

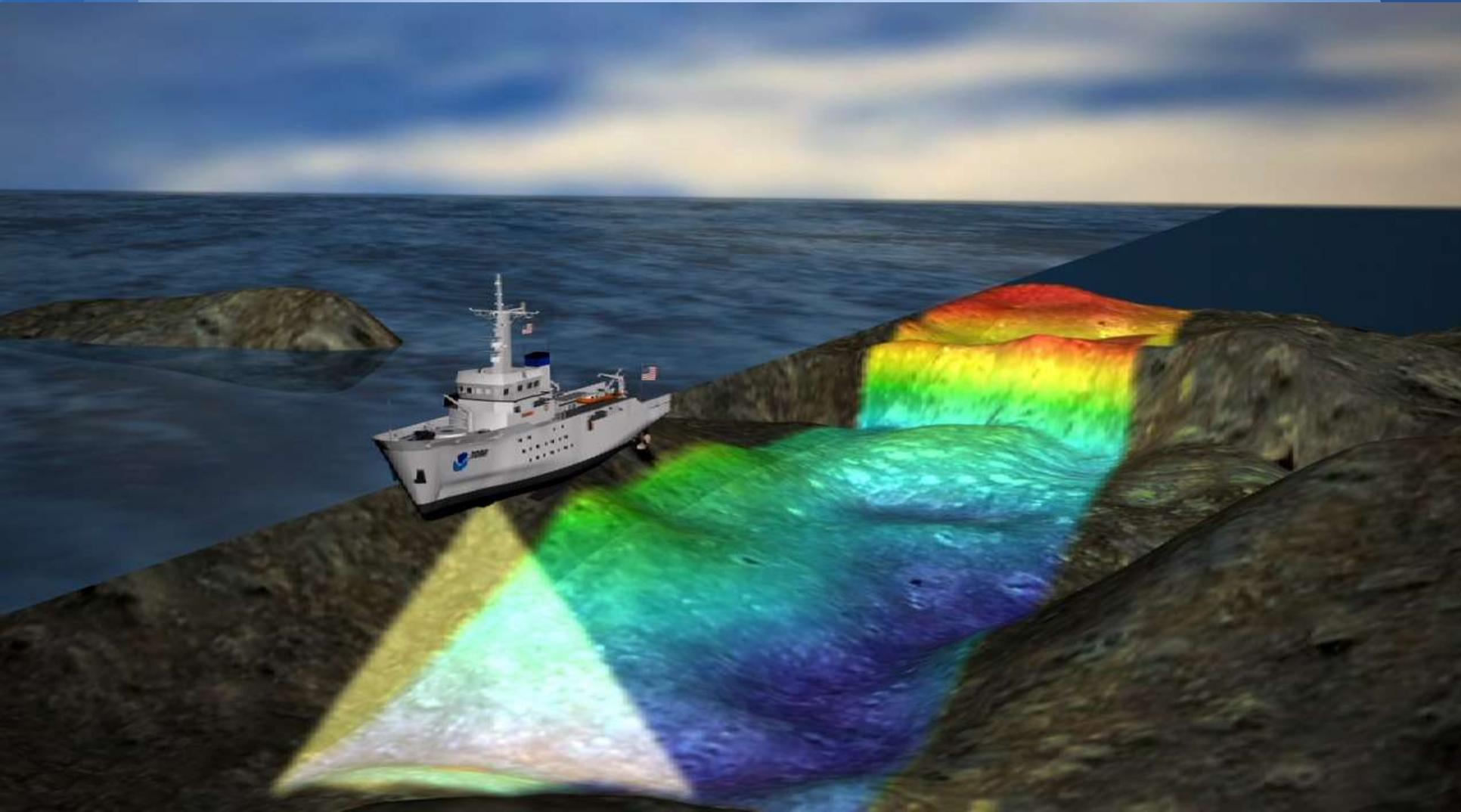
“State” of the State of Seafloor Mapping Data on Washington’s Outer Coast

