

North Olympic Peninsula Regional Background Sampling and Analysis Plan

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**Port Angeles – April 8, 2013
Port Townsend – April 9, 2013**

Forum Outline

- Goals and objectives
- Regional background
- Relationship with revised Sediment Management Standards
- Relationship to bay-wide cleanups
- North Olympic Peninsula Regional Background Sampling and Analysis Plan (SAP)
- Discussion and questions

Goals for Today

- Provide context for why we're conducting sampling
 - Updated Sediment Management Standard rule
 - Definition of regional background
 - Need for regional background sediment characterization
- Provide an overview of the sampling and analysis plan (SAP)
 - Regional background study area
 - Sampling locations
 - What analyzing for
- Hear your feedback on the SAP

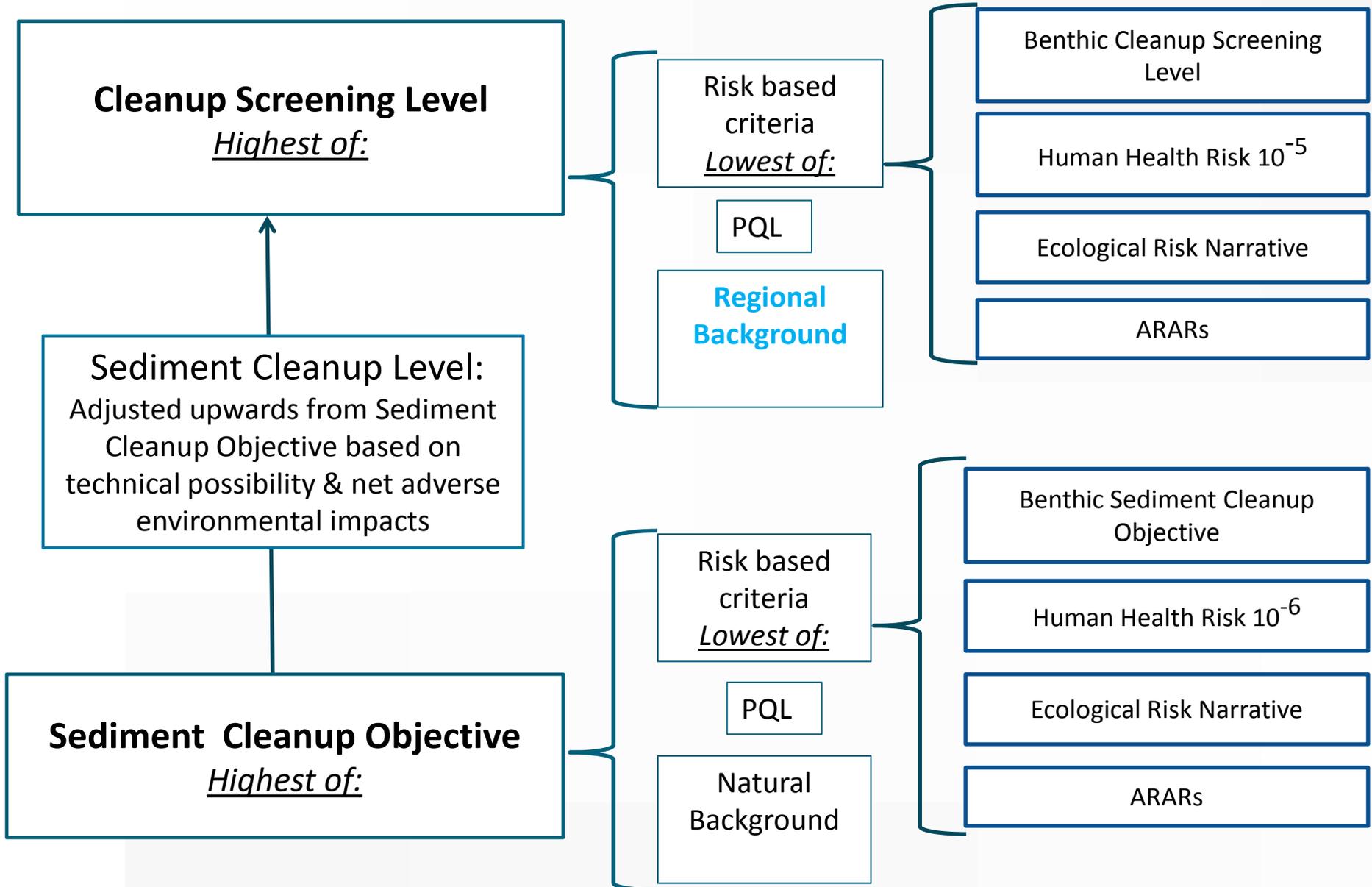
Why is Ecology Determining Regional Background?

