

MarineCadastre.gov



AN OCEAN OF INFORMATION

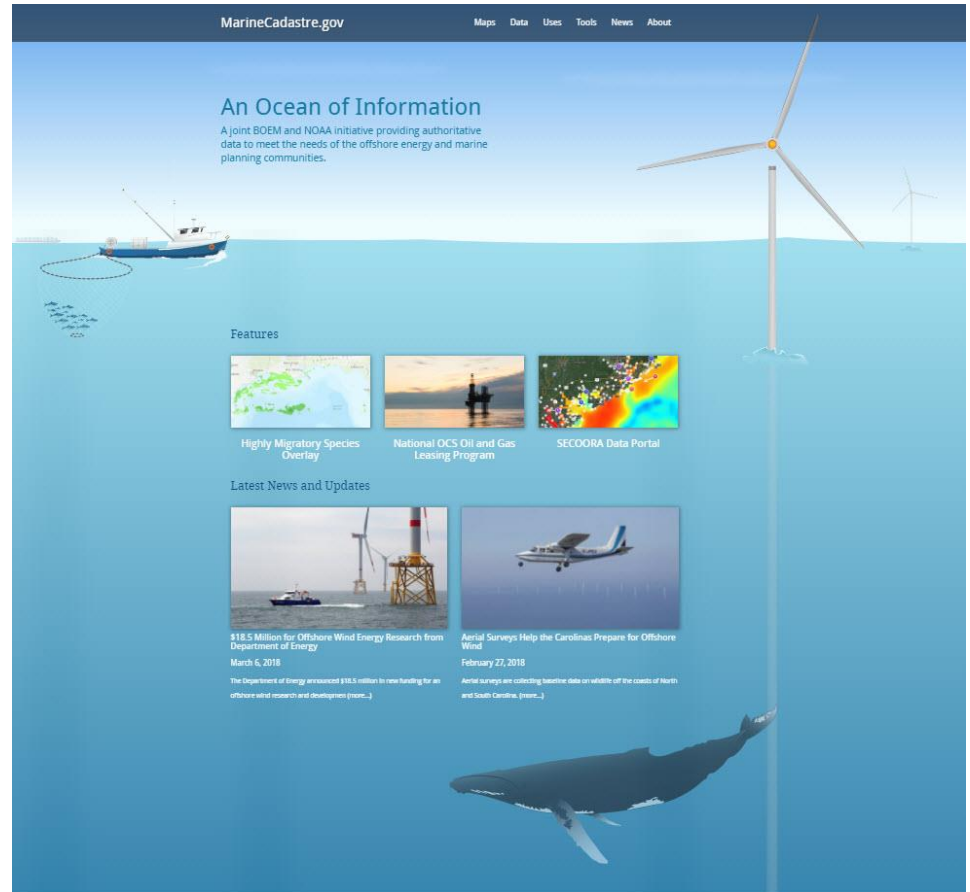
OFFICE FOR COASTAL MANAGEMENT



BOEM
BUREAU OF OCEAN ENERGY MANAGEMENT

History

- Energy Policy Act of 2005, Section 388
- Initiated as a data catalog co-led by the Bureau of Ocean Energy Management (BOEM) and National Oceanic and Atmospheric Administration (NOAA)
- Expanded the portfolio beyond data to map viewers, tools, and other resources for offshore planning

