Pope & Talbot Mill Site and Leased Area Port Gamble Bay

Open House and Public Meeting

March 9, 2011

WASHINGTON STATE
Department of Ecology

Tonight's Agenda for Public Meeting

4:30pm	Open House	
5:30pm	Welcome and Introduction	
	1. Introductory Remarks 2. Site Background 3. Pope & Talbot, Inc. Sawmill Site 4. Leased Area 5. Next Steps	
6:30pm	Questions and Discussions	
7:30pm	Adjourn	

Remedial Investigation Feasibility Studies for Public Review

- Draft Remedial Investigation (Mill Site & Leased Area)
- Draft Feasibility Study (Mill Site & Leased Area)
- These documents can be found and downloaded on the Ecology website
  - http://www.ecy.wa.gov/programs/tcp/sites/psi/portGamble/psi_portGamble.html

Parallel Remedial Investigation and Feasibility Studies

- Manage Mill Site and Lease Area together to streamline efforts
- Build on same methods for evaluation of risks to Human Health and Environment
- Address Cleanup and Restoration opportunities collectively across the entire bay

Project Team

- **Kevin MacLachlan – Site Manager**
- **Russ McMillan – Sediment Technical Lead**
- **Panjini Balaraju – Upland Technical Lead**
- **Clay Patmont – OPG**
- **Joel Breems – WA DNR**

The Puget Sound Initiative

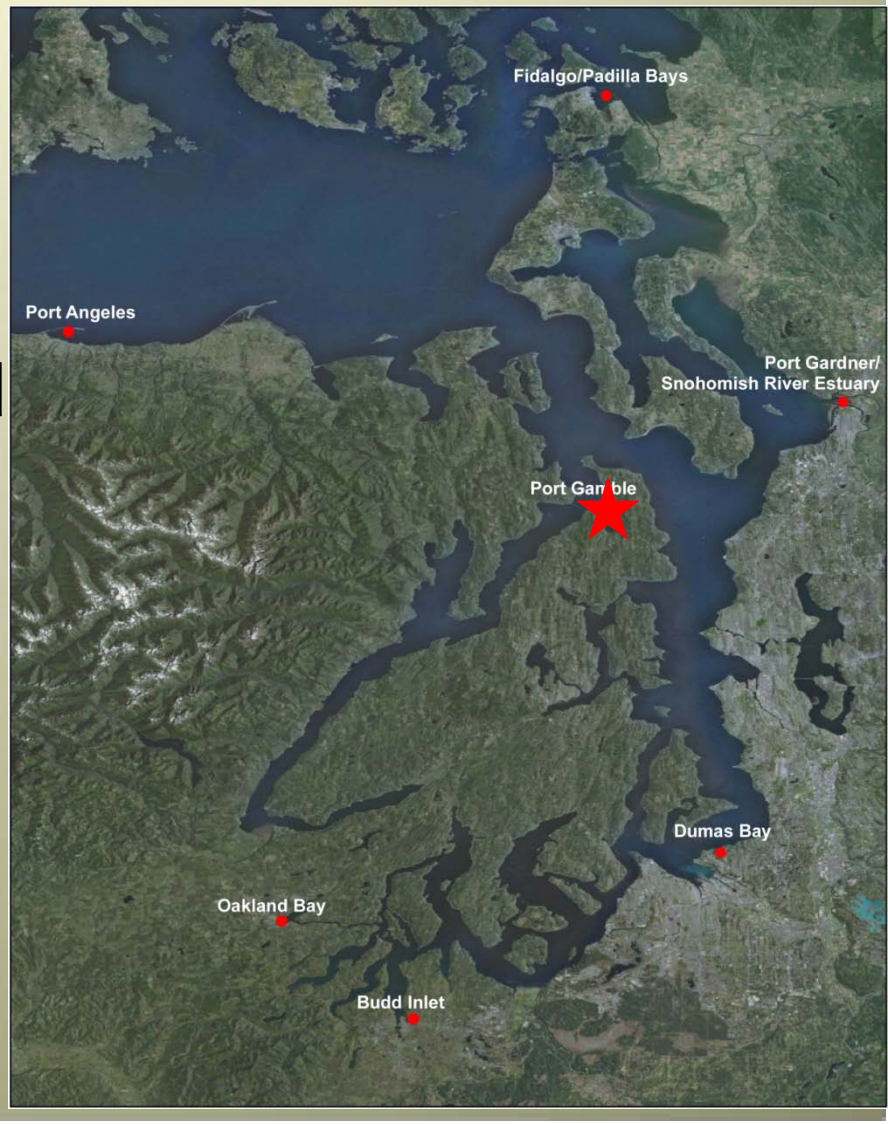
- **Background**

- Began in 2005 and 2006
- Includes a lot of people, organizations and governments
- Cleanup Program focuses on contaminated site cleanup & restoration
- 2020 goal to have most work done

The Puget Sound Initiative

We identified seven priority bays where:

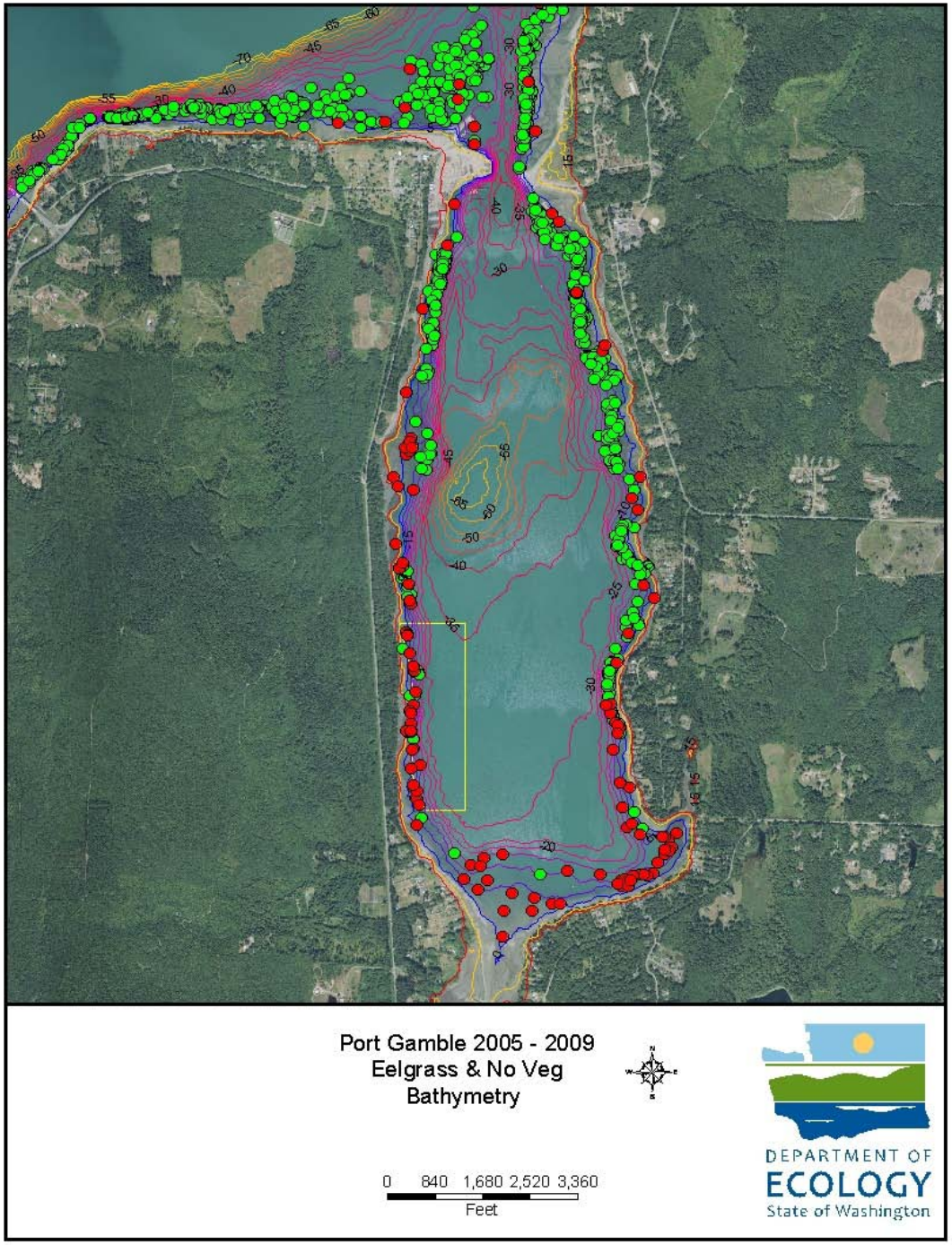
- Critical habitat exists.
- Important natural resources were supported.
- We had active paired upland & sediment cleanups.
- We conducted baywide sediment studies.
- Overall, there are over 30 cleanup actions on-going in these Priority Bays



Why is Port Gamble a PSI Bay?

