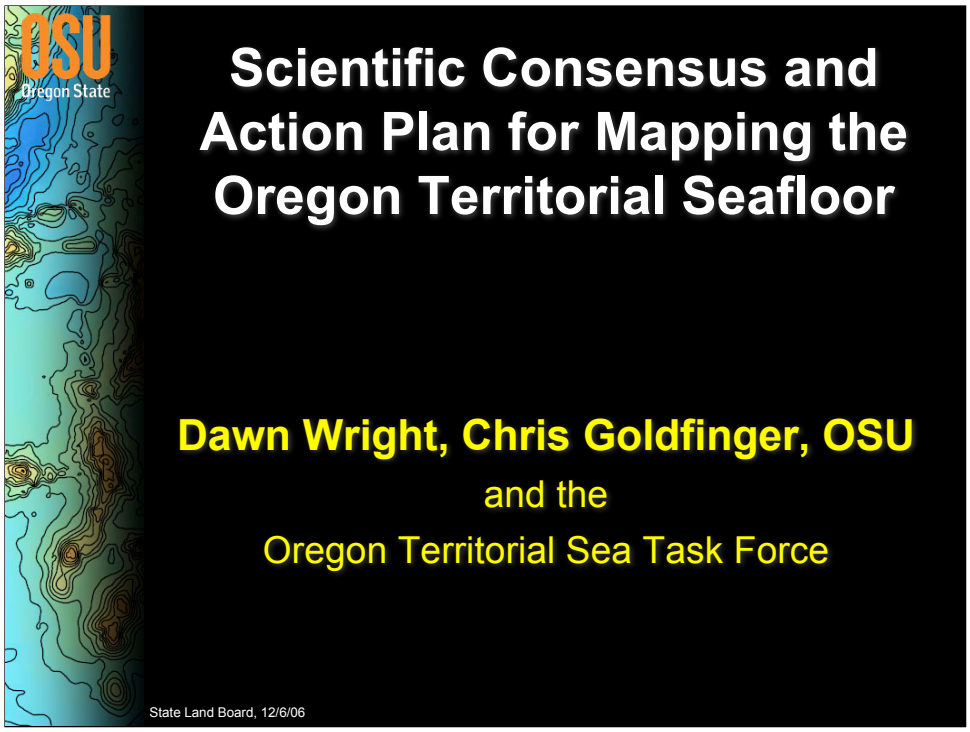
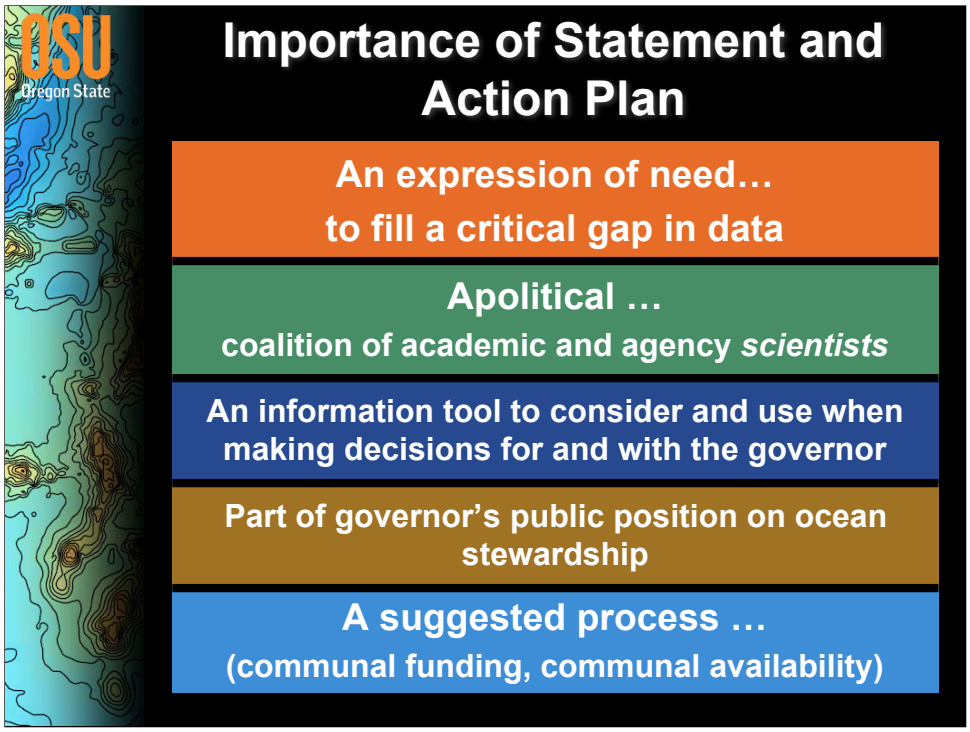