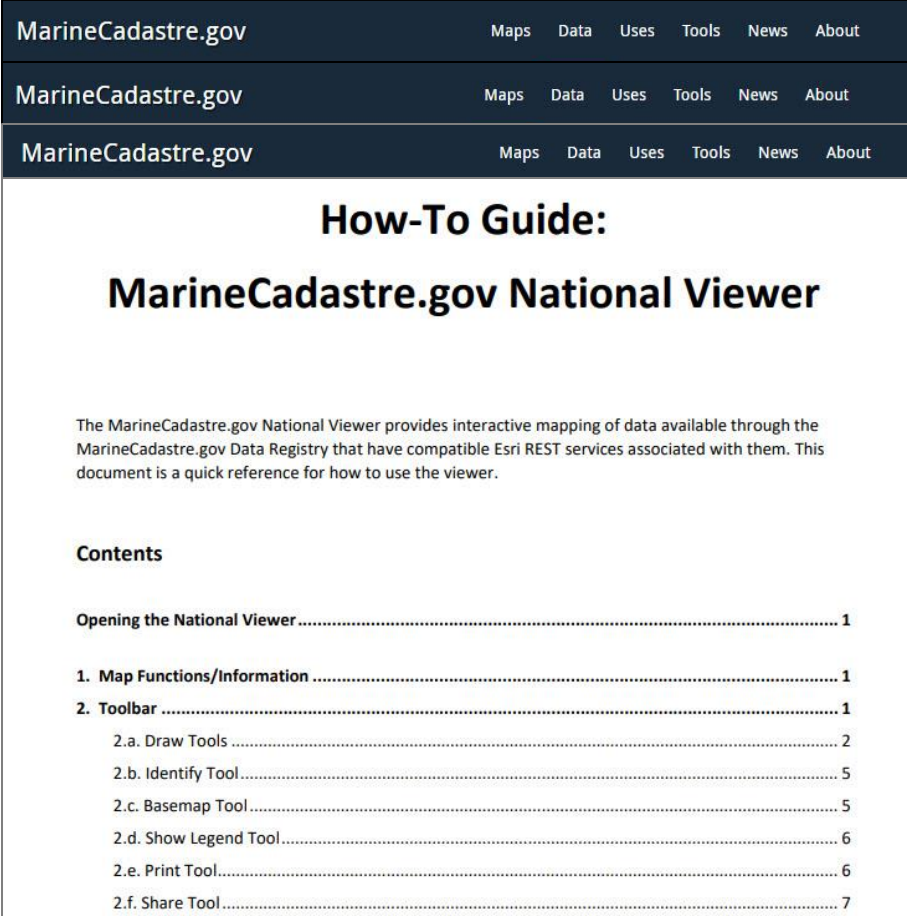


Coastal Zone Management Community

- Across all 34 state coastal zone management programs, 21 rank “planning for the use of ocean resources” as a high or medium-priority objective
- State coastal programs rely heavily on the authoritative federal data
- Spatial data, information, and analysis tools support a more effective federal consistency review at the state level

Focus Areas

- **Data Access:** Registry containing ~270 data sets in 11 topical areas
- **Data Visualization:** National Viewer and regional, thematic, and story maps
- **Tools:** Web-based and desktop tools for data query and analysis
- **Education:** user examples, case studies, and technical support materials



MarineCadastre.gov Maps Data Uses Tools News About

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How-To Guide: MarineCadastre.gov National Viewer

