Long Island Sound Blue Plan – Potential Data Products Review

# Map Book Table of Contents:

## *Marine Transportation, Navigation, and Infrastructure*

**Marine Transportation & Navigation**

- All Transportation
    1. 2013 All Vessel Density

- Marine Passenger/Ferries
    2. 2013 Passenger Vessel Density

- Shipping & Shipping Corridors
    3. 2013 Cargo Vessel Density
    4. 2013 Tanker Vessel Density
    5. Pilot Boarding Areas
    6. Ports Cargo Volumes 2013
    7. Shipping Lanes and Zones

- Towing
    8. 2013 Tug-Tow Vessel Density

- Navigational Dredging
    9. Maintained Channels

**Marine & Coastal Infrastructure**

- Harbors and Marinas
    10. Marinas by County, 2013
    11. Type – Infrastructure Data
    12. Type – Physical Infrastructure Data

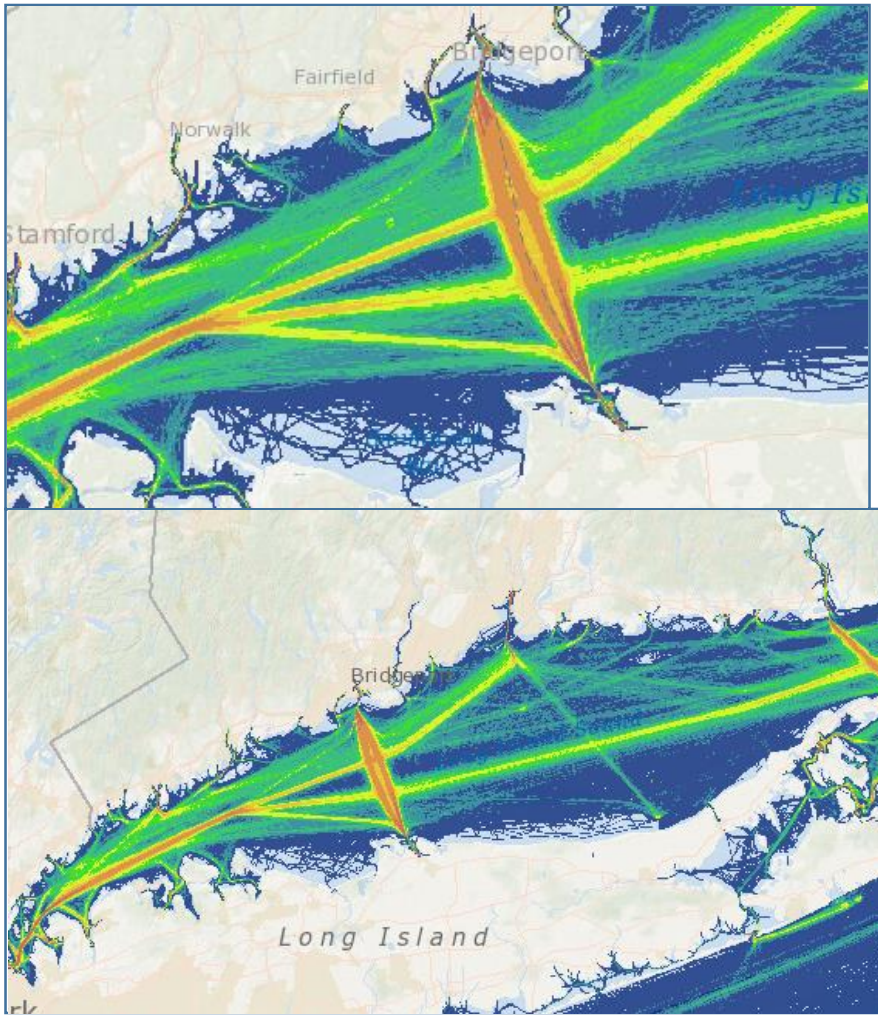
**Recreation & Tourism**

- Recreational Sailing, Boating, and Kayaking
    - 13. Recreational Boating Density

# 2013 All Vessel Density

*(Northeast Ocean Data Portal)*

**Source:** Automatic Identification Systems, U.S. Coast Guard





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# 2013 Vessel Density

***Blue Plan Sector(s)***: Marine Transportation - All

***Summary Description***: This layer shows the density of vessel traffic in 2013 for all vessels that carry Automatic Identification System (AIS) transponders. AIS are a navigation safety device that transmits and monitors the location and characteristics of many vessels in U.S. and international waters in real-time. The data represent density in 100 meter grid cells and are best interpreted using a high to low density scale. This dataset was created using vessel density products from the National Oceanographic and Atmospheric Administration (NOAA) Office for Coastal Management (OCM). NOAA created the density grids from trackline features, which were generated from NOAA's TrackBuilder tool in ArcGIS using AIS data from 2013. These data products were informed and reviewed by the port and shipping sectors and the US Coast Guard during outreach conducted from New York to Maine in 2015.

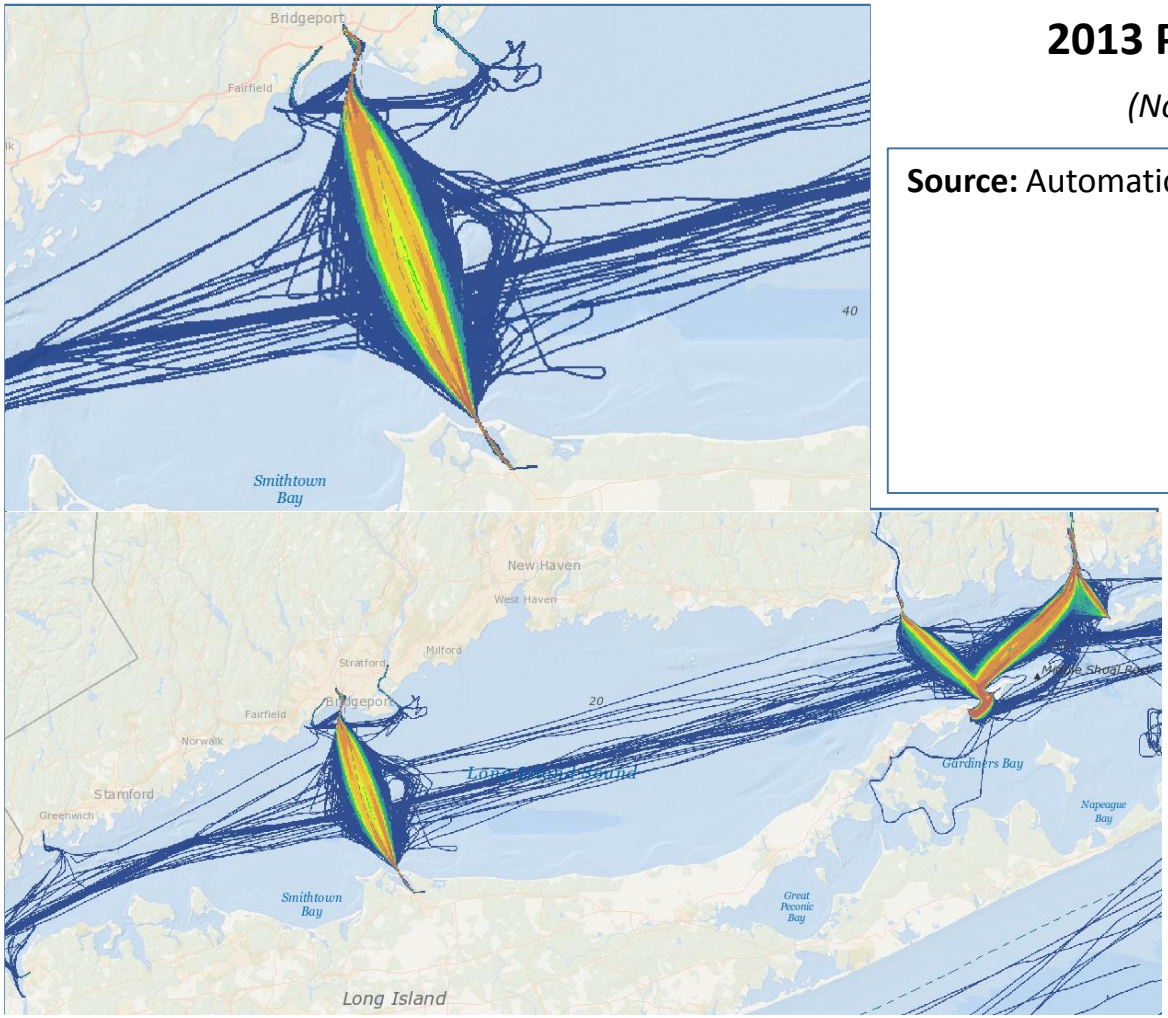
***Full Description:***
http://www.northeastoceandata.org/files/metadata/Themes/AIS/NorthAtlanticTotalAISVesselDensity2013.pdf

