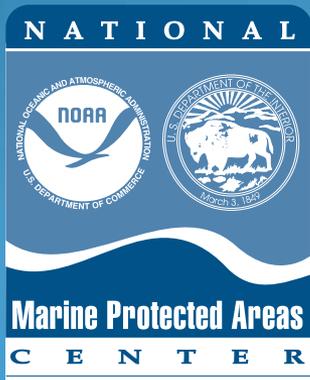


MPA Center Databases

Mimi D'Iorio

Jordan Gass

National Marine Protected Areas Center



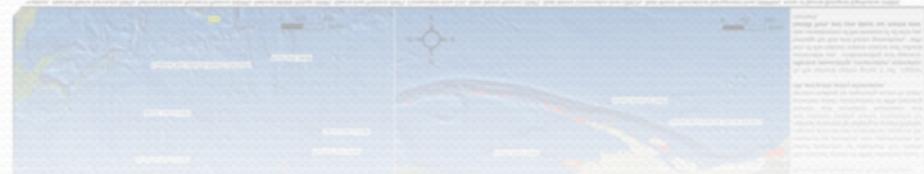
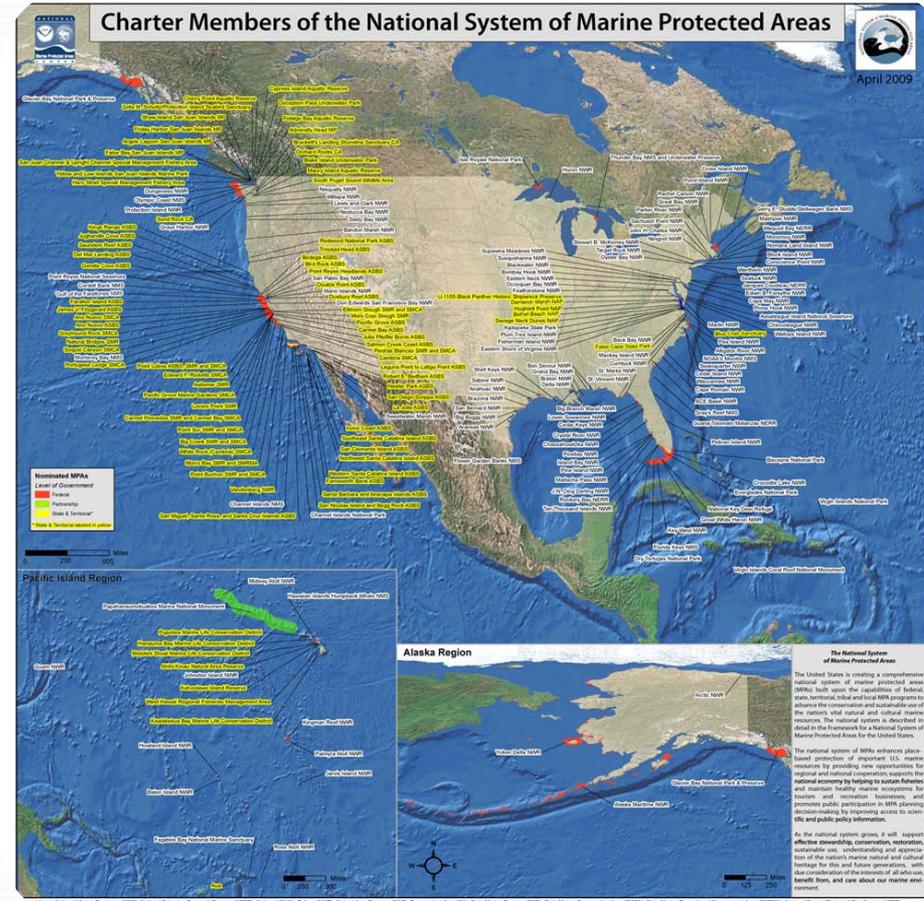
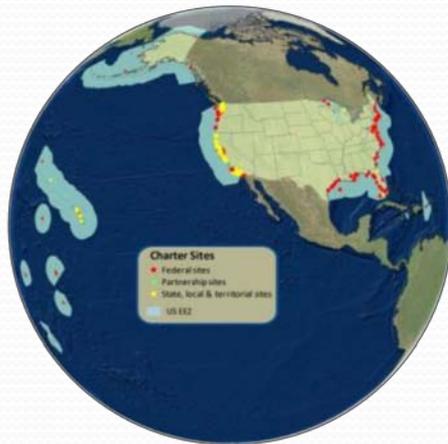
November 17, 2009