Natural Resources:
Fish and Shellfish

Critical Habitat:
Forage Fish
Eelgrass

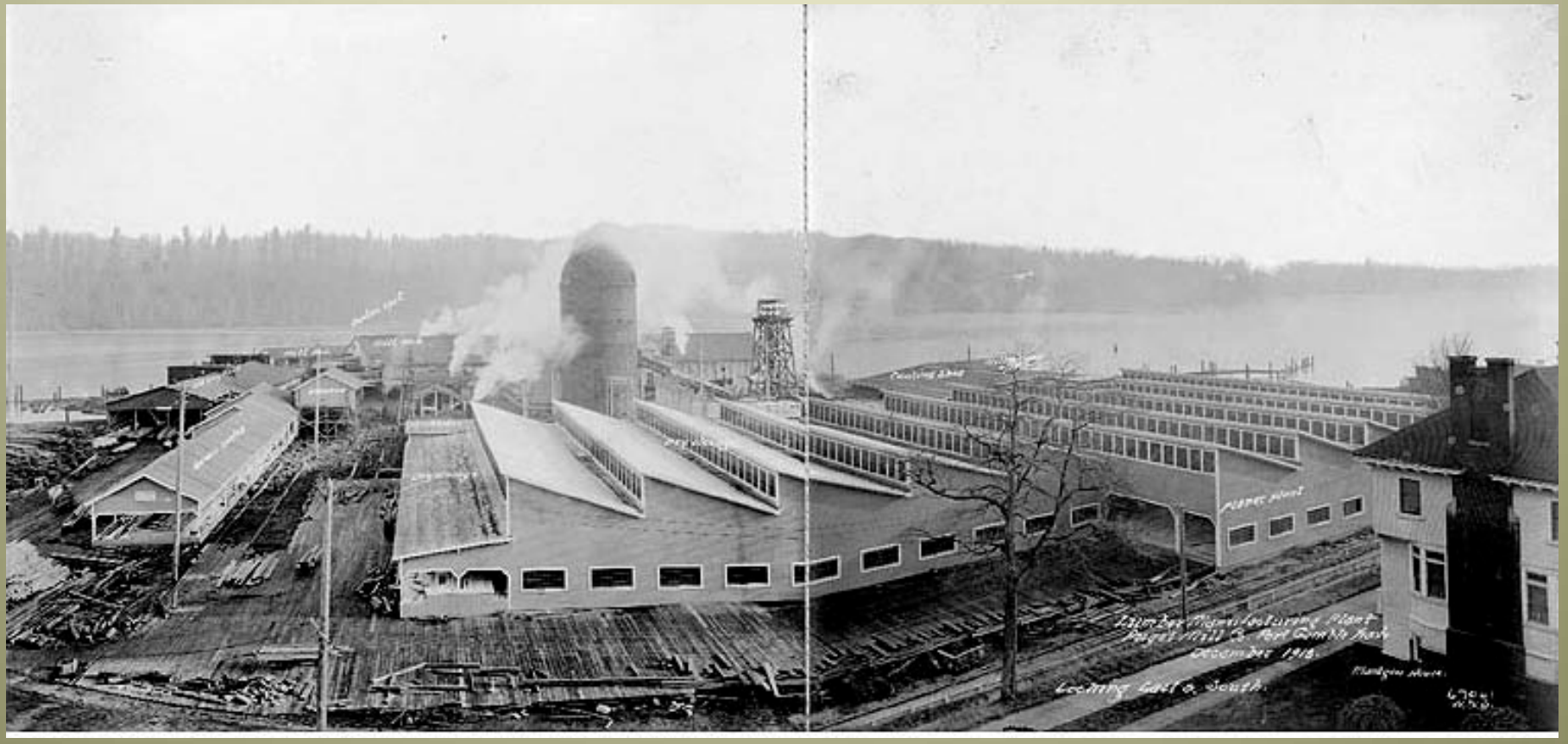


Dialogue Group

Background on Mill Site and Leased Area

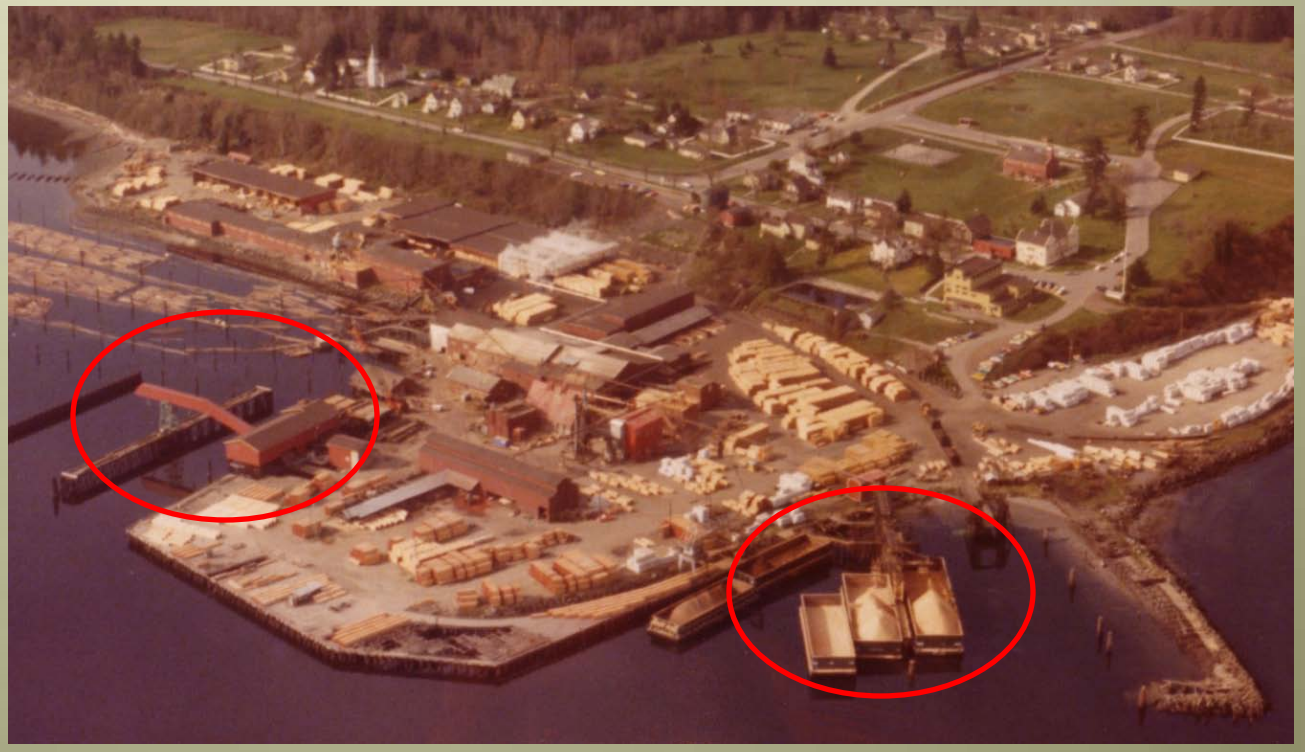
History of Mill Site Operations

- Saw mill operated from 1853 – 1995



History of Mill Site Operations

- Northern Chip Mill active 1928 – 1995
- Southern Chip Mill active 1974 – 1995

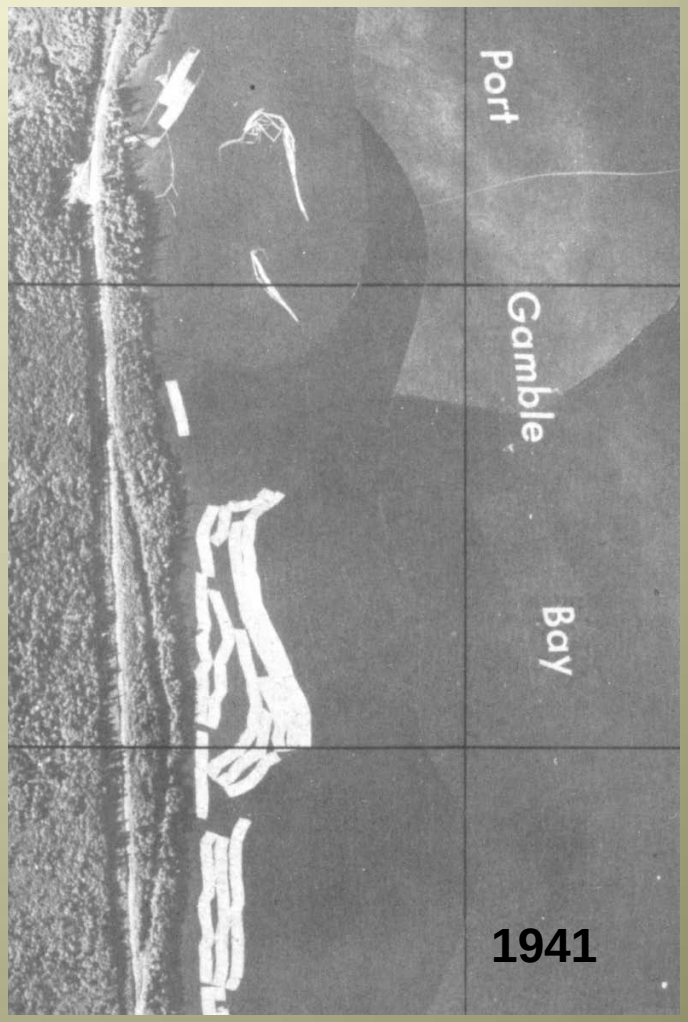


History of Mill Site Operations

- Area Leased for non mill operations
  - Wood Chipping & Log Sorting
  - Marine Construction
  - Marine Laboratory

