

Marine Spatial Planning at the NOAA Coastal Services Center

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**National Oceanic and Atmospheric Administration (NOAA)
Coastal Services Center**

January 27, 2009



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Outline

Presentation Outline

- MSP Overview
- NOAA's role
- NOAA CSC Tools and Support
 - Multipurpose Marine Cadastre
 - Legislative Atlas
 - Marine Boundary Making





High Demand Exists for the Nation's Oceans and Great Lakes



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Marine Spatial Planning (MSP)

Allocating marine space to achieve multi-sector objectives and to balance competing interests



MSP-Related Activities at NOAA

International Program Office

- Sponsored and attended United Nations MSP workshop
- Supporting future international MSP efforts

Marine Protected Area (MPA) Center

- Developing framework for a national system of MPAs
- Releasing analysis reports on “de facto MPAs”
- Human Use Atlas – funding from Moore Foundation



Multipurpose Marine Cadastre

History

- **Energy Policy Act of 2005**
 - **Section 388 – Alternative Energy Related Uses on the OCS**
 - **Develop an OCS mapping initiative**
- **MBWG developed an implementation plan called the multipurpose marine cadastre**
- **Multi-year, interagency plan which focuses on:**
 - **Database development**
 - **Data access, standardization, and viewing**
 - **Case studies**
 - **Partnership development**
 - **Capacity building**



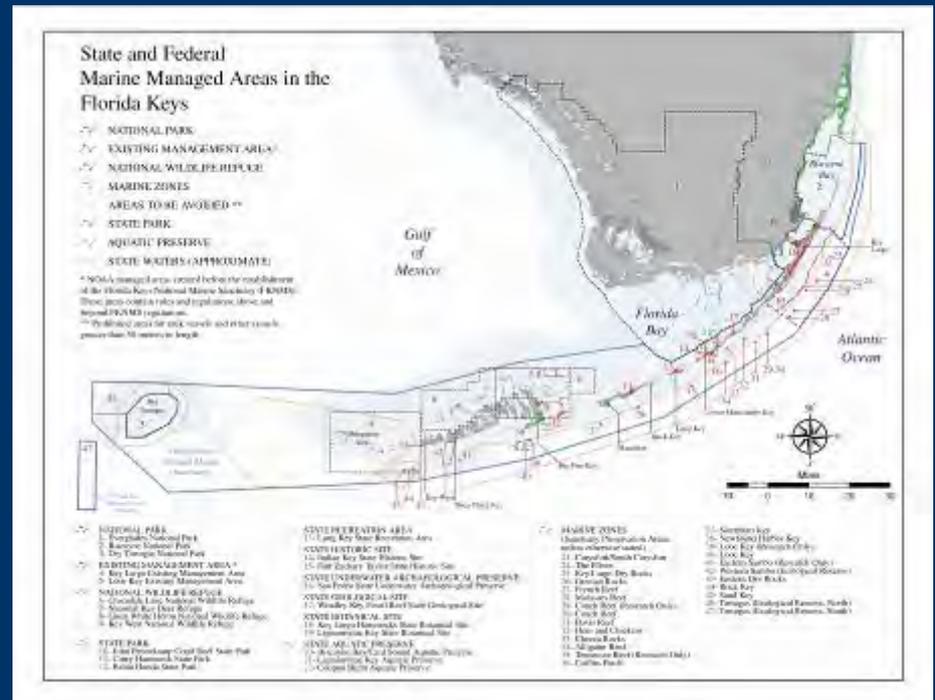
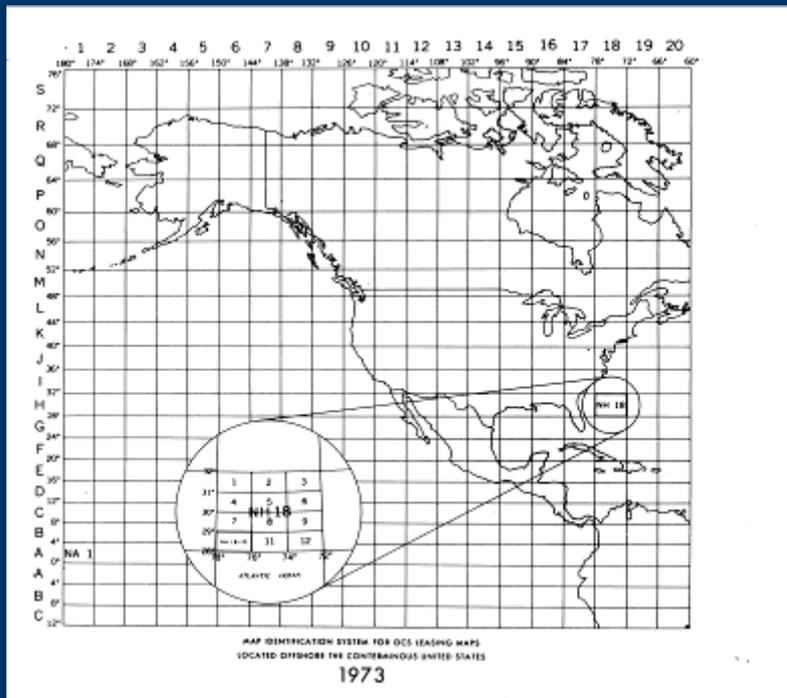
Multipurpose Marine Cadastre

A marine information system for the outer continental shelf and state waters that provides a data framework to support decision making.

