

BOEM

Bureau of Ocean Energy
Management

Collaboration and Decision Making with Ocean Mapping and Reporting Tools

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Decision Tools

- **Always multiple stakeholders in any decision involving state or federally managed waters**
- **Best scenario is everyone is using the same and most up to date, authoritative maps and information**
- **States and Federal Agencies have collaborated on processes and tools to help you navigate through all the data**



Decision Tools

- MarineCadastre.gov
- Northeast Ocean Data Portal
- Ocean Reports

The image displays three overlapping screenshots from the MarineCadastre.gov website. The top screenshot shows the homepage with the heading "An Ocean of Information" and a description of a joint BOEM and NOAA initiative. The middle screenshot shows the "DATA EXPLORER" interface with a map of the Gulf of Maine and a "LAUNCH DATA EXPLORER" button. The bottom screenshot shows the "Ocean Reports" section for a "Custom Area 26.56 nautical miles from Winter Harbor, ME", featuring a "Vessel Count" table and a "Vessel Routing" section.

Type	Min	Mean	Max
All	1	216	221
Coast	1	208	8
Fishing	1	145	200
Marine	1	218	22
Pleasure	1	120	7
Towee	1	142	25
Tugboat	1	107	9

MarineCadastre.gov



- Provided by BOEM & NOAA for since 2007
- Agency of Responsibility /Authoritative Map Layers – Updated regularly
- Map Once – Use Often
 - Map Services utilized by other portals

MarineCadastr.gov – Data Registry

MarineCadastr.gov

Data Registry

The MarineCadastr.gov Data Registry provides direct access to data currently available through MarineCadastr.gov. Filter the data by provider, thematic category, geographic region, and service type. If you are looking for a data set that is currently not available on MarineCadastr.gov, please email us.

MarineCadastr.gov works with data sources to provide highest quality data sets available. When using data for planning purposes, please read the associated metadata and use constraints to be sure the data will meet your needs.

Sign up to receive email updates on changes to our map services.

- Data Fact Sheet
- Data Updates
- How to Contribute Data
- MarineCadastr.gov Frequently Asked Questions
- The Power of Map Services
- Using MarineCadastr.gov Web Services in ArcMap
- Vessel Traffic (AIS) Data

Search [] [x] [Help] [My Map 0]

Currently displaying 310 Datasets

Clear Filters

Theme

- Bathymetry
- Birds
- Corals
- Economics
- Elevations
- Show More

Region

- Alaska
- Caribbean
- East Coast
- Great Lakes
- Gulf of Mexico
- Show More

Provider

- Bureau of Indian Affairs
- Bureau of Ocean Energy Management
- DOE National Renewable Energy Laboratory
- Department of Energy Office of Energy Efficiency and Renewable Energy

12NM Territorial Sea ⓘ
NOAA Office of Coast Survey

2009 - 2017 National AIS at 1 Minute Intervals ⓘ
MarineCadastr.gov

2009 Vessel Traffic (AIS) ⓘ
Bureau of Ocean Energy Management

2009-2010 Commercial Vessel Density (October - AIS) ⓘ
NOAA Office of Coast Survey

200NM EEZ and Maritime Boundaries ⓘ
NOAA Office of Coast Survey

2010 Vessel Traffic (AIS) ⓘ
Bureau of Ocean Energy Management

- Search for over 300 layers
- Download
- View
- Dig deeper
- Save to Map

MarineCadastre.gov – Map Viewer

The screenshot displays the Marine Cadastre National Viewer interface. The main map area shows a coastal region with several colored overlays: a large yellow area, a red area, a green area, and a blue area. A search bar at the top left contains the text "military *". The layer control panel on the right is titled "HIDE LAYERS" and "ACTIVE LAYERS". It lists 11 matching layers, all of which are checked:

- Danger Zones and Restricted Areas
- Department of Defense Offshore Wind Mission Compatibility Assessments
- Formerly Used Defense Sites (Unexploded Ordnances)
- Military Operating Area Boundaries
- Military Submarine Transit Lanes: Atlantic / Gulf of Mexico
- Unexploded Ordnance Areas
- Unexploded Ordnance Locations
- Military Regulated Airspace: Atlantic / Gulf

The interface also includes a top navigation bar with "DRAW", "IDENTIFY", and "BASEMAP" options, and a bottom status bar showing coordinates: 12,311,162.22 and 44,75012, -69,30143.



MarineCadastre.gov – Map Viewer

Marine Cadastre National Viewer HIDE LAYERS

DRAW **IDENTIFY** **BASEMAP** **Layers** **Home** **Print** **Share** **Help**

Military Operating Area Boundaries
U.S. NAVY

[DATA](#) [SERVICES](#) [MORE INFO](#)

DESCRIPTION

An Operating Area (OPAREA) Complex boundary is the bounded area in which national defense training exercises and system qualification tests are routinely conducted. OPAREA boundaries are formally established by national designation and by international treaty for national defense training purposes, and allow for specific exercises and training events to be coordinated with other federal, state, and local agencies, and also the general public, as in Notices to Mariners (NOTMARs). Includes the OPAREA, range complex boundaries and study areas. The MarineCadastre.gov team worked with the Navy to provide this data, which is a subset of the Navy's Common Operating Picture, for ocean planning purposes.