History of Leased Area

- This area of Port Gamble Bay was used by Pope & Talbot for a long time…



Previous Cleanup Work

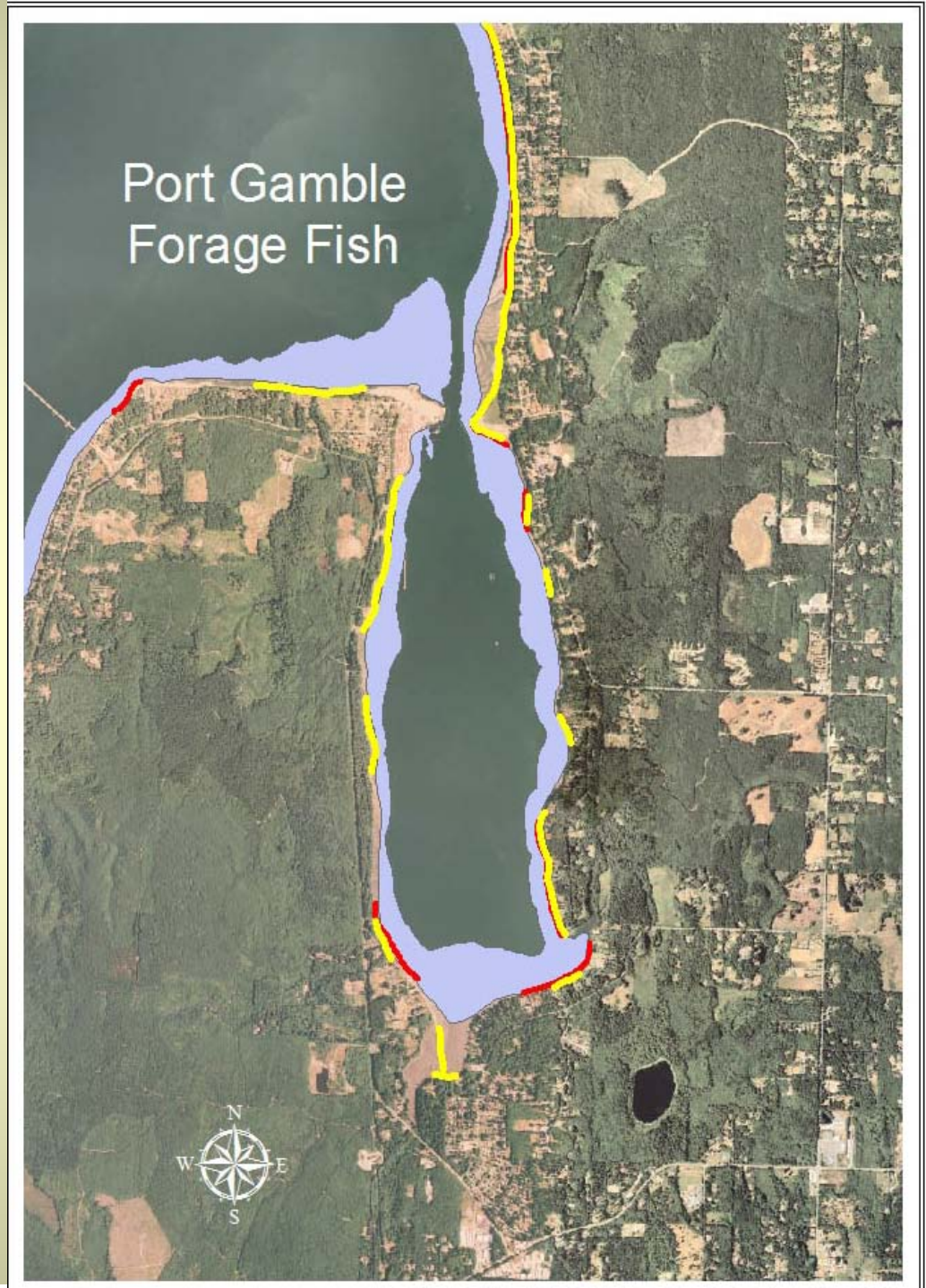
- 27,000 tons of soil removed.
- 30,000 cubic yards of wood waste dredge 2003/2007
- Off Site 4 lanc along the wes shore.

* Landfills are not part of the Mill Site

Cleanup Considerations

Natural resource and habitat data researched:

- Eelgrass
- Forage Fish
- Shellfish



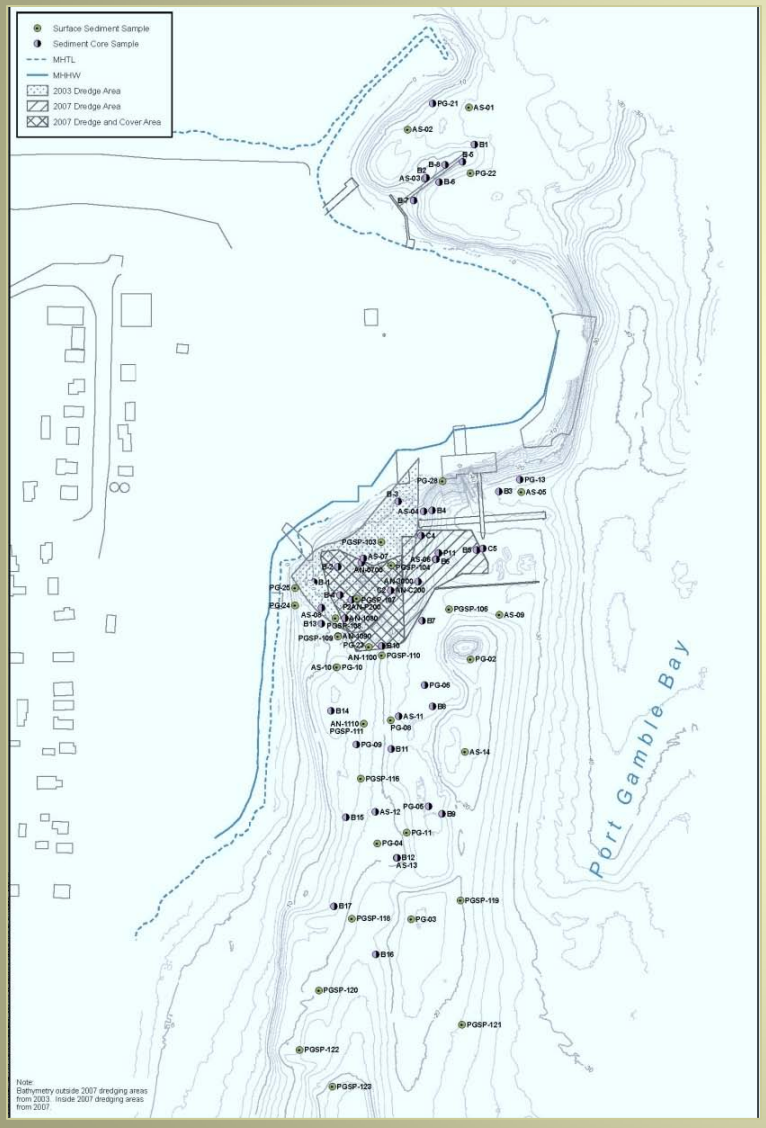
Cleanup Considerations

- Cultural Resources both past and present were considered in the selection of alternatives.