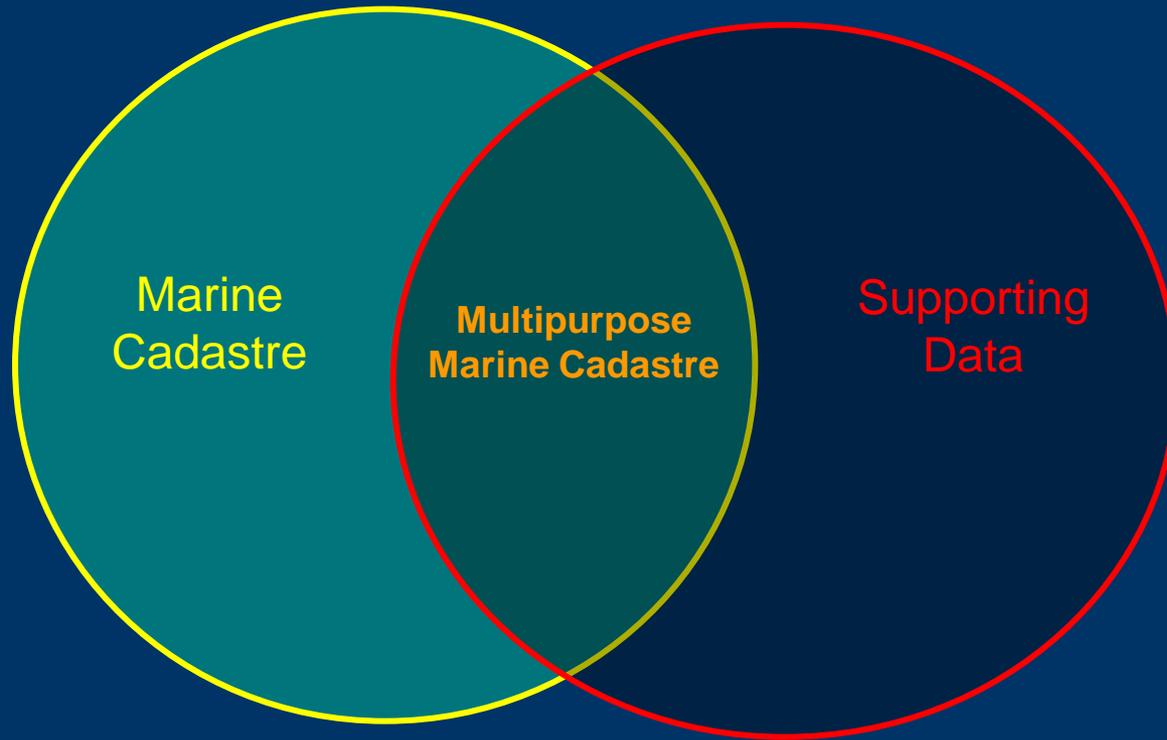


What is a Marine Cadastre?

“A marine cadastre is a system to enable the boundaries of maritime rights and interests to be recorded, spatially managed and physically defined in relationship to the boundaries of other neighboring or underlying rights and interests .” (Robertson et al., 1999)