VISIBLE SCALE RANGE
0 to 0

LEGEND PATCH

ADDITIONAL KEYWORDS

◀ AREAS ▶ ATLANTIC ▶ BOUNDARIES ▶ COAST ▶ DOD ▶ EAST
◀ GULF ▶ MEXICO ▶ MILITARY ▶ NAVY ▶ NGA ▶ OCEAN
◀ PACIFIC ▶ PLANNING ▶ USES



MarineCadastre.gov – Map Viewer

The screenshot displays the Marine Cadastre National Viewer interface. The main map area shows a satellite-style view of the Gulf of Mexico coastline with several colored overlays: a large yellow area, a red area, and a green area. A legend on the right side of the screen lists various maritime boundaries and restrictions. The legend includes categories such as 200NM EEZ and Maritime Boundaries, Military Operating Area Boundaries, Danger Zones and Restricted Areas, and DOD Offshore Wind Mission Compatibility Assessments. The interface also features a top navigation bar with options like DRAW, IDENTIFY, BASEMAP, and a search bar. A 'HIDE LAYERS' button is visible in the top right corner of the map area.

Map Legend

- 200NM EEZ and Maritime Boundaries
 - US EEZ
 - Int'l Maritime Boundary
 - Int'l Maritime Boundary N' EEZ
 - Eastern Special Area
 - Territorial Sea
- Military Operating Area Boundaries
 - Unexploded Ordnance Locations
 - Unexploded Ordnance Areas
- Submerged Lands Act Boundary
- Military Submarine Transit Lanes: Atlantic / Gulf of Mexico
- Danger Zones and Restricted Areas
 - Danger Zone
 - Restricted Area
 - Other
- DOD Offshore Wind Mission Compatibility Assessments
 - No Restrictions
 - Site-Specific Stipulations
 - Wind Exclusion
 - Not Assessed
- Formerly Used Defense Sites (Unexploded Ordnances)





ceanReports

Unlocking Ocean Intelligence, Empowering Ocean Decisions

Ocean Reports Components

- Draw your own area – results in about 2 seconds
 - Move it around if you don't get the results you need
 - Or use known coordinates

OceanReports
A BOEM NOAA PARTNERSHIP

Know what's happening in your ocean area

Draw a custom area anywhere in U.S. waters or pick from a predefined list of locations to get instant custom reports. Reports include descriptive infographics and supporting data that can be used for offshore planning, permitting, environmental review, public relations, and more. New features allow printing by industry, sharing, and adding custom coordinates.

Report Topics Include

General Information	Oceanographic and Biophysical
Energy and Minerals	Transportation and Infrastructure
Natural Resources and Conservation	Economics and Commerce

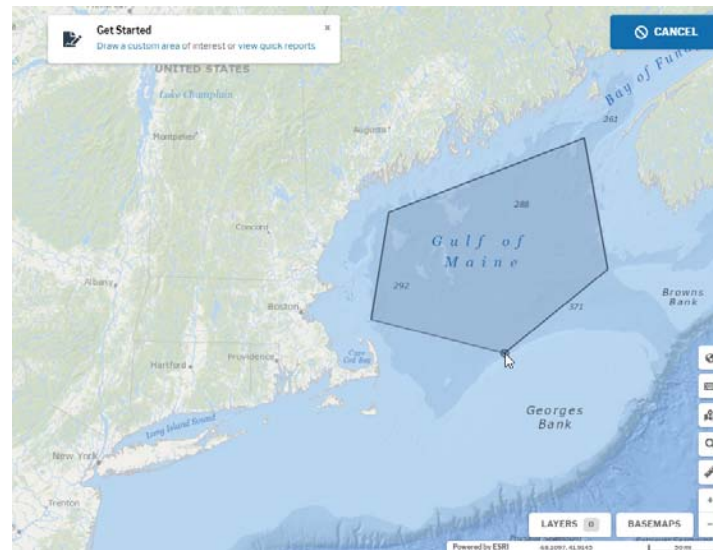
Report Area

677 Miles ²	511 National Miles ²	1,753 Miles ²
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Federal, State and County Jurisdictions

Federal (79.5%)	North Carolina (20.5%)
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Buttons: DRAW CUSTOM AREA, VIEW QUICK REPORTS









CREATE A POLYGON WITH COORDINATES

Enter a minimum of four geographic coordinate pairs, each on their own line. The first and last pair must be the same. For example:

```
-70.2301, 41.8634  
-70.4360, 41.8204  
-70.8178, 41.4344  
-70.4690, 41.2881  
-70.2301, 41.8634
```