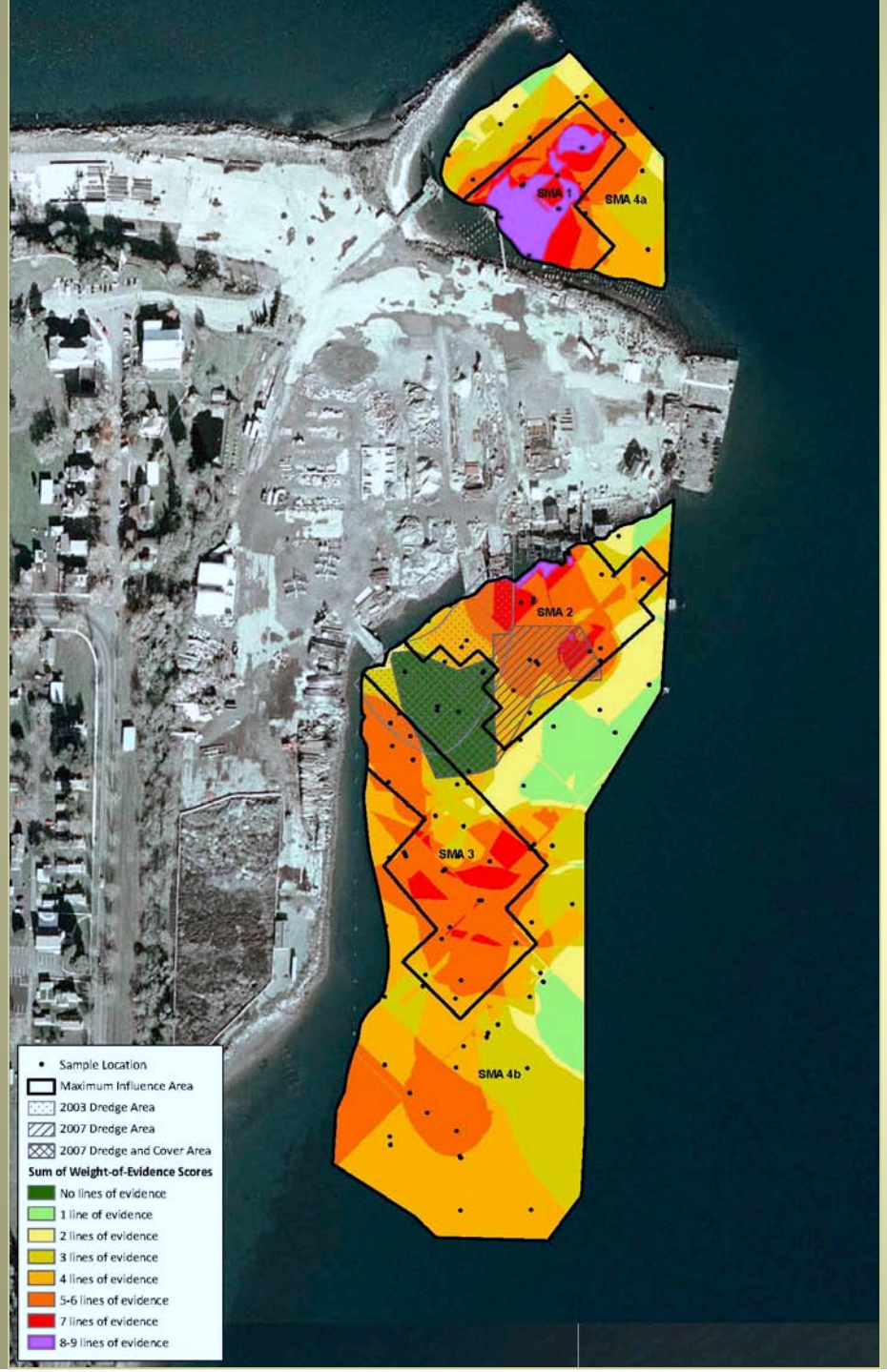
Photo courtesy Kitsap Herald.

What is Ecology proposing for the Mill Site cleanup?

Mill Site Cleanup Investigations



- Extensive soil, groundwater, and sediment sampling (1998 to 2006)
- Interim cleanup (2007)
- Final sampling in remaining areas of potential concern (2008)
- Remedial investigation/feasibility study reports (2010)



Mill Site Divided into Sediment Management Areas (SMAs)

- Based on evidence of sediment toxicity
  - Multiple bioassays using sensitive organisms
  - Relative concentrations of wood waste
  - Different statistical interpretations of data
  - Evidence combined to make an overall evaluation

How did we evaluate cleanup methods?

SMA-1: Northern Mill Site

- Highest evidence of sediment toxicity
- Dredging and residuals cover
- Dredge and cap

SMA-2: Southern Mill Site chip loading area

- 30,000 cy dredged in 2003/2007
- Dredging and residuals cover
- Dredge and cap
- Engineered cap

How did we evaluate cleanup methods?

SMA-3: Southern Mill Site log rafting area

- Evidence for recent reductions in sediment toxicity
- Engineered cap
- Sand cover to enhance biological recovery
- Monitor natural biological recovery

SMA-4a and 4b: Lower evidence of toxicity areas

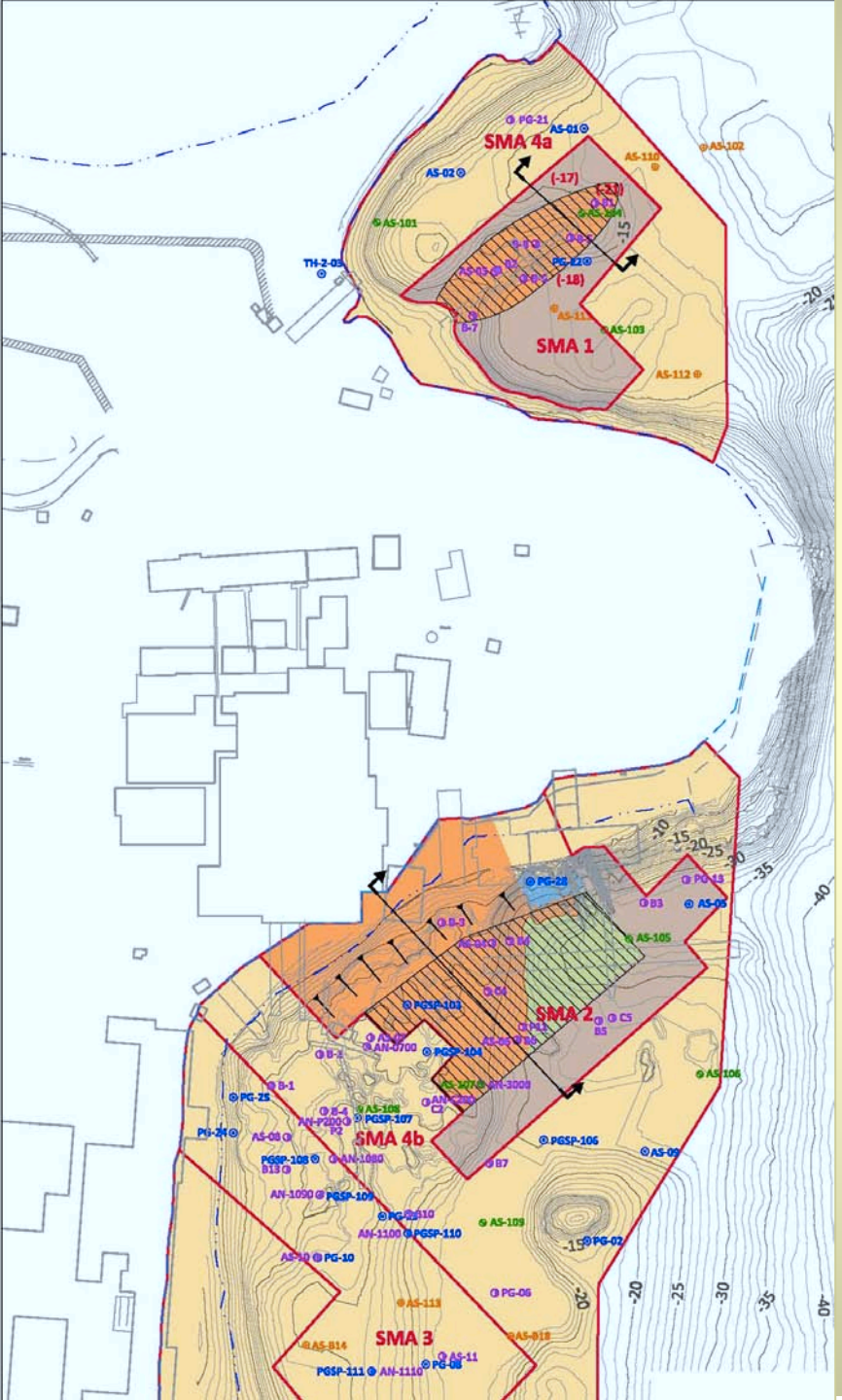
- Evidence for recent reductions in sediment toxicity
- Sand cover to enhance biological recovery
- Monitor natural biological recovery