- Helps set site-specific cleanup levels in complex sites
- Part of Sediment Management Standards
 - Ecology's cleanup rule for sediments
 - Sediment Management Standards Rule Revision
 - Revised rule adopted: February 22, 2013
 - Adopted rule effective date: September 1, 2013
 - Defines regional background

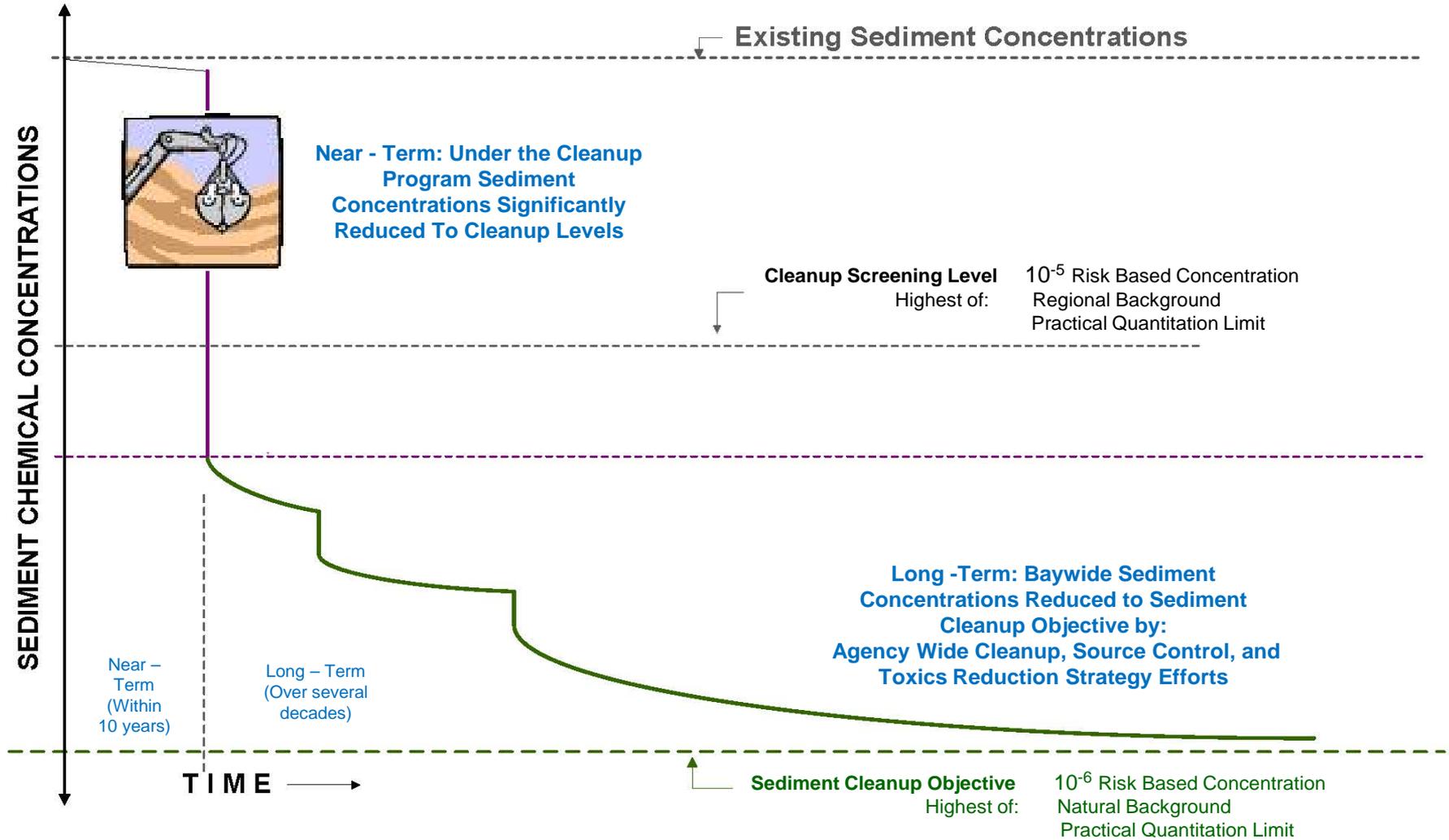
Regional Background (WAC 173-204-505)

The concentration of a contaminant within a department-defined geographic area that is primarily attributable to diffuse sources, such as atmospheric deposition or storm water, not attributable to a specific source or release.

