

Coastal and Ocean Management and Use Databases for Diverse Applications

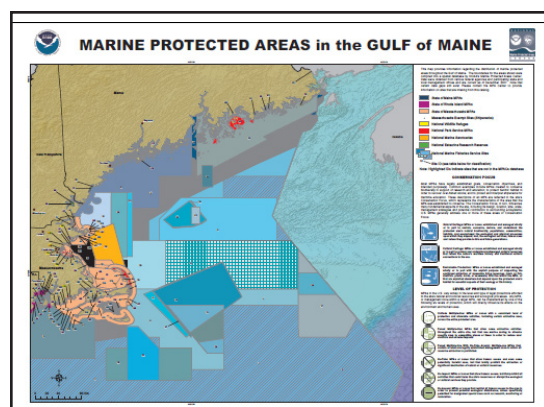
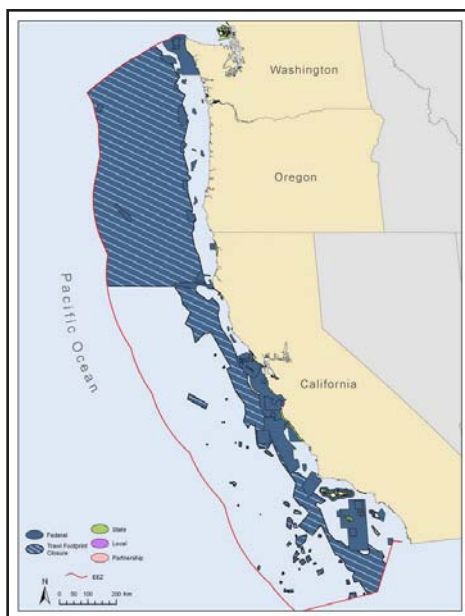


The National Marine Protected Areas Center was established under Executive Order 13158 to develop a national system of marine protected areas. Working in cooperation with public and private sector partners, the MPA Center has completed or is developing four databases to support the consensus-based development, implementation, and evaluation of the National System. These databases also can inform public and private ecosystem-based management, marine spatial planning, operational planning, ocean zoning, and regional ocean governance activities. While differing in scale and emphasis, all these processes focus fundamentally on managing human use patterns within specific natural marine areas in the hopes of achieving certain ecological and/or societal objectives.

Marine Protected Areas Inventory

Presidential Executive Order 13158 identified the need to develop a national system of marine protected areas (MPAs) that uses sound science, meaningful stakeholder input, and existing MPA authorities to sustain the long-term conservation, management, and use of the ocean. Central to this effort is the inventory of U.S. marine protected areas (http://www.mpa.gov/helpful_resources/inventory.html). This growing compilation of over 1,700 sites forms the foundation for a comprehensive assessment of existing site types and levels of protection in relation to human uses. Data are provided in both tabular and GIS form. GIS data are in ESRI shapefile format, and include the following attribute fields:

- **Boundaries (GIS version only)**
- **Site Name**
- **Level of Government**
- **Marine Area**
- **Year Established**
- **Level of Protection**
- **Permanence/Constancy**
- **Scale of Protection**
- **Conservation Focus**
- **Primary Conservation Focus**
- **Fishing Restrictions**



Tabular and GIS data were collected from state and federal MPA programs and other public sources.

Status: These data are current through December 2007. Data on which sites meet the various priority conservation objectives of the national system of MPAs will be added in 2009. Additional datafields will be added and data will be updated in the future. An official update process will be established as part of the implementation of the national system.

De Facto Marine Protected Areas Inventory

De facto MPAs are areas of the ocean where access is restricted or where specific activities or uses are regulated by law for reasons other than conservation or natural resource management. More than 1,000 federal de facto MPAs are located in U.S. waters. These sites cover 3% of the U.S. Exclusive Economic Zone (EEZ), which extends from the coastline to 200 nautical miles offshore. They range in size from less than one acre to more than 40,000 km², with the vast majority at the smaller end of this spectrum. Familiar examples of de facto MPAs include safety, security, and danger zones (e.g., Cape Canaveral), regulated navigation areas, and restricted areas. The inventory of federal de facto sites completes the picture of how, and to what degree, specific ocean areas are accessible to human uses. The MPA Center has collected data on de facto MPAs, classified these sites, and created electronic spatial boundaries for those areas where they did not exist.

There are various types of de facto MPAs in the U.S. The type of de facto MPA is determined by the managing agency, when the site is established.

- * **Anchorage Ground:** To protect government vessels, or vessels carrying explosives from injury or sabotage
- * **Danger Zones:** To protect the public from target practice, bombing, rocket firing or other especially hazardous operations
- * **Lightering Zone:** To confine and control oil and hazardous materials transfer
- * **Prohibited Areas:** To prevent oil and hazardous materials transfer at sea
- * **Regulated Navigation Area:** To control vessel traffic around ports and harbors
- * **Restricted Area:** To provide security for government operations and protection of the public from the risks of damage or injury arising from government activity by prohibiting or limiting public access
- * **Safety Zone:** To limit access for safety and environmental purposes
- * **Security Zone:** To safeguard public or private infrastructure from destruction, loss, or injury from sabotage
- * **Shipping Safety Fairway:** To control the erection of structures in highly trafficked areas
- * **Shipping Safety Anchorage:** To provide for safe vessel routes
- * **Special Anchorage Area:** To provide safe navigation in navigable waters
- * **Traffic Separation Scheme:** To provide access routes for vessels to and from ports



Status: Completed. Data are current as of September 2005.

Ocean Uses Atlas Series

The MPA Center's Ocean Uses Atlas Project is creating maps of the full range of ocean uses from the shoreline to the Exclusive Economic Zone (EEZ) and includes all state and federal waters. Knowledgeable experts will participate in workshops to develop spatial data regarding the patterns of specific industrial, military and recreational uses.