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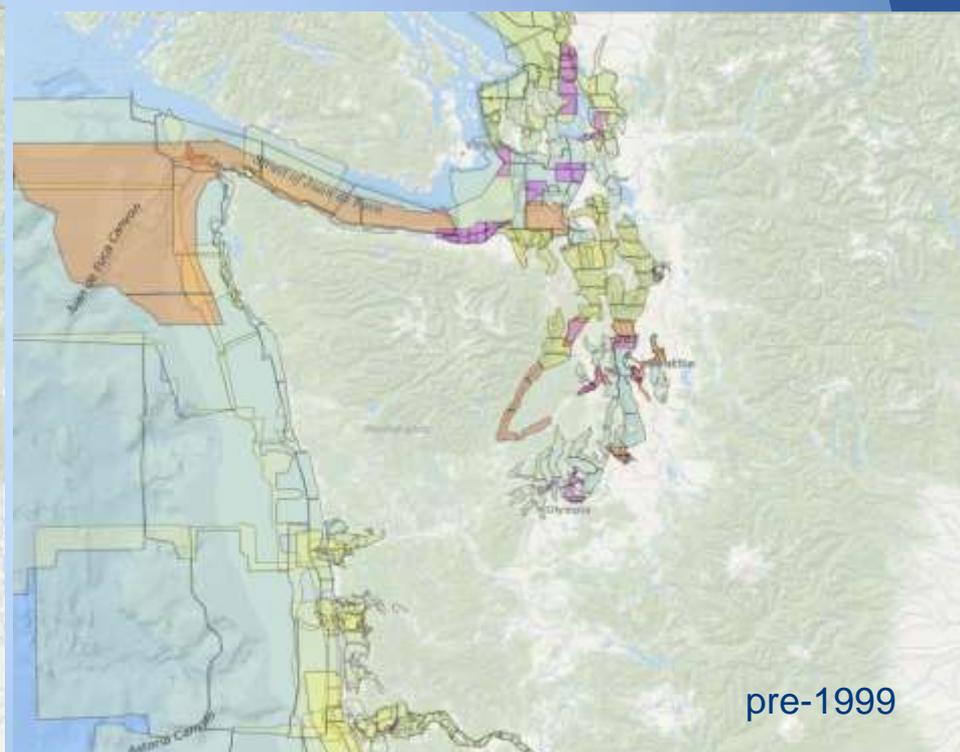
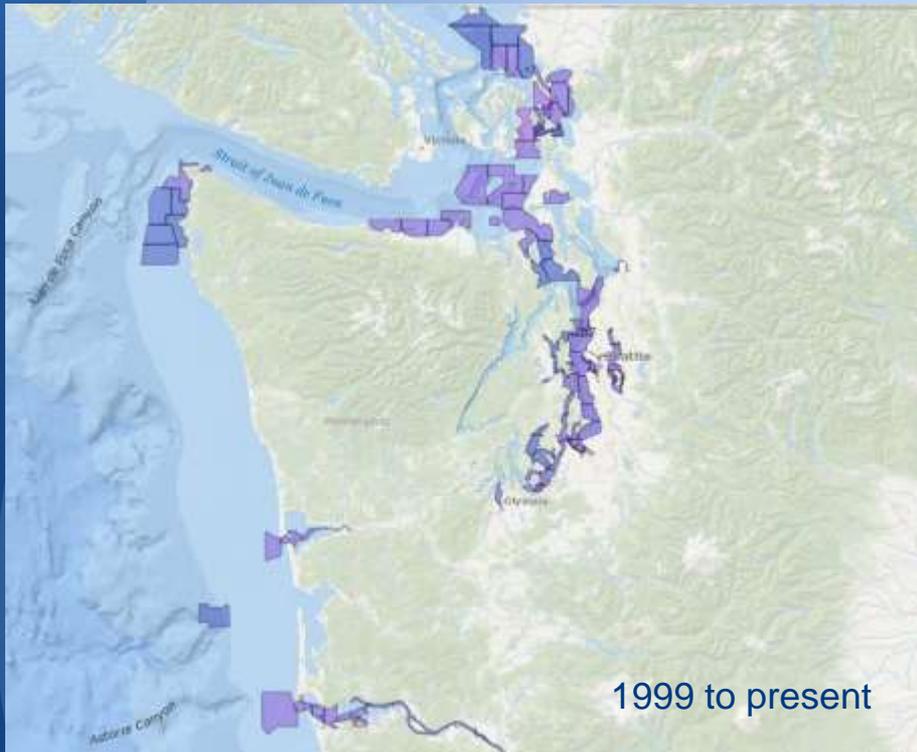
Prioritizing Seafloor Mapping for Washington’s Pacific Coast
October 26, 2014



What's Mappen'ing?!