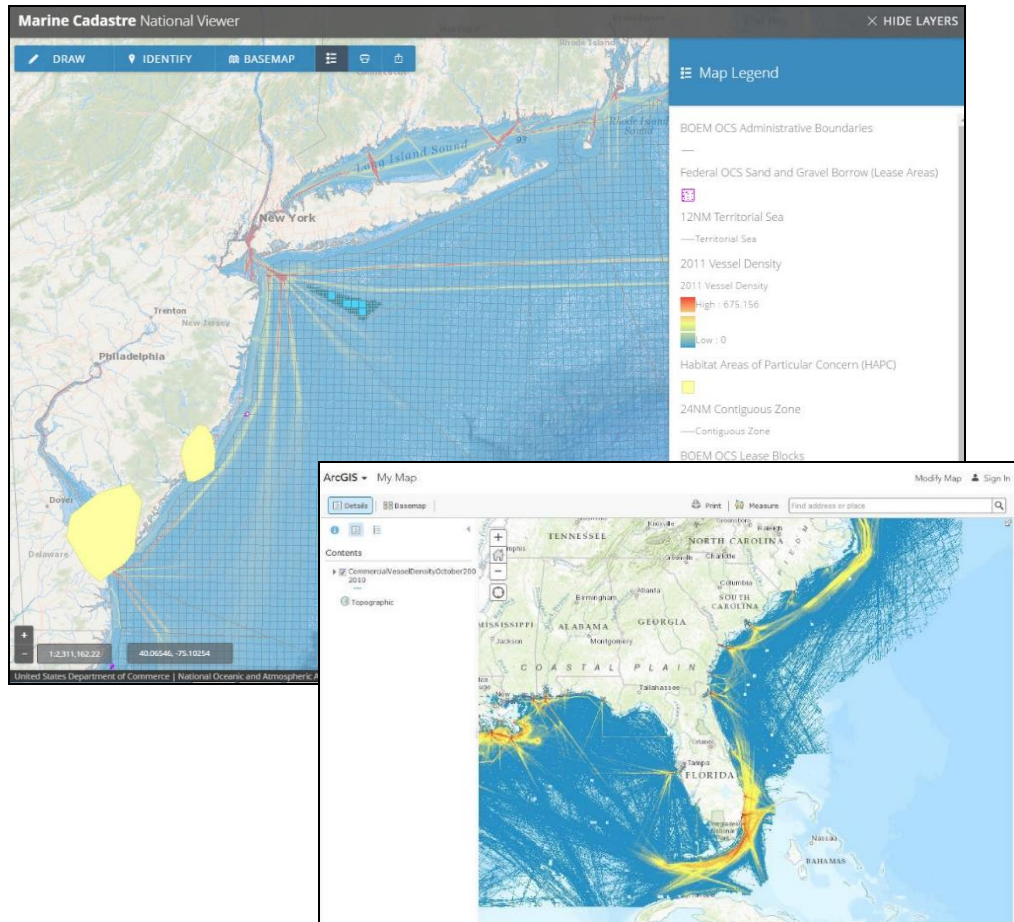
The MarineCadastre.gov National Viewer provides interactive mapping of data available through the MarineCadastre.gov Data Registry that have compatible Esri REST services associated with them. This document is a quick reference for how to use the viewer.

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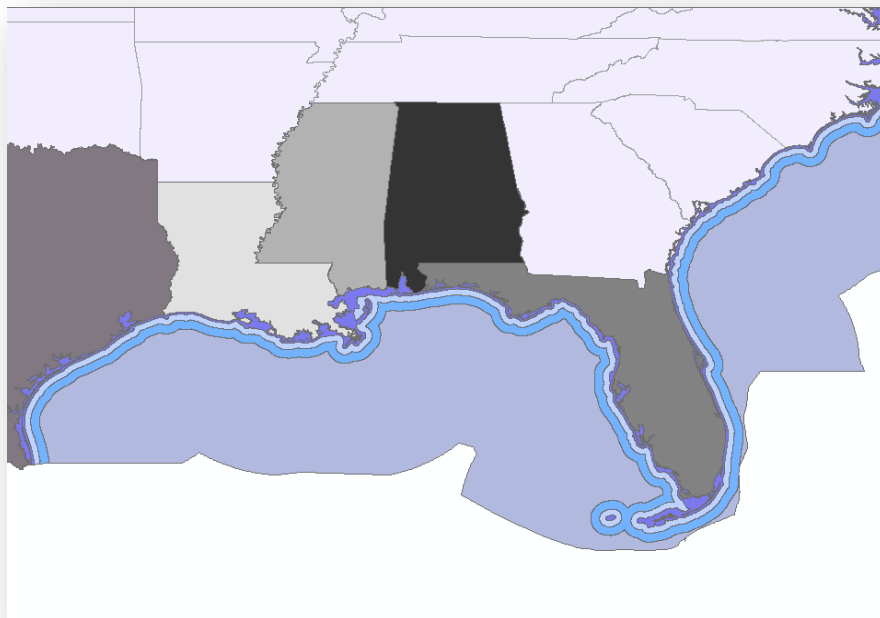
Authoritative Data

- Jurisdictions and Boundaries
- Marine Habitat
- Mammals and Turtles
- Birds and Fish
- Ocean Uses and Planning areas
- Physical and Oceanographic



Georegulation Development

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



Legislative Atlas

Spatial data depicting coastal and marine regulatory framework at federal and state levels

A screenshot of the NOAA Coastal Services Center Digital Coast Legislative Atlas website. The page features a search bar, navigation links, and a map of the Gulf of Mexico. The map shows various regulatory boundaries in different colors. The text on the page describes the atlas as a tool for identifying coastal and ocean laws and provides a list of features and services.

