UNITED STATES COAST GUARD

The Areas Offshore of Massachusetts and Rhode Island Port Access Route Study

Final Report

Docket Number USCG-2019-0131

May 14, 2020

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I. EXECUTIVE SUMMARY

The Bureau of Ocean Energy Management (BOEM) has leased seven adjacent areas of the outer continental shelf (OCS) south of Martha's Vineyard, Massachusetts and east of Rhode Island that together constitute the Massachusetts/Rhode Island Wind Energy Area (MA/RI WEA). Offshore renewable energy installations ("wind farms") could be constructed within each leased area-each with its own number, size, type of wind turbines, and distinct array.

There is no federal requirement, through either statute or lease, that adjacent wind farms adopt uniform array spacing and alignment. From the projects that have published intended layouts as of the date of this study, there are significant differences that may require substantial maneuvering by mariners to safely navigate the wind farms if they are built as proposed. Additionally, the study area is primarily beyond 12 nautical miles (NM) and outside most of the regulatory jurisdiction of the U.S. Coast Guard (USCG), severely limiting regulatory, safety and security actions that can be taken.

The topic of safe navigation routes to facilitate vessel transits through the MA/RI WEA has been considered since at least May of 2018, when the USCG first invited developers to discuss the issue. At various subsequent meetings throughout southeastern New England, which included participation by the USCG, other federal, state, and local agencies, fishing industry representatives, and myriad stakeholders, various layout plans were proposed. After a consensus among all stakeholders could not be reached, the USCG concluded that a Port Access Route Study (PARS) should be conducted to determine the best possible alternative.

On March 26, 2019, the USCG announced The Areas Offshore of Massachusetts and Rhode Island Port Access Route Study (MARIPARS), in the Federal Register (84 FR 11314), to: 1) determine what, if any, navigational safety concerns exist with vessel transits in the study area; 2) whether to recommend changes to enhance navigational safety by examining existing shipping routes and waterway uses as any or all of the lease areas within the MA/RI WEA are partially or fully developed as wind farms; and 3) to evaluate the need for establishing vessel routing measures.

The MARIPARS was conducted according to the methodology outlined in USCG Commandant Instruction 16003.2B, *Marine Planning to Operate and Maintain the Marine Transportation System (MTS) and Implement National Policy*. The public was afforded a 60-day comment period, and three public meetings were held (one each in Massachusetts, Rhode Island, and New York) to receive public input. All comments and supporting documents are available in the public docket.[1]

[1] The Federal Register notice (84 FR 11314) of March 26, 2019, (see Enclosure 1) provided for a 60-day period to receive written public comments. Thirty comments were posted to the public docket. The comments and documents in the docket can be viewed at *http://www.regulations.gov*. In the "Search" box insert "USCG-2019-0131" and click "Search." Click the "Open Docket Folder" in the "Actions" column. A synopsis of those comments is contained in Appendix E.

In August of 2019, after the announcement and public comment period for the MARIPARS, the USCG released *Navigation Vessel Inspection Circular (NVIC) 01-19 GUIDANCE ON THE COAST GUARD'S ROLES AND RESPONSIBILITIES FOR OFFSHORE RENEWABLE ENERGY INSTALLATIONS (OREI)*. NVIC 01-19 provides further guidance to USCG units and external stakeholders on factors the USCG considers when evaluating risk in an OREI.

The recommendations of this PARS are based in large part on the comments received to the docket, public outreach, and consultation with other government agencies. The PARS evaluated several concerns that resulted in the following recommendations:

A. That the MA/RI WEA's turbine layout be developed along a standard and uniform grid pattern with at least three lines of orientation and standard spacing to accommodate vessel transits, traditional fishing operations, and search and rescue (SAR) operations, throughout the MA/RI WEA. The adoption of a standard and uniform grid pattern through BOEM's approval process will likely eliminate the need for the USCG to pursue formal or informal routing measures within the MA/RI WEA at this time.

Lanes for vessel transit should be oriented in a northwest to southeast direction, 0.6 NM to 0.8 NM wide. This width will allow vessels the ability to maneuver in accordance with the COLREGS while transiting through the MA/RI WEA.

Lanes for commercial fishing vessels actively engaged in fishing should be oriented in an east to west direction, 1 NM wide.

Lanes for USCG SAR operations should be oriented in a north to south and east to west direction, 1 NM wide. This will ensure two lines of orientation for USCG helicopters to conduct SAR operations.

In the event that subsequent MA/RI WEA project proposals diverge from a standard and uniform grid pattern approved in previous projects, the USCG will revisit the need for informal and formal measures to preserve safe, efficient navigation and SAR operations.

B. That mariners transiting in or near the MA/RI WEA should use extra caution, ensure proper watch and assess all risk factors. Offshore renewable energy installations present new challenges to safe navigation, but proper voyage planning and access to relevant safety information should ensure that safety is not compromised.

In general, mariners transiting through this WEA should make a careful assessment of all factors associated with their voyage. These factors at a minimum should include;

1) The operator's experience and condition with regard to fitness and rest.
2) The vessels characteristics, which should include the size, maneuverability, and sea keeping ability. The overall reliability and operational material condition of propulsion, steering, and navigational equipment.
3) Weather conditions – both current and predicted including sea state and visibility.
4) Voyage planning to include up-to-date information regarding the positions of completed wind towers or wind towers under construction and their associated construction vessels. A great deal of consideration should also be given to whether the transit will be conducted during day or night.

The USCG will continue to serve as a National Environmental Policy Act (NEPA) cooperating agency to BOEM's environmental review of each proposed project. In that role, the USCG will evaluate the navigational safety risks of each proposal on a case-by-case basis.

The First Coast Guard District actively monitors all waterways subject to its jurisdiction to ensure navigation safety and will continue to monitor the areas offshore of Massachusetts and Rhode Island for evolving conditions, which may require additional studies to ensure navigational safety and minimize impacts to USCG operations.

II. BACKGROUND

A. Procedural Background:

1. In 2012, BOEM identified seven adjacent areas of the OCS south of Martha's Vineyard, MA and east of Rhode Island that together constituted the MA/RI WEA. From 2013 to 2019, BOEM sold the leases to these seven areas to wind energy developers to facilitate production and transmission of energy from offshore sources other than oil and natural gas.

2. As the lead federal agency for OCS development, BOEM leads the federal government's environmental analysis of specific project proposals within each offshore lease area in accordance with NEPA. The USCG serves as a cooperating agency to BOEM. As a cooperating agency, the USCG examines project proposals and advises BOEM on the projects' potential impacts to the Marine Transportation System, navigation safety, traditional uses of the waterways, and USCG missions.

3. Two planned, adjacent projects within the MA/RI WEA published their intended turbine layouts, which were different from each other. Given that the projects were in close proximity to each other in the MA/RI WEA, substantial maneuvering by mariners to safely navigate through the wind farms could be required. Neither project accommodated navigation safety corridors,[2] and the projects did not align the orientation of their turbines with each other.

4. Through a variety of forums, the wind energy developers and waterway users made many attempts to come to consensus on navigation safety corridors through adjacent lease areas in the WEA:

   (a) In May 2018, the USCG invited developers to its East Providence, Rhode Island, office to discuss safe navigation routes in order to facilitate vessel transits through the MA/RI WEA. The USCG made these efforts to foster conversation that would lead to a position with regard to navigational safety amenable to all stakeholders that the USCG could then promote via its role as a cooperating agency.

[2] "Navigation safety corridors" are defined in Appendix E to COMDTINST 16003.2B. While navigation safety corridors are not official routing measures recognized by the USCG or the IMO, they are a planning tool to identify the sea space necessary for vessels to safely transit along a route under all situations and to delineate areas where no offshore development should be considered. The USCG's initial use of the term, "navigation safety corridors" was in Enclosure 1 to the 2015 Atlantic Coast Port Access Route Study (ACPARS). In that study, the USCG identified areas where the vast majority of traffic moved along the Atlantic Coast and sought to preserve those areas for navigation, free from obstructions. In the MARIPARS, the navigation safety corridors discussed are the result of our recommendation for a standard and uniform grid pattern with at least three lines of orientation and standard spacing. In effect, the standard and uniform grid pattern results in numerous straight, unobstructed lanes that function like navigation safety corridors through which traffic can safely transit. With adequate spacing between wind turbine generators, the totality of the resultant corridors can safely accommodate observed traffic density for the largest vessels typically transiting through or operating within the MA/RI WEA.

(b) In September 2018, the Massachusetts Office of Coastal Zone Management (MA CZM) convened a Fisheries Working Group (MA FWG) consisting of a broad cross-section of commercial fishing interests, primarily from Massachusetts. The USCG, wind energy developers, and fishing representatives from Rhode Island, Connecticut, and New York also attended. The MA FWG developed and presented the vessel transit layout plan depicted in Figure 1:

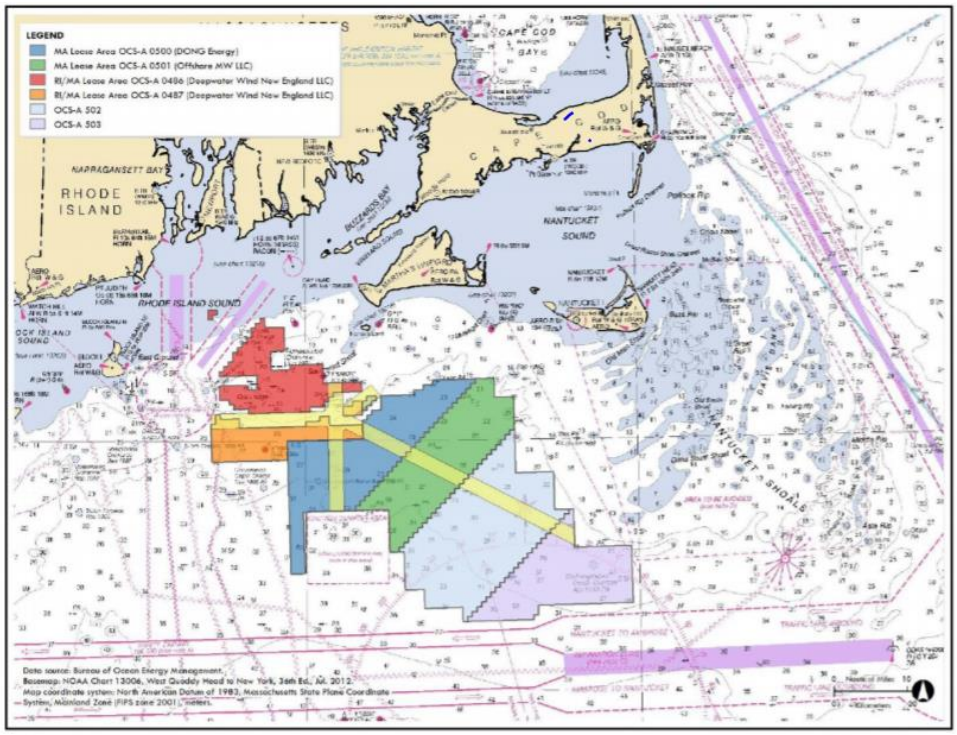

Figure 1. Massachusetts Fisheries Working Group Vessel Transit Layout Plan of September 2018

(c) In December 2018, the Responsible Offshore Development Alliance (RODA) sponsored a day-long workshop attended by the USCG and many MA FWG participants. The participants developed and provided an alternative vessel transit layout plan Figure 2:

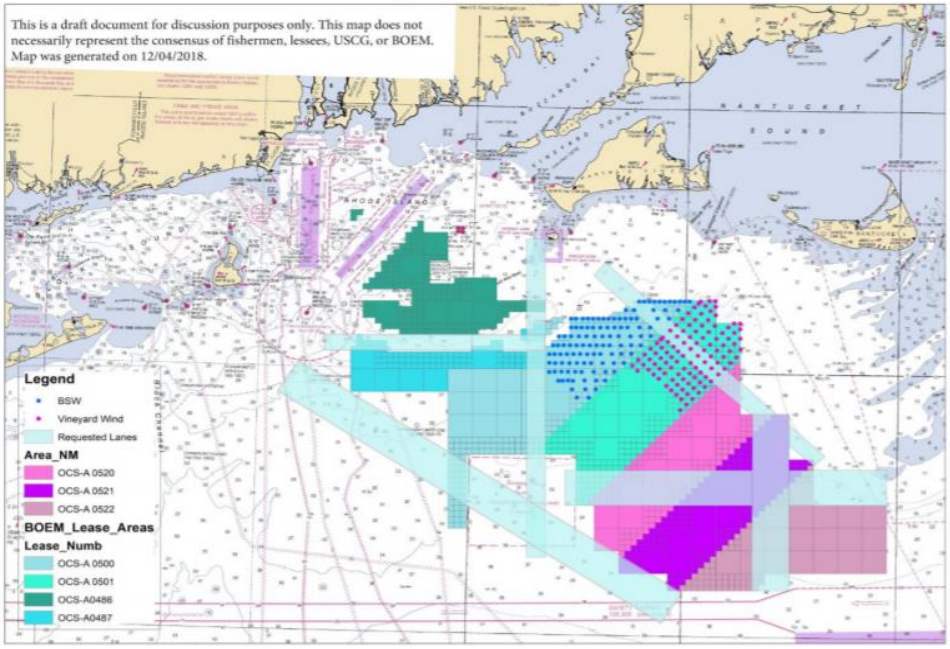

Figure 2. Responsible Offshore Development Alliance Vessel Transit Layout Plan of December 2018

5. Following these meetings, it became clear that unanimous consensus among all stakeholders could not be reached. In an effort to ensure all stakeholders had access to a repeatable process, established in policy, the USCG concluded that a Port Access Route Study (PARS) should be conducted.[3]

6. On March 26, 2019, the USCG announced it was conducting the MARIPARS. The purpose of the MARIPARS was to determine what routing measures, if any, may be necessary for navigation safety should any or all of the leased areas within the MA/RI WEA be partially or fully developed as wind farms.[4] The USCG sought public input through a 60-day comment period, and public meetings in Massachusetts, Rhode Island, and New York.[5] All comments were recorded in the public docket.

[3] On March 15, 2019, the USCG announced that it was conducting a Supplemental Atlantic Coast Port Access Route Study (Supplemental ACPARS) to examine the need for east/west access routes to/from various Atlantic coast ports, including New Bedford, MA, Pt Judith, RI, Narragansett Bay, RI, and eastern Connecticut ports. This MARIPARS is a separate study but will inform the Supplemental ACPARS. See https://www.federalregister.gov/documents/2019/03/15/2019-04891/atlantic-coast-port-access-route-study-port-approaches-and-international-entry-and-departure-transit.

[4] PARS are typically for port access routes and evaluating the need for routing measures to and from a particular shipping port. In this instance PARS was used to evaluate impacts to MTS, safe navigation, USCG missions and traditional uses of the waterway in the WEA.

[5] All comments and supporting documents are available in a public docket.

7. On January 29, 2020, the USCG published a Notice of availability of draft report; request for comments entitled "Port Access Route Study (PARS): The Areas Offshore of Massachusetts and Rhode Island" in the Federal Register (85 FR 5222) announcing the availability of the draft version of the study report. During the 45-day public comment period, the USCG received 48 comments in response to our Federal Register Notice and other outreach efforts which included announcements via a Marine Safety Information Bulletin (MSIB), publication in the Local Notice to Mariners (LNM), and Twitter posts. All comments and supporting documents are available in the public docket.

B. Legal Authority:

1. The Ports and Waterways Safety Act (PWSA), which in relevant part was recodified to 46 U.S.C. 70003 during the course of this Study, requires the USCG to conduct a study of port access routes before determining the need for, establishing, or adjusting fairways or traffic separation schemes (TSS). The USCG must announce the study through a Federal Register notice and then coordinated with federal and state agencies (as appropriate) to consider the views of maritime community representatives, environmental groups, and other interested stakeholders. A primary purpose of this coordination is to reconcile the need for safe access routes with other reasonable waterway uses. Information and analysis developed through the PARS process may also be used to support other routing measures, areas to be avoided or limited access areas.

2. This MARIPARS was conducted in accordance with the PWSA, employing the methodology outlined in USCG Commandant Instruction 16003.2B, *Marine Planning to Operate and Maintain the Marine Transportation System (MTS) and Implement National Policy*. The objectives of this MARIPARS are to:

   (a) Determine present traffic types, patterns, and density;

   (b) Determine potential traffic types, patterns, and density;

   (c) Determine if existing vessel routing measures are adequate;

   (d) Determine if existing vessel routing measures require modifications;

   (e) Determine the type of modifications;

   (f) Define and justify the needs for new vessel routing measures;

   (g) Determine the type of new vessel routing measures; and

   (h) Determine if the usage of the vessel routing measures must be mandatory for specific classes of vessels.

C. Administrative Procedure:

1. In accordance with policy, the USCG collected and analyzed data on the following factors:

   (a) Present traffic density, to include vessel traffic characteristics and trends (both existing and potential), traffic volume, size and types of vessels, potential interference with the flow of commercial traffic, presence of any unusual cargoes, and other similar information;

   (b) Fishing activity;

   (c) Recreational boating data;

   (d) Commercial ferry traffic;

   (e) Military activities;

   (f) Existing and potential OCS resource development activities;

   (g) Environmental information and factors which may be impacted by potential or amended vessel routing measures;

   (h) Underway and projected dredging projects;

   (i) Port development activities;

   (j) Native American Tribal activities and impacts of potential or amended vessel routing measures;

   (k) Economic (cost and benefit) effects and impacts; and

   (l) Information that arises as a result of public comments.

2. Engagement Process and Outreach:

   (a) A "Notice of study; request for comments" (USCG-2019-0131) was published in the Federal Register (84 FR 11314) on March 26, 2019. A copy of this Federal Register notice is included as Enclosure 1.

   (b) On March 26, 2019, USCG Sector Southeastern New England issued Marine Safety Information Bulletin 01-19 to announce the study. This bulletin was distributed via e-mail to 870 subscribers. A copy of the bulletin is included as Enclosure 3 to this study.

   (c) Notice of the MARIPARS was published each week for nine consecutive weeks in the First Coast Guard District Local Notice to Mariners (more than 5,000 subscribers) from LNM 13-19 to LNM 21-19.

   (d) The USCG also discussed the MARIPARS and solicited comments at several public forums:

      1) The March 27, 2019, New York Bight Transit Lane Workshop sponsored by the New York State Energy Research and Development Authority (NYSERDA), held at Port Jefferson, New York.

      2) The March 29, 2019, Southeastern New England Passenger Vessel Industry Day held at Fall River, Massachusetts, sponsored by USCG Sector Southeastern New England.

3) The March 29, 2019, and May 16, 2019, meetings of the Massachusetts Fisheries Working Group held at New Bedford, Massachusetts.

4) The April 3, 2019, Southeastern Massachusetts Port Safety and Security Forum held at Wareham, Massachusetts.

5) The April 5, 2019, Rhode Island Port Safety and Security Forum held at Providence, Rhode Island.

6) The April 10, 2019, meeting of the Rhode Island Fisheries Advisory Board held at Narragansett, Rhode Island.

7) The April 11, 2019, Offshore Wind International Partnership Forum, held at New York, New York.

(e) In conducting this PARS, the USCG communicated and coordinated with appropriate federal and state agencies, non-government organizations, and other public stakeholders listed in Appendix D. Additionally, the USCG received input from the Rhode Island Coastal Resources Management Council, Massachusetts Coastal Zone Management, National Oceanic Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS), World Shipping Council, American Waterways Operators, and Passenger Vessel Association representatives.

(f) Comments and Public Meetings:

1) The Federal Register notice (84 FR 11314) of March 26, 2019 (see Enclosure 1) provided for a 60-day period to receive written public comments. Thirty comments were posted to the public docket. The comments and documents in the docket can be viewed at www.regulations.gov. In the "Search" box insert "USCG-2019-0131" and click "Search." Click the "Open Docket Folder" in the "Actions" column. A synopsis of those comments is contained in Appendix E.

2) The USCG also held three public meetings to receive public comments directly. Notes of these public meetings are also included in Appendix E and in the public docket at the link above. The meetings were held:

(i) April 23, 2019, at the University of Rhode Island, Narragansett, Rhode Island.

(ii) April 25, 2019, at the Massachusetts Maritime Academy, Buzzards Bay, Massachusetts.

(iii) April 29, 2019, at the Inland Seafood Restaurant, Montauk, New York.

III. VESSEL TRAFFIC AND CHARACTERISTICS ANALYSIS

A. The MARIPARS Area:

The MARIPARS area, depicted in Figure 3 below, encompassed the entire MA/RI WEA. The MA/RI WEA consists of seven adjacent lease areas as depicted in Figure 4.

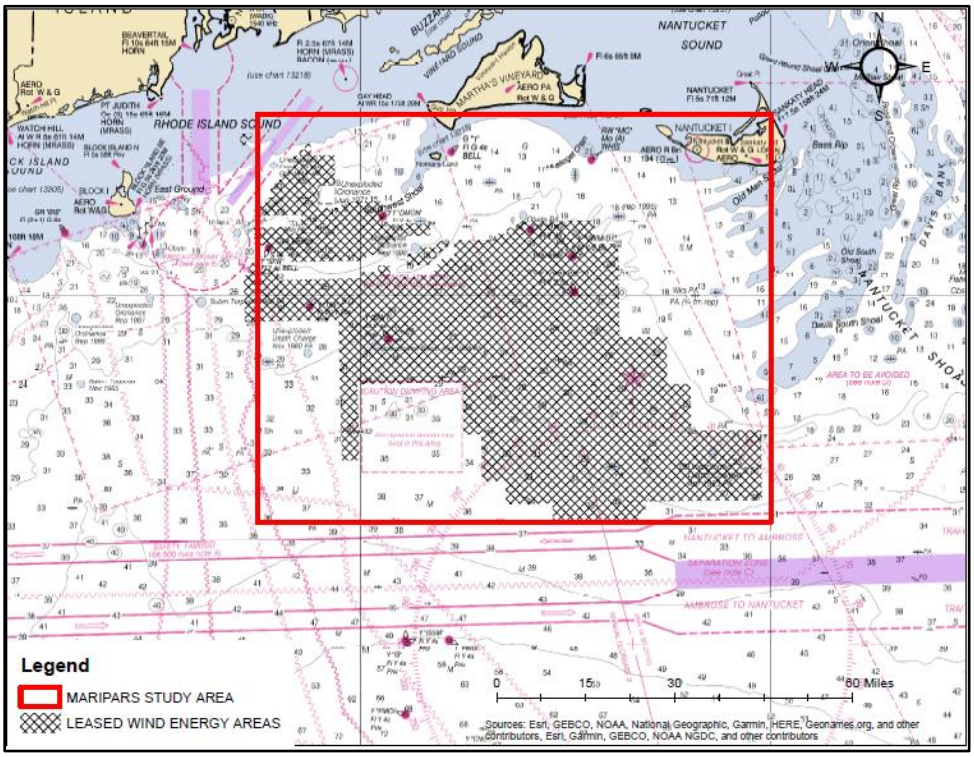

Figure 3. MARIPARS Study Area

The MARIPARS study area is bounded by a line connecting the following geographic positions:

(1) 41°20′ N, 070°00′ W;

(2) 40°35′ N, 070°00′ W;

(3) 40°35′ N, 071°15′ W;

(4) 41°20′ N, 071°15′ W.

(Geographic coordinates are defined using North American 1983 Datum (NAD 83))

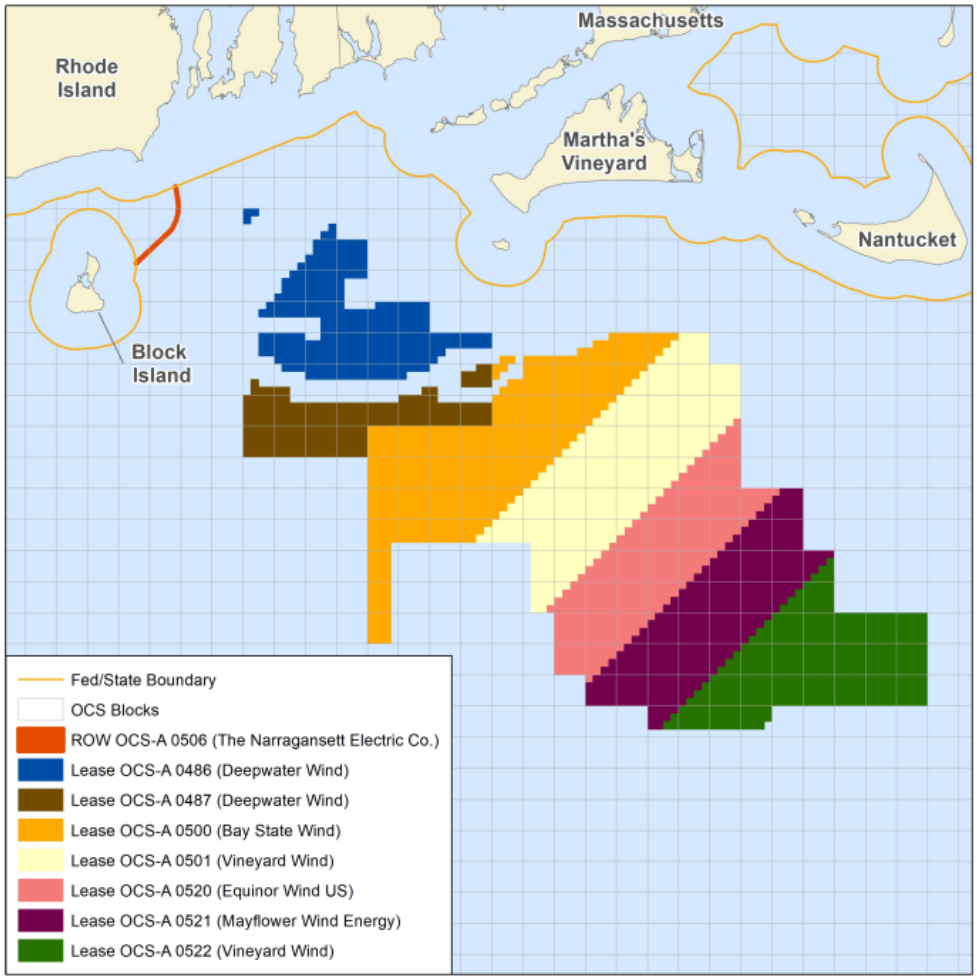

Figure 4. MA/RI WEA's Seven Lease Areas

B. Vessel Traffic Characteristics:

1. The USCG examined vessel traffic Automatic Identification System (AIS) density data, drawn from the USCG Navigation Center (NAVCEN). The vessel traffic AIS density maps are contained in Appendix G. Not all vessels are required to broadcast or transmit their location using AIS or the vessel monitoring system (VMS). The USCG reviewed AIS track lines through the MA/RI WEA for years 2015, 2016, 2017, and 2018 to identify current traffic characteristics. Based on this data, annual vessel transits through the MA/RI WEA range from 13,000 to 46,900 transits. AIS annual vessel traffic data shows that vessel activity and vessel density quadruples during the summer months compared to the colder months of January and February.
2. Present Vessel Traffic Density: AIS data from 2018 is graphically represented in the following figures and in Appendix G. It demonstrates vessel traffic density based on the type of vessel and is referred to as a heat map. Blue lines represent single vessel transits, yellow areas represent moderately high trafficked areas and red wide lines represent highly trafficked areas.

(a) Fishing vessels: Figure 5 graphically represents the fishing vessels that use AIS that regularly transit through the WEA. Most traffic appears to travel in a northwest to southeast direction. The yellow and red areas indicate areas of mass transit, primarily used to get to and from the fishing grounds and other areas southeast of the WEA. The red area in the northeast corner of the graphic shows what appears to be an area used for fishing.

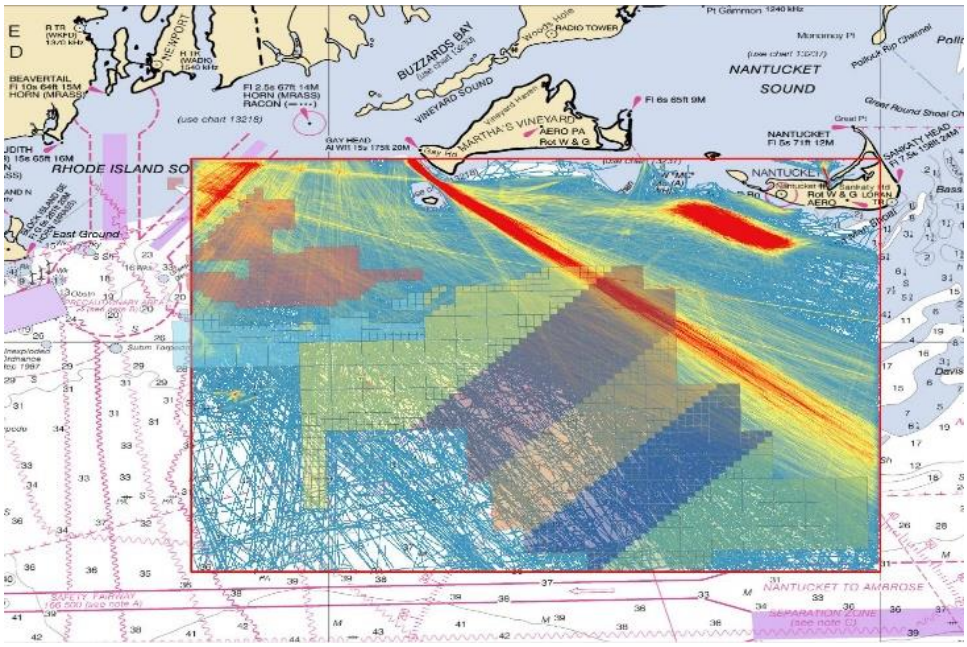

Figure 5. Fishing vessels

Input received at several MA FWG and RODA workshops, and validated further by AIS data and NOAA commercial fishing licenses,[6] showed commercial fishing vessels transiting through the study area generally originated in one of several primary ports. They transited to fishing grounds south and east of the WEA as listed below:

1) New Bedford, Massachusetts: This fleet generally transits from New Bedford, Massachusetts, across Buzzards Bay and through or around the Elizabeth Islands to the vicinity of Nomans Land, then southeasterly to fishing grounds east of the study area. This fleet follows a reciprocal track to return to port.

[6] There are 781 vessels possessing valid NOAA commercial fishing licenses from Massachusetts, Rhode Island, Connecticut and New York that would reasonably fish in the MA/RI WEA. AIS data showed that there is also a presence of fishing vessels transiting the MA/RI WEA hailing from ports further south of New England and New York, located in New Jersey and Virginia.

2) Pt. Judith, Rhode Island: This fleet generally transits from Pt. Judith, Rhode Island, to fishing grounds south and east of the study area. This fleet follows a reciprocal track to return to port. Some members of this fleet fish within the WEA.

3) Quonset, Rhode Island: This fleet generally transits from Quonset, Rhode Island, south through the West Passage of Narragansett Bay then southeasterly to fishing grounds south and east of the study area. This fleet follows a reciprocal track to return to port.

4) Montauk, New York: This fleet generally transits from Montauk, New York, east/southeast through the study area to fishing grounds further east. This fleet follows a reciprocal track to return to port.

5) Connecticut ports (Stonington, New London, and several smaller ports): This fleet generally transits from Connecticut ports east/southeast through the study area to fishing grounds further east. This fleet follows a reciprocal track to return to port.

(b) Recreational vessels: Figure 6 shows voyages of recreational vessels that broadcast AIS through the WEA. These vessels leave from of a variety of ports and transit in many directions. Given their size and maneuverability, recreational vessels are more likely than other classes of vessels to transit within the turbine arrays, and less likely to use any designated routing measure.

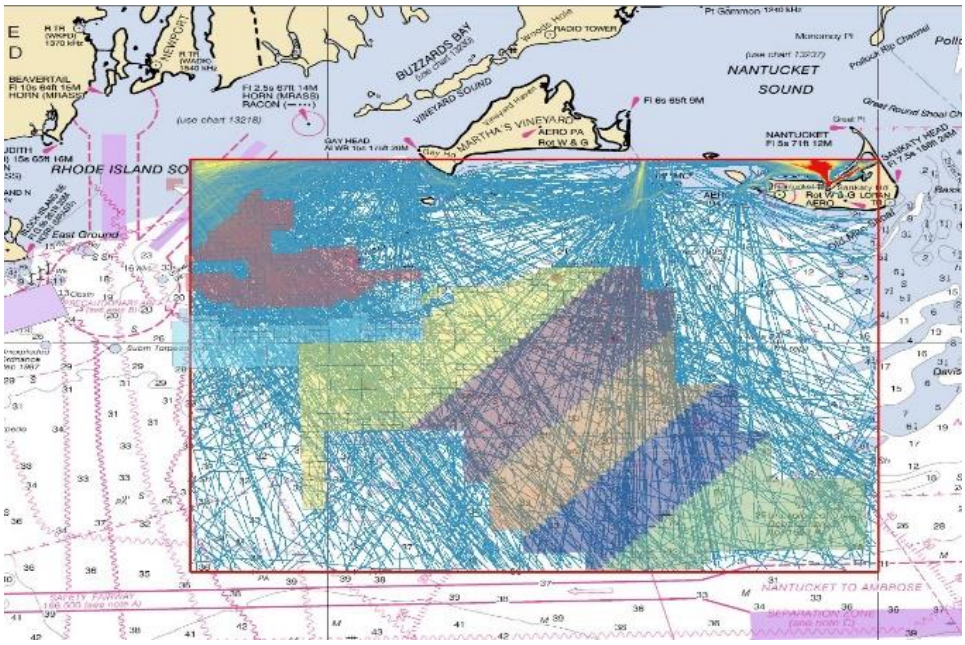

Figure 6. Recreational vessels

(c) Other vessels: Figure 7 graphically represents a group of unidentified vessels and their track lines. Based on their tracks, a large portion of these vessels appear to be fishing vessels (i.e., taking routes seemingly aimed at Quicks Hole/New Bedford area, as well as the concentration of tracks in the common fishing area just southwest of Nantucket). Some also seem to be smaller vessels with the tracks transiting between Martha's Vineyard and Nantucket. It is possible the AIS users failed to register their information properly and the equipment defaulted to this category. The USCG included them as part of the study, but did not evaluate them extensively since there was no way to identify how to classify them and how to evaluate their activity for purposes of determining safe navigation or preserving historical uses of the waterway. Nonetheless, their transit tracks do not vary widely from the other categories of vessels.

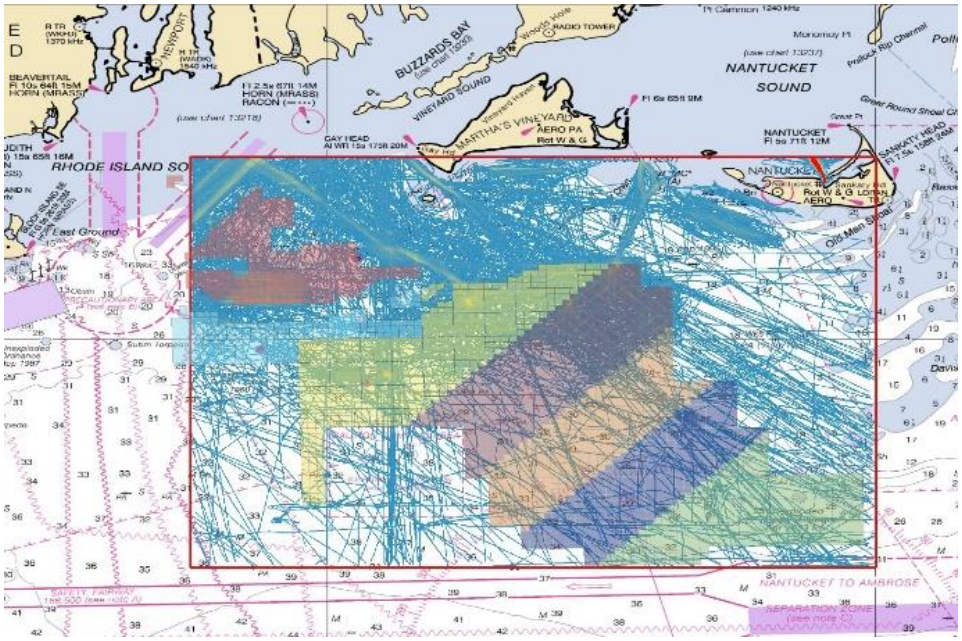

Figure 7. "Other" vessels

(d) Passenger vessels: Figure 8 indicates there was no significant commercial ferry traffic through the WEA. Feedback provided to the USCG was that, once the wind farms were fully built out, the larger commercial passenger vessels, mostly cruise ships, would divert around the arrays. Some small passenger vessel operations may conduct sightseeing tours in or around the turbines.

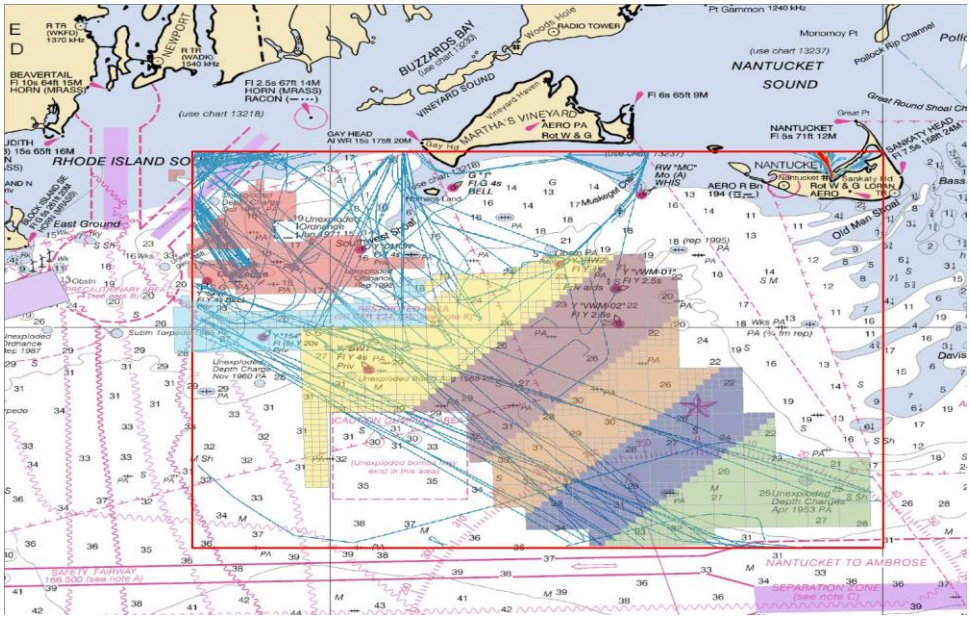

Figure 8. Passenger vessels

(e) Cargo and tanker vessels: Figures 9 and 10 show larger commercial cargo and tank vessel transits through the WEA, especially the western sections.

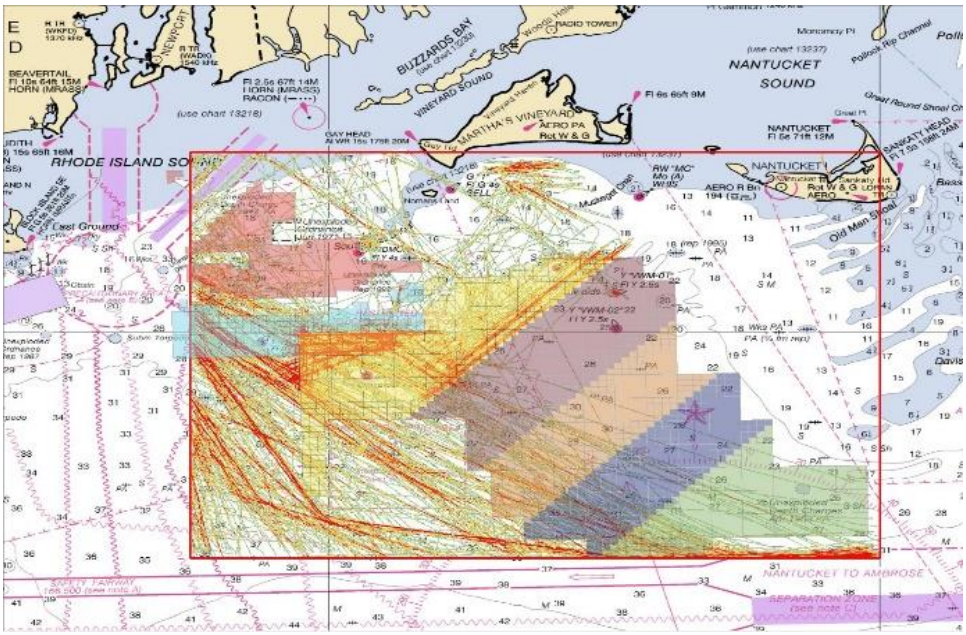

Figure 9. Cargo vessels

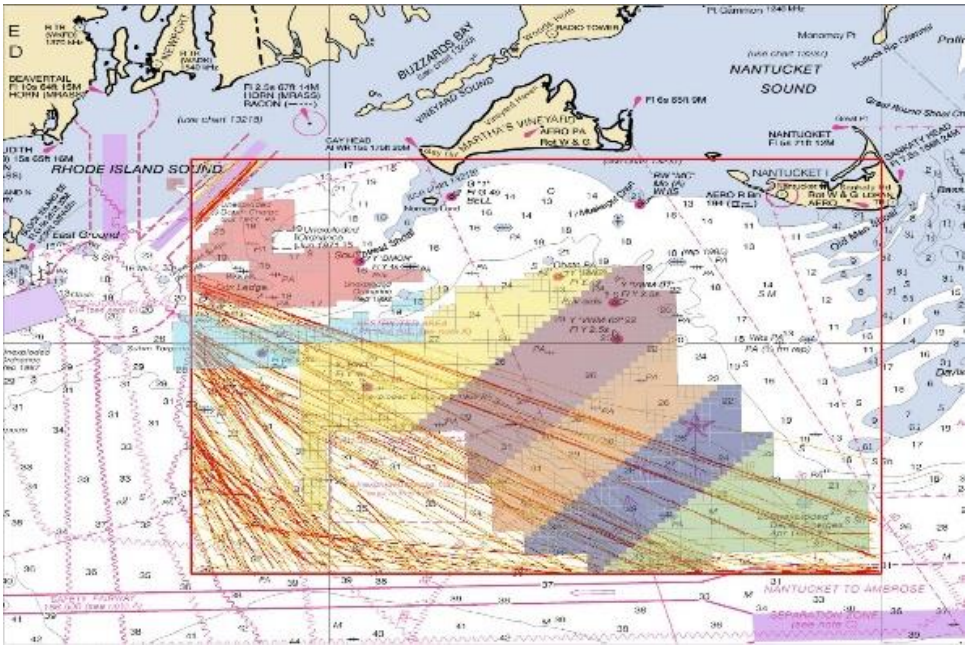

Figure 10. Tank vessels

These vessels generally transit on the southwestern edge of the MA/RI WEA. Some heavy traffic indicated by red lines appears to currently transit through the WEA from the Nantucket-Ambrose lanes to the approaches into Providence or into Connecticut ports, taking the most direct routes into port. Based on early discussions with the pilots and industry trade groups, we believe most of the large commercial ships will avoid the turbine arrays and follow the traditional deep-draft lanes. A review of United Kingdom (UK) guidance suggests the same: that large commercial vessels tend not to navigate through wind farms.