6 Chapters, 80+ layers, 68 infographics

Chapter Theme	Symbol	Infographic Reports Available		
General Information		Report Area Depth/Elevation Populated Places Federal/State/County Jurisdictions	Congressional and Legislative Districts Federal Statutes Tribal Lands	
Energy & Minerals		Offshore Wind Potential Offshore Wind Planning Areas Offshore Wind Energy Leases OCS Revenue Sharing Areas Oil and Gas Potential	Oil and Gas Planning Areas Oil and Gas Leases Energy Facilities OCS Blocks with Sand Resources	Beach Nourishment Projects Surficial Sediment Texture Ocean Disposal Sites Federal Sand and Gravel Leases
Transportation & Infrastructure		AIS Vessel Count Vessel Routing N. Atlantic Right Whale Management Areas Anchorage Areas Pilot Boarding Areas	Ports Coastal Maintained Channels Danger Zones/Restricted Areas Unexploded Ordnances Formerly Used Defense Sites	Wrecks/Obstructions Cables and Pipelines Wastewater Outfalls Aquaculture Oil Lightering Zones Deepwater Ports Oil/Gas Platforms Oil/Gas Wells
Natural Resources		Endangered Species ESA-Critical Habitat Designations Habitat Areas of Particular Concern Managed Highly Migratory Species Audubon Important Bird Areas	Protected Areas Artificial Reefs Shallow Corals Deep-sea Sponge/Coral Obs. Deep-sea Coral Habitat Suitability	Historical Lighthouses Cetacean Biologically Important Areas
Oceanographic & Biophysical		Wave Height, Period and Direction Wind Speed and Direction Current Speed and Direction at Depths Sea Surface Height Water Temp/Salinity	Nitrates Phosphates Silicates Aragonite Light Attenuation KD PAR	Light Attenuation KD 490 Chlorophyll a Concentration
Economics & Commerce		Ocean Job Contributions GDP of Ocean Economy Contributions by Sector	Census Statistics Fishing Economic Value (North and Mid Atlantic)	

General Information – 7 infographics

Custom Area 26.56 nautical miles from ...
GENERAL INFORMATION

If the report area is onshore or inside state waters, showing the three closest counties and three closest states. If the report area is solely in federal offshore waters, showing the three closest states.

Congressional and Legislative Districts

3 Congressional Districts	6 State Districts
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US Congressional Districts

Maine Congressional District 01	Massachusetts Congressional District 06	×
Maine Congressional District 02		

State Senate +

State House +

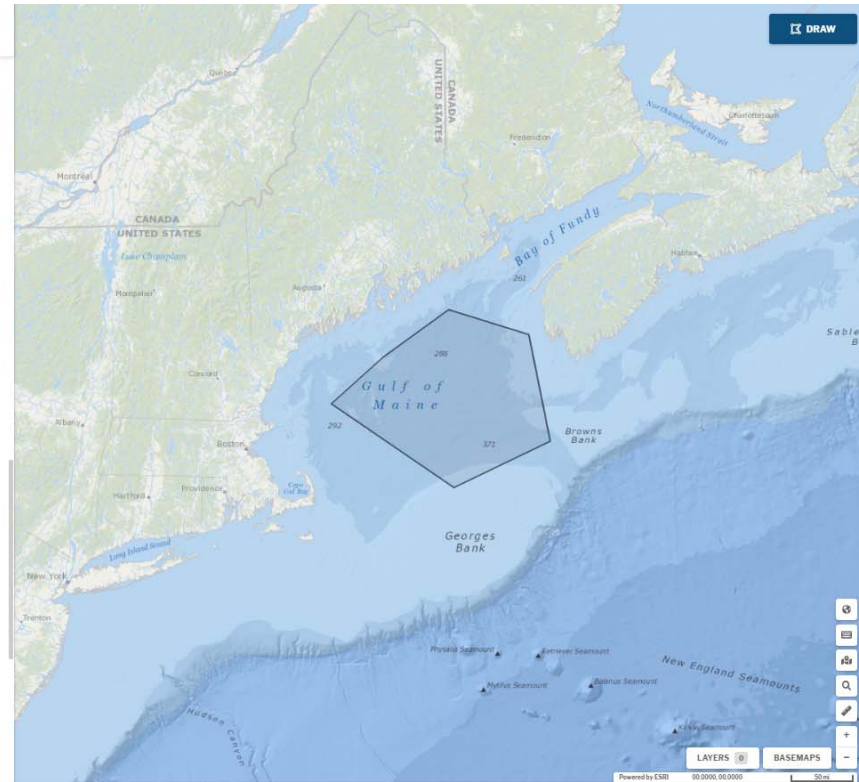
Showing all districts within 12 nautical miles of the report area, or the closest 3 if none are within 12 nautical miles.

Federal Statutes

Federal statutes cover a broad variety of legal restrictions and permitted activities within state and U.S. federal waters. It is important to know these statutes and where they are applicable before planning for any activities in these waters. Those listed below apply within the area of interest outlined in this report. Please note that other federal statutes with complex or uncertain geographic boundaries may exist in the area and can be found by using the Ocean Law Search tool.