Multipurpose Marine Cadastre



- Alternative energy
- Ocean planning
- Habitat conservation

- Human use and recreation
- MPA siting
- Aquaculture

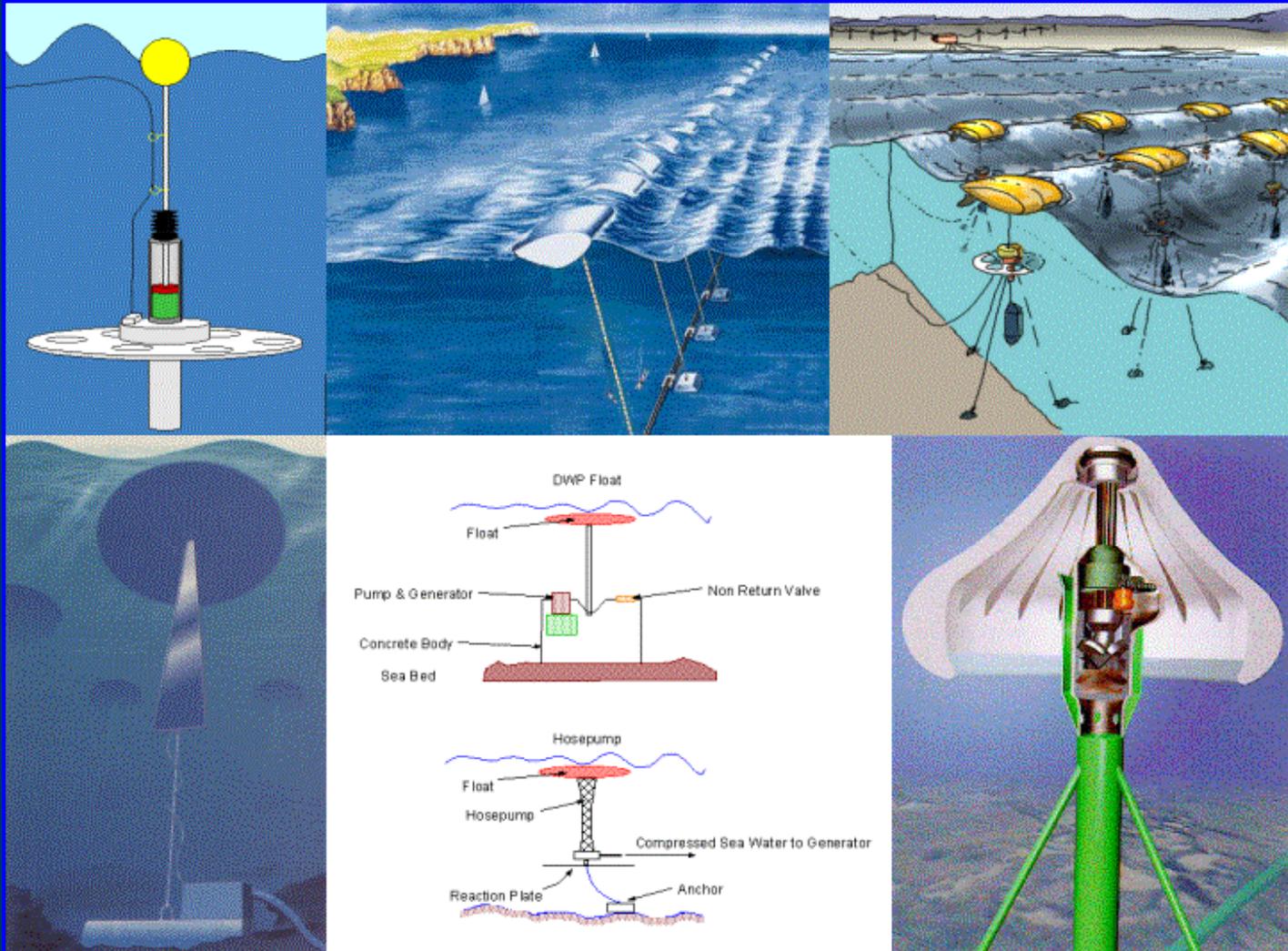


So, Things Like:



Offshore Wind Farms





Alternative forms of wave energy





Why Is this Project Important?

- **Single data portal**
- **Integrated system for improved decision making**
- **Venue to resolve and modernize boundaries**
- **Mechanism for collaboration and integration of new data**
- **Relevant to state ocean planning issues**



MMC - Data Themes

Core Cadastral Data:

Limit of 8(g) Zone
Submerged Lands Act
Contiguous Zone
Territorial Sea
Exclusive Economic Zone
Shoreline
National Estuarine Research Reserves
National Marine Sanctuaries
National Forests
National Park Service
Indian Lands
National Wildlife Refuge
MMS Protraction Diagrams
Outer Continental Lease Blocks