***Access Instructions***: Go to http://www.northeastoceandata.org/data-explorer/. Go to Marine Transportation > Commercial Traffic > 2013 Vessel Density

# 2013 Passenger Vessel Density

*(Northeast Ocean Data Portal)*

**Source:** Automatic Identification Systems, U.S. Coast Guard




2013 Passenger Vessel Density

- High
- Low

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# 2013 Passenger Vessel Density

***Blue Plan Sector(s)***: Marine Transportation & Navigation > Marine Passenger/Ferries

***Summary Description***: This layer shows the density of vessel traffic in 2013 for passenger vessels that carry Automatic Identification System (AIS) transponders. AIS are a navigation safety device that transmits and monitors the location and characteristics of many vessels in U.S. and international waters in real-time. The data represent density in 100 meter grid cells and are best interpreted using a high to low density scale. This dataset was created using vessel density products from the National Oceanographic and Atmospheric Administration (NOAA) Office for Coastal Management (OCM). NOAA created the density grids from trackline features, which were generated from NOAA's TrackBuilder tool in ArcGIS using AIS data from 2013. These data products were informed and reviewed by the port and shipping sectors and the US Coast Guard during outreach conducted from New York to Maine in early 2015.

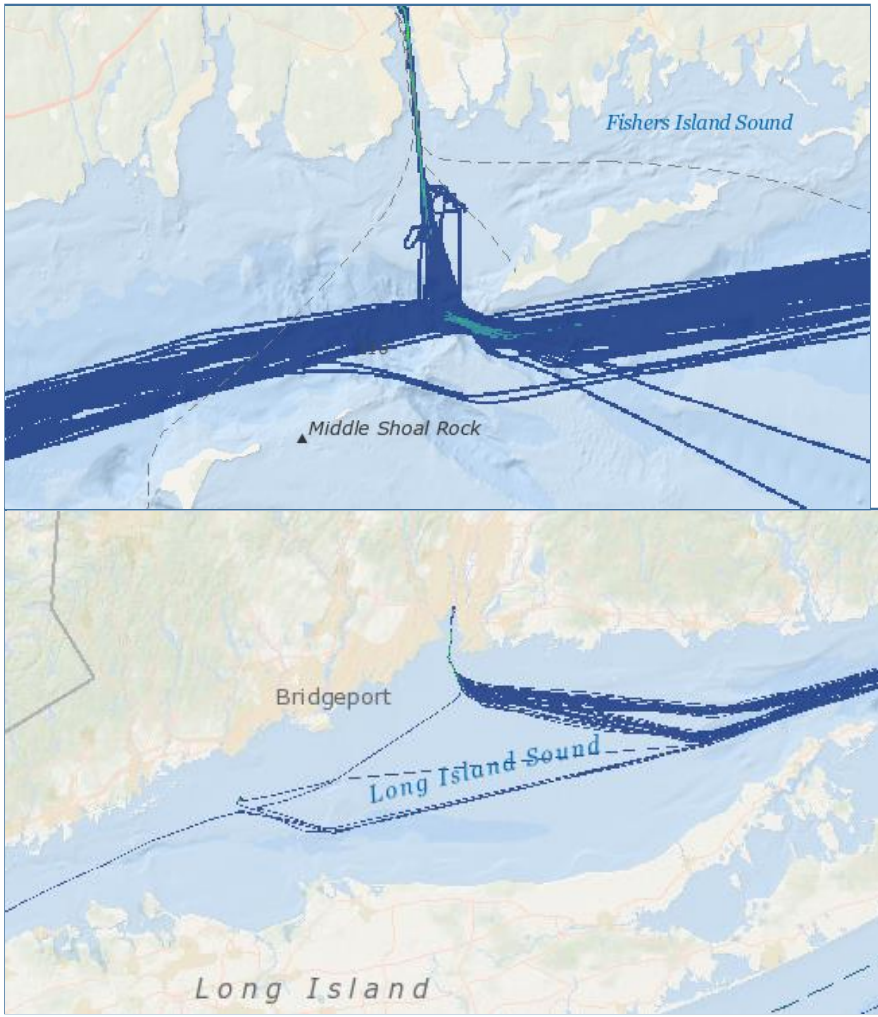
***Full Description:***
*http://www.northeastoceandata.org/files/metadata/Themes/AIS/NorthAtlanticPassengerAISVesselDensity2013.pdf*

***Access Instructions***: Go to http://www.northeastoceandata.org/data-explorer/. Go to Marine Transportation > Commercial Traffic > 2013 Passenger Vessel Density

# 2013 Cargo Vessel Density

*(Northeast Ocean Data Portal)*

**Source:** Automatic Identification Systems, U.S. Coast Guard




**2013 Cargo Vessel Density**

High

Low

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# 2013 Cargo Vessel Density

***Blue Plan Sector(s)***: Marine Transportation & Navigation > Shipping and Shipping Corridors

***Summary Description***: This layer shows the density of vessel traffic in 2013 for cargo vessels that carry Automatic Identification System (AIS) transponders. AIS are a navigation safety device that transmits and monitors the location and characteristics of many vessels in U.S. and international waters in real-time. The data represent density in 100 meter grid cells and are best interpreted using a high to low density scale. This dataset was created using vessel density products from the National Oceanographic and Atmospheric Administration (NOAA) Office for Coastal Management (OCM). NOAA created the density grids from trackline features, which were generated from NOAA's TrackBuilder tool in ArcGIS using AIS data from 2013. These data products were informed and reviewed by the port and shipping sectors and the US Coast Guard during outreach conducted from New York to Maine in early 2015.