Act to Prevent Pollution from Ships and MARPOL 73/78	Marine Debris Research, Prevention and Reduction Act
Clean Water Act	Marine Mammal Protection Act
Coastal Zone Management Act	National Environmental Policy Act
Comprehensive Environmental Response, Compensation, and Liability Act	National Historic Preservation Act
Endangered Species Act	National Marine Sanctuaries Act
Energy Policy Act	Outer Continental Shelf Lands Act
Magnuson-Stevens Fishery Conservation and Management Act	

Showing federal statutes that apply inside the report area.



Energy and Minerals – 13 infographics

Custom Area 26.56 nautical miles from ...
ENERGY AND MINERALS

coastal and marine waters also provide sand and gravel, which is used to restore hundreds of miles of coastline and protect billions of dollars in infrastructure and ecological habitats from coastal erosion and destructive storms.

Offshore Wind Resource Potential

Areas with annual average wind speeds of 7 meters per second (m/s) and greater, at 100-meters (328-feet) height, are generally considered to be resources suitable for offshore development. Our nation's offshore wind resource potential, with the exclusion of areas not feasible for development, is more than 2,000 gigawatts of capacity per year. This is nearly double the nation's current electricity use. If only 4 percent of the potential available areas were built by 2050, they could support 160,000 jobs, reduce power sector water consumption by 5 percent, and reduce greenhouse gas emissions by 1.6 percent. Floating wind platforms could potentially provide access to deepwater areas which tend to have the greatest wind capacity, expanding this potential.

DISPLAY LAYER

19,375,679
Potential Houses Supported Annually

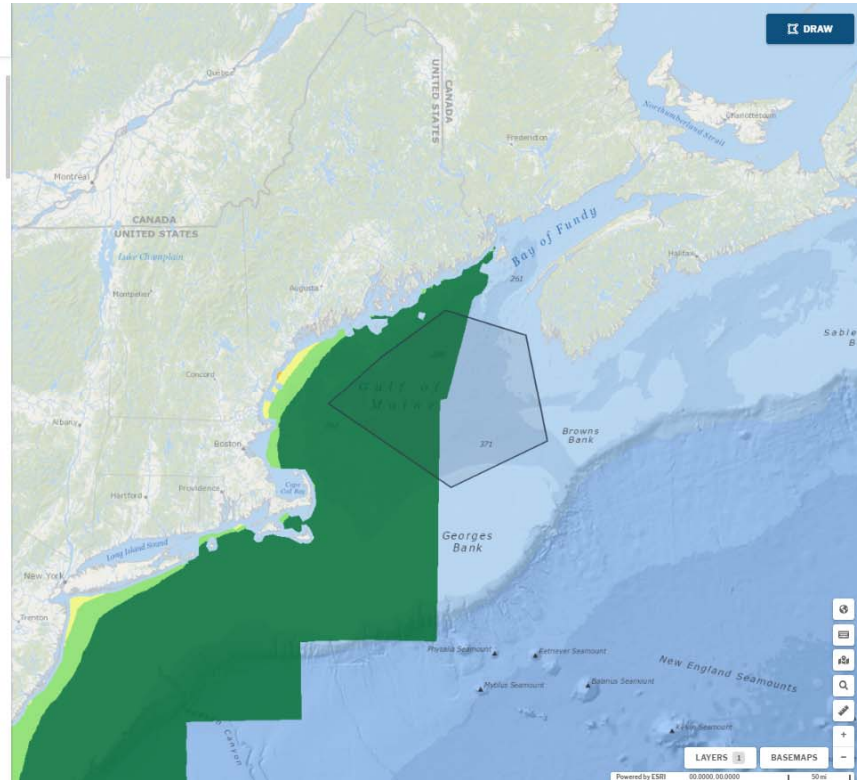
19,843.85
Area with suitable wind resources km²

