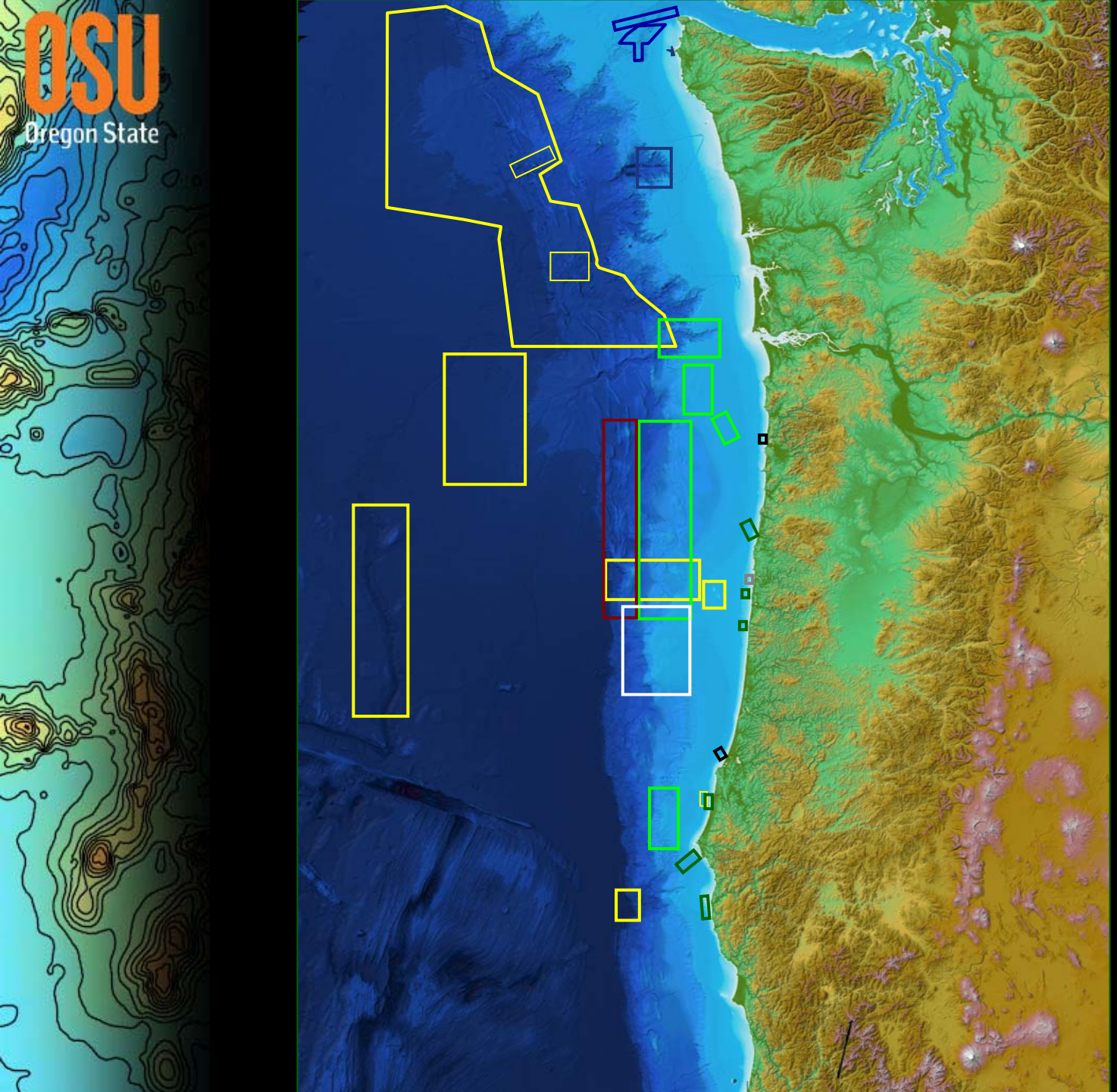
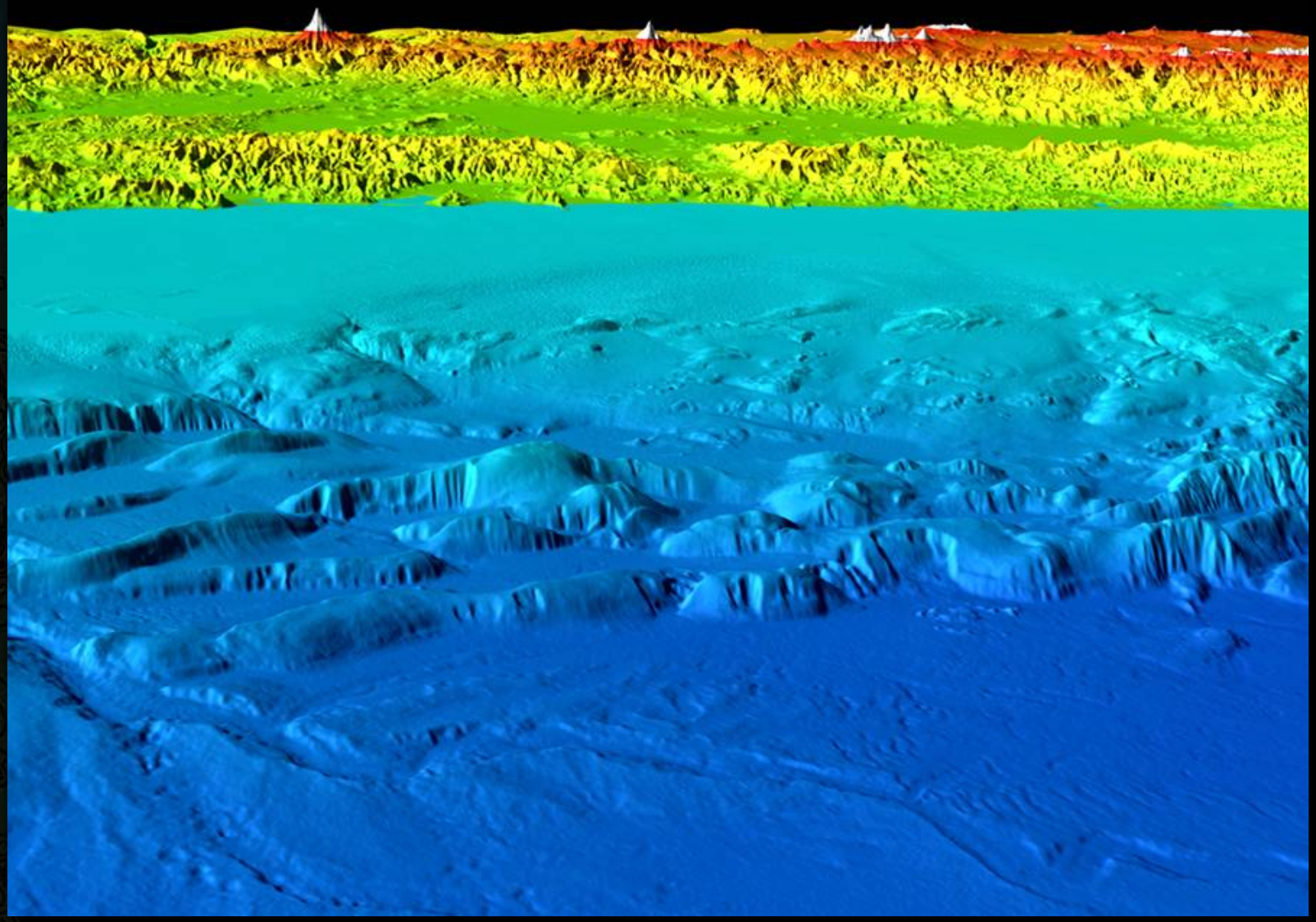