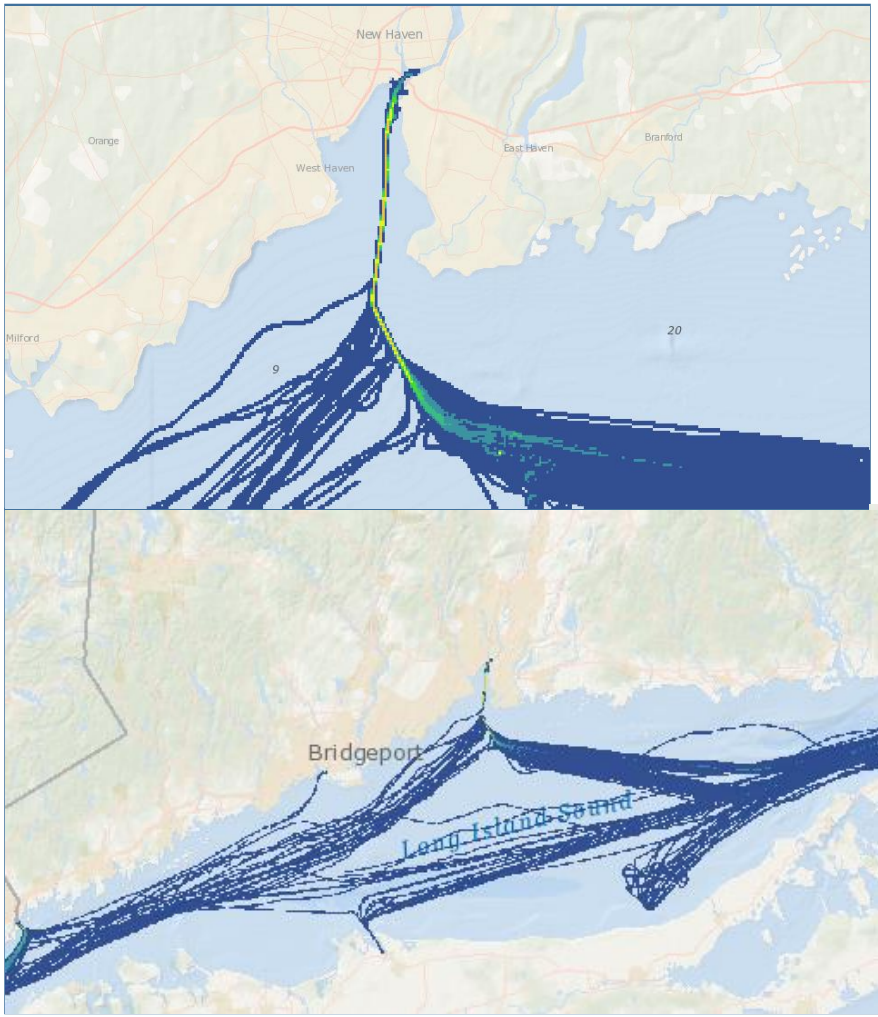
***Full Description:***
http://www.northeastoceandata.org/files/metadata/Themes/AIS/NorthAtlanticCargoAISVesselDensity2013.pdf

***Access Instructions***: Go to http://www.northeastoceandata.org/data-explorer/. Go to Marine Transportation > Commercial Traffic > 2013 Cargo Vessel Density

# 2013 Tanker Vessel Density

*(Northeast Ocean Data Portal)*

**Source:** Automatic Identification Systems, U.S. Coast Guard




**2013 Tanker Vessel Density**

High

Low

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# 2013 Tanker Vessel Density

***Blue Plan Sector(s)***: Marine Transportation & Navigation > Shipping & Shipping Corridors

***Summary Description***: This layer shows the density of vessel traffic in 2013 for tanker vessels that carry Automatic Identification System (AIS) transponders. AIS are a navigation safety device that transmits and monitors the location and characteristics of many vessels in U.S. and international waters in real-time. The data represent density in 100 meter grid cells and are best interpreted using a high to low density scale. This dataset was created using vessel density products from the National Oceanographic and Atmospheric Administration (NOAA) Office for Coastal Management (OCM). NOAA created the density grids from trackline features, which were generated from NOAA's TrackBuilder tool in ArcGIS using AIS data from 2013.These data products were informed and reviewed by the port and shipping sectors and the US Coast Guard during outreach conducted from New York to Maine in early 2015.

***Full Description:***
http://www.northeastoceandata.org/files/metadata/Themes/AIS/NorthAtlanticTankerAISVesselDensity2013.pdf

***Access Instructions***: Go to http://www.northeastoceandata.org/data-explorer/. Go to Marine Transportation > Commercial Traffic > 2013 Tanker Vessel Density

# Pilot Boarding Areas

*(Northeast Ocean Data Portal)*

**Source:** U.S. Coast Pilot, Massachusetts Office of Coastal Zone Management


**Pilot Boarding Areas**

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# Pilot Boarding Areas

***Blue Plan Sector(s)***: Marine Transportation & Navigation > Shipping & Shipping Corridors

***Summary Description***: This layer shows locations where harbor pilots meet and board arriving ships to navigate their passage to and from a destination port. Most pilot boarding areas are represented by circle with a radius of 0.5 nautical miles, unless source material indicated otherwise. The primary source material is the United States Coast Pilot. Additional information was derived from the Office of Massachusetts Coastal Zone Management's pilot boarding area dataset, which consists of information acquired from pilot associations in 2009.

***Full Description:***
http://www.northeastoceandata.org/files/metadata/Themes/MarineTransportation/PilotBoardingAreas.pdf

***Access Instructions***: Go to http://www.northeastoceandata.org/data-explorer/. Go to Marine Transportation > Navigation > Pilot Boarding Areas

# Ports Cargo Volumes 2013

*(Northeast Ocean Data Portal)*

**Source:** National Geospatial-Intelligence Agency (NGA) World Port Index


**Ports Cargo Volumes 2013**

Total Cargo Volume indicated by relative circle size

Petroleum and Petroleum Products

Other

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# Ports Cargo Volume 2013

***Blue Plan Sector(s)***: Marine Transportation & Navigation > Shipping & Shipping Corridors

***Summary Description***: This data represents the cargo volume (metric tons/year) by port in the northeast United States and was created for the Northeast Ocean Planning Baseline Assessment. Cargo volume data was acquired from the US Army Corps of Engineers, 2013 Waterborne Commerce Statistics of the United States and categorized by 'Petroleum and Petroleum Products' and 'Other'. Port location data was acquired from National Geospatial-Intelligence Agency (NGA) World Port Index.