9.49
Weighted Average (m/s)

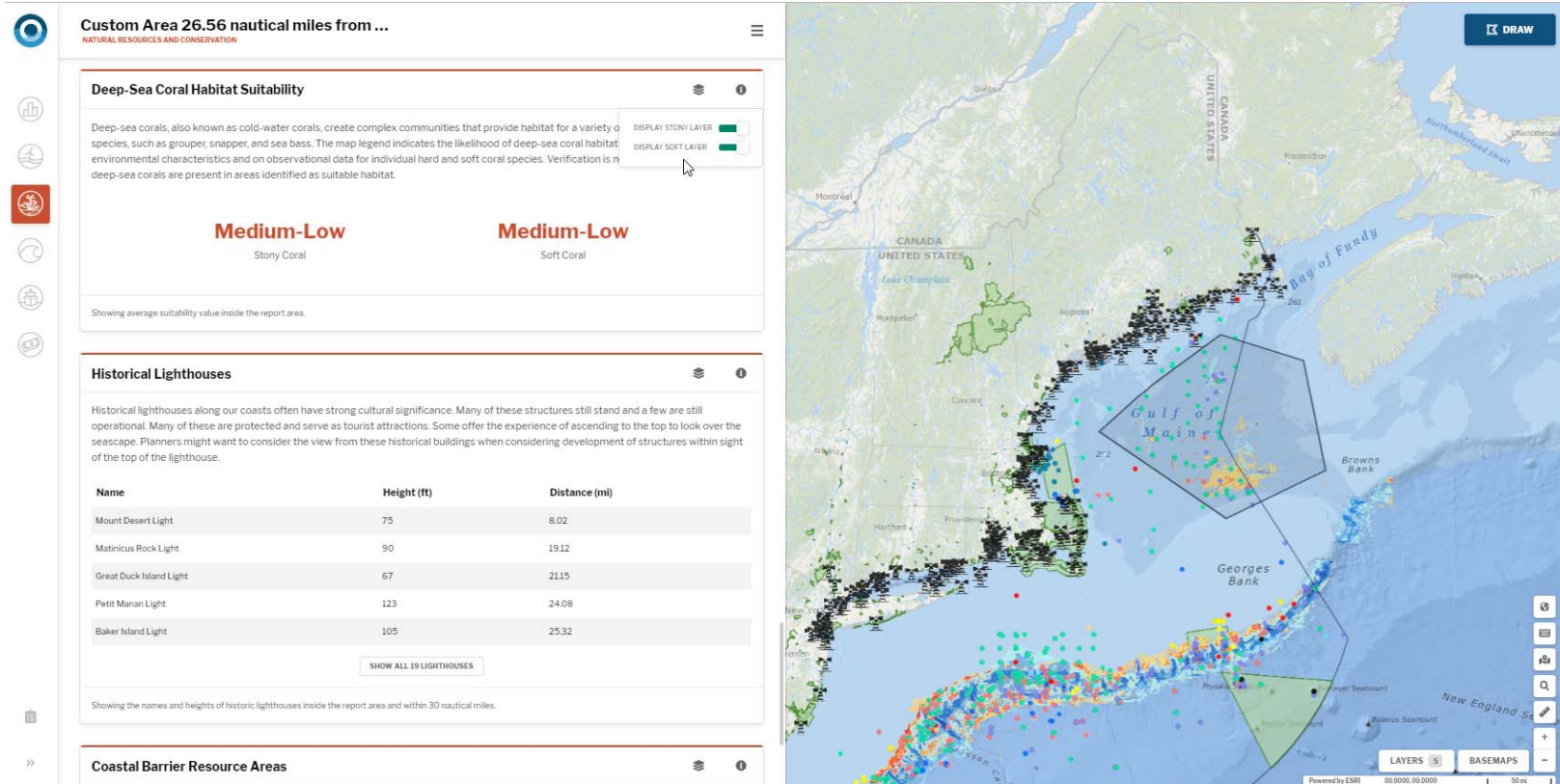
Potential houses calculations assume that only areas of good or better quality (> 7 m/s wind speed) are developed to maximum capacity.

Offshore Wind Planning Areas

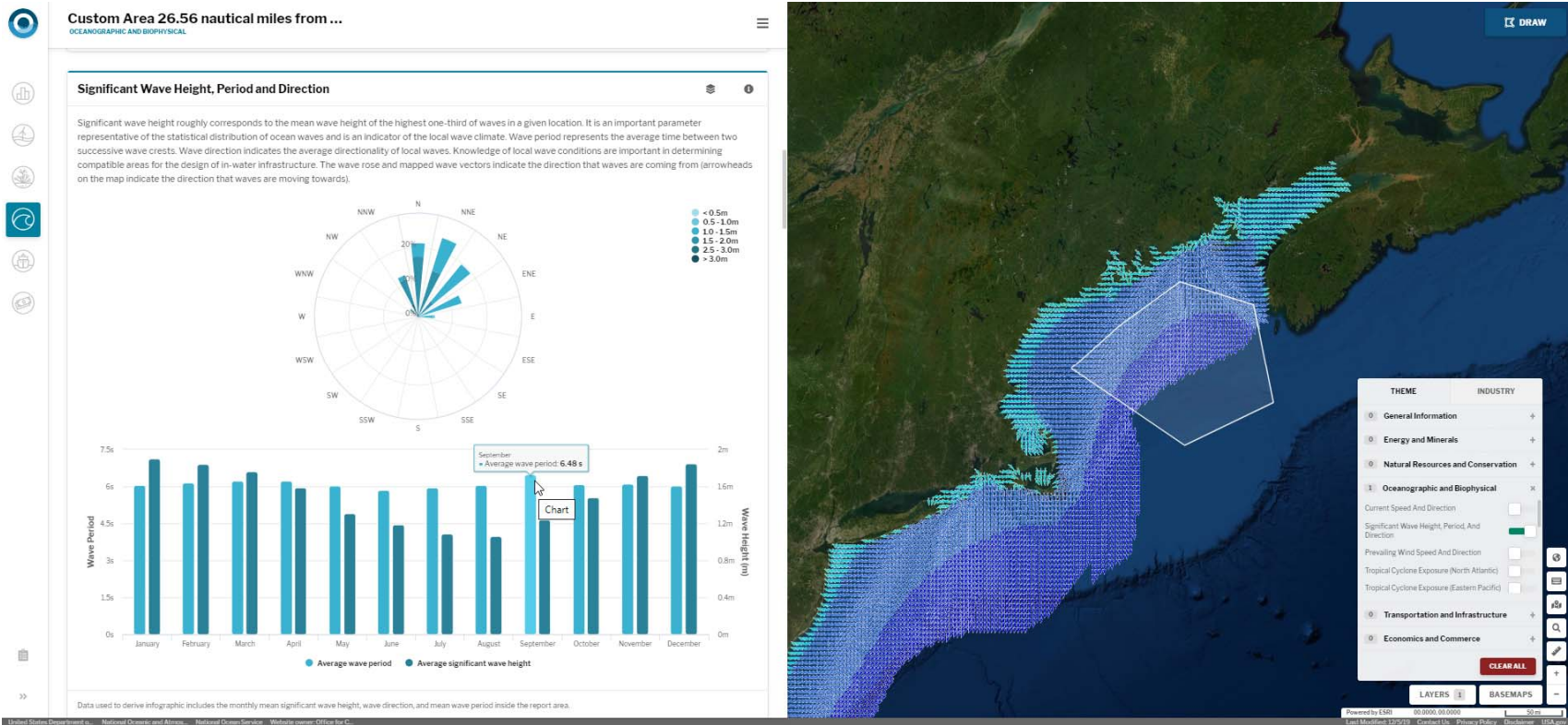
A wind planning area delineates an area of the U.S. Outer Continental Shelf that is being or has been considered by the Bureau of Ocean Energy Management for wind energy development. Wind planning areas can reflect up to six different types of announcements within the Federal Register for potential offshore wind leases.