NOAA Coastal Services Center
LINKING PEOPLE, INFORMATION, AND TECHNOLOGY

Center Home
About the Center
Program Areas
Pacific Services Center

Search CSC
Go

Advanced Search
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 identify coastal and ocean laws that apply at specific locations and to see relationships to natural and socioeconomic resources in the region.

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

US DOC | NOAA | NCS
NOAA Coastal Services Center

Privacy Policy
Contact NOAA Coastal Services Center
Updated on January 08, 2007

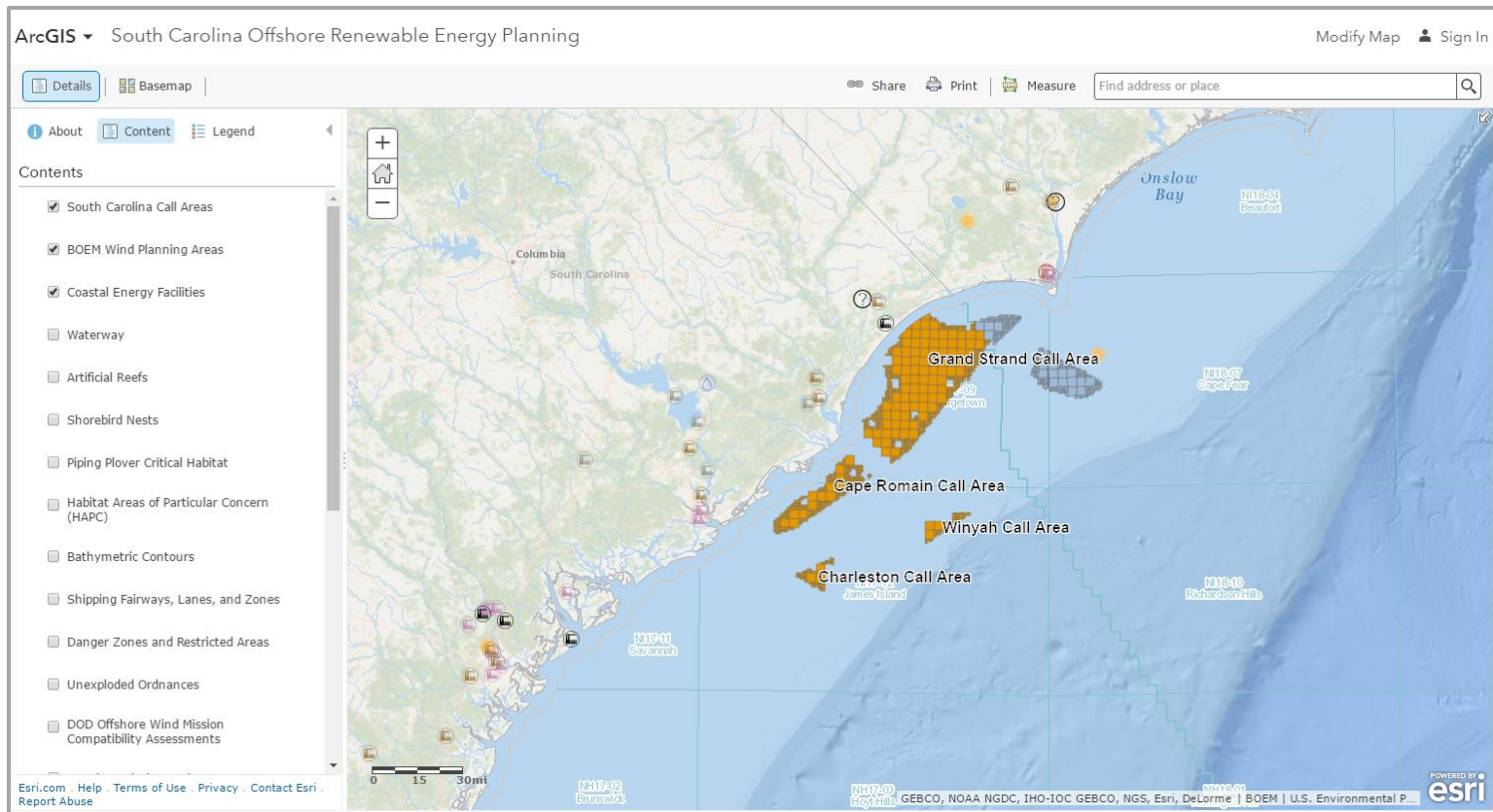
Data Registry

- Access ~270 downloadable data sets, metadata, and web services
- Filter by provider, theme, region, or service type
- Keyword search
- “Shop” for data and easily create a customized map

The screenshot displays the 'Data Registry' interface. At the top, there is a search bar containing the word 'corals'. Below the search bar, the interface is divided into several sections. On the left, there is a sidebar with filters for 'Theme', 'Region', and 'Provider'. The 'Theme' section lists 'Benthic', 'Birds', 'Corals', 'Economic', and 'Elevation'. The 'Region' section lists 'Alaska', 'Caribbean', 'East Coast', 'Great Lakes', and 'Gulf of Mexico'. The 'Provider' section lists 'Bureau of Ocean Energy Management', 'DOE National Renewable Energy Laboratory', 'Department of Energy Office of Energy Efficiency and Renewable Energy', and 'Duke University'. The main content area shows a list of datasets. The first dataset is 'Artificial Reefs' from 'MarineCadastr.gov'. The second is 'Benthic Cover' from 'MarineCadastr.gov'. The third is 'Deep-Sea Coral Observations' from 'NOAA National Centers for Coastal Ocean Science'. The fourth is 'Deep-Sea Soft Coral Habitat Suitability' from 'MarineCadastr.gov'. The fifth is 'Deep-Sea Stony Coral Habitat Suitability' from 'MarineCadastr.gov'. A pop-up window is visible over the 'Deep-Sea Soft Coral Habitat Suitability' dataset, showing options to 'Open in ArcGIS.com', 'Open in National Viewer', and 'Clear Layers'. The pop-up also includes a 'Remove Layer' button and a '+ Add to Map' button.