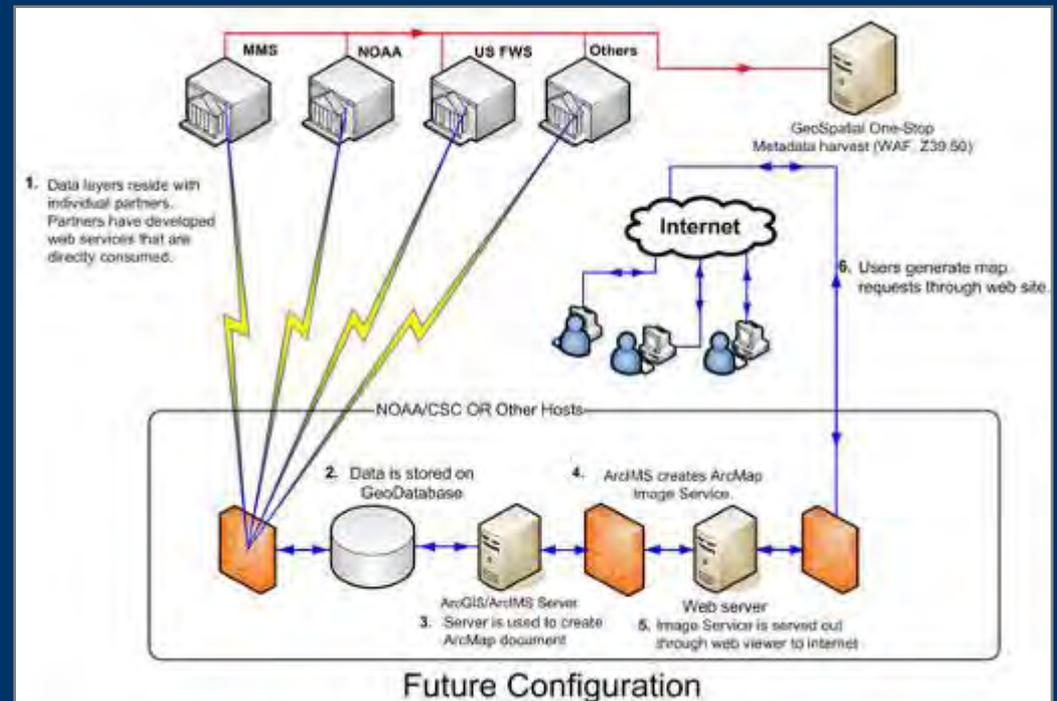
Supporting Data:

Coastline or Shoreline
Sand Borrow Sites
Pipelines
Fiber Optic Cables
Artificial Reef Sites
Shipping Fairways
Anchorage Areas
Military Restricted Areas
Platform Locations
Bathymetry
Wind, Wave, and Tidal Energy Sites
Archeological Sites
Aquaculture Sites
MMS Leases
Liquid Natural Gas (LNG) Sites
Benthic Data



MMC - Data Management Vision

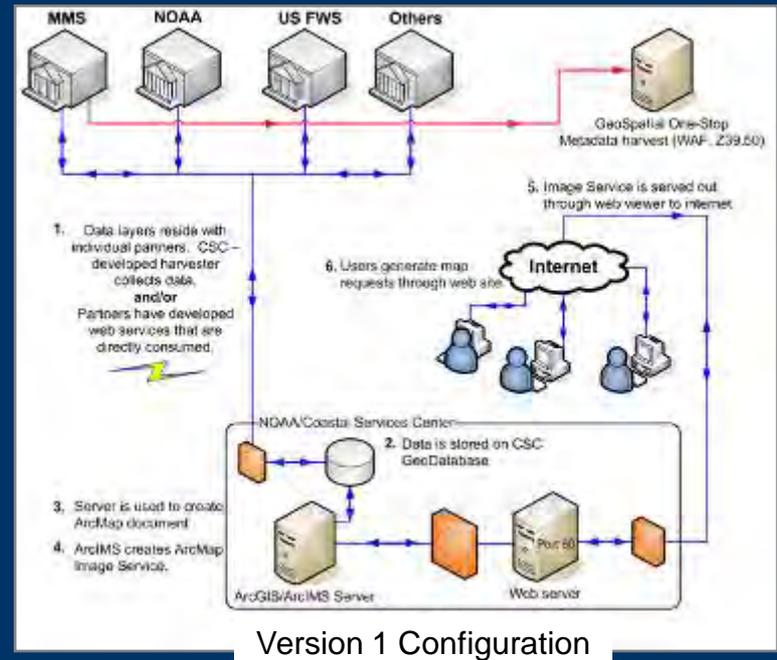
Data needed to support ocean planning and management is available from the **authoritative source** in an easily **accessible format** so that end users can **visualize and access** data for their specific needs.



MMC - Data Access and Management

- Data is managed and maintained by the authoritative source
- The Center harvests on a periodic basis to keep the viewers up to date
- Access is provided via the Marine Boundary Working Group data portal
- Capacity building is critical to achieve a distributed system

