

# IOOS DATA MANAGEMENT AND COMMUNICATION (DMAC) ANNUAL MEETING

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Management

# INTRODUCTION

- 20+/16
- GIO = NOAA OCIO + NOS OCM
- NOAA representative to DMAC Steering Team 2005-7
- NOAA CMSP Data and Tools Team
- FGDC, GOS, GP, IOCM, ICAN, OGC.....



# TOPICS

- National Geospatial Landscape
- Marine Planning, IOOS and Geospatial Coordination
- NOAA's Related Geospatial Activities
- Discussion / Questions

# RECENT HISTORY OF NATIONAL GEOSPATIAL COORDINATION

## ■ 1990s

- [1990] Creation of the Federal Geographic Data Committee [FGDC]
- [1994] Executive Order on National Spatial Data Infrastructure [NSDI]

## ■ 2000s

- [2005] E-government (Bush) → Geospatial One-Stop released
- [2005] Ocean.US DMAC
- [2009] Open Government (Obama) → data.gov released

## ■ 2010s

- [2010] President's 2011 Budget → Geospatial Platform Concept
- [2010] Data Integration Framework successfully completed; DMAC 1.0 launched - IOOS Data Catalog
- [2011] Geospatial One-Stop migrated to new geo.data.gov
- [2011] ocean.data.gov community released on data.gov
- [2011] Geospatial Platform released [www.geoplatform.gov]
- ***[2013] Merging of data.gov and geoplatform.gov catalogs using CKAN?***

# DATA.GOV



- White House Initiative
- Increase public access to high value, machine readable datasets
- Federal, State, University, NGO
- Increasing number of topical communities withing data.gov → Ocean Community

# OCEAN.DATA.GOV

- National Ocean Council (NOC) leads the effort
- User requirements were gathered from existing documentation; the team continues to work with ROPs to refine requirements
- GSA via data.gov provides the underlying IT infrastructure and website development support
- NOC Data and Information Working Group assisting with content and providing subject matter expertise
  - Group is led by Jon Andrechik (IOOS DMAC Steering Team Member, USCG, currently at NOC)
  - David Stein: NOAA MarineCadastre.gov; Regional Marine Planning
  - Jeff DLB: IOOS background; NOAA Information Architecture

# WHAT DOES OCEAN.DATA.GOV INCLUDE?

- Catalog of Spatial Data and related Information Products
- Links to Decision Support Tools
- Technical Guide
- Marine Planning Portal Network
- Links into Regional Planning, IOOS, and state data portals



***So What? This is another venue to highlight IOOS RA portals and data streams and allow users to find and access IOOS data.***

# NEW CKAN-BASED CATALOG

- One registration process [*planned*]
- Harvest
  - Geoportal Server
  - WAF
  - Z39.50
  - CS-W
- Search Facets
- Web Service Preview
- Single Sign On
- Support for "Marketplace"
- Utilized by Geoplatform.gov

The screenshot displays the 'DATA CATALOG' interface. At the top, there's a header with 'DATA CATALOG' and navigation links for 'Organizations' and 'Interactive Datasets'. Below the header, a note explains that only datasets marked as 'Federal' are subject to the U.S. Federal Government's Data Policy. The main content area is divided into two columns. The left column contains filters: 'Filter by location' with a map of North America, 'Dataset Type' with a list of types (geospatial: 85), 'Tags' with a list of tags (oceans: 42, outer continental s...: 32, bering sea: 32, biological: 31, beaufort sea: 29), and 'Formats' with a list of formats (HTML: 15, Esri REST: 9, pdf, kml/kmz, shp, ...: 6, gif: 4). The right column shows the search results for '124 datasets found'. It includes a search bar, a dropdown for 'Order by' (set to Relevance), and a list of organization types and groups. The first three results are highlighted with a 'Federal' tag: 'Aerial surveys of ringed seals (Phoca hispida) on fast and pack ice in the central Beaufort Sea of Alaska, 1985-1987 and 1996-1999 (NODC Accession 0000931)', 'Alaska Groundfish Stocks Survey, 1982-2011', and 'Anchorage Areas in U.S. Waters'. Each result includes a brief description and a link to the dataset.