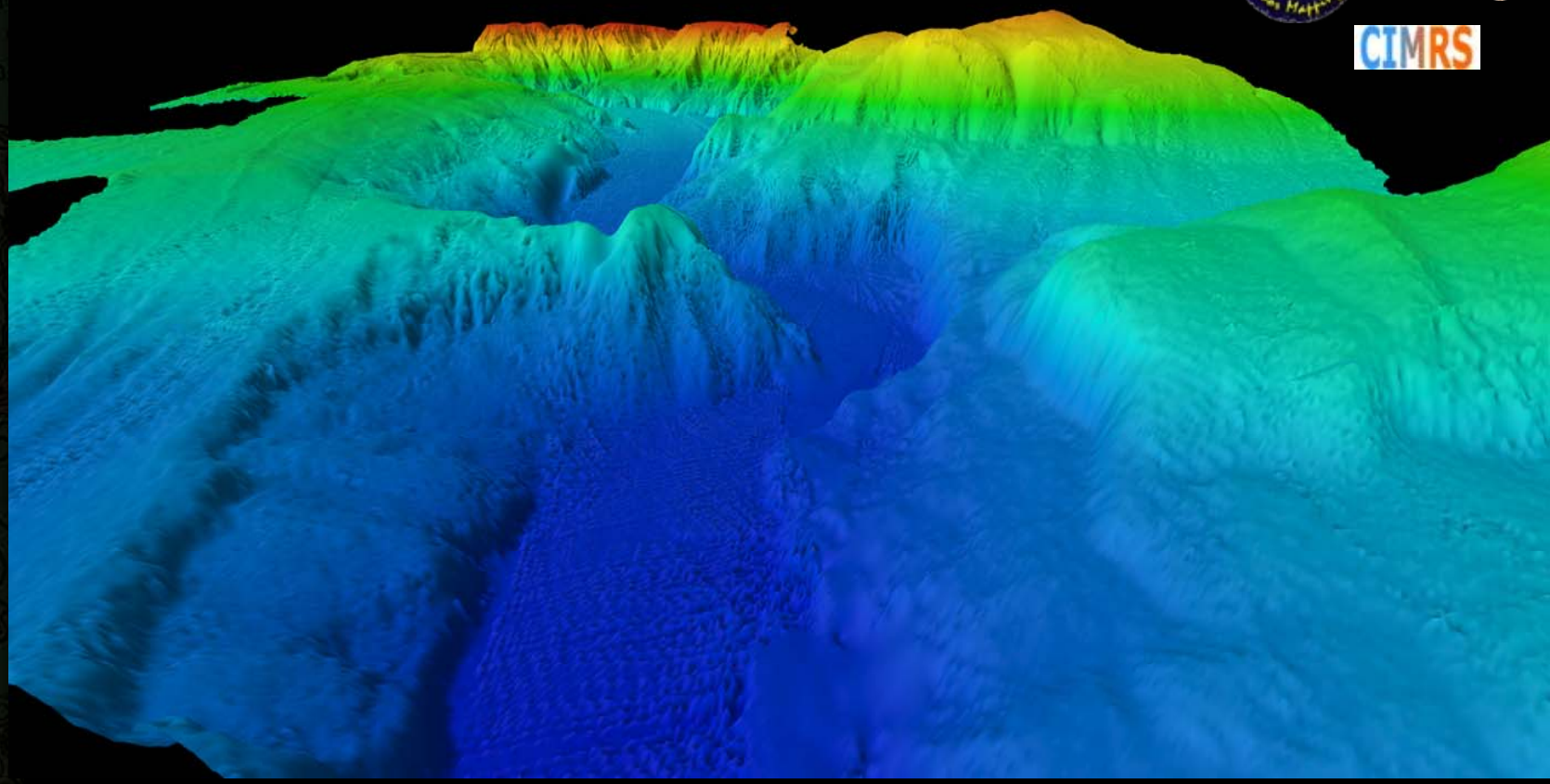
Seafloor Mapping on the Oregon Continental Margin*

