

# **The Multipurpose Marine Cadastre**

## **A Tool for Planning & Decision Making**

### **in the Marine Environment**

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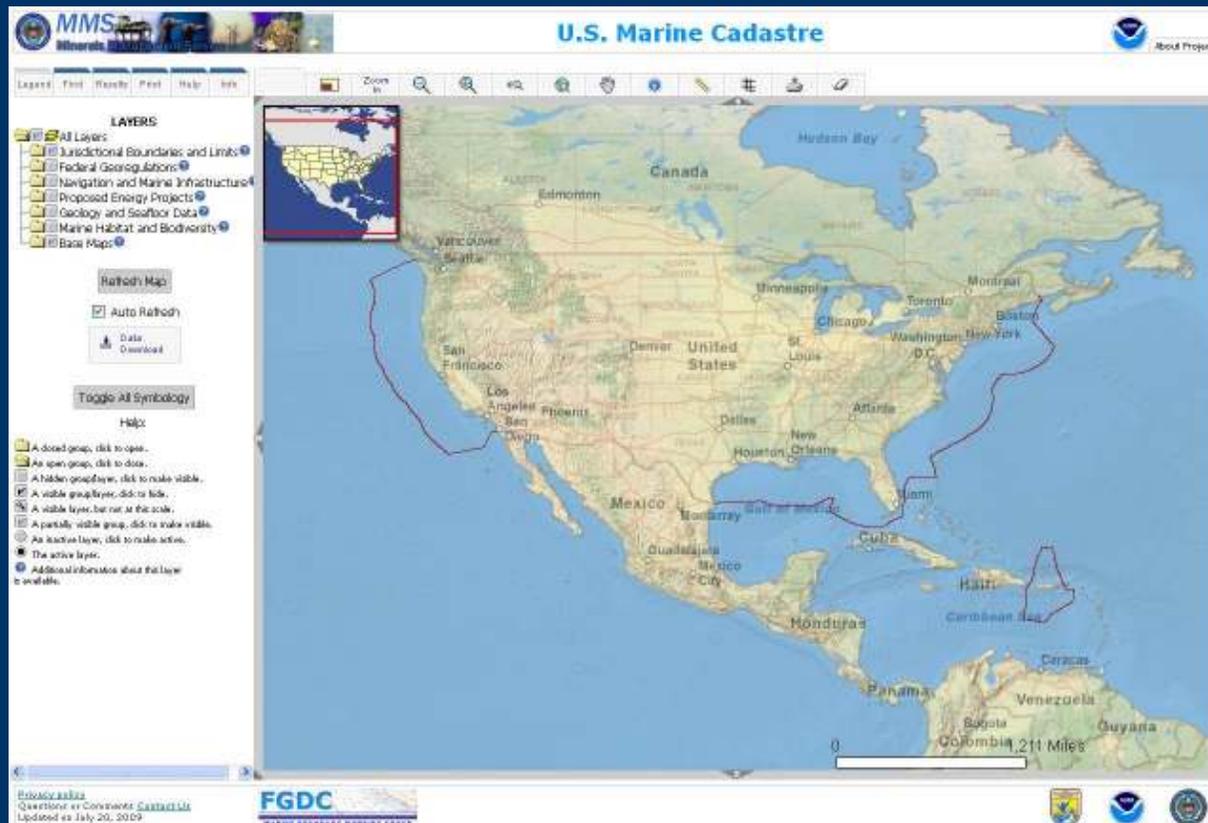
# Multipurpose Marine Cadastre

## Presentation Outline

- MMC Overview
- Partnerships
- Data and Viewers
- Case Studies

# Multipurpose Marine Cadastre

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



# Multipurpose Marine Cadastre

## History

- **Energy Policy Act of 2005**
  - **Section 388 – Alternate Energy Related Uses on the Outer Continental Shelf (OCS)**
    - **Develop an OCS mapping initiative**
- **Marine Boundary Working Group developed an implementation plan called the multipurpose marine cadastre**
- **Multi-year, interagency plan which focuses on . . .**
  - **Data compilation**
  - **Data access, standardization, and viewing**
  - **Case studies**
  - **Partnership development**
  - **Capacity building**

# 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
- USGS
- U.S. Fish and Wildlife Service
- National Park Service
- Federal Energy Regulatory Commission
- The Nature Conservancy
- California Coastal Conservancy