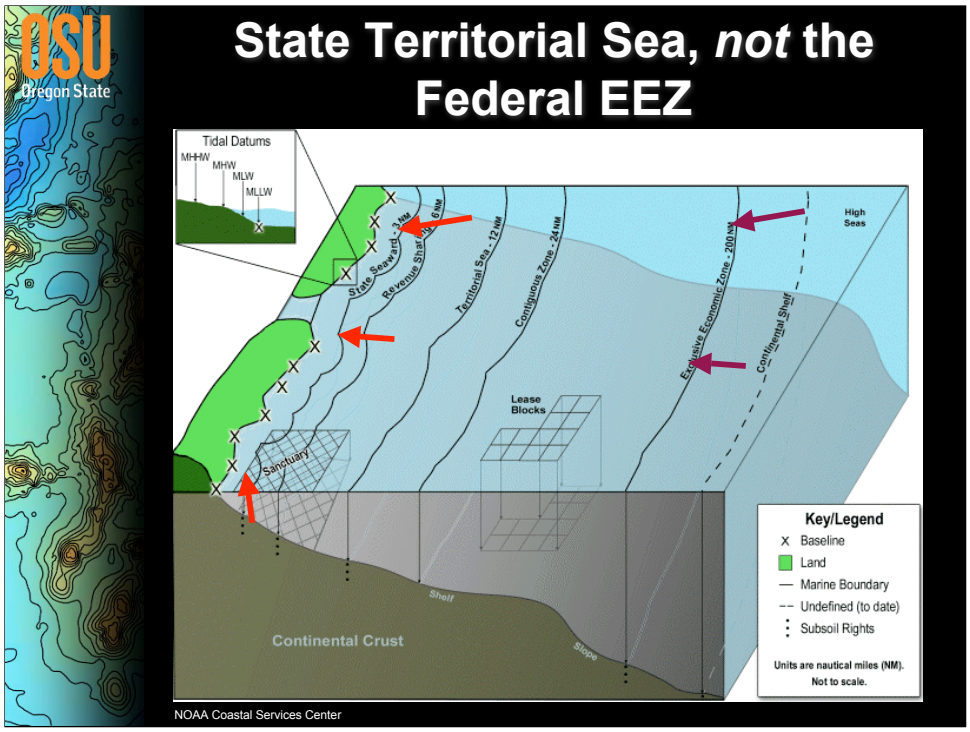