MMC team provides the core marine cadastre data set in a variety of formats



MMC - Viewers

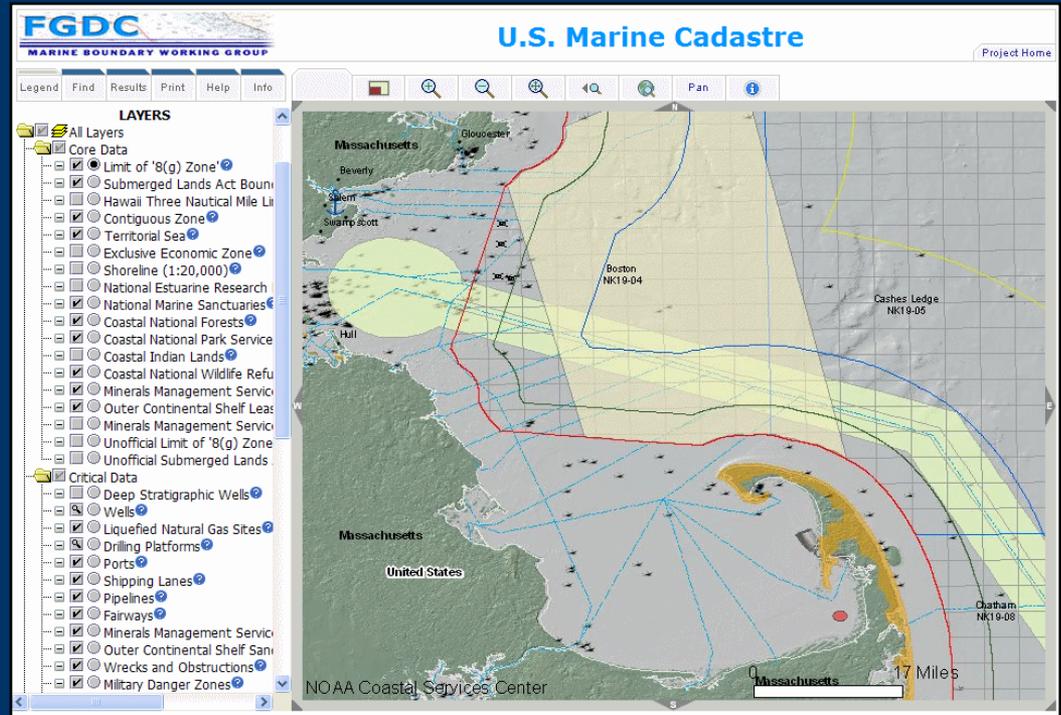
- Web-based and client-side

ArcIMS

ArcReader

Google Earth

- Provides access to data
- Map-making functionality
- Used for decision support
- Driven by partner needs



MMC – Partners and Providers

Current Partnerships

- Minerals Management Service (lead)
- NOAA Coastal Services Center (technical lead)
- NOAA Office of Coast Survey
- NOAA National Marine Sanctuaries
- NOAA Marine Protected Areas
- NOAA Fisheries
- U.S. Fish and Wildlife Service
- National Park Service
- The Nature Conservancy
- California Coastal Conservancy

Potential Partnership Opportunities

- Department of Defense (DoD)
- Coast Guard
- Federal Energy Regulatory Commission
- Massachusetts Coastal Zone Mgmt.
- Rhode Island CRMC
- Department of Energy
- South Carolina OCRM
- Northeast Regional Ocean Council
- Other States



Case Studies

- **Criteria:**
 - Meets customer needs
 - Meets objectives of MSP
 - Builds collective capacity
 - Available resources
- **How we engage depends on level of partner capacity**