Contemporary Multibeam vs. Single Beam and Leadline



NOAA Office of Coast Survey seafloor data as shown on the National Geophysical Data Center data portal

Challenges on the Outer Coast

- Exposed conditions of the outer coast make surveying difficult and weather dependent (even lidar)
- Best done with a larger vessel (more expensive)
- Only two small harbors
 - Neah Bay and La Push
 - Westport is significantly south

Exposed coastline, crab pots, kelp, fog, rocky shoreline



Olympic Coast National Marine Sanctuary

- One of 14 national marine protected areas
- 2,408 square nautical miles
- Poorly mapped!

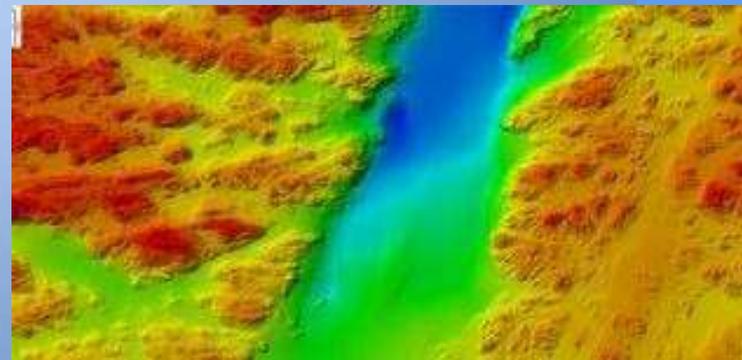
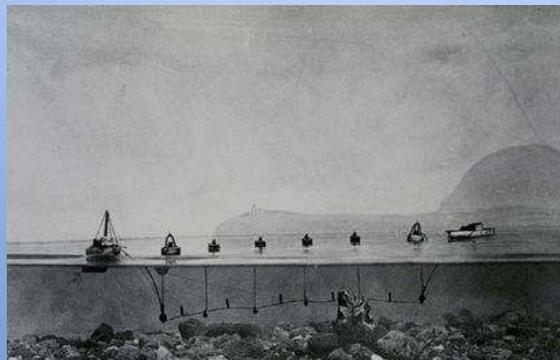


Office of Coast Survey

- Mapping Priorities
 - For Office of Coast Survey (OCS), the priority is based on navigational significance and charting requirements
- Support Capabilities
 - Shoreline, tides, VDatum, survey requirements, training and mapping expertise
 - Integrated Ocean and Coastal Mapping

Not all data are created equal!

- Varies across users and surveys
- Each stakeholder has a unique purpose and subsequent quality requirement for data collection (density, backscatter, vertical and horizontal datums, meta data)
- This has impacts on other data consumers
- Quality varies based on needs, budgets, expertise, weather, equipment, etc