MarineCadastre.gov Viewers










Contains most of the data found in the MarineCadastre.gov data registry; provides custom tools to draw, share, and print maps.



Story Maps

Interactive story maps either tell a story with the data, or explain more about how the data were created or used

Story Maps

- **Discovering Deep-Sea Corals**
Predictive Habitat Modeling in the United States
- **Mapping Marine Boundaries and Statutes**
This MarineCadastr.gov story map illustrates marine boundaries and federal statutes that can assist with ocean planning.
- **Tropical Cyclone Exposure in the United States**
This MarineCadastr.gov story map illustrates modeled exposure of U.S. marine and coastal waters to winds associated with tropical cyclones.
- **North Carolina Offshore Wind Turbine Simulation**
Simulation depicting offshore wind facilities at different locations along the North Carolina coastline.
- **Considering Atlantic Shipwrecks when Planning Offshore Energy**
Atlantic Shipwreck Database density analysis of coordinate locations compiled in the Outer Continental Shelf.
- **Understanding Ocean Wind Energy**
Check out how MarineCadastr.gov is being used to assist in Ocean Wind Energy planning.
- **MAPPING Human Uses of the Ocean**
Informing Marine Spatial Planning Through Participatory GIS a MarineCadastr.gov Story Map.
- **Predicting Cetacean Density with Geospatial Models**
This MarineCadastr.gov story map details the development of models that map cetacean, and specifically marine mammal, distribution.
- **Finding Safe Anchor: Employing Vessel Traffic Data in Jacksonville, Florida**
Click within the maps to learn more about the data.

marinecadastre.gov

MAPPING
Human Uses of the Ocean

The ocean is a busy place, and it is getting busier every day. Understanding the many ways we use the ocean is essential to making sound and effective coastal management decisions.