Criteria we must use to decide on cleanup options

- Comply with cleanup standards and applicable state & federal laws
- Protect human health and the environment
  - Evidence of toxicity evaluation of environmental protection
  - Human health protection included expansion of SMAs to address creosote piling/sediment areas
- Reasonable restoration timeframe and compliance monitoring
- Use permanent solutions to maximum extent
  - Disproportionate cost analysis
- All public input will be considered by Ecology

Additional criteria used to determine cleanup options

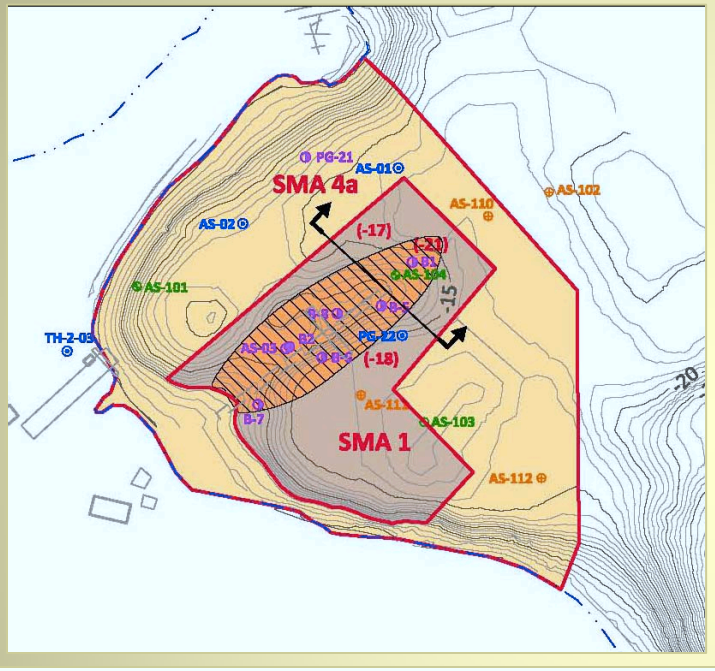
- Protection of cultural resources, consistent with regulatory requirements
  - Cultural resource assessment performed in 2010
  - Monitoring and contingency responses during dredging (similar to 2007 action)
- Habitat restoration opportunities
  - Removal of creosote piling in SMAs
  - Other shoreline restoration opportunities
- Compatibility with future land use
  - Timing considerations

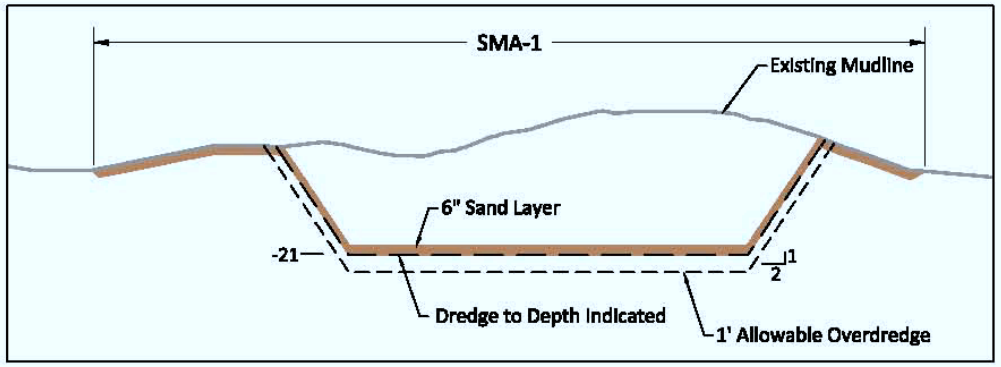


Proposed Mill Site Cleanup Options

- Uplands
  - No further cleanup needed
  - Restrictive covenants
- Sediments
  - Dredge 18,000 cy of the most concentrated, shallow wood waste deposits
  - Remove 640 piling
  - Cap/cover low risk areas
  - Monitor biological recovery

SMA-1: Dredge 8,000 cy of wood waste; sand cover adjacent lower risk areas



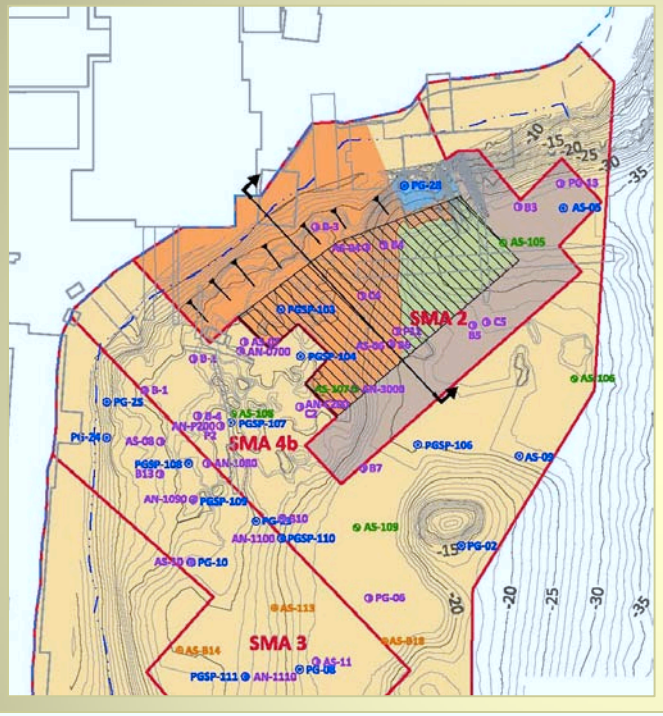


SMA 1 Cross Section Schematic
Not to Scale

LEGEND:

- 2008 Core Sample
- 2008 Surface Sediment Sample
- Existing Sediment Core Sample
- Existing Surface Sediment Sample
- Approximate MHHW (Mean Higher High Water)
- Approximate MLLW (Mean Lower Low Water)
- SMA Boundary
- Bathymetric Contour in Feet
- Proposed Dredge Footprint Daylight Line
- 3-Foot-Thick Armored Cap (Type I)
- 18-Inch-Thick Sand Cap (Type II)
- 6-Inch-Thick Sand Cover (Type III)
- Dredge Area
- Monitored Natural Recovery Area
- Approximate Area Exceeding CSL Criteria Based on 2006 and 2008 Sampling Data; Boundary to be Refined During Remedial Design

SMA-2: Dredge 10,000 cy of wood waste; cap and sand cover adjacent lower risk areas