*And a little in Washington…


OSU
OSU/NOAA
NOAA/NOS
NOAA/MBARI
NOAA OCNMS
NOAA PMEL
ODFW
Industry



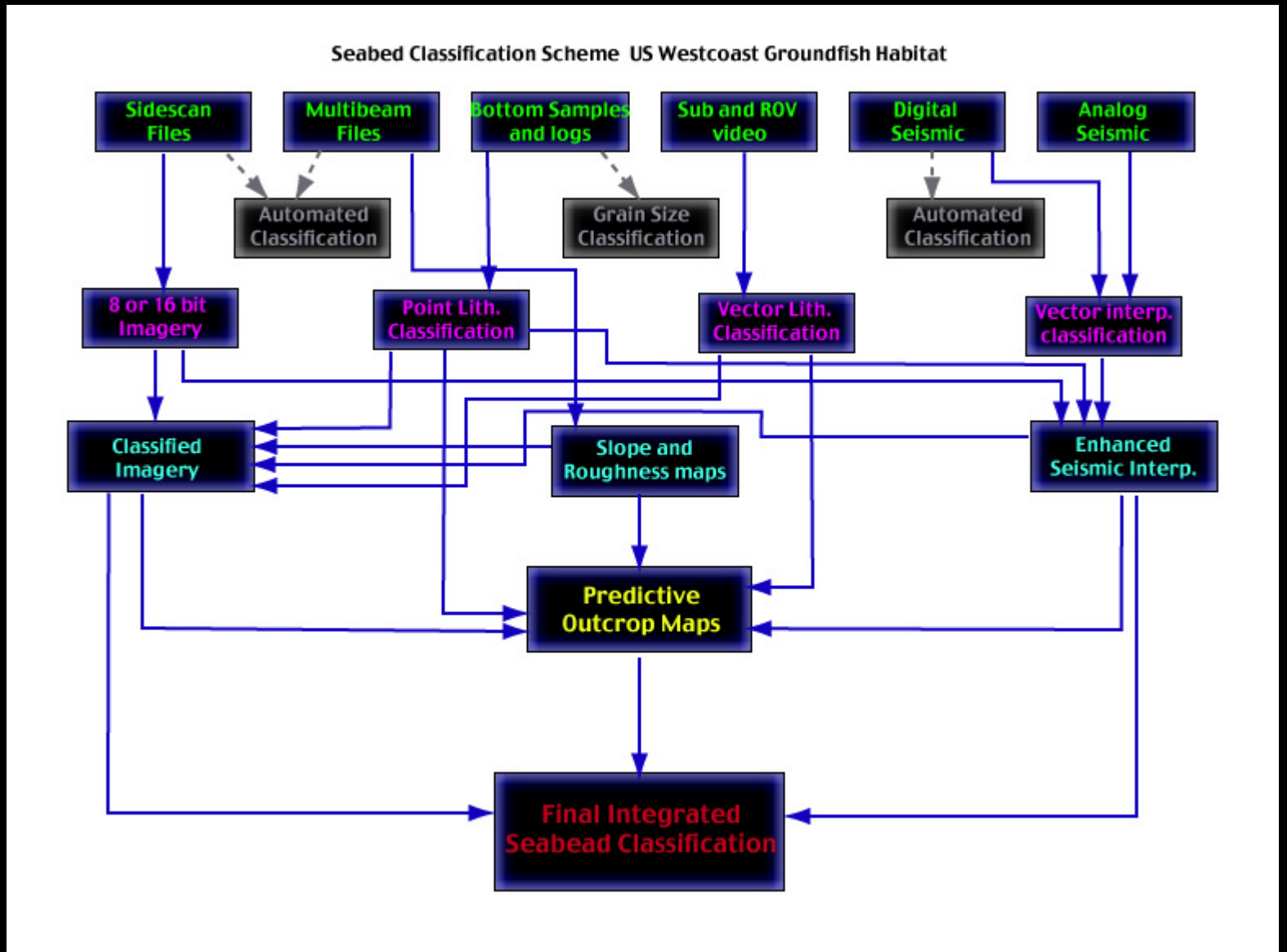
OSU onshore offshore compilation

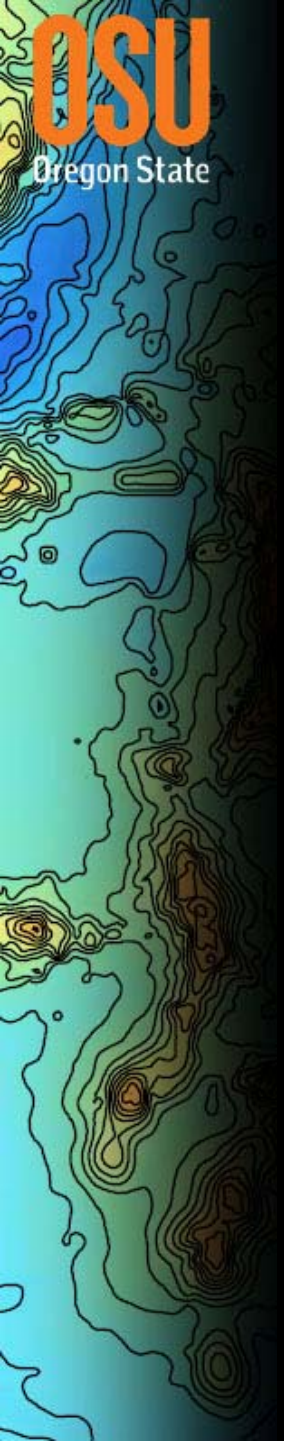


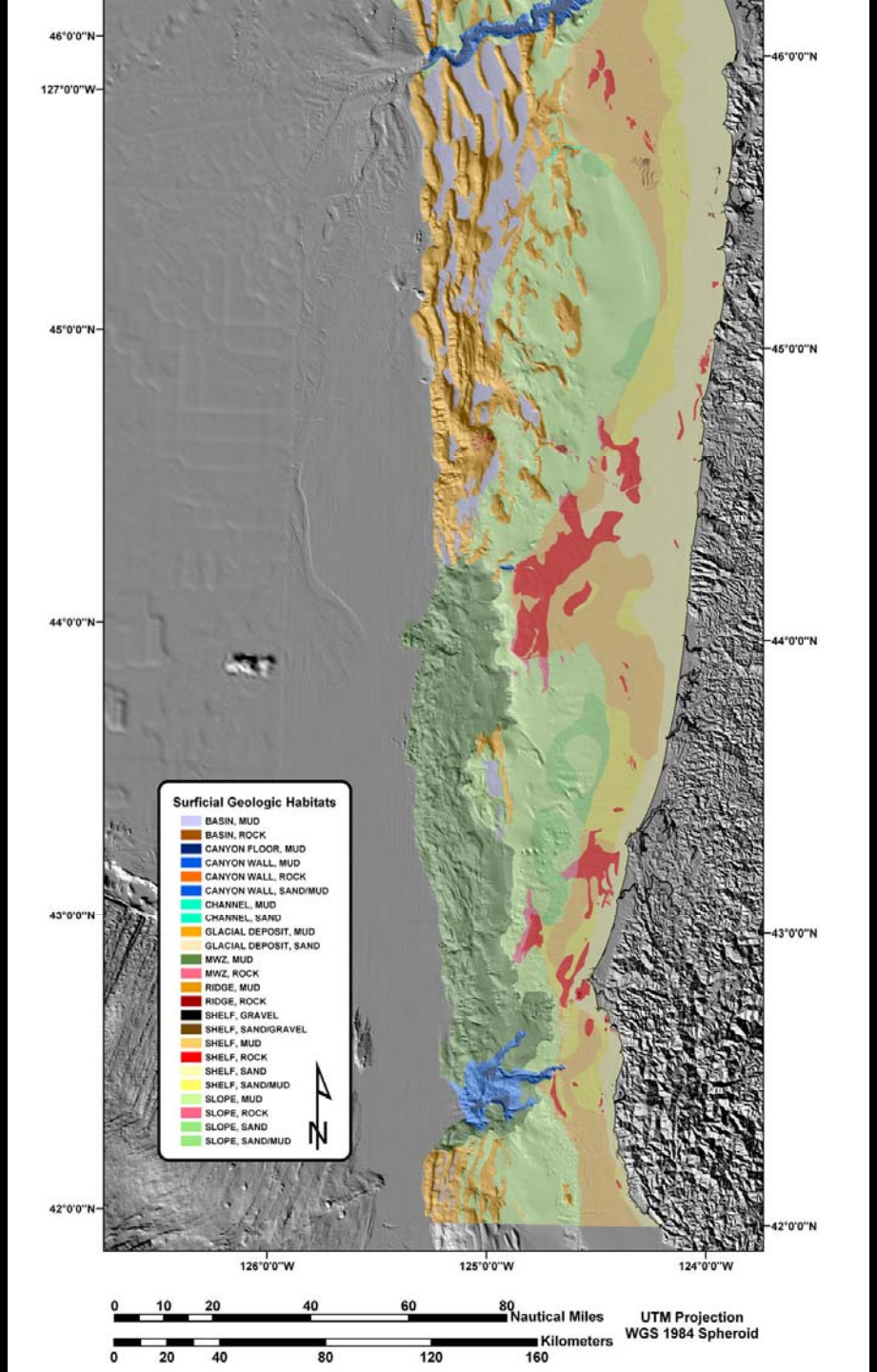