Regional Background: Establishing Cleanup Levels



Reducing Sediment Contamination



Regional Background Levels

Regional background levels will be:

- Area or embayment specific
- Above natural background in most cases
- Expected to decrease over time as toxics reduction strategies are implemented
 - Source control
 - Pollution prevention programs
 - Low impact development

Using Regional Background for Baywide Cleanups

Regional background will be:

- Used to accelerate cleanups
- Considered when setting cleanup levels
 - Port Angeles Harbor
 - Other bays around the north Olympic Peninsula

**North Olympic Peninsula
Regional Background
Sampling and Analysis Plan**

Revised Regional Background Study Area with Port Townsend Bay



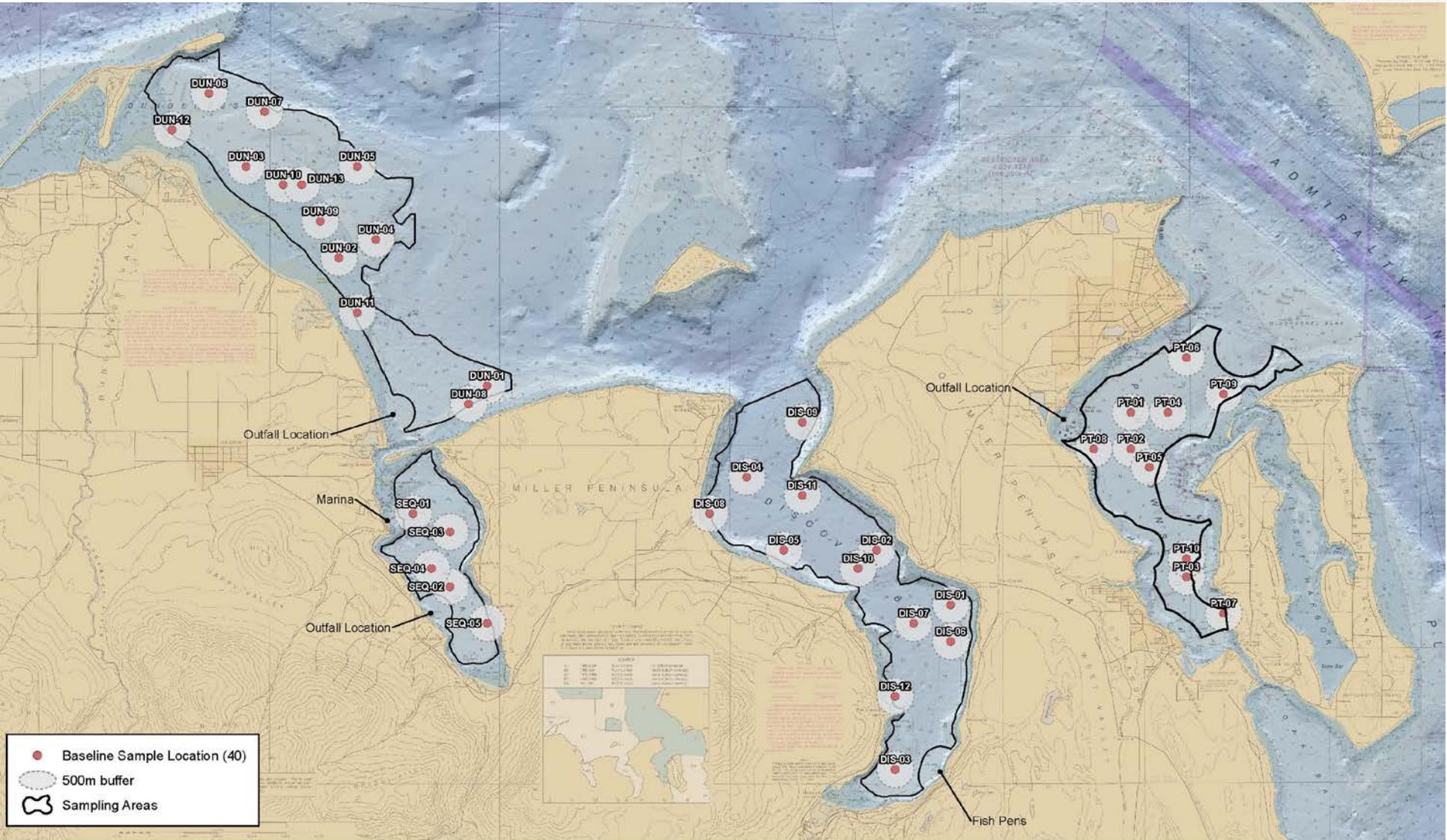
How did we select the areas of interest?