Natural Resources and Conservation – 13 infographics



Oceanographic and Biophysical – 12 infographics



Transportation and Infrastructure – 18 infographics

OceanReports
A BOEM/NOAA PARTNERSHIP

TRANSPORTATION AND INFRASTRUCTURE
Custom Area 26.56 nautical miles from Winter Harbor, ME

The United States Marine Transportation System is essential to the American economy; it supports millions of American jobs, facilitates trade, and safely moves people and goods. This report provides a snapshot of the infrastructure and activities of the marine transportation sector along the coast of the United States.

Vessel Count

These data show the approximate number of vessels over 65 feet traversing the ocean within the U.S. Excludes based on the latest automatic identification system (AIS) vessel traffic layers created by MarineCadastrre.gov. Understanding where vessels travel can help identify conflicts between various ocean uses. Vessel count can displayed may not be representative of the entire area. Turn on the data layer to understand the spatial distribution following: military, not available, not identified, null, or other.

Type	Min	Mean	Max
All	1	2.00	
Cargo	1	1.19	9
Fishing	1	1.72	382
Passenger	1	1.93	106
Pleasure	1	1.14	16
Tanker	1	1.48	26
Tug/tow	1	1.12	121

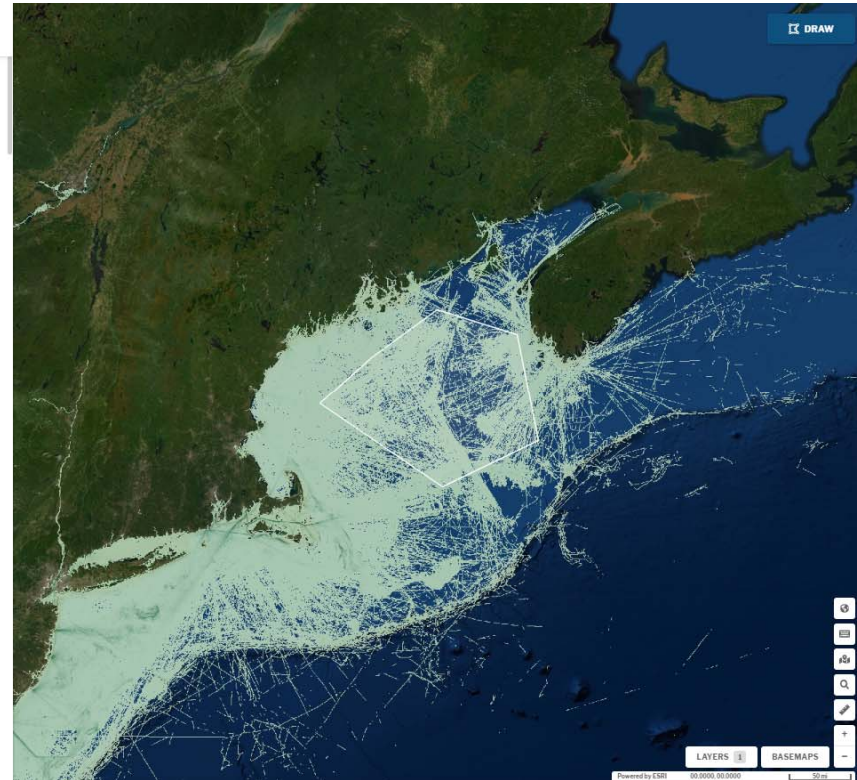
Showing the minimum, maximum, and mean of vessel counts by type inside the report area.