**DATA CATALOG**

**/ Datasets**

Note that only datasets marked as "Federal" are subject to the U.S. Federal Government and Data.gov's Data Policy. Non-federal participants (e.g., universities, organizations, and tribal, state, and local governments) maintain their own data policies. It is important that users understand the data policies of participating entities in order to best utilize these datasets. A description of this catalog and information about the datasets presented and associated metrics is available [here](#)

**Filter by location** Clear

Enter location...

**124 datasets found** Order by: Relevance

Organization Types: Federal Government x Groups: Ocean Community x Organizations: National Oceanic and Atmospheric Administration, Department of Commerce x

**Aerial surveys of ringed seals (*Phoca hispida*) on fast and pack ice in the central Beaufort Sea of Alaska, 1985-1987 and 1996-1999 (NODC Accession 0000931)**

National Oceanic and Atmospheric Administration, Department of Commerce — These datasets include counts of ringed seals (*Phoca hispida*) and other marine mammals made during aerial surveys of ringed seals on fast and pack ice of the...

HTML HTML HTML

**Alaska Groundfish Stocks Survey, 1982-2011**

National Oceanic and Atmospheric Administration, Department of Commerce — The Resource Assessment and Conservation Engineering Division (RACE) of the Alaska Fisheries Science Center (AFSC) conducts bottom trawl surveys to monitor the...

csv (inside zip)

**Anchorage Areas in U.S. Waters**

National Oceanic and Atmospheric Administration, Department of Commerce — The GIS REST service for "Anchorage Areas in U.S. waters" provides raster maps of the anchorage areas in which vessels anchor or may anchor (as defined by IHO...

Esri REST Esri REST

**Bathymetry Data Viewer**

National Oceanic and Atmospheric Administration, Department of Commerce — The Bathymetry Data Viewer is an interactive map providing map-based discovery, descriptions, and download capability for bathymetric survey data and digital...

variable



# ONE MORE FEDERAL PIECE: GEOPLATFORM.GOV

- OMB directed FGDC in FY11 Passback to develop a 'Geospatial Platform'
- Shared cloud-computing infrastructure to host data and applications [Esri ArcGIS Online / commodity cloud]
- Utilizes CKAN catalog and ArcGIS Online to manage back-end
- Supports non-Esri and OGC service types
- The "geospatial component of data.gov"

*So what?*

*Potential for hosting regional data and maps in the future.*

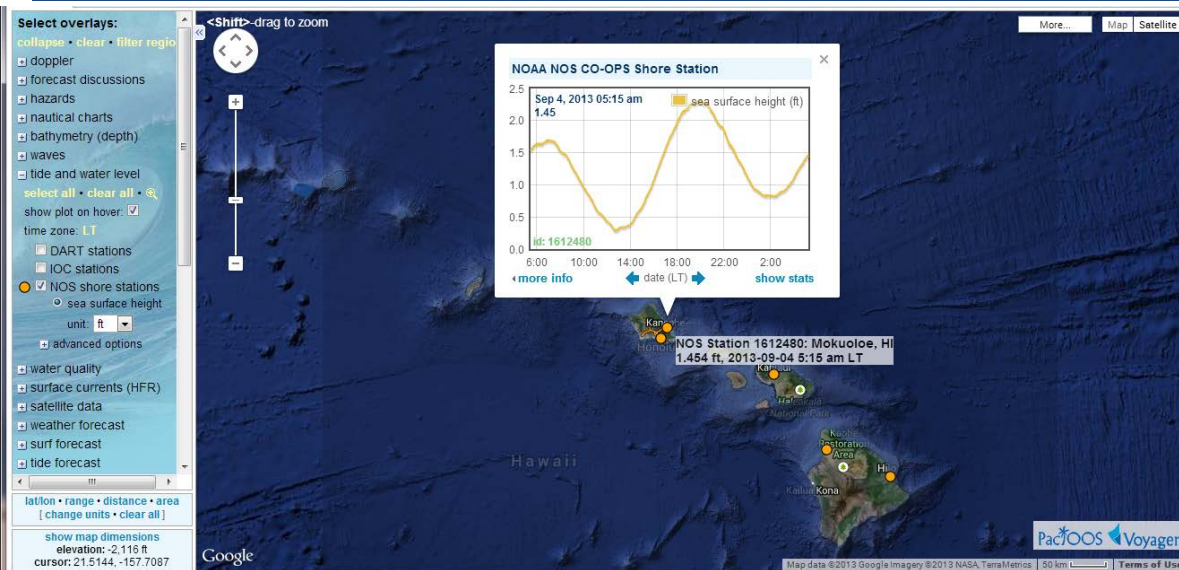
The image displays two screenshots of the GEOPLATFORM.gov website. The top screenshot shows the homepage with a navigation bar (Overview, Data, Maps, Communities, Resources, Market Place, Labs) and a search bar. The bottom screenshot shows the 'Dataset Catalog' page, which lists 2,712 datasets found for 'loos'. The page includes filters for Dataset Type, Tags, Formats, Groups, and Organization Types. A map view is shown at the bottom, displaying a coastal area with various zones and labels like NI17-09, NI18-07, NI17-12, and NI18-10. The map is overlaid with a grid and includes a legend for Contiguous Zone, Exclusive Economic Zone, Submerged Lands Act Boundary, Bureau of Ocean Energy Management Planning Areas, Protraction Diagram, Region Labels, and Protraction Diagram.