(f) Tug and tow vessels: Figure 11 shows tracks for tug and tow vessels through the WEA. The data confirmed that the frequency of tug and tow vessel transits is low. This fact was also validated by a comment to this study from the American Waterways Operators.

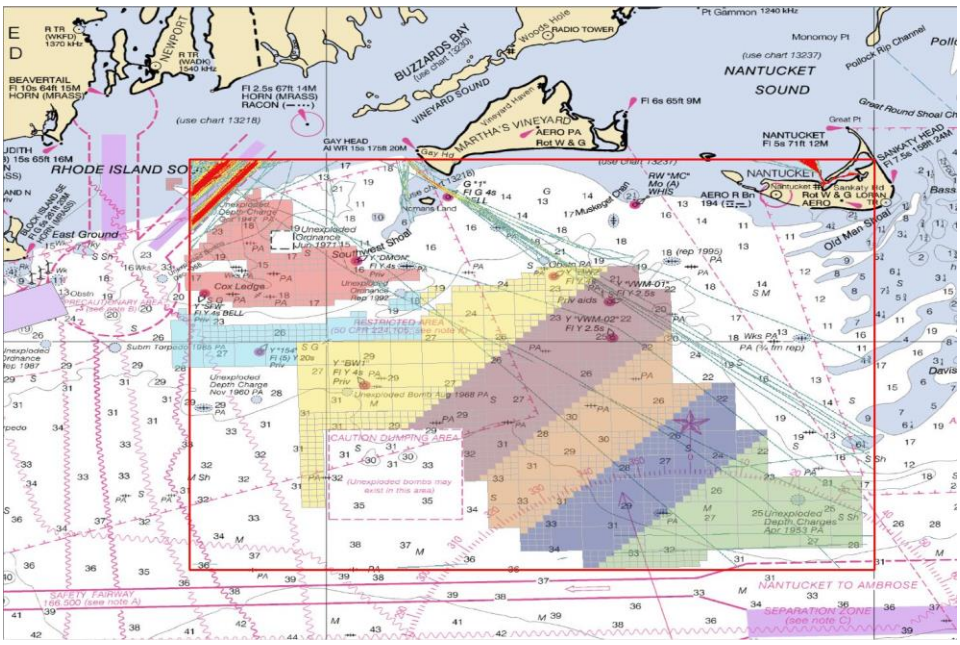

Figure 11. Tug and tow vessels

(g) Early in the information gathering stages of the BOEM permitting process, dialogue from the state coastal resources offices, state fishing vessel working groups, and fishing vessel industry meetings indicated there was east-west fishing vessel traffic not captured by AIS or VMS. The majority of these vessels are smaller fishing vessels (less than 65 feet in length), not required to employ an AIS or VMS transponder. Data from the Rhode Island Coastal Resources Management Council (CRMC) showed a population of fishing vessels that fish in an east-west pattern. This population included squid, mackerel and butterfish trawlers and lobster boats. With assistance from the CRMC, the USCG was able to find more information to substantiate this finding. Appendix G graphically illustrates some of the fishing vessel traffic through the WEA over several years.

(h) Based on fishing vessel tracks, specifically squid, mackerel, and butterfish vessels, there is significant east to west fishing activity in the WEA, particularly in August and September, following the north to south migration of the fish. Based on comments received on this report, there is a "gentlemen's agreement" between the fixed gear fishermen and the mobile gear fishermen to prevent gear entanglement.[7] The fixed gear fishermen set their gear along traditional LORAN-C lines that are generally in an east to west direction. The mobile gear fishermen fish in functional lanes between the set fixed gear, in a general east to west direction. While figures 12, 13, and 14 focus on squid, mackerel, and butterfish, the same areas are also lobster fishing grounds.

[7] The agreement among fixed and mobile gear fishermen was mentioned in prior public meetings held by BOEM for the Vineyard Wind project, in conversations with the RI CRMC and is a widely known practice to local mariners.

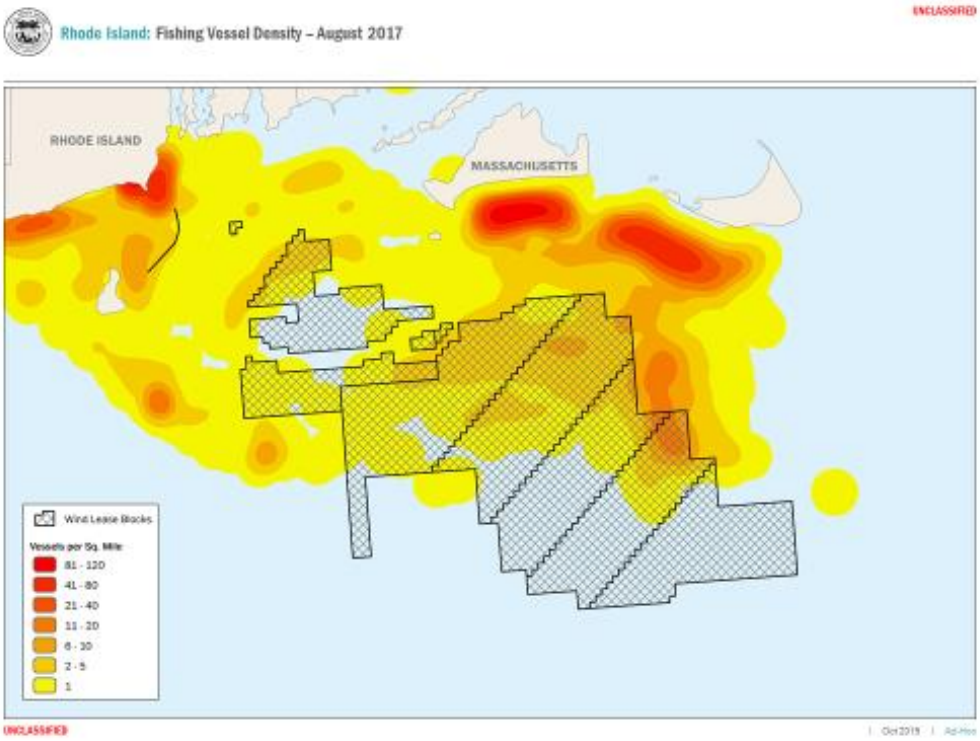

Figure 12. Squid, Mackerel, Butterfish (August 2017)

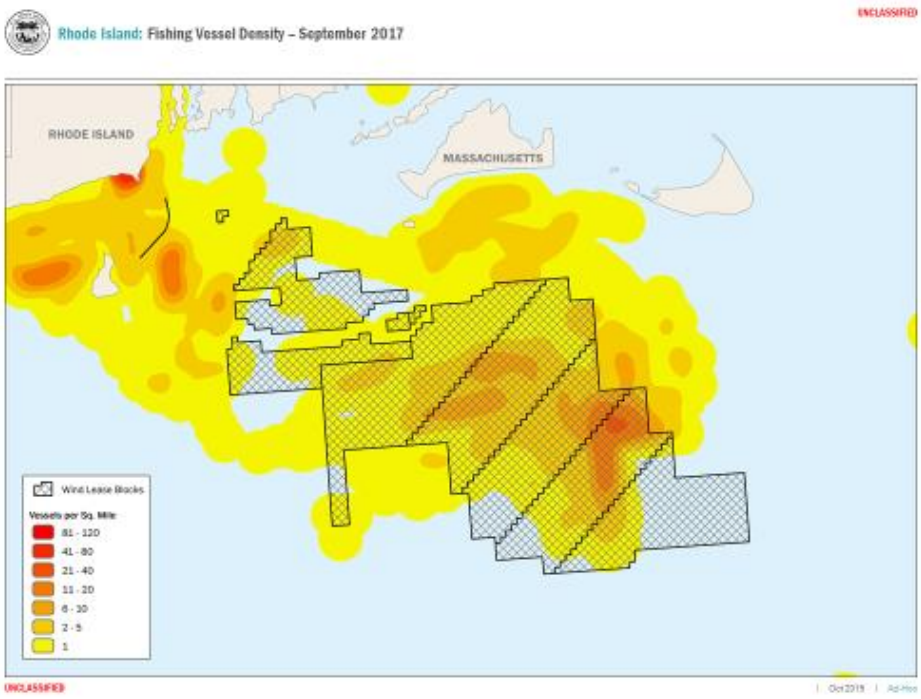

Figure 13. Squid, Mackerel, Butterfish (Sept. 2017)

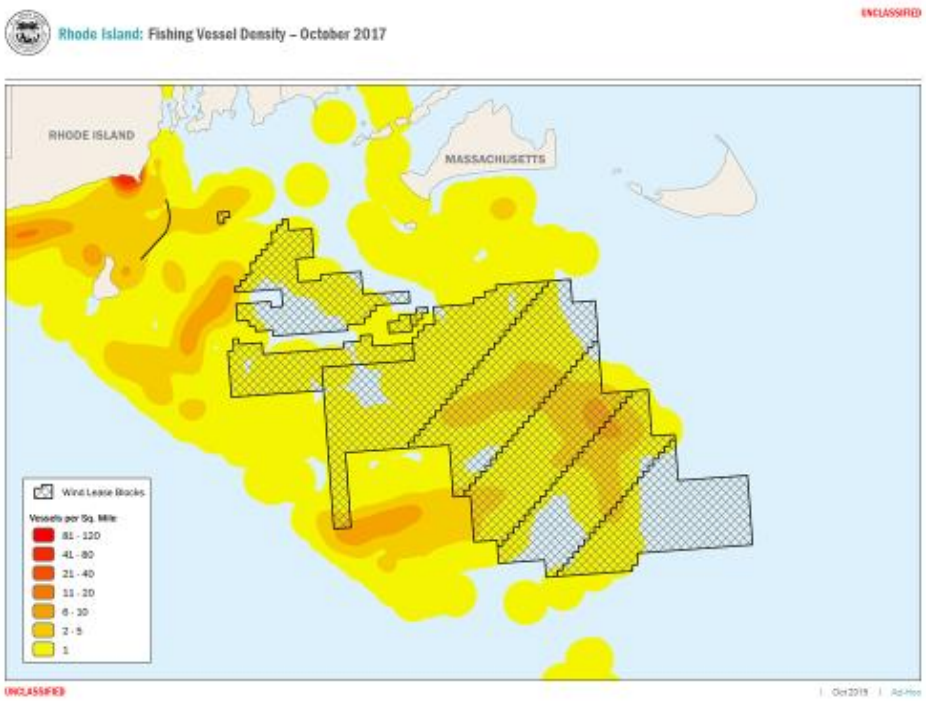

Figure 14. Squid, Mackerel, Butterfish (Oct. 2017)

(i) Charter fishing and excursions. The USCG found no database documenting active charter fishing or excursion activity and no specific vessel counts are available, thus making reliable year-to-year trend comparisons impossible. However, outreach to area charter and excursion operations through the USCG Sector Southeastern New England Port Safety Forum, coupled with direct conversation with charter boat operators, indicates a modest, steady increase in active vessels since the mid-1990s. These vessels may be captured in fishing vessels, passenger vessels, or other.

(j) In summary, from a variety of sources including the information in Appendices F, G, and H, input from mariners, and USCG organic expertise and experience, the study area appears to be primarily used for commercial fishing vessels engaged in fishing or transiting through the area to fishing grounds adjacent to the MA/RI WEA. Other vessel traffic includes recreational fishing and general recreational traffic (e.g., sailing vessels, vessels participating in organized marine events, etc.) that have unidentifiable origins and destinations.

C. Future Traffic Characteristics:

1. It is difficult to gauge future traffic characteristics within the WEA. Port development activities may be the only way to predict future vessel traffic and density, since the lack of proper infrastructure and waterway depths would deter vessels larger than the current sizes to make port calls. Additionally, a lack of expansion would also indicate that capacity would not change significantly as well.

2. A review of port development activities was conducted to assess future traffic characteristics. This review considered current and planned dredging projects, and canvassed some of the larger local facilities on whether there are any significant plans to develop. Additionally, the review also included surveying any permits that were sought or granted for bridge construction or to raise bridges in order to increase air draft.

   (a) Port Development Activities - Underway/Projected Dredging Projects.[8] Current or projected dredging projects in Massachusetts, Rhode Island, or Connecticut are not expected to impact vessel traffic or vessel density in the MA/RI WEA.[9] Vessel density data reviewed for this report incorporates the previous dredging projects and any impacts they may have had on vessel traffic and vessel density. Most dredging projects are to maintain the currently authorized depths.

   (b) Port Development Activities – Bridge Permits.[10] There are no current or planned permitted bridge projects with the intention to increase air drafts.

   (c) Port Development Activities – Maritime Facilities. The following information regarding port development activities comes from the local government or organizational websites of the ports described:

      1) Port of Providence: The Port of Providence is a strategically located northeast port anchored by a strong tenant base, which utilizes the port as a distribution center within the New England area. Sea3 has reopened the Liquid Propane Gas (LPG) terminal, which will increase the number of LPG vessels into Providence. The anticipated number of LPG ship transits is six to eight annually.

      2) Ports of New Bedford and Fairhaven: The Port of New Bedford is a deepwater commercial port located on the northwestern side of Buzzards Bay. The Port is approximately nine nautical miles from the Cape Cod shipping canal, 83 miles south of Boston, and 166 miles north of New York. Home port to more than 500 commercial scallopers and fishermen, New Bedford currently has the highest valued commercial fisheries catch in the nation. The town of Fairhaven shares a harbor with the city of New Bedford. Fairhaven's history, economy, and culture are closely aligned with those of its larger neighbor. South Terminal in New Bedford Harbor is located inside the hurricane barrier and has over 25 acres of marine industrial land, with a 1,600-linear foot bulkhead and depths of 20 feet, for offloading fish and seafood directly into

[8] Dredging would enable vessels with greater drafts to transit safely within the area. Dredging projects could indicate a port's plans to receive larger vessels. For example, some U.S. ports dredged in anticipation of the Panama Canal expansion to prepare for larger ships that would transit to the United States once the Panama Canal reopened.
[9] https://www.nae.usace.army.mil/Missions/Navigation/Connecticut-Projects/
https://www.nae.usace.army.mil/Missions/Navigation/Rhode-Island-Projects/
https://www.nae.usace.army.mil/Missions/Navigation/Massachusetts-Projects/
(last seen 28 August 2019)
[10] Bridge construction projects can be indicators of future expansion. Raising vertical clearances under bridges allows for some increase in vessel size. Bridge construction activities require a USCG permit if they impact a navigable waterway. First Coast Guard District Bridges division reports no major construction projects to increase vertical clearances.

the fish processing plants that occupy most of the site. In 2015, the state completed the 2-year construction of the Marine Commerce Terminal, a 29-acre facility built specifically for the construction, assembly, and deployment of offshore wind turbines.

3) Port of Davisville: The Port of Davisville is located at Quonset Point, a small peninsula in North Kingstown, Rhode Island. Situated near the mouth of Narragansett Bay, Davisville offers four berths and five terminals with 58 acres of laydown and terminal storage. Davisville is an automobile and frozen seafood port. In February 2016, Governor Gina Raimondo announced a proposal to modernize and expand the port of Davisville. This initiative calls for the state to modernize and reconstruct Pier 2 at Quonset's Port of Davisville to add more berthing space at the pier. The port anticipates a 20 percent increase in vessel activity at its port related to wind farm construction and maintenance projects.

4) Port of Galilee: The Port of Galilee, part of Narragansett, Rhode Island, is home to many charter fishing vessels. The port is also a major hub for year round ferry service to Block Island and the Town of New Shoreham.

5) Brayton Point: For 50 years, Brayton Point in Somerset, Massachusetts, was home to a coal-fired power plant that, which before decommissioning, generated 1600 MW for electricity to local homes and businesses. Current plans for Brayton Point include redevelopment of 300 acres of waterfront property into a logistics, manufacturing, and support center for offshore wind and other industries.

6) Newport: Newport, Rhode Island, hosts dozens of cruise ships each spring and fall. In recent years, the port has seen a slight increase from 40 to 50 cruise ship visits in the summer months. The port anticipates the number of cruise ship visits to Newport to double.

In summary, there is a significant amount of planned port development activity, however, it is predominantly intended to support the evolution of the wind energy industry. Bridgeport and New London, Connecticut, as well as Port Jefferson, New York, have announced upgrade projects to support offshore wind supply and construction. During the wind farm construction phases, there might be a slight increase in certain vessel characteristics and traffic, but it is unlikely significant enough to impact safe navigation through the wind farms. A new PARS study may be needed if the activity increases or otherwise changes significantly.

D. OCS Resource Development Activities:

1. The WEA consists of OCS areas leased by BOEM for construction and operation of offshore wind farms. Figure 15 below depicts the individual leased areas with the estimated number of towers to be erected in each area, current as of March 2019. Several of the lease areas may develop in phases; the final number of towers in a full leased area could differ than shown below. (Note: The Block Island Wind Farm is operational with five towers. As it is located in Rhode Island state waters, it is not within a BOEM-leased area.)

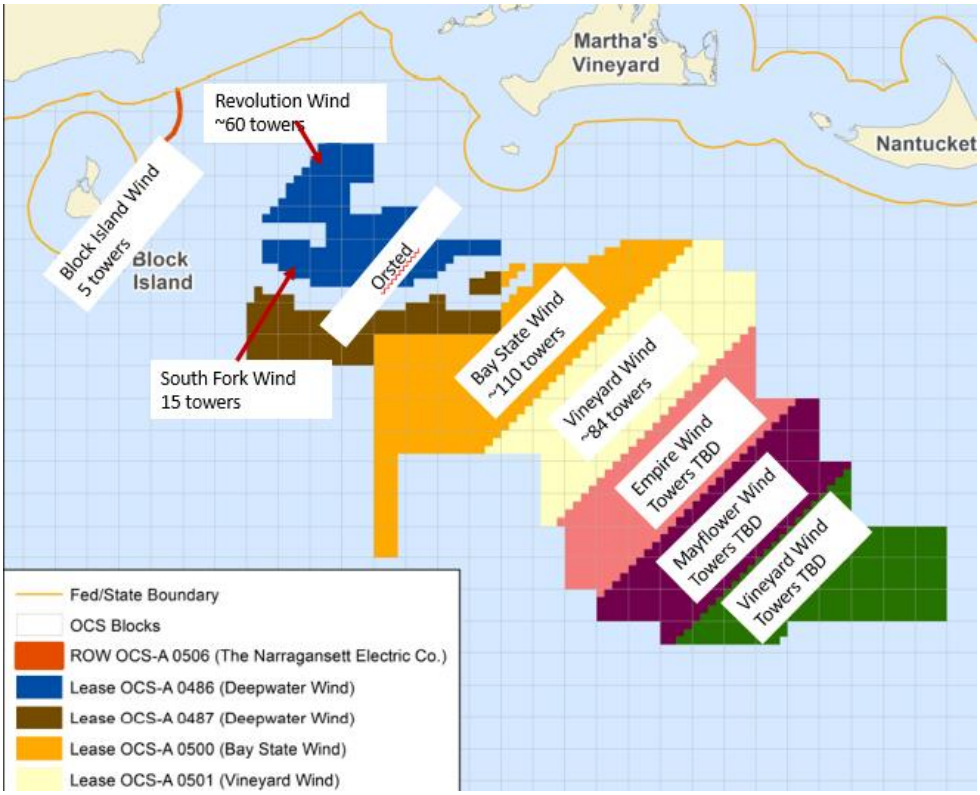

Figure 15. MA/RI Wind Energy Area

2. A temporary increase in vessel traffic associated with construction of each wind farm (including cable installation) is expected to be localized to only those areas under construction. In the long term, there could be increased vessel activity to and from, and within the turbine arrays, associated with wind farm maintenance and support vessels.

3. Future waterway uses by other classes of vessels, such as general recreational vessels, excursion vessels, and recreational fishing vessels are expected to increase based on post-construction activity. These increases have been observed in European wind farms and around the Block Island Wind Farm.

4. Some commenters requested that the USCG consider the potential impacts to the endangered North Atlantic Right Whale, resulting from vessel routing measures within the MA/RI WEA. The commenters' concern was that routing measures may facilitate higher-speed vessel transits, which could negatively impact right whales. Should the USCG pursue regulatory action to officially implement one or more routing measures, potential impacts to right whales would be considered as part of the review process under NEPA, which would include consultations under applicable environmental control laws.

E. Native American Tribal Activities:

1. No Native American tribes indicated to the USCG any current or future navigation safety concerns related to the MARIPARS study area.

F. Military and National Security:

1. USCG: The primary military activities occurring in the study area are USCG operations supporting maritime safety and security, search and rescue, aids to navigation, pollution response, living marine resource enforcement, and other law enforcement. SAR is discussed more in depth in a later section of this study. USCG cutters patrol the offshore areas of the Atlantic Coast. Typically, the largest of these are 270-foot medium endurance cutters. In the coming years, they will be replaced by 360-foot offshore patrol cutters (OPC). The OPC will primarily conduct the following missions: law enforcement, drug and migrant interdiction, search and rescue and other homeland security and defense operations.

2. Navy and Other Department of Defense: The U.S. Navy operates the Offshore Narragansett Bay Range Complex off the coasts of Massachusetts, Rhode Island, and New York. A range complex is a designated set of specifically bounded geographic areas and may encompass a water component (above and below the surface) and airspace through established Operating Areas and Special Use Airspace.[11] Part of the complex, Warning Area 105 (W-105A) is a Special Use Airspace that partially overlaps the wind energy area. [12]

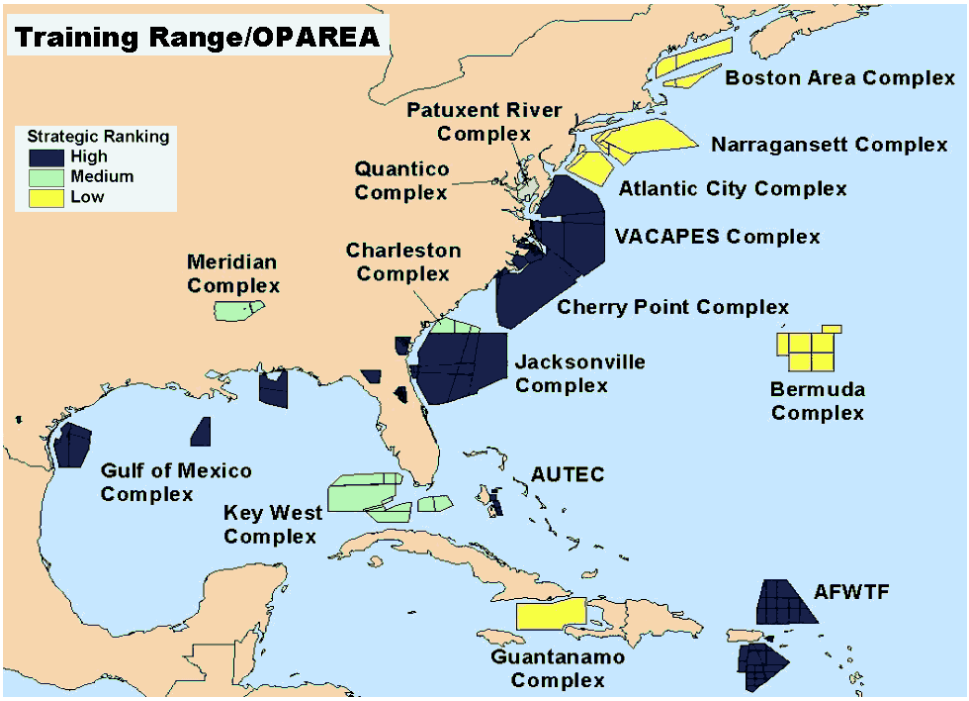

Figure 16. Training Range/OPAREA

[11]http://portal.midatlanticocean.org/static/data_manager/metadata/pdf/NationalSecurityMidAMilitary_Range_Complex.pdf
[12]https://sua.faa.gov/sua/siteFrame.app

Figure 17. Warning Area 105A

G. Aids to Navigation:

1. There are two federal aids-to-navigation (buoys) in the MARIPARS Study Area:
   (a) The Muskeget Channel "MC" buoy marks the southern entrance to that waterway.
   (b) The "G1" buoy east of Nomans Land, marks shoal water.
2. There are several private aids to navigation (buoys) in the MA/RI WEA which serve as data collection and/or research instruments, installed by wind farm developers or research/educational institutions.
3. Structures within a wind farm, in addition to being obstructions, will possibly serve as aids to navigation as well. Developers constructing and operating wind farms in the MA/RI WEA will mark and light each structure in accordance with Federal regulations and international standards. BOEM may, as a condition of a construction and operations permit, require the wind energy companies to submit a comprehensive aids-to-navigation plan for USCG review.
4. The USCG would seek to develop a special and perhaps unique system of aids-to-navigation marking and lighting for Wind Turbine Generators (WTGs) to assist mariners to identify specific locations and navigate safely within the WEA.

H. Radar:

1. Fishing vessels are not currently required to have a marine radar system for surface navigation unless they carry 16 or more persons onboard or are engaged in the Aleutian trade.[13] [14] However, the International Regulations for Preventing Collisions at Sea 1972 (COLREGS) Rule 8 requires all vessel operators to avoid collision by using "all available means appropriate to the prevailing circumstances and conditions to determine if risk of collision exists." COLREGS Rule 5 requires that "every vessel shall at all times maintain a proper lookout by sight and hearing as well as by all

[13] See, generally, 46 CFR Subchapter C, Part 28. See also, 46 CFR 28.400(a) and 46 CFR 28.875(a).
[14] Typically, for larger commercial vessels required to carry radars, USCG mariner credentialing regulations require masters and officers in charge of navigational watches of such vessels to earn an endorsement on their credential for radar observer. This endorsement certifies that the member has demonstrated a level of proficiency to safely operate a radar for safe navigation.

available means appropriate in the prevailing circumstances and conditions so as to make a full appraisal of the situation and risk of collision." Combined, these rules suggest that proper use of a radar is required if the vessel is fitted with one.

2. The potential for interference with marine radar is site specific and depends on many factors including, but not limited to, turbine size, array layouts, number of turbines, construction material(s), and the vessel types. A number of commenters mentioned the potential for radar interference by WTGs. The USCG reviewed several studies that address correlations between wind turbines and marine radar interference. To date, the USCG is not aware of an authoritative scientific study that confirms or refutes the concern that WTGs will degrade marine radar.

3. Some of the general types of interference may include radar clutter, radar saturation, and radar shadowing.[15]

   (a) Radar clutter is unwanted radar returns, including "false targets."

   (b) Radar saturation occurs when signal levels exceed the dynamic range of the receiver or cause multiple reflections, also known as "ghost targets."

   (c) Radar shadowing is where an object in the line-of-sight may act to block the radar, reducing the signal strength of a target behind that object.

4. Vessels have different types of radar with varying capabilities. UK radar studies have concluded that the location of radar antenna aboard vessels may contribute to the ability of radar to properly detect targets and may even cause false echoes.[16] For example, radars that are off-center or obstructed by railings, antennas, masts and the like are more likely to detect objects falsely.[17] Additionally, radar operator proficiency plays an essential role in a radar system's ability to properly detect targets in and around a wind farm.

5. The UK studies also show that additional mitigation measures, such as properly trained radar operators, properly installed and adjusted equipment, marked wind turbines and the use of AIS, enable safe navigation with minimal loss of radar detection.[18]

6. Comments requested the USCG review a report on an allision between a vessel navigating within a European wind farm and an unlit wind turbine.

   (a) In March 2019, marineinsight.com[19] reported a 2012 incident wherein a vessel's captain "as was the practice once inside the wind farm, had put the radar into standby mode" because "trials have demonstrated that, at close range, a wind farm may produce multiple reflected and side lobe echoes that can mask real targets. Employing radar within a wind farm is not reliable; therefore, the decision by the captain not to employ the radar while transiting the wind farm was understandable."

[15] These types of interference are not limited to wind farms and can be experienced even without the presence of a wind farm. See "Assessment of the Impact of the Proposed Block Island Wind Farm on Vessel Radar Systems", QINETIQ 15/0165/2.0, 2015. See also "Investigation of Technical and Operational Effects on Marine Radar Close to Kentish Flats Offshore Wind Farm, British Wind Energy Association (BWEA), April 2007.
[16] See, BWEA, 2007.
[17] See id.
[18] See id. See also, QINETIQ, 2015.
[19] https://www.marineinsight.com/case-studies/wind-farm-vessel-collides-with-turbine-tower

(b) A closer investigation by the United Kingdom's Maritime and Coast Guard Agency (MCA) Marine Accident Investigation Board (MAIB) found the vessel's master at fault due to several contributing factors: operating in 30-knot winds, in heavy seas, driving rain, at night, with excessive speed, and all without a proper lookout.

(c) Ultimately, the Board found the master relied too heavily on his own visual monitoring as the sole method of detection, made insufficient use of a proper lookout and available navigation equipment, and failed to adequately monitor the vessel's passage in light of the prevailing circumstances.[20]

I. Weather:

1. Weather is an important consideration for all parties engaged within the MA/RI WEA. The USCG examined marine weather information from a variety of sources to gauge historic wind and wave data, including data from National Data Buoy Center Station 44097 (Block Island), part of the Scripps Institute of Oceanography Coastal Data Information Program (CDIP, also referred to as CDIP 154), and the Coastal and Marine Automated Network (C-MAN) station BUZM3, located at the far end of the Elizabeth Islands.

2. Weekly average wave heights for CDIP 154, the closest data source to the WEA, were obtained from 2017 to 2019 through the Northeastern Regional Association of Coastal Ocean Observing Systems (NERACOOS) website[21] and are contained in Appendix I.

3. CDIP 154 does not provide wind data; monthly mean and maximum wind speeds with available data were retrieved from BUZM3 for 2014 through March of 2019 are provided in Appendix I.

4. According to the Rhode Island Ocean Special Area Management Plan, winds in the region "contain a seasonal, diurnal (e.g., late morning through late afternoon/early evening) summer breeze component blowing from the southwest, with winter winds generally blowing from the northwest that are stronger than summer winds (Loder et al. 1998).[22] The data retrieved from sources and contained in Appendix I indicates a seasonal fluctuation in wave and wind that could impact vessel transits through the WEA.

[20] https://assets.publishing.service.gov.uk/media/547c6f44e5274a429000001b/W9IPReport_Web.pdf, last accessed on Sept 25, 2019.
[21] http://www.neracoos.org/datatools/historical
[22] https://seagrant.gso.uri.edu/oceansamp/pdf/samp_approved/200_Ecol_OCRMchanges_5.4_Clean.pdf

J. Search and Rescue:

1. An examination of USCG SAR data indicates an average of 9.5 incidents annually within or near the WEA from 2005 through 2018. Table A provides the number of SAR cases annually. Table B breaks these cases down by type.

TABLE A	
2005	8
2006	11
2007	12
2008	5
2009	12
2010	3
2011	9
2012	10
2013	9
2014	8
2015	7
2016	15
2017	16
2018	8
TOTAL	**133**

TABLE B	
Disabled Vessel	45
Distress Alert - needs assistance, but not in immediate danger	21
MEDEVAC - medical evacuation	16
Taking on Water	13
MEDICO - medical advice, given by radio	9
Fire	6
Uncorrelated MAYDAY - hoaxes	4
Unreported Vessel / Overdue Vessel	10
Capsized Vessel	3
MAYDAY Broadcast - international radio distress signal	3
Beset by Weather - vessel unable to move or maneuver under its own power because of weather. (wind, ice, seas)	2
Lost / Disoriented Vessel	1
TOTAL	**133**

2. Of note, the incidents in Tables A and B represent cases captured from USCG SAR database records, which originated within or near the WEA and contained accurate data quality. Other relevant cases not reflected in Tables A and B may include: responding USCG assets transiting through the WEA to reach a SAR location, SAR cases which, due to environmental factors, drift into the confines of the WEA, and subjects of SAR cases which are towed or otherwise transported through the WEA from originating points outside of it, such as from south of Cape Cod to the New Bedford area. The fact that the database only reflects originating points and destinations is significant since, as seen by case type ranking, the most likely case in the WEA involves towing a disabled vessel. The second highest ranked type involves large search areas due to minimal information received in the initial alerts.

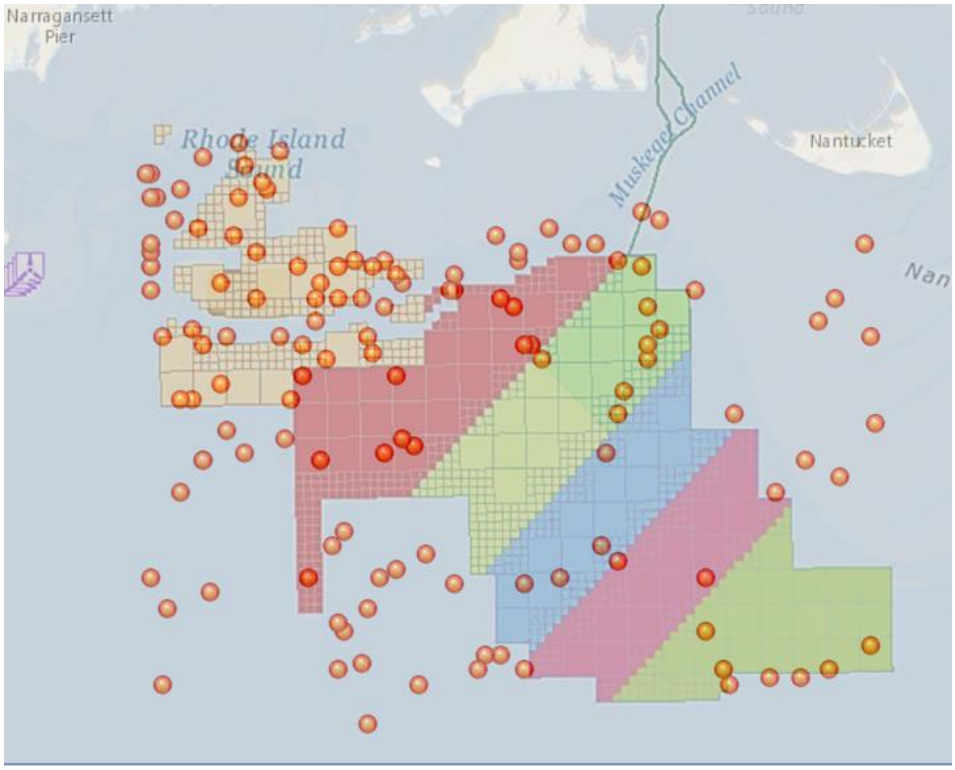

Figure 18. SAR Cases within the WEA 2005 – 2018

3. Figure 18 is a graphical representation of SAR cases. It highlights the need for SAR operations within the WEA.

4. The USCG also utilizes portions of the electromagnetic spectrum to maintain surveillance and communications in the WEA for SAR purposes. A large portion of this WEA lies within Sea Area A1.[23] A greater portion is under the umbrella of USCG communications coverage provided by Rescue 21. Vessels transiting below the WEA would sail beyond this coverage. See Figure 19.

[23] Sea Area A1 is an area within the radiotelephone coverage of at least one VHF coast station in which continuous digital selective calling alerting and radiotelephony services are available, as defined by the International Maritime Organization and applicable portions of the Safety of Life at Sea (SOLAS) convention.

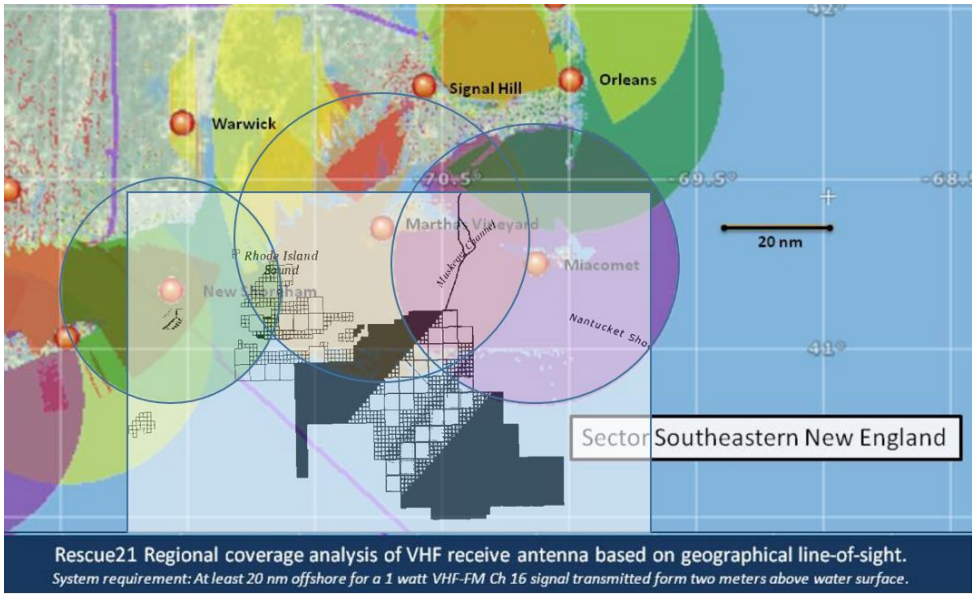

Figure 19. Rescue 21 Regional Coverage

5. The USCG uses a combination of surface and aviation assets to conduct the SAR mission within the WEA. Like other government, commercial, and recreational craft, these assets will be most impacted if WTGs and associated components are not placed in predictable patterns and adequately spaced.

6. SAR capabilities in the WEA will be impacted by the presence of structures in the ocean where before there were no such structures. Due to the time it takes for the smaller USCG surface assets to reach the WEA, USCG helicopters will be most heavily relied upon for SAR. In order to conduct search patterns, USCG Air Station Cape Cod pilots recommend a minimum of 1 NM between turbines along a search path.[24] The 1 NM spacing between WTGs creates a 0.5 NM navigational buffer on either side of the helicopter as it transits. The capability of turning within a wind farm is critical in the execution of SAR operations. Normal search speeds for USCG helicopter operations range from 70 to 90 knots indicated airspeed. The turn diameter for a helicopter operating at normal search speeds, utilizing normal flight procedures will range from 0.8 to 1 NM. One NM spacing between WTGs allows aircrews to safely execute turns to the adjacent lane using normal flight procedures in visual conditions. On scene conditions or WTG spacing less than 1 NM may require aircrews to deviate from normal flight procedures or to transit the entire length and conduct turns outside of the wind farm. One NM spacing may allow sufficient navigational room for aircrews to execute USCG missions in diverse and challenging weather conditions or deal with an aircraft emergency and/or navigational malfunction. The USCG will continue to evaluate WTG impacts to SAR capabilities and recommend additional mitigation strategies to enhance SAR mission effectiveness. Similar to the USCG recommendation that a standard and uniform grid pattern will assist vessels to safely navigate the MA/RI WEA, they will also assist SAR in favorable weather conditions.

[24] Based on visual flight rules for helicopters as cited in 14 CFR 91.155.

7. Multiple orientations of 1 NM spacing between structures would provide more flexible options for search patterns, especially where USCG assets are constricted by weather and wind. In some cases, weather and wind may be so severe as to not allow for USCG assets to enter the WEA.

8. Environmental conditions will greatly influence helicopter operations in the MA/RI WEA. Normal search altitudes in optimal weather are 200-300 feet above the water. Searches within the wind farm will require extensive visual maneuvering and helicopter crews will be required to stay below the clouds while in the confines of the MA/RI WEA. In cases of emergency, or to exit from a wind farm, there will be times when the flight crews will need to operate at an altitude higher than 200-300 feet above the water. Environmental conditions such as icing, thunderstorms, or turbulence will impact how high the crews can operate or will be able to operate due to safety concerns. There may be times that crews will be forced to stay low due to an atmospheric icing layer at certain altitudes. Flying through those icing layers could exceed the capabilities of the aircraft's systems. Minimizing the length of time a flight crew is required to operate in these types of conditions is critical.

9. Based on the size of the MA/RI WEA, additional space could be helpful to increase aviation crew welfare during search and rescue operations, especially in conditions involving exceptionally strong winds and inclement weather. USCG aviators will continue to examine this issue as the MA/RI WEA is built out and experience is gained on which distances would provide the appropriate reaction time when flying during periods of significantly reduced visibility.

IV. SAFE NAVIGATION ANALYSIS

Several assumptions guided the safe navigation analysis.

- No laws or regulations currently exist to prevent vessels from transiting through, fishing or recreating in the WEA.
- Mariners are required to follow the COLREGs, also known as “rules of the road.”
- Mariners will likely have to adjust their watchkeeping requirements and level of vigilance when navigating within the WEA.

The USCG’s recommendations for a standard and uniform grid pattern with at least three lines of orientation and standard spacing should accommodate vessel transits in accordance with the COLREGs.

A. Existing Routing Measures:

1. There are no existing routing measures within the study area. The Nantucket – Ambrose fairway is south of the study area. The approaches to ports in Rhode Island and Connecticut (via Block Island pilot station) are west of the study area.