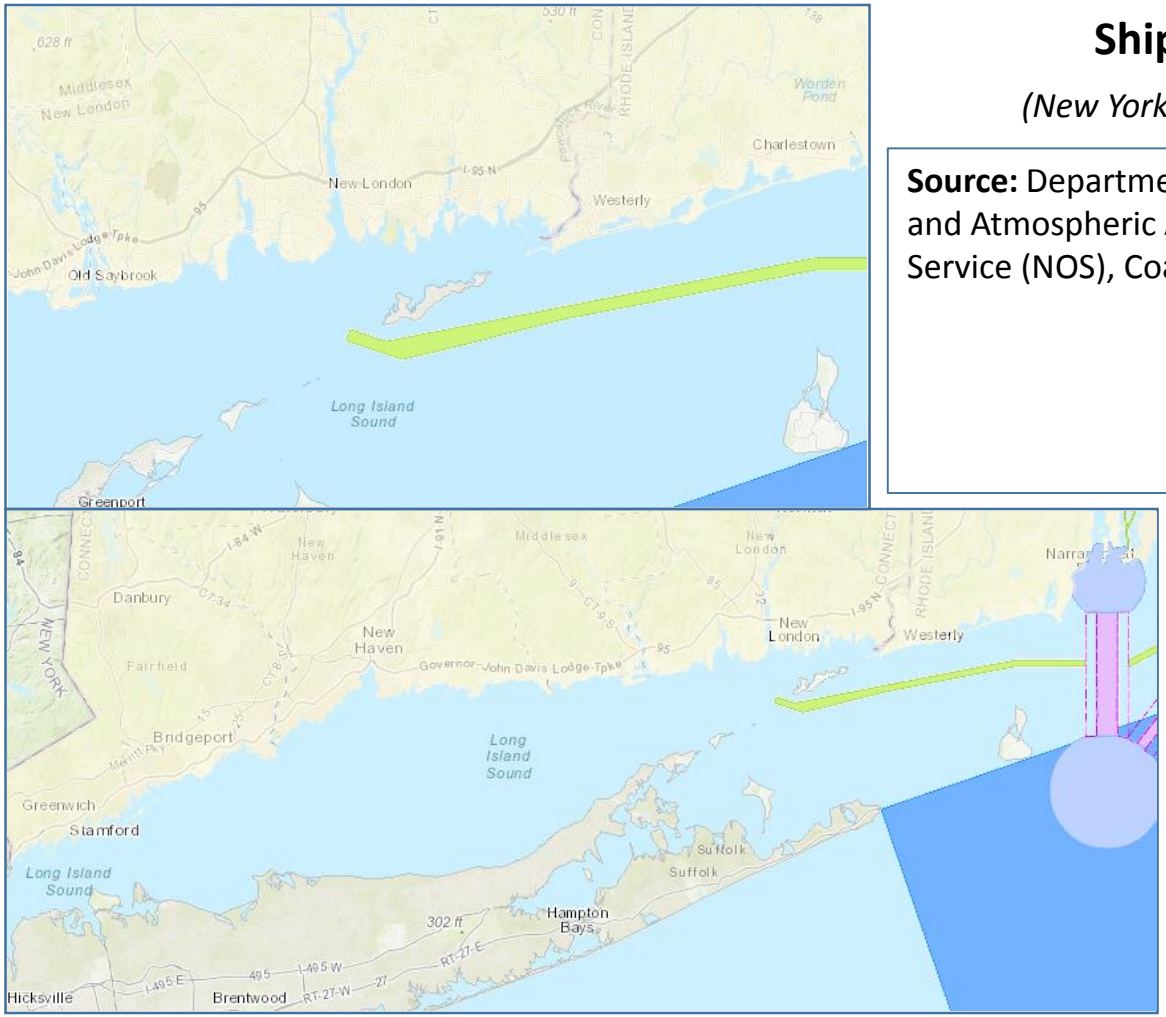
***Full Description:***
http://www.northeastoceandata.org/files/metadata/Themes/MarineTransportation/PortsCargoVolumes.pdf

***Access Instructions***: Go to http://www.northeastoceandata.org/data-explorer/. Go to Marine Transportation > Commercial Traffic

# Shipping Lanes and Zones

*(New York Geographic Information Gateway)*

**Source:** Department of Commerce (DOC), National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Coastal Services Center (CSC)




Legend:

- Traffic Separation Schemes/Traffic Lanes
- Area to be Avoided
- Particularly Sensitive Sea Area
- Precautionary Areas
- Recommended Routes
- Traffic Separation Schemes
- Speed Restrictions/Right Whales
- Shipping Fairways Lanes and Zones

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# Shipping Lanes and Zones

***Blue Plan Sector(s)***: Marine Transportation & Navigation > Shipping & Shipping Corridors

***Summary Description***: *Abstract*: Various shipping zones delineate activities and regulations for marine vessel traffic. Traffic lanes define specific traffic flow, while traffic separation zones assist opposing streams of marine traffic. Precautionary areas represent areas where ships must navigate with caution, and shipping safety fairways designate where artificial structures are prohibited. Recommended Routes are predetermined routes for shipping adopted for reasons of safety. Along certain zones of the East Coast of the United States, ships are also required to report vessel location within designated endangered species areas, such as the North Atlantic right whale. Particularly Sensitive Sea Areas need special protection because of their vulnerability to damage by international maritime activities. Areas to be Avoided are within defined limits where navigation is particularly hazardous or it is exceptionally important to avoid casualties and should be avoided by all ships or certain classes of ships.