# WHAT ELSE IS OUT THERE?

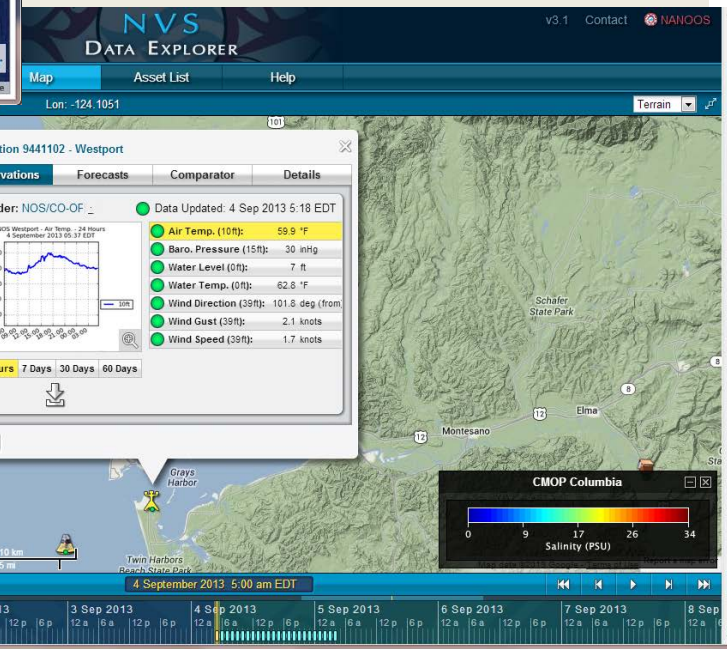
- State coastal atlases and portals
- Regional Marine Planning portals
- IOOS RA data catalogs and portals
- Federal agency-owned applications and portals (ERMA, MarineCadaastre.gov, Digital Coast)
- National systems and portals
- Non-profit and academic systems and DSTs
- ...and lots and lots of catalogs