Thanks to Jed Roberts, Davey Jones Locker Lab, OSU, for PPT slide design

MANY thanks to Amy Windrope, PISCO Policy & Outreach Coordinator, for helpful discussions which improved this presentation!



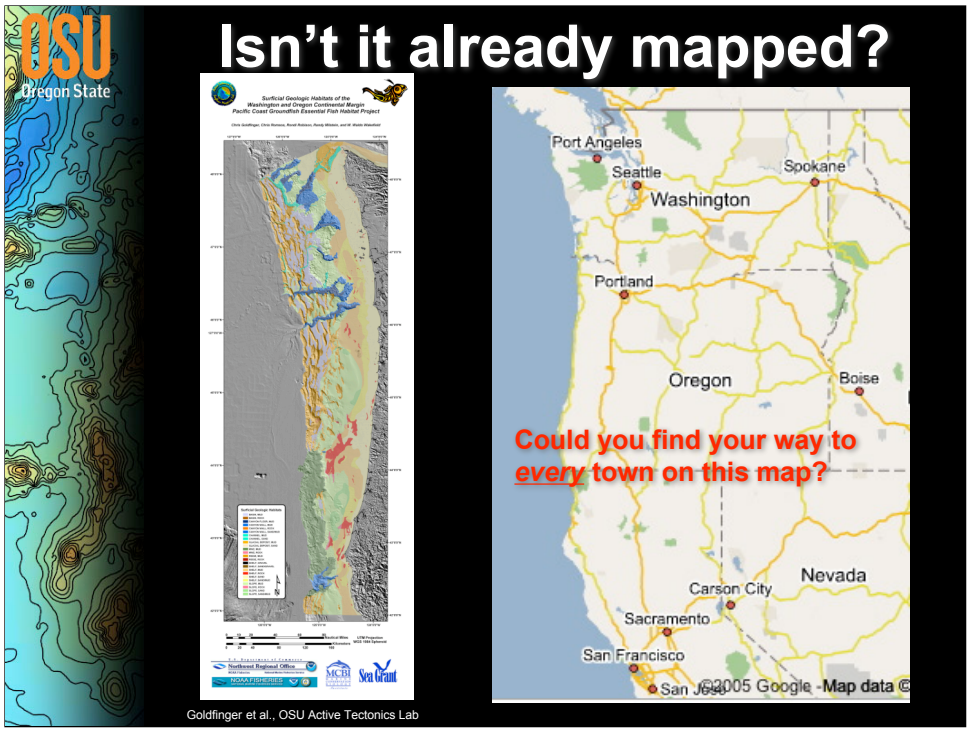
While limited mapping information does exist that allows for some management of coastal resources and assessment of habitats, having a more complete map of the Territorial Sea will allow improved decisions on many pressing issues, such as siting wave energy parks and dealing with the threat of coastal inundation from a tsunami.



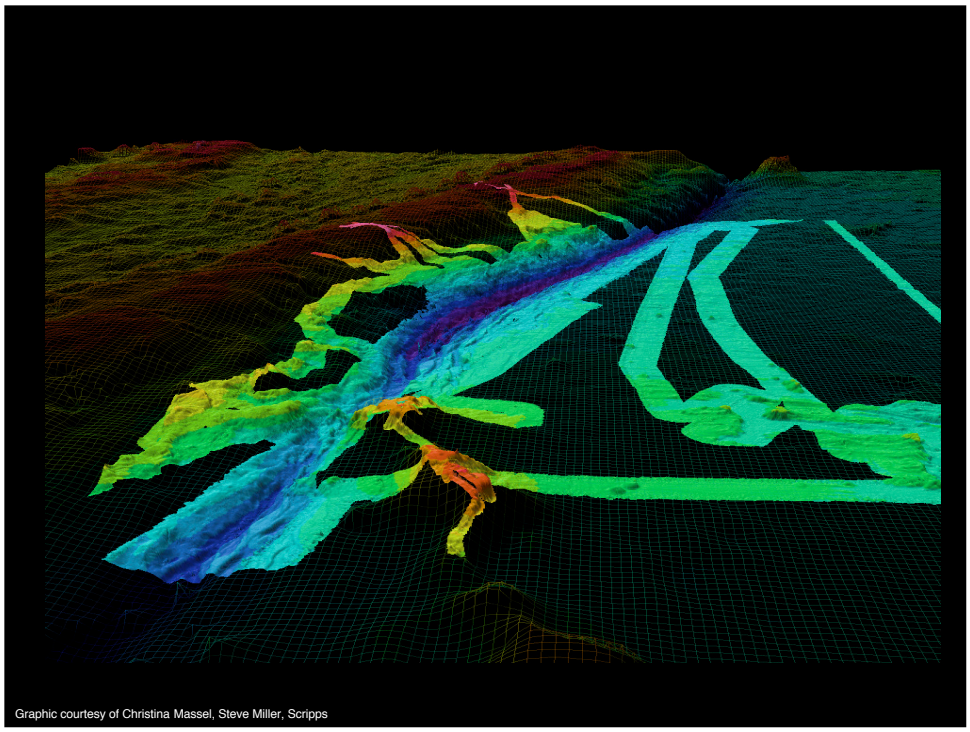
This is also about OREGON. EEZ is a federal boundary - territorial sea is OUR jurisdication, owned and managed by State Land Board

This is a STATE ISSUE and the state should be concerned with mapping it

Feds such as NOAA **NOS can't alone acquire all the new bathymetry needed, but NOS will always have to give priority to navigational channels in ports. USGS is broke.**