Industrial Uses

- Aquaculture
- Underwater cables
- Cruise ships
- Military operations
- Mining and mineral extraction
- Offshore alternative energy
- Offshore oil and gas
- Shipping

Fishing

- Commercial dive fishing
- Commercial fishing with benthic fixed gear
- Commercial fishing with benthic mobile gear
- Kayak fishing
- Kelp harvesting
- Recreational dive fishing
- Recreational fishing from boats
- Recreational fishing from shore

Non-Consumptive Uses

- Beach use
- Motorized boating
- Paddling
- Sailing
- SCUBA/Snorkeling
- Surface water sports
- Swimming
- Tidepooling
- Wildlife viewing at sea (commercial)



Products:

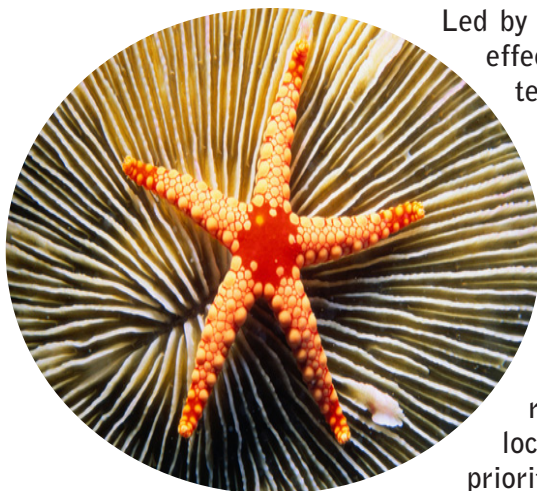
- **Regional Maps of Ocean Uses** - Drawing upon the experience and knowledge of regional experts in ocean use and management throughout the state, the project will develop and provide to ocean managers and the interested public comprehensive GIS maps and analytical products reflecting the variety of ocean uses in state and federal waters to support California's Marine Life Protection Act Initiative (MLPAI).
- **Sustainability Plan for Long-Term Mapping of Changes in Ocean Uses** - Working with a variety of federal and state agencies, including the MLPAI's new Monitoring Enterprise, the Atlas project will develop plans to ensure the sustainable collection and management of ocean use data as part of a broader ocean monitoring effort in California.
- **Design Criteria for Online Mapping Tool** - Working with federal and state agencies and private organizations in California, the Atlas project will convene an expert workshop to develop design criteria for a web-based mapping tool that will allow individual users and stakeholders to participate directly and easily in planning for managing ocean uses.

Status:

California: Maps for uses in the marine waters of California will be completed by the summer of 2009.

Additional Areas: Maps of additional states and regions will be produced as public and/or private funds become available.

Regional Gap Analysis Series



Led by NOAA's National MPA Center, the national system of MPAs will enhance the effectiveness of existing national system MPAs through coordination, science and technical assistance. It will also work with other management agencies to identify and fill gaps in protection for important ocean areas whose protections do not address current or emerging threats from human uses. Both priorities will be addressed through a collaborative gap analysis process designed to guide the developing national system of MPAs, as well as to inform and support its partner MPA programs and sites across the U.S. Key components of the gap analysis process include:

1. Identifying Ecologically Important Areas - The MPA Center will bring regional science experts together in a participatory GIS workshop to map the location of ecologically important areas corresponding to the national system's priority conservation objectives.

2. Identifying Current Protection for Important Places - Using its natural inventory of MPAs in U.S. waters, the MPA Center will identify and assess the location, type and level of protection afforded by existing U.S. MPAs to those ecologically important areas, including the national system's priority conservation objectives.

3. Comprehensively Assessing Gaps in Protection - Working closely with other MPA agencies and stakeholders, and using the best available ecological, ocean uses, and governance data, the MPA Center will evaluate regional and local gaps in protection for regionally important ocean areas.

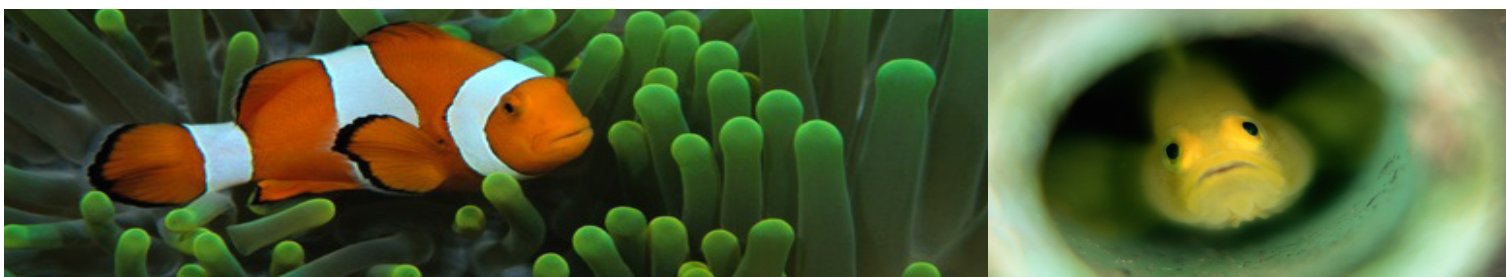
4. Working Collaboratively to Fill Gaps - Using the results of the collaborative gap analysis process, the MPA Center will work with partner MPA agencies at all levels of government to fill critical gaps through either enhancing the effectiveness of existing MPAs, or expanding protections to threatened important areas.

Status:

National workshop: February 2009

Pacific Coast (CA, OR, WA): Summer 2009

Other Regions: timing based on financial and staff resource availability



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