# IOOS REAL TIME AND GEOSPATIAL DATA ACCESS PORTALS



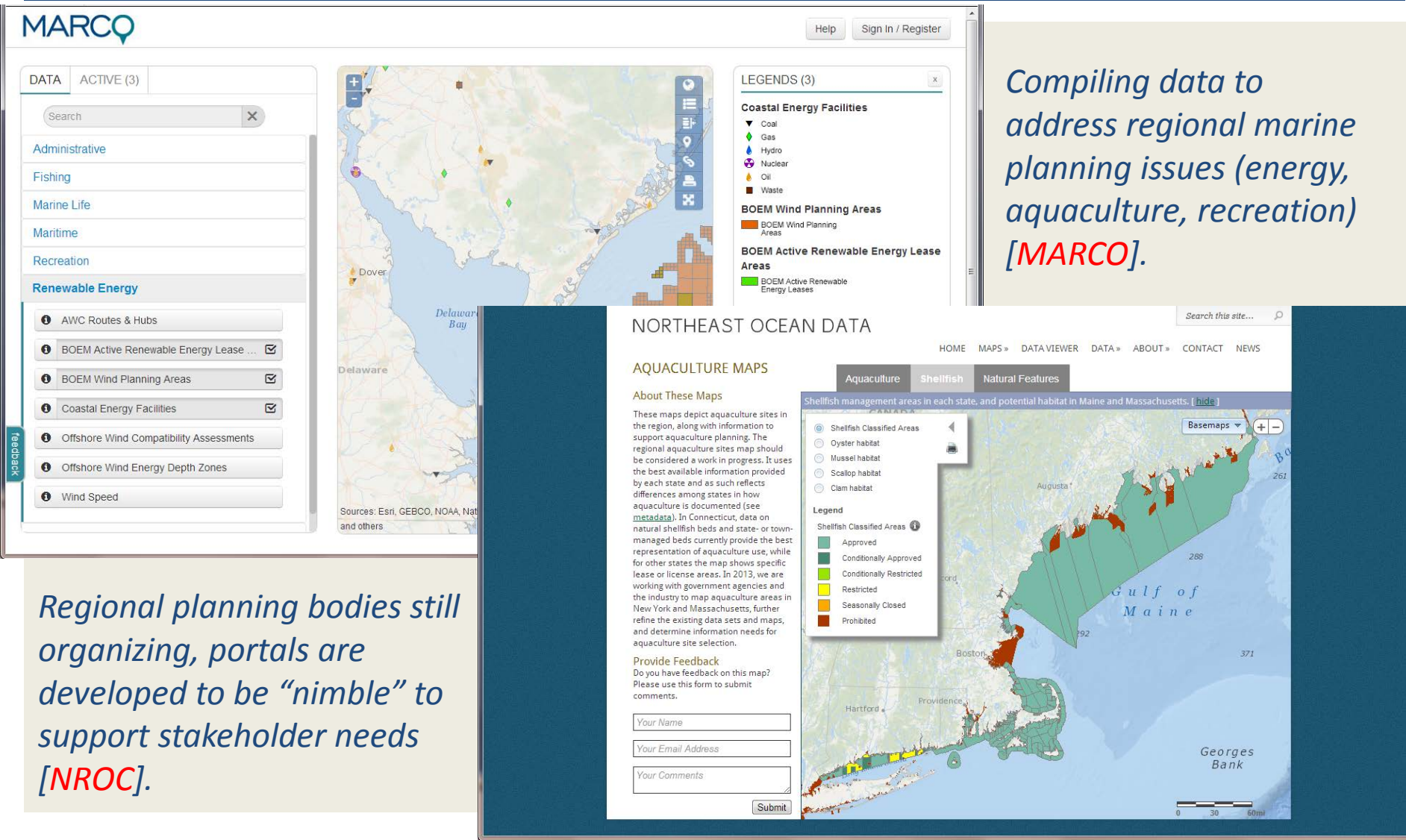
*Regional IOOS data access portals and custom tools and products [PacIOOS].*



*Focused products development for boaters, fishermen, and other stakeholder [NANOOS].*



# EVOLVING MARINE PLANNING GEOSPATIAL DATA ACCESS PORTALS



# IOOS + MARINE PLANNING COORDINATION AND COMMUNICATION

- The West Coast Governors Alliance and SCCOOS, CeNCOOS, and NANOOS are collaborating on [a joint fellowship](#).
- SECOORA was funded to develop Southeast regional planning portal and is working to integrate IOOS products.
- NERACOOS and NROC have an MOU to formalize the relationship between the two organizations and they work closely together.
- MARACOOS has a MARCO Portal Team member (O'Dell) on their Board.
- The Pacific Islands ROP and RPB have identified PacIOOS as a primary regional source for integrated information to inform marine planning.
- And there are more examples...there is collaboration ongoing in some aspect in all regions.