B. Need for New Routing Measures:

1. Due to the location of the WEA and its limited use by commercial cargo or passenger vessels, there is no current need for a regulatory project to establish routing measures through the WEA.
2. The presence of WTGs where only open ocean previously existed introduces a new impact to safe navigation for vessels transiting through the MA/RI WEA. Absent mitigation measures the only option available for some vessels will be to navigate around the MA/RI WEA.
3. Mitigation measures are necessary due to the following factors:
   (a) Of the seven adjacent or near-adjacent lease areas within the MA/RI WEA, the preliminary designs of the first two projects submitted to BOEM were not congruent; and
   (b) The lack of congruent designs submitted by the first two developers would require vessels transiting the area to make multiple course alterations in order to avoid alliding with structures; and
   (c) The multiple course alterations necessary to transit through the 65 NM long WEA, avoiding non-standardized WTG placement and other vessels, would present an increased navigational risk to mariners.
   (d) The seven adjacent lease areas cover 1400 square miles of ocean.
4. Both developers with proposed projects stated in their navigational safety risk assessments that vessels would likely go around the WEA. Depending upon the port of departure and the intended destination, there may appear to be reasonable alternate routes around the MA/RI WEA. However, once all the leased WEA's are fully constructed, altering course around the entire WEA could require excessive additional travel, time, and distance. A comment submitted by Orsted [25]provided some examples of "go around" calculations. Figure 20, created by USCG Sector Southeastern New England, is another example. Vessel operators will have to balance the risks of going through a WEA against the economic impacts associated with the additional distance, fuel, and passage time. Expecting all vessels to go around may be impractical. AIS data showed more than 46,000 vessel transits through the MARIPARS Study Area annually. Those annual numbers did not include vessels less than 65 feet not carrying AIS. These smaller vessels may take a longer time to transit the same distances.

[25] Comment USCG-2019-0131-0028 summited by Orsted Wind Power North America LLC. Can be viewed at www.regulations.gov, enter Tracking Number: 1k3-9a5r-7p14 in the search bar and click "search".

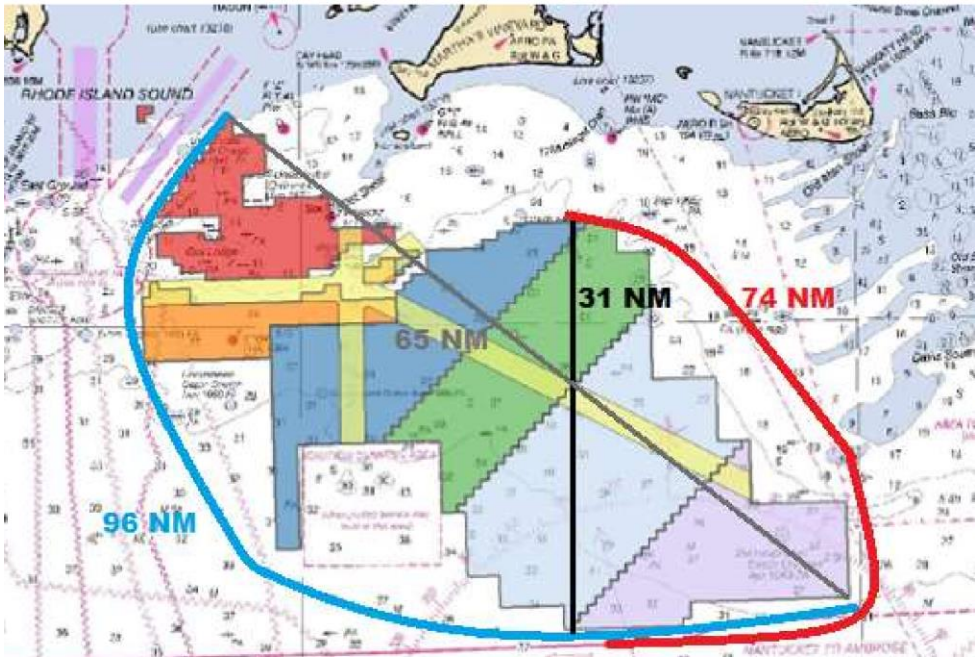

Figure 20. Transit Distances Through and Around the MA/RI WEA

5. Additionally, as described in the SAR discussion, the "go around" options would require vessels to transit either further towards open ocean, away from safe haven, or further from some of the USCG's marine communications coverage.

C. Type of Mitigation Measures:

1. Vessel operators will have the freedom to navigate through the wind farms, and it is anticipated that some will opt to continue transiting through, fishing in, or recreating within the MA/RI WEA. The two initially proposed incongruent turbine array designs foreshadow the navigational challenge that would be extended by seven adjacent wind farm projects.
2. International and U.S. guidance recommend offshore developers design their arrays to maximize the ability of vessels to transit through them on straight-line courses. For the purposes of safe navigation, the USCG strongly recommends that BOEM require a standard array throughout the MA/RI WEA that would allow for multiple, straight-line navigation safety corridors through the MA/RI WEA. A standard and uniform grid pattern for offshore structures with multiple straight orientations throughout the MA/RI WEA would maximize safe navigation within the MA/RI WEA.
3. In addition to recommending a standard and uniform grid pattern throughout the MA/RI WEA, the USCG also considered the following routing measures for possible application to the MA/RI WEA. (A consolidated list of routing measure definitions is included in Appendix B).
   (a) "Traffic Separation Scheme" (TSS) means a routing measure intended to separate opposing streams of traffic by the establishment of traffic lanes with a separation zone between them. An official TSS is an IMO-sanctioned routing measure that is typically designed to safely guide commercial vessels transiting in and out of major ports.

(b) "Recommended route" means a route of undefined width for the convenience of vessels in transit, which is often marked by centerline buoys.

(c) "Recommended track" is a route that has been specially examined to ensure, so far as possible, that it is free of dangers. Typically, vessels are advised to navigate along those routes. Conceivably, a recommended track, or tracks, could be drawn within the MA/RI WEA with appropriate turns to avoid WTGs. Without a standard array, these tracks would require multiple turns as they weave their way through several arrays with differing layouts.

(d) "Traffic lane" means an area within defined limits in which one-way traffic is established. Natural obstacles, including those forming separation zones, may constitute a boundary.

(e) "Two-way route" means a route within defined limits inside which two-way traffic is established. A two-way route is aimed at providing safe passage of ships through waters where navigation is difficult or dangerous.

(f) "Fairway or shipping safety fairway" means a lane or corridor in which no artificial island or fixed structure, whether temporary or permanent, will be permitted. Aids to navigation approved by the USCG may be established in a fairway.

4. After considering all options and the vessel traffic patterns within the MA/RI WEA, a standard and uniform grid pattern with at least three lines of orientation throughout the MA/RI WEA would allow for safe navigation and continuity of USCG missions through seven adjacent wind farm lease areas over more than 1400 square miles of ocean.

D. Determining Appropriate Distance Between Turbines in the Array:

1. According to international guidelines, the purpose of routing measures is to improve safety of navigation where freedom of movement is inhibited by restricted sea room, the existence of obstructions to navigation and/or unfavorable meteorological conditions.

2. Determining an appropriate distance between structures, or the need for any vessel routing measure between structures is an inexact science. There is no single international standard or common methodology for determining such widths.

3. Some comments requested that we review a discussion in the British guidance document MGN 543.[26] It recommends some of the following considerations:

(a) Standard turning circles for vessels for collision avoidance are six times the vessel's length;

(b) Requirements for stopping in an emergency, following mechanical failures and/or to avoid collision; and

(c) Adequate space for vessels to safely pass and overtake each other, equivalent to a distance of two to four vessel lengths, depending on traffic density.

[26] MGN 543, "Safety of Navigation: Offshore Renewable Energy Installations (OREIs) - Guidance on UK Navigational Practice, Safety and Emergency Response"

4. MGN 543 refers to a Netherlands study, which assesses sea room requirements by taking into consideration data from the World Association for Waterborne Transport Infrastructure (known as PIANC).[27] The study describes a methodology based on experience gained from masters of commercial vessels. It preserves space for a navigation path, a collision avoidance zone, and a safety margin, based on the length of a "standard" vessel and traffic density. There is also room reserved for a possible future safety zone around individual WTGs.

   (a) Navigation Path: A space (adjusted for a typical vessel size) for normal vessel transiting.
   (b) Collision Avoidance Zone: A space reserved for normal maneuvering in accordance with the COLREGS.
   (c) Safety Margin: A space to be used by a vessel in an emergency to avoid an accident.
   (d) Safety Zone: An area around turbines to provide a measure of safety to both passing vessels and maintenance vessels that may be servicing one or more WTGs.
   (e) Standard Vessel: A length representative of the length of the standard size vessel that transits the area over a specific timeframe.
   (f) Traffic Density: The number of vessel transits through a particular area.

5. The UK uses the guidance described above to help determine how far turbines should be from an established shipping route, or determine the width of a "shipping corridor" if needed within an array. These shipping corridors are intended for large commercial vessels (typically 400m) that cannot or would not typically transit through a WEA. Below, the USCG uses this methodology to determine the turbine spacing that would enable safe transits through a single navigation safety corridor within the WEA. With sufficient spacing between turbines, the USCG's recommended standard and uniform grid pattern will create multiple navigation safety corridors. Vessels that transit within the WEA are also able to maneuver to different lanes within the WEA. Both of these factors will add to the overall navigation safety determined by the calculations for a single corridor.

   (a) Standard Vessel: For the turbine array, the USCG relied on the length of the largest fishing vessel routinely transiting the MA/RI WEA, since that industry was the heaviest population of waterway users. While AIS data showed that larger vessels transited through the MA/RI WEA, input from trade organizations and the USCG's own understanding of large ship navigational watchstanding requirements led to the conclusion that larger ships would likely follow the deep draft lanes around the MA/RI WEA, rather than go through the wind farms once constructed. The USCG concluded that smaller vessels, predominately commercial fishing vessels, would be the primary users of the MA/RI WEA.

[27] "Assessment Framework for Defining Safety Distances between Shipping Lanes and Offshore Wind Farms" (the "framework") published by The Ministry of Infrastructure and the Environment and the Ministry of Economic Affairs of the Netherlands in 2015.

Based on AIS data, the length of the largest fishing vessel routinely found in the MA/RI WEA was 144 feet.[28]

(b) Navigation Path: Space in a lane should allow a vessel to transit and overtake another vessel, transiting in the same direction. As previously discussed, this space is largely dependent on vessel density, or the number and types of vessels that transit in the area. Four lengths of the standard vessel ("L") is widely accepted as space adequate for vessels to safely pass, overtake and avoid each other where the anticipated traffic is more than 18,000 vessel transits annually.[29] While the USCG does not expect more than 18,000 vessel transits in every lane between turbines, the additional spacing provides buffering space and additional distance between turbines for inclement weather and vessel emergencies.

(c) Collision Avoidance Zone: The Netherlands study preserved space to allow vessels to make normal collision avoidance maneuvers and, when necessary, give way to other traffic to starboard in accordance with COLREGS. The advance needed for a vessel's initial collision avoidance maneuver has been calculated at 1.5 vessel lengths.

(d) Safety Margins: Space is needed for vessels to exercise emergency maneuvering to avoid collisions. For emergency maneuvering, that is, when the collision avoidance maneuver to starboard is ineffective, a vessel may have to make 180 degree turn to starboard. To safely make that turn, the vessel will need a space equivalent to six vessel lengths.

(e) Safety Zone: A temporary 500m safety zone around structures during construction and maintenance is well-recognized in international law. U.S. law does not currently authorize the USCG to establish safety zones around structures for offshore wind farms beyond 12 NM from the territorial sea baseline. However, the safety zones were included in the analysis to preserve the space in the event that the USCG receives the statutory authority to establish safety zones around WTGs. The USCG does have similar authority for oil and gas, exploration and production on the outer continental shelf.

[28] In 2015, 2016 and 2017, AIS data shows that the largest fishing vessel in the WEA was 144 feet long. In 2018, there were some AIS data integrity issues. The largest fishing vessel may not have been 144 feet in 2018. However, the USCG is confident that 144 feet was still representative of the largest fishing vessels in the WEA from 2015 to 2018. While there may have been some fishing vessels larger than 144 feet (two vessels out of more than 500 fishing vessels whose sizes we could not confirm with certainty but may have been up to two feet larger), the difference in sizes did not make a marked difference in the associated calculations.

[29] The World Association for Waterborne Transport Infrastructure, Maritime Navigation Commission, "MarCom WG 161: Interaction Between Offshore Wind Farms and Maritime Navigation" (2018).

6. Figure 21 graphically represents the methodology for determining lanes for fishing vessel transits (northwest to southeast). Based on these considerations, the USCG recommends the minimum spacing between turbines for navigational safety to be 0.6 NM to 0.8 NM. If the 500m safety distance is not included, the minimum spacing between turbines should be no less than 0.6 NM.

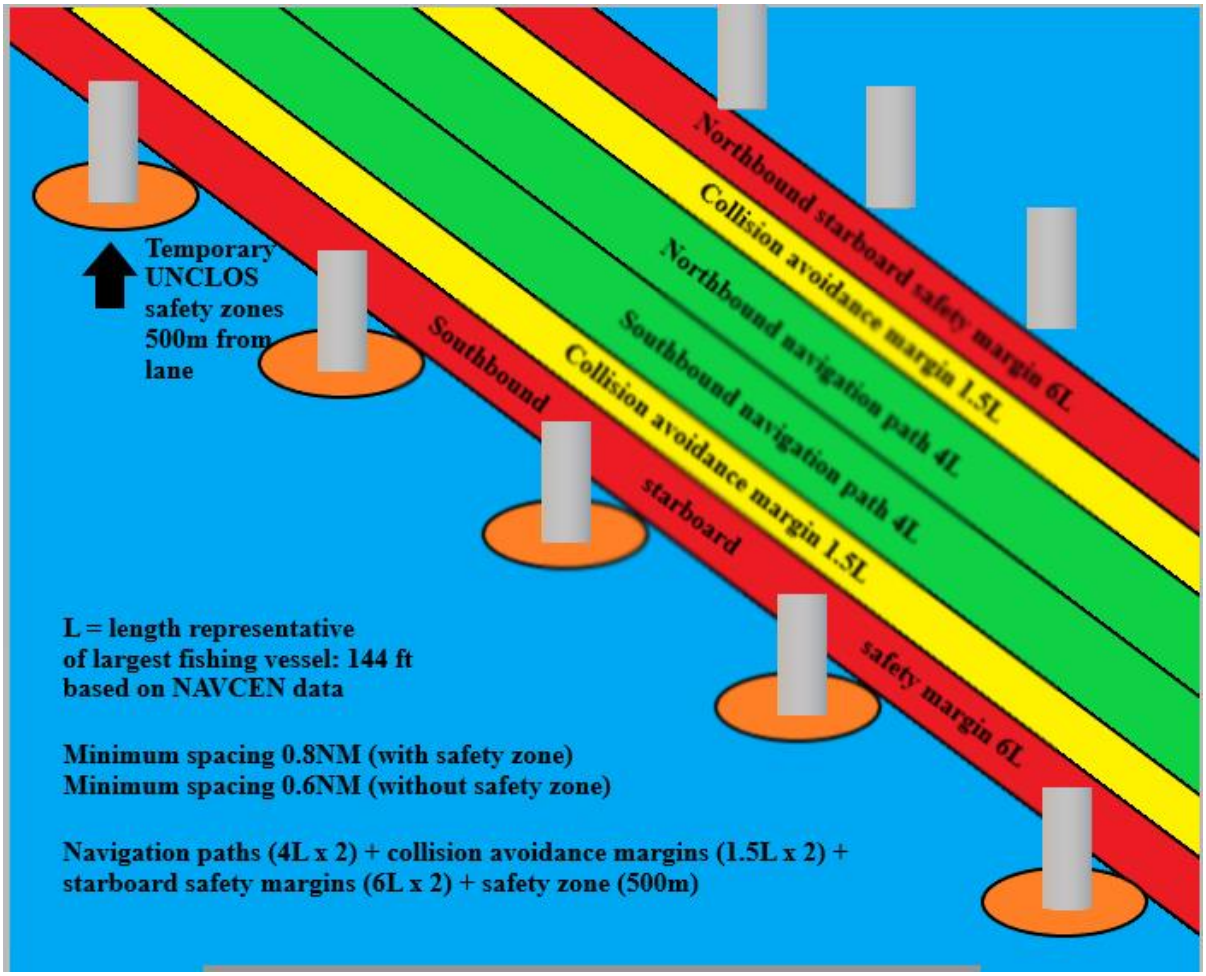

Figure 21. Methodology for spacing between turbines

7. Based on the above, the spacing between turbines within the array should be 0.6 NM to 0.8 NM for navigation safety. The fishing vessel transit trends shown in AIS data and validated by comments from the fishing vessel industry show that most traffic through the MA/RI WEA moves in a northwest to southeast direction, and on a reciprocal track. Thus, it would make sense to have at least one line of orientation with a spacing of at least 0.6 NM to 0.8 NM for safe navigation in a northwest to southeast orientation.
8. State coastal resources offices and fishing vessel interest groups have consistently requested a minimum of 1 NM spacing in an east to west orientation to continue to safely fish in the MA/RI WEA. Creating at least 1 NM spacing in the east to west orientation would meet the needs of state and fishing vessel interests. The USCG recommends a second line of orientation should be in an east to west direction.

9. USCG NVIC 01-19 advises that there be at least two straight lines of orientation through an array. [30] Given the need for an east to west orientation for fishing operations, an additional north to south orientation for search and rescue and a northwest to southeast orientation for transit, the USCG recommends a minimum of three lines of orientation in the MA/RI WEA.

10. Multiple orientations of 1 NM spacing would provide more flexible options for search patterns, especially where USCG assets are constricted by weather and wind. Such additional lines of orientation are necessary when environmental conditions (i.e., fog, wind, and sea state) limit or reduce SAR options. It also improves safe navigation for the same reason: increasing the number of directional options for vessels to transit through the MA/RI WEA.

11. Comments submitted to this study expressed concerns with compression and funneling traffic through relatively narrow lanes. Some commenters expressed their concerns about the potential for all transiting traffic to be funneled into a navigation safety corridor, thus increasing the risk to mariners. The standard and uniform grid pattern discussed above should alleviate these concerns by providing vessels with sufficient spacing and multiple options to transit safely through the array. If the entire MA/RI WEA is developed consistent with such a grid pattern, mariners could choose among the many resulting navigation safety corridors to safely navigate through the entire MA/RI WEA.

V. CONCLUSION:

A. The PARS process provides a way to solicit and evaluate data and input to inform the USCG's understanding of impacts resulting from multiple adjacent wind farms in an open and transparent manner. Through this process, the USCG reviewed vessel transit and search and rescue data, current and reasonably foreseeable future waterways uses, and marine incidents. The review included AIS and anecdotal data, various studies, U.S. and European guidance documents and practices, and developer assessments previously submitted to BOEM. The USCG also considered written comments submitted to the docket and stakeholders engagement through public meetings.

B. Within the MA/RI WEA, lack of a federal requirement or industry standard for uniformity in array layouts with sufficient minimum spacing may present mariners with an untenable navigation safety challenge.

C. Given the traditional use of the water space within the MA/RI WEA, it is reasonable to preserve for mariners the ability and option to transit on a single or near-single course through the entire length of the MA/RI WEA. Safety considerations require a standard and uniform grid pattern with sufficient path width and spacing between turbines to provide adequate sea room for vessels to avoid collision in passing, crossing, and overtaking situations, and adequate room to react to various potential emergencies.

[30] NVIC 01-19 reccommends straightline columns or rows with two lines of orientation. The USCG acknowledges that two lines of orientation will in most every scenario create a third and fourth line of orientation.

VI. RECOMMENDATIONS:

A. That the MA/RI WEA's turbine layout be developed along a standard and uniform grid pattern with at least three lines of orientation and standard spacing to accommodate vessel transits, traditional fishing operations, and SAR operations, throughout the MA/RI WEA. The adoption of a standard and uniform grid pattern through BOEM's approval process will likely eliminate the need for the USCG to pursue formal or informal routing measures within the MA/RI WEA at this time.

Lanes for vessel transit should be oriented in a northwest to southeast direction, 0.6 NM to 0.8 NM wide. This width will allow vessels the ability to maneuver in accordance with the COLREGS while transiting through the MA/RI WEA.

Lanes for commercial fishing vessels actively engaged in fishing should be oriented in an east to west direction, 1 NM wide.

Lanes for USCG SAR operations should be oriented in a north to south and east to west direction, 1 NM wide. This will ensure two lines of orientation for USCG helicopters to conduct SAR operations.

In the event that subsequent MA/RI WEA project proposals diverge from a standard and uniform grid pattern approved in previous projects, the USCG will revisit the need for informal and formal measures to preserve safe, efficient navigation and SAR operations.

B. That mariners transiting in or near the MA/RI WEA should use extra caution, ensure proper watch and assess all risk factors. Offshore renewable energy installations present new challenges to safe navigation, but proper voyage planning and access to relevant safety information should ensure that safety is not compromised.

In general, mariners transiting through this WEA should make a careful assessment of all factors associated with their voyage. These factors at a minimum should include;

1) The operator's experience and condition with regard to fitness and rest.
2) The vessels characteristics, which should include the size, maneuverability, and sea keeping ability. The overall reliability and operational material condition of propulsion, steering, and navigational equipment.
3) Weather conditions – both current and predicted including sea state and visibility.
4) Voyage planning to include up-to-date information regarding the positions of completed wind towers or wind towers under construction and their associated construction vessels. A great deal of consideration should also be given to whether the transit will be conducted during day or night.

VII. CONTINUED ACTIONS:

A. The USCG will continue to serve as a NEPA cooperating agency to BOEM's environmental review of each proposed project. In that role, the USCG will evaluate the navigational safety risks of each proposal on a case-by-case basis.

B. The First Coast Guard District actively monitors all waterways subject to its jurisdiction to ensure navigation safety and will continue to monitor the areas offshore of Massachusetts and Rhode Island for evolving conditions, which may require additional studies to ensure navigational safety and minimize impacts to USCG operations.

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PORT ACCESS ROUTE STUDY:

THE AREAS OFFSHORE OF MASSACHUSETTS AND RHODE ISLAND

APPENDICES AND ENCLOSURES

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APPENDIX A

The MA/RI PARS Area

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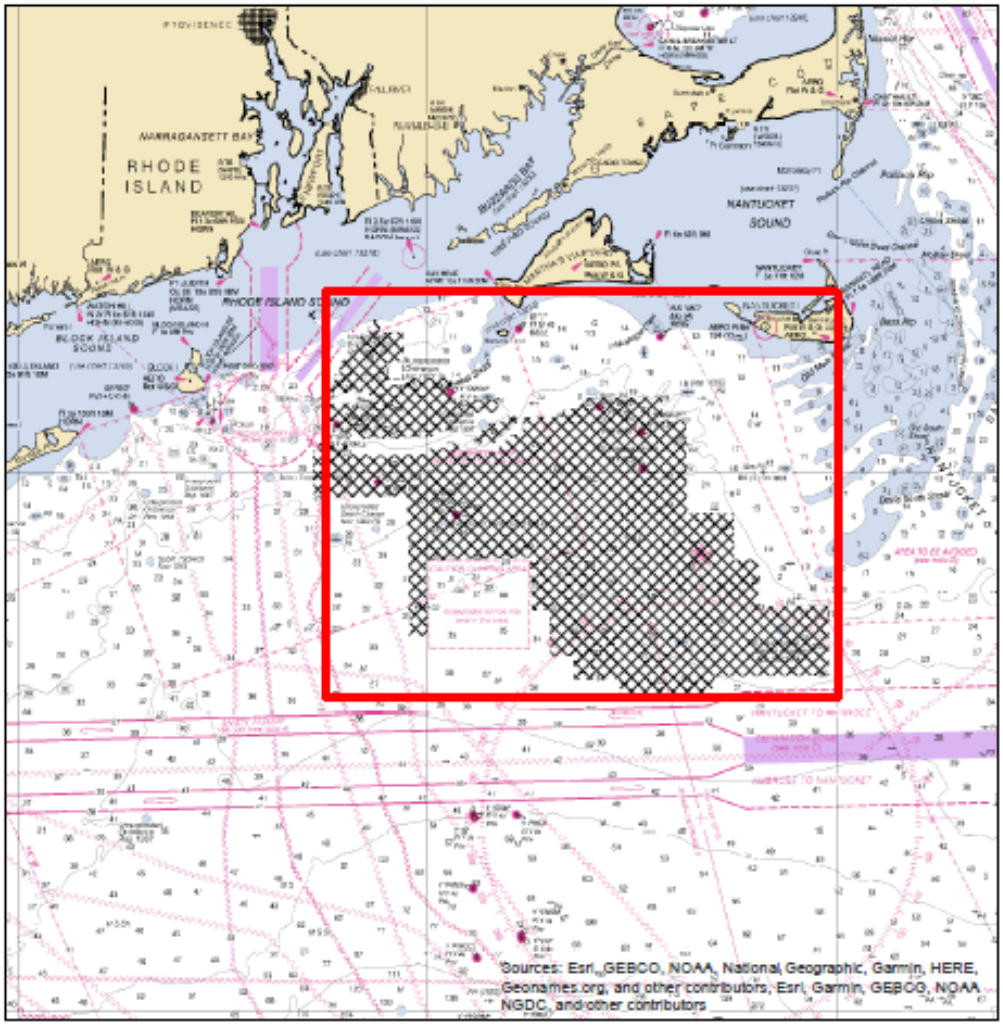
The Areas Offshore of MA and RI Port Access Route Study Area USCG-2019-0131



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APPENDIX B

Definitions of Terms

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1. Area To Be Avoided or ATBA means a routing measure comprising an area within defined limits in which either navigation is particularly hazardous or it is exceptionally important to avoid casualties and which should be avoided by all vessels, or certain classes of vessels.
2. Deep-water Route means a route within defined limits, which has been accurately surveyed for clearance of sea bottom and submerged obstacles as indicated on nautical charts.
3. Fairway means a lane or corridor in which no artificial island or structure, whether temporary or permanent, will be permitted so that vessels using U.S. ports will have unobstructed approaches.
4. Inshore Traffic Zone means a routing measure comprising a designated area between the landward boundary of a traffic separation scheme and the adjacent coast, to be used in accordance with the provisions of Rule 10(d), as amended, of the International Regulations for Preventing Collisions at Sea, 1972 (COLREGS), 33 USC §1601, *et seq*.
5. Marine Environment as defined by the Ports and Waterways Safety Act, means the navigable waters of the United States and the land resources therein and thereunder; the waters and fishery resources of any area over which the United States asserts exclusive fishery management authority; the seabed and subsoil of the Outer Continental Shelf of the United States, the resources thereof and the waters superjacent thereto; and the recreational, economic, and scenic values of such waters and resources.
6. Navigation safety corridors are defined in Appendix E to COMDTINST 16003.2B. While navigation safety corridors are not official routing measures recognized by the USCG or the IMO, they are a planning tool to identify the sea space necessary for vessels to safely transit along a route under all situations and to delineate areas where no offshore development should be considered. The USCG's initial use of the term, "navigation safety corridors" was in Enclosure 1 to the 2015 Atlantic Coast Port Access Route Study (ACPARS). In that study, the USCG identified areas where the vast majority of traffic moved along the Atlantic Coast and sought to preserve those areas for navigation, free from obstructions. In the MARIPARS, the navigation safety corridors discussed are the result of our recommendation for a standard and uniform grid pattern with at least three lines of orientation and standard spacing. In effect, the standard and uniform grid pattern

results in numerous straight, unobstructed lanes that function like navigation safety corridors through which traffic can safely transit. With adequate spacing between wind turbine generators, the totality of the resultant corridors can safely accommodate observed traffic density for the largest vessels typically transiting through or operating within the MA/RI WEA.

7. No Anchoring Area means a routing measure comprising an area within defined limits where anchoring is hazardous or could result in unacceptable damage to the marine environment. Anchoring in a no anchoring area should be avoided by all vessels or certain classes of vessels, except in case of immediate danger to the vessel or the persons on board.
8. Precautionary Area means a routing measure comprising an area within defined limits where vessels must navigate with particular caution and within which the direction of traffic flow may be recommended.
9. Recommended Route means a route of undefined width, for the convenience of vessels in transit, which is often marked by centerline buoys.
10. Recommended Track means a route which has been specially examined to ensure so far as possible that it is free of dangers and along which vessels are advised to navigate.
11. Regulated Navigation Area or RNA means a water area within a defined boundary for which regulations for vessels navigating within the area have been established under 33 CFR part 165.
12. Roundabout means a routing measure comprising a separation point or circular separation zone and a circular traffic lane within defined limits. Traffic within the roundabout is separated by moving in a counterclockwise direction around the separation point or zone.
13. Separation Zone or Separation Line means a zone or line separating the traffic lanes in which vessels are proceeding in opposite or nearly opposite directions; or from the adjacent sea area; or separating traffic lanes designated for particular classes of vessels proceeding in the same direction.
14. Traffic Lane means an area within defined limits in which one-way traffic is established.
15. Traffic Separation Scheme or TSS means a routing measure aimed at the separation of opposing streams of traffic by appropriate means and by the establishment of traffic lanes.

16. Two-way Route means a route within defined limits inside which two-way traffic is established, aimed at providing safe passage of ships through waters where navigation is difficult or dangerous.
17. Vessel Routing System means any system of one or more routes or routing measures aimed at reducing the risk of casualties; it includes traffic separation schemes, two-way routes, recommended tracks, areas to be avoided, no anchoring areas, inshore traffic zones, roundabouts, precautionary areas, and deep-water routes.

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APPENDIX C

Abbreviations and Acronyms

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ACPARS – Atlantic Coast Port Access Route Study
ATBA – Area to be Avoided
AtoN – Aids to Navigation
AIS – Automatic Identification System
BOEM – Bureau of Ocean Energy Management
CFR – Code of Federal Regulations
COLREGS - International Regulations for Preventing Collisions at Sea 1972
COP – Construction and Operations Plan
FR – Federal Register
FWG – Fisheries Working Group
IMO – International Maritime Organization
NAVCEN – Coast Guard Navigation Center
NEPA – National Environmental Policy Act
NMFS – National Marine Fisheries Service
NM – Nautical Mile
NOAA – National Oceanic and Atmospheric Administration
MEDEVAC – Medical Evacuation
MEDICO – Medical Communication
OCS – Outer Continental Shelf
OPC – Offshore Patrol Cutters
OREI – Offshore Renewable Energy Installation
PARS – Port Access Route Study
PWSA – Ports and Waterways Safety Act
RNA – Regulated Navigation Area
RODA – Responsible Offshore Development Alliance
SAP – Site Assessment Plan
SAR – Search and Rescue
SOW – Statement of Work
TEU – Twenty-foot Equivalent Unit
TSS – Traffic Separation Scheme
UK – United Kingdom
UK MGN – United Kingdom Maritime Guidance Note
USC – United States Code
USCG – United States Coast Guard
VMS – Vessel Monitoring System
WEA – Wind Energy Area
WTG – Wind Turbine Generator

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APPENDIX D

Contact List

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Coast Guard Sector Southeastern New England
Stakeholder Outreach Through Marine Safety Information Bulletin (MSIB)
E-Mail Distribution Database

Note: Two or more entries for the same organization indicates outreach to separate individuals within that organization

	Organization
1.	12 Meter Charters
2.	12 Meter Charters
3.	13th Civil Support Team. Rhode Island National Guard
4.	13th Civil Support Team. Rhode Island National Guard
5.	A & J Boat Corp.
6.	A&R Marine Corp/ DBA Prudence Island & Bay Island Transport
7.	Absolute Sport Fishing
8.	AC Leasing Corp.
9.	Acushnet - Emergency Management Agency
10.	AcuTech Consulting Group
11.	Adirondack Sailing Excursions
12.	ALBATROSS
13.	Allen Harbor Marine Service Inc.
14.	Althea K Sport Fishing
15.	America's Cup Charters - Intrepid Charters, LLC - Nefertiti Charters, LLC
16.	America's Cup Charters - Intrepid Charters, LLC - Nefertiti Charters, LLC
17.	ANG 1st WWD-CST
18.	Apponaug Harbor Marina (Dickerson's Marina, Inc.)
19.	Aquinnah - Fire Department
20.	Aquinnah - Harbormaster
21.	Aquinnah - Police
22.	Arabella Sail Charters
23.	Atlantic Commercial Diving Co
24.	Atlantic Star Lines, LLC
25.	Atlantic Star Lines, LLC
26.	Avondale Boatyard
27.	Bannister's Wharf Marina
28.	Barden's Boat Yard, Inc.
29.	Bareboat Sailing Charters
30.	Barnstable - Fire Department - West Barnstable
31.	Barnstable - Harbormaster
32.	Barnstable - Harbormaster

33.	Barnstable - Police Department
34.	Barnstable - Police Department
35.	Barnstable - Police Department
36.	Barnstable County
37.	Barnstable County
38.	Barnstable County Department of Health & Environment (REPC)
39.	Barnstable County Sheriff's Department
40.	Barnstable County Sheriff's Office
41.	Barnstable County Sheriff's Office
42.	Barnstable County Sheriff's Office
43.	Barnstable Fire Department
44.	Barnstable HarborMaster
45.	Barnstable Police Department
46.	Barnstable Police Department
47.	Barrington - Fire Department
48.	Barrington Harbormaster
49.	Barrington Yacht Club
50.	Barrington Yacht Club / US Sailing
51.	Bay Fuel Inc.
52.	Bay Marine, Inc.
53.	Bay Queen Cruises / Spirit of Newport / Rhode Island Cruise Company (Water Street Dock)
54.	Bay Queen Cruises / Spirit of Newport / Rhode Island Cruise Company (Water Street Dock)
55.	Bay Queen Cruises / Spirit of Newport / Rhode Island Cruise Company (Water Street Dock)
56.	Bayline Boatyard & Transport
57.	Belle Vue Yachting Center (Point Judith Marina)
58.	Beth Ann Fishing Charters
59.	Beverly Yacht Club
60.	Beverly Yacht Club
61.	Bigeye Charters
62.	Blackstone Valley Tourism Council
63.	Blackstone Valley Tourism Council (Warwick Harbor Master)
64.	Block Island Boat Basin
65.	Block Island Parasail & Watersports
66.	Blount Boats, Inc.
67.	Blount Small Ship Adventures
68.	Blount Small Ship Adventures
69.	Blount Small Ship Adventures
70.	Borden & Remington Corporation

71.	Borden Light Marina
72.	Borden Light Marine Contracting, Inc.
73.	Boston Coastline Pilots
74.	Boston Coastwise Pilots
75.	Boston Coastwise Pilots
76.	Boston Coastwise Pilots
77.	Boston Harbor Cruises
78.	Boston Harbor Cruises
79.	Boston Harbor Pilot Association, LLC
80.	Boston Harbor Pilot Association, LLC
81.	Bourne Department of Natural Resources
82.	Bourne Department of Natural Resources
83.	Bourne Department of Natural Resources
84.	Bourne Enterprise / Sandwich Enterprise
85.	Bourne Fire Department
86.	Bowen's Wharf Co.
87.	Bowen's Wharf Co.
88.	Brayton Point Energy, LLC
89.	Brayton Point LLC
90.	Brewer Cove Haven Marina
91.	Brewster - Conservation & Natural Resources
92.	Brewster - Fire Department
93.	Brewster - Police Department - Boat Patrol
94.	Bristol - Harbor Master
95.	Bristol - Police Department
96.	Bristol Marine
97.	Bristol Yacht Club
98.	Bucky Barlow's Boat Yard, LLC
99.	Burr Brothers Boats, Inc.
100.	Buzzards Bay Coalition
101.	Cape Cod Bay Sail, Inc
102.	Cape Cod Bay Watersports
103.	Cape Cod Chronicle
104.	Cape Cod Commercial Hook Fishermen's Association - Nantucket Soundkeeper
105.	Cape Cod Duckmobiles
106.	Cape Cod Times
107.	Capital Terminal Company
108.	Capt. John Boats

109.	Capt. John Boats
110.	Capt. John Boats - Cape Cod Cruises
111.	Capt. Leroy's Fishing Parties
112.	Capt. O'Connell's
113.	Casey's Oil
114.	CEE JAY Corporation
115.	Center for Coastal Studies
116.	Centerville-Osterville-Marstons Mills Fire Dept
117.	Champlin's Block Island Marina
118.	Charlestown - Harbor Master
119.	Charlestown - Police Department
120.	Chatham - Fire Department
121.	Chatham - Fire Department
122.	Chatham - Fire Department
123.	Chatham - Harbor Master (President - C&I HMA)
124.	Chatham - Police Department
125.	Chatham Boat Company
126.	Chatham Yacht Basin
127.	Chilmark - Fire Department
128.	Chilmark - Harbor Master
129.	Chilmark - Police Department
130.	Clean Harbors
131.	Clean Harbors Environmental Services
132.	Clean Harbors Environmental Services
133.	Clean Harbors Environmental Services
134.	Coalition for Buzzards Bay
135.	Coast Line Service
136.	Community Boating Center
137.	Conanicut Marine Services, Inc.
138.	Conanicut Yacht Club
139.	Conanicut Yacht Club
140.	Concordia Company, Inc.
141.	Cove Haven Marina (Brewer)
142.	Cranston - Fire Department
143.	Cranston - Harbor Master
144.	Crosby Yacht Yard, Inc.
145.	Crosby Yacht Yard, Inc.
146.	Cross Sound Ferry (JESSICA W - New London to BI)

147.	Cruising Club of America, Buzzards Bay Post
148.	Cuttyhunk Boat Lines
149.	Cuttyhunk Ferry Company Inc.
150.	Cuttyhunk Ferry Company Inc.
151.	Cuttyhunk Water Taxi
152.	Dartmouth - Fire Department District 1
153.	Dartmouth - Harbormaster
154.	Deepwater Wind
155.	Deepwater Wind
156.	Deepwater Wind, LLC
157.	Dennis Fire Department
158.	Dennis Fire Department
159.	Dennis Harbormaster
160.	Dennis Harbormaster
161.	Dennis Police Department (Cape Cod Regional Law Enforcement Council)
162.	Department of Conservation and Recreation
163.	Department of Environmental Management
164.	Department of Homeland Security (D
165.	Department of Homeland Security
166.	Department of Homeland Security - US Customs and Border Protection
167.	DHS
168.	DHS Office of Intelligence and Analysis
169.	DHS- TSA
170.	DHS- TSA
171.	Dog Gone Sailing Charters
172.	Dolphin Fleet of Provincetown
173.	Dolphin Fleet of Provincetown
174.	DONG Energy Wind Power
175.	Dukes County Emergency Management
176.	East Bay Newspapers
177.	East Bay Newspapers
178.	East Bay Newspapers
179.	East Bay Newspapers
180.	East Greenwich - Harbor Master
181.	East Greenwich - Police Department
182.	East Greenwich Yacht Club
183.	East Passage Yachting Center
184.	East Providence - Fire Department - Marine Unit

185.	East Providence - Harbor Master
186.	East Providence - Harbor Master
187.	East Providence - Harbor Master
188.	East Providence - Harbor Master
189.	East Providence - Harbor Master
190.	East Providence - Police Department
191.	Eastham - Department of Natural Resources
192.	Eastham - Fire Department
193.	Eastham - Natural Resources Officer
194.	Edgartown - Fire Department
195.	Edgartown - Police Department
196.	Edgartown Police Dept
197.	Edgartown Yacht Club
198.	Edgartown Yacht Club
199.	ENDEAVOR
200.	Enterprise Terminals and Storage, LLC (EPCO, Inc.)
201.	Enterprise Terminals and Storage, LLC (EPCO, Inc.)
202.	EPA Region 1
203.	Esco Terminal
204.	ExxonMobil
205.	ExxonMobil
206.	Fairhaven - Harbor Master
207.	Fairhaven - Police Department (SEMLEC)
208.	Fairhaven Police
209.	Fairhaven Police Department
210.	Fairhaven Police Dept
211.	Fairhaven Shellfish Dept./Harbormaster
212.	Fairhaven Shipyard & Marina, Inc.
213.	Fall River - Emergency Management (LEPC)
214.	Fall River - Harbor Master
215.	Fall River - Harbor Master
216.	Fall River - Police Department
217.	Fall River Harbor Master
218.	Fall River Herald News
219.	Fall River Line Pier, Inc.
220.	Fall River Police Department
221.	Fall River Police department
222.	Fall River Police Dept

223.	Fall River Police Dept
224.	Falmouth - Harbor Master
225.	Falmouth - Harbor Master
226.	Falmouth Fire Rescue Department
227.	Falmouth Fire Rescue Department (LEPC)
228.	Falmouth Marine
229.	Federal Air Marshall Service
230.	Federal Air Marshall Service
231.	Federal Bureau of Investigation
232.	Fiddler's Cove Marina (Brewer)
233.	FISHTALES
234.	FLYER Catamaran
235.	Flyer's Boat Rentals
236.	Fortier Boats
237.	Frances Fleet
238.	Frank Corp. Environmental Services
239.	Frogmen Divers, Inc.
240.	G.W. Connors, Inc
241.	Gannon and Benjamin Marine Railway
242.	Gansett Cruises
243.	General Dynamics - Electric Boat
244.	General Dynamics - Electric Boat
245.	Genon Canal LLC
246.	Genon Canal LLC
247.	Ginny G Cape Cod Fishing Charters
248.	Global Companies LLC
249.	Global Petroleum - Sandwich
250.	Goat Island Marina
251.	Golden Eagle Deep Sea Fishing
252.	Great Harbor Yacht Club
253.	Great Lakes Dredge & Drydock Co.
254.	Great Lakes Dredge and Dock Company
255.	Green Pond Tackle and Marina
256.	Greenwich Bay Marina (Brewer)
257.	Harbor Fuel Oil Corporation
258.	Harbor Launch Nantucket
259.	Harbormaster Jamestown
260.	Harborside Inn

261.	Harwich - Fire Department
262.	Harwich - Fire Department
263.	Harwich - Harbor Master
264.	Harwich - Harbor Master
265.	Harwich - Police Department
266.	Harwich Port Boat Yard, Inc.
267.	Hayward Industries, Inc
268.	HEL-CAT II
269.	Helen H Deep Sea Fishing
270.	Hexagon Metrology Inc
271.	High Tides Charter & Guide Service
272.	Holcim US (St. Lawrence Cement Co.)
273.	Holland & Knight LLP
274.	Hooked Up Charters
275.	Hospital Association of Rhode Island
276.	Hudson Terminal Corp. / Northeast Petroleum Terminal (NEPT) North & South
277.	Hudson Terminal Corp. / Northeast Petroleum Terminal (NEPT) North & South
278.	Hunt Marine Towing & Transport
279.	Hyannis - Fire Department
280.	Hyannis Marina
281.	Hyannis Marina
282.	Hyannis Pirate Adventures
283.	Hyannis Yacht Club
284.	Hy-Line Cruises - Hyannis Harbor Tours, Inc.
285.	Hy-Line Cruises - Hyannis Harbor Tours, Inc.
286.	Hy-Line Cruises - Hyannis Harbor Tours, Inc.
287.	Ida Lewis Yacht Club
288.	Ida Lewis Yacht Club
289.	Inchcape Shipping Services
290.	Inland Fuel Terminals
291.	Inspire Environmental
292.	International Longshoremen's Association Local 2001
293.	Interstate Navigation Company - "The Block Island Ferry"
294.	Interstate Navigation Company - "The Block Island Ferry"
295.	Interstate Navigation Company - "The Block Island Ferry" - Security
296.	Interstate Navigation Company - "The Block Island Ferry"
297.	Island Commuter Corp.
298.	Island Commuter Corp.