Astoria Canyon Ocean Exploration Survey/ROV dives

NOAA NMFS, OSU, many others.

With incomplete mapping and sampling data, a hybrid scheme was devised for the regional EFH-EIS mapping effort.

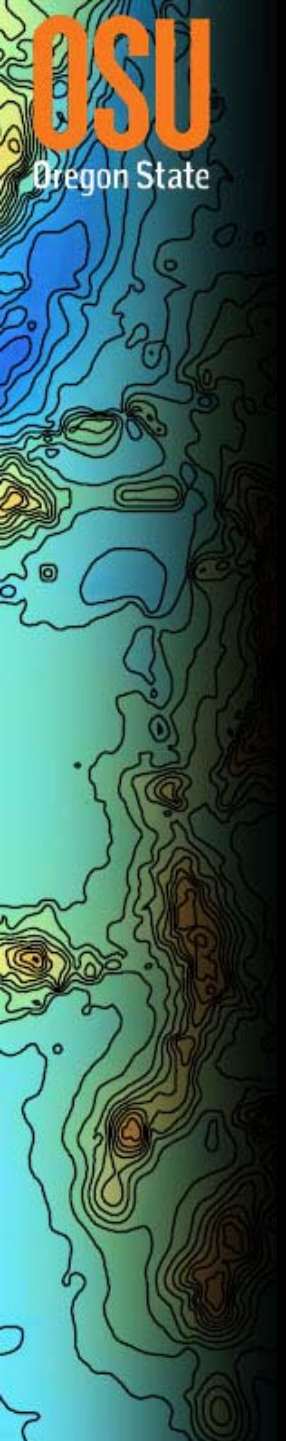






West Coast EFH/EIS composite mapping completed 2004.