OCRM Brown Bag



Outline

- MPAC GIS Team
- What We Do
- MPAC GIS Capacity
- Spatial Databases
- Marine Applications



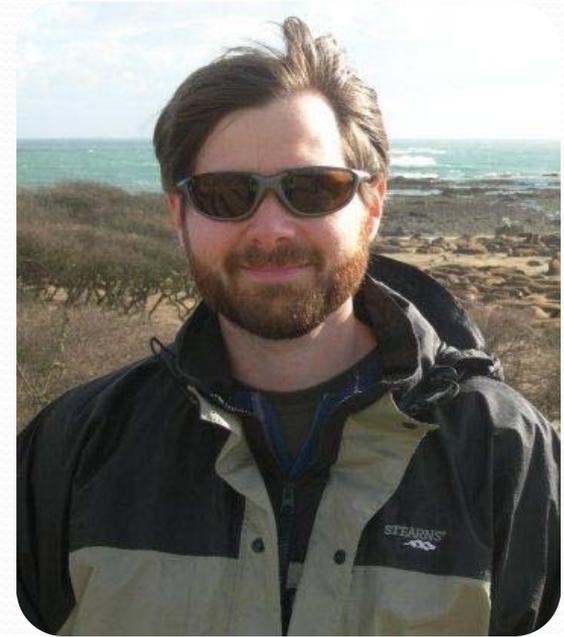
Meet The Team



Mimi D'Iorio
GIS Manager



Jordan Gass
GIS Specialist
National System



Nick Hayden
GIS Specialist
Ocean Uses Atlas

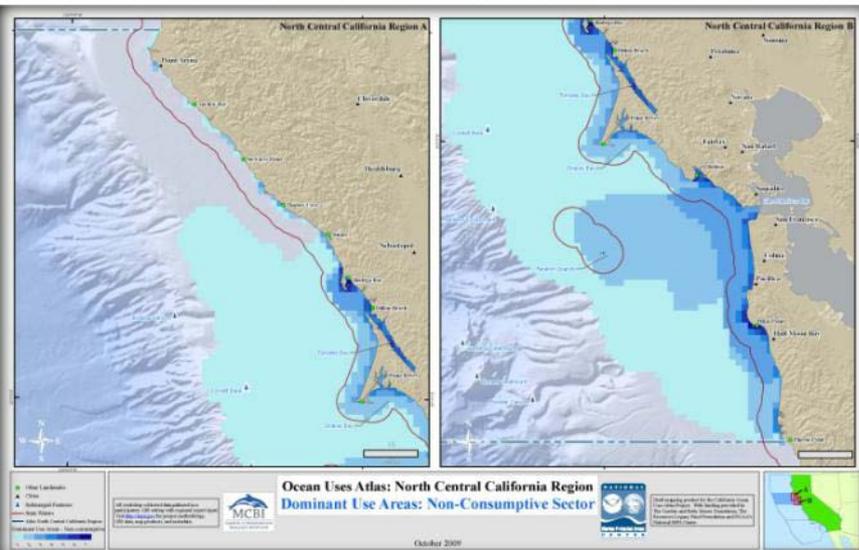
What We Do...