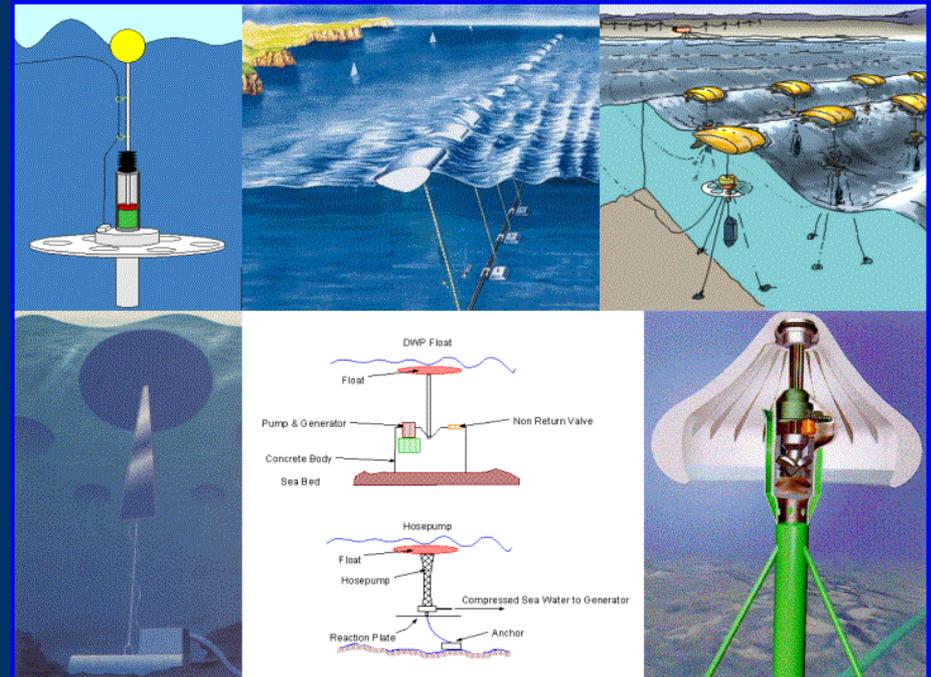


Demonstration

Scenario: Permit review:
site selection for energy
projects

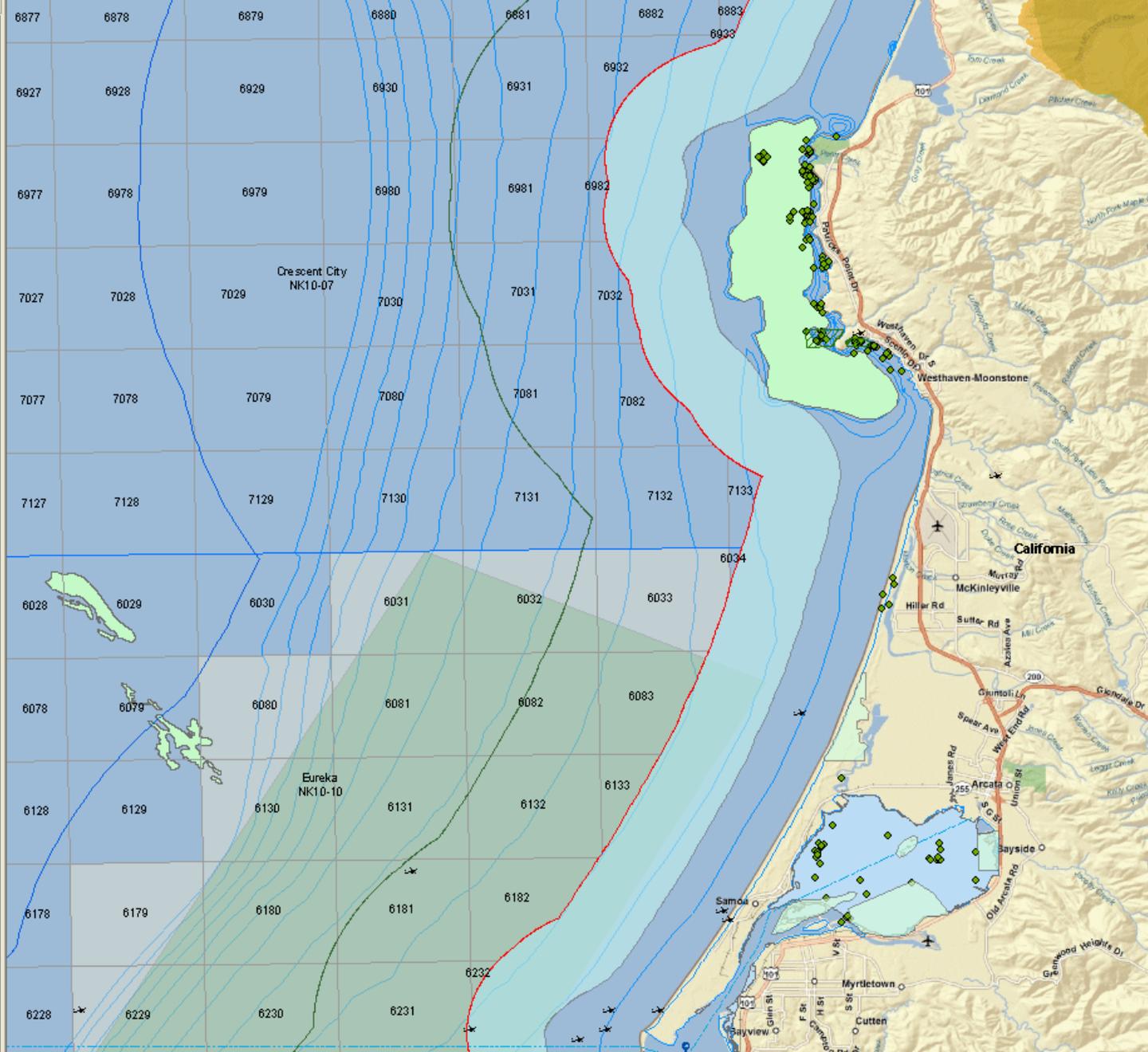
Location: Northern California

Users: State permitting offices,
private sector



Layers

- JURISDICTIONAL BOUNDARIES AND LIMITS
 - Submerged Lands Act Boundary
 - Limit of 8g Zone
 - Contiguous Zone
 - Territorial Sea
 - Exclusive Economic Zone
 - Marine Protected Areas
 - Federal Fishery Management Areas
 - National Estuarine Research Reserves
 - National Marine Sanctuaries
 - Coastal National Forests
 - Coastal National Park Service
 - Coastal Indian Lands
 - Coastal National Wildlife Refuges
 - Coastal Barrier Resources Act
 - Minerals Management Service Protraction Diagrams
 - Outer Continental Shelf Lease Blocks
 - Minerals Management Service Planning Areas
 - Hawaii Three Nautical Mile Line
 - Unofficial Limit of 8g Zone
 - Unofficial Submerged Lands Act Boundary
- FEDERAL GEOREGULATIONS
- NAVIGATION AND MARINE INFRASTRUCTURE
- GEOLOGY AND SEAFLOOR DATA
- MARINE HABITAT AND BIODIVERSITY
- PROPOSED ENERGY PROJECTS
 - California Hydrokinetic Proposed Sites
 - Alternative Energy Nominated OCS Lease Block
- BASE MAPS