The participatory mapping process developed by the National Oceanic and Atmospheric Administration (NOAA) fills critical data needs for marine planning by engaging ocean use communities in documenting their expert knowledge about ocean use activities.

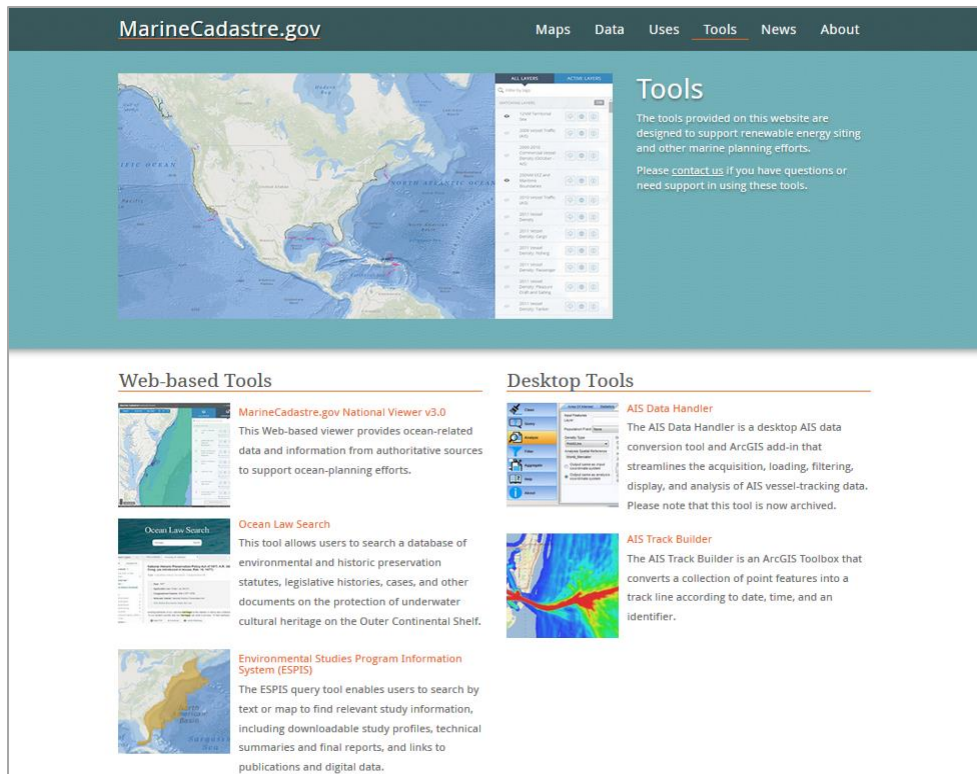


For more information on the participatory mapping process and case studies where it has been applied, please visit



MarineCadastre.gov Tools

Custom tools created to help research, discover, process, and analyze our data offerings



The screenshot shows the MarineCadastre.gov website interface. At the top, there is a navigation menu with links for Maps, Data, Uses, Tools, News, and About. The main content area features a map of the United States with a layer control panel on the right. Below the map, there is a section titled "Tools" with a description: "The tools provided on this website are designed to support renewable energy siting and other marine planning efforts. Please contact us if you have questions or need support in using these tools." The tools are categorized into "Web-based Tools" and "Desktop Tools".