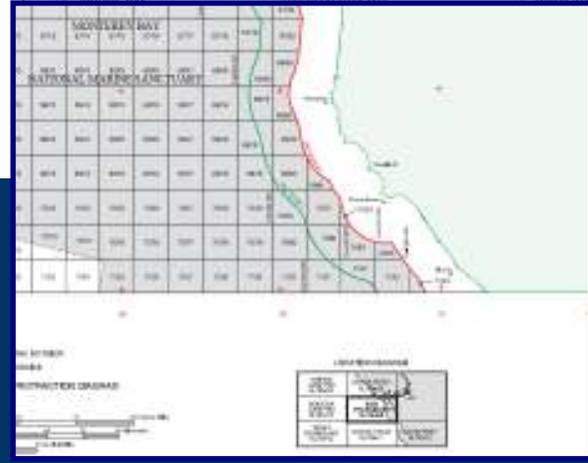
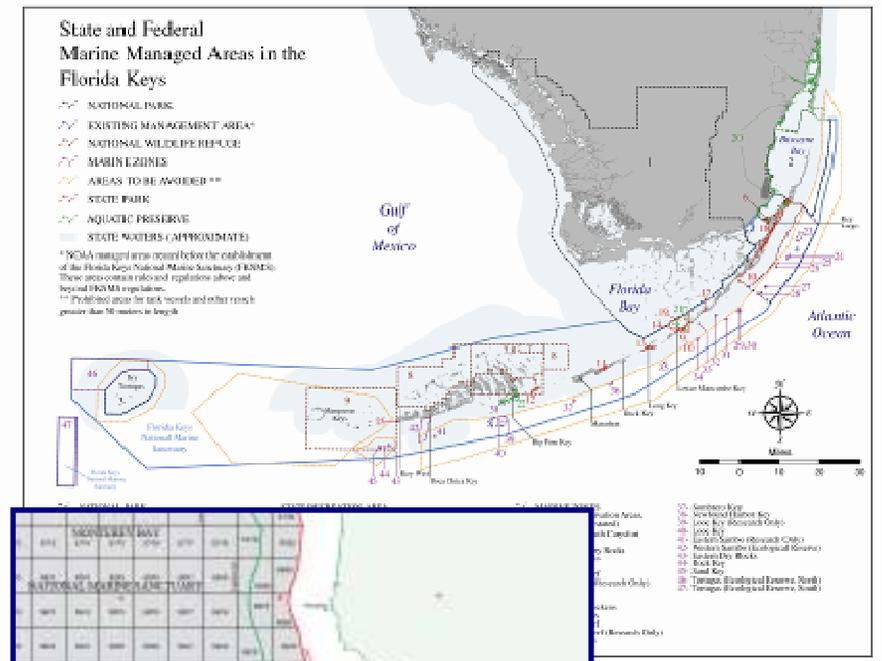
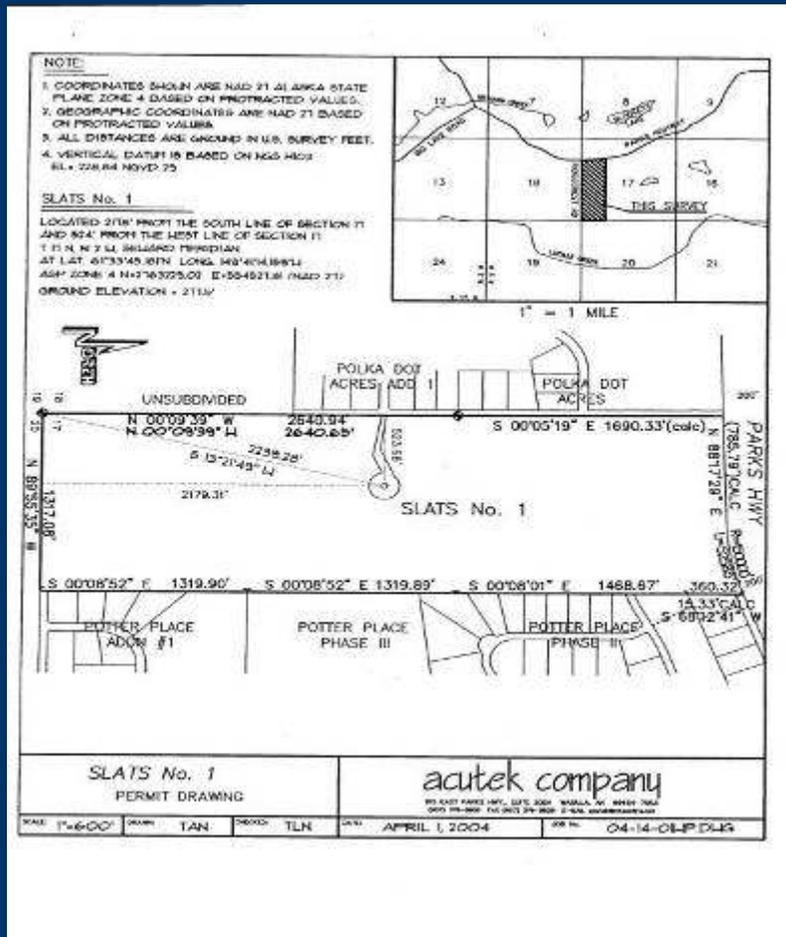
- **Potential Partnership Opportunities**