- Manage data on federal, state, local and tribal MPAs
- Collect information on human uses of the ocean
- Conduct spatial analysis for marine issues & questions
- Integrate participatory GIS tools & processes

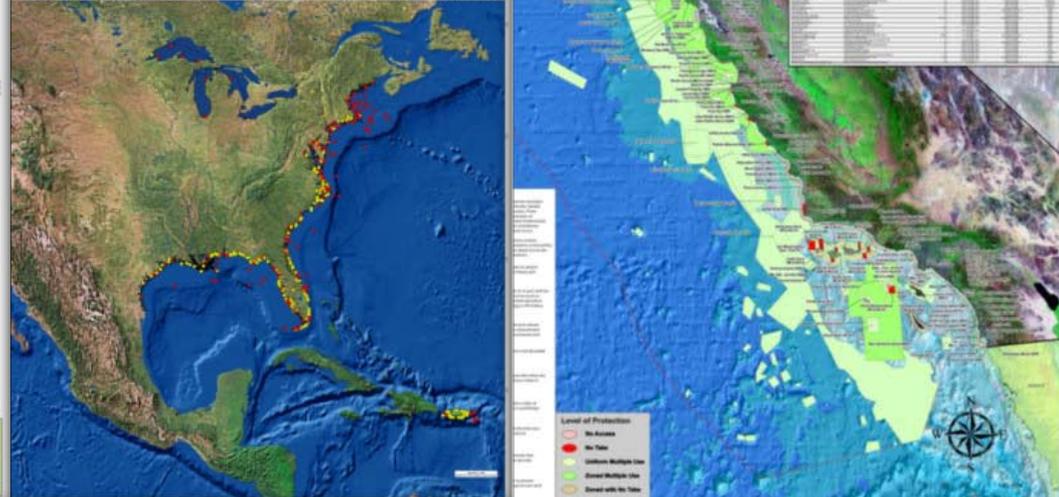


Custom Mapping Products

- Static MPA Maps
- National System Maps
- Analytical Syntheses
- California Ocean Uses Atlas
- Google Earth MPA files
- Web-Mapping applications



System Eligible Marine Protected Areas, Contiguous U.S. And Caribbean

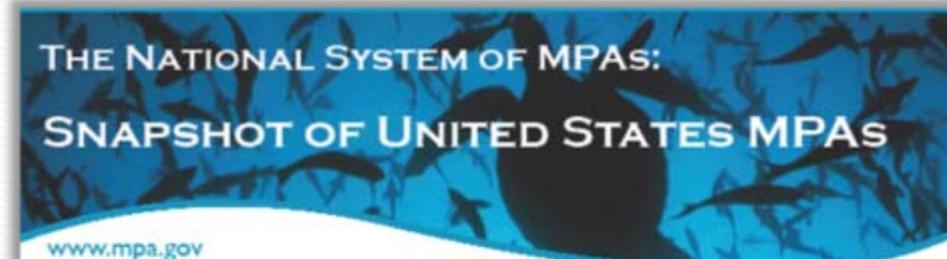


GIS Databases

- MPA Inventory
 - GIS boundaries and classification data for 1,600 sites
- De Facto MPAs
 - GIS boundaries and classification data for 1,200 sites
- Ocean Uses Atlas
 - Use patterns for 30 human uses in California
- Gap Analysis Database
 - Biogeographic data for mapping National MPA System Priority Conservation Objectives (NCCOS)

MPA Inventory

- Spatial Catalog of 1,600 Sites
- GIS Boundaries from Authoritative Sources
- Classification Attributes
 - Conservation Focus
 - Level of Protection
 - Fishing Restrictions
 - Management
 - Legal Authority
 - Etc.
- Metadata



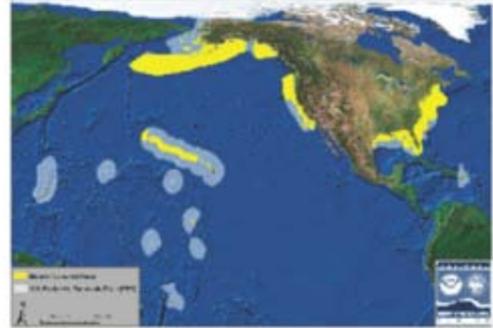
**THE NATIONAL SYSTEM OF MPAS:
SNAPSHOT OF UNITED STATES MPAS**

www.mpa.gov

The information provided here is current as of October 2008, and is from the Marine Protected Areas Inventory (MPA Inventory) – a comprehensive geospatial database designed to catalog and classify marine protected areas within U.S. waters. The MPA Inventory was developed from information provided by state, territorial, tribal and federal MPA programs, and other publicly available data.

WHAT IS A MARINE PROTECTED AREA?