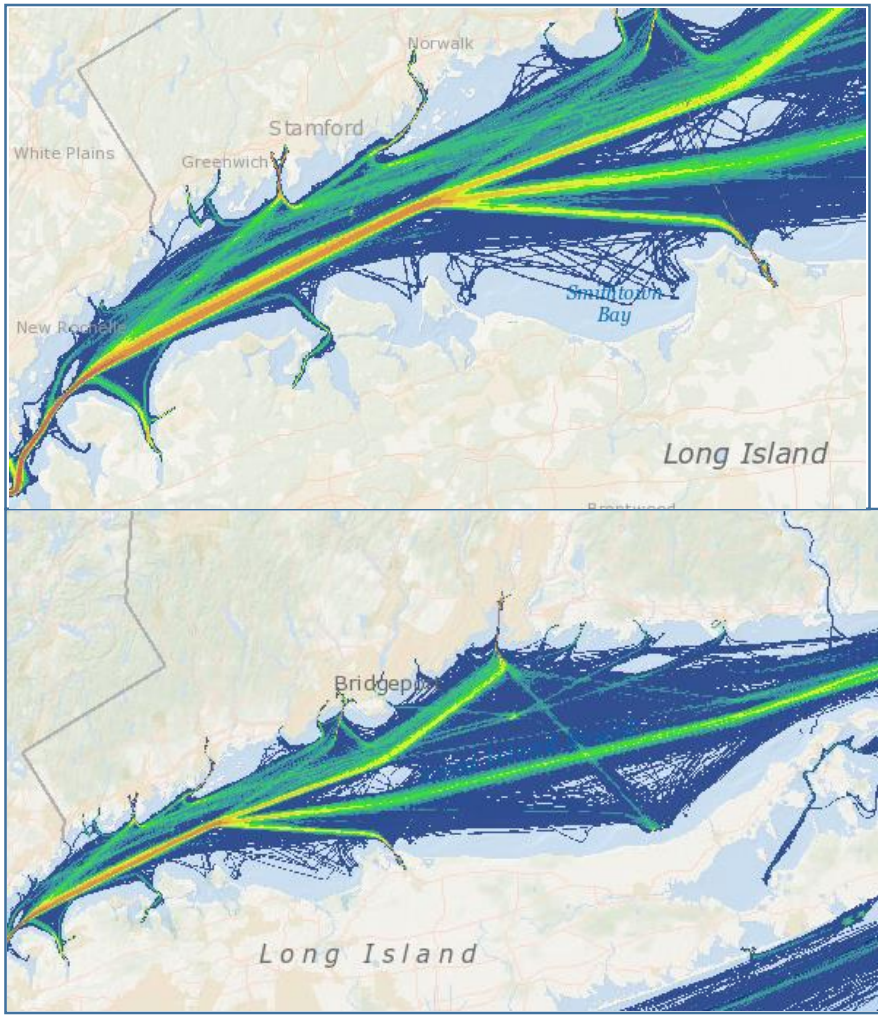
***Full Description:***
http://opdgig.dos.ny.gov/geoportal/catalog/search/resource/detailsnoheader.page?uuid={6EECC804-1173-417C-8AA2-C568B6C47F8A}

***Access Instructions***: Go to http://opdgig.dos.ny.gov/#/map. Go to Transportation > Water Based > Shipping Lanes and Zones

# 2013 Tug-Tow Vessel Density

*(Northeast Ocean Data Portal)*

**Source:** Automatic Identification Systems, U.S. Coast Guard




2013 Tug-Tow Vessel Density

High

Low

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# 2013 Tug Tow Vessel Density

***Blue Plan Sector(s)***: Marine Transportation & Navigation > Towing

***Summary Description***: This layer shows the density of vessel traffic in 2013 for tug-tow vessels that carry Automatic Identification System (AIS) transponders. AIS are a navigation safety device that transmits and monitors the location and characteristics of many vessels in U.S. and international waters in real-time. The data represent density in 100 meter grid cells and are best interpreted using a high to low density scale. This dataset was created using vessel density products from the National Oceanographic and Atmospheric Administration (NOAA) Office for Coastal Management (OCM). NOAA created the density grids from trackline features, which were generated from NOAA's TrackBuilder tool in ArcGIS using AIS data from 2013. These data products were informed and reviewed by the port and shipping sectors and the US Coast Guard during outreach conducted from New York to Maine in early 2015.

***Full Description:***
http://www.northeastoceandata.org/files/metadata/Themes/AIS/NorthAtlanticTugTowAISVesselDensity2013.pdf

***Access Instructions***: Go to http://www.northeastoceandata.org/data-explorer/. Go to Marine Transportation > Commercial Traffic

# Maintained Channels

*(Mid-Atlantic Ocean Data Portal)*

**Source:** Department of Commerce (DOC), National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Coast Survey (OCS**)**



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# Maintained Channels

***Blue Plan Sector(s)***: Marine Transportation & Navigation > Navigational Dredging

***Summary Description***: *Abstract*: This layer shows coastal channels and waterways that are maintained and surveyed by the U.S. Army Corps of Engineers (USACE). These channels are necessary transportation systems that serve economic and national security interests. The possibility of silting is always present. Local authorities should be consulted for the controlling depth. NOS Charts frequently show controlling depths in a table, which is kept current by the US Coast Guard Local Notice to Mariners. *Supplemental Information*: The condition of navigation channels is reported to NOAA by USACE on a regular basis. As the USACE performs hydrographic surveys of the maintained channels they provide NOAA with the results of these surveys. The survey results are provided on survey sheets and/or channel condition reports. Hydrographic survey sheets depict the hydrography within the maintained channel as well as the channel limits. The surveys are either a condition or after dredge survey. A condition survey, among other things, depicts hydrography prior to dredging operations and the after dredge survey shows the results of dredging operations. Channel condition reports are a tabulated format of the results of a hydrographic survey. The channel condition reports contain the names of all the reaches in a particular channel. Along with each reach name the project dimensions are listed and they include the reach's width, project depth and length. Additionally for each reach controlling depths are listed for the separate quarters of that reach and the date of the survey from which those controlling depths were taken. The controlling depths are determined by USACE and are the shoalest depths for that quarter of the reach. A channel condition report will also contain more detailed information concerning the location of extreme shoaling or obstructions that may be located in the channel. (Coastal Channel Data: Cooperative Production of a NOAA/USACE Data Framework, Libeau and Morrison 2005)