299.	J & J Fishing Corporation - DBA: Hyannis WHALE WATCHER
300.	J Class Management, Inc.
301.	J.P. Noonan
302.	Jamestown - Fire Department
303.	Jamestown - Fire Department
304.	Jamestown - Harbor Master
305.	Jamestown - Police Department
306.	Jamestown Boat Yard
307.	Jamestown Press
308.	Johnson & Wales University - Safety & Security
309.	Johnson & Wales University - Safety & Security
310.	Johnson and Wales University
311.	JUST DO IT TOO
312.	Kamelot Marine Services - LNG
313.	Kelly J Sportfishing Charters
314.	Kelly's Marine, Inc.
315.	Kingman Yacht Center
316.	Lawrence Lynch Corp.
317.	Lehigh Northeast Cement
318.	Lincoln - Lime Rock Fire District
319.	Little Compton - Fire Department
320.	Little Compton - Harbor Master
321.	Little Compton - Police Department
322.	LMS Ship Management
323.	Machaca Charters
324.	MAKO II
325.	Marine Safety Consultants
326.	Marine Safety Consultants
327.	Marine Safety Consultants, Inc
328.	Marine Safety Consultants, Inc
329.	Marine Safety Consultants. INC
330.	Maritime Consultants
331.	Maritime International Inc.
332.	Maritime International Inc.
333.	Mashpee - Harbormaster
334.	Mashpee - Police Department
335.	Mashpee Wampanoag Tribe
336.	Mashpee Wampanoag Tribe

337.	Mass Department of Environmental Protection
338.	Mass Department of Environmental Protection - Emergency Response - SERO
339.	Mass Department of Environmental Protection - SERO
340.	Mass Division of Fisheries and Wildlife
341.	Mass Division of Marine Fisheries
342.	Mass Division of Marine Fisheries
343.	Mass Emergency Management Agency
344.	Mass Emergency Management Agency
345.	Mass Emergency Management Agency
346.	Mass Marine Trade Association
347.	Mass Maritime Academy
348.	Mass Maritime Academy
349.	Mass Maritime Academy
350.	Mass Maritime Academy - T/S KENNEDY
351.	Mass Maritime Academy - T/S KENNEDY
352.	Mass Office of Coastal Zone Management
353.	Mass Office of Coastal Zone Management
354.	Mass Office of Coastal Zone Management / Buzzards Bay Basin
355.	Mass Office of Coastal Zone Management / Regional Coordinator
356.	Mass State Police - Marine Unit
357.	Massachusetts Air National Guard
358.	Massachusetts Clean Energy Center
359.	Massachusetts Environmental Police
360.	Massachusetts Environmental Police
361.	Massachusetts Environmental Police
362.	Massachusetts Environmental Police
363.	Massachusetts Governor's Seaport Advisory Council
364.	Massachusetts Maritime Academy
365.	Massachusetts Maritime Academy
366.	Massachusetts Maritime Academy
367.	Massachusetts Office of Environmental Law Engorcement
368.	Massachusetts State Police
369.	Massachusetts State Police
370.	MAT Marine - Hallam Marine Construction, Inc.
371.	Mattapoisett - Fire Department
372.	Mattapoisett - Harbor Master
373.	Mattapoisett - Police Department - Mass Chiefs of Police Association
374.	Mattapoisett Boatyard, Inc.

375.	Mattapoisett Harbormaster
376.	Maverick Charters Ltd.
377.	McAllister Towing
378.	Metals Recycling
379.	Middletown - Fire Department
380.	Middletown - Harbor Master
381.	Middletown - Police Department
382.	Middletown - Police Department - Boat Patrol
383.	Middletown - Town Administrator
384.	Millway Marina
385.	Millway Marina
386.	Molchan Marine Services
387.	Monomoy Island Ferry
388.	Moran Environmental Recovery LLC
389.	Moran Environmental Recovery LLC
390.	Moran Shipping
391.	Moran Shipping Agencies
392.	Moran Shipping Agencies, Inc.
393.	Moran Shipping Agencies, Inc.
394.	Moran Shipping Agencies, Inc.
395.	Moran Shipping Agencies, Inc.
396.	Moran Towing Corp
397.	Moran Towing of New York, New Jersey
398.	Motiva Enterprises LLC
399.	MRW Marine Services
400.	MSP-Critical Infrastructure Program
401.	Nantucket - Fire Department
402.	Nantucket - Harbor Master
403.	Nantucket - Harbor Master - MA Harbormasters Association
404.	Nantucket - Harbor Master - MA Harbormasters Association
405.	Nantucket - Police Department
406.	Nantucket - Police Department
407.	Nantucket Adventures
408.	Nantucket Boat Basin
409.	Nantucket Fire Dept
410.	Nantucket Fire Dept
411.	Nantucket Moorings
412.	Nantucket Yacht Club

413.	Nantucket Yacht Club
414.	Narragansett - Harbormaster - Bonnet Shores
415.	Narragansett Bay Commission
416.	Narragansett Fire Department
417.	Narragansett Fire Department
418.	Narragansett Indian Tribe
419.	National Grid
420.	National Response Corporation
421.	National Response Corporation
422.	Nauset Marine, Inc.
423.	Naushon Ferries
424.	Neat Lady Fishing, LLC
425.	Network Technical Solutions, Inc
426.	New Bedford - Emergency Management Department
427.	New Bedford - Emergency Management Department
428.	New Bedford - Police Department - Port Security Unit
429.	New Bedford - Police Department - Port Security Unit
430.	New Bedford Fire Department
431.	New Bedford Fire Department
432.	New Bedford Fire Dept
433.	New Bedford Harbor Development Committee
434.	New Bedford Marine Rescue - TowBoat US
435.	New Bedford Police
436.	New Bedford Police
437.	New Bedford Police Department
438.	New Bedford Police Port Security Unit
439.	New Bedford Port Authority
440.	New Bedford Port Authority
441.	New Bedford Port Authority
442.	New Bedford Seafood Consulting
443.	New Bedford Standard Times
444.	New Bedford State Pier
445.	New Bedford State Pier - Mass DCR
446.	New Bedford Yacht Club
447.	New England Fast Ferry Company / Bay State Cruise Company
448.	New England Stevedore Service Corp.
449.	New Seabury Marina
450.	New Shoreham - Harbor Master

451.	New Shoreham - Police Department
452.	New York Yacht Club
453.	New York Yacht Club
454.	Newport - Fire Department
455.	Newport - Harbor Master (Perotti Park)
456.	Newport - Police Department
457.	Newport Cruise Company
458.	Newport Daily News
459.	Newport Police Department
460.	Newport Shipyard
461.	Newport Yacht Club
462.	Newport Yachting Center Marina
463.	Newport Yachting Center Marina
464.	Nice Day Too Fishing Charters
465.	Niemiec Marine
466.	NOAA Northeast Marine Support Facility
467.	NOAA Northeast Marine Support Facility
468.	NOAA Office of Coast Survey
469.	NOAA Ship OKEANOS EXPLORER
470.	North Kingstown - Fire Department
471.	North Kingstown - Fire Department
472.	North Kingstown - Fire Department
473.	North Kingstown - Harbor Master (North Kingstown Town Wharf)
474.	North Kingstown - Harbor Master (North Kingstown Town Wharf)
475.	North Kingstown - Police Department
476.	North Kingstown - Police Department.
477.	North Kingstown - Police Department.
478.	North Kingstown Fire Department
479.	North Kingstown Fire department
480.	North Shore Charters
481.	Northeast Marine Pilot
482.	Northeast Marine Pilots
483.	Northeast Marine Pilots
484.	Northeast Marine Pilots
485.	Northeast Marine Pilots
486.	Northeast Marine Pilots Inc.
487.	Northeast Marine Pilots Inc.
488.	Northeast Marine Pilots Inc.

489.	Northeast Marine Pilots Inc.
490.	Northeast Marine Pilots Inc.
491.	Northeast Regional Ocean Council
492.	Northern Pelagic Group, LLC
493.	Northside Marina at Sesuit Harbor
494.	Norton's Shipyard and Marina Inc.
495.	Norwegian Cruise Lines - (Agents)
496.	NRG - Somerset Power LLC
497.	Oak Bluffs - Harbor Master - Oak Bluffs Marina
498.	Oak Bluffs - Police Department
499.	Oak Bluffs - Police Department
500.	Oak Bluffs - Police Department (OB Harbor Terminal)
501.	Oak Bluffs - Police Department (OB Harbor Terminal)
502.	Office of Congressman Jim Langevin
503.	Office of US Senator Sheldon Whitehouse
504.	Offshore Wind Development Coalition
505.	Oil Heat Institute
506.	Oldport Marine Services, Inc.
507.	Olmsted Marine Service
508.	Orleans - Fire Department
509.	Orleans - Harbormaster
510.	Orleans - Police Department
511.	OS Security Associates Inc
512.	Oyster Harbors Marine, Inc.
513.	Oyster River Boat Yard
514.	P. K. O'Connell Marina
515.	Parker's Boatyard, Inc.
516.	Patriot Party Boats, Inc
517.	Pawtucket - Fire Department
518.	Pawtucket - Police Department
519.	Pawtuxet Cove Marina
520.	Peck's Boats Inc.
521.	Pettis Boat Yard and Yacht Sales
522.	Pier Oil Co. - TB 450, TB 451
523.	Pirate Adventures Orleans
524.	Plymouth - Fire Department
525.	Plymouth - Fire Department
526.	Plymouth County Sheriff's Department

527.	Plymouth Fire Department
528.	Pope's Island Marina
529.	Portsmouth - Police Department - Harbor Master
530.	Portsmouth - Police Department - Harbor Master
531.	Portsmouth Fire Department
532.	Portuguese Princess Excursions
533.	Providence - Emergency Management Agency
534.	Providence - Police Department
535.	Providence - Police Department - Marine Patrol
536.	Providence - Police Department - Marine Patrol
537.	Providence - Police Department - Marine Patrol
538.	Providence Emergency Management
539.	Providence Emergency Management Agency
540.	Providence Fire Department
541.	Providence Fire Department
542.	Providence Fire Marine 1
543.	Providence Journal
544.	Providence Piers
545.	Providence River Boat Co.
546.	Providence Steamboat - McAllister Towing of Narragansett Bay
547.	Provincetown - Fire Department
548.	Provincetown - Harbor Master (MacMillan Pier)
549.	Provincetown - Harbor Master (MacMillan Pier)
550.	Provincetown - Police Department
551.	ProvPort Inc. - Waterson Terminal Services, LLC
552.	Prudence Island Ferry
553.	Quonset Development Corporation
554.	Quonset Development Corporation
555.	R.M. Packer Co., Inc.
556.	R.M. Packer Co., Inc. - Tisbury Towing
557.	Ram Point Marina, Inc.
558.	Ram Point Marina, Inc.
559.	Reinauer / Windserve Marine
560.	Reinauer Transportation Company
561.	Reinhauer Transportation
562.	Rescue Captain BIRS
563.	Rhode Island National Guard
564.	Rhode Island Cruise Co. - (Water Street Docks)

565.	Rhode Island Mooring Services, Inc.
566.	Rhode Island Mooring Services, Inc.
567.	Rhode Island National Guard
568.	Rhode Island Office of Energy Resources
569.	Rhode Island State Police
570.	Rhode Island State Police / RI Fusion Center
571.	Rhode Island Yacht Club
572.	RI Army National Guard
573.	RI Army National Guard
574.	RI Civil Air Patrol - USAF Auxiliary
575.	RI Coastal Resources Management Council
576.	RI Coastal Resources Management Council
577.	RI Coastal Resources Management Council
578.	RI Coastal Resources Management Council
579.	RI Coastal Resources Management Council
580.	RI Committee for Occupational Safety and Health
581.	RI DEM - Boating and Commercial Licensing Office
582.	RI DEM - Director's Office
583.	RI DEM - Division Of Coastal Resources (Galilee State Pier #3)
584.	RI DEM - Emergency Response
585.	RI DEM - Emergency Response
586.	RI DEM - Emergency Response
587.	RI DEM - Emergency Response
588.	RI DEM - Emergency Response
589.	RI DEM - Law Enforcement
590.	RI DEM - Law Enforcement
591.	RI DEM - Law Enforcement
592.	RI DEM - Water Resources
593.	RI DEM - Water Resources
594.	RI Emergency Management Agency
595.	RI Emergency Management Agency
596.	RI Emergency Management Agency
597.	RI Emergency Management Agency
598.	RI Lobstermen's Association, Inc.
599.	RI State Police
600.	RI State Police
601.	RI State Senator's Staff
602.	RI State Yachting Committee

603.	RIBI Security
604.	Ryan Marine, Inc.
605.	Ryder's Cove Boat Yard
606.	Safe Sea RI
607.	Safe/Sea
608.	Safe/Sea - TowBoat US Narragansett Bay
609.	Safe/Sea Marine Rescue
610.	Sail Martha's Vineyard
611.	Sail Newport
612.	Sail Newport
613.	Sail Newport
614.	Sail Newport
615.	Sandwich - Fire Department
616.	Sandwich - Natural Resources Officer
617.	Sandwich - Police Department
618.	Sandwich Harbor Master
619.	Sandwich Harbor Master
620.	Save the Bay
621.	Save the Bay
622.	Save the Bay
623.	Save The Bay
624.	Save the Bay
625.	Save The Bay - Narragansett Bay
626.	Save The Bay - Narragansett Bay
627.	Save The Bay Inc. - MV ALLETTA MORRIS
628.	Sea Education Association
629.	Sea Education Association
630.	Sea Fuels Marine Services - CO-OP NO. 4
631.	Sea Hawk Charters
632.	Sea Risk Solutions, LLC
633.	Sea Tow
634.	Sea Tow Cape & Islands / Sea Tow Rhode Island
635.	Sea Tow Cape & Islands / Sea Tow Rhode Island
636.	Sea Tow Cape and Islands
637.	Sea Tow Cape and Islands
638.	Sea Tow Rhode Island
639.	Sea Tow South Shore
640.	Sea-3 Providence LLC

641.	Seaboats Inc.
642.	Seaboats Inc.
643.	Seacope Yacht Charters - Gleam Charters, Inc.
644.	Seacope Yacht Charters - Northern Light Charters. Inc.
645.	Seafreeze, Ltd.
646.	Securitas USA
647.	Seven B's V Deep Sea Fishing
648.	Shell Oil Products US
649.	Shell Trading (US) Company (Motiva)
650.	Ship Shops Inc.
651.	Shoreline Diving Services
652.	Sightsailing, Inc.
653.	Sightsailing, Inc.
654.	Simms
655.	Skippy's Pier I Marina
656.	Snappa Fishing & Diving Charter
657.	Snug Harbor Marina
658.	Somerset - Fire Department
659.	Somerset - Police Department
660.	Somerset Fire Department
661.	Sortie Charters
662.	South Kingstown - Fire Department - Union
663.	South Kingstown - Harbor Master
664.	South Kingstown - Police Department
665.	South Kingstown Harbormaster
666.	South Kingstown Harbormaster
667.	Southern Rhode Island Newspapers
668.	Sprague Energy
669.	Sprague Energy Corp.
670.	Sprague Operating Resources LLC
671.	St. Georges School
672.	Standish Boat Yard
673.	Steamship Authority
674.	Steamship Authority
675.	Steamship Authority
676.	Steamship Authority
677.	Steamship Authority
678.	Steamship Authority Board of Governors

679.	Stonebridge Marina - Atlantic Boats
680.	Striper Marina
681.	SUE-Z
682.	Sun Tan Yacht Charters
683.	Tabor Academy
684.	Tabor Academy
685.	TAKE IT E-Z
686.	Tall Ships RI
687.	The Black Dog Tall Ships - a.k.a. The Coastwise Packet Company
688.	The Inquirer and Mirror
689.	The Nature Conservancy
690.	The Response Group
691.	The Sunken Ship - Diving and Salvage
692.	Three Flags Holding Company
693.	Three Flags Holding Company, LLC
694.	Tisbury - Fire Department
695.	Tisbury Towing and Transportation
696.	Tiverton - Harbor Master
697.	Tomahawk Charters
698.	Town of Barrington
699.	Town of Chatham
700.	Town of Dennis
701.	Town of Mashpee
702.	Town of Mattapoisett
703.	Town of Mattapoisett
704.	Town of Nantucket
705.	Town of Tisbury, MA
706.	Tripps Boatyard & Marina - F. L. Tripp & Sons, Inc.
707.	Truro - Fire Department
708.	Truro - Harbormaster
709.	Tucker-Roy Marine Towing & Salvage
710.	Tucker-Roy Marine Towing & Salvage
711.	U.S. Army Corps of Engineers (CCC)
712.	U.S. Army Corps of Engineers (CCC)
713.	U.S. Army Corps of Engineers (CCC)
714.	U.S. Army Corps of Engineers (CCC)
715.	U.S. Army Corps of Engineers (CCC)
716.	U.S. Customs and Border Protection

717.	U.S. Customs and Border Protection
718.	U.S. Customs and Border Protection
719.	U.S. Department of Commerce - NOAA - Office of Coast Survey
720.	U.S. Department of Commerce - NOAA - Office of Coast Survey
721.	U.S. Department of Commerce - NOAA - Office of Coast Survey
722.	U.S. Department of Commerce - NOAA - Office of Coast Survey
723.	U.S. Department of Commerce - NOAA - Stellwagen Bank National Marine Sanctuary
724.	U.S. Department of Commerce - NOAA Fisheries Service - Office of Law Enforcement
725.	U.S. Department of Commerce - NOAA Fisheries Service - Ship Strike Reduction
726.	U.S. Department of Commerce - NOAA Fisheries Service - Ship Strike Reduction
727.	U.S. Department of Homeland Security - Customs & Border Protection - Boston
728.	U.S. Department of Homeland Security - Customs & Border Protection - Boston
729.	U.S. Department of Homeland Security - Customs & Border Protection - New Bedford
730.	U.S. Department of Homeland Security - Customs & Border Protection - New Bedford
731.	U.S. Department of Homeland Security - Customs & Border Protection - Providence
732.	U.S. Department of Homeland Security - Customs & Border Protection - Providence
733.	U.S. Department of Homeland Security - FEMA Region 1-Rhode Island
734.	U.S. Department of Homeland Security - Transportation Security Administration - Providence
735.	U.S. Department of Interior - National Park Service - Cape Cod National Seashore
736.	U.S. Environmental Protection Agency - Region I
737.	U.S. Navy - Naval Station Newport - Fire Department//Emergency Management Coordinator
738.	U.S. Rep James Lanqevin
739.	U.S. Senator Jack Reed's Office
740.	U.S. Senator Sheldon Whitehouse
741.	United States Coast Guard
742.	United States Coast Guard
743.	United States Coast Guard Auxiliary
744.	United States Coast Guard Auxiliary
745.	United States Coast Guard Maritime Safety and Security Team (MSST)
746.	United States Coast Guard Maritime Safety and Security Team (MSST)
747.	United States Naval Station Newport
748.	Univar
749.	Univar Usa
750.	Univar USA
751.	Univar USA
752.	Univar USA
753.	University of Rhode Island School of Oceanography
754.	URI College of the Environment and Life Sciences

755.	URI Graduate School of Oceanography - Coastal Resource Center
756.	URI Graduate School of Oceanography - Coastal Resource Center
757.	URI Graduate School of Oceanography - R/V ENDEAVOR
758.	URI Graduate School of Oceanography - R/V ENDEAVOR
759.	US Army Corps of Engineers
760.	US Army Corps of Engineers Cape Cod Canal
761.	US Coast Guard Auxiliary
762.	US Coast Guard Auxiliary
763.	US Coast Guard Investigation Service
764.	US Coast Guard Sector Southeastern New England
765.	US Coast Guard Sector Southeastern New England
766.	US Coast Guard Station Castle Hill
767.	US Customs and Border Protection
768.	US Customs and Border Protection Agency
769.	US Department of Homeland Security
770.	US Naval Station Newport
771.	US Navy Region Atlantic
772.	US Navy Underwater Weapons Center
773.	US Wind Power
774.	USCG Auxiliary
775.	USCG Auxiliary
776.	USCG Auxiliary - D1NR
777.	USCG Auxiliary - D1NR
778.	USCG Auxiliary - D1NR
779.	USCG Auxiliary - D1NR
780.	USCG Auxiliary - Division 10 - Flotilla 7
781.	USCG Auxiliary - Division 10 (Central Mass)
782.	USCG Auxiliary - Division 11 - Flotilla 1 (Chatham)
783.	USCG Auxiliary - Division 11 - Flotilla 2 (Woods Hole)
784.	USCG Auxiliary - Division 11 - Flotilla 3 (Lewis Bay, Barnstable)
785.	USCG Auxiliary - Division 11 - Flotilla 6 (Nauset)
786.	USCG Auxiliary - Division 11 - Flotilla 7 (Nantucket)
787.	USCG Auxiliary - Division 11 - Flotilla 8 (Oyster Harbor, Sandwich)
788.	USCG Auxiliary - Division 11 (Cape & Islands)
789.	USCG Auxiliary - Division 11 (Cape & Islands)
790.	USCG Auxiliary - Division 11 (Cape & Islands)
791.	USCG Auxiliary - Division 11 (Cape & Islands)
792.	USCG Auxiliary - Division 6 - Flotilla 3 (Onset)

793.	USCG Auxiliary - Division 6 - Flotilla 5 (New Bedford)
794.	USCG Auxiliary - Division 6 - Flotilla 5 (New Bedford)
795.	USCG Auxiliary - Division 6 - Flotilla 5 (New Bedford)
796.	USCG Auxiliary - Division 7 - Flotilla 2 (East Providence)
797.	USCG Auxiliary - Division 7 - Flotilla 6 (Warwick)
798.	USCG Auxiliary - Division 7 - Flotilla 7 (Wickford)
799.	USCG Auxiliary - Division 7 - Flotilla 8 (Providence)
800.	USCG Auxiliary - Division 7 (Narragansett West Bay)
801.	USCG Auxiliary - Division 8 - Flotilla 3 (Bristol)
802.	USCG Auxiliary - Division 8 - Flotilla 4 (Somerset)
803.	USCG Auxiliary - Division 8 (Narragansett East Bay)
804.	USCG Auxiliary - Division 8 (Narragansett East Bay) - AWMC
805.	USCG Civil Engineering Unit Providence
806.	USCG D1 (dpi)
807.	USCG D1 (dpi)
808.	USCG D1 (dpw)
809.	USCG D1 (dpw) - P-ATON
810.	USCG D1 (dpw-1)
811.	USCG D1 (dpw-3)
812.	USCG D1 (drmp)
813.	USCG D1 (drmp)
814.	USCG MSD Cape Cod
815.	USCG MSST Cape Cod
816.	USCG Sector Southeastern New England
817.	USCG Sector Southeastern New England
818.	USCG Sector Southeastern New England
819.	USCG Sector Southeastern New England
820.	USCG Sector Southeastern New England
821.	USCG Sector Southeastern New England
822.	USCG Sector Southeastern New England
823.	USCG Sector Southeastern New England
824.	USCG Sector Southeastern New England
825.	USCG STA Castle Hill
826.	USS Vessel Management LLC
827.	Viking Fleet Ferry (Montauk, NY to BI & MV)
828.	Vineyard Fast Ferry
829.	Vineyard Fast Ferry
830.	Vineyard Gazette

831.	Vineyard Haven Marina
832.	Vineyard Porthole / Dockside Marina
833.	Vineyard Sound Charters, Inc.
834.	Vineyard Wind
835.	Wampanoag Tribe of Gay Head - Cultural Resource Protection
836.	Wampanoag Tribe of Gay Head - Natural Resource Dept.
837.	Wampanoag Tribe of Gay Head (Aquinnah)
838.	Wampanoag Tribe of Gay Head(Aquinnah) THPO dept
839.	Waquoit Bay National Estuarine Research Reserve
840.	Wareham - Asst Harbor Master
841.	Wareham - Emergency Management
842.	Wareham - Fire Department
843.	Wareham - Harbor Master
844.	Wareham - Harbor Master
845.	Wareham - Police Department
846.	Wareham Boat Yard & Marina
847.	Warren - Fire Department
848.	Warren - Harbor Master
849.	Warren - Police Department
850.	Warrior Fuel Corp. - MORGAN NO. 6
851.	Warwick - Fire Department
852.	Warwick - Harbor Master
853.	Warwick - Harbor Master (RI Harbormaster's Association)
854.	Warwick - Police Department
855.	Warwick Fire Dept. Marine/Dive Ops
856.	Warwick Police Department
857.	Warwick Police Department
858.	Watch Hill Boat Yard
859.	Watch Hill Yact Club
860.	Wauwinet Inn, LLC
861.	Wellfleet - Fire Department
862.	Wellfleet - Harbormaster
863.	Wellfleet - Harbormaster
864.	Wellfleet - Police Department
865.	Wequassett Inn
866.	West Dennis Yacht Club
867.	West Tisbury - Fire Department
868.	West Tisbury - Police Department

869.	West Warwick - Fire Department - Chief
870.	Westerly - Civil Defense
871.	Westerly - Watch Hill Fire Department
872.	Westerly - Westerly Fire Department
873.	Westport - Fire Department
874.	Westport - Harbormaster
875.	Westport - Police Department
876.	Westport Fisherman's Association
877.	Wickford Cove Marina (Brewer)
878.	Wickford Marina
879.	Woods Hole Group
880.	Woods Hole Marine
881.	Woods Hole Oceanographic Institution
882.	Woods Hole Oceanographic Institution
883.	Woods Hole Oceanographic Institution
884.	Woods Hole Oceanographic Institution
885.	Woods Hole Oceanographic Institution
886.	Woods Hole Oceanographic Institution
887.	YANKEE Deep Sea Fishing
888.	Yarmouth - DNR & Harbormaster Department
889.	Yarmouth - DNR & Harbormaster Department
890.	Yarmouth - Police Department

APPENDIX E

Synopsis of Comments

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A. COMMENTS:

30 comments were submitted to regulations.gov in response to our Federal Register Notice published on March 26, 2019 (84 FR 11314). and other outreach efforts.

1. Two comments were duplicates (i.e., the same comment by the same author submitted twice, presumably by mistake.)

2. Two comments simply endorsed the view(s) contained in other comments within the docket.

3. One comment endorsed offshore wind farms and renewable energy in general, but offered no views with respects to access routes within the MARIPARS study area.

4. One comment was essentially a revision of an earlier comment, and the author requested that we disregard the first.

5. One comment requested that we consider vessel speeds in our evaluation of potential access routes, as cavitation and noise therefrom may adversely impact right whales.

6. One comment recommended a 9-mile wide "towing vessel navigation fairway" to accommodate potential (but admittedly rare) tug/barge traffic that may have a need to transit through the MA/RI WEA.

7. One comment recommended the USCG follow the "Guidance on Maritime Security Transit Corridor" published by the Combined Maritime Forces. This guidance was designed to provide for maritime security in the Gulf of Aden and Somali Basin.

8. One comment requested we consider the safe transit requirements of the NOAA vessel R/V BIGELOW, and consider research vessels as a separate class when determining navigation safety corridors.

9. One comment recommended that the USCG adopt the "precautionary principle" in determining navigation safety corridors. (Essentially the "precautionary principle" states that when the risks of a particular activity are unclear or unknown, assume the worst and avoid the activity.)

10. The remaining written comments generally advocated for one or more of the following positions:

    a. Navigation corridors must be a minimum width of 4 nautical miles (NM) to provide for navigation safety of transiting vessels. Generally, members or representative of the commercial fishing vessel community supported this position (though one fisher advocated for 3 NM-wide lanes).

    b. Navigation corridors are unnecessary, as there are sufficient mitigations that can reduce risks to navigation and there will be sufficient width between offshore wind towers for vessels to navigate safely. Or, vessels may navigate around the MA/RI WEA with minimal adverse impact. However, if there are to be navigation corridors, a maximum width of 2 NM is sufficient to provide for navigation safety. Generally, MA/RI WEA leaseholders (developers) or their representatives support this position.

    c. Some comments supported the MA FWG navigation safety corridor, while others supported the RODA model.

    d. Several comments expressed concern about the possibility of vessel traffic compression, or "funneling" into navigation safety corridors by vessels that would otherwise choose a different transit route, with greater separation, if wind farms in the MA/RI WEA were not present.

    e. Several comments expressed concerns about the USCG's ability to conduct effective search-and-rescue (SAR) operations within a wind farm.

    f. Several comment expressed concern about potential adverse impacts to vessel radar from WTGs.

    g. Some comments referenced a 2012 accident in a European wind farm where a transiting maintenance vessel hit a wind turbine generator (WTG) at speed.

    h. Some comments recommended adoption of the "20 degree" formula described in the United Kingdom's Maritime and USCG agency publication MGN-543, which supports a 5.5NM-wide navigation safety corridor.

    i. Several comments requested a similar PARS study for other wind energy areas along the Atlantic coast. Those requests have been forwarded to the appropriate office (CG-NAV) at USCG Headquarters.

j. RODA recommended its model's five specific navigation safety corridors:

   i. *Route 1: North-South transit through the western portion of the WEA.* Fishermen require a western N-S lane for vessels traveling through the WEA to fishing grounds near or at the dump and the canyons, such as for monkfish fishermen who are "on the clock" while transiting due to the fishery's days-at-sea management regime.

   ii. *Route 2: North-South transit to the East in the middle portion of the WEA* This transit corridor would allow fishermen and others from a number of ports to move north and south to and from multiple areas for fishing. In particular, it supports an active fishery that moves between squid and whiting grounds diurnally.

   iii. *Routes 3 and 4: East-West transit* Fishermen from Rhode Island, Connecticut and New York transit directly E-W across the WEA to get to Nantucket Shoals in the south. To the North, New York fishermen in particular move directly from port to the productive fishing grounds just south of Martha's Vineyard and north of the WEA. (Note that the "open' area between the two Ørsted lease areas was originally intended to preserve fishing near Cox Ledge. It is unclear how project proposals will affect the ability of vessels to fish in that area. If there is enough spacing between turbines to allow any fishing activity there, vessels may be transiting to and from those grounds. However, its designation as a transit corridor could then lead to conflict between transiting and fishing vessels.)

   iv. *Route 5: Transit from Northwest of the WEA to the Southeast ("the diagonal")* The "diagonal" route identified in each of the maps contained in the Notice of Study is another extremely important vessel transit route, particularly in foul weather when steaming through the shallower area to the Northeast of the lease areas poses greater navigational risk. It is commonly used for this purpose by larger vessels from New Bedford and other ports. Rhode Island, Connecticut, and New York fishermen must also transit from the ports located to the Northwest of the WEA (e.g., Pt Judith, Montauk), through the WEA in a direction generally aligned with its long axis, toward the South and East to very productive fishing grounds on the shelf edge. "

k. The Massachusetts Executive Office of Energy and Environmental Affairs and the City of New Bedford each provided a thorough history of the navigation safety corridor issue and each endorsed the MA FWG navigation safety corridor model

l. The City of New Bedford noted that "poorly placed" navigation safety corridors could disproportionately harm fisheries governed by days-at-sea rules.

m. One comment from the American Wind Energy Association (AWEA) opposed any navigation safety corridors. AWEA encouraged the USCG to conduct a "project specific" review of navigation safety impacts rather than a multi-project or regional approach. AWEA noted low volume of transiting vessel traffic in the MA/RI WEA and is opposed to "one size fits all" routing measures.

n. One comment ask the USCG to consider the following design criteria for navigation safety corridors:

    i. Select transit routes based on objective evidence (AIS data, VMS data, and input from consulted fishermen);

    ii. Select the shortest and most direct transit routes;

    iii. Select transit routes which minimize unnecessary transit through turbine fields;

    iv. Avoid creating unsafe traffic patterns such as congestion and collision risk; and

    v. Pursue safe navigation consistent with the Mariners Rules of the Road.

o. The Bureau of Ocean Energy Management (BOEM) requested that the USCG:

    i. Use AIS and VMS to determine historical vessel transit patterns.

    ii. Consider vessel traffic analyses already submitted through developer NSRAs (Navigation Safety Risk Assessments).

    iii. Consider "objective vessel needs" in determining navigation safety corridor widths.

    iv. Consider fishing vessel traffic practices internationally.

    v. Consider the offshore wind energy goals of MA, RI, CT, and NY, and the commercial viability of the seven areas already leased.

p. Several comments requested that the USCG review and consider certain articles, publications, policies, and studies.

B. PUBLIC MEETINGS:

1. In addition to written comments, the public was afforded opportunities to provide oral comments to the USCG at three public meetings:

    a. April 23, 2019, University of Rhode Island, Narragansett, RI

    b. April 25, 2019, Massachusetts Maritime Academy, Buzzards Bay, MA

    c. April 29, 2019, Inlet Seafood Restaurant, Montauk, NY

In total 64 people attended the public meetings and offered 17 comments. Written notes from the public meetings are included in the docket and incorporated into the summary of written comments. Generally oral comments were consistent with written comments, with concerns expressed about potential navigation safety corridor width, vessel congestion, SAR, and radar, along with potential crew proficiency and fatigue issues transiting through adjacent wind farms within the MA/RI WEA. Some supported the MA FWG model, others the RODA model. Some advocated for 5-to-6 nautical-mile wide lanes to provide sufficient "room for error".

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APPENDIX F

Vessel Transits Summary

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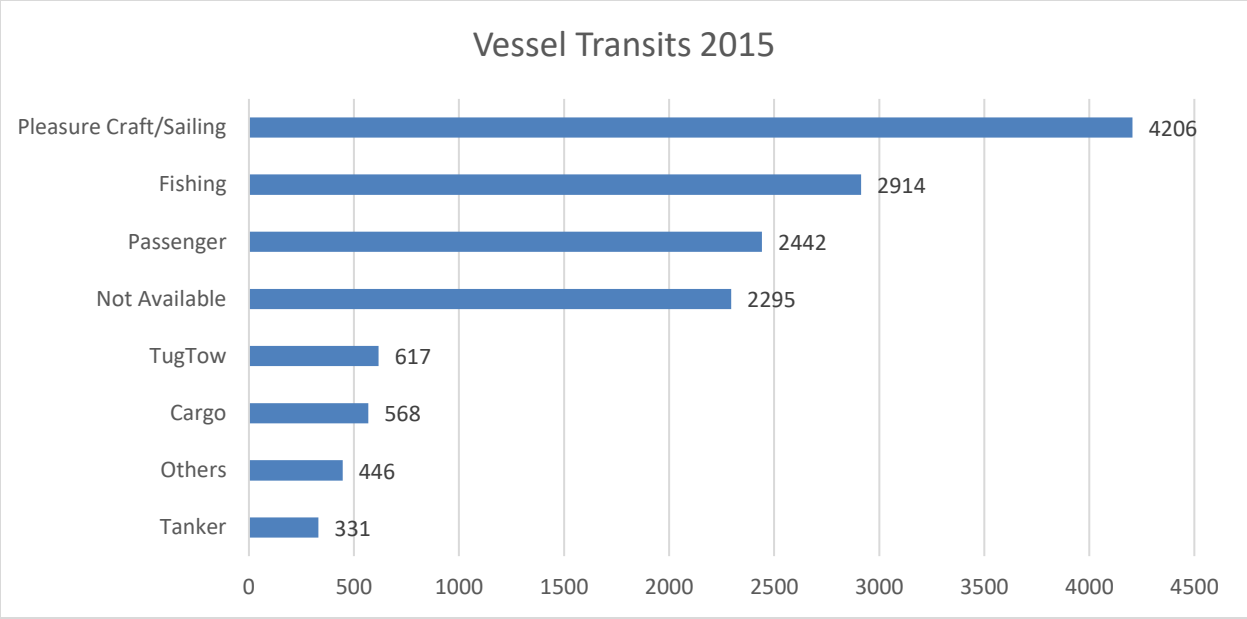
Time		Vessel type							Totals	
Year	Month	Cargo	Fishing	Others/ Not Available	Passenger	Pleasure Craft/Sailing	Tanker	Tug/Tow	Monthly	Yearly
2015	1	79	77	58	216	9	30	36	505	
2015	2	52	49	23	101	8	21	27	281	
2015	3	54	109	35	55	12	27	48	340	
2015	4	27	145	121	59	74	28	44	498	
2015	5	34	245	293	103	182	27	40	924	
2015	6	27	273	460	189	649	46	61	1705	
2015	7	30	325	625	242	1258	22	65	2567	
2015	8	23	421	491	203	1223	14	66	2441	
2015	9	34	414	269	302	613	30	38	1700	
2015	10	55	276	135	241	69	34	60	870	
2015	11	55	276	253	241	69	34	60	988	
2015	12	86	334	86	366	43	26	59	1000	
TOTAL		556	2944	2849	2318	4209	339	604		**13819**
2016	1	18	104	28	47	6	8	22	233	
2016	2	20	184	30	23	0	14	26	297	
2016	3	24	298	39	22	0	15	25	423	
2016	4	13	364	40	33	12	7	24	493	
2016	5	53	914	227	141	216	19	46	1616	
2016	6	26	1781	431	175	621	22	54	3110	
2016	7	36	2243	474	279	1450	27	75	4584	
2016	8	42	2287	492	247	1659	24	45	4796	
2016	9	37	2408	303	215	545	31	64	3603	
2016	10	54	1066	143	109	134	18	53	1577	
2016	11	64	809	101	76	40	35	89	1214	
2016	12	28	496	39	81	17	27	85	773	
TOTAL		415	12954	2347	1448	4700	247	608		**22719**
2017	1	48	544	38	79	2	42	89	842	
2017	2	32	740	108	0	151	22	87	1140	
2017	3	64	534	145	49	7	17	104	920	
2017	4	62	1241	219	180	46	27	57	1832	
2017	5	62	1188	278	231	208	25	62	2054	
2017	6	25	1365	496	203	668	30	34	2821	
2017	7	50	2165	1226	346	1780	21	52	5640	
2017	8	120	1652	1746	462	2206	40	56	6282	
2017	9	84	1351	387	499	508	43	45	2917	
2017	10	52	1352	293	326	239	12	66	2340	
2017	11	72	585	212	97	80	18	66	1130	
2017	12	32	512	189	169	13	31	75	1021	
TOTAL		703	13229	5337	2641	5908	328	793		**28939**

Time		Vessel type							Totals	
Year	Month	Cargo	Fishing	Others/ Not Available	Passenger	Pleasure Craft/Sailing	Tanker	Tug/Tow	Monthly	Yearly
2018	1	226	643	203	161	5	69	38	1345	
2018	2	151	604	300	146	19	62	28	1310	
2018	3	205	562	246	160	6	28	37	1244	
2018	4	110	1310	582	249	46	47	68	2412	
2018	5	82	2436	766	292	410	63	52	4101	
2018	6	32	3145	1009	381	1589	23	43	6222	
2018	7	82	4356	994	495	2749	33	58	8767	
2018	8	71	3713	898	462	3121	24	59	8348	
2018	9	55	2598	736	344	1012	36	31	4812	
2018	10	107	2334	666	287	249	48	60	3751	
2018	11	107	1398	488	194	159	43	34	2423	
2018	12	110	1275	564	186	41	36	34	2246	
TOTAL		1338	24374	7452	3357	9406	512	542		46981

Source: CG NAVCEN



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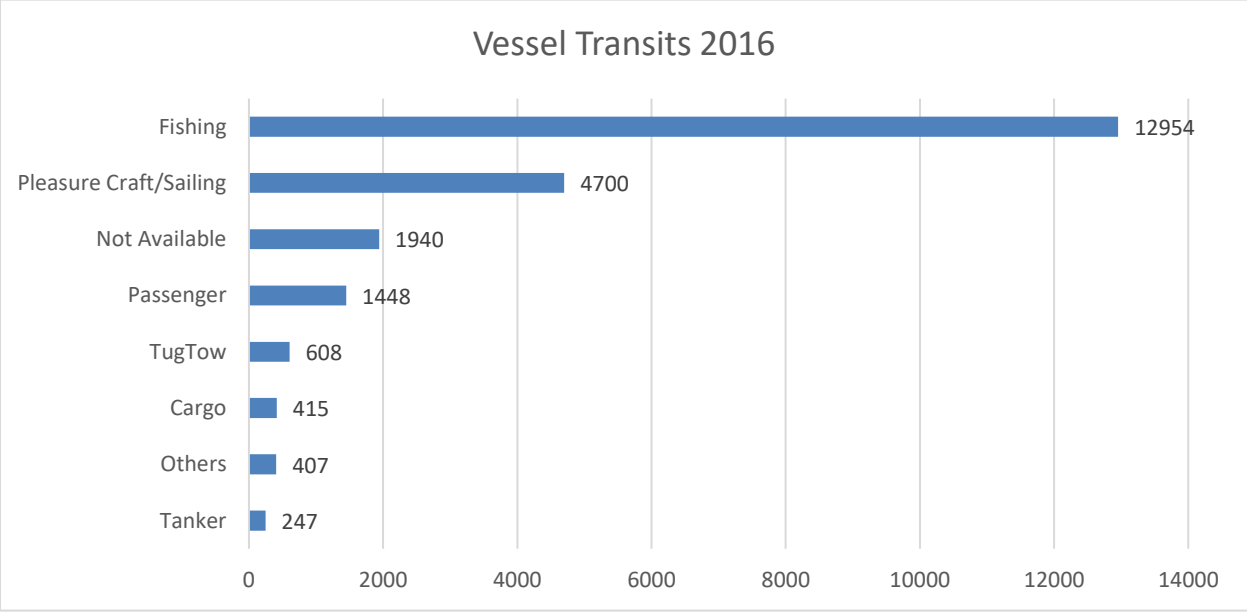