Executive order 13158 (see below) defines an MPA as “any area of the marine environment that has been reserved by federal, state, territorial, tribal, or local laws or regulations to provide lasting protection for part or all of the natural and cultural resources therein.” Key terms within the definition – area, marine, reserved, lasting, and protection – are defined in the Framework for the National System of Marine Protected Areas of the United States of America.



PRESIDENTIAL EXECUTIVE ORDER ON MPAS

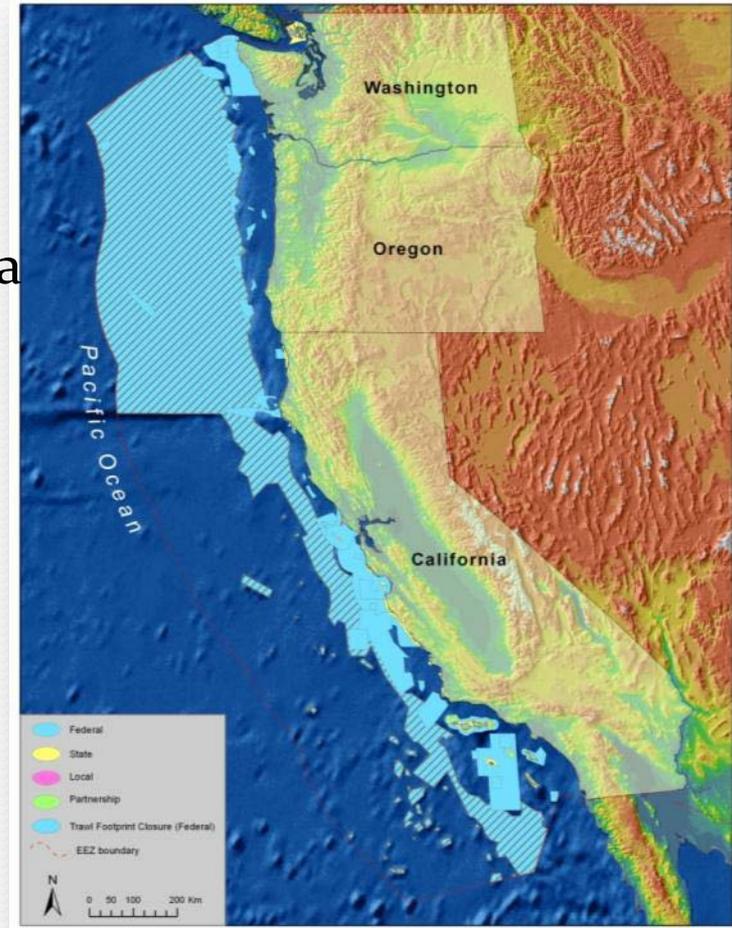
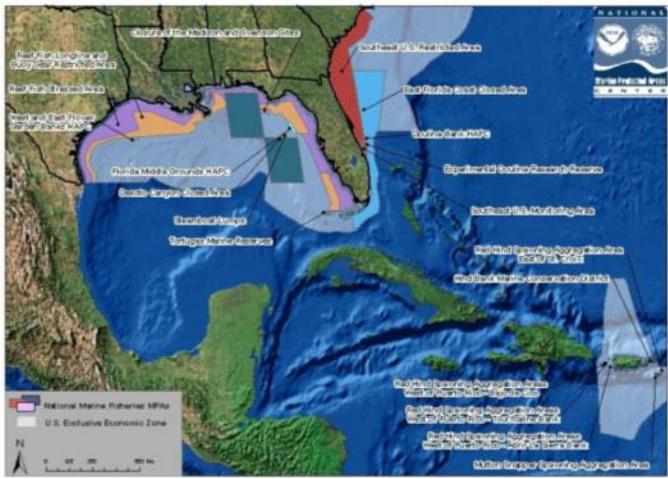
In May 2000, Presidential Executive Order 13158 was signed to enhance the management, protection, and conservation of U.S. marine resources through more effective and collaborative uses of MPAs as an ecosystem management tool. It directs the National Oceanic and Atmospheric Administration (NOAA) and the Department of the Interior to work with other federal agencies and states, territories, tribes, and the public to develop a scientifically-based, comprehensive national system of MPAs. The national system of MPAs aims to conserve the nation’s natural and cultural marine heritage, and to sustain production of living marine resources. It provides a transparent process to enhance