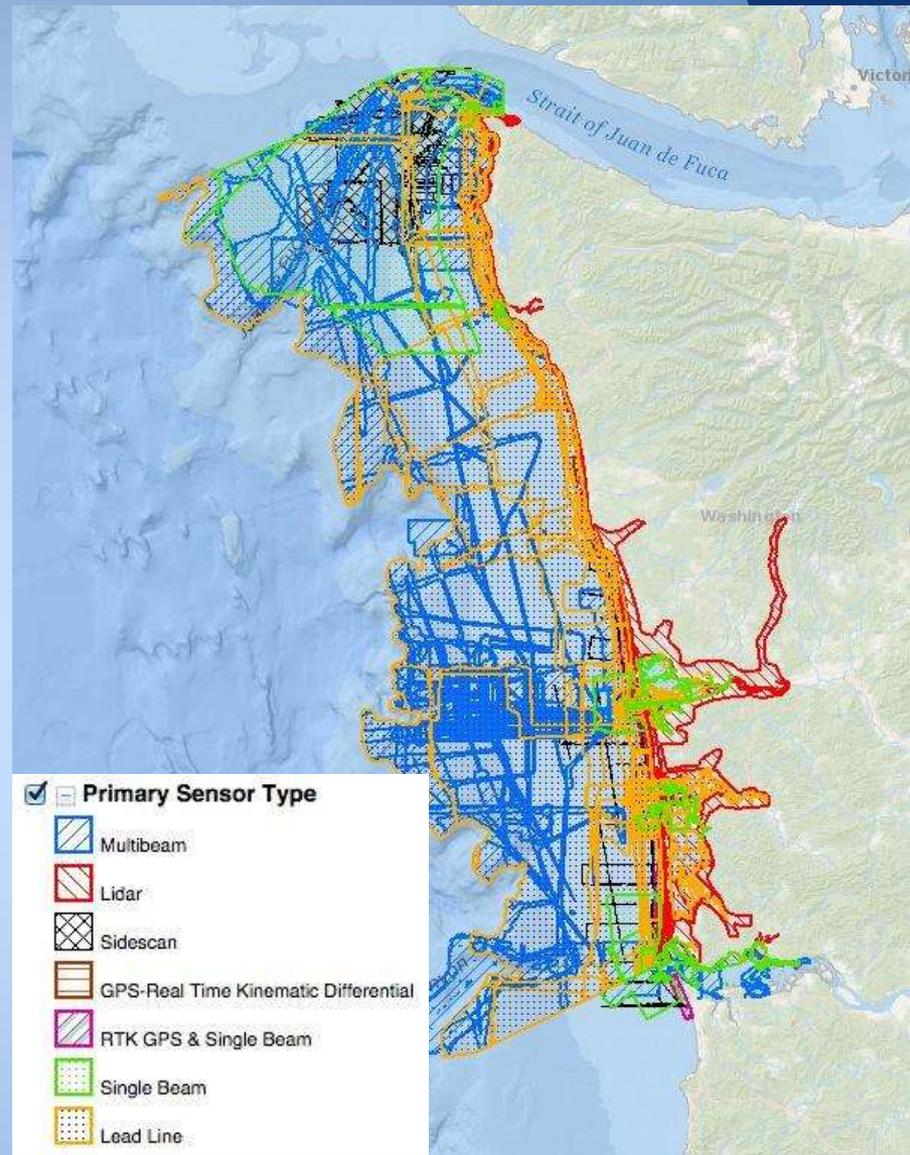
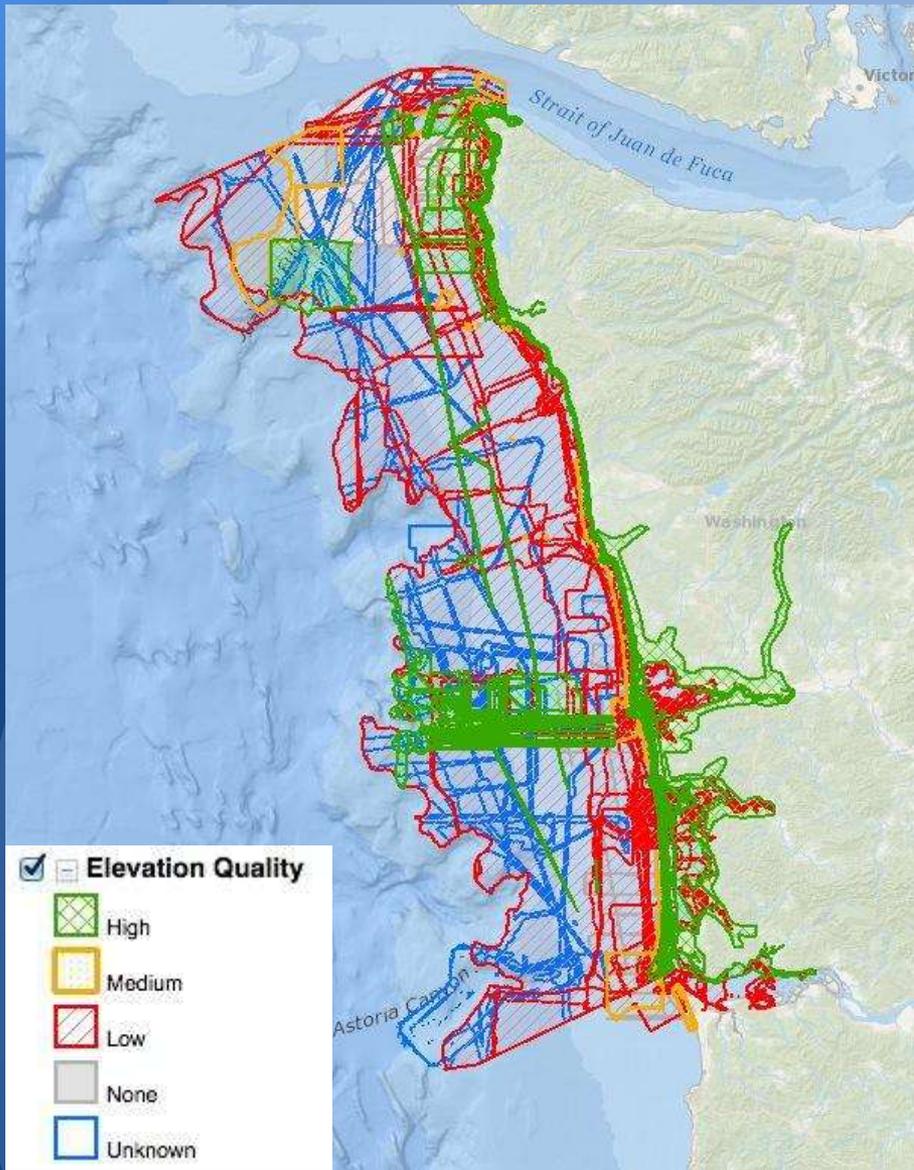