Vessel Routing

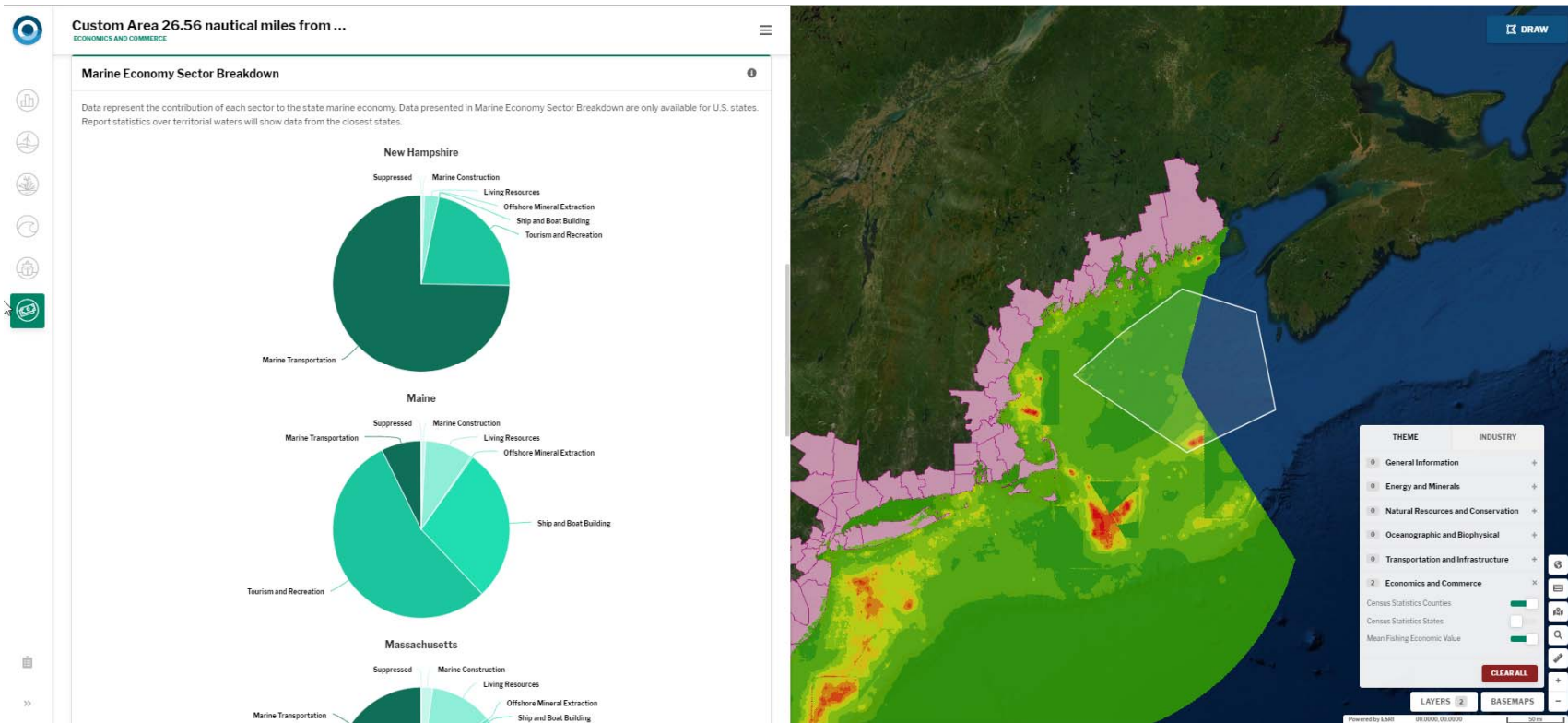
Vessel routing measures designate traffic lanes, precautionary, and other geographic features with a primary purpose for navigation over all other uses. The presence of a traffic lane or precautionary area will likely limit the placement of a temporary or permanent structure in those areas.

Type	Count
Area to be Avoided	1

DISPLAY ALL VESSELS LAYER
 DISPLAY CARGO VESSEL COUNT LAYER
 DISPLAY FISHING VESSEL COUNT LAYER
 DISPLAY PASSENGER VESSEL COUNT LAYER
 DISPLAY PLEASURE CRAFT SAILING VESSEL COUNT LAYER
 DISPLAY TANKER VESSEL COUNT LAYER
 DISPLAY TUG/TOW VESSEL COUNT LAYER