UNITED STATES MPAS AT A GLANCE:

- The U.S. currently has nearly 1,700 MPAs
- About 1/3 of all U.S. waters are in some form of MPA
- Nearly all U.S. MPAs are multiple use
- “No take” MPAs occupy only about 1% of all U.S. waters
- Less than 3% of the area in MPAs in the U.S. is “no take”
- U.S. MPAs are designated and managed by over 100 federal, state, territorial and local laws and regulations

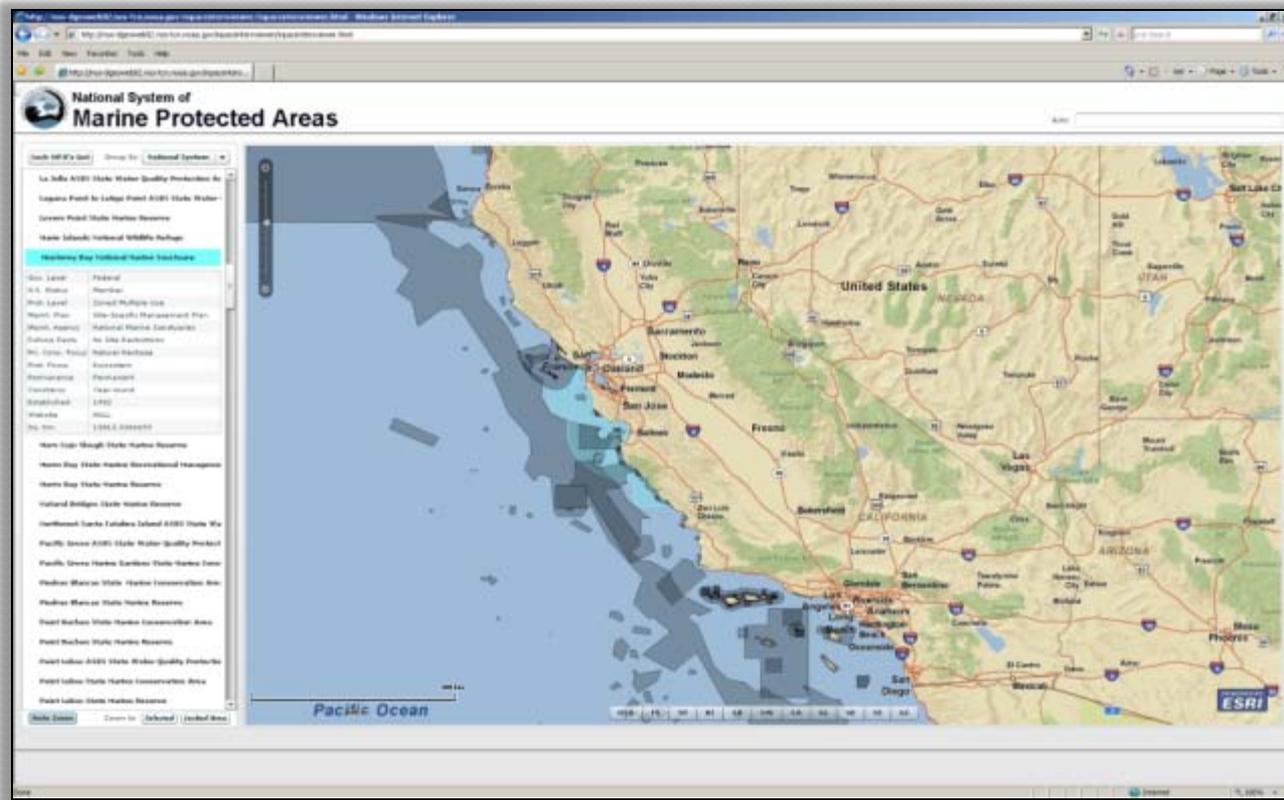
Coming Attractions

- MPA Inventory 2.0
 - Updated GIS inventory of MPAs
 - QA/QC boundaries & classification data
 - Incorporating new site data
 - Updated national MPA statistics
 - Anticipated release 1/10