***So What?***

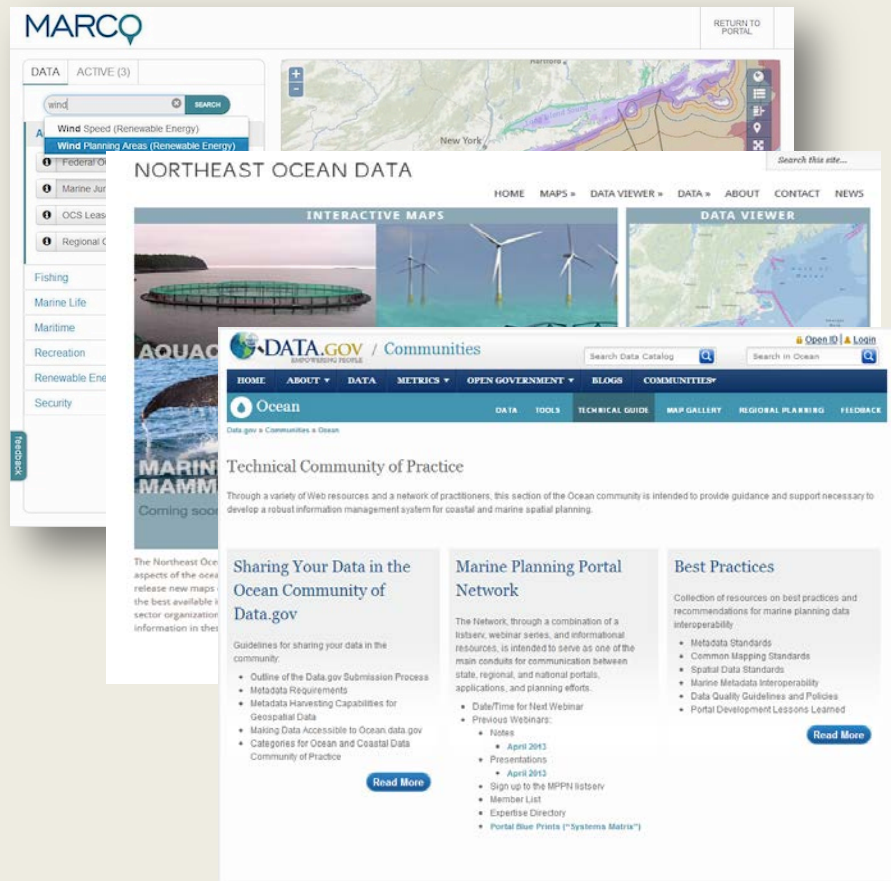
***There is a lot of opportunity for sharing lessons learned  
and best practices between the communities.***

# WHAT IS NOAA DOING TO SUPPORT ITS GEOSPATIAL COMMUNITY

- Fostering a coastal and marine Technical Community of Practice (Marine Planning Portal Network)
- Conducting an analysis of our various geospatial systems to understand what we have and identify redundancy
- Centralizing access to geospatial products and services via the National Geospatial Platform
- Implementing geospatial enterprise licensing

# LEADING THE MARINE PLANNING PORTAL NETWORK

- A conduit for communication between state, regional, and national portals, applications and planning efforts
- Encompasses regional data managers (IOOS and ROP), nongovernmental organizations, and federal agencies
- Organized two workshops (June 2012, August 2013)
  - Identified several topics of mutual interest for collaborative work (data products, data quality, outreach)
  - Develop a Network summary noting roles/responsibilities for each system
  - Collate individual data needs to identify commonalities/overlap




# ASSESSING NOAA GEOSPATIAL SYSTEMS


- Task from NOAA leadership to compile a baseline inventory of all NOAA geospatial systems, analyze a range of characteristics, and provide foundational components for development of a NOAA Geospatial Strategy.
- IOOS Program Office part of the team (Snowden).
- Sample recommendations:
  - NOAA GeoPlatform: Migrate content to National Geospatial Platform and shut down system
  - NOS Data Explorer: Migrate metadata to Data.gov and shut down system
  - Compile existing best practices for developing and using Web services
  - NOAA Procedural Directive Implementation (Metadata, Data Management Plans)

***So What? This assessment has helped answer NOAA leadership questions about perceived overlaps among systems, including the IOOS RA portals, ERMA, and MarineCadastre.gov. It highlighted the differences in scope and customer base.***



# SUPPORTING AND POPULATING THE GEOPLATFORM

 **GEOPLATFORM.gov**


Federal Geographic Data Committee 

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## Welcome to NOAA

The NOAA Community on the National Geoplatform provides NOAA customers, partners, and staff members with a centralized platform for discovering and accessing much of NOAA's distributed geospatial data, services, and applications.