Web-based Tools

- MarineCadastre.gov National Viewer v3.0**
This Web-based viewer provides ocean-related data and information from authoritative sources to support ocean-planning efforts.
- Ocean Law Search**
This tool allows users to search a database of environmental and historic preservation statutes, legislative histories, cases, and other documents on the protection of underwater cultural heritage on the Outer Continental Shelf.
- Environmental Studies Program Information System (ESPIS)**
The ESPIS query tool enables users to search by text or map to find relevant study information, including downloadable study profiles, technical summaries and final reports, and links to publications and digital data.

Desktop Tools

- AIS Data Handler**
The AIS Data Handler is a desktop AIS data conversion tool and ArcGIS add-in that streamlines the acquisition, loading, filtering, display, and analysis of AIS vessel-tracking data. Please note that this tool is now archived.
- AIS Track Builder**
The AIS Track Builder is an ArcGIS Toolbox that converts a collection of point features into a track line according to date, time, and an identifier.


Environmental Studies Program Information System

- Search by text or map to find study information
- Download study profiles, technical summaries, and final reports, and find links to publications and digital data
- View and learn about 40 years of environmental studies (~2,000) and the \$1 billion spent on environmental research

The screenshot shows the ESPIS search results page. At the top, there is a search bar with 'marine mammals' in the 'FIND' field and 'gulf of mexico' in the 'NEAR' field. Below the search bar is a world map with a red box highlighting the Gulf of Mexico region. The main content area displays 'WE FOUND 35 RESULTS MATCHING YOUR SEARCH' and 'SORT BY BEST MATCH'. There are three filter sections: 'YEAR' (2001 - 2015), 'STATUS' (SHOW ALL), and 'REGION' (GULF OF MEXICO). A 'RESET FILTERS' button is located below the filters. The results list includes three items, each with a map thumbnail and a brief description. The first result is 'Workshop on the Status and Applications for Acoustic Monitoring of Marine Mammals' in the Gulf of Mexico (2009-2011). The second is 'Pilot Study of Aerial High-Definition Surveys for Seabirds, Marine Mammals and Sea Turtles' nationally (2010-2012). The third is 'Development of Software and Hardware to Acoustically Detect, Classify, and Locate Marine Mammals' as a NOPP co-sponsorship. At the bottom, there is a partnership logo for BOEM (Bureau of Ocean Energy Management) and NOAA (National Oceanic and Atmospheric Administration).

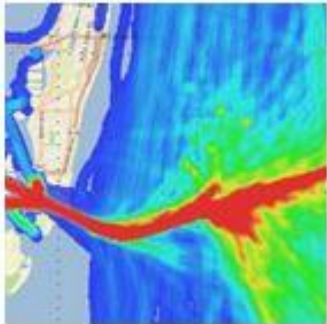
Automatic Identification System Toolkit

- Processing tools
- Filtered points 2009 to 2014
- Derived Data Products
- Tutorials