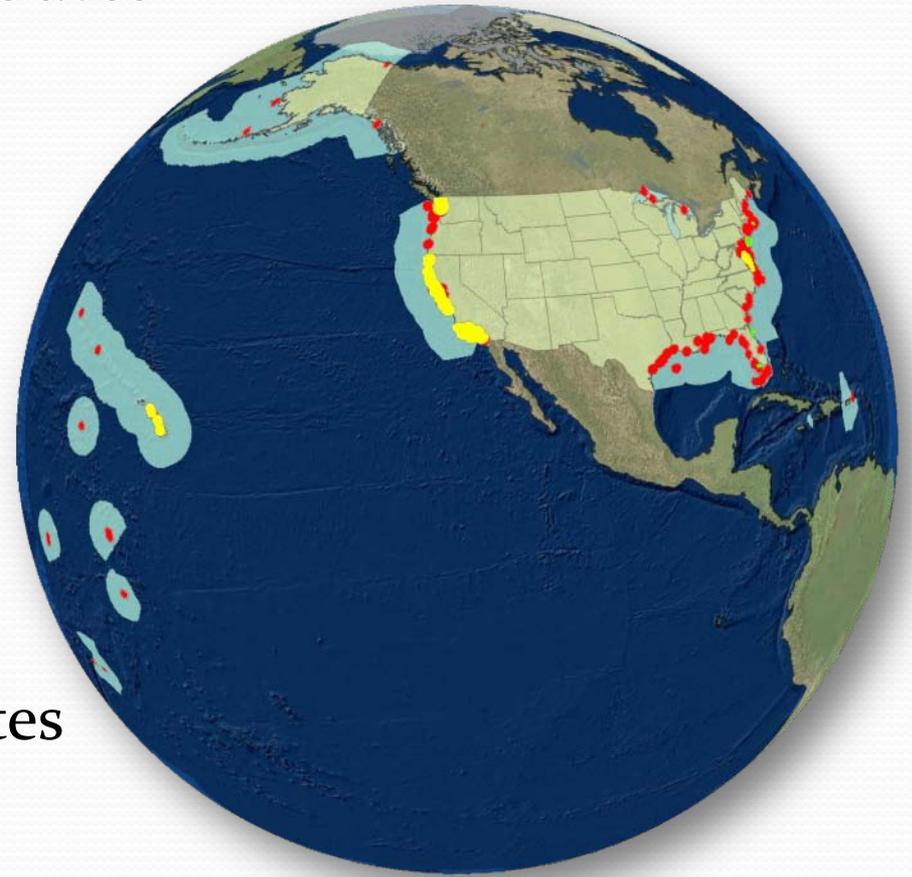
New Visualization Tool

- MPA Online Viewer
 - Lightweight web-based viewer for MPA Inventory
 - Being developed in partnership with SPO



Linking Data Sources

- Updates to Inventory Attributes
 - IUCN/WDPA
 - Ecoregions
 - Marine Classification
 - Legal Authority
 - PCO Data
 - Cultural Heritage Data
- NMFS Data
 - Criteria for MMA/MPA Sites