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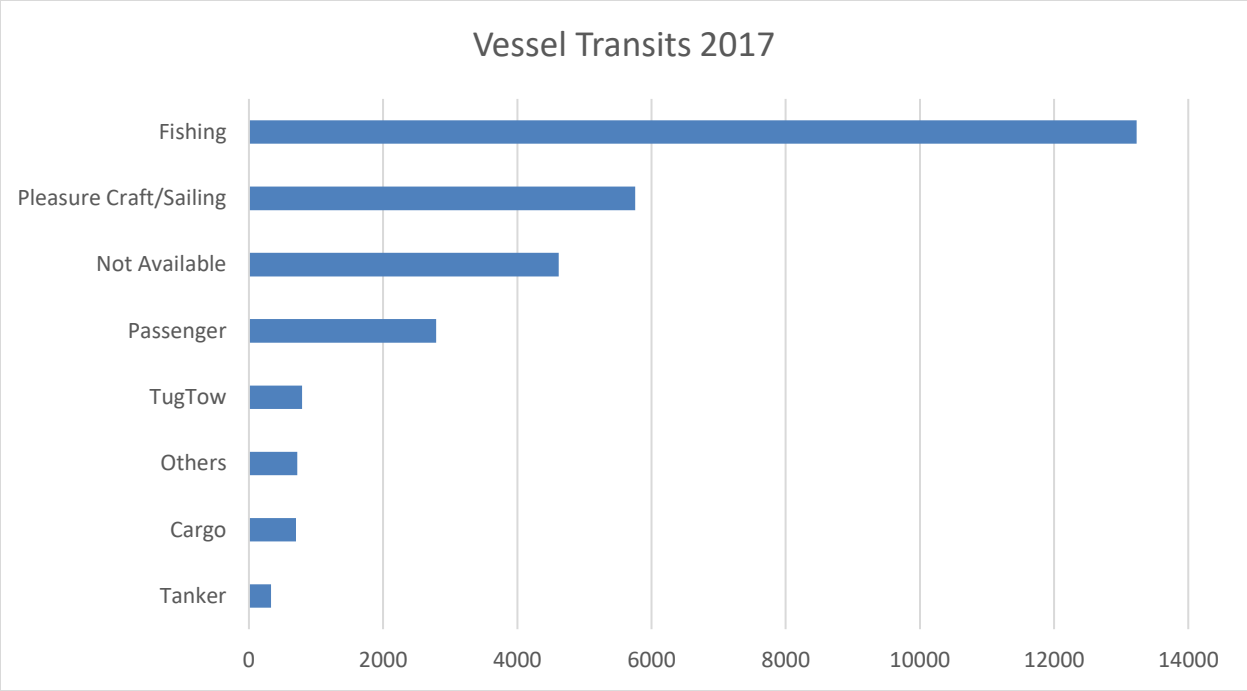

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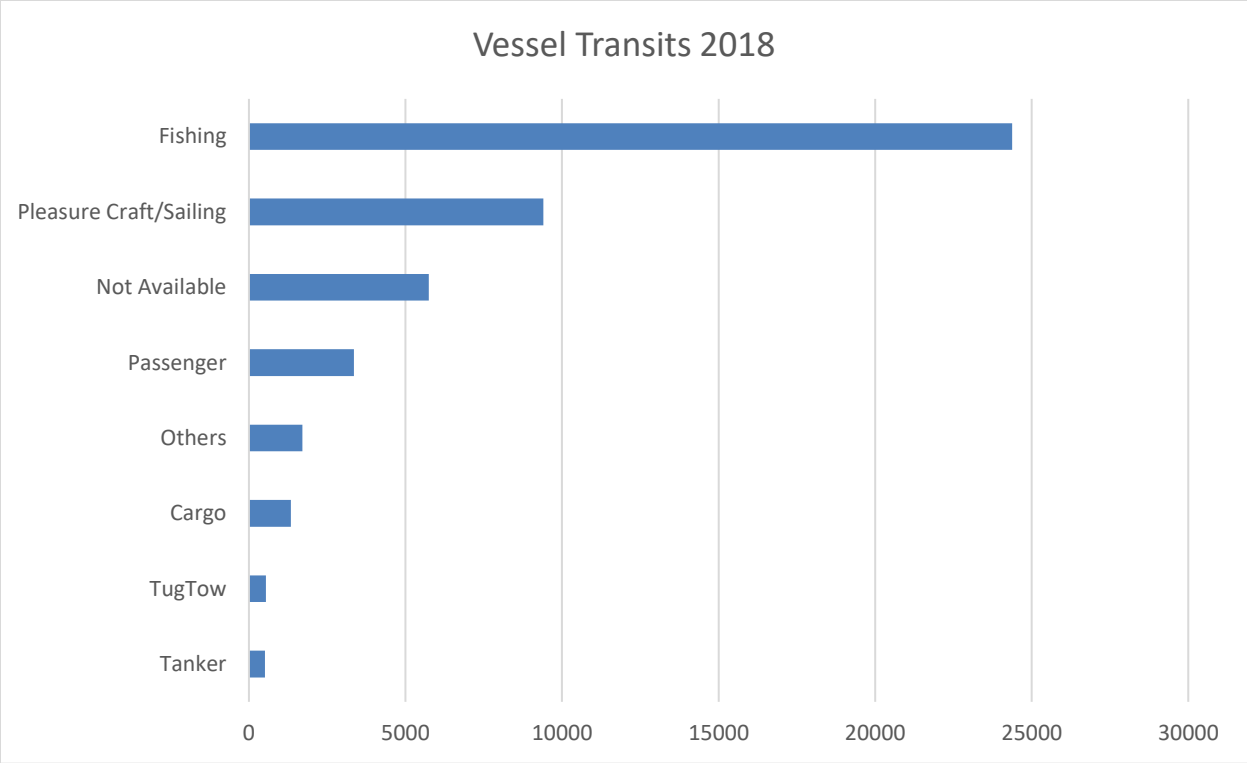

Source: CG NAVCEN

APPENDIX G

Vessel Trackline Data

NOTE: The data presented may not match by vessel type year to year, primarily due to the fact that starting on March 2, 2016, USCG promulgated a requirement that commercial vessels greater than 65 feet are required to be equipped with and use AIS. Every effort was made to ensure the consistency and validity of the data presented here.

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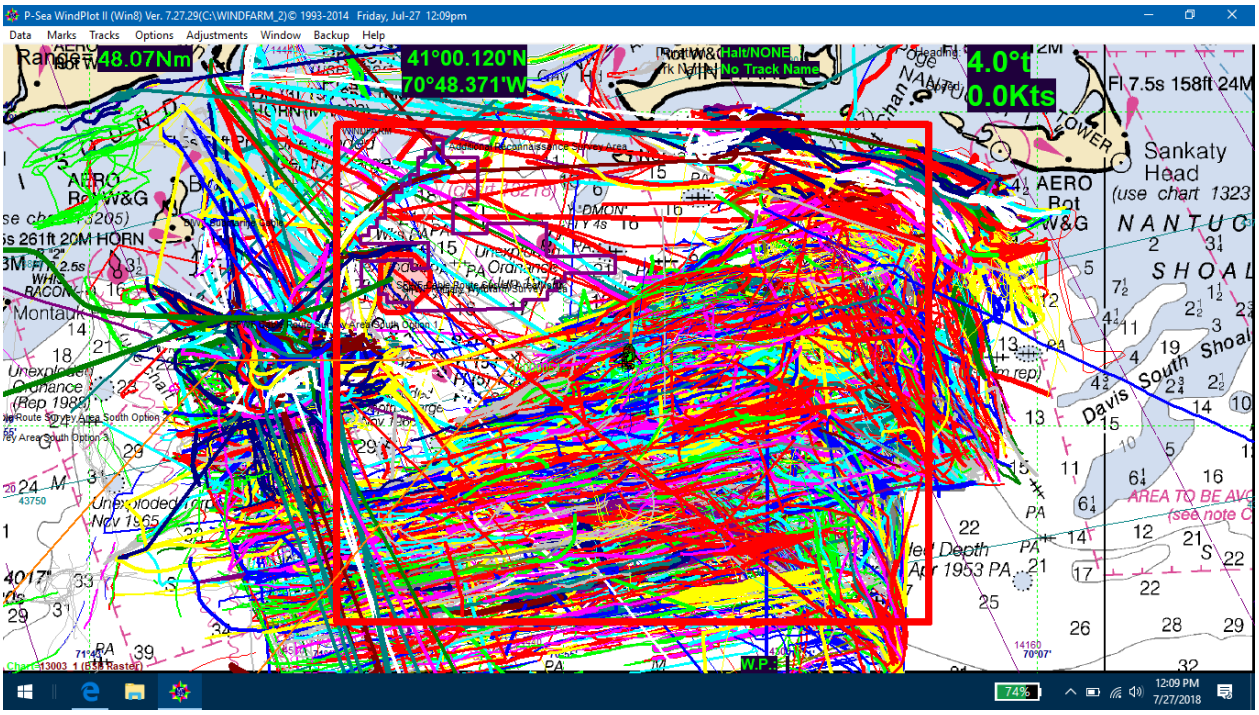
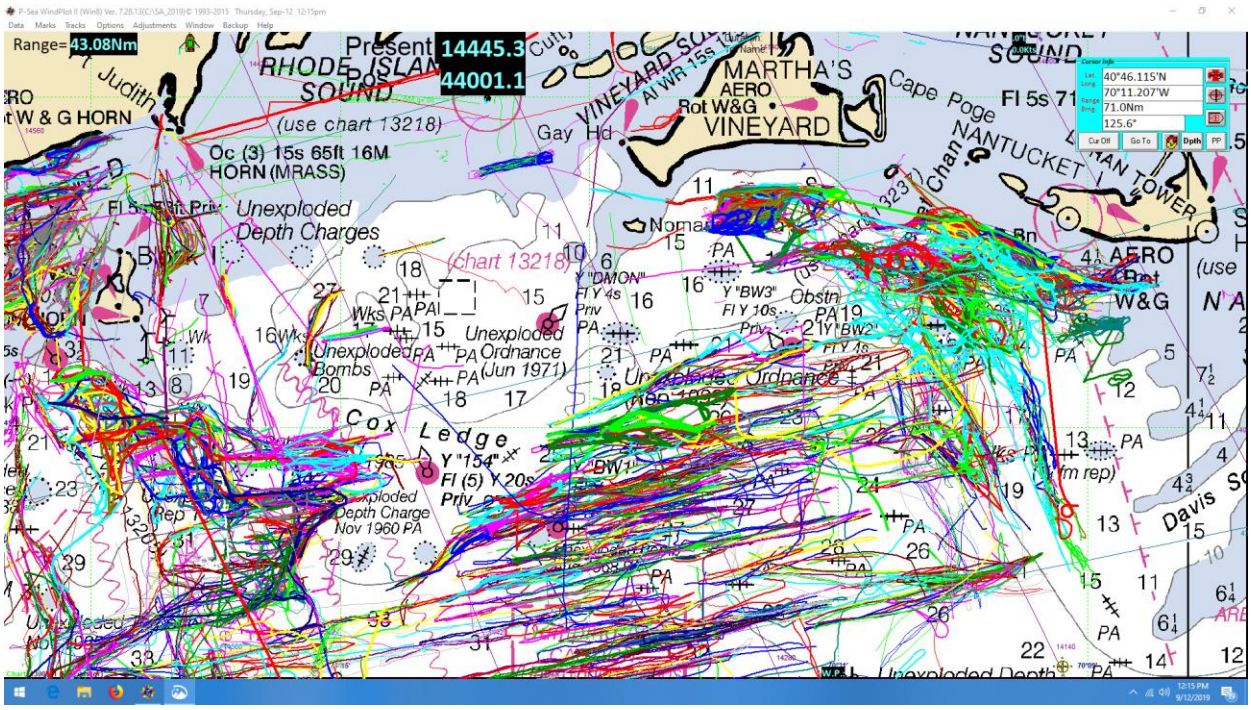
Multiple Commercial Fishing Vessel Trawling Track Plots



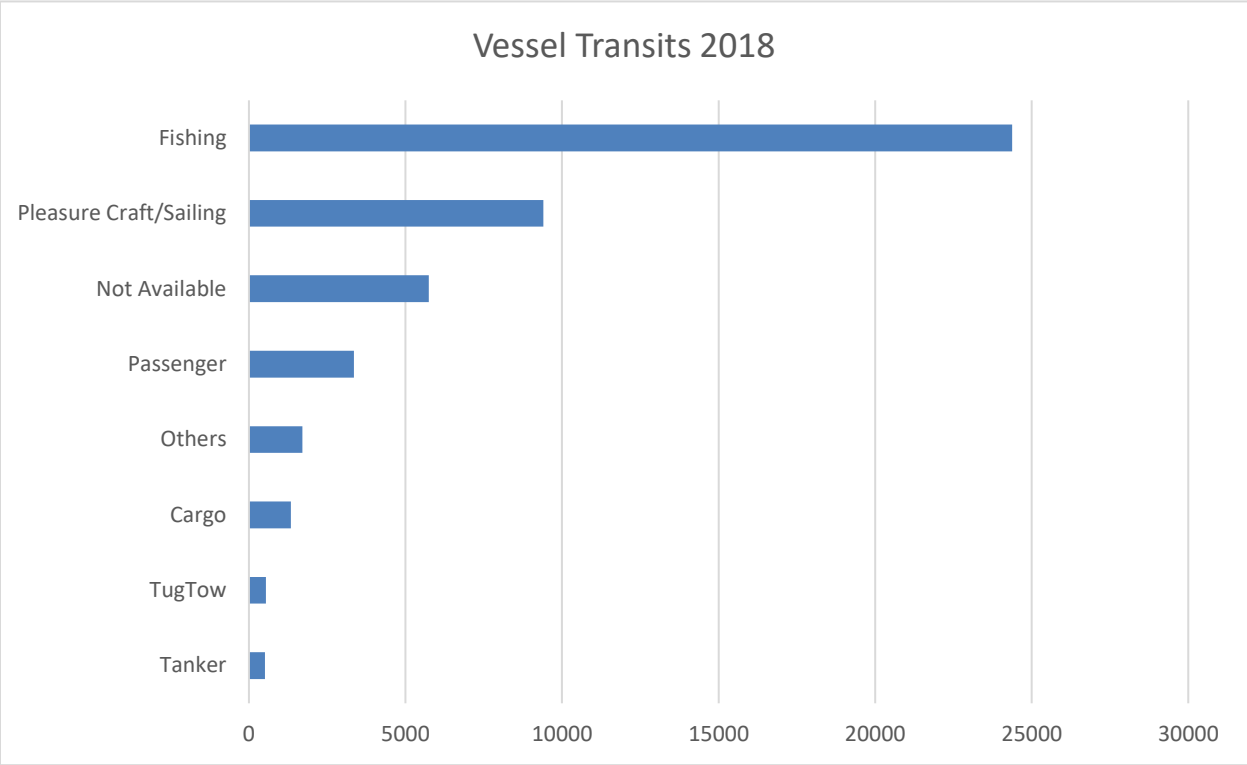
Source: Commercial Fishing Center of Rhode Island (1993-2014)

Single Commercial Fishing Vessel Trawling Track Plots



Source: Commercial Fishing Center of Rhode Island (1993-2015)

2018 Coast Guard NAVCEN Data

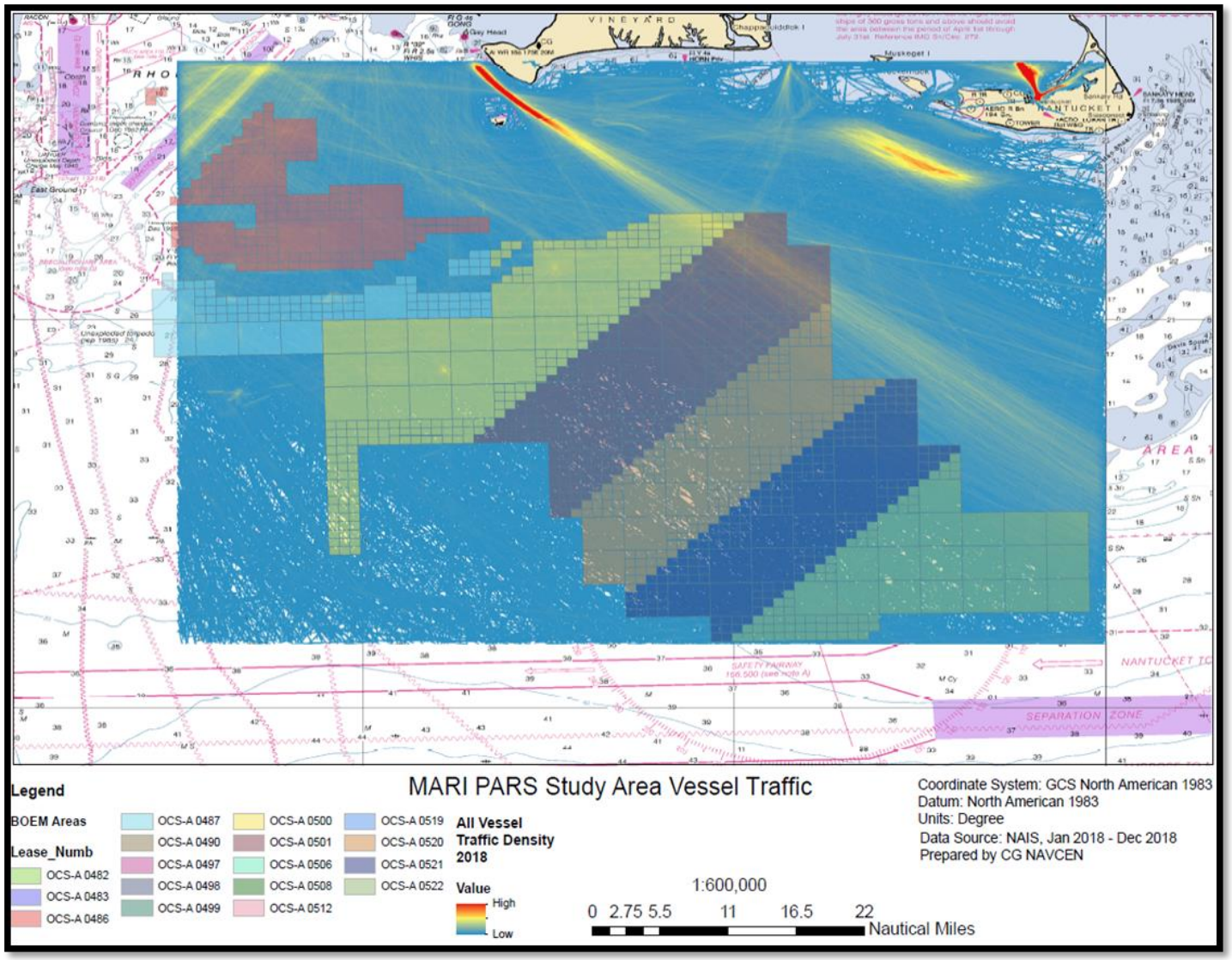


2018

Type	Count
Tanker	512
TugTow	542
Cargo	1338
Others	1705
Passenger	3357
Not Available	5747
Pleasure Craft/Sailing	9406
Fishing	24374
Total	**46981**