It's a question of the level of DETAIL that is needed for applications



Graphic courtesy of Christina Massel, Steve Miller, Scripps

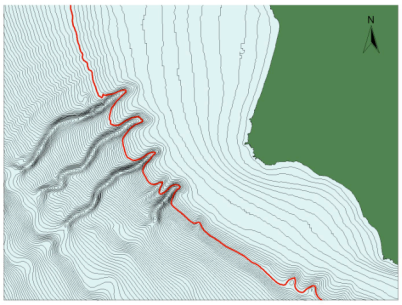
Detail comes alive at the higher resolution

Tonga Trench region - bathymetry simulated from satellite altimetry - resolution still too course for tectonic studies. Overlay is of multibeam bathymetry that is needed for tectonic studies (gathered from ships). Gaps in data still tremendous.

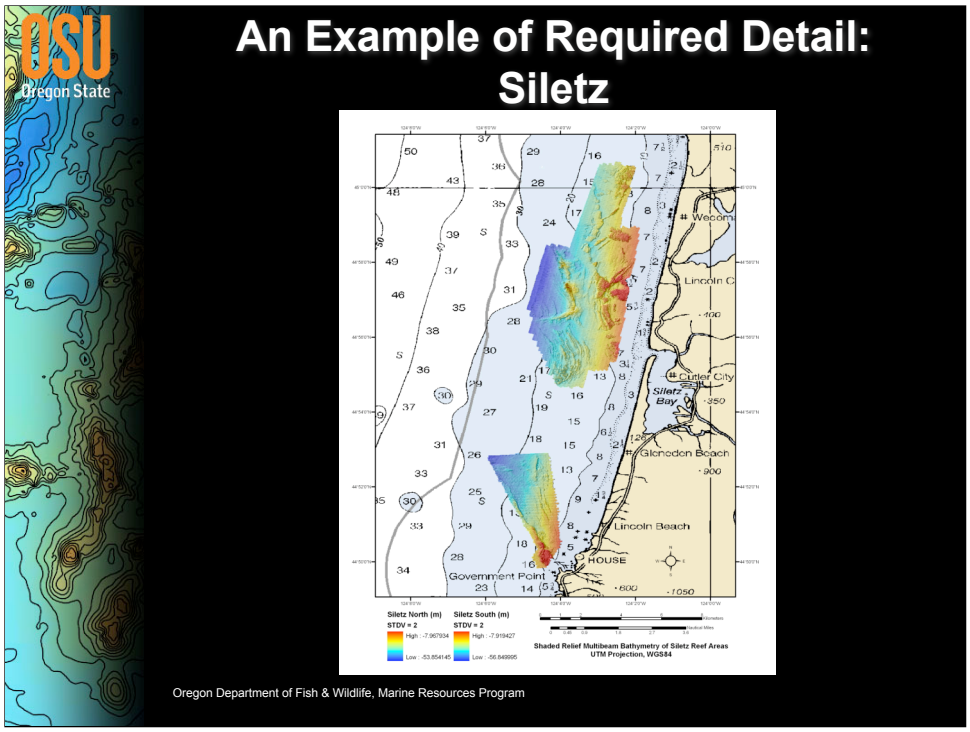
Details, Details…

100 m

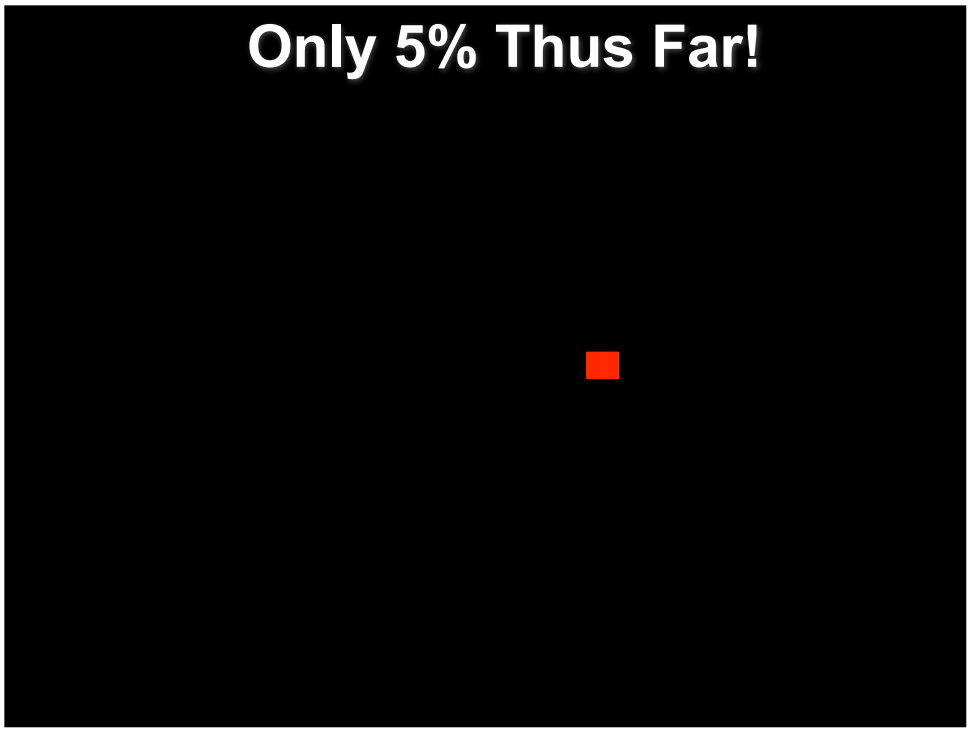
10 m