- Department of Defense (DoD)
- Coast Guard
- Massachusetts Coastal Zone Mgmt.
- Rhode Island CRMC
- Washington State – Dept. of Ecology
- Department of Energy
- South Carolina OCRM
- Northeast Regional Ocean Council
- Other States

# Multipurpose Marine Cadastre

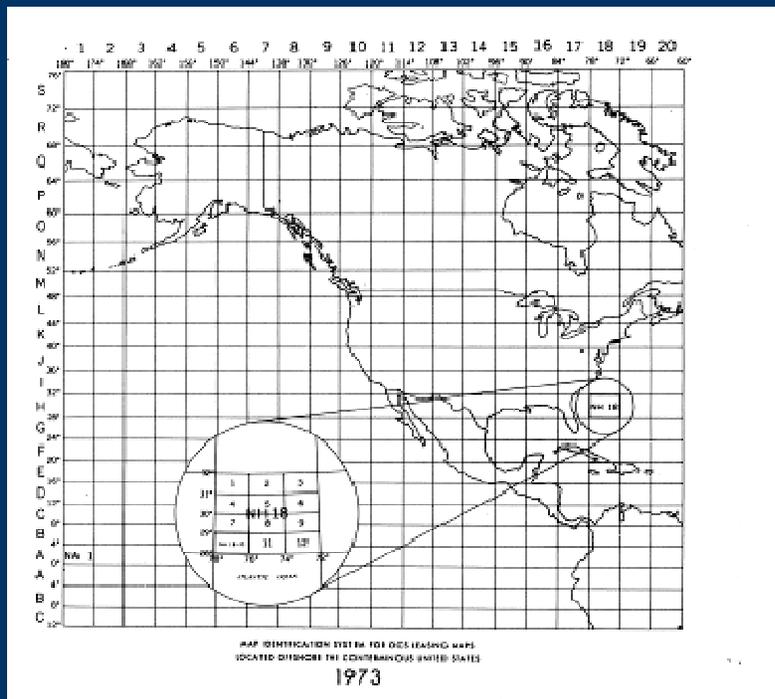
## Marine-Based Cadastre Example

## Land-Based Cadastre Example



# 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)





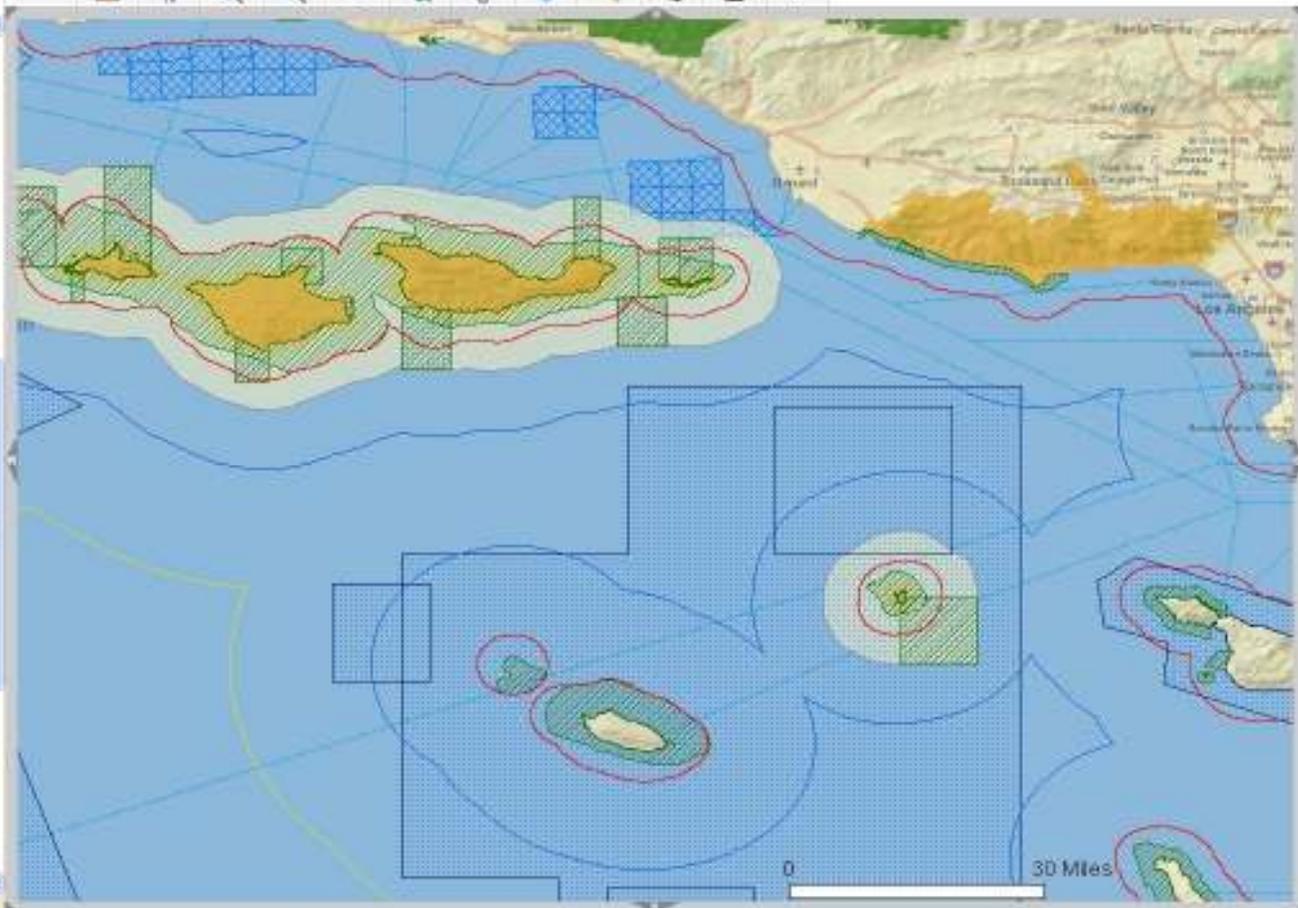
# U.S. Marine Cadastre



Legend View Favorites Print Help Info

- Unofficial Limit of 8(g) Zone
- Unofficial Submerged Lands