Inventory Applications

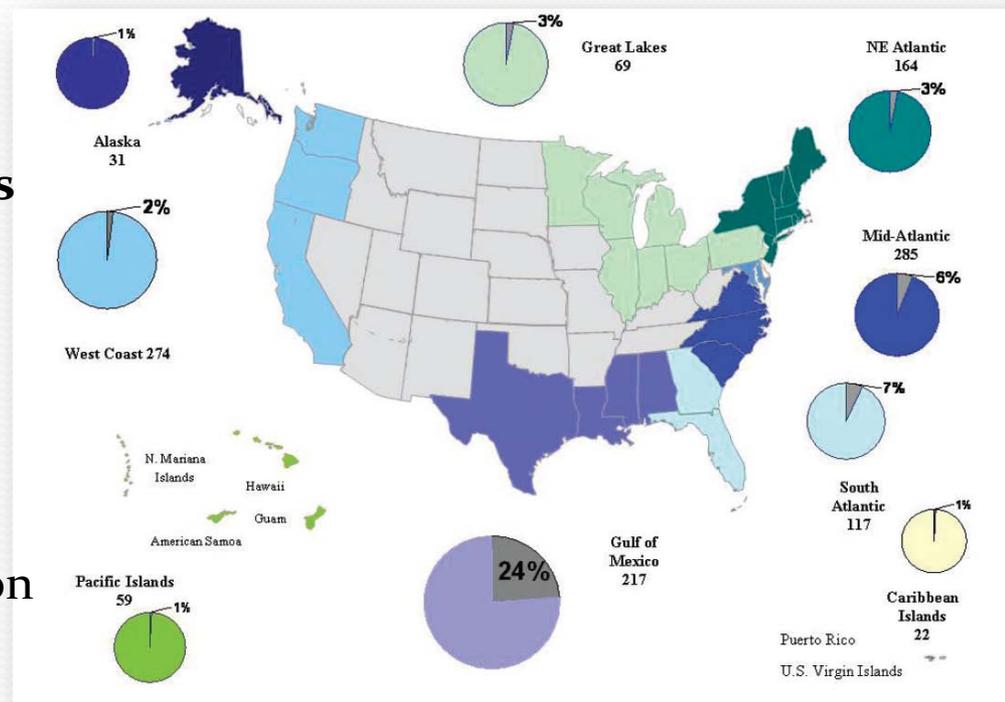
- Basic knowledge of MPAs
 - How much area of the EEZ is protected in an MPA?
 - What is the average size of an MPA?
 - For what purposes are MPAs designated?
 - How much area of the ocean is no-take?
- Spatial awareness of MPAs
 - What MPAs are in my Congressional District?
 - Where is fishing prohibited?
 - Where is there overlap of MPAs?

DeFacto Database

Marine areas set aside for reasons other than conservation, such as economic, human health or safety, and protection of government or private property.

- 1,234 De Facto MPAs in the U.S.
- Most do not restrict human activities
- DFMPAs cover 3 % of U.S. waters

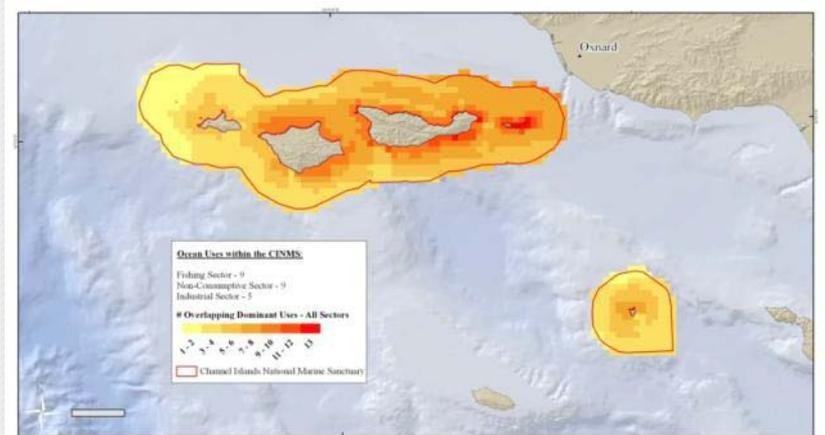
Examples include areas for: safety, security, and danger zones, restricted areas, prohibited lightering areas, some anchorage grounds, and traffic separation schemes



California Human Uses Atlas

Mapping human uses of the ocean off the state of California to inform marine decision making and ocean management.

- Nearly 30 different uses
- Three sectors
 - Non-consumptive
 - Fishing
 - Industrial/Military
- Regional Experts
- Participatory GIS
- Sector-focused Workshops
- Data, Maps, Webtools



MPA Center GIS Goals

- Create new data, not just mine existing data
- Apply new participatory data gathering approaches
- Create applications to visualize data and patterns
- Conduct spatial analyses to inform decision-making
- Leverage multiple GIS data sources to address emerging marine management questions
- Design products that are accessible to all audiences

Questions?

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Jordan.Gass@noaa.gov