California Dept. of Fish & Game, Moss Landing Marine Labs



A new, updated nautical chart should be prepared based on these data as well?



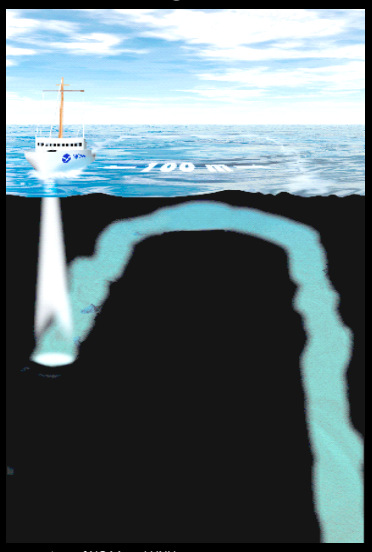
If this black screen represents all of the Oregon Territorial Sea zone, the red box represents 5%!

Without a coordinated effort, it will take 50 years or more at the present rate of progress. This pace is much too slow to meet the needs of coastal erosion studies, tsunami planning and resource management decision-making.

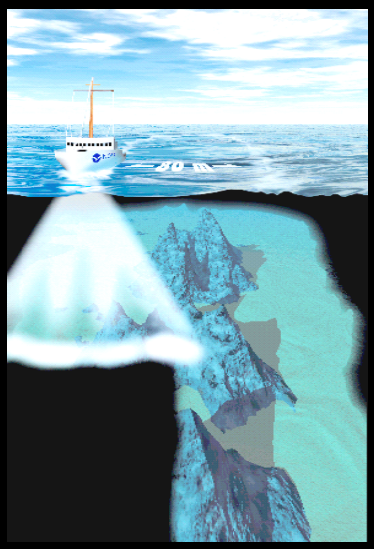
Seafloor Mapping: How and What?