Goldfinger et al., OSU Active Tectonics Lab



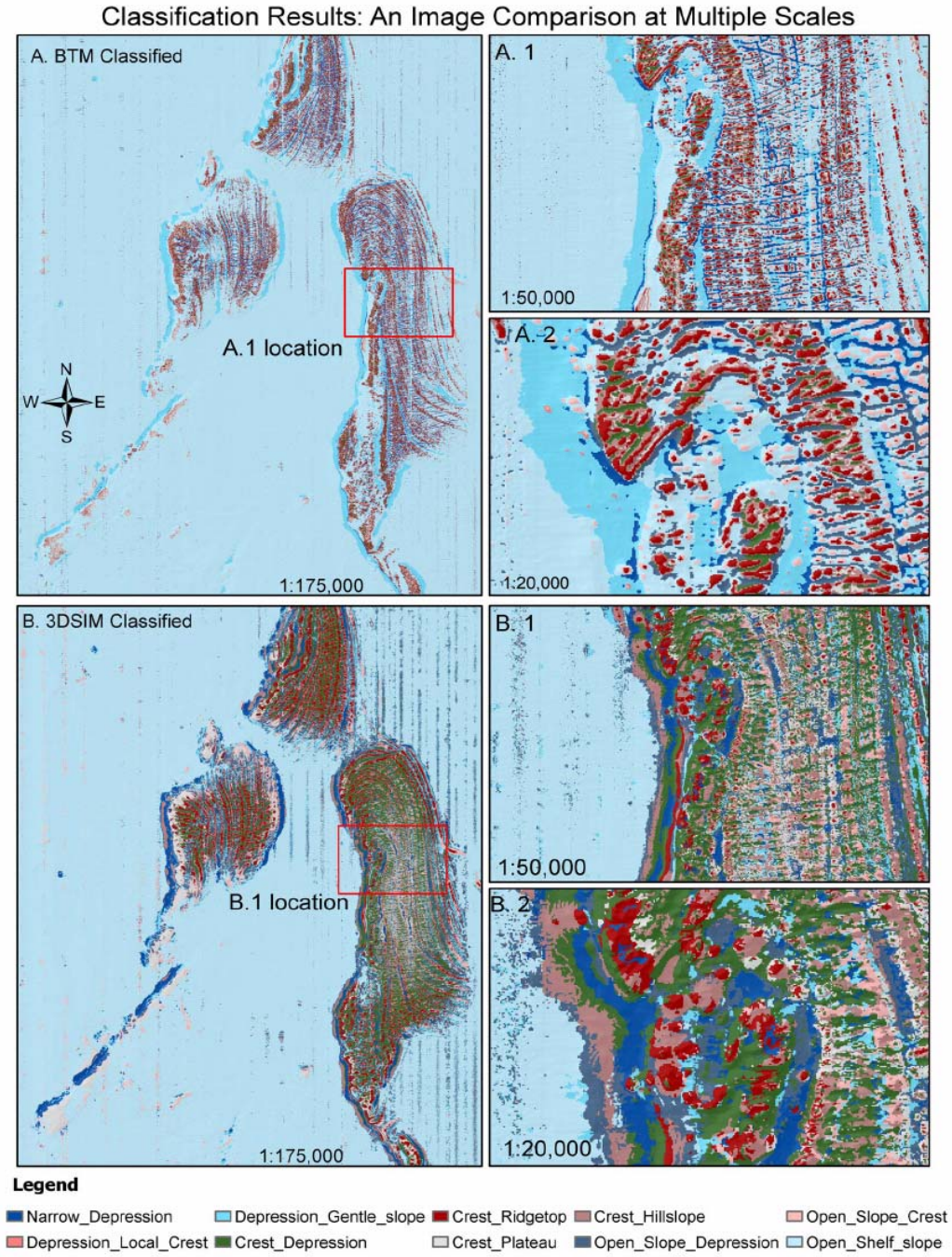
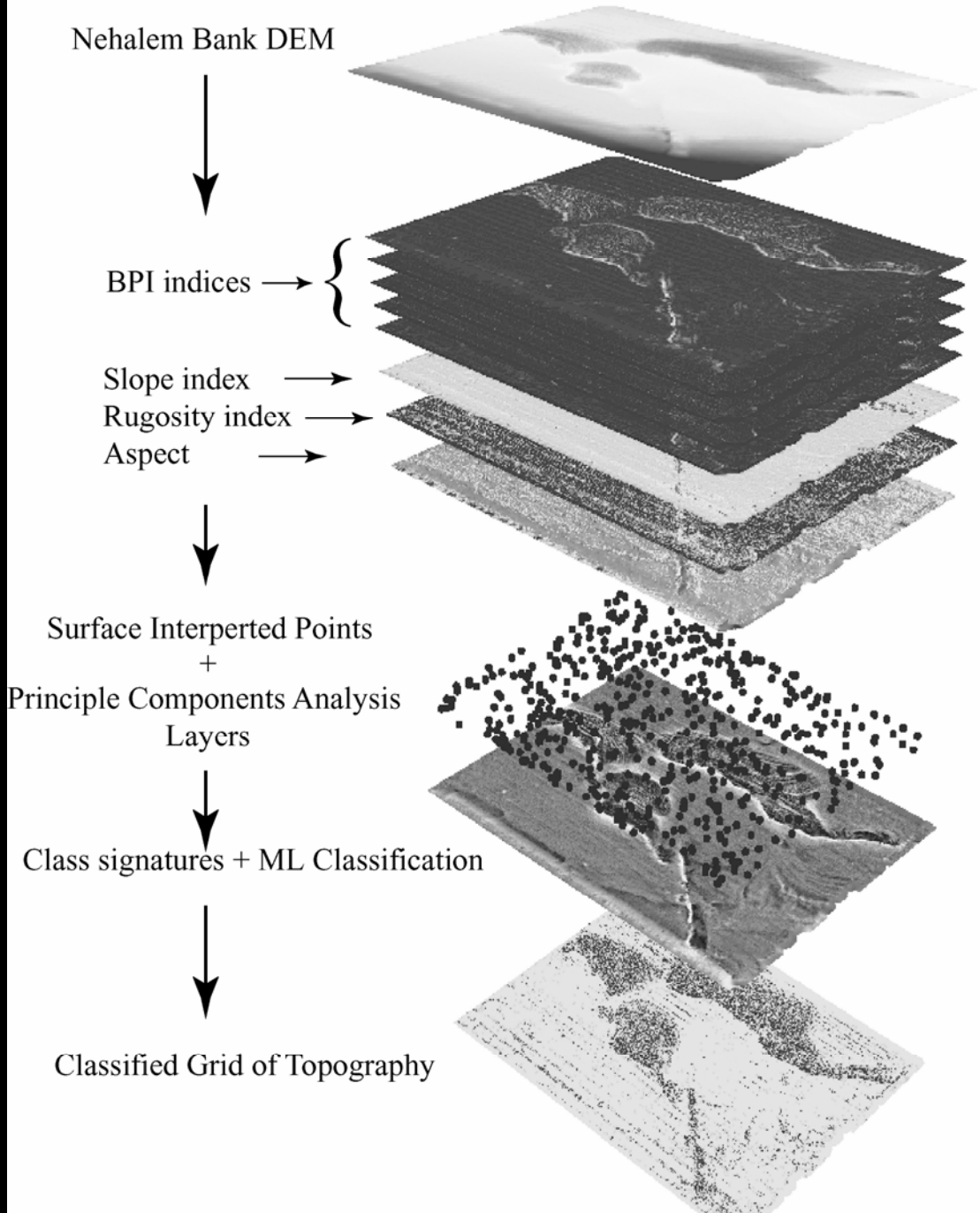


Figure 7.

With complete coverage for all of the Oregon shelf Banks (excluding those in the Territorial Sea), more sophisticated algorithm-assisted schemes can be used.

This project applied several hybrid schemes to Nehalem Bank, N. Oregon Shelf.