- State Lateral Boundaries (Unofficial)
- Federal OCS Administrative Boundaries
- Federal Georegulations
  - Navigation and Marine Infrastructure
  - Deep Stratigraphic Wells
- Wells
- Liquefied Natural Gas Sites
- Drilling Platforms
- Transmission Lines
- Ports
- Shipping Lanes
- Pipelines
- Airways
- Minerals Management Service
- Wrecks and Obstructions
- Military Danger Zones
- Proposed Energy Projects
- Geology and Seafloor Data
- Marine Habitat and Biodiversity
- Base Maps

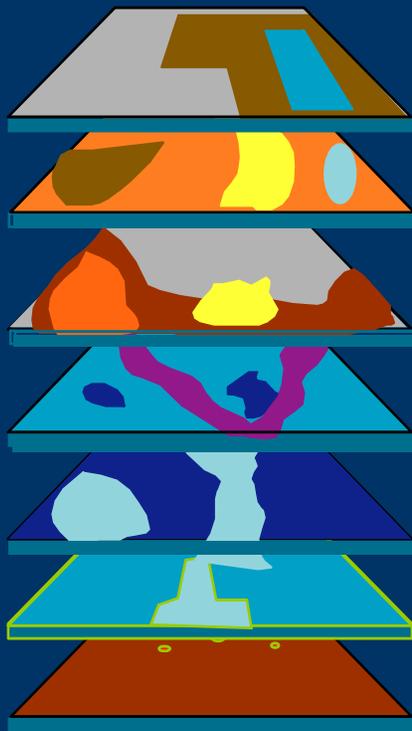
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Updated on July 20, 2005