Washington State Spatial Prioritization Data Viewer

- The portal is intended to provide a quick representation of data coverage and quality
- Actual data holdings are not part of the maps
- A valuable tool to help prioritize areas for new mapping effort decisions
- Seek feedback on the portal - does it give enough information?

http://maps.coastalscience.noaa.gov/dataviewer/dataviewer.html?id=WA_MSP





http://maps.coastalscience.noaa.gov/dataviewer/dataviewer.html?id=WA_MSP

Collaboration

- Mapping is expensive!
 - It makes sense to collaborate whenever possible to avoid duplication of efforts and dollars unwisely spent
- Not just with mapping efforts, but also how the data is shared.



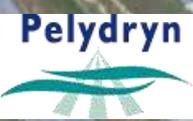
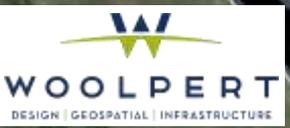
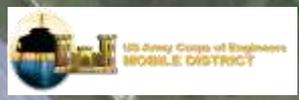
Rolling Deck to Repository (R2R)



Joint Airborne Lidar Bathymetry Technical Center of Expertise



Annual Technical Workshop June 2014, Mobile



National Coastal Mapping Program

- Develop regional, repetitive, high-resolution, high-accuracy elevation and imagery data
- Build an understanding of how the coastal zone is changing
- Facilitate management of sediment and projects at a regional, or watershed scale

(500 m) Topo

Hydro (1,000 m)