SIM Classification Process



Submersible ground truth is available and has been used in the Oregon Bank work, though it is not yet complete

Scientific Consensus and Action Plan for Mapping the Oregon Territorial Seafloor

Dawn Wright, Chris Goldfinger, OSU

and the

Oregon Territorial Sea Task Force

Importance of Statement and Action Plan

An expression of need…

to fill a critical gap in data

Apolitical …

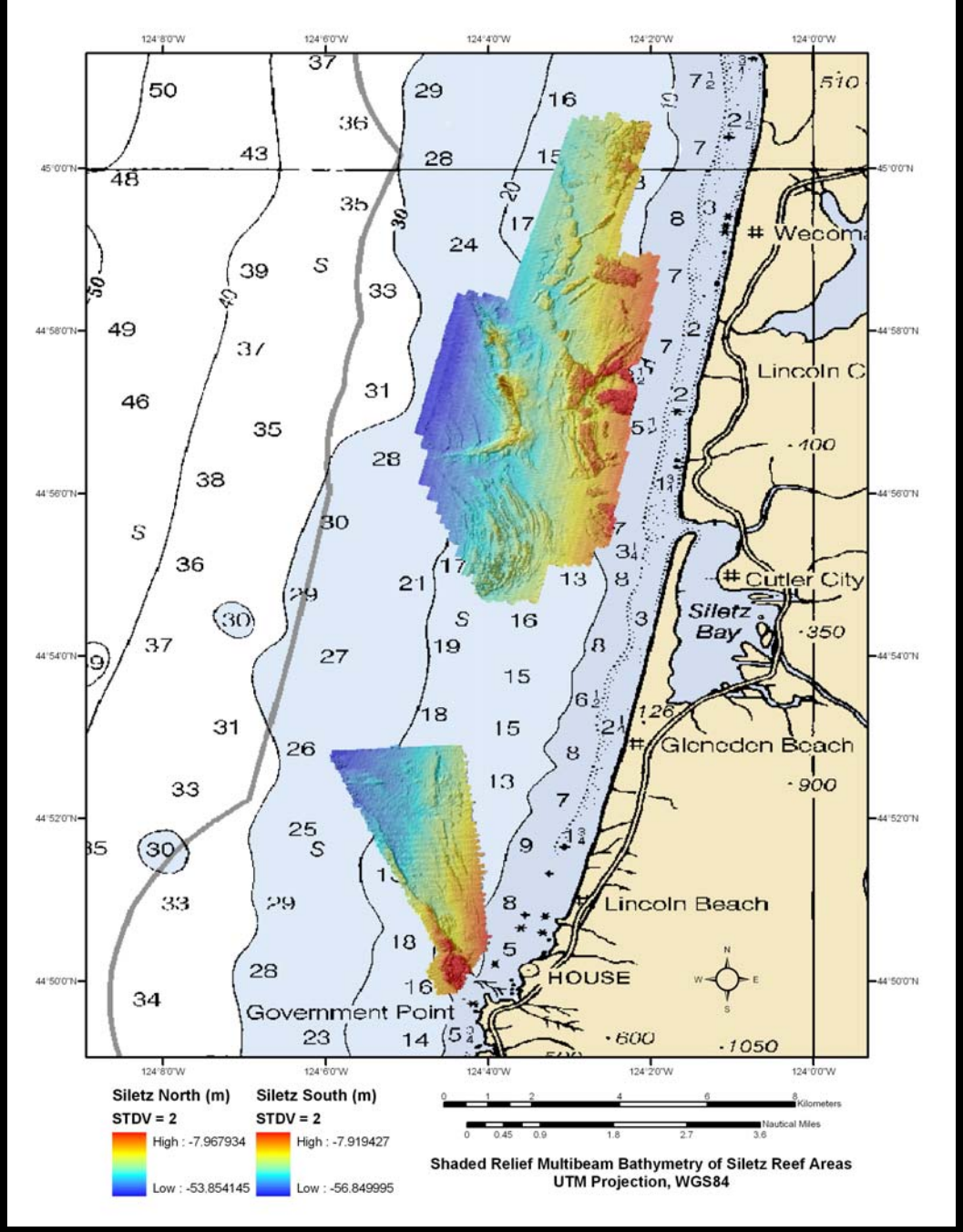
coalition of academic and agency *scientists*

An information tool to consider and use when making decisions for and with the governor

Part of governor's public position on ocean stewardship

A suggested process …

(communal funding, communal availability)



Oregon Department of Fish & Wildlife
Goldfinger et al., OSU Active Tectonics & Seafloor Mapping Lab