### Overview



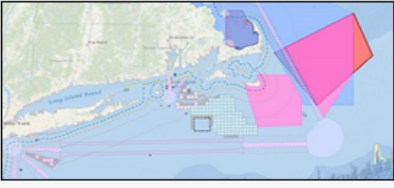
NOAA is an agency that enriches life through science. Our reach goes from the surface of the sun to the depths of the ocean floor as we work to keep citizens informed of the changing environment around them.

### Hurricanes & Storms



This ArcGIS Online group provides access to authoritative NOAA web map services and applications in support of the 2013 hurricane season.

### MarineCadastre.Gov



MarineCadastre.gov, a partnership between the Bureau of Ocean Energy Management and the National Oceanic and Atmospheric Administration's Coastal Services Center, provides spatial data, viewers, tools, and

# GEOSPATIAL ENTERPRISE LICENSING

- NOAA Esri Enterprise License Agreement
  - NOAA anticipated contract award date – end of September, 2013
  - Unlimited deployment of core ArcGIS desktop extensions, ArcGIS Server, ArcGIS Online, etc.
  - Unlimited Virtual Campus & discounted instructor-led Esri training
  - Discounts on Esri Professional & Managed Services
- NOAA Google Earth & Maps Enterprise License Agreement
  - Unlimited deployment of Google Earth Pro desktop client
  - Unlimited page views for Google Maps API on any 'noaa.gov' site
  - NOAA Google Maps Engine cloud hosted service (experimental)
- Contracts in place with OpenGeo for GeoServer

***So What? This may provide cost saving mechanisms for regions with software already and new opportunities for geospatial integration for those currently without access to the Esri and Google geospatial suite of tools.***

# WHERE CAN WE WORK TOGETHER?

- Work with RAs to be sure the regional portals and associated services and products are represented on [ocean.data.gov](https://ocean.data.gov) as effectively as possible
- Continue to engage IOOS portal developers in the Marine Planning Portal Network and focus on marine planning data requirements
- Explore methods to increase the communication and collaboration with IOOS RAs on [ocean.data.gov](https://ocean.data.gov) activities
- Ongoing GAO studies on Federal Geospatial Coordination and NOAA Ocean and Coastal Data Collection Systems
- Others?
- Discussion: What can NOAA geospatial efforts do to support Regional IOOS?

# WHO'S WHO

- Charly Alexander: IOOS connection point into NOAA Marine Planning Efforts
- Adam Bode: Coordinator for Marine Planning Portal Network ([Adam.Bode@noaa.gov](mailto:Adam.Bode@noaa.gov))
- Kim Jenkins: Questions about Geospatial Software Licensing ([Kim.Jenkins@noaa.gov](mailto:Kim.Jenkins@noaa.gov))
- Tony LaVoi: Broad Federal and Internal NOAA Geospatial Coordination ([Tony.LaVoi@noaa.gov](mailto:Tony.LaVoi@noaa.gov))

# BACKUP SLIDES

# CURRENT IOOS CONTRIBUTIONS

- CKAN Catalog / Ocean Community
  - U.S. IOOS: Data Catalog and Asset Viewer
  - National Data Buoy Center
- Regional Planning
  - Under each of the Planning Regions, the associated RA(s) is listed
  - <http://www.data.gov/ocean/page/ocean-regional-planning-efforts>

# TOP DATA REQUESTS

- Sea-floor mapping, especially bathymetry for shallow coastal waters
- Avian, marine mammal and turtle habitat and sightings
- Vessel density (AIS derived products and VMS)
- **Model outputs (marine debris - understand how current patterns and oceanographic conditions affect debris)**
- **Ocean acidification information**
- Existing human uses
- NMFS Vessel Trip Report (VTR)

# WHAT IS NOAA'S ROLE IN OCEAN.DATA.GOV?

- Staff the Ocean Community Working Group
- Manage and maintain web content on [ocean.data.gov](http://ocean.data.gov)
- Continue to contribute data and information
- Serve as a liaison for NOAA data stewards to Data.gov
- Develop strategies to link national and regional information management approaches through the Marine Planning Portal Network





# COORDINATION AND COMMUNICATION

## ■ Forums for technical communication

- IOOS DMAC
- Marine Planning Portal Network
- IOOS Association (products workshop)
- NOC Data and Information Work Group
- EDMC / DMIT