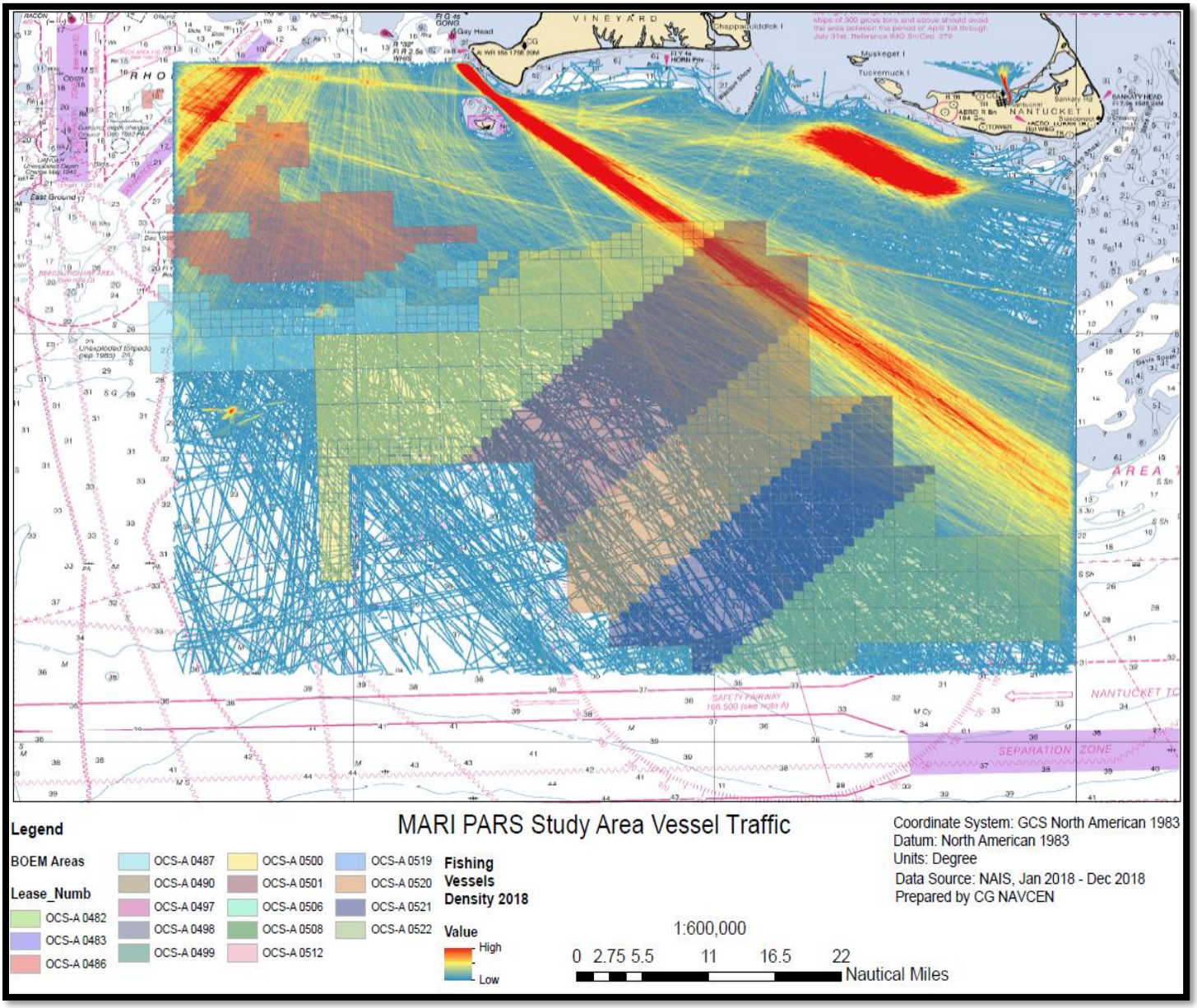
2018 Coast Guard NAVCEN Data

All Vessels



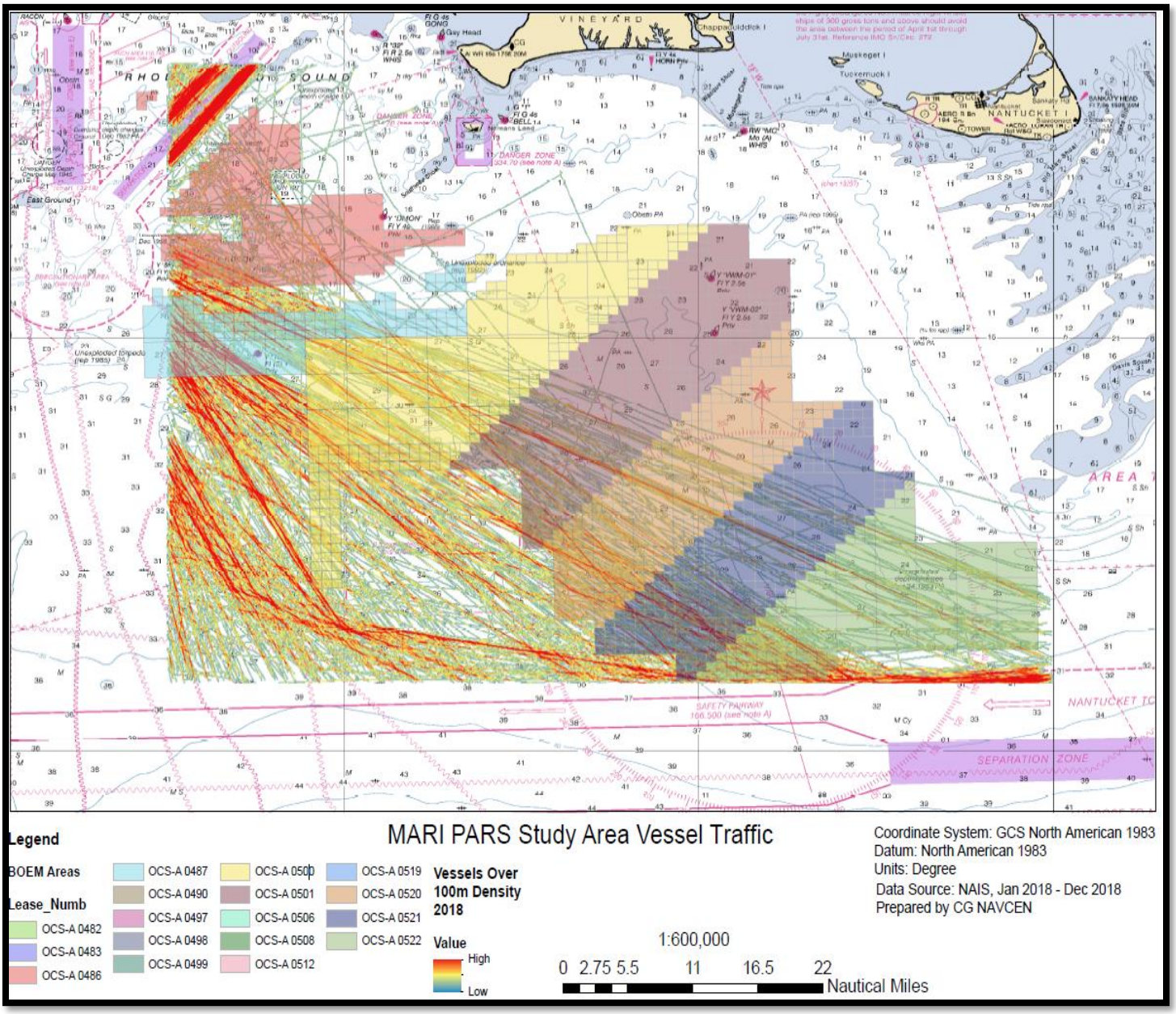
2018 Coast Guard NAVCEN Data

Fishing Vessels



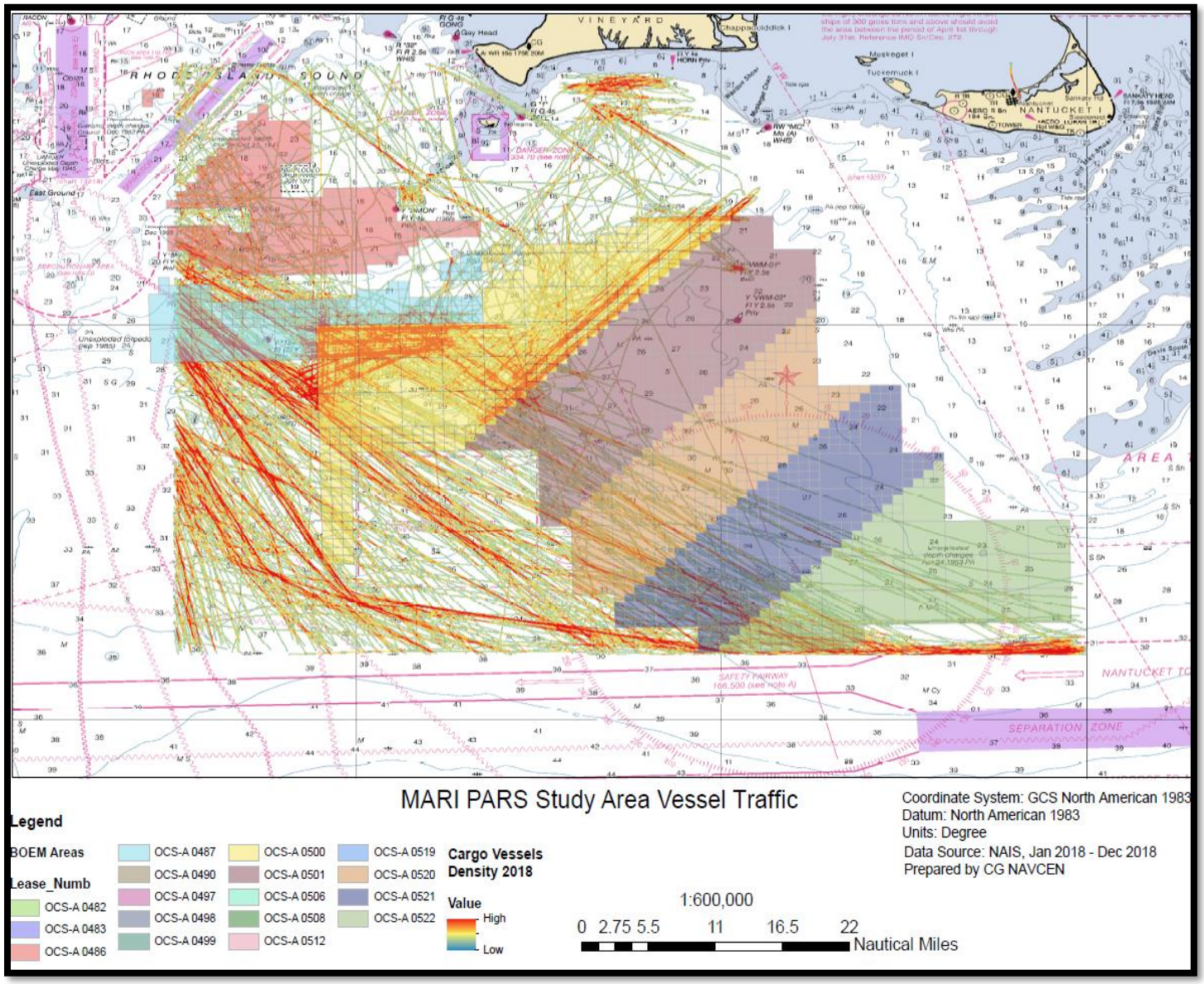
2018 Coast Guard NAVCEN Data

More Than 100 Meters



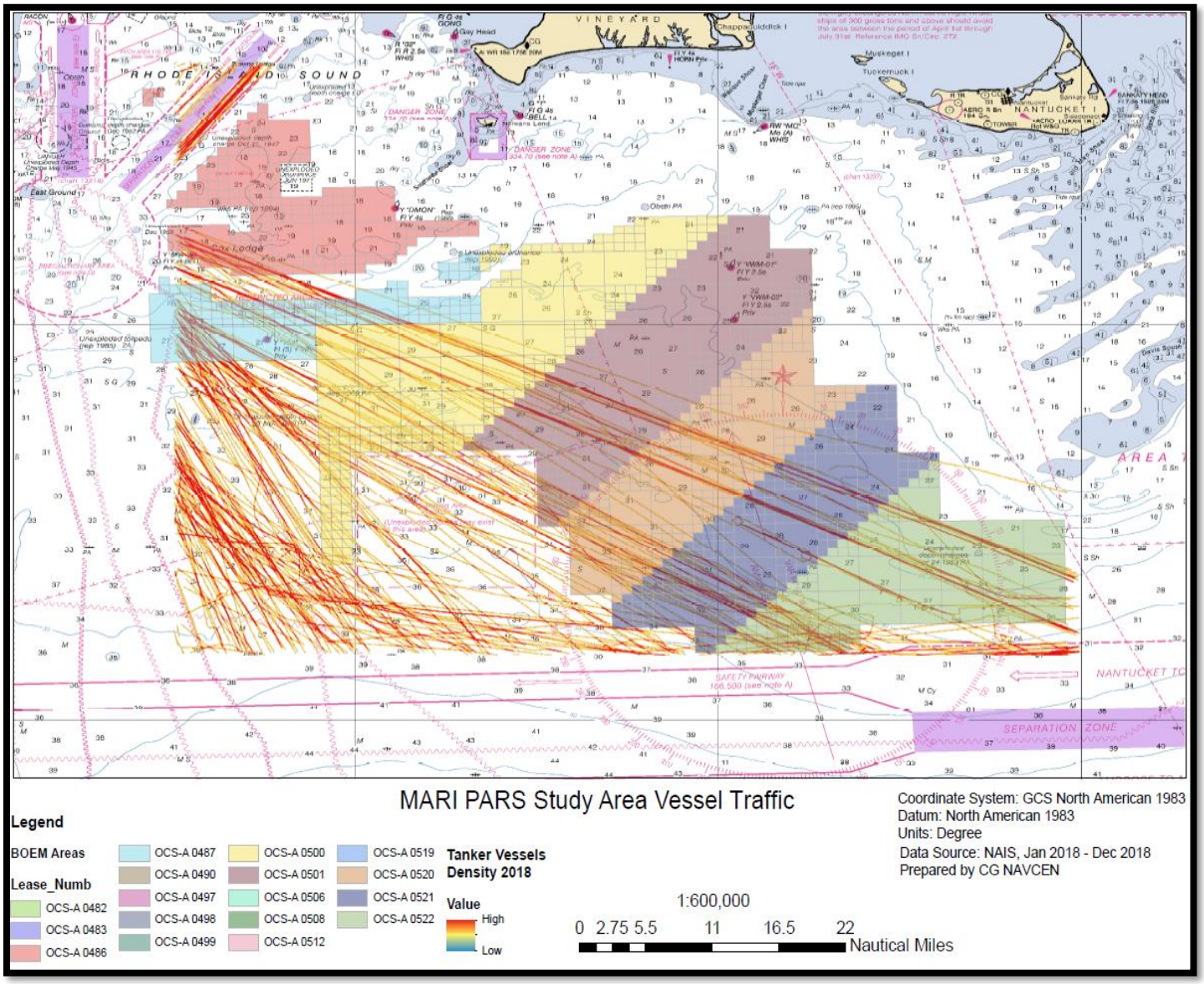
2018 Coast Guard NAVCEN Data

Cargo



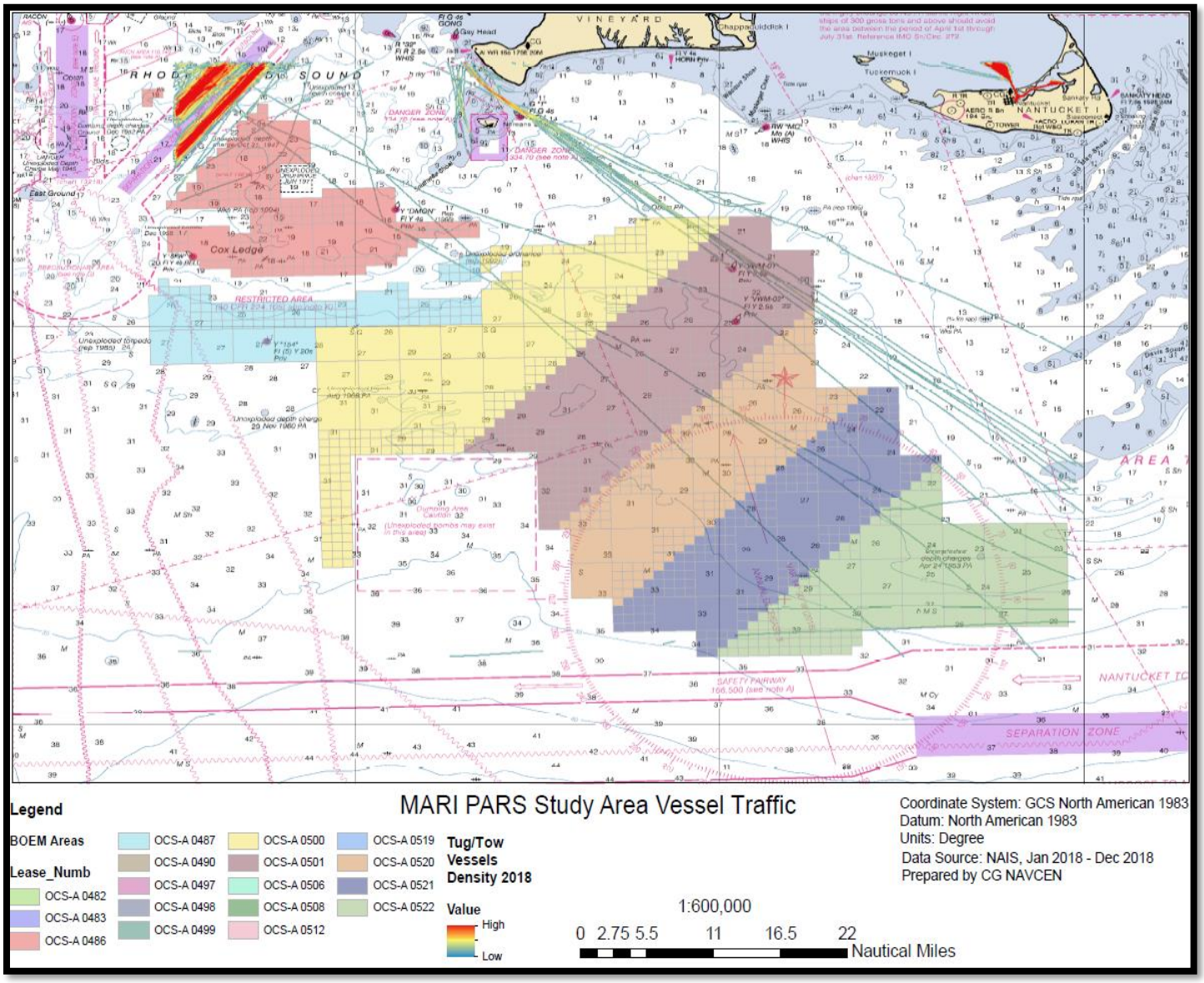
2018 Coast Guard NAVCEN Data

Tankers



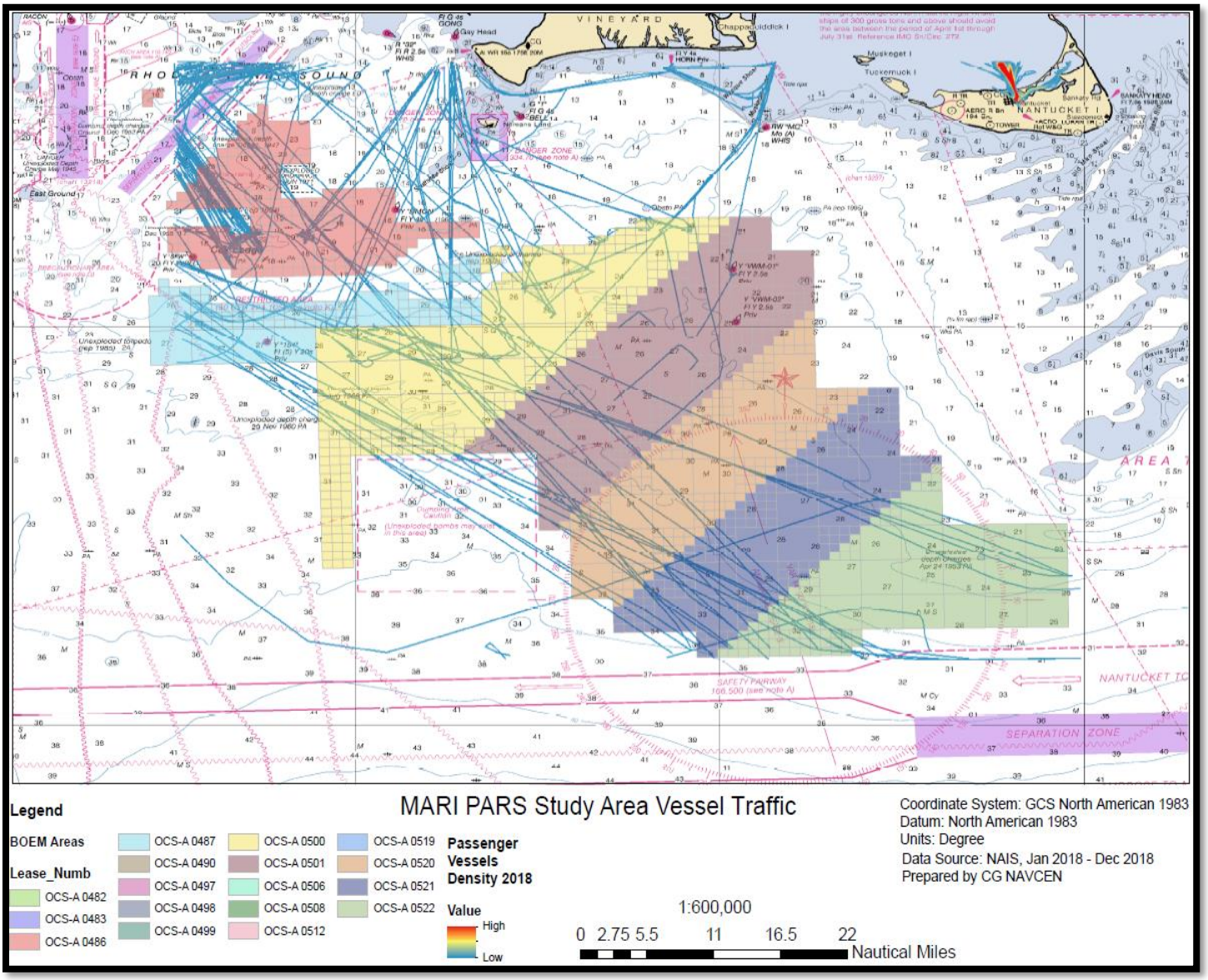
2018 Coast Guard NAVCEN Data

Tug/Tow



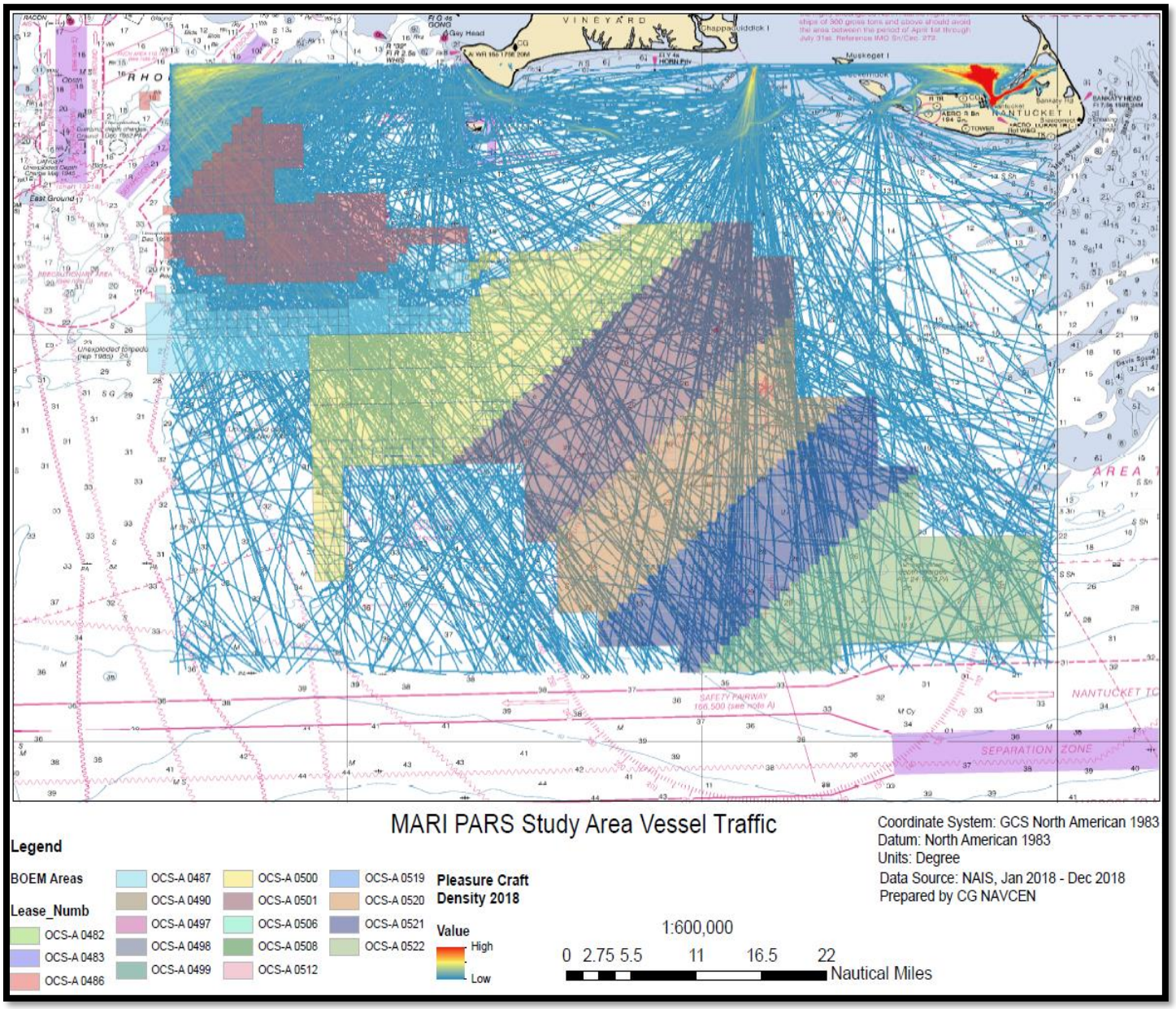
2018 Coast Guard NAVCEN Data

Passenger Vessels



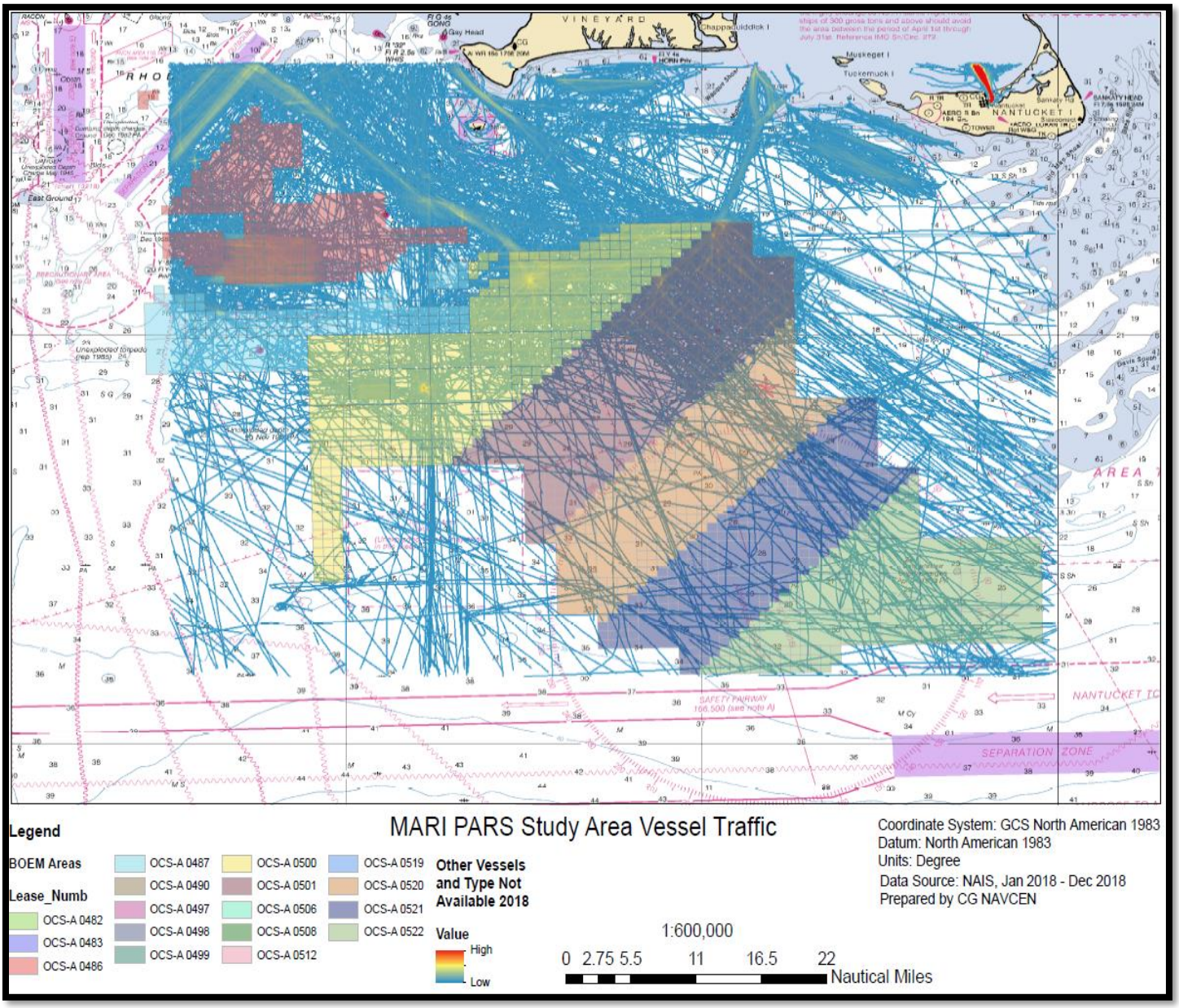
2018 Coast Guard NAVCEN Data

Pleasure Craft

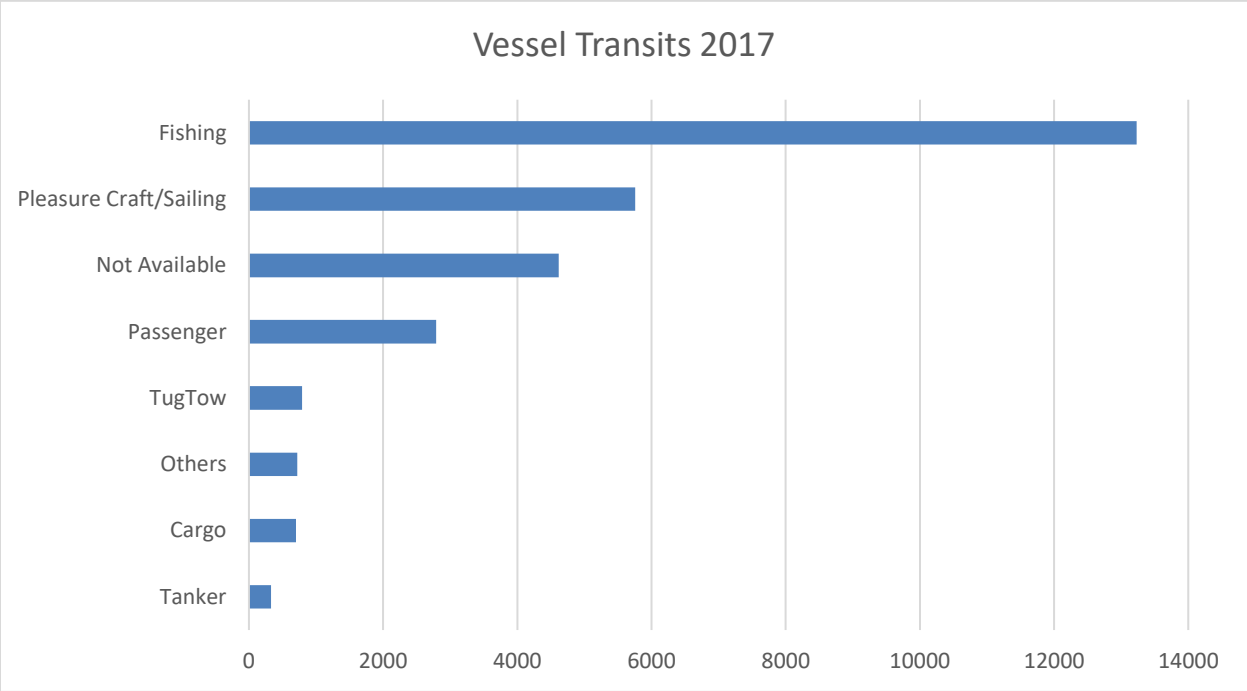


2018 Coast Guard NAVCEN Data

Other Vessels



2017 Coast Guard NAVCEN Data

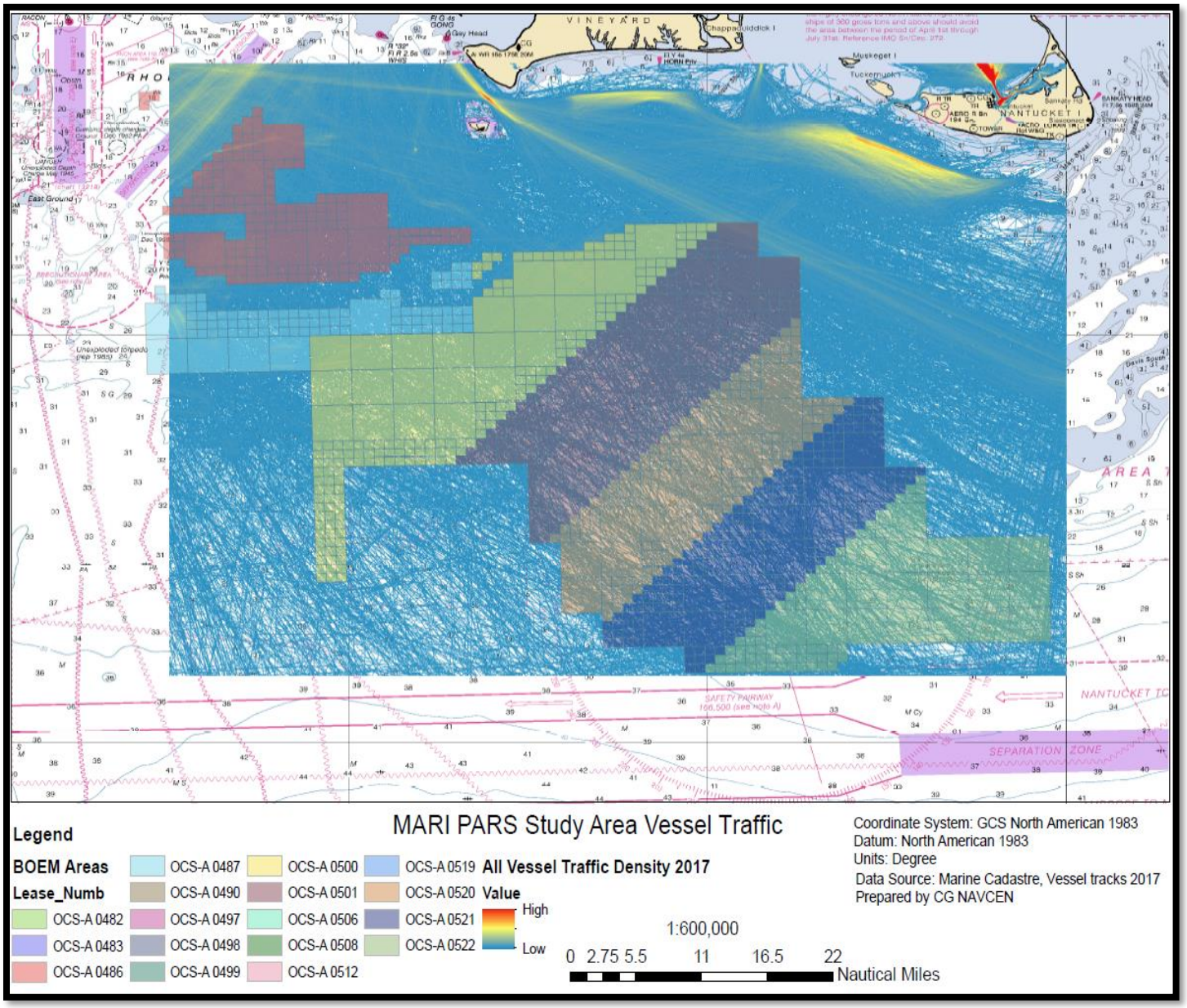


2017

Type	Count
Tanker	328
Cargo	703
Others	721
Tug/Tow	793
Passenger	2792
Not Available	4616
Pleasure Craft/Sailing	5757
Fishing	13229
Total	**28939**