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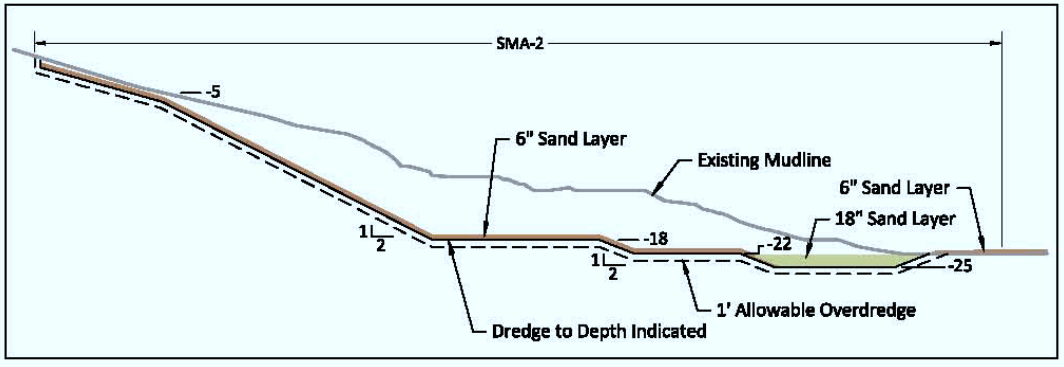
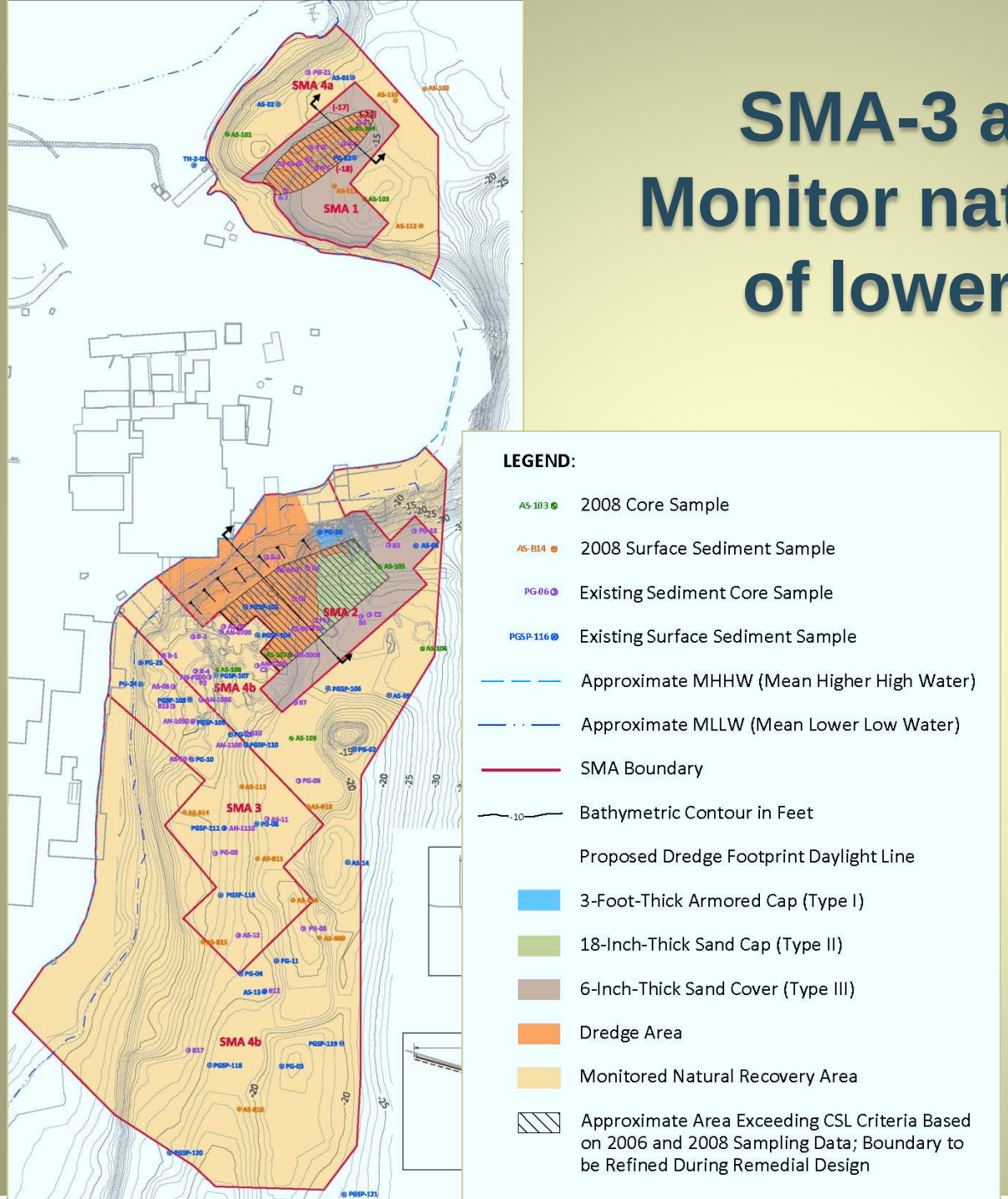


SMA 2 Cross Section Schematic
Not to Scale

SMA-3 and SMA-4: Monitor natural recovery of lower risk areas

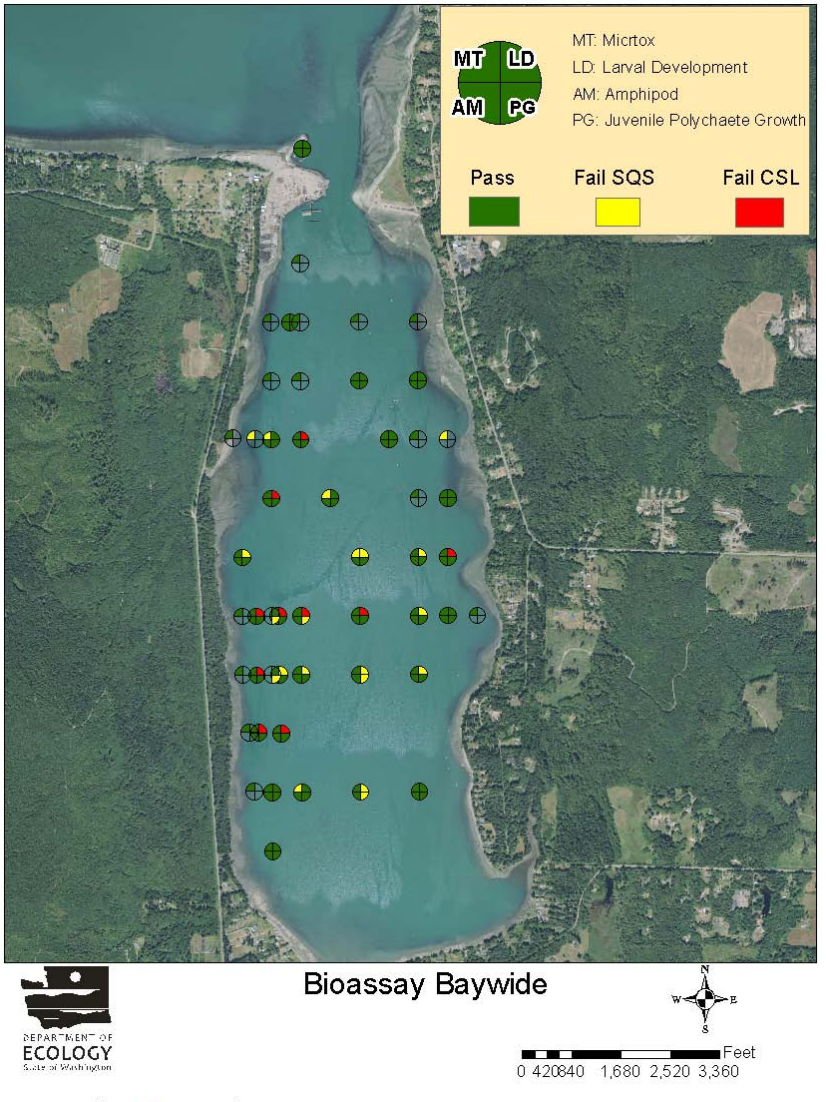


- Substantial recovery occurred from 2002 to 2008
- Full recovery anticipated within the next 10 years