# ***Multipurpose Marine Cadastre Data Themes***



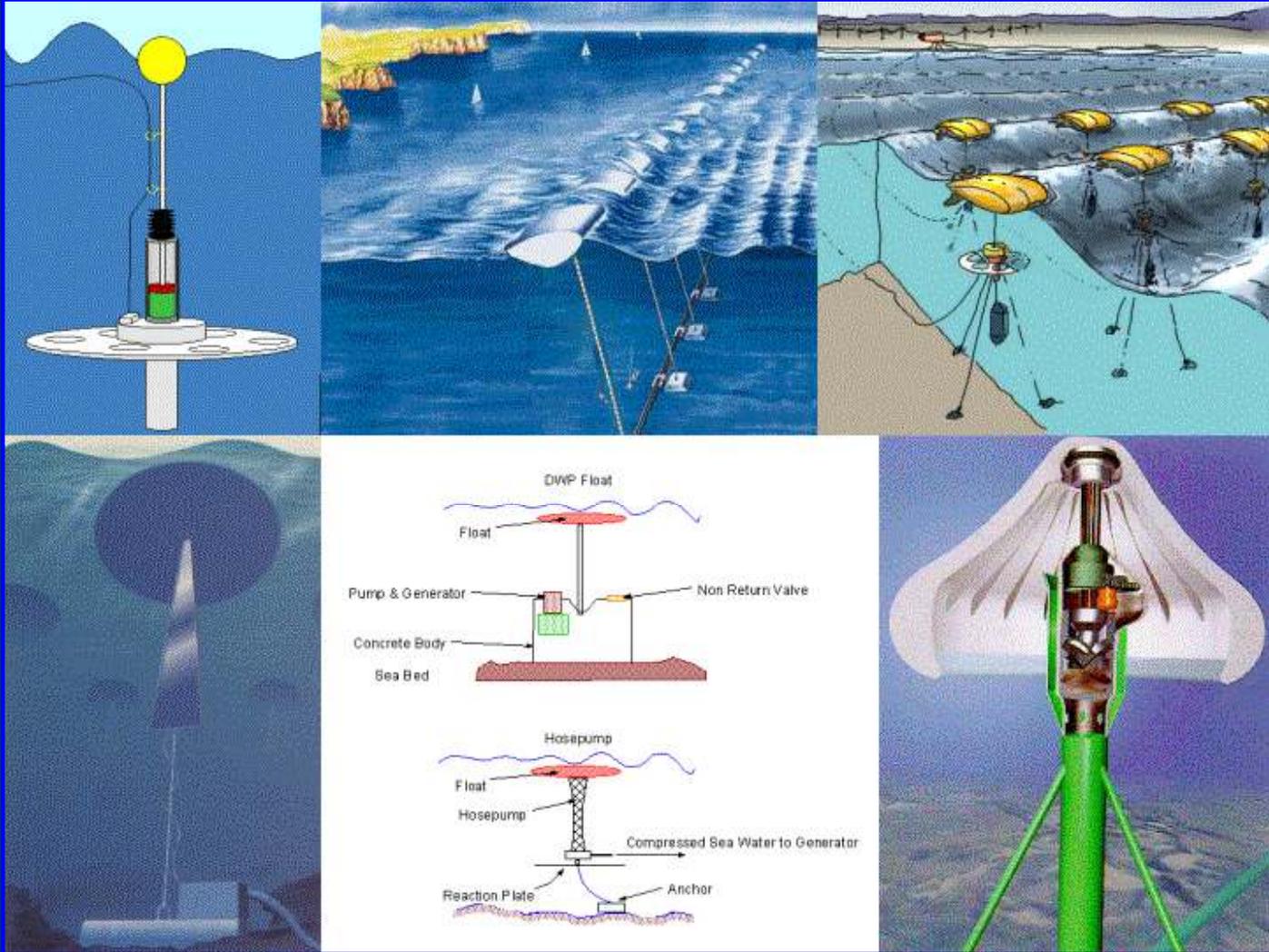
- *Marine Cadastre*
- *Georegulations*
- *Marine Infrastructure & Navigation*
- *Geology and Seafloor \**
- *Marine Habitat and Biodiversity \**
- *Human Uses \**
- *Base Maps*