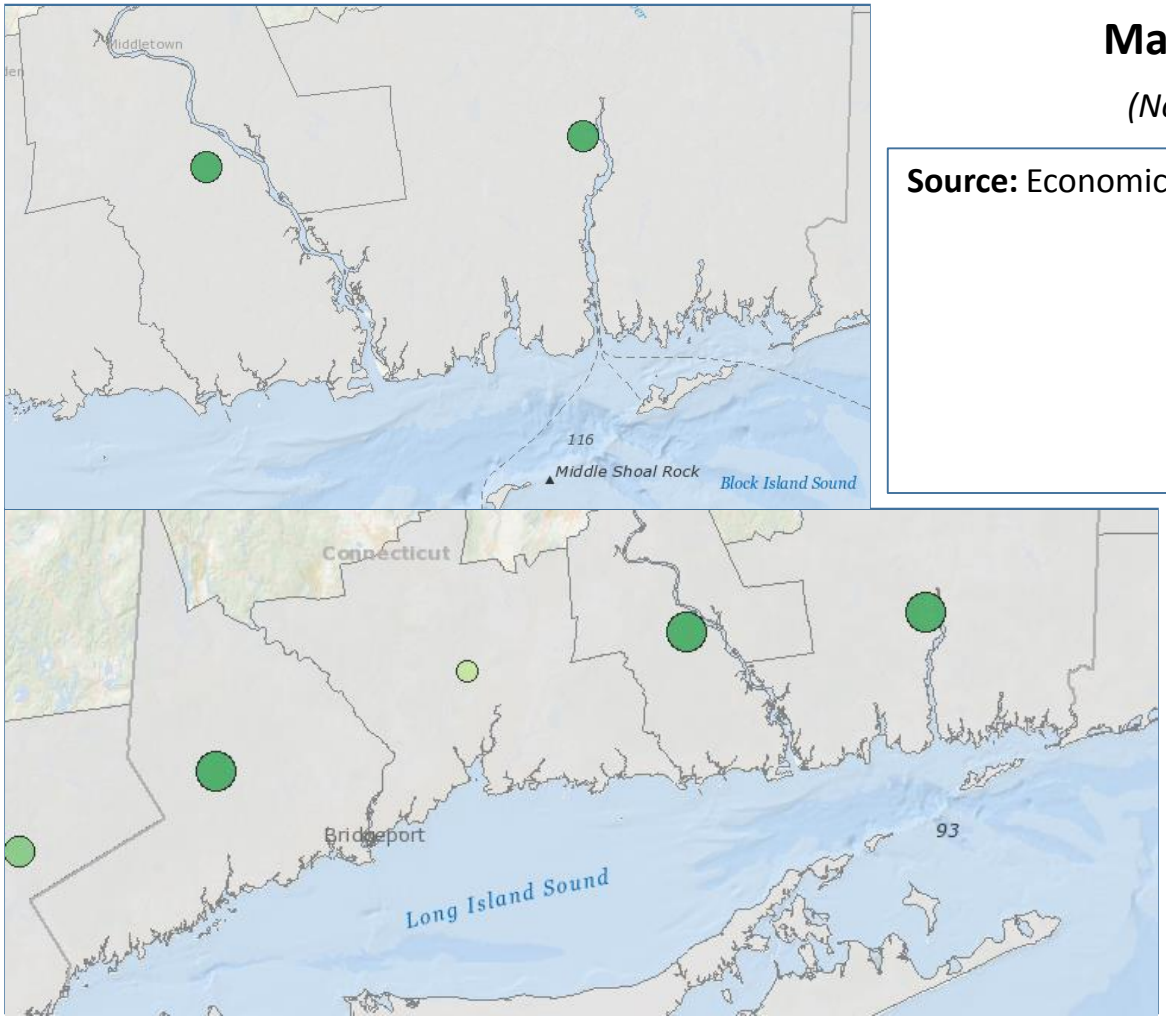
***Full Description:*** https://www.ncddc.noaa.gov/approved_recs/nos_de/ocs/ocs/ocs/enc_coastal_maint_chnls.html

***Access Instructions***: Go to http://portal.midatlanticocean.org/visualize. Go to Maritime > Maintained Channels

# Marinas by County, 2013

*(Northeast Ocean Data Portal)*

**Source:** Economics: National Ocean Watch

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# Marinas by County, 2013

***Blue Plan Sector(s)***: Marine & Coastal Infrastructure > Harbors & Marinas

***Summary Description***: This layer depicts the estimated number of marinas serving the Northeast's recreational boating community in coastal counties from New York to Maine. Results are based on research from the Center for the Blue Economy and the National Oceanic and Atmospheric Administration's 2013 Economics: National Ocean Watch (ENOW) database. ENOW provides time-series data on the coastal and ocean economy from 2005 to 2013 derived from national accounts of the Bureau of Labor Statistics and the Bureau of Economic Analysis. ENOW's four economic indicators are the number of business establishments, number of people employed, wages paid to employees, and contribution to gross domestic product.

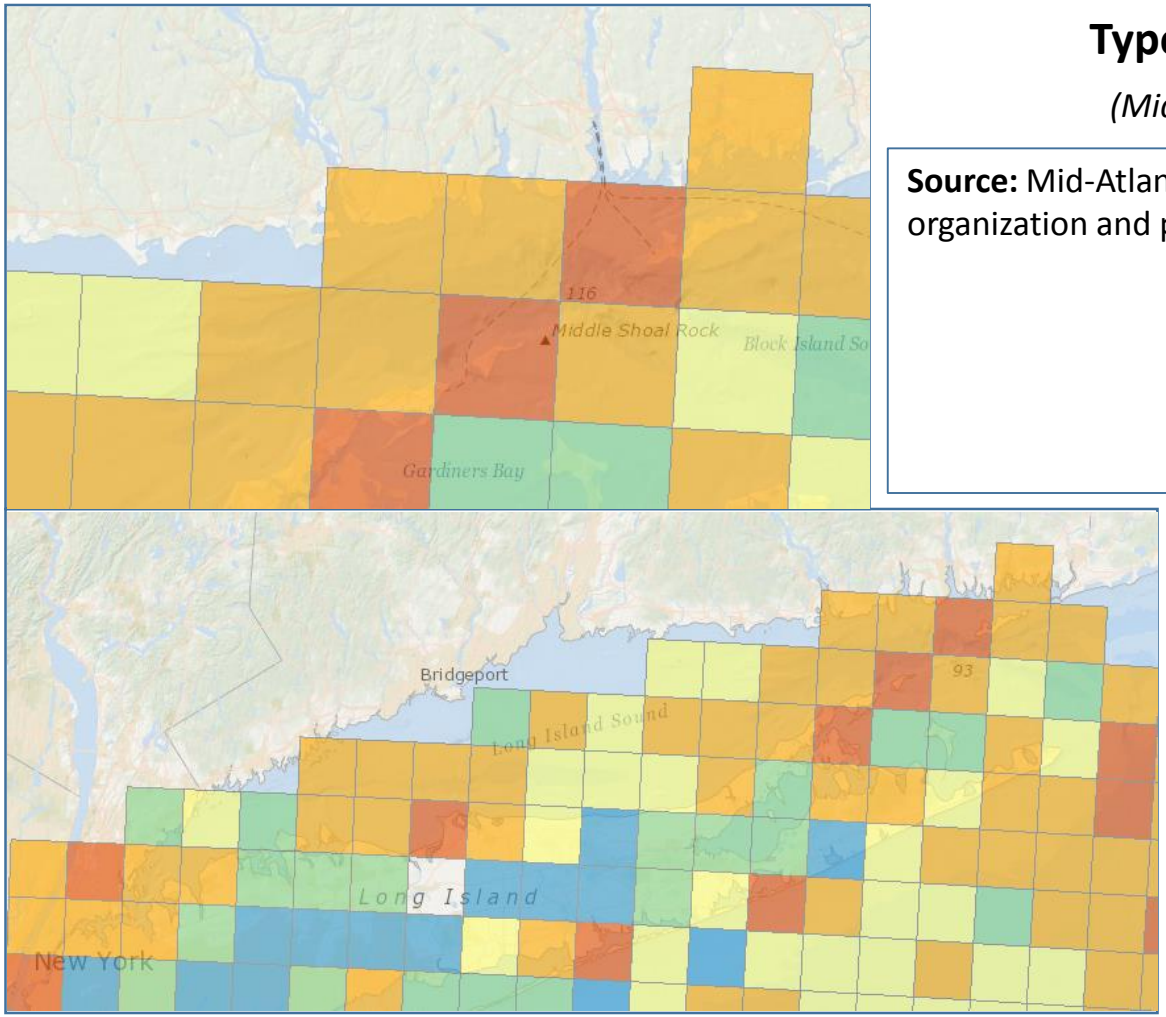
***Full Description:***
http://www.northeastoceandata.org/files/metadata/Themes/DemographyAndEconomy/CoastalCountiesOceanEconomy.pdf