Leased Area

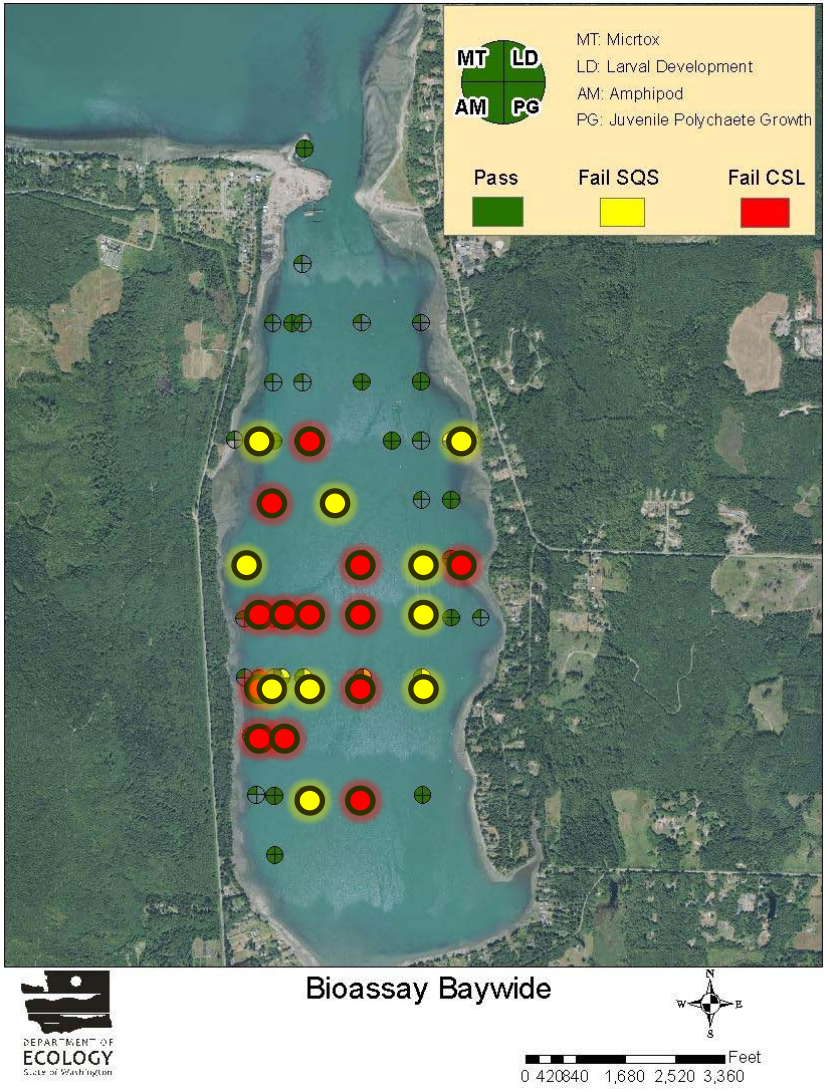
Baywide Sediment Investigation

- Comprehensive baywide sampling in 2008 which included 120 stations:
- Analysis of sediment for chemicals.
- Analysis of sediment for toxicity to animals.
- Evaluated tissue chemistry for risks to humans.

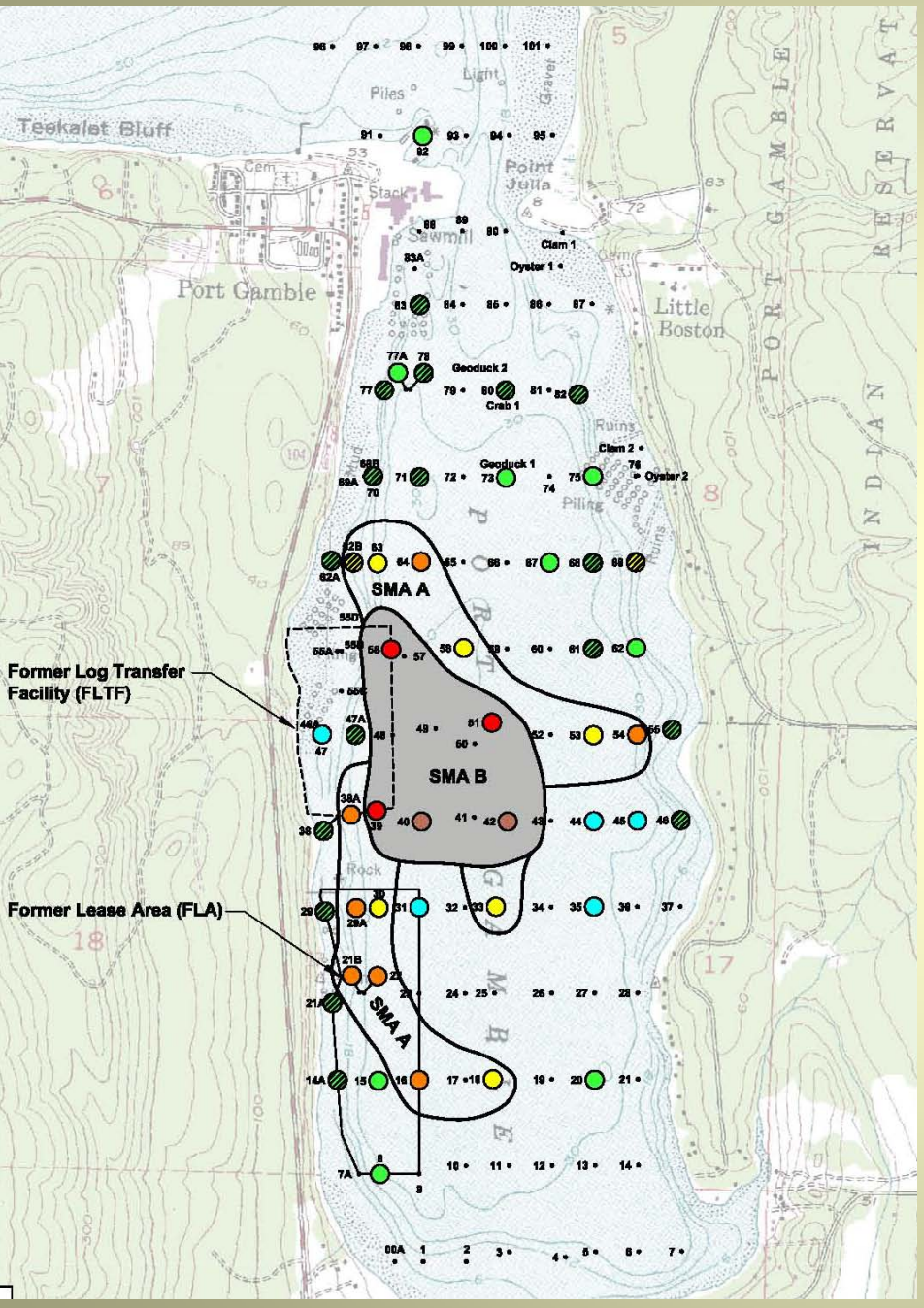


Baywide Sediment Investigation

- Biological toxicity to animals:
  - 24 stations exceeded criteria

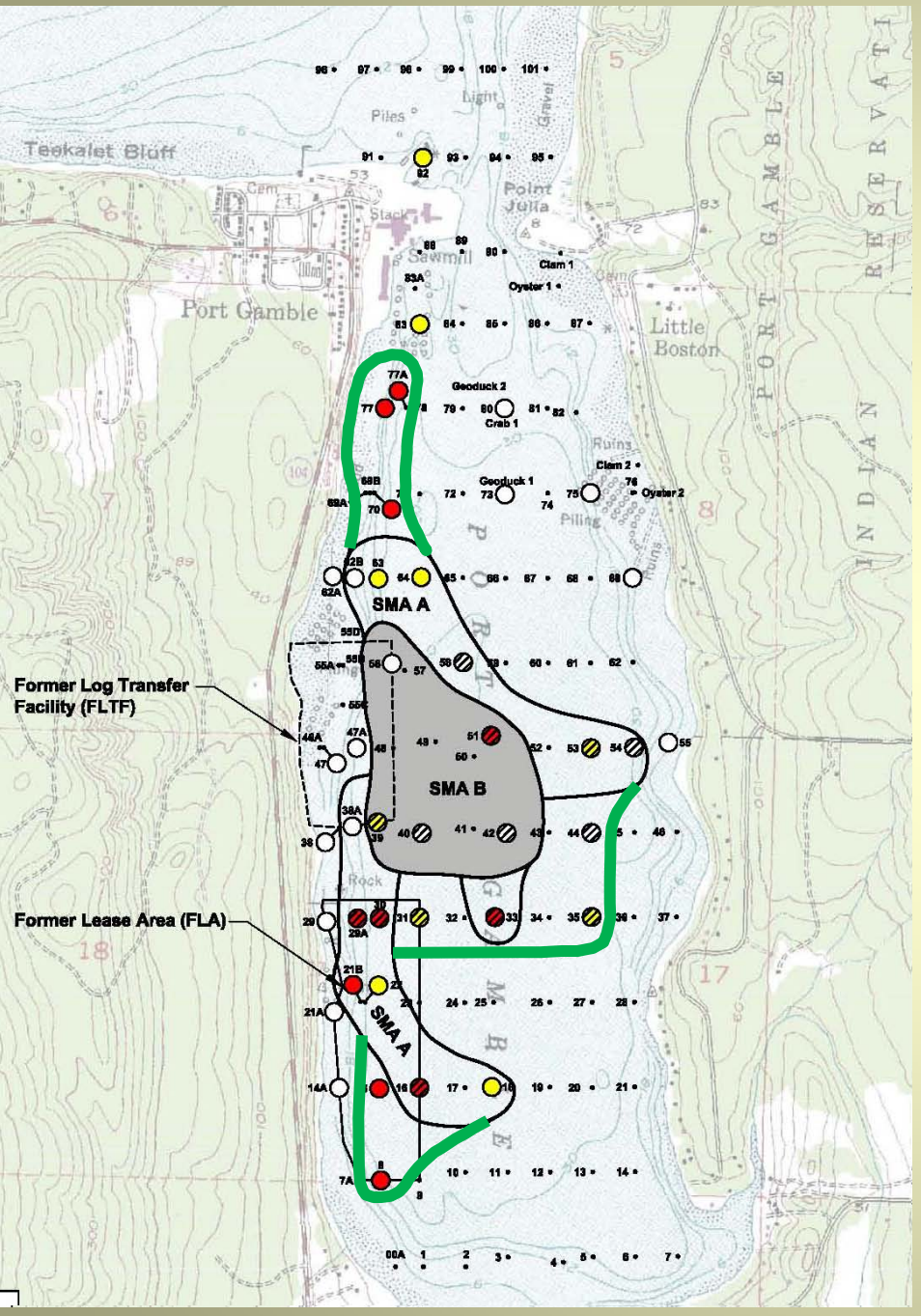


Leased Area Sediment Management Areas (SMAs)



- Main environmental concern:
  - Wood waste toxicity.
  - Several items combined to make an overall evaluation.