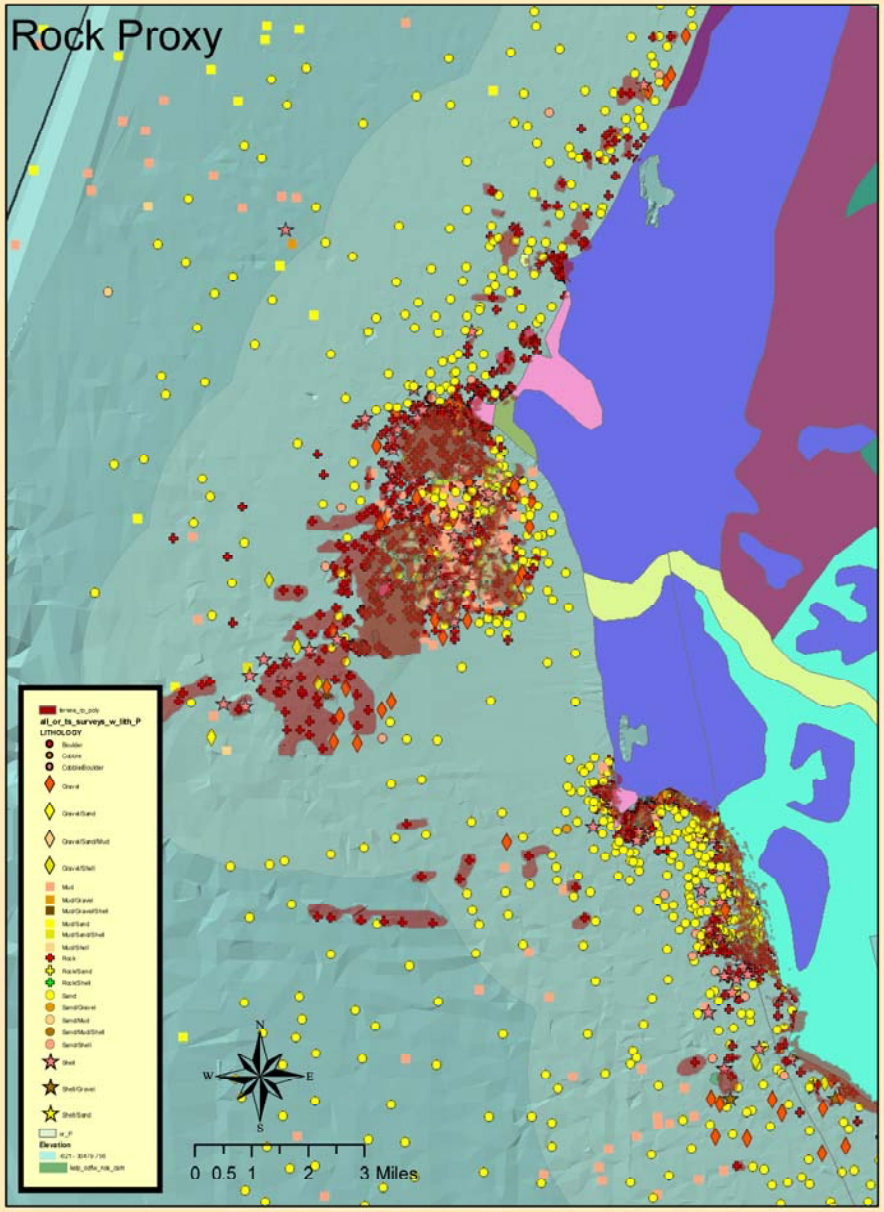
Applications

Tsunami Runup Models - Evacuation Planning	Habitat Restoration
Shoreline Change Analysis	Analyzing Storm Impacts - Coastal Erosion
Fisheries Management Commercial Fishing	*Marine Reserve Design*
Emergency Response, Impact Assessment	Port Security
Maps and Visualizations	Navigation Products, Services
Wave Energy	Oil Spill Response, Tracking
Coastal tourism, recreation	MANY others

And then came Marine Reserves…

Slated to the start of a nomination process in Spring 2008

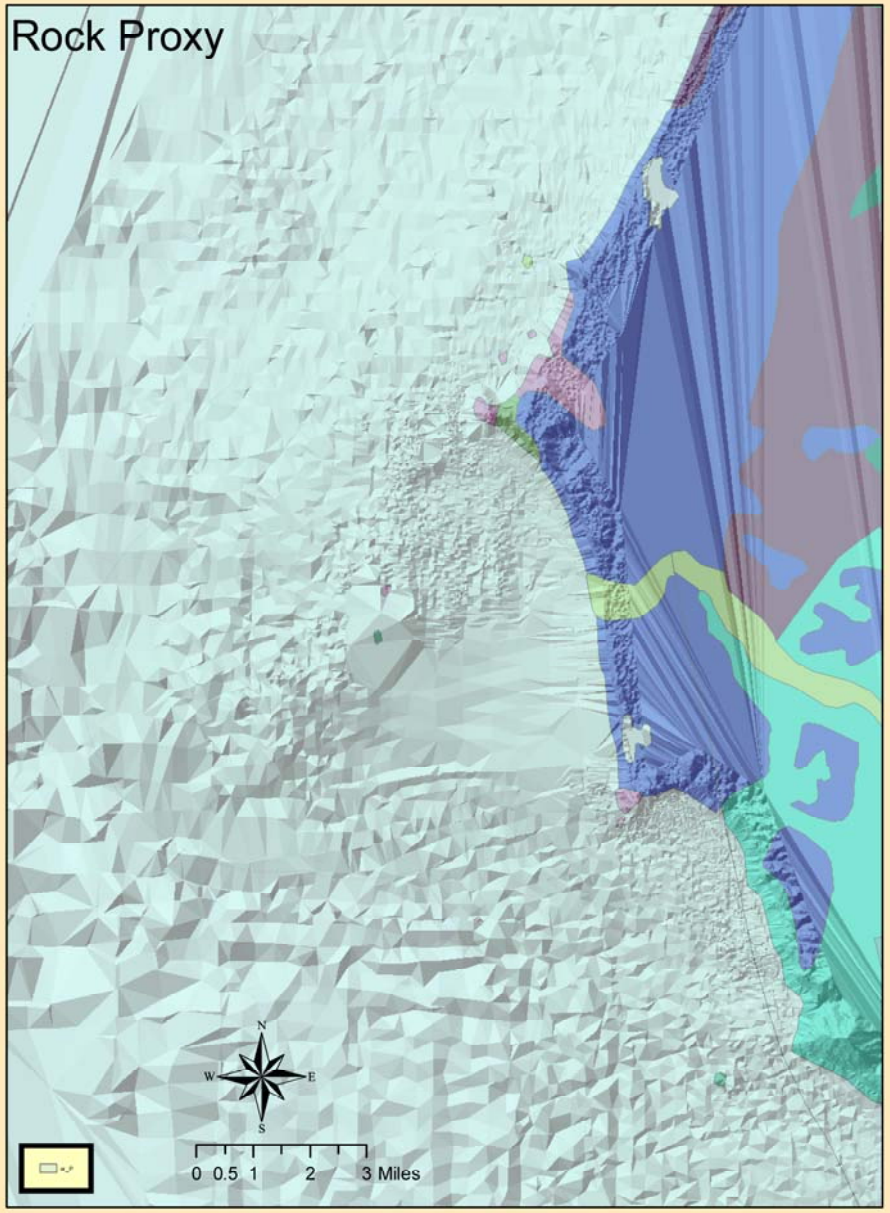
Agencies and Universities assembling data and GIS layers to support the nomination and evaluation process, mid 2008.



Since multibeam data only exists for small portions of the Oregon Territorial Sea, Marine Reserve siting is difficult.

An interim product based on a recently discovered cache of ~11,000 bottom samples is helping to fill in the gaps.

A similar quantity of data exists for Washington, and mapping is in progress for the Washington Territorial Sea as well.