OSU Oregon State

Single Beam

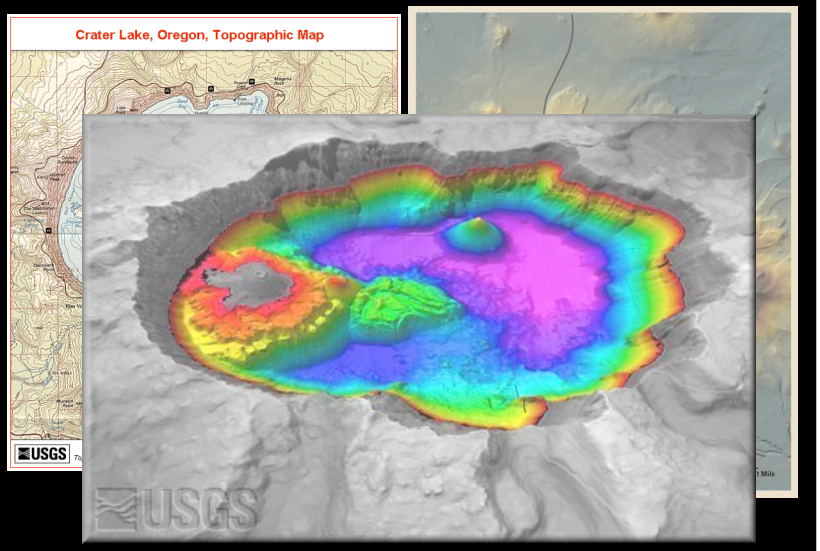


Multibeam

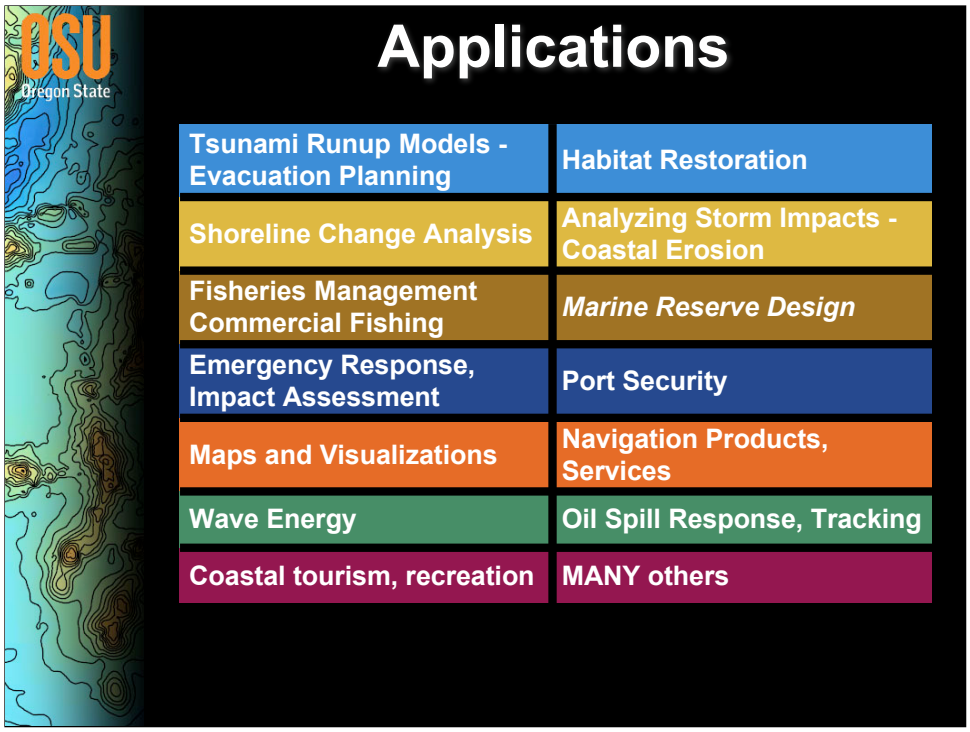


Images courtesy of NOAA and UNH

Topo/Bathy is the Fundamental Base "Layer"



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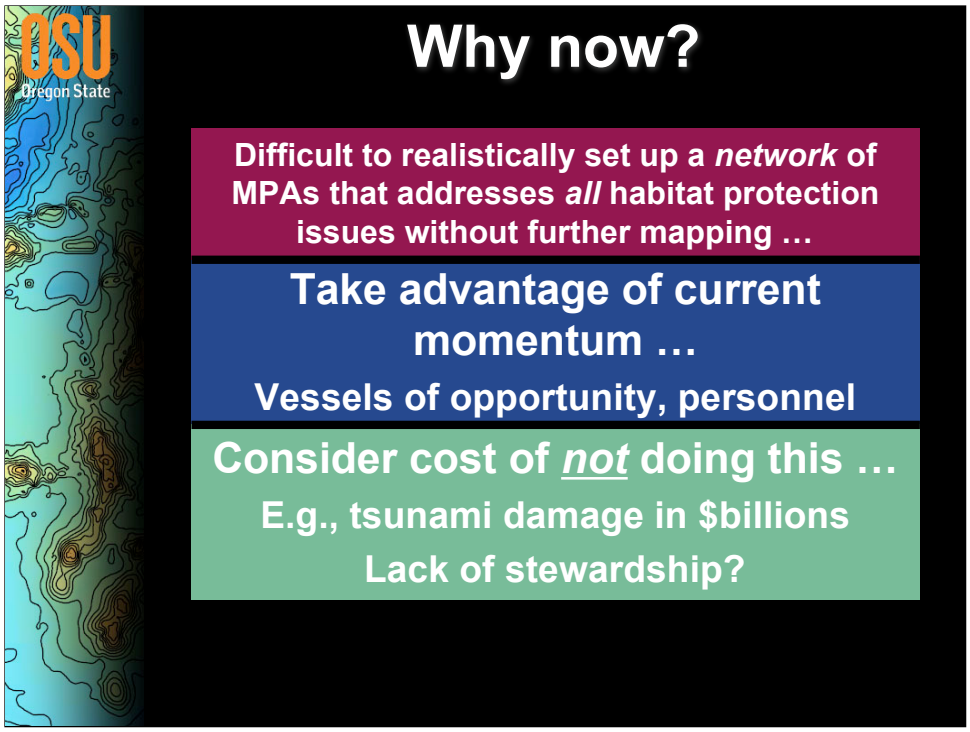
Applications
Tsunami Runup Models - Evacuation Planning
Habitat Restoration
Shoreline Change Analysis
Analyzing Storm Impacts - Coastal Erosion
Fisheries Management Commercial Fishing
Marine Reserve Design
Emergency Response, Impact Assessment
Port Security
Maps and Visualizations
Navigation Products,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