•\* Denotes significant gaps in data

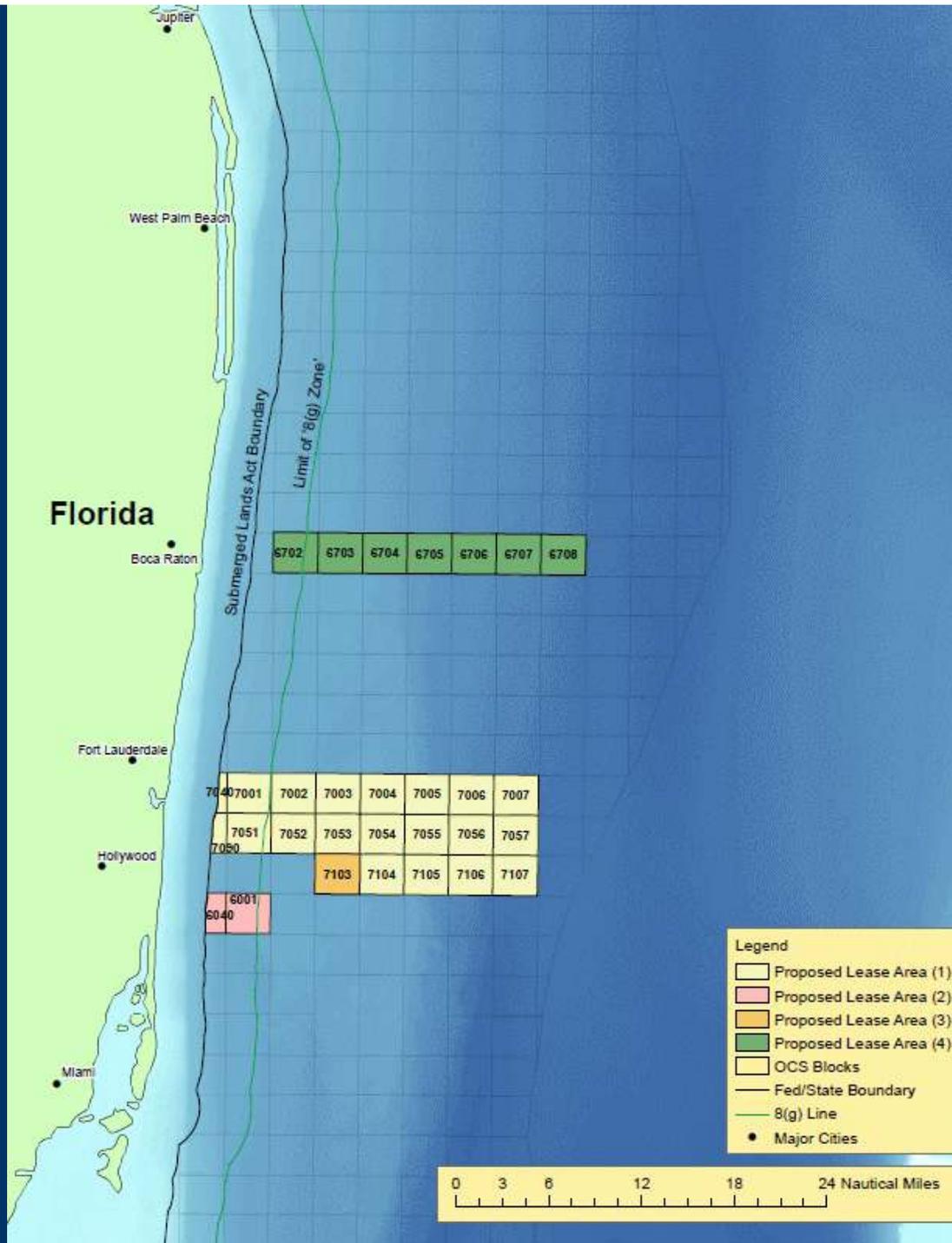
So, Things Like:



Offshore Wind Projects



Alternative forms of wave energy

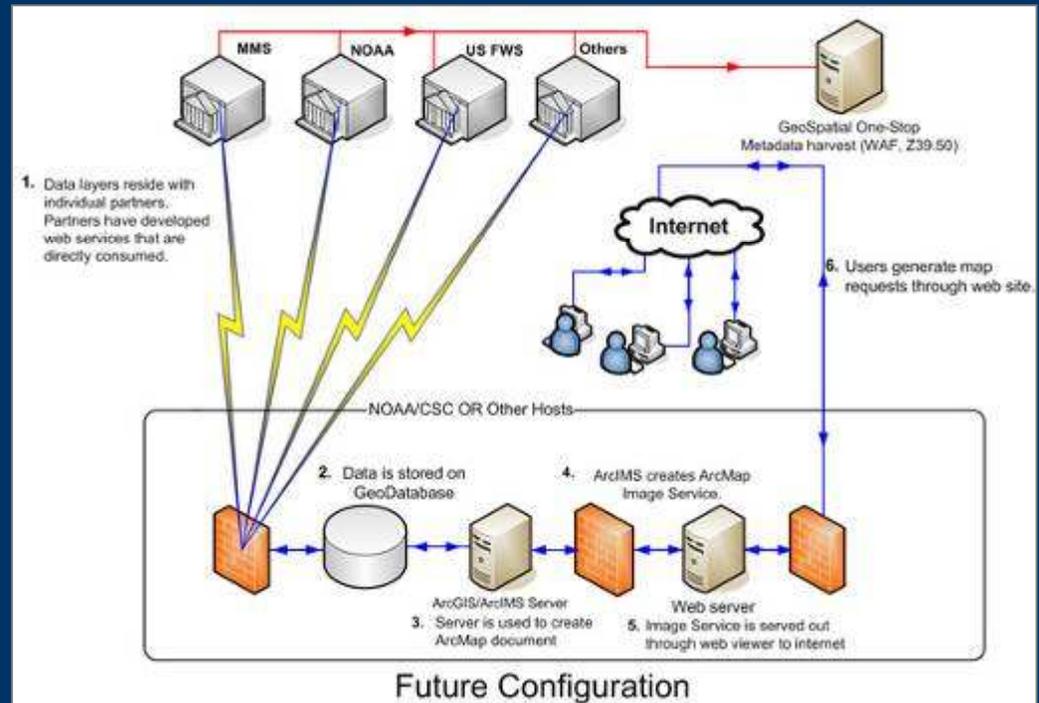


# ***Why is the Multipurpose Marine Cadastre Important?***

- Improves coordination and decision making
- Tool to resolve and modernize boundaries
- Tool for new data
- Relevant to all ocean planning issues
- Reduces data costs for states and other organizations

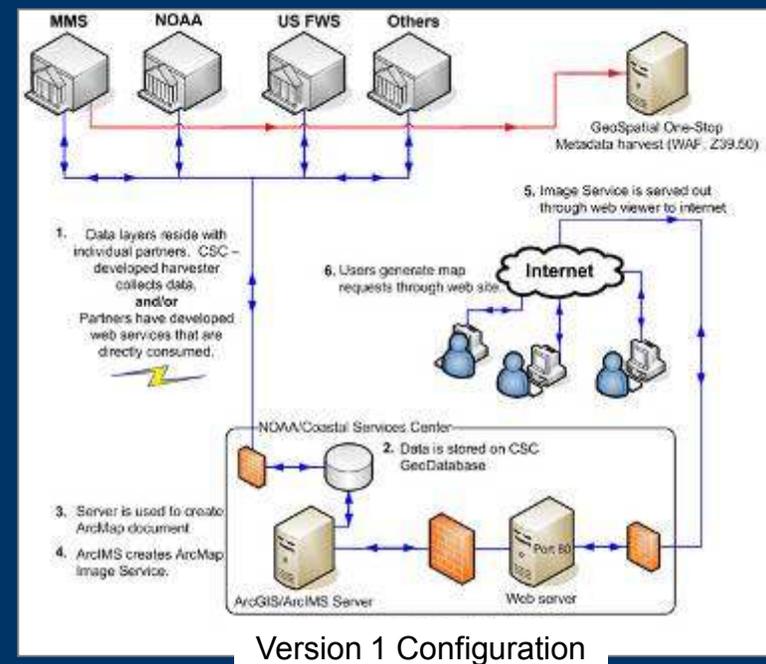
# MMC - Data Management Vision

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
- Working on a series of data bundles
  - Core marine cadastre
  - Marine Infrastructure – ENC's
  - Georegulations