National Coastal Mapping Progress

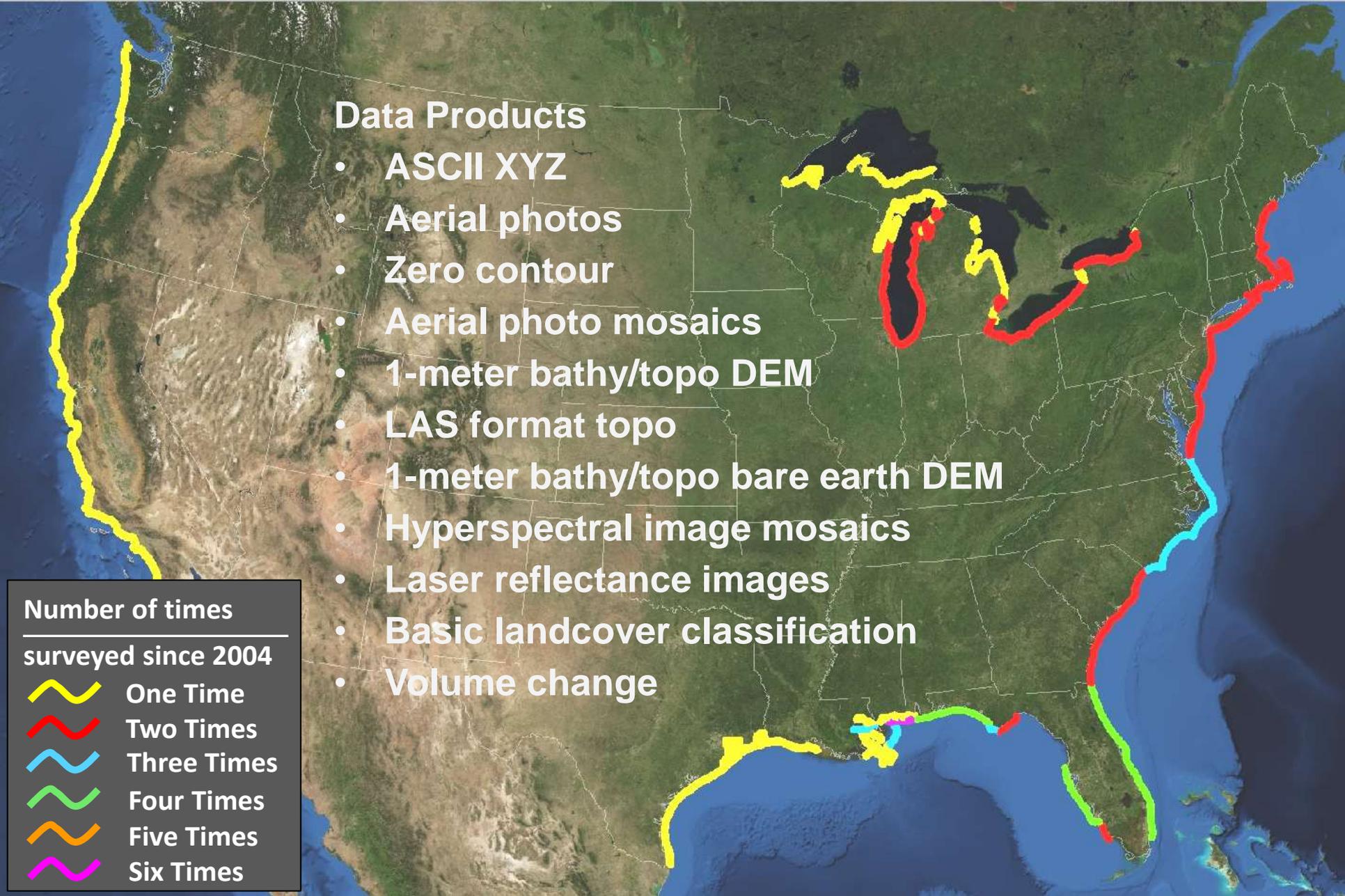
Data Products

- ASCII XYZ
- Aerial photos
- Zero contour
- Aerial photo mosaics
- 1-meter bathy/topo DEM
- LAS format topo
- 1-meter bathy/topo bare earth DEM
- Hyperspectral image mosaics
- Laser reflectance images
- Basic landcover classification
- Volume change

Number of times

surveyed since 2004

-  One Time
-  Two Times
-  Three Times
-  Four Times
-  Five Times
-  Six Times



The State of the State?

- The State of the State for the outer coast is poor.
- The problem is three fold:
 - Sparse coverage, outdated technology and inferior quality
 - Challenging to find where data has been collected and even more challenging to obtain it
 - Previous survey efforts were mostly uncoordinated and duplication of effort is evident

Recommendations

- A thorough review of the current inventory is essential in continuing outer coast mapping efforts
 - ensure no duplication of effort
 - identify all stakeholders and foster collaboration
 - allow prioritization
 - improve data quality
 - agree upon a common data standard
- Stand up a working group to identify challenges and how to address them collectively