***Access Instructions***: Go to http://www.northeastoceandata.org/data-explorer/. Go to Demography and Economy > Marinas by County 2013

# Type – Infrastructure Data

*(Mid-Atlantic Ocean Data Portal)*

**Source:** Mid-Atlantic Ocean Data Portal project team organization and partners




HUDS Type - Infrastructure Data
Total

- 0
- 1 - 2
- 3
- 4
- 5 - 6
- 7 - 12

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Sustainable Ecosystems - Compatible Uses

# Type – Infrastructure Data

***Blue Plan Sector(s)***: Marine Infrastructure (Marine Transportation, Wrecks, Reefs, Energy, National Security)

***Summary Description***: *Abstract*: The Mid-Atlantic Regional Council on the Ocean (MARCO) contracted with RPS Applied Science Associates (dba RPS ASA) in partnership with SeaPlan to develop synthesized spatial products characterizing human use in the Mid-Atlantic (Mid-A) region using existing data products. This project was referred to as the Human Use Data Synthesis (HUDS) in order to promote ocean planning priorities and goals as laid out in the draft Regional Ocean Action Plan (ROAP) Framework for the Mid-A region, defined as New York to Virginia from the coast out to the Exclusive Economic Zone. RPS ASA and SeaPlan developed a human use mapping approach that borrows from existing efforts while honoring the goals of MARCO and constraints inherent to the available data. The MARCO web portal was the primary source of data throughout the project, however additional data was incorporated from other sources including the Marine Cadastre, U.S. Navy, and from the Northeast Regional Ocean Council's (NROC) parallel ocean planning efforts. All available data were mapped to a 10 km grid within the region. This product contains a set of six informative attributes for each of the 64 source datasets included in the analysis. These attributes seek to answer whether data is present in a cell, what kind of data is present, and how much of the data occurs within one cell compared to another. The fields denote on a per-cell basis: 1) data presence; 2) pertinent descriptive information; 3) spatial or quantitative statistics such as areal, linear, or point coverage; 4) count of features; 5) a numerical use intensity field that scales the statistical data from 0 to 1; and 6) a qualitative use intensity field which assigns categorical classifications of use intensity to aid in interpretation.

There is a set of summary fields which sums the total number of data layers present in each grid cell, and the number of layers present for a set of human use themes to better identify regional human use trends. Additional summary fields contain similar information for the use intensity metrics, whereby the scaled use intensity values (from 0 to 1) for all layers are summed together, and then assigned categorical classifications. There are five main themes: maritime, fishing, recreation, energy, and security. Each source layer is included in only one of these themes. Four additional themes break out the data by all activities, all infrastructure, physical infrastructure only, and regulatory infrastructure only. The sum of the physical-infrastructure and regulatory-infrastructure fields should equal the number for all-infrastructure.

Two summarized companion products 'HUDS_Summary_Data_Presence' and 'HUDS_Summary_Data_Use_Intensity' contain only the attributes that relate specifically to data presence and use intensity, respectively.

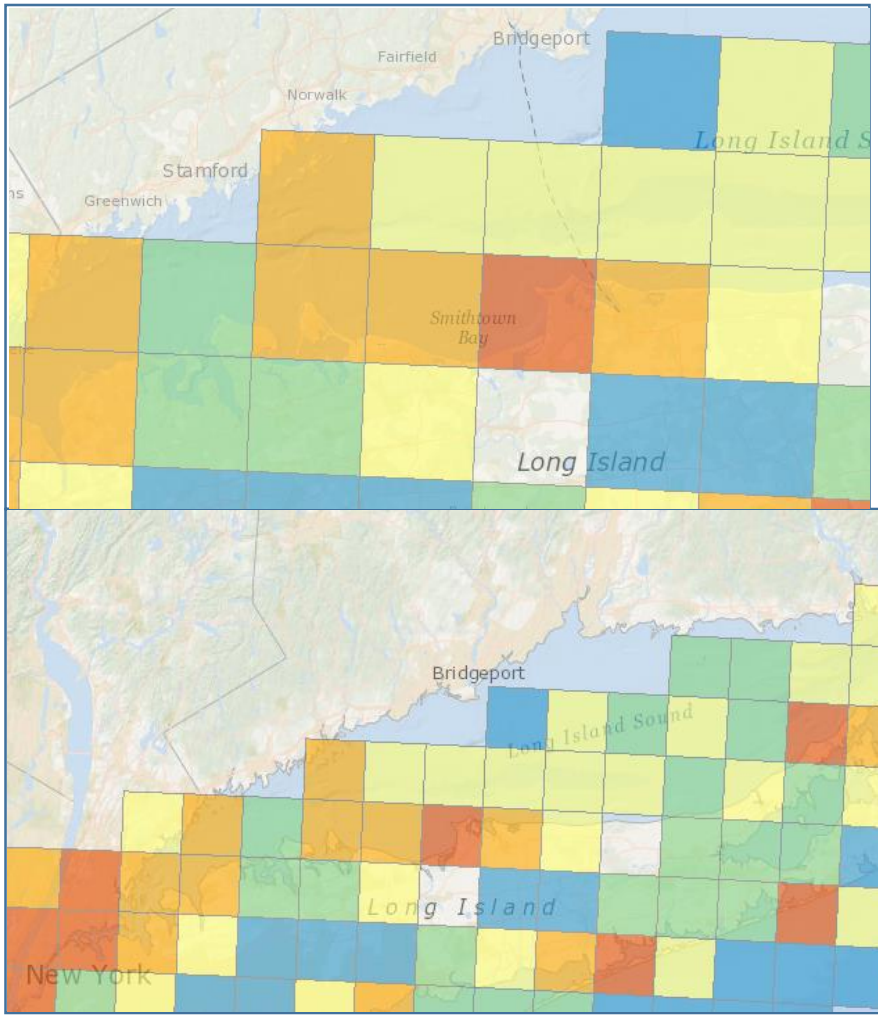
***Full Description:*** *http://portal.midatlanticocean.org/static/data_manager/metadata/html/HUDS_All_Data_Synthesis.html*

***Access Instructions***: Go to http://portal.midatlanticocean.org/visualize. Go to Human Use Data Synthesis > Type – Infrastructure Data

# Type – Physical Infrastructure Data

*(Mid-Atlantic Ocean Data Portal)*

**Source:** Mid-Atlantic Ocean Data Portal project team organization and partners




HUDS Type - Physical Infrastructure Data
Total

- 0
- 1
- 2
- 3
- 4
- 5 - 7

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# Type – Physical Infrastructure Data