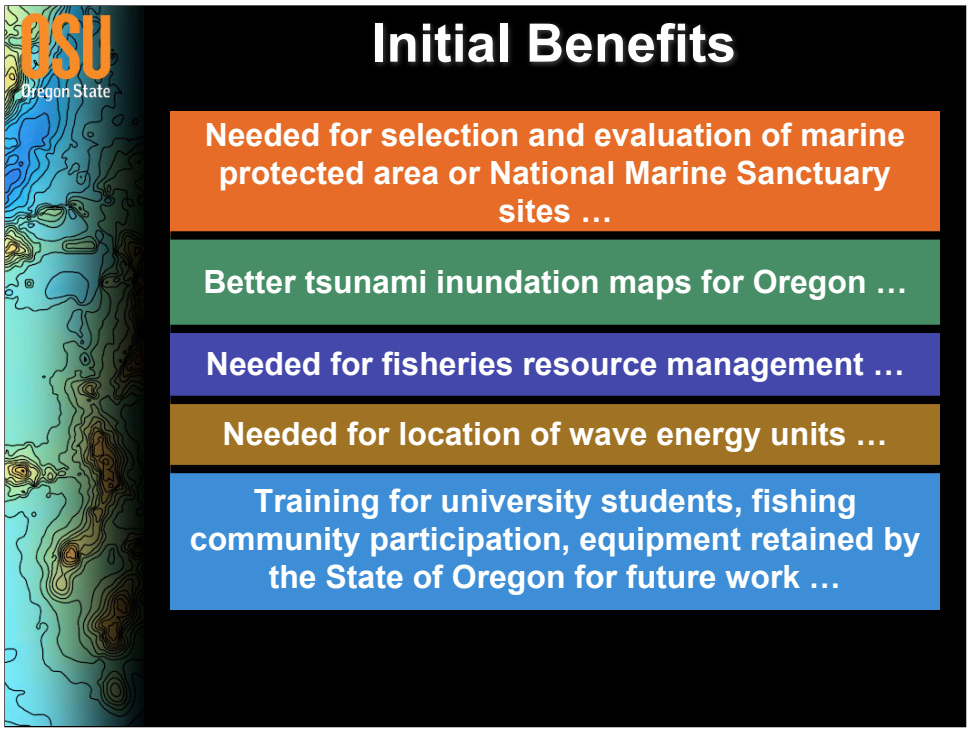
OPAC can move on the MRV designation process - we can protect some key areas with our current information BUT …

Under $6M, portable multibeam system, fishing boats, RIB boats

using average water depth, average swath width, average vessel speed etc., and based on using academic and agency people,

contracted outside OSU (no overhead)

“Build it and they will come” effect - people will additional proposals to work with further with these data after the initial collectiion, processing, and distribution - will be leverage into many, many important and useful projects for all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Initial Benefits
Needed for selection and evaluation of marine protected area or National Marine Sanctuary sites …
Better tsunami inundation maps for Oregon …
Needed for fisheries resource management …
Needed for location of wave energy units …
Training for university students, fishing community participation, equipment retained by the State of Oregon for future work …


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