Rock Proxy
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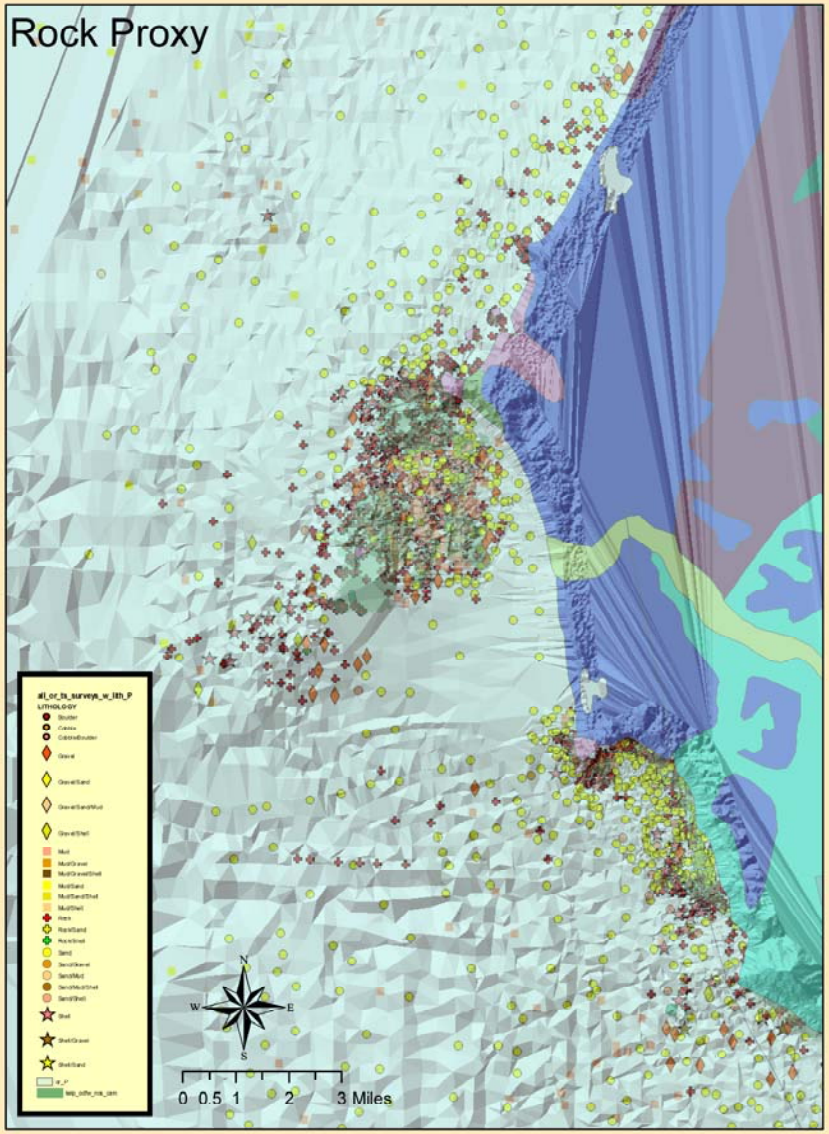
Rock Proxy
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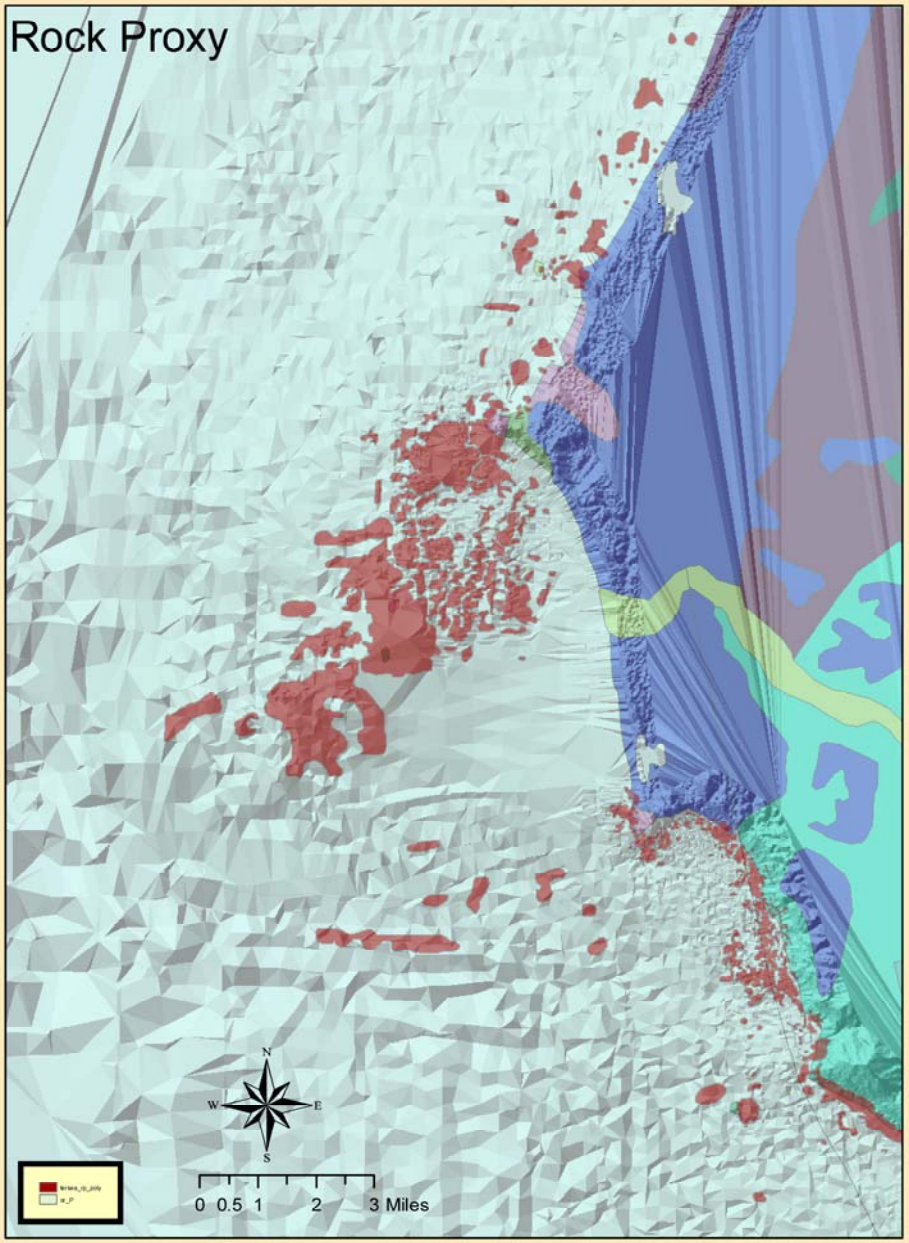
Rock Proxy
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0 0.5 1 2 3 Miles