***Blue Plan Sector(s)***: Marine Infrastructure (Marine Transportation, Wrecks, Reefs, Energy, National Security)

***Summary Description***: *Abstract*: The Mid-Atlantic Regional Council on the Ocean (MARCO) contracted with RPS Applied Science Associates (dba RPS ASA) in partnership with SeaPlan to develop synthesized spatial products characterizing human use in the Mid-Atlantic (Mid-A) region using existing data products. This project was referred to as the Human Use Data Synthesis (HUDS) in order to promote ocean planning priorities and goals as laid out in the draft Regional Ocean Action Plan (ROAP) Framework for the Mid-A region, defined as New York to Virginia from the coast out to the Exclusive Economic Zone. RPS ASA and SeaPlan developed a human use mapping approach that borrows from existing efforts while honoring the goals of MARCO and constraints inherent to the available data. The MARCO web portal was the primary source of data throughout the project, however additional data was incorporated from other sources including the Marine Cadastre, U.S. Navy, and from the Northeast Regional Ocean Council's (NROC) parallel ocean planning efforts. All available data were mapped to a 10 km grid within the region. This product contains a set of six informative attributes for each of the 64 source datasets included in the analysis. These attributes seek to answer whether data is present in a cell, what kind of data is present, and how much of the data occurs within one cell compared to another. The fields denote on a per-cell basis: 1) data presence; 2) pertinent descriptive information; 3) spatial or quantitative statistics such as areal, linear, or point coverage; 4) count of features; 5) a numerical use intensity field that scales the statistical data from 0 to 1; and 6) a qualitative use intensity field which assigns categorical classifications of use intensity to aid in interpretation.

There is a set of summary fields which sums the total number of data layers present in each grid cell, and the number of layers present for a set of human use themes to better identify regional human use trends. Additional summary fields contain similar information for the use intensity metrics, whereby the scaled use intensity values (from 0 to 1) for all layers are summed together, and then assigned categorical classifications. There are five main themes: maritime, fishing, recreation, energy, and security. Each source layer is included in only one of these themes. Four additional themes break out the data by all activities, all infrastructure, physical infrastructure only, and regulatory infrastructure only. The sum of the physical-infrastructure and regulatory-infrastructure fields should equal the number for all-infrastructure.

Two summarized companion products 'HUDS_Summary_Data_Presence' and 'HUDS_Summary_Data_Use_Intensity' contain only the attributes that relate specifically to data presence and use intensity, respectively.

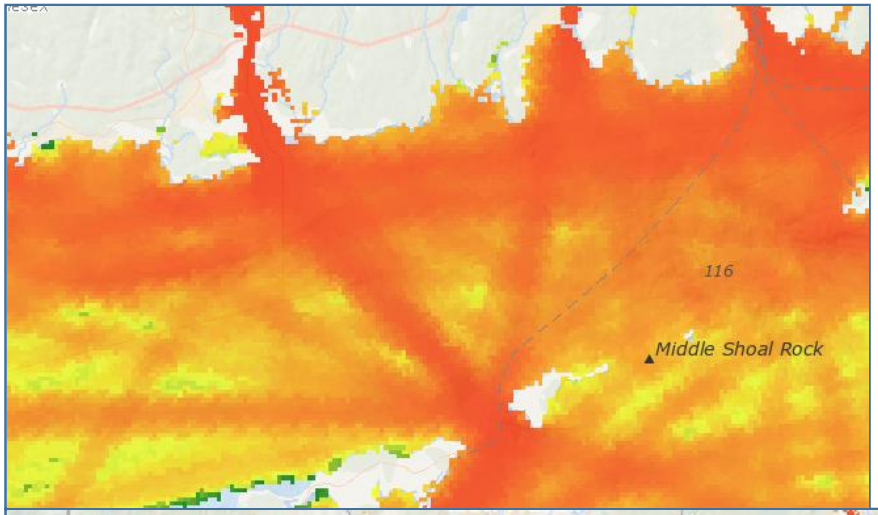
***Full Description:*** *http://portal.midatlanticocean.org/static/data_manager/metadata/html/HUDS_All_Data_Synthesis.html*

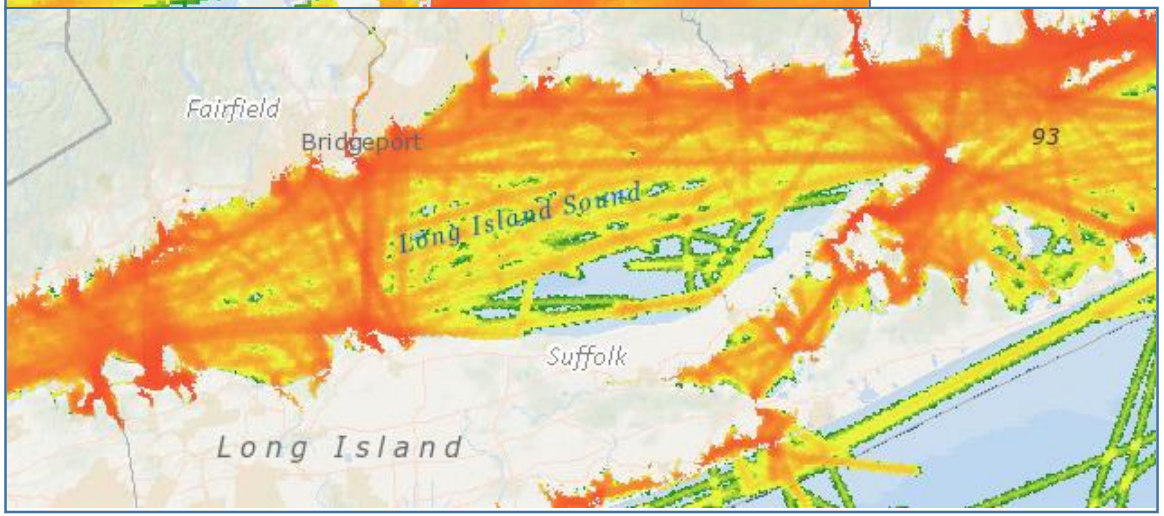
***Access Instructions***: Go to http://portal.midatlanticocean.org/visualize. Go to Human Use Data Synthesis > Type – Physical Infrastructure Data

# Recreational Boating Density

*(Northeast Ocean Data Portal)*

**Source:** SeaPlan 2012 Northeast Recreational Boater Survey




**Recreational Boating Density**

- High
- Low

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# Recreational Boating Density

***Blue Plan Sector(s)***: Recreation & Tourism > Recreational Sailing/Boating/Kayaking

***Summary Description***: Both a random and supplemental sample of Northeast boaters plotted their boating routes through the 2012 boating season using an online mapping application. The density map is derived using only the random sample of survey participants and is intended to show the relative density of boating activity throughout the region using a scale from high (red) to low (green). Areas showing low or no activity does not necessarily mean they are not used for recreational purposes. According to the results of the survey, these areas are likely less trafficked than others. Survey methodology consists of surveying a random sample of selected boat owners throughout the Northeast through a series of monthly online surveys. The surveying period lasted throughout the 2012 boating season (May 1 through October 31, 2012).

***Full Description:***
http://www.northeastoceandata.org/files/metadata/Themes/Recreation/RecreationalBoaterRouteDensity.pdf

***Access Instructions***: Go to http://www.northeastoceandata.org/data-explorer/. Go to Recreation > Recreational Boating Density