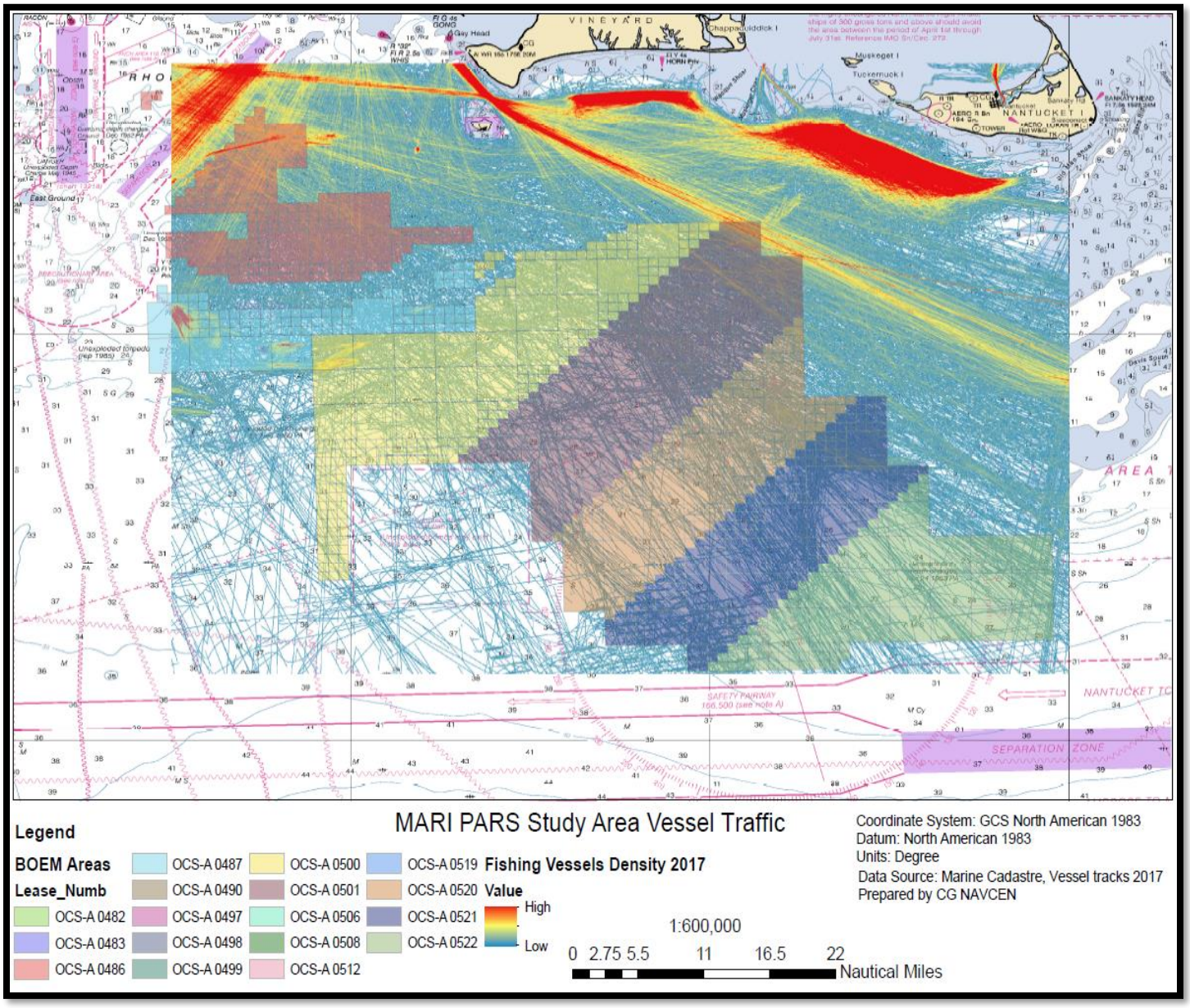
2017 Coast Guard NAVCEN Data

All Vessels



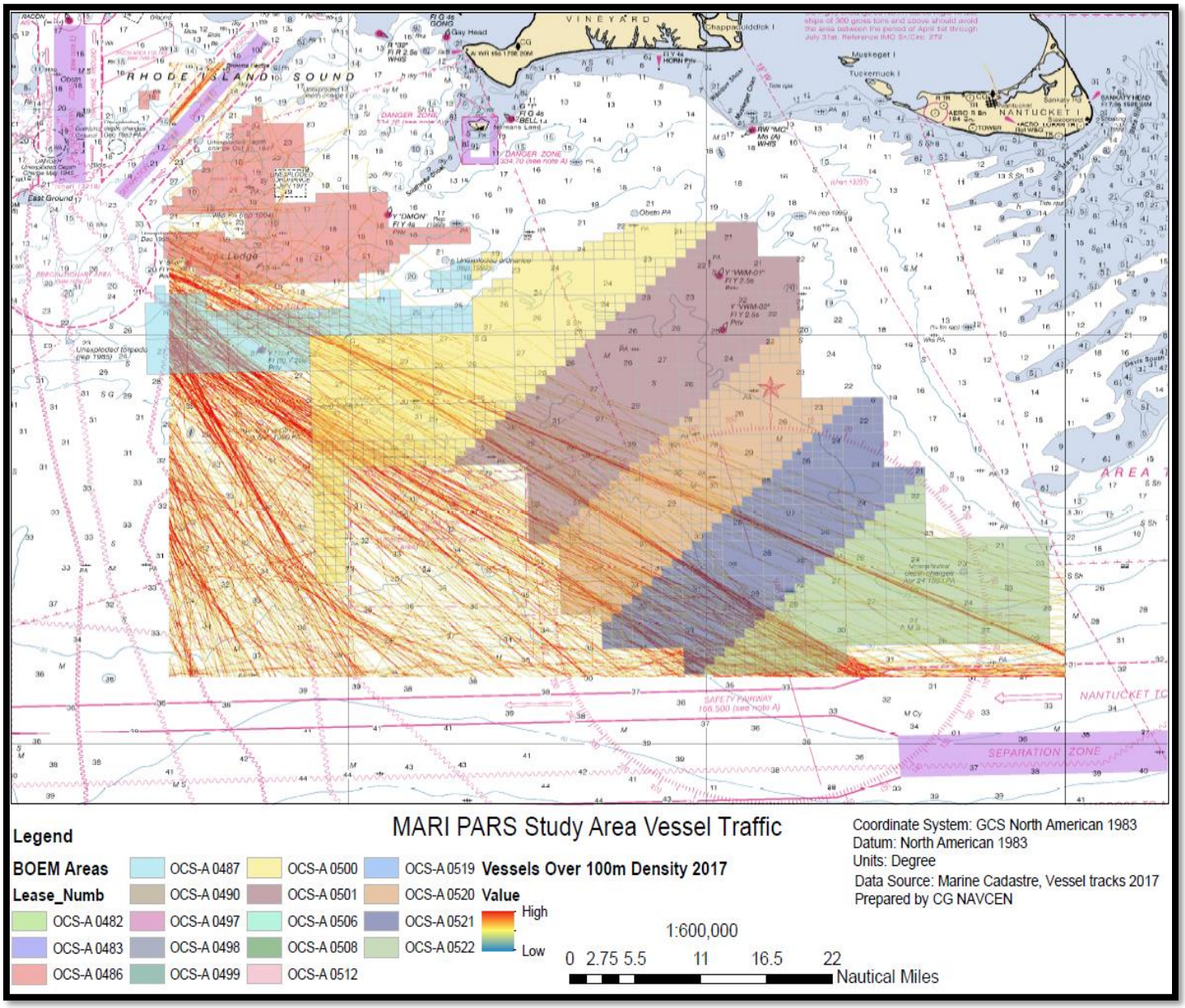
2017 Coast Guard NAVCEN Data

Fishing Vessels



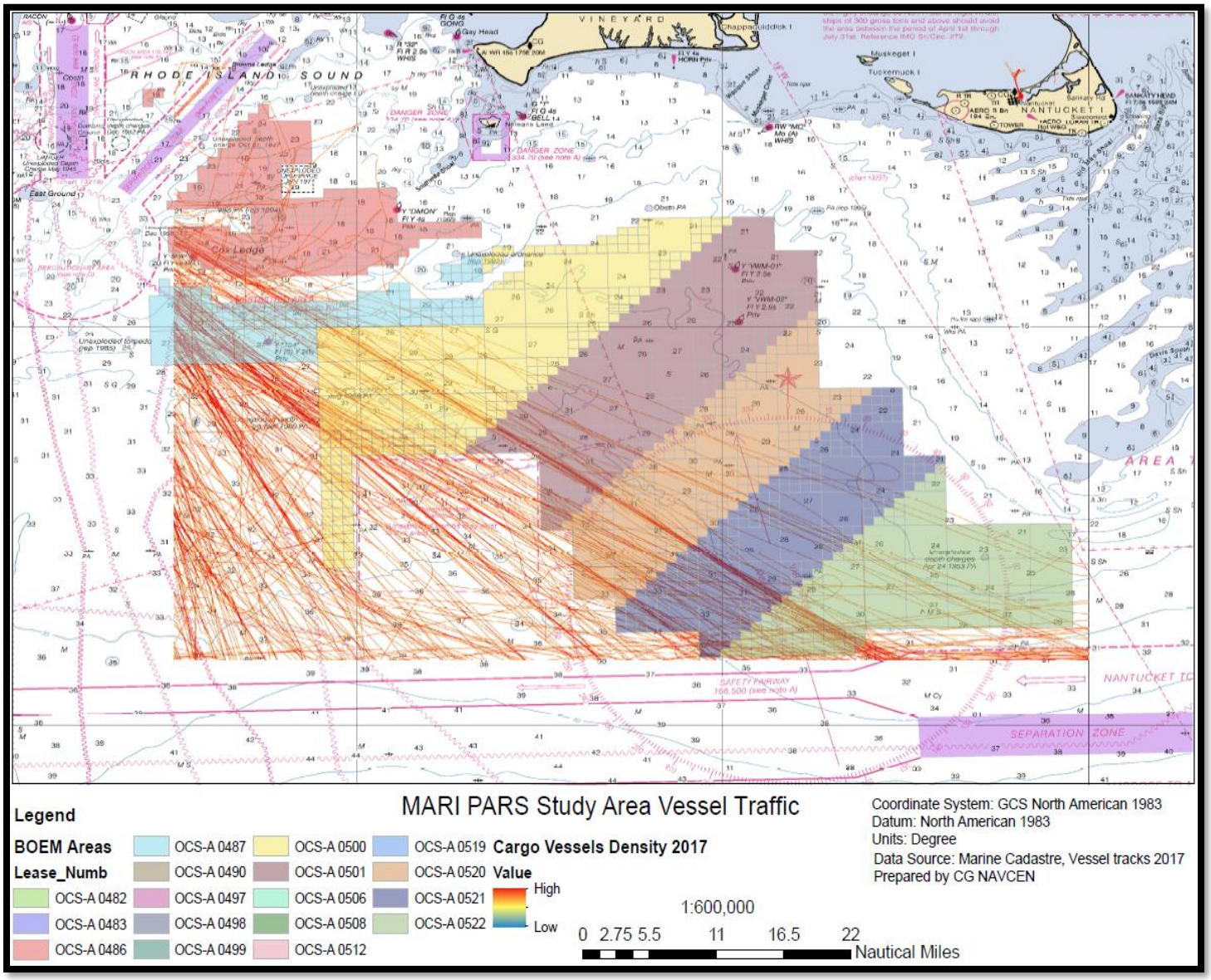
2017 Coast Guard NAVCEN Data

More Than 100 Meters



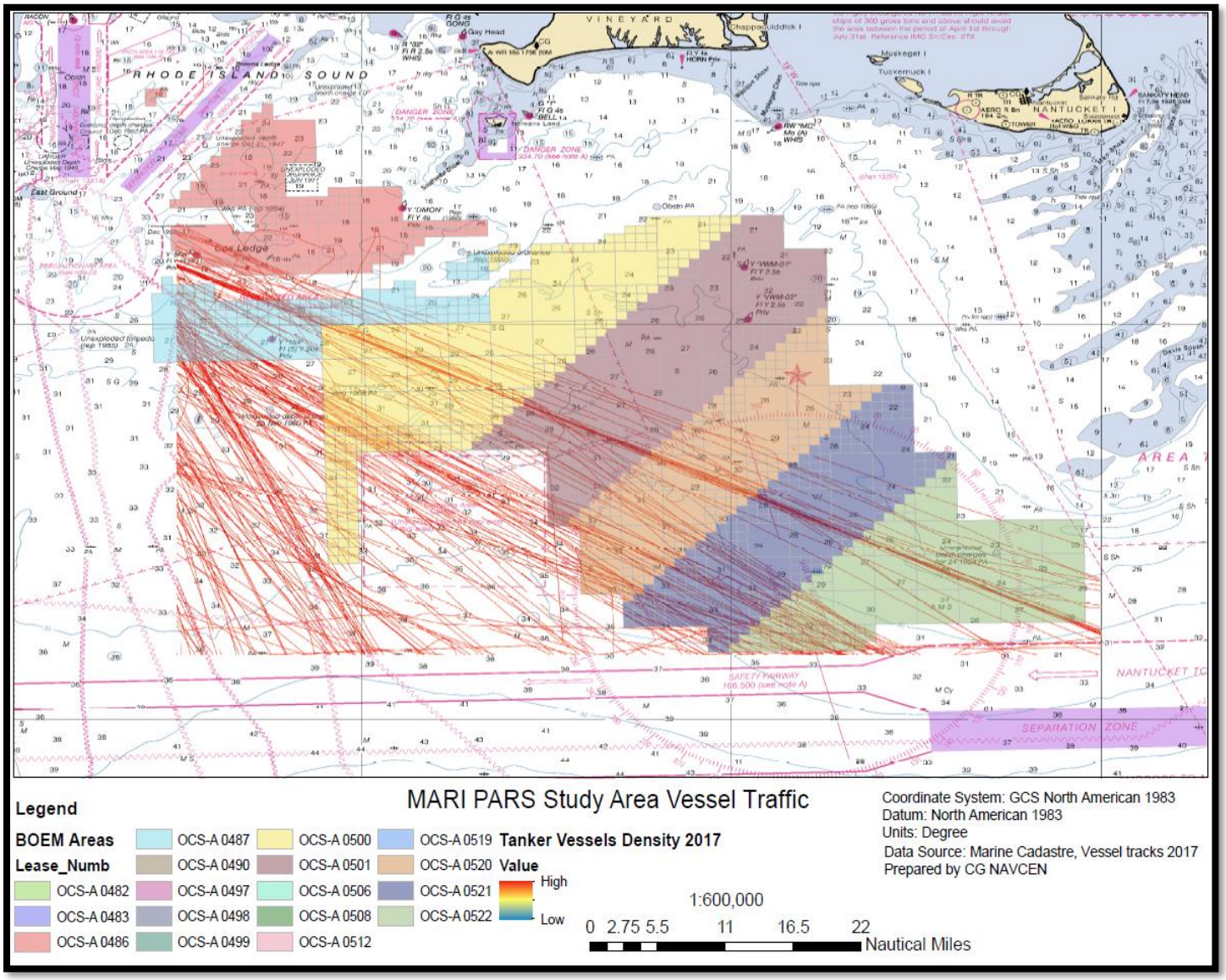
2017 Coast Guard NAVCEN Data

Cargo



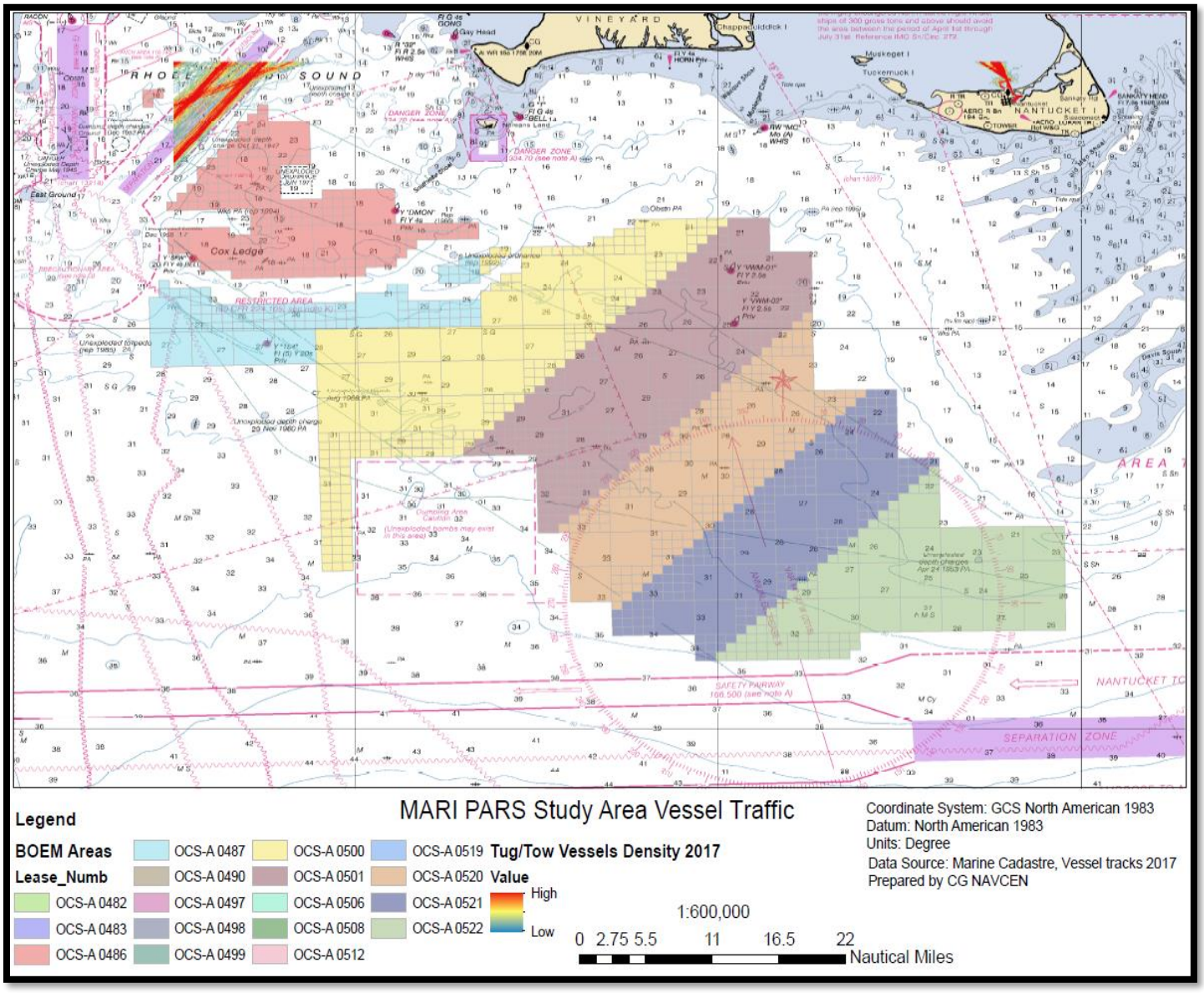
2017 Coast Guard NAVCEN Data

Tankers



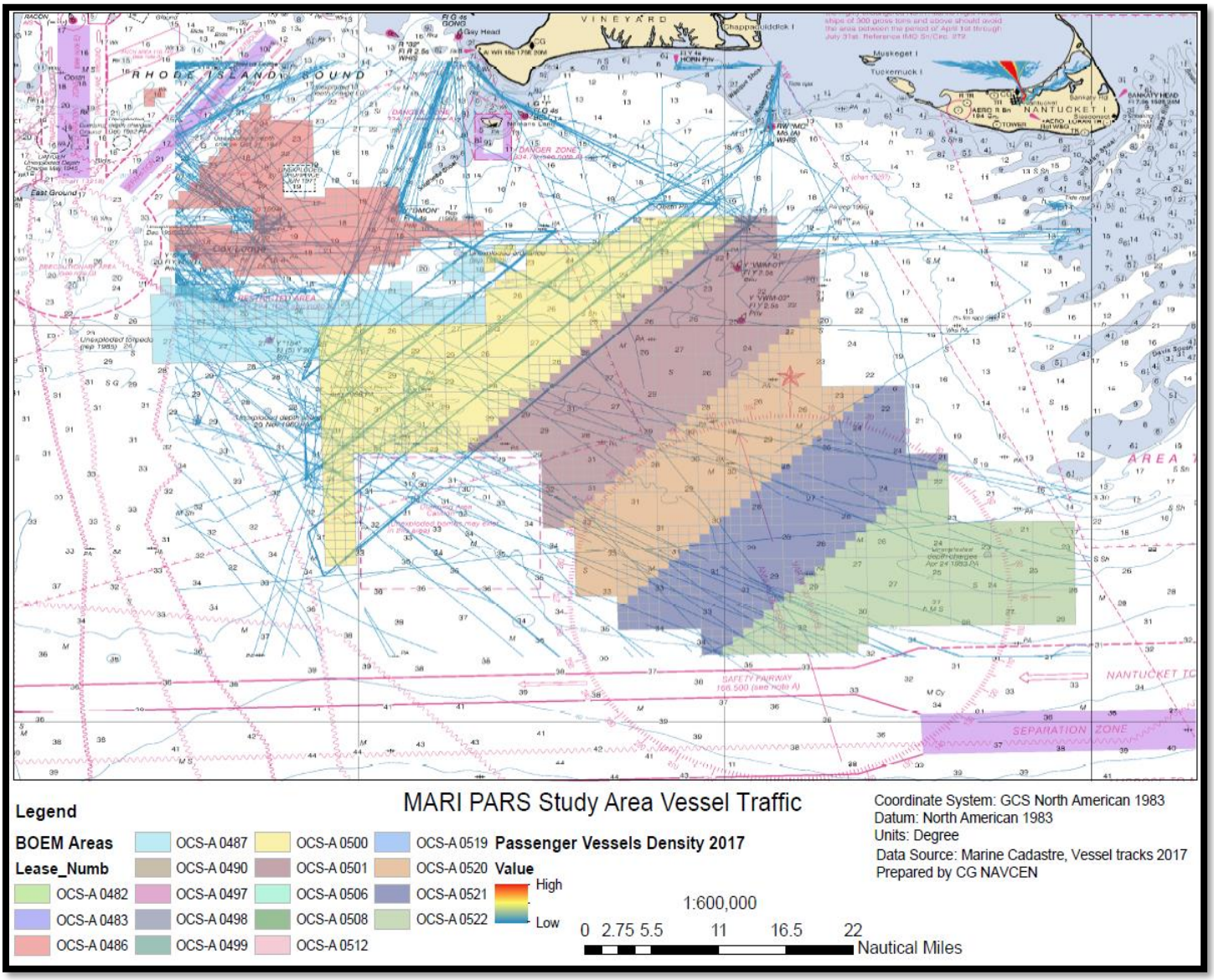
2017 Coast Guard NAVCEN Data

Tug/Tow



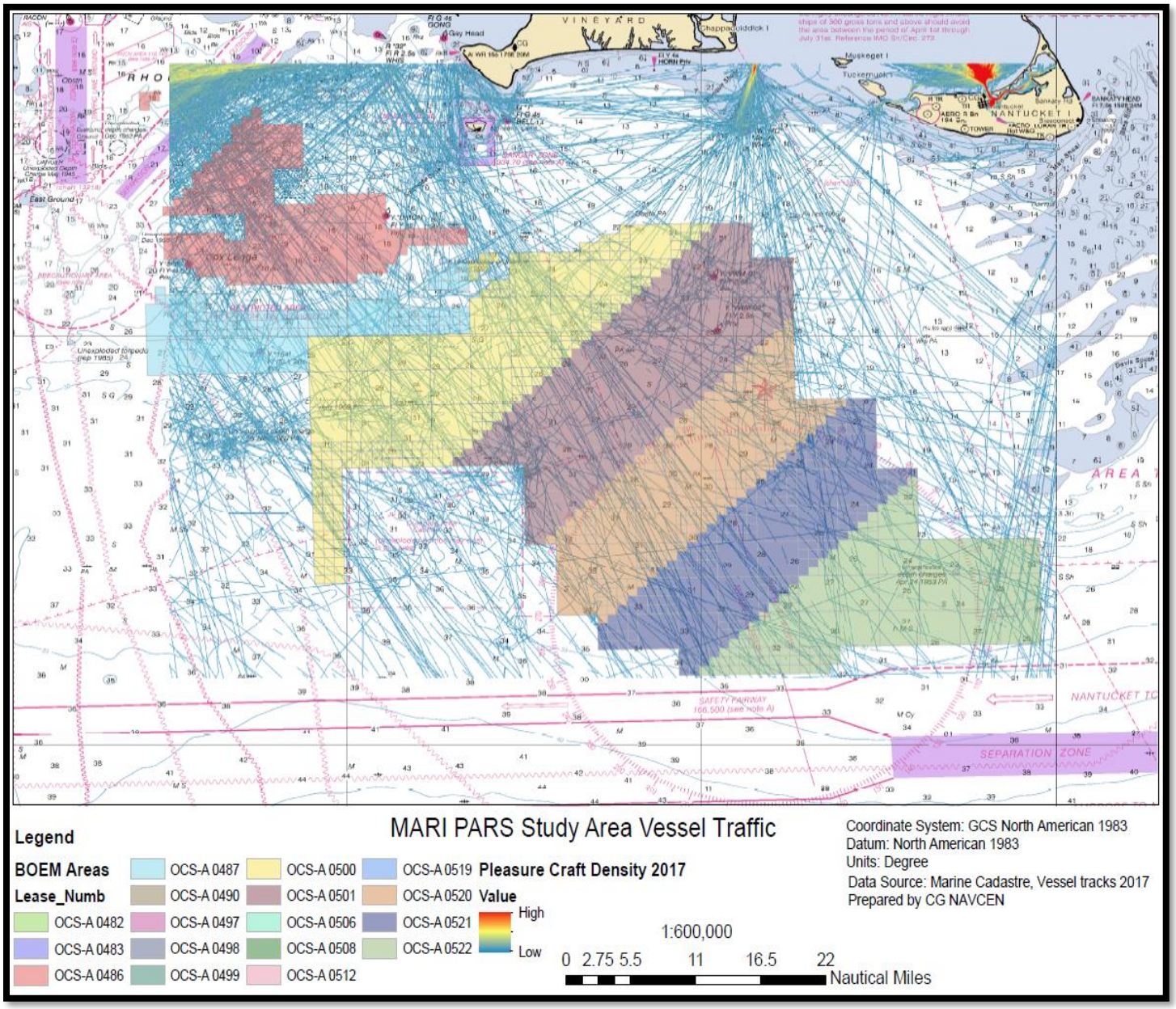
2017 Coast Guard NAVCEN Data

Passenger Vessels



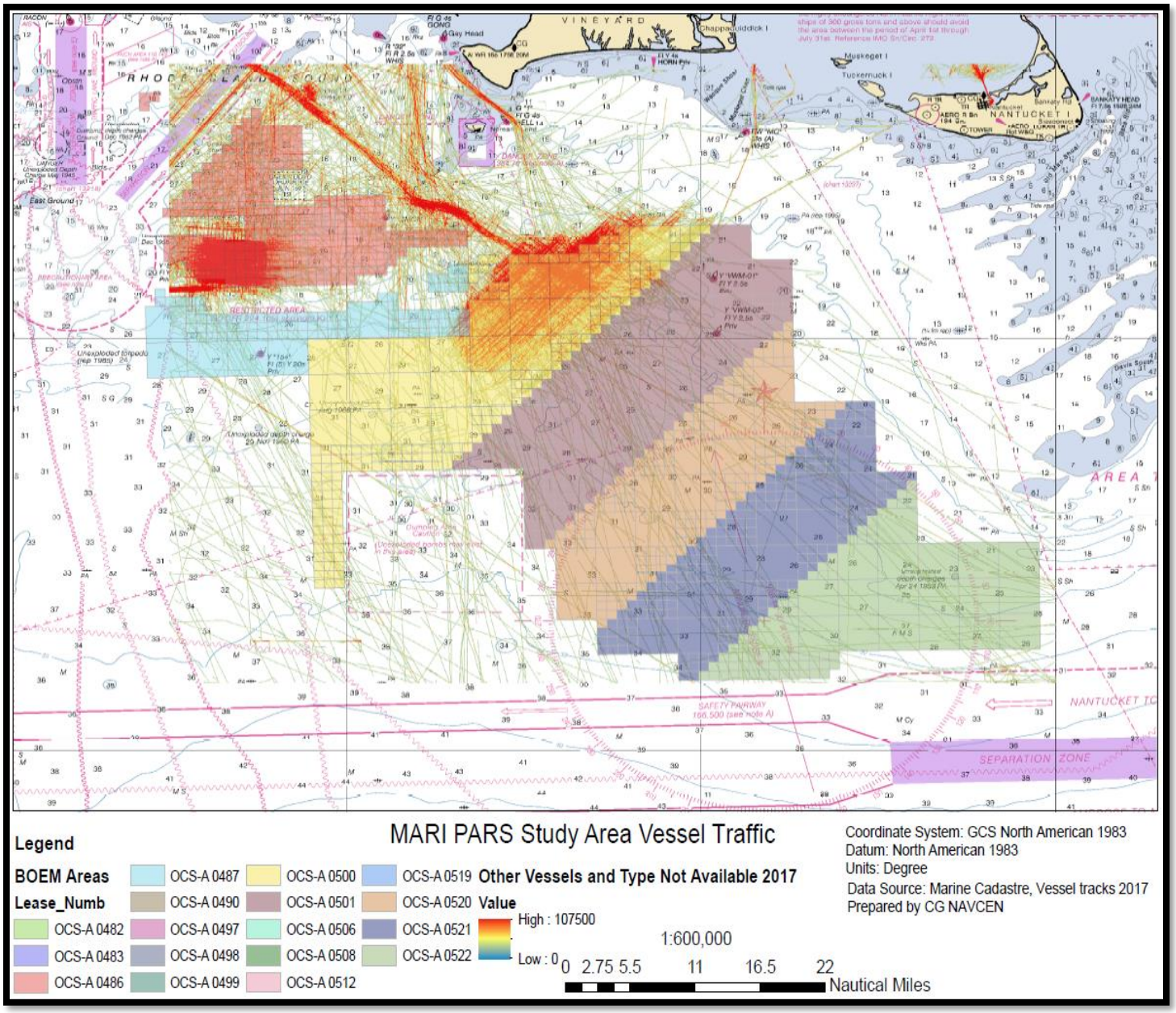
2017 Coast Guard NAVCEN Data

Pleasure Craft

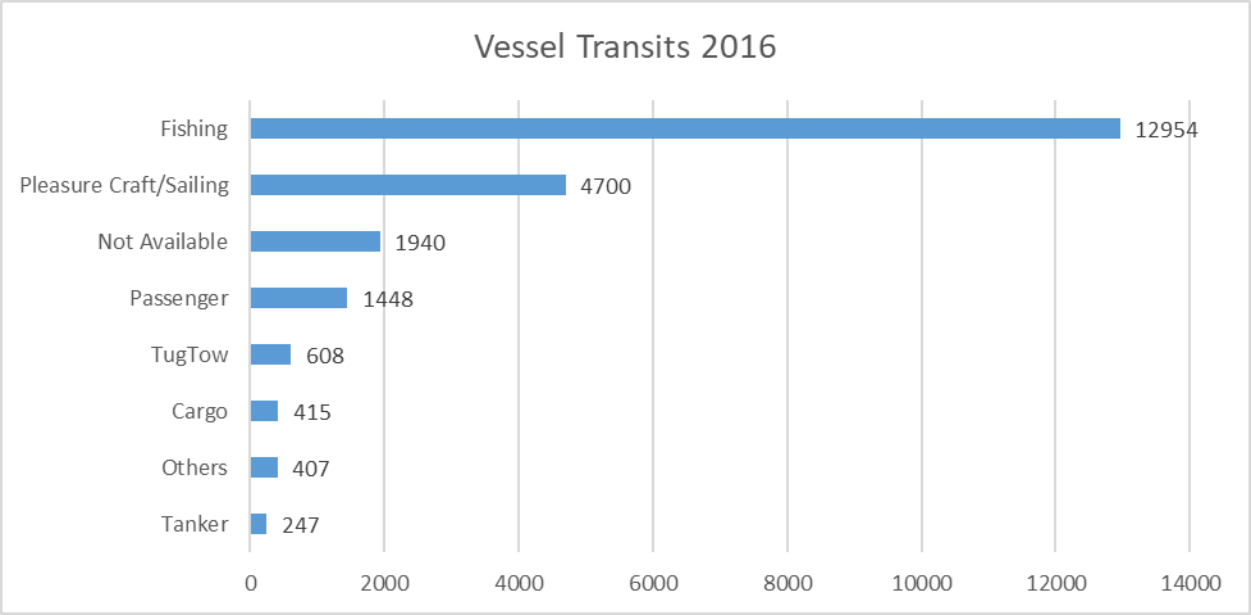


2017 Coast Guard NAVCEN Data

Other Vessels



2016 Coast Guard NAVCEN Data

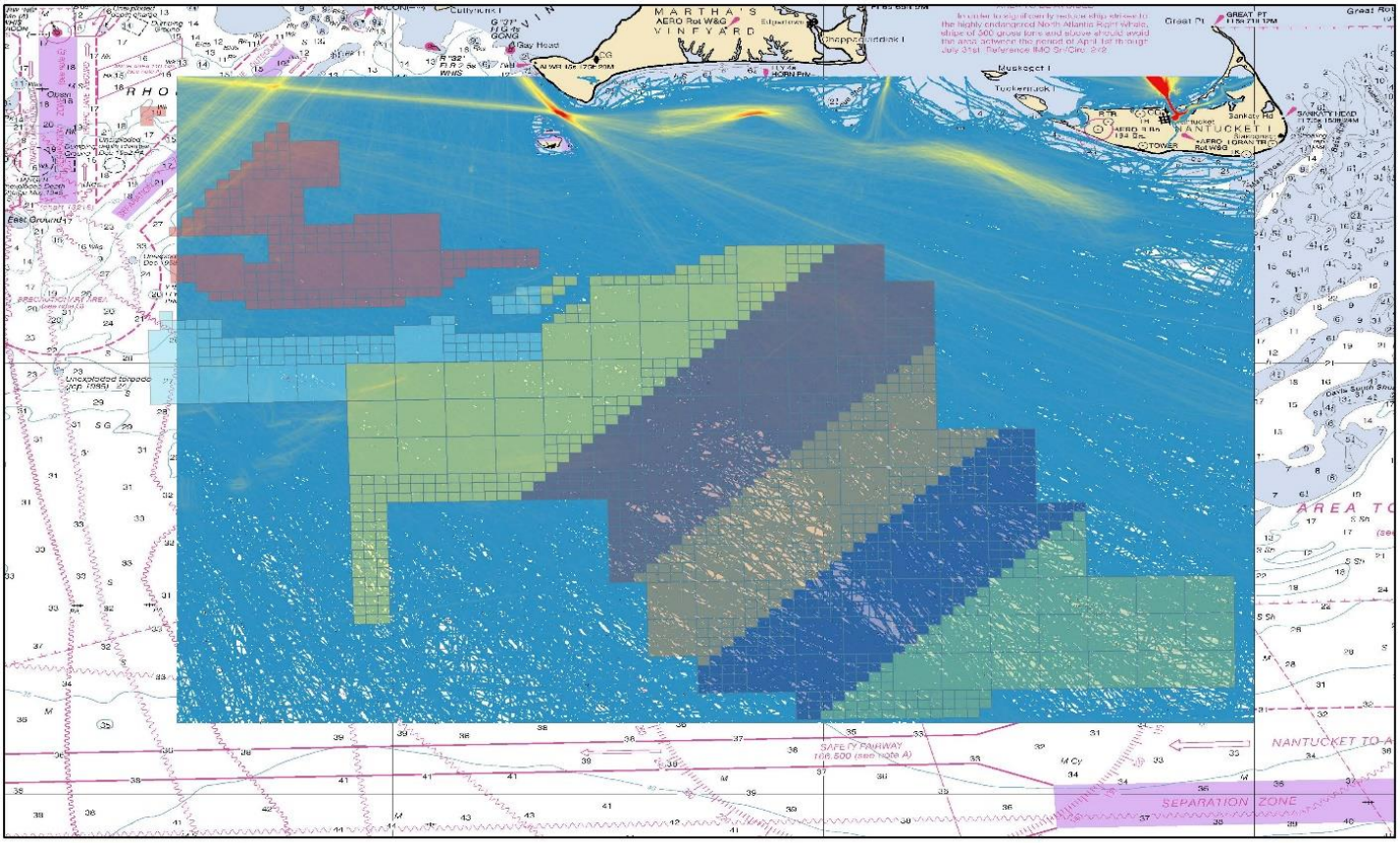


2016

Type	Count
Tanker	247
Others	407
Cargo	415
Tug/Tow	608
Passenger	1448
Not Available	1940
Pleasure Craft/Sailing	4700
Fishing	12954
Total	**22719**

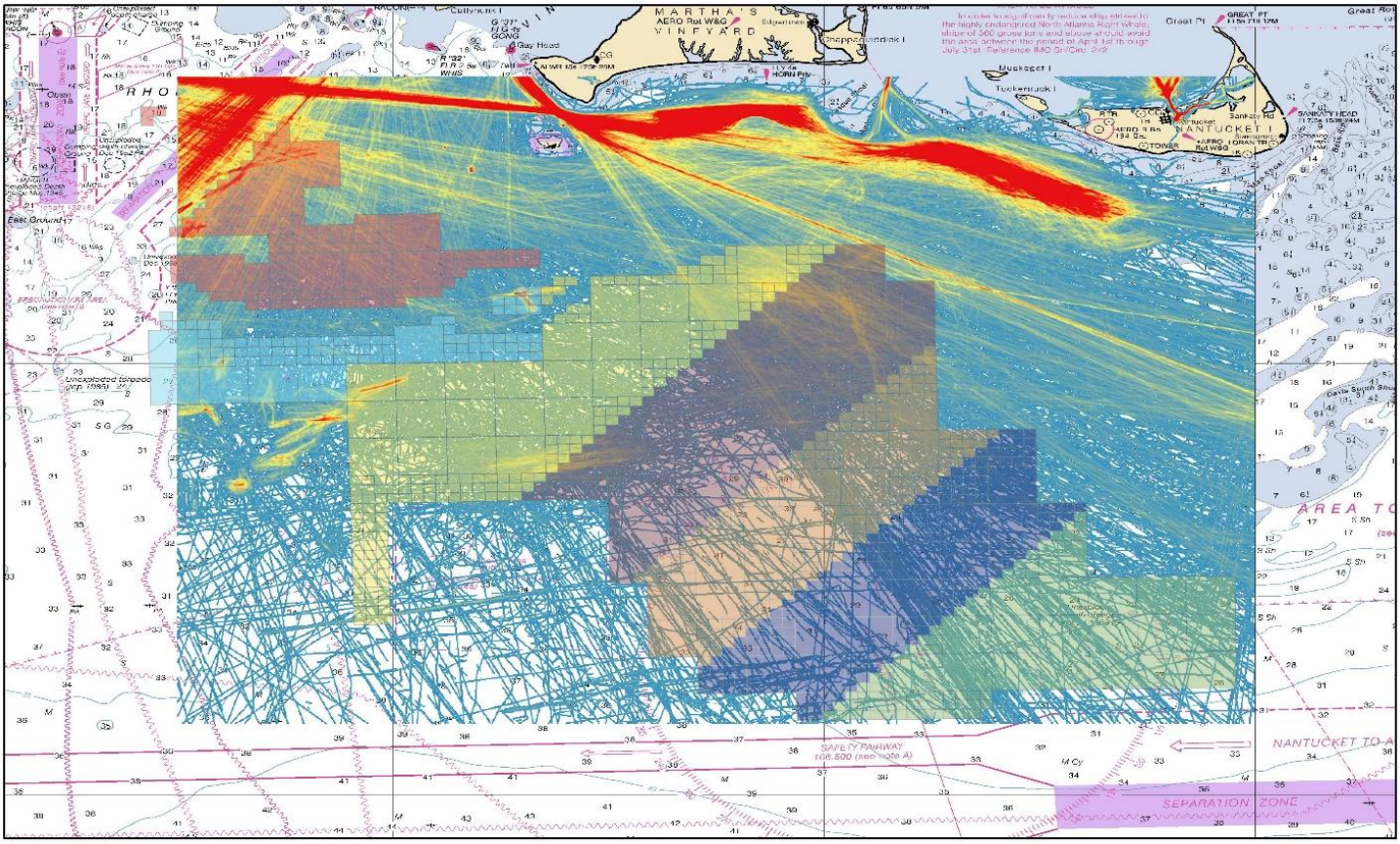
2016 Coast Guard NAVCEN Data

All Vessels



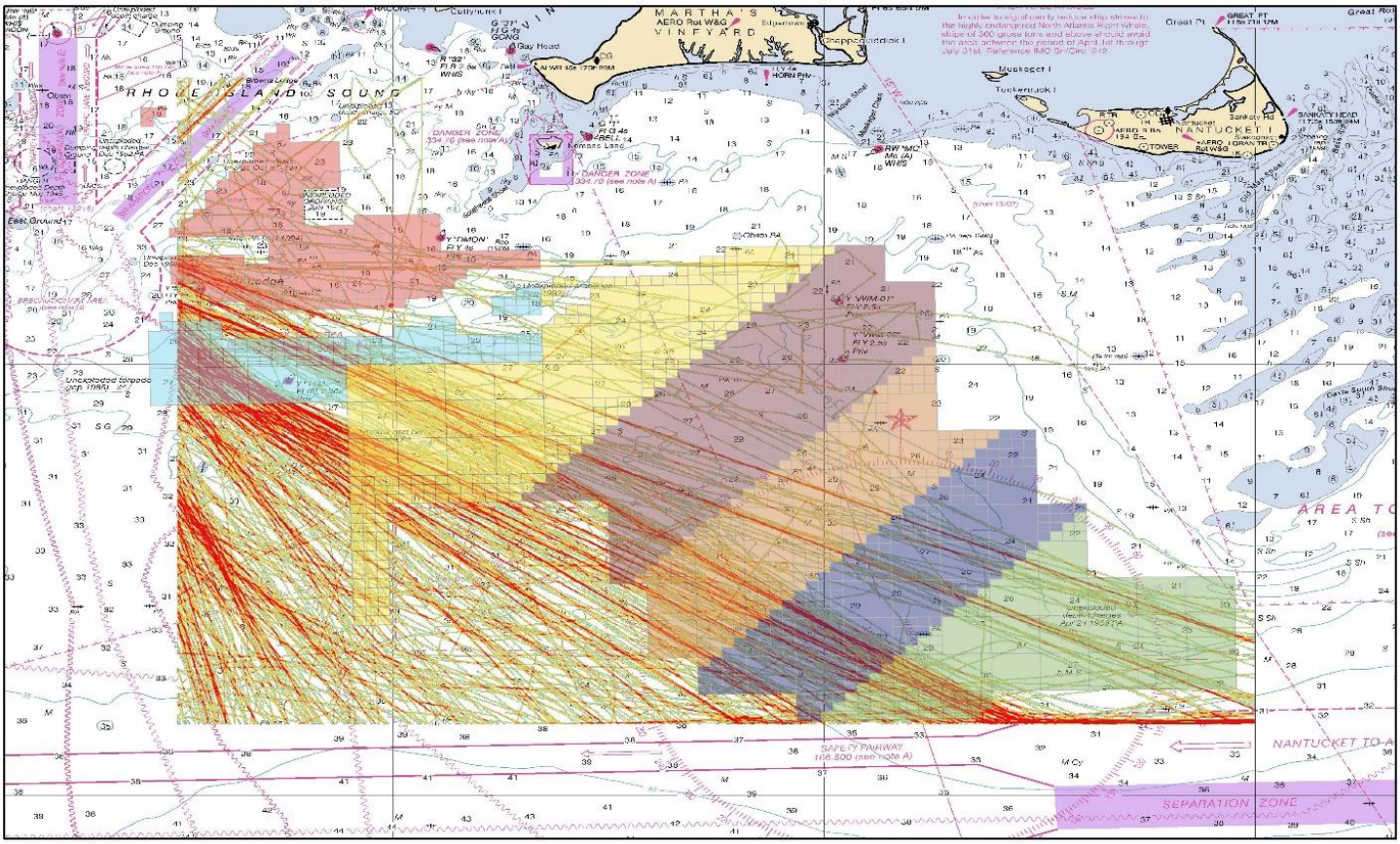
2016 Coast Guard NAVCEN Data

Fishing Vessels



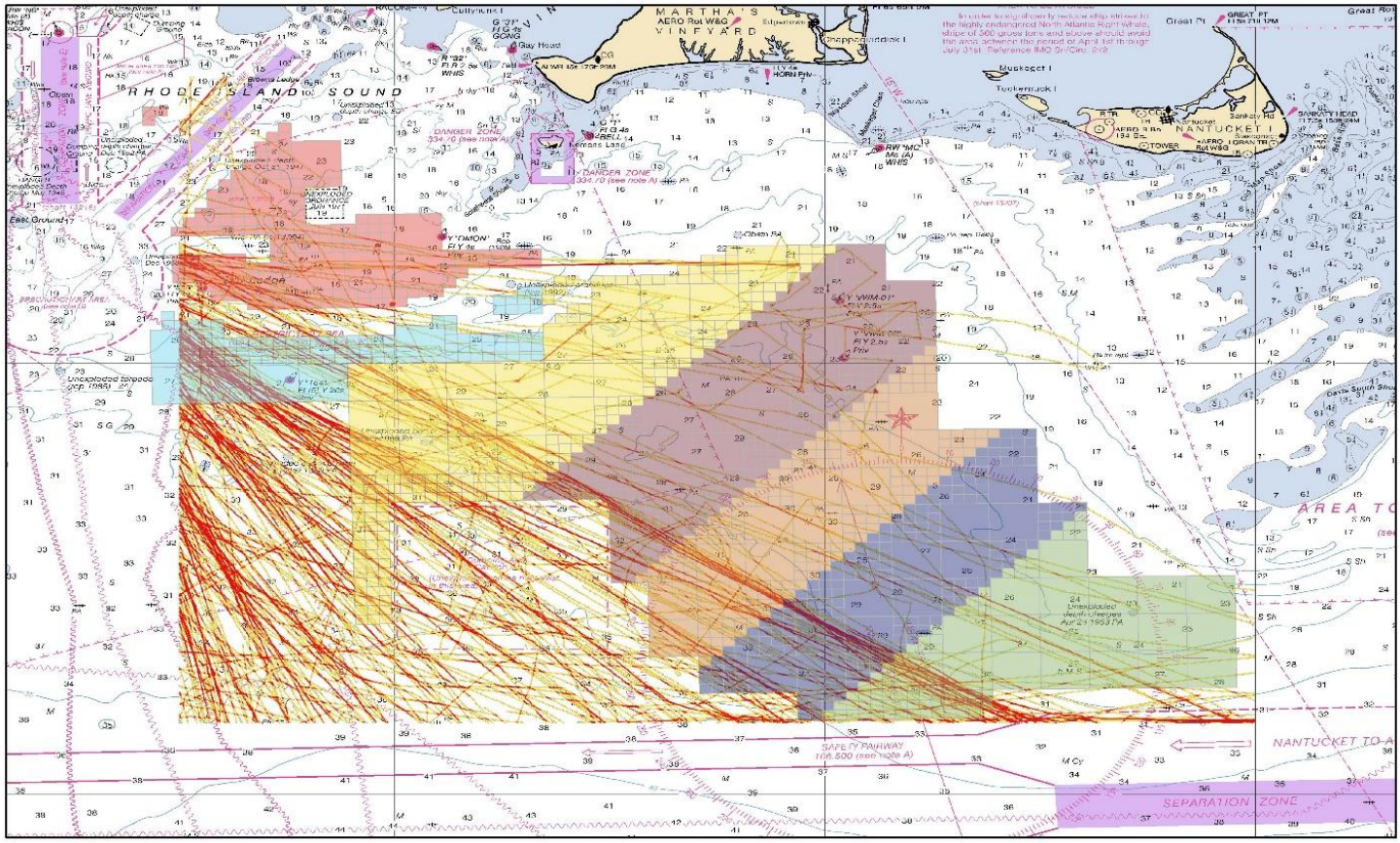
2016 Coast Guard NAVCEN Data

Over 100 Meters



2016 Coast Guard NAVCEN Data

Cargo



MARI PARS Study Area Vessel Traffic

Coordinate System: GCS North American 1983
Datum: North American 1983
Units: Degree
Data Source: Marine Cadastre, Vessel tracks 2016
Prepared by CG NAVCEN

Legend

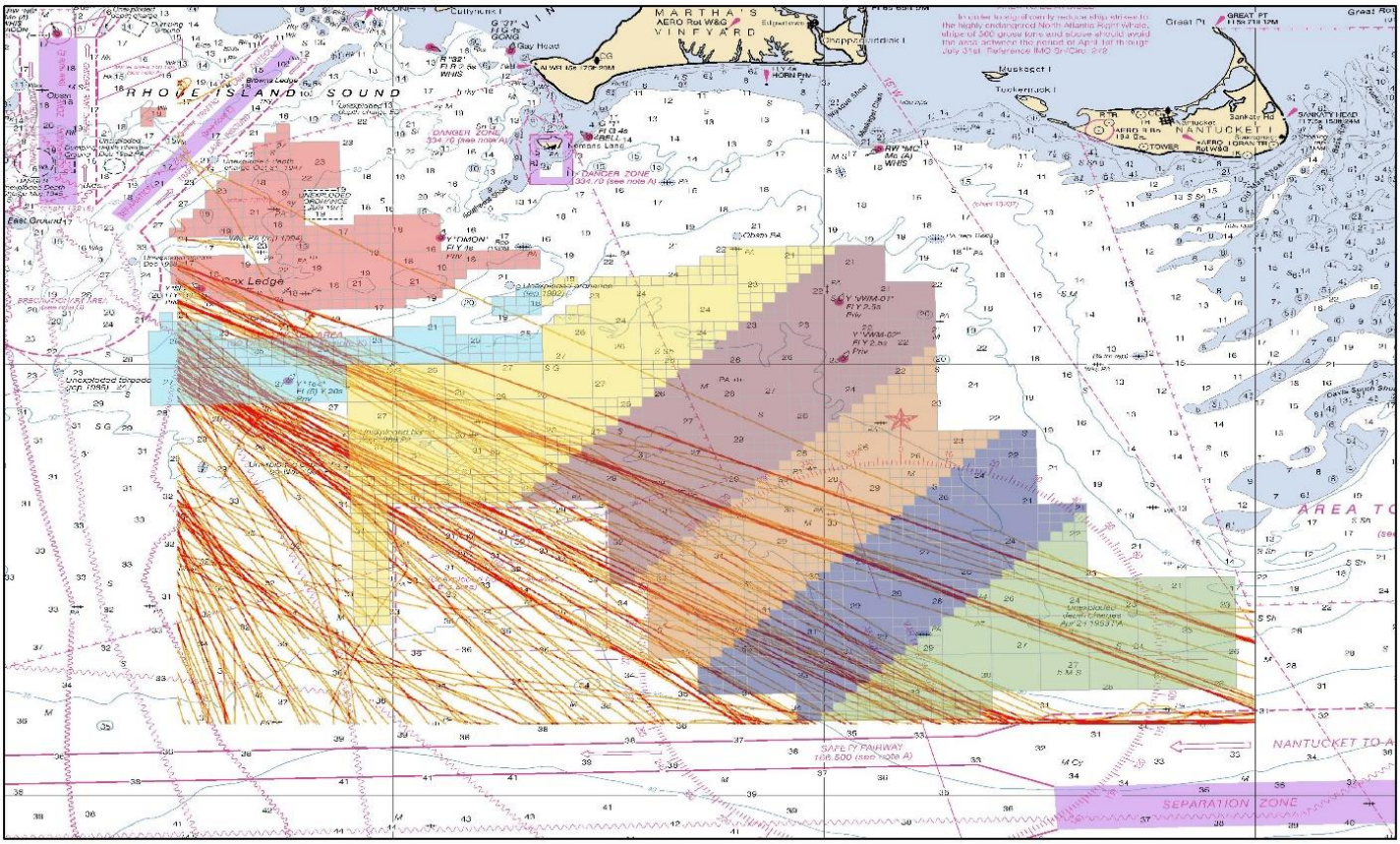
BOEM Areas
Lease_Numb
OCS-A 0482
OCS-A 0483
OCS-A 0486
OCS-A 0487
OCS-A 0490
OCS-A 0497
OCS-A 0498
OCS-A 0499
OCS-A 0500
OCS-A 0501
OCS-A 0506
OCS-A 0508
OCS-A 0512
OCS-A 0519
OCS-A 0520
OCS-A 0521
OCS-A 0522

Cargo Vessel Density 2016
Value
High
Low

1:600,000
0 2.75 5.5 11 16.5 22
Nautical Miles

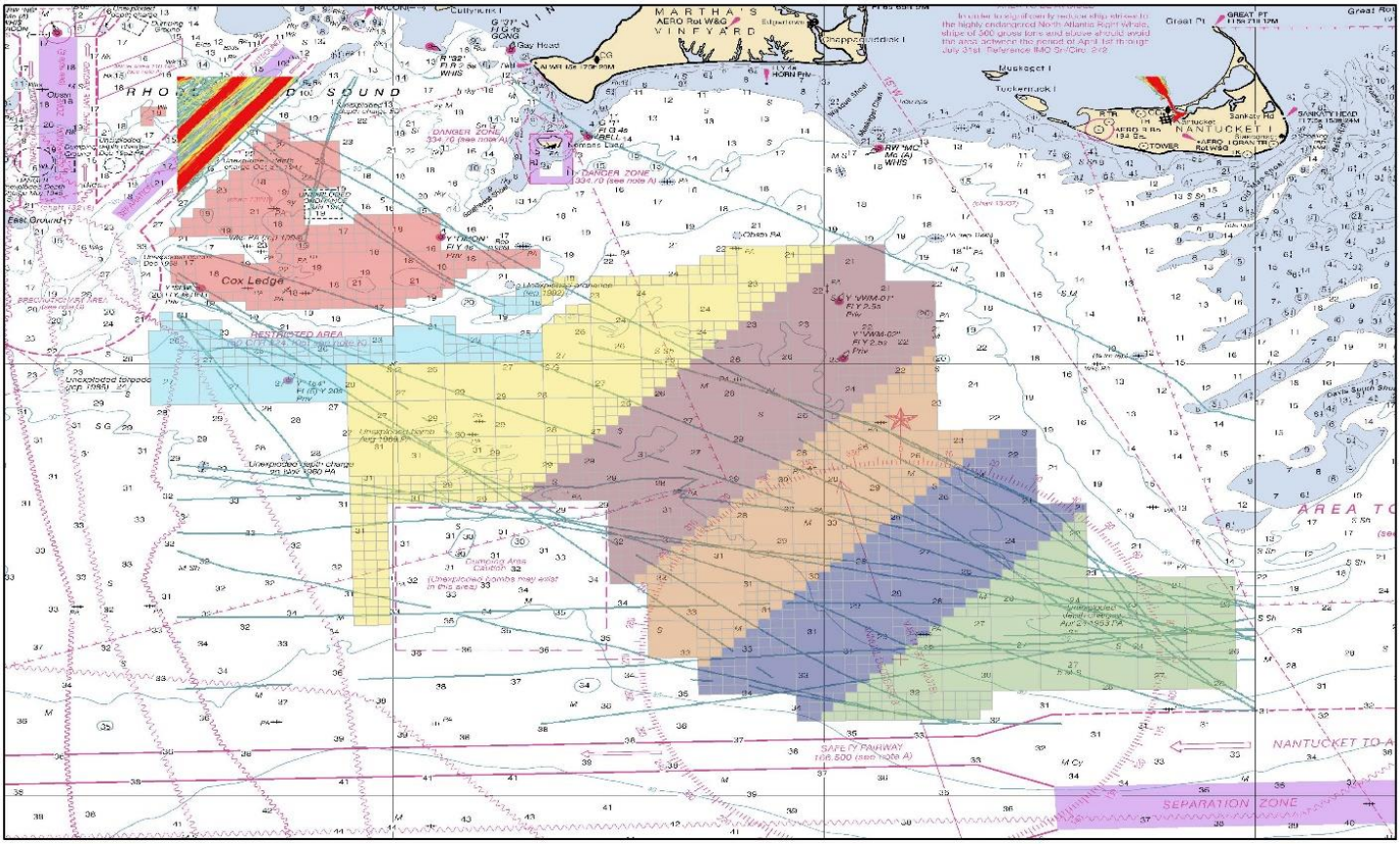
2016 Coast Guard NAVCEN Data

Tankers



2016 Coast Guard NAVCEN Data

Tug/Tow



Legend

BOEM Areas

Lease_Numb

OCS-A 0482
OCS-A 0483
OCS-A 0486
OCS-A 0487
OCS-A 0490
OCS-A 0497
OCS-A 0498
OCS-A 0499
OCS-A 0500
OCS-A 0501
OCS-A 0506
OCS-A 0508
OCS-A 0512
OCS-A 0519
OCS-A 0520
OCS-A 0521
OCS-A 0522

MARI PARS Study Area Vessel Traffic

Tug/Tow Vessels Density 2016

Value

High : 314679

Low : 0

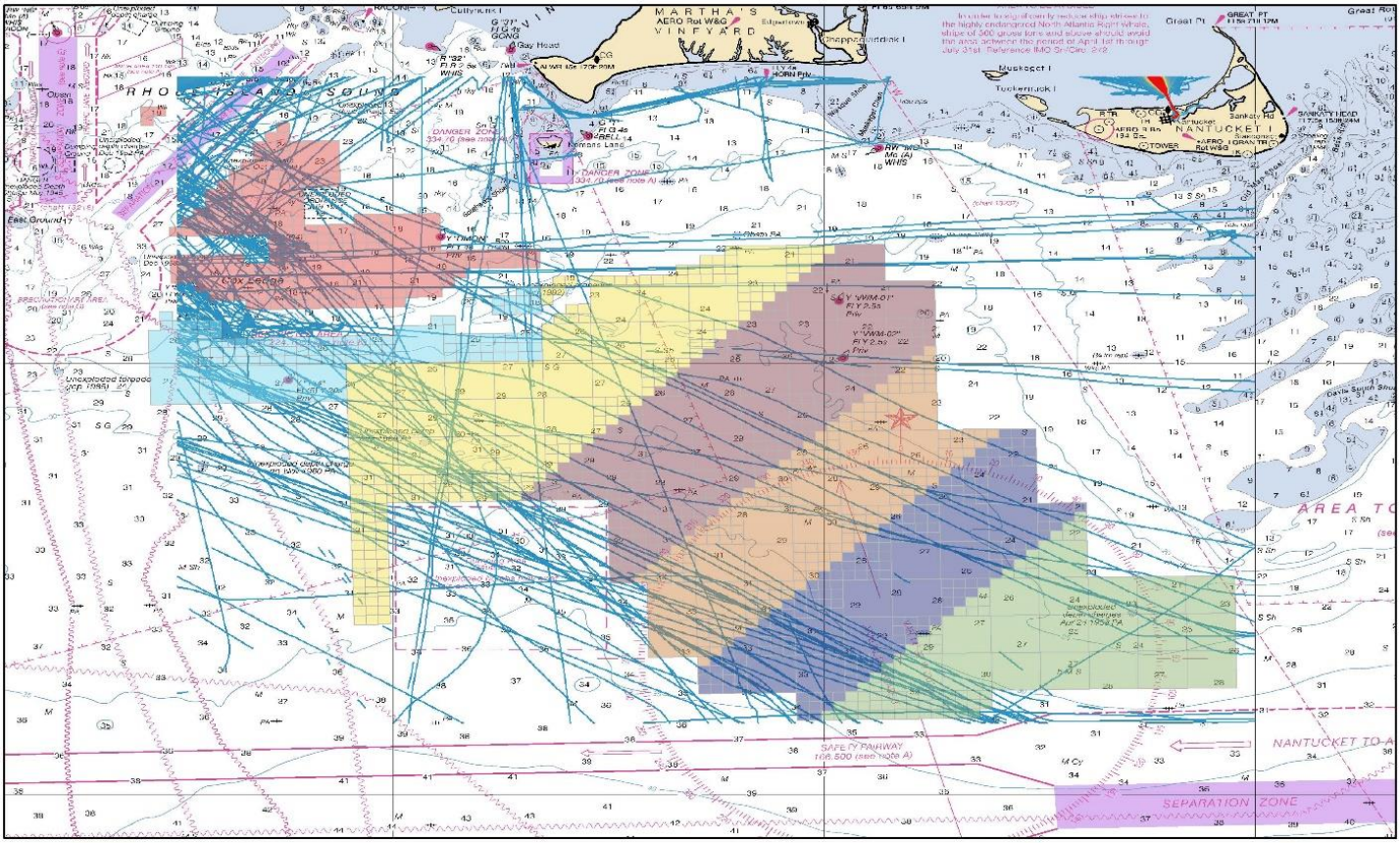
1:600,000

0 2.75 5.5 11 16.5 22 Nautical Miles

Coordinate System: GCS North American 1983
Datum: North American 1983
Units: Degree
Data Source: Marine Cadastre, Vessel tracks 2016
Prepared by CG NAVCEN