Leased Area Sediment Management Areas (SMAs)



- Based on assessing risks to human health and the environment.
- Main human health concerns:
  - Carcinogenic PAHs
  - Cadmium

How did we evaluate the range of cleanup options?

- Dredge
- Dredge and Cap
- Engineered Cap
- Thin-layer sand cover/Enhanced Natural Recovery
- Monitored Natural Recovery
- No Action

Proposed Cleanup Option: Monitored Natural Recovery

Monitored Natural Recovery includes:

- Allowing the environment to recover by burial by clean sediment over time and decomposition of wood waste.
- Recovery goals must be met by a certain time period.
- Certain actions must be taken if recovery goals are not met.
- Extensive long term monitoring of:
  - Chemicals of concern
  - Biological recovery of animals living in sediment

What's Next?

Port Gamble Mill & Lease Site	Date
Public Comment: Draft RI/FS Report	Feb ~ March 2011
Develop Clean up Action Plan (CAP) and Consent Degree (CD)	Spring ~ Summer 2011
Public Comment: CAP and CD	Late 2011
Engineering Design Report (EDR) and Permits	Late 2012
Cleanup Begins	2012 - 2014

Your input is valuable

- Fill out a comment form tonight
- Visit Ecology's Toxics Cleanup Website at: http://www.ecy.wa.gov/programs/tcp/sites/pope/pope_hp.html
- Review the Port Gamble Site documents at the Poulsbo Public Library

Send your comments to:

Kevin MacLachlan – Site Manager

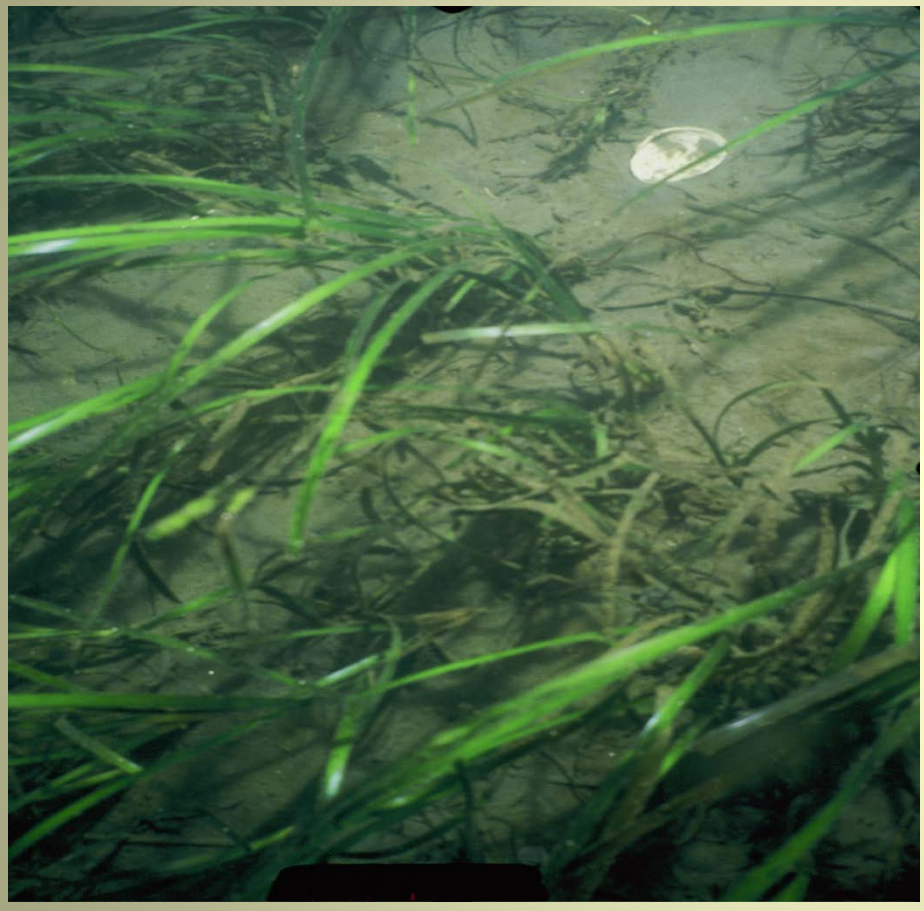
WA Department of Ecology
Toxics Cleanup Program
PO Box 47600
Olympia, WA 98504-7600
E-mail: Kmac461@ecy.wa.gov

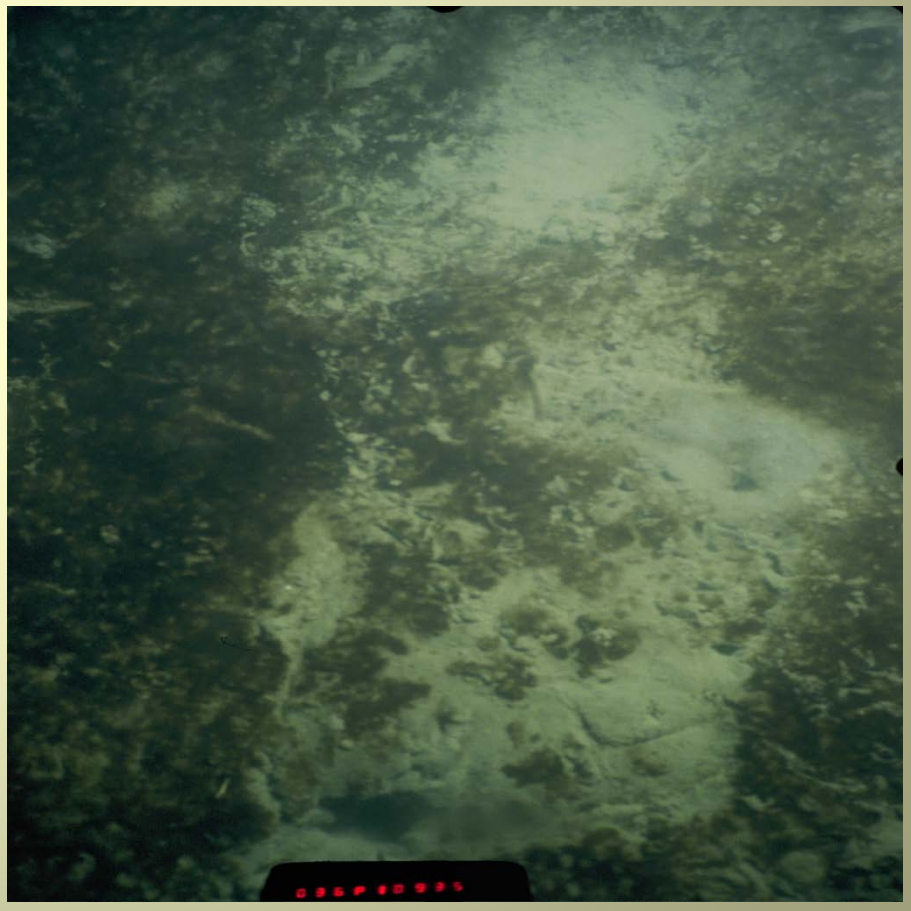

Questions?

Why is woodwaste a problem?

DEPARTMENT OF
ECOLOGY
State of Washington

Why is woodwaste a problem?





Monitored Natural Recovery Framework for Monitoring Plan

- Develop specific objectives and metrics to track – (e.g., chemical or biological)
- Specify sampling intervals and triggers for determining success or failure
- Identify Data Gaps to be filled at engineering design phase
- Higher impacts observed based upon toxicity to critters and Human Health