- Selected bays without a history of major industry
- Examined historical data to:
 - Avoid cleanup sites
 - Find useable bay-wide sediment data
- Used best professional judgment to:
 - Avoid stormwater outfalls
 - Avoid highly urbanized areas draining to the bays

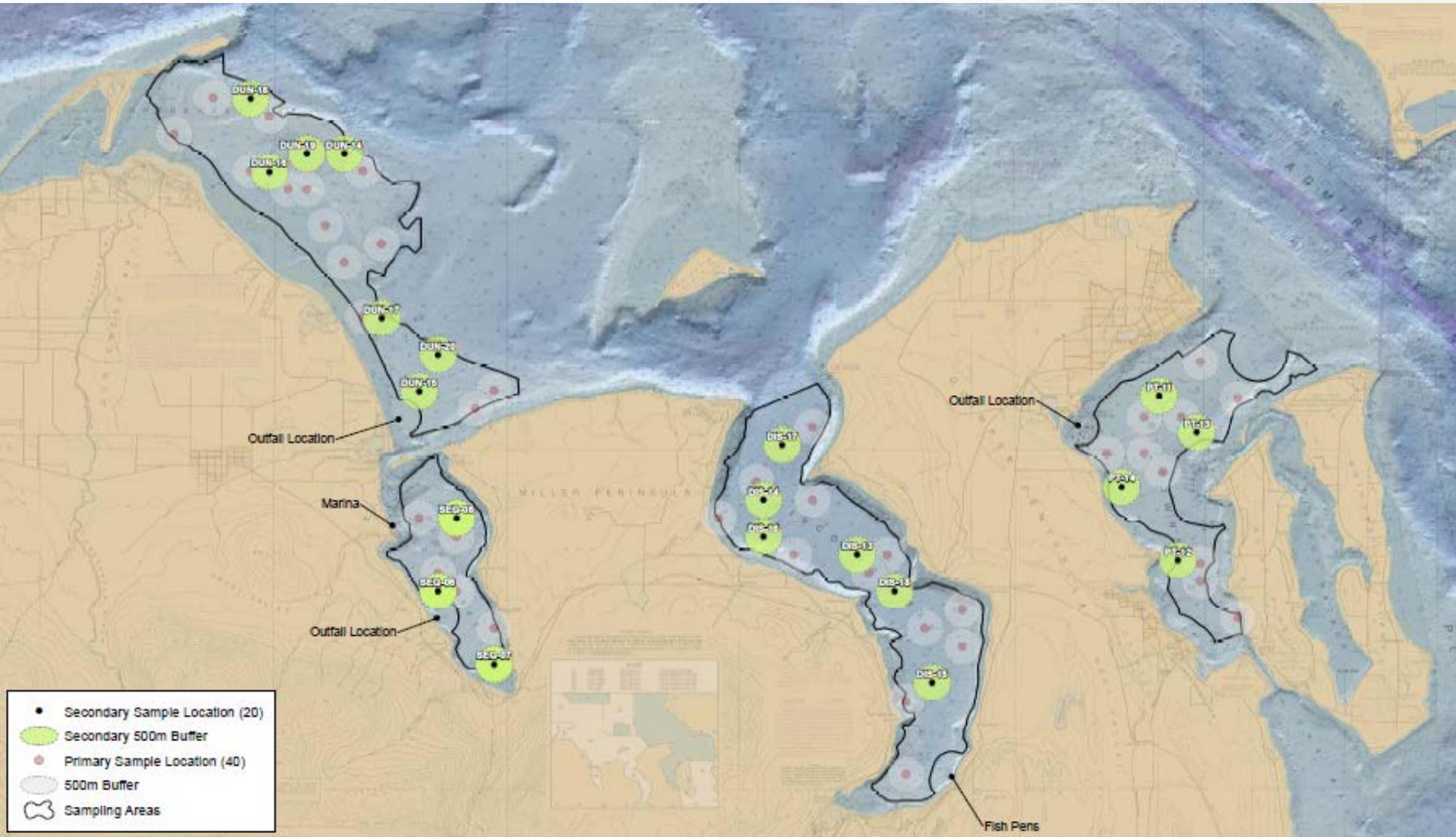
How did we decide where to sample?

- Excluded:
 - Areas adjacent to known or suspected source areas
 - Shallow areas (above -6ft MLLW)
- Within the study area, used a spatially balanced random sampling design:
 - GIS to evenly distribute samples across the site (avoid sample clusters)
 - Minimum separation of 500 meters between samples for spatial independence

Proposed Baseline Sampling Locations



Proposed Secondary Sampling Locations



What we're analyzing for:

- Metals
 - Arsenic
 - Cadmium
 - Mercury
- Carcinogenic organic compounds
 - Polycyclic Aromatic Hydrocarbons (cPAHs)
 - Dioxin and Furan Congeners
 - Polychlorinated Biphenyl Congeners (PCBs)
- Conventional parameters

Regional Background Timeline & Next Steps

March - April 2013

May - July 2013

August –
September 2013

October –
November 2013

Early Winter
2013