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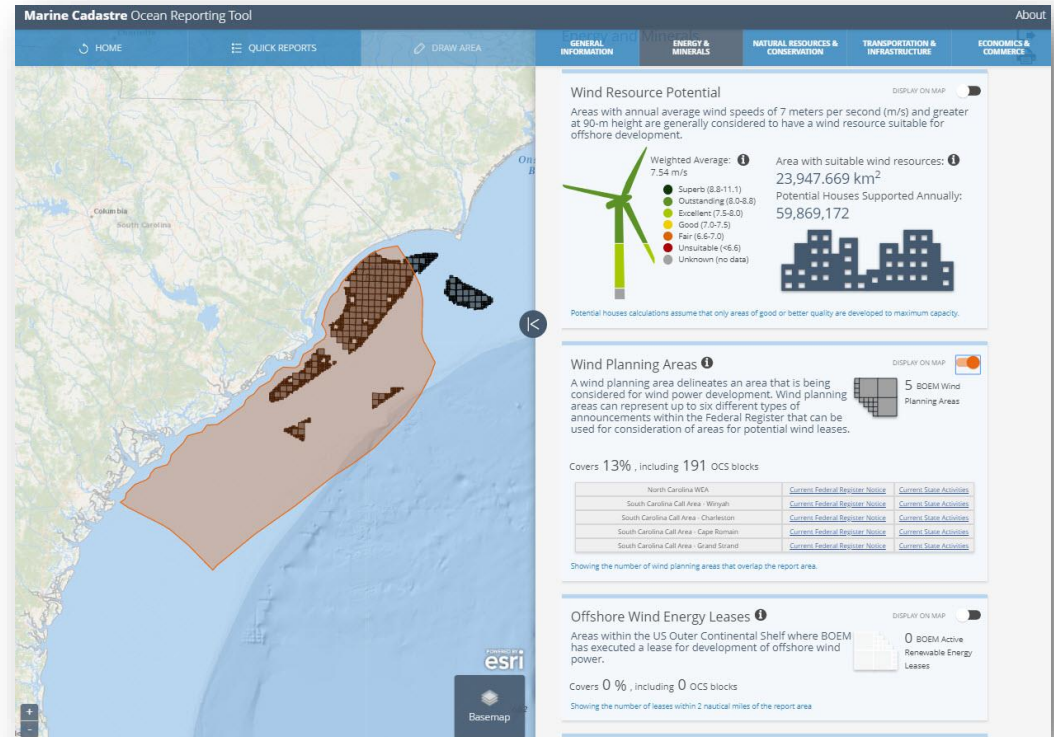


AIS Track Builder

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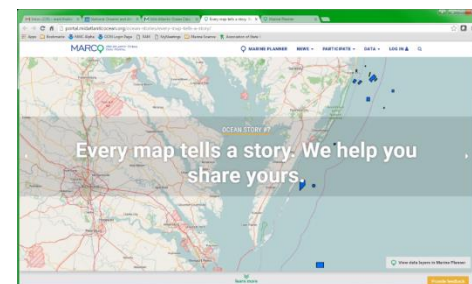
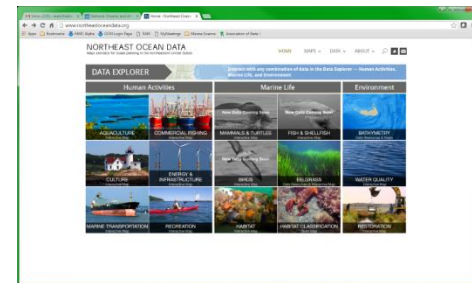
New Tool: Ocean Reporting Tool

- **Audience:** Non-technical users: congressional staffers, NEPA analysts, resource managers
- Report-centric tool for non technical users
- High level statistics and infographics
- FY18 Focus: Mariculture Permitting and Planning



Integration With Ocean Portals

- Provide National and Federal level data that is being integrated into regional portals (up to 50% in NROC Portal)
- Allows regions to focus on locally important data
- Regional Portals rely on our team to coordinate with other federal agencies
- Sharing of lessons-learned and coordinated data development



Measuring Success: Stories from the Field

Mapping Uses of MarineCadastre.gov
This map displays examples of how MarineCadastre.gov products are being used around the United States.

MarineCadastre.gov BOEM

MAP LEGEND

Aiding Marine Mammal Research
Locality: Scituate, MA
Using: Data
Stellwagen Bank National Marine Sanctuary is using vessel-density data from MarineCadastre.gov to aid in research of how noise from large commercial vessels may affect marine mammals.
[About](#) | [Project Site](#)
[Zoom to](#)

Identifying E from Mid- An Offshore Drill
Region: Mid-South Atlantic
Using: Data
Geospatial analysts at the Southern Environmental Law Center used data obtained from MarineCadastre.gov to analyze and visualize wildlife and natural resource areas potentially impacted by offshore drilling.
[About](#) | [Project Site](#)
[Zoom to](#)

Future Direction

- Continued data dissemination and maintenance
- Tool development where needed – Ocean Reporting
- Technical assistance and capacity building
- Continued support for regional planning efforts
- Emphasis on particular data types and issues
 - Aquaculture
 - Sediment management
 - Connection to NOAA's Blue Economy Initiative

For More Information

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