# Case Studies

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



# Case Studies

**Partners:** Minerals Management Service and NOAA CSC

**Issue:** Alternative Energy Development on the OCS

**Task:** Develop mapping applications to support energy planning and regulations

**Status:** Ongoing effort

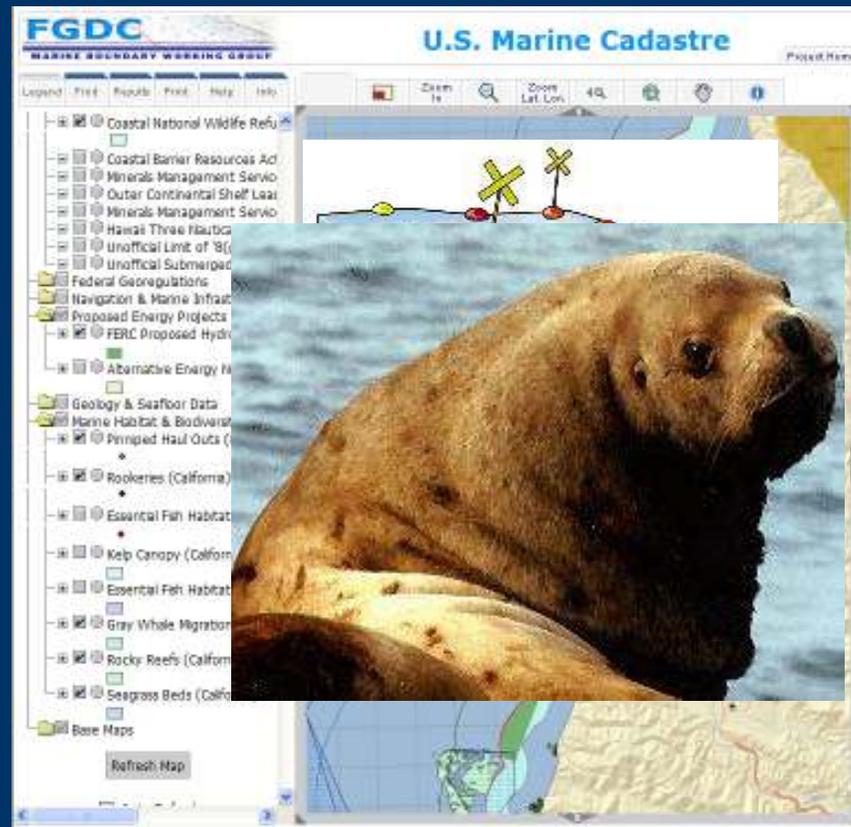


# Case Studies

**Partner:** NOAA NMFS Habitat Conservation Division

**Issues:** Map hydrokinetic projects and critical habitat data; system to support permit review

**Status:** Ongoing; figuring out best way to collaborate



# Case Studies

- California Coastal Conservancy – using data and maps for wave energy studies
- Providing web map services for state ocean planning





# *Demonstration*

**Scenario:** Permit review or site selection for energy projects

**Location:** State and Federal Waters off of Northern California

**Users:** NMFS, State Permitting Offices, private sector



## *In Summary...*

- MMC is issue driven
- Gaining momentum through case studies and partnerships
- Scalable and transferrable
- Products and support include:
  - Authoritative marine boundary and supporting data
  - Stand-alone and customizable data viewers
  - Templates for developing map viewers
  - Support on a case-by-case basis
  - <http://www.csc.noaa.gov/mmc>

## ***MMC – Future Activities***

- Work to achieve our vision of a distributed system
- Integrate biology, benthic, and human use data
- Provide a range of visualization and analysis options
- Capitalize on emerging partnership opportunities (e.g. ESRI, Google, Academia)
- Engage in demonstration projects, e.g. decision support for MSP, enhanced tools for renewable energy

# Contacts

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- Brian Smith, NOAA CSC – [Brian.M.Smith@noaa.gov](mailto:Brian.M.Smith@noaa.gov)

Web access points:

- [www.csc.noaa.gov/digitalcoast/tools/mmc/](http://www.csc.noaa.gov/digitalcoast/tools/mmc/)
- [www.mms.gov/offshore/mapping/](http://www.mms.gov/offshore/mapping/)