Economics and Commerce – 6 infographics



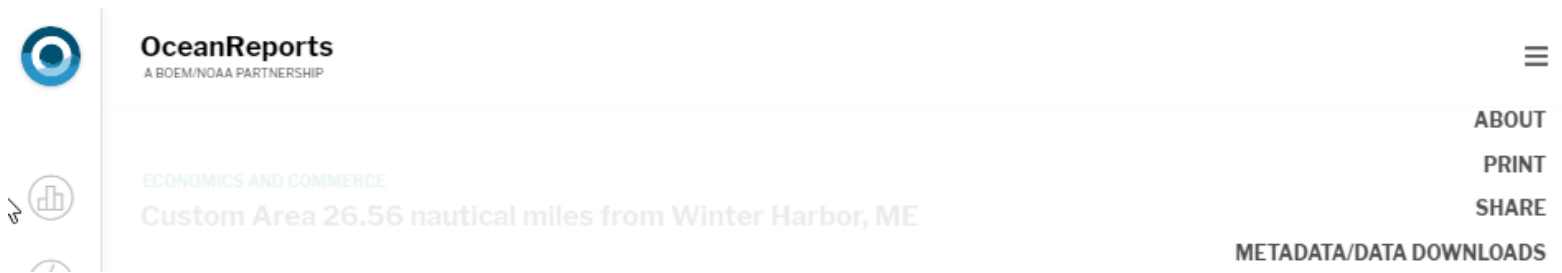
Available tools

- **Special Tools**

- Coordinate entry
- Return to original location on map
- Measure distances
- Change base maps
- Display map layers



Available tools

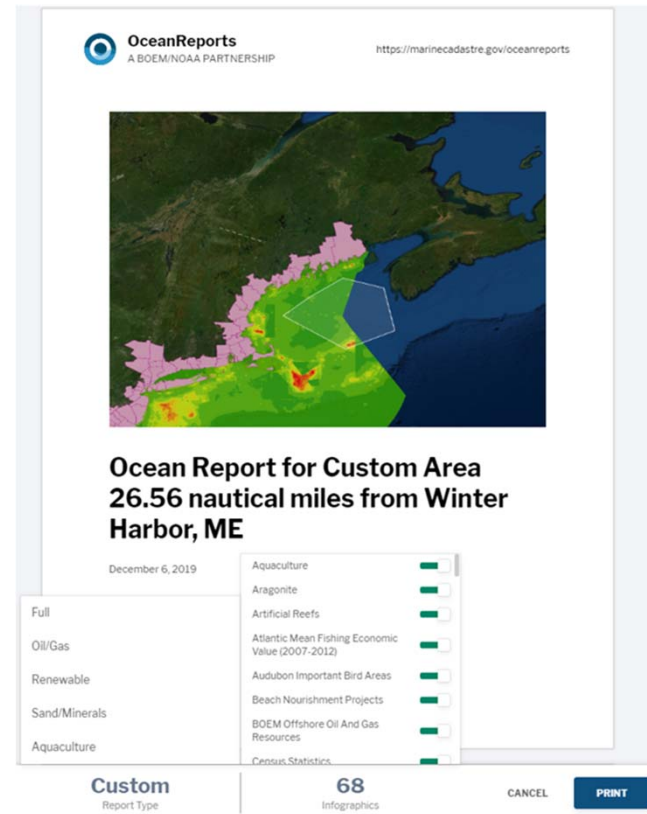


The screenshot displays the OceanReports interface. On the left, there is a vertical navigation menu with icons for home, a bar chart, and a search icon. The main content area shows the title "OceanReports" with the subtitle "A BOEM/NOAA PARTNERSHIP". Below this, it indicates the category "ECONOMICS AND COMMERCE" and the specific report title "Custom Area 26.56 nautical miles from Winter Harbor, ME". On the right side of the interface, there is a hamburger menu icon followed by a list of options: "ABOUT", "PRINT", "SHARE", and "METADATA/DATA DOWNLOADS".

- Print a pdf version
- Share with others/keep for later
- Investigate further (metadata, downloads)
- Use side by side with MarineCadastre using MarineCadastre's ID tool

○ Print Report

- Gives you all the infographics and links
- Allows you to choose to turn off infographics you don't need
- Or you can choose a preset grouping by industry



The screenshot shows the OceanReports interface. At the top, it says "OceanReports A BOEM/NOAA PARTNERSHIP" and provides the URL "https://marinecadastre.gov/oceanreports". Below this is a map of a coastal area with a white polygon highlighting a specific region. The map is titled "Ocean Report for Custom Area 26.56 nautical miles from Winter Harbor, ME" and is dated "December 6, 2019".

Below the map is a list of infographics with checkboxes to select or deselect them. The list includes:

- Aquaculture
- Aragonite
- Artificial Reefs
- Atlantic Mean Fishing Economic Value (2007-2012)
- Audubon Important Bird Areas
- Beach Nourishment Projects
- BOEM Offshore Oil And Gas Resources
- Census Statistics

At the bottom of the interface, there are three buttons: "Custom Report Type", "68 Infographics", and "PRINT". There is also a "CANCEL" button.

The background of the slide is an underwater photograph of sand dunes, showing rhythmic, undulating patterns of sand in shades of light blue and white, set against a deep blue water column.

BOEM

Bureau of Ocean Energy
Management

BOEM.gov



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- **Northeast Ocean Data Portal – Nick Napoli**