Next Steps for MMC

- New requirements
- Mid-Atlantic case study
- Identify and integrate new data
- Formalize data management policies
- Marketing and outreach
- FY 2010–2012 project plan



Legislative Atlas

NOAA HOME WEATHER OCEANS FISHERIES CHARTING SATELLITES CLIMATE RESEARCH COASTS

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Center Home > GIS Integration & Development >

Digital Coast: Legislative Atlas

Coastal and Ocean Governance

How the Coasts and Oceans Are Governed

Search Coastal and Ocean Legislation

Map of Federal Regulations

Map of Gulf of Mexico

Spatial Data Download

DIGITAL COAST: Legislative Atlas

The Legislative Atlas allows users to visualize where selected coastal and ocean laws apply helping regional collaborations to make sense of the complex governance system of our oceans and coasts.

Select a highlighted region of interest from the adjacent map to access regional internet mapping sites.

Map Legislation: Gulf of Mexico Federal Search Legislation

What Is the Legislative Atlas?

A growing number of regional collaborations are forming among federal, state, and local agencies across the country to address management issues that cut across existing political and jurisdictional boundaries. The Legislative Atlas supports regional ocean and coastal management efforts by mapping key state and federal laws and jurisdictions. Use this site to find:

- A searchable database of coastal and ocean legislation
- State and federal legislative and agency summaries
- Downloadable spatial data and metadata
- On-line mapping

Laws

- Spatial data depicting coastal and marine regulatory framework at federal and state levels
- Web-based mapping and information resource
- Currently includes
 - Federal legislation for Atlantic, Pacific, Gulf coasts
 - State legislation for Gulf of Mexico region, CA, OR, WA, HI
 - Database of coastal laws



Georegulation Development

Georegulation – A principle, rule, or law and the geographic representation of the region(s) of applicability on the earth



Magnuson-Stevens Fishery Conservation Act
Coastal Zone Management Act



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Digital Coast: Legislative Atlas Website

Searchable Database of Legislation

- Ability to search by region, issue, or agency
- Returns brief legislative summary
- Contains links to full text

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Digital Coast: Legislative Atlas

- Coastal and Ocean Governance
- How the Coasts and Oceans Are Governed
- Search Coastal and Ocean Legislation
- Map of Federal Regulations
- Map of Gulf of Mexico
- Spatial Data Download

Search Laws

All coastal and ocean laws in the legislative database are listed below. You can filter this list by selecting your state, region, management issue, or agency of interest. Mouse over the law name to see short summary of the law.

View all laws, federal laws, or specific state laws:

OR view laws in a specific region:

Further refine your search:

Select laws concerning this issue: And / or select responsible agency:

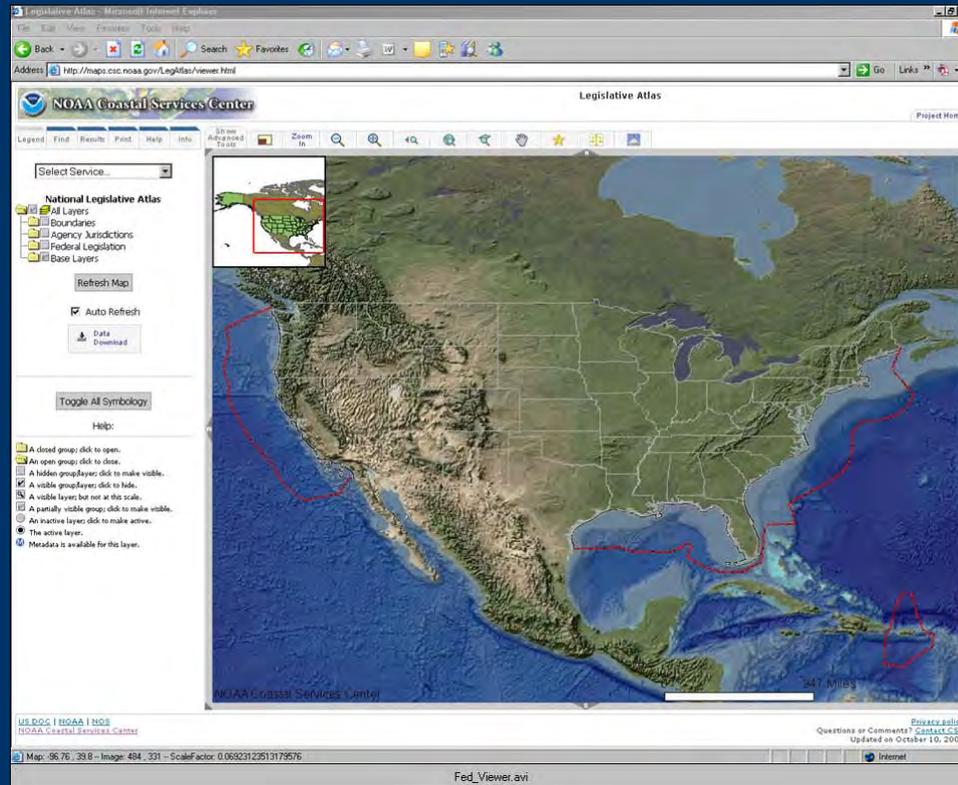
OR select a specific law:

Law Name	State	Issues	Agencies	Region	Spatial Data Available
1988 Beachfront Management Act	SC	Coastal Zone Management	South Carolina Department of Health and Environmental Control	Southeast	
Abandoned Shipwreck Act	FED	Historic and Cultural Resources	U.S. National Park Service	National	✓
Act to Prevent Pollution from Ships	FED	Environmental Quality	U.S. Coast Guard	National	
Alabama Fishing Laws	AL	Living Resources	Alabama Department of Conservation and Natural Resources	Gulf of Mexico	✓
Alabama Marine Mammals Protection Act of 1976	AL	Living Resources	Alabama Department of Conservation and Natural Resources	Gulf of Mexico	✓
Alabama Water Resources Act	AL	Environmental Quality, Living Resources, Coastal Zone Management	Alabama Office of Water Resources, Alabama Water Resources Commission	Gulf of Mexico	✓
Antiquities Act	FED	Historic and Cultural Resources	U.S. Bureau of Land Management	National	
Aquaculture Ordinance	MS	Fisheries, Living	Mississippi Commission on	Gulf of	✓



Digital Coast: Legislative Atlas Website

Spatial Data Viewers



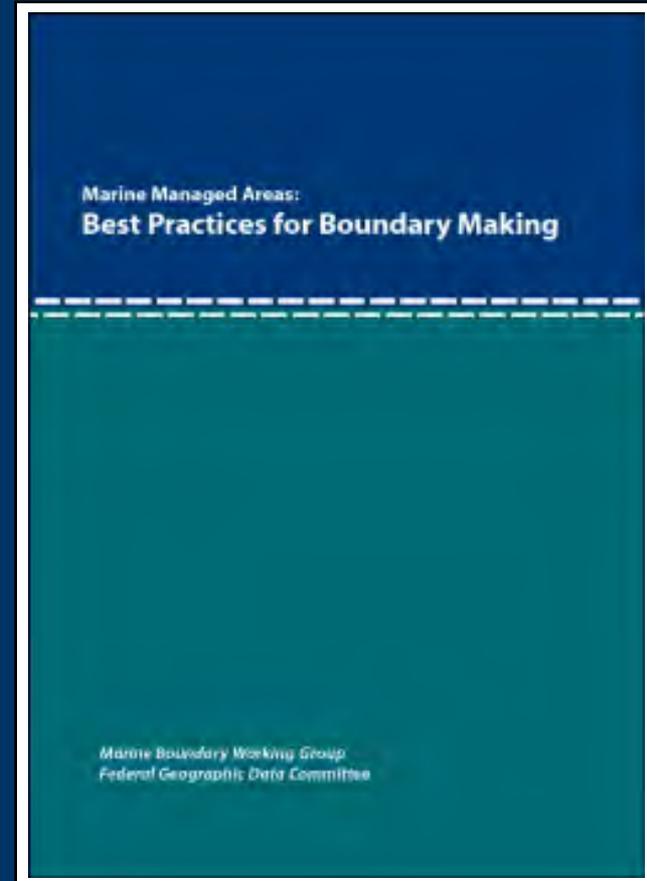
- View agency jurisdictions, federal legislation, and state legislation

- Ability to identify laws and jurisdictions and link back to legislative summaries

Marine Boundary Working Group

Best Practices for Boundary Making Handbook

- Provides best practices for writing boundary descriptions for federal, state, or local marine managed areas
- Eases transition from traditional to modern mapping techniques
- Helps to reduce boundary misunderstandings and litigation



www.csc.noaa.gov/products/mb_handbook/



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MSP Services Provided By the NOAA Coastal Services Center

- **Application development**
- **Data development and access**
- **Standards and best practices**
- **Technology transfer**
- **Geospatial consultation services**
- **Training**
- **Facilitation**



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www.csc.noaa.gov/mmc

www.csc.noaa.gov/legislativeatlas/

www.csc.noaa.gov/mbwg/