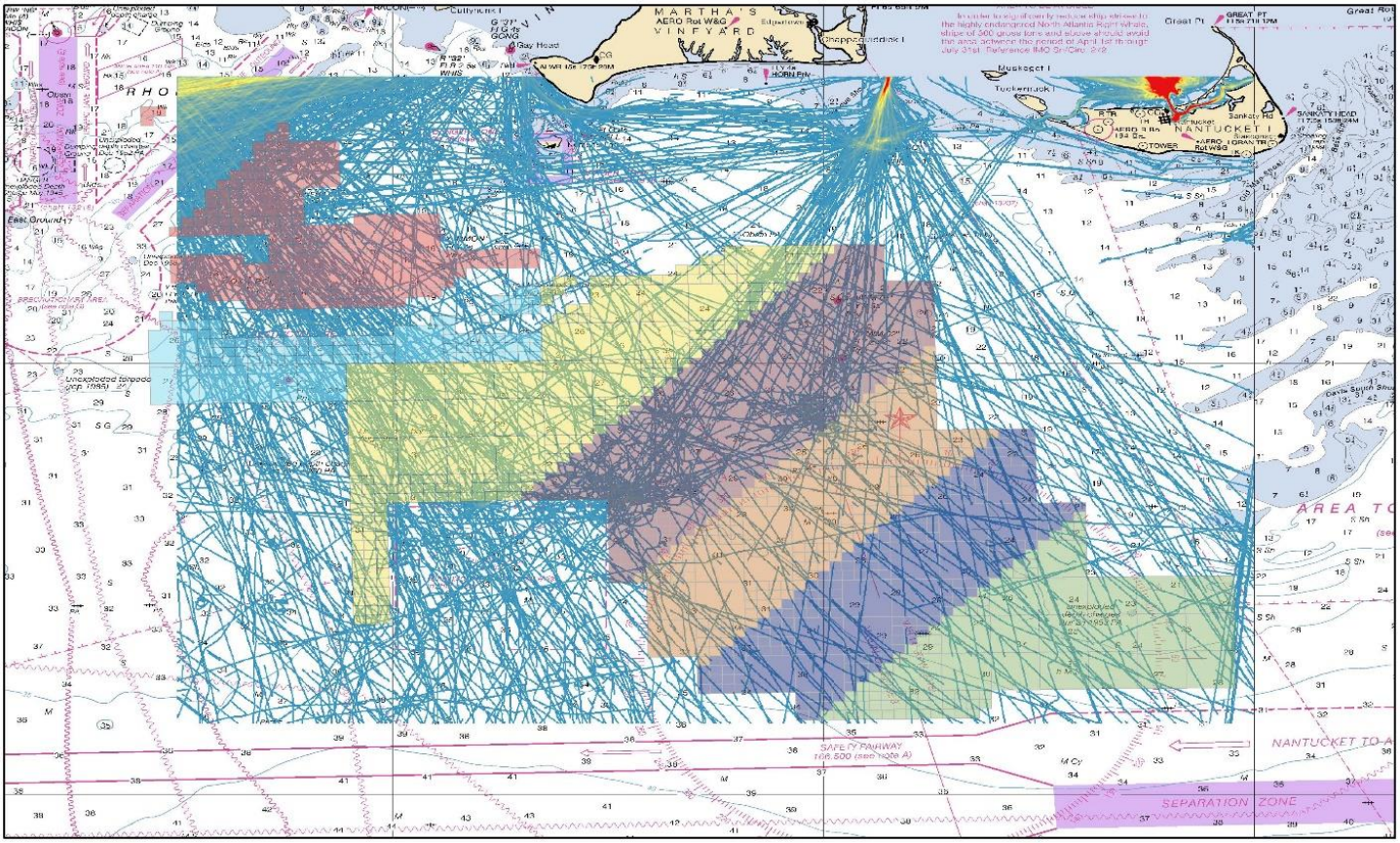
2016 Coast Guard NAVCEN Data

Passenger



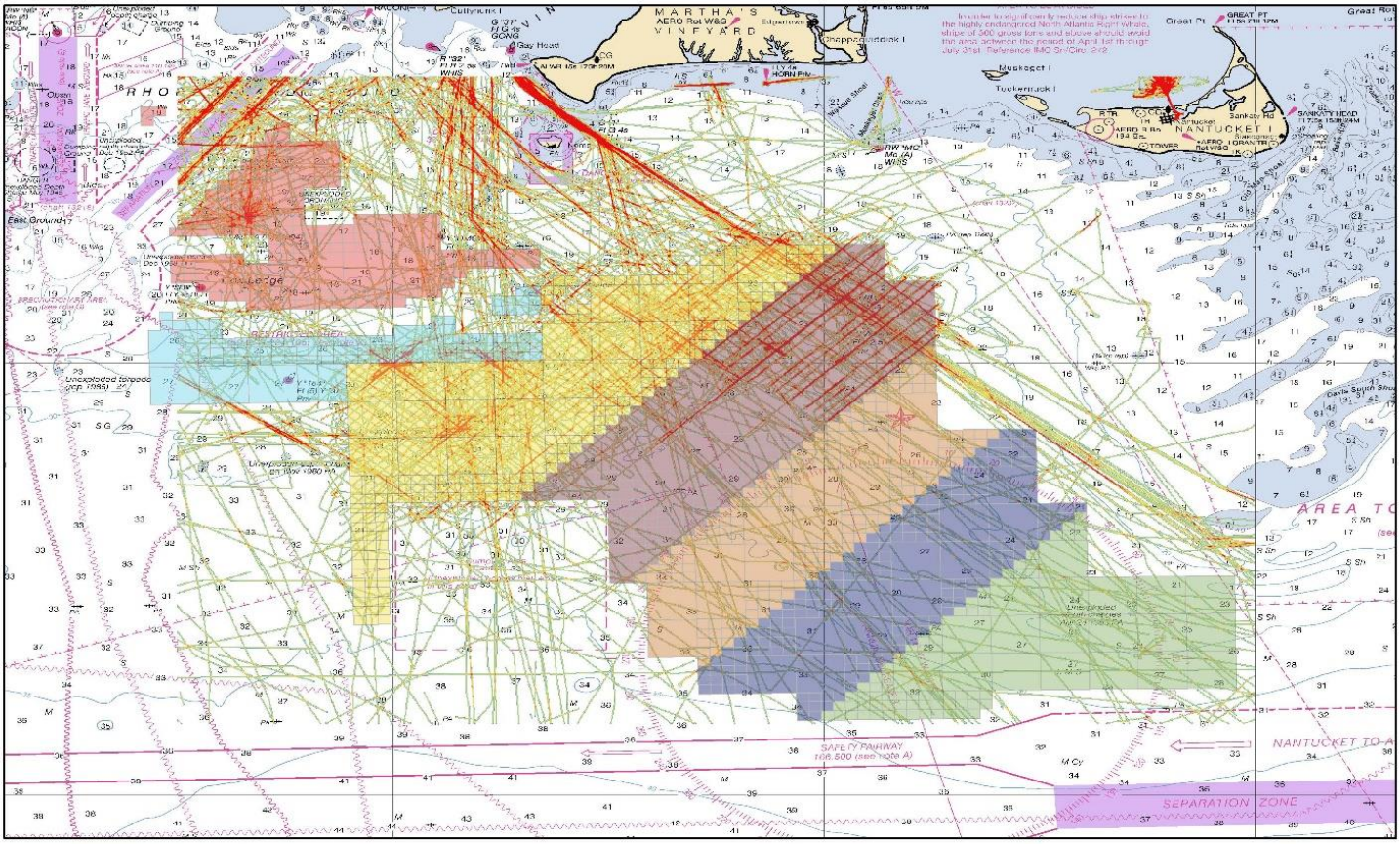
2016 Coast Guard NAVCEN Data

Pleasure

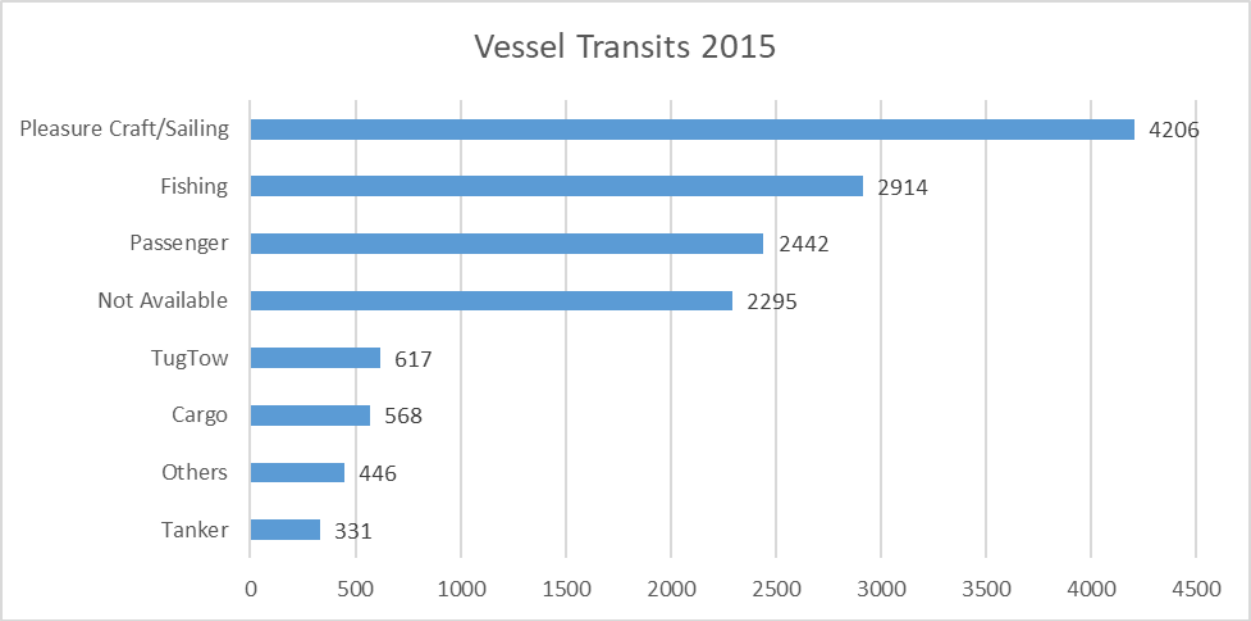


2016 Coast Guard NAVCEN Data

Other



2015 Coast Guard NAVCEN Data

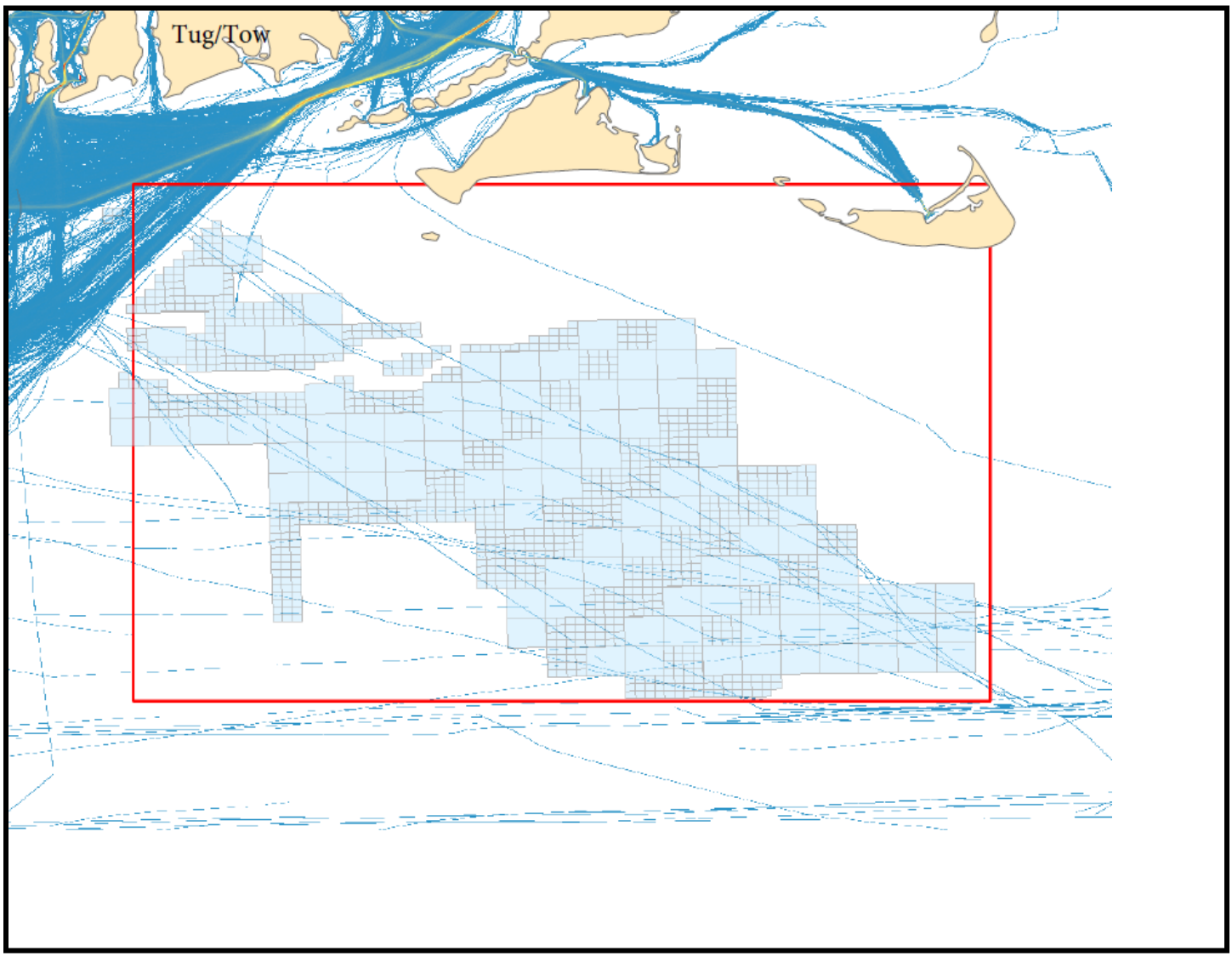


2015

Type	Count
Tanker	331
Others	446
Cargo	568
Tug/Tow	617
Not Available	2295
Passenger	2442
Fishing	2914
Pleasure Craft/Sailing	4206
Total:	**13819**

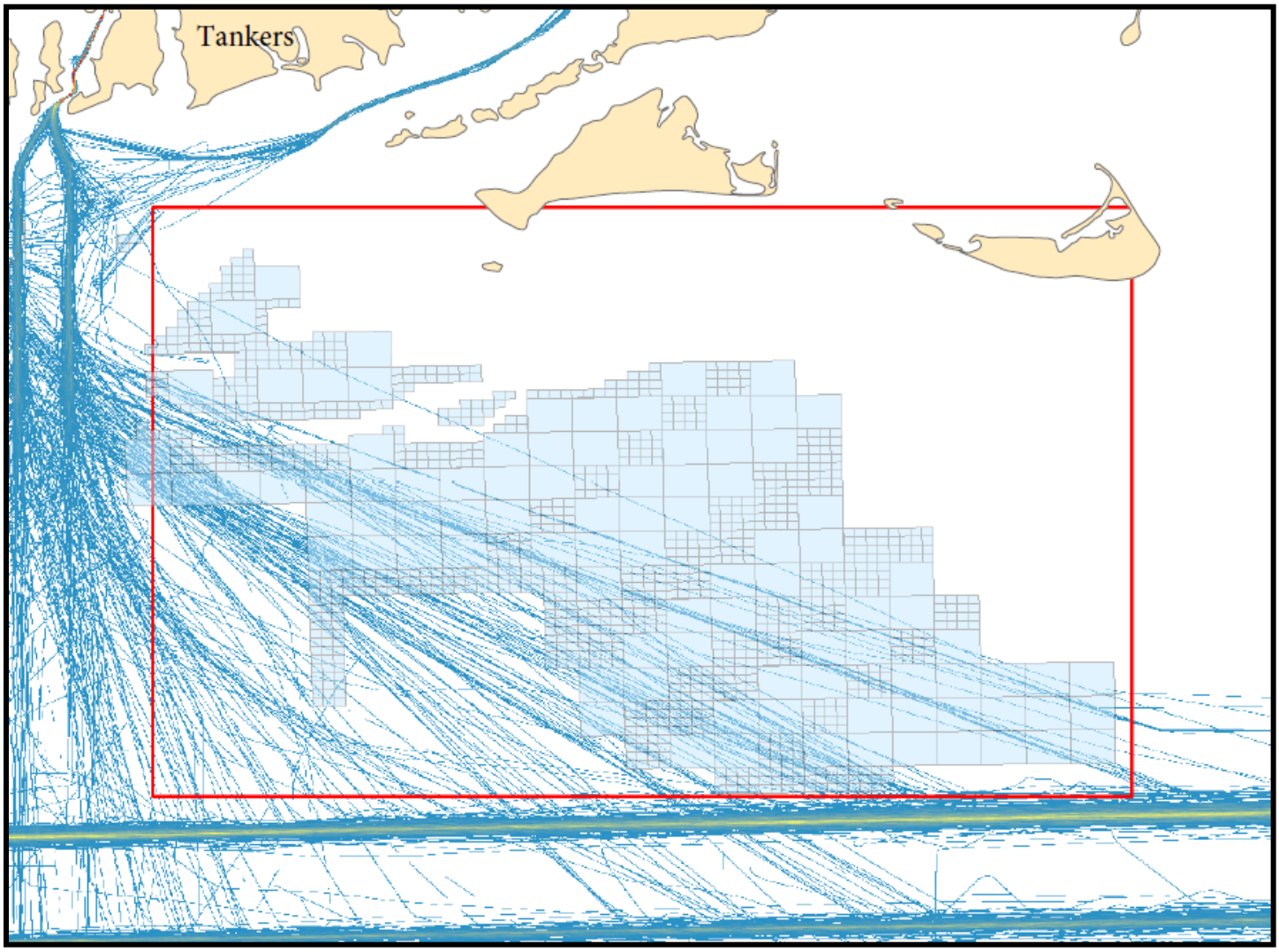
2015 Coast Guard NAVCEN Data

Tug/Tow



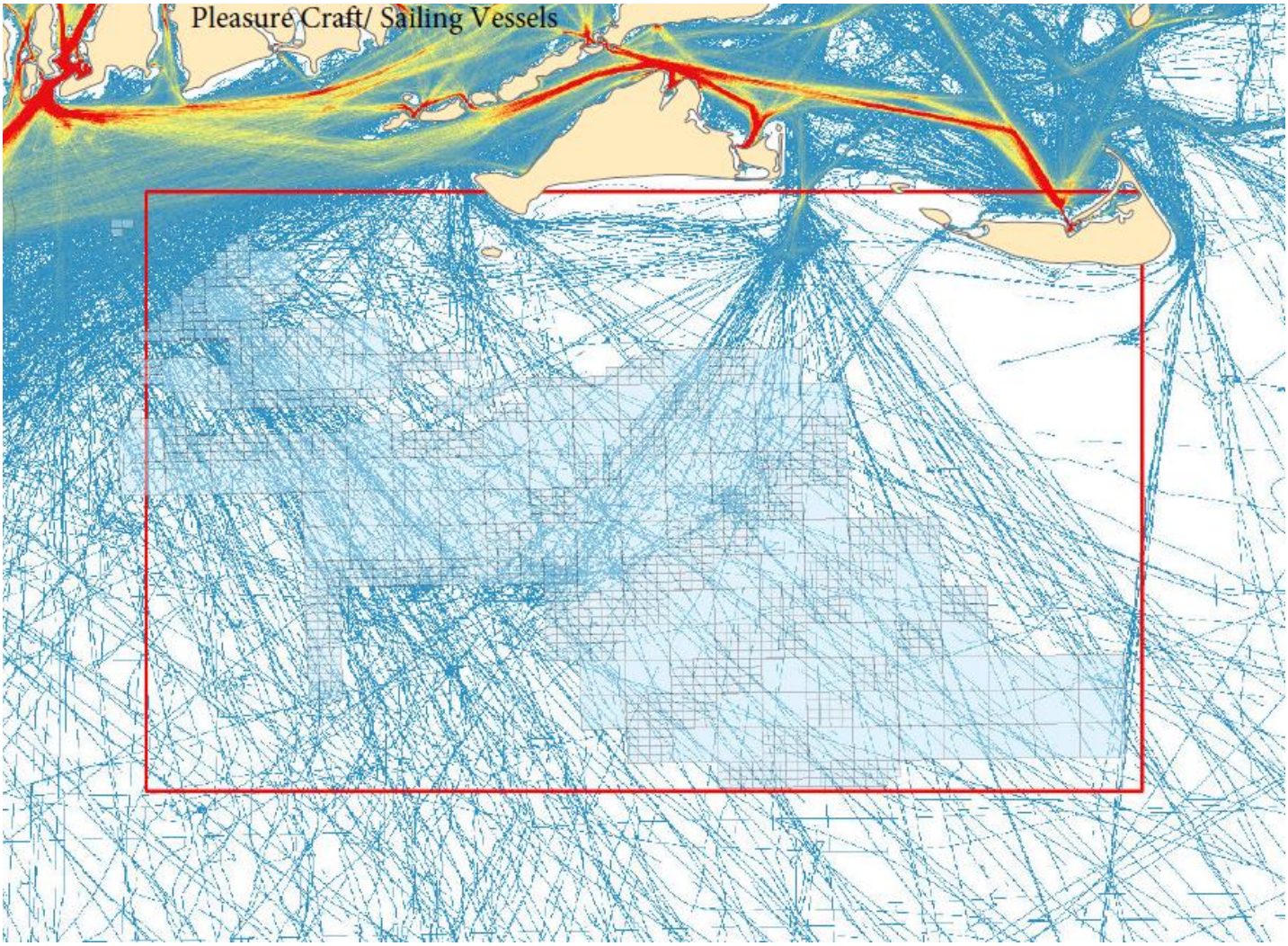
2015 Coast Guard NAVCEN Data

Tankers



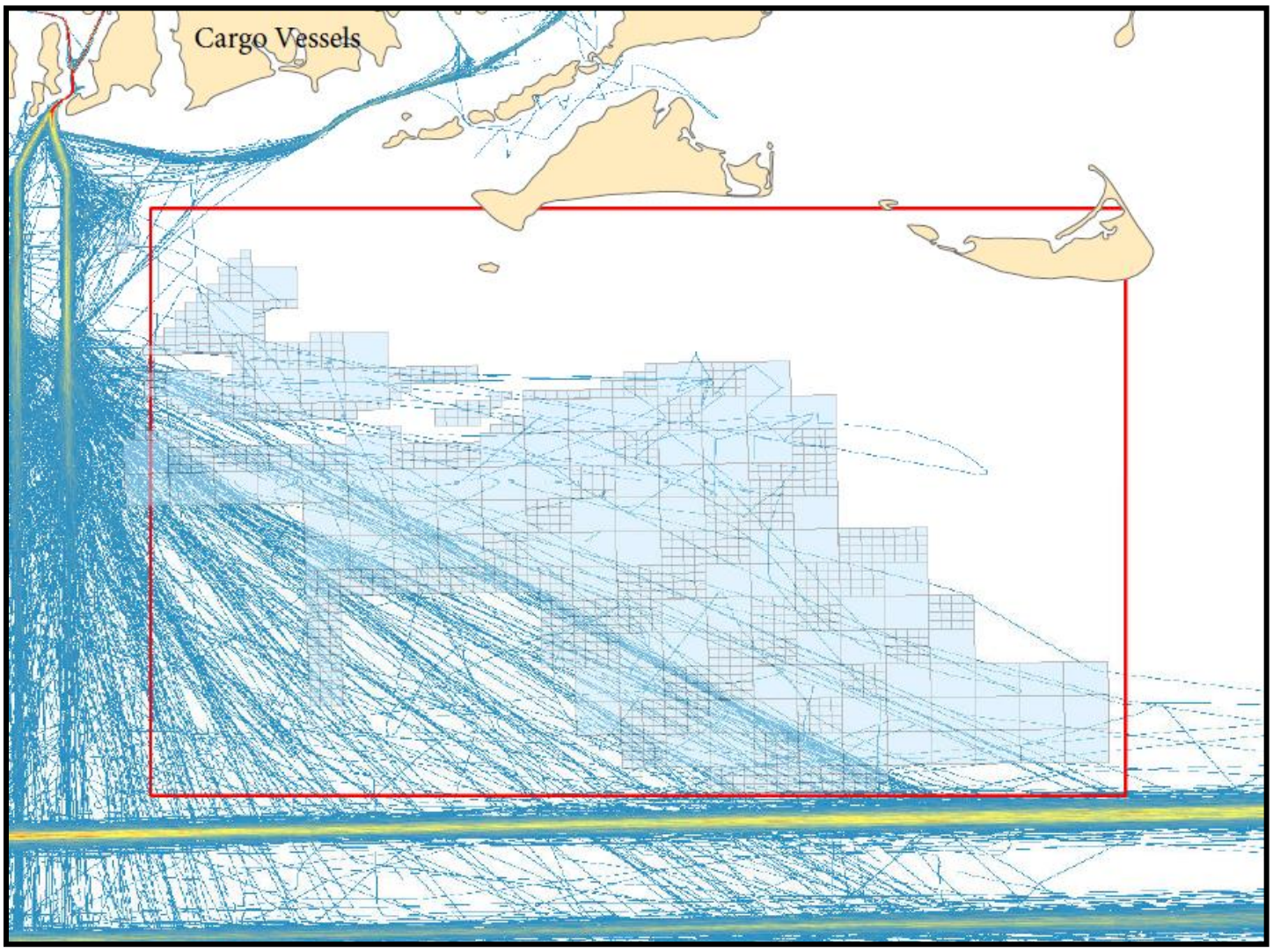
2015 COAST GUARD NAVCEN DATA

Pleasure Craft



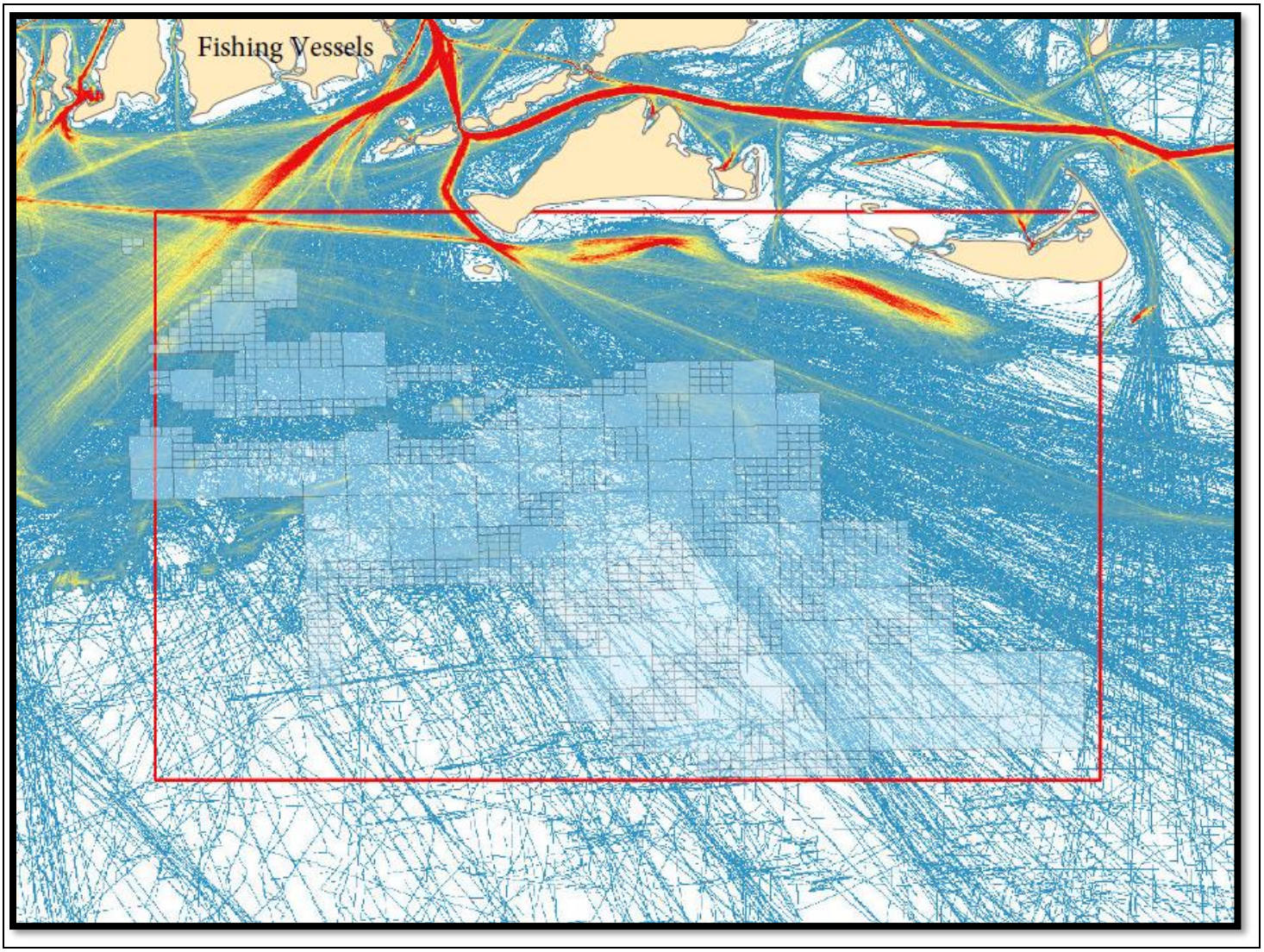
2015 COAST GUARD NAVCEN DATA

Cargo Vessels



2015 COAST GUARD NAVCEN DATA

Fishing Vessels



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APPENDIX H

AIS Abstract of Commercial Fishing Vessel Information

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Sizes of the largest fishing vessels transiting through WEA based on AIS data						
Year		MMSI		Length (rounded, in meters)		Name
2015		367411970		44		ESS PURSUIT
2015		366850380		36		F/V ENDURANCE
2015		367394060		35		F/V RELENTLESS
2015		368065000		34		F/V PROVIDIAN
2015		366900670		33		F/V SUNLIGHT
2016		367411970		44		ESS PURSUIT
2016		367411950		44		ESS PRIDE
2016		367411920		44		ESS ENDEAVOR
2016		367010820		41		F/V SEA WATCHER
2016		367600150		39		VOYAGER
2017		367411970		44		ESS PURSUIT
2017		367411950		44		ESS PRIDE
2017		367411920		44		ESS ENDEAVOR
2017		367010820		41		F/V SEA WATCHER
2017		367600150		39		VOYAGER
2018		366983070		43		F/V CHALLENGER*
2018		367394060		42		F/V RELENTLESS
2018		367514630		42		ENDEAVOR
2018		367010820		40		F/V SEA WATCHER
2018		368016810		40		F/V FREEDOM

* Four commercial fishing vessels were listed as larger than F/V Challenger, according to AIS data, in 2018, including the FV JERSEY GIRL, MMSI 367010750. After cross-checking the data, we were not confident about their listed sizes to include them but the largest of the four appears to be 44 meters. Accordingly, we believe 144 feet to be representative of the largest commercial fishing vessels operating in the WEA.

NOAA-Licensed Commercial Fishing Vessels, by Home Port, In The Vicinity of the MA/RI Wind Energy Area

Note: Taken from NOAA's public database of Commercial Fishing Vessels Permits, June 2019. See: https://www.greateratlantic.fisheries.noaa.gov/aps/permits/data/index.html

	PORT	STATE	LENGTH (in feet)
1.	BLOCK ISLAND	RI	35
2.	BLOCK ISLAND	RI	34
3.	BLOCK ISLAND	RI	19
4.	BRISTOL	RI	26
5.	BRISTOL	RI	24
6.	CENTER MORICHES	NY	61.6
7.	CENTER MORICHES	NY	35.7
8.	CRANSTON	RI	24
9.	DAVISVILLE	RI	137.5
10.	DAVISVILLE	RI	128.2
11.	FAIRHAVEN	MA	97.2
12.	FAIRHAVEN	MA	93.5
13.	FAIRHAVEN	MA	93.5
14.	FAIRHAVEN	MA	84.3
15.	FAIRHAVEN	MA	83.9
16.	FAIRHAVEN	MA	83.7
17.	FAIRHAVEN	MA	78.5
18.	FAIRHAVEN	MA	74.9
19.	FAIRHAVEN	MA	69
20.	FAIRHAVEN	MA	65.4

21.	FAIRHAVEN	MA	59.4
22.	FAIRHAVEN	MA	52.5
23.	FAIRHAVEN	MA	45
24.	FAIRHAVEN	MA	44
25.	FAIRHAVEN	MA	44
26.	FAIRHAVEN	MA	42
27.	FAIRHAVEN	MA	38.30
28.	FAIRHAVEN	MA	35
29.	FAIRHAVEN	MA	34.2
30.	FAIRHAVEN	MA	34.11
31.	FAIRHAVEN	MA	34
32.	FAIRHAVEN	MA	24
33.	FAIRHAVEN	MA	20
34.	FAIRHAVEN	MA	104.5
35.	FALL RIVER	MA	31.4
36.	FALMOUTH	MA	35.8
37.	FALMOUTH	MA	32
38.	FALMOUTH	MA	26
39.	GALILEE	RI	56.7
40.	GALILEE	RI	43
41.	GALILEE	RI	40.7
42.	GALILEE	RI	40
43.	GALILEE	RI	39.3
44.	GALILEE	RI	34.9
45.	GALILEE	RI	34.3
46.	GALILEE	RI	32
47.	GALILEE	RI	30
48.	GALLILEE	RI	25

49.	GROTON	CT	44
50.	GROTON	CT	42
51.	GROTON	CT	42
52.	GROTON	CT	100.3
53.	HAMPTON BAYS	NY	59.8
54.	HAMPTON BAYS	NY	53.8
55.	HAMPTON BAYS	NY	46
56.	HAMPTON BAYS	NY	44.6
57.	HAMPTON BAYS	NY	44
58.	HAMPTON BAYS	NY	42
59.	HAMPTON BAYS	NY	41
60.	HAMPTON BAYS	NY	39.4
61.	HAMPTON BAYS	NY	38
62.	HAMPTON BAYS	NY	36
63.	HAMPTON BAYS	NY	35.3
64.	HAMPTON BAYS	NY	31.2
65.	JAMESTOWN	RI	32.6
66.	LITTLE COMPTON	RI	41
67.	LITTLE COMPTON	RI	36.8
68.	MATTAPOISETT	MA	33.6
69.	MATTAPOISETT	MA	28.2
70.	MATTITUCK	NY	30.6
71.	MATTITUCK	NY	16
72.	MEDFORD	MA	27
73.	MENEMSHA	MA	47
74.	MENEMSHA	MA	38.1
75.	MENEMSHA	MA	38
76.	MENEMSHA	MA	37.7

77.	MENEMSHA	MA	34
78.	MENEMSHA	MA	34
79.	MENEMSHA	MA	33.8
80.	MENEMSHA	MA	32
81.	MENEMSHA	MA	31.9
82.	MENEMSHA	MA	30.7
83.	MENEMSHA	MA	20
84.	MENEMSHA	MA	18
85.	MONTAUK	NY	92.3
86.	MONTAUK	NY	90.4
87.	MONTAUK	NY	88.2
88.	MONTAUK	NY	80.4
89.	MONTAUK	NY	76
90.	MONTAUK	NY	75.7
91.	MONTAUK	NY	73.9
92.	MONTAUK	NY	73
93.	MONTAUK	NY	72
94.	MONTAUK	NY	69.7
95.	MONTAUK	NY	64.8
96.	MONTAUK	NY	64.5
97.	MONTAUK	NY	63
98.	MONTAUK	NY	61.3
99.	MONTAUK	NY	60.8
100.	MONTAUK	NY	60.4
101.	MONTAUK	NY	59.3
102.	MONTAUK	NY	57
103.	MONTAUK	NY	57
104.	MONTAUK	NY	55.9

105.	MONTAUK	NY	55
106.	MONTAUK	NY	51
107.	MONTAUK	NY	51
108.	MONTAUK	NY	48.6
109.	MONTAUK	NY	47.3
110.	MONTAUK	NY	45.7
111.	MONTAUK	NY	45
112.	MONTAUK	NY	45
113.	MONTAUK	NY	45
114.	MONTAUK	NY	45
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116.	MONTAUK	NY	45
117.	MONTAUK	NY	44
118.	MONTAUK	NY	44
119.	MONTAUK	NY	44
120.	MONTAUK	NY	43.9
121.	MONTAUK	NY	43.9
122.	MONTAUK	NY	43
123.	MONTAUK	NY	43
124.	MONTAUK	NY	43
125.	MONTAUK	NY	42.3
126.	MONTAUK	NY	42.3
127.	MONTAUK	NY	42
128.	MONTAUK	NY	41.8
129.	MONTAUK	NY	41.7
130.	MONTAUK	NY	41.6
131.	MONTAUK	NY	41
132.	MONTAUK	NY	40.7

133.	MONTAUK	NY	40.1
134.	MONTAUK	NY	40
135.	MONTAUK	NY	39.9
136.	MONTAUK	NY	39.4
137.	MONTAUK	NY	39.1
138.	MONTAUK	NY	39
139.	MONTAUK	NY	39
140.	MONTAUK	NY	38.5
141.	MONTAUK	NY	38.4
142.	MONTAUK	NY	38.3
143.	MONTAUK	NY	38.2
144.	MONTAUK	NY	38.1
145.	MONTAUK	NY	38.1
146.	MONTAUK	NY	38.1
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149.	MONTAUK	NY	36.7
150.	MONTAUK	NY	36.3
151.	MONTAUK	NY	36
152.	MONTAUK	NY	35.3
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159.	MONTAUK	NY	35
160.	MONTAUK	NY	35

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172.	MONTAUK	NY	31.8
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174.	MONTAUK	NY	31.6
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185.	MONTAUK	NY	29
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202.	MONTAUK	NY	25
203.	MONTAUK	NY	25
204.	MONTAUK	NY	25
205.	MONTAUK	NY	24.5
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207.	MONTAUK	NY	21.25
208.	MONTAUK	NY	19
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210.	MONTAUK	NY	12
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214.	MYSTIC	CT	43.2
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216.	NANTUCKET	MA	35

217.	NANTUCKET	MA	35
218.	NANTUCKET	MA	35
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220.	NANTUCKET	MA	31.5
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360.	NEW BEDFORD	MA	80.3
361.	NEW BEDFORD	MA	80.2
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364.	NEW BEDFORD	MA	79.9
365.	NEW BEDFORD	MA	79.7
366.	NEW BEDFORD	MA	79.2
367.	NEW BEDFORD	MA	78.5
368.	NEW BEDFORD	MA	78.3
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377.	NEW BEDFORD	MA	76.6
378.	NEW BEDFORD	MA	76.5
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400.	NEW BEDFORD	MA	73.6
401.	NEW BEDFORD	MA	73.1
402.	NEW BEDFORD	MA	72.1
403.	NEW BEDFORD	MA	72.1
404.	NEW BEDFORD	MA	72.1
405.	NEW BEDFORD	MA	71.5
406.	NEW BEDFORD	MA	71.3
407.	NEW BEDFORD	MA	71.1
408.	NEW BEDFORD	MA	70.5
409.	NEW BEDFORD	MA	70.3
410.	NEW BEDFORD	MA	70.3
411.	NEW BEDFORD	MA	69.7
412.	NEW BEDFORD	MA	69.5

413.	NEW BEDFORD	MA	69.5
414.	NEW BEDFORD	MA	68.4
415.	NEW BEDFORD	MA	68.4
416.	NEW BEDFORD	MA	67.8
417.	NEW BEDFORD	MA	66.4
418.	NEW BEDFORD	MA	65.4
419.	NEW BEDFORD	MA	65.2
420.	NEW BEDFORD	MA	65
421.	NEW BEDFORD	MA	64.9
422.	NEW BEDFORD	MA	64.8
423.	NEW BEDFORD	MA	64.8
424.	NEW BEDFORD	MA	64.7
425.	NEW BEDFORD	MA	63
426.	NEW BEDFORD	MA	63
427.	NEW BEDFORD	MA	62.9
428.	NEW BEDFORD	MA	62.2
429.	NEW BEDFORD	MA	61
430.	NEW BEDFORD	MA	61
431.	NEW BEDFORD	MA	60.6
432.	NEW BEDFORD	MA	60
433.	NEW BEDFORD	MA	60
434.	NEW BEDFORD	MA	6
435.	NEW BEDFORD	MA	58
436.	NEW BEDFORD	MA	57.9
437.	NEW BEDFORD	MA	56.6
438.	NEW BEDFORD	MA	55.2
439.	NEW BEDFORD	MA	55
440.	NEW BEDFORD	MA	55

441.	NEW BEDFORD	MA	51.6
442.	NEW BEDFORD	MA	51.4
443.	NEW BEDFORD	MA	51
444.	NEW BEDFORD	MA	49.11
445.	NEW BEDFORD	MA	47.1
446.	NEW BEDFORD	MA	47
447.	NEW BEDFORD	MA	46.8
448.	NEW BEDFORD	MA	45.1
449.	NEW BEDFORD	MA	44.11
450.	NEW BEDFORD	MA	44
451.	NEW BEDFORD	MA	44
452.	NEW BEDFORD	MA	43.5
453.	NEW BEDFORD	MA	42
454.	NEW BEDFORD	MA	42
455.	NEW BEDFORD	MA	41
456.	NEW BEDFORD	MA	38.1
457.	NEW BEDFORD	MA	36.8
458.	NEW BEDFORD	MA	32.2
459.	NEW BEDFORD	MA	32
460.	NEW BEDFORD	MA	29.1
461.	NEW BEDFORD	MA	28.2
462.	NEW BEDFORD	MA	25.2
463.	NEW BEDFORD	MA	25
464.	NEW BEDFORD	MA	21
465.	NEW BEDFORD	MA	20.9
466.	NEW BEDFORD	MA	19
467.	NEW BEDFORD	MA	18
468.	NEW BEDFORD	MA	16

469.	NEW BEDFORD	MA	15.8
470.	NEW BEDFORD	MA	14.1
471.	NEW BEDFORD	MA	14
472.	NEW BEDFORD	MA	13
473.	NEW BEDFORD	MA	129.5
474.	NEW BEDFORD	MA	120.8
475.	NEW BEDFORD	MA	12
476.	NEW BEDFORD	MA	11.1
477.	NEW BEDFORD	MA	108.6
478.	NEW BEDFORD	MA	107.2
479.	NEW BEDFORD	MA	106.2
480.	NEW BEDFORD	MA	101.3
481.	NEW BEDFORD	MA	101.3
482.	NEW BEDFORD	MA	10
483.	NEW BEDFORD	MA	10
484.	NEW LONDON	CT	80
485.	NEW LONDON	CT	52
486.	NEW LONDON	CT	49
487.	NEW LONDON	CT	49
488.	NEW LONDON	CT	44.3
489.	NEW LONDON	CT	42.5
490.	NEW LONDON	CT	39.9
491.	NEW LONDON	CT	39.1
492.	NEW LONDON	CT	38.2
493.	NEW LONDON	CT	38.1
494.	NEW LONDON	CT	36.1
495.	NEWPORT	RI	77
496.	NEWPORT	RI	76

497.	NEWPORT	RI	75.5
498.	NEWPORT	RI	69.4
499.	NEWPORT	RI	65.8
500.	NEWPORT	RI	64.9
501.	NEWPORT	RI	63.5
502.	NEWPORT	RI	62.1
503.	NEWPORT	RI	60
504.	NEWPORT	RI	43
505.	NEWPORT	RI	42
506.	NEWPORT	RI	40.1
507.	NEWPORT	RI	40
508.	NEWPORT	RI	40
509.	NEWPORT	RI	39
510.	NEWPORT	RI	39
511.	NEWPORT	RI	38
512.	NEWPORT	RI	37.9
513.	NEWPORT	RI	36.4
514.	NEWPORT	RI	32
515.	NEWPORT	RI	20
516.	NEWPORT	RI	15
517.	NEWPORT	RI	13
518.	NEWPORT	RI	10
519.	NIANTIC	CT	64
520.	NIANTIC	CT	36.4
521.	NOANK	CT	59.2
522.	NOANK	CT	50
523.	NOANK	CT	42
524.	NOANK	CT	42

525.	NOANK	CT	38.1
526.	NOANK	CT	38
527.	NOANK	CT	24
528.	NORTH KINGSTOWN	RI	30.5
529.	NORTH KINGSTOWN	RI	25.7
530.	NORWALK	CT	55
531.	OLD SAYBROOK	CT	28.4
532.	ORIENT	NY	44.8
533.	ORIENT	NY	39.9
534.	ORIENT POINT	NY	40.3
535.	ORIENT POINT	NY	31.3
536.	POINT JUDITH	RI	83
537.	POINT JUDITH	RI	81.3
538.	POINT JUDITH	RI	80
539.	POINT JUDITH	RI	79.3
540.	POINT JUDITH	RI	78.6
541.	POINT JUDITH	RI	78.5
542.	POINT JUDITH	RI	77.7
543.	POINT JUDITH	RI	77.2
544.	POINT JUDITH	RI	76.8
545.	POINT JUDITH	RI	76.7
546.	POINT JUDITH	RI	76.4
547.	POINT JUDITH	RI	75.7
548.	POINT JUDITH	RI	73.5
549.	POINT JUDITH	RI	72.7
550.	POINT JUDITH	RI	72.4
551.	POINT JUDITH	RI	72.2
552.	POINT JUDITH	RI	72

553.	POINT JUDITH	RI	71.6
554.	POINT JUDITH	RI	71.2
555.	POINT JUDITH	RI	69.2
556.	POINT JUDITH	RI	67.7
557.	POINT JUDITH	RI	67.5
558.	POINT JUDITH	RI	67.1
559.	POINT JUDITH	RI	67.1
560.	POINT JUDITH	RI	67.1
561.	POINT JUDITH	RI	67
562.	POINT JUDITH	RI	67
563.	POINT JUDITH	RI	65.7
564.	POINT JUDITH	RI	65.2
565.	POINT JUDITH	RI	64.9
566.	POINT JUDITH	RI	64.9
567.	POINT JUDITH	RI	64.8
568.	POINT JUDITH	RI	64.4
569.	POINT JUDITH	RI	64.3
570.	POINT JUDITH	RI	63
571.	POINT JUDITH	RI	62.7
572.	POINT JUDITH	RI	62.7
573.	POINT JUDITH	RI	62.1
574.	POINT JUDITH	RI	61.9
575.	POINT JUDITH	RI	61.5
576.	POINT JUDITH	RI	60.8
577.	POINT JUDITH	RI	59.2
578.	POINT JUDITH	RI	58.7
579.	POINT JUDITH	RI	58.2
580.	POINT JUDITH	RI	56.9

581.	POINT JUDITH	RI	56.5
582.	POINT JUDITH	RI	55
583.	POINT JUDITH	RI	55
584.	POINT JUDITH	RI	54
585.	POINT JUDITH	RI	52.6
586.	POINT JUDITH	RI	50
587.	POINT JUDITH	RI	50
588.	POINT JUDITH	RI	50
589.	POINT JUDITH	RI	49.8
590.	POINT JUDITH	RI	46.2
591.	POINT JUDITH	RI	46
592.	POINT JUDITH	RI	46
593.	POINT JUDITH	RI	46
594.	POINT JUDITH	RI	45
595.	POINT JUDITH	RI	45
596.	POINT JUDITH	RI	45
597.	POINT JUDITH	RI	44.5
598.	POINT JUDITH	RI	44.11
599.	POINT JUDITH	RI	44
600.	POINT JUDITH	RI	44
601.	POINT JUDITH	RI	44
602.	POINT JUDITH	RI	43.5
603.	POINT JUDITH	RI	43
604.	POINT JUDITH	RI	43
605.	POINT JUDITH	RI	42.5
606.	POINT JUDITH	RI	42.3
607.	POINT JUDITH	RI	42.2
608.	POINT JUDITH	RI	42.2

609.	POINT JUDITH	RI	42
610.	POINT JUDITH	RI	41.2
611.	POINT JUDITH	RI	40.7
612.	POINT JUDITH	RI	40
613.	POINT JUDITH	RI	40
614.	POINT JUDITH	RI	40
615.	POINT JUDITH	RI	40
616.	POINT JUDITH	RI	39.9
617.	POINT JUDITH	RI	39.3
618.	POINT JUDITH	RI	39.2
619.	POINT JUDITH	RI	38.3
620.	POINT JUDITH	RI	38.3
621.	POINT JUDITH	RI	38.2
622.	POINT JUDITH	RI	38.1
623.	POINT JUDITH	RI	38.1
624.	POINT JUDITH	RI	38
625.	POINT JUDITH	RI	38
626.	POINT JUDITH	RI	38
627.	POINT JUDITH	RI	37.5
628.	POINT JUDITH	RI	37
629.	POINT JUDITH	RI	37
630.	POINT JUDITH	RI	36.7
631.	POINT JUDITH	RI	36.7
632.	POINT JUDITH	RI	36
633.	POINT JUDITH	RI	35.9
634.	POINT JUDITH	RI	35.8
635.	POINT JUDITH	RI	35.7
636.	POINT JUDITH	RI	35

637.	POINT JUDITH	RI	35
638.	POINT JUDITH	RI	35
639.	POINT JUDITH	RI	35
640.	POINT JUDITH	RI	35
641.	POINT JUDITH	RI	34.3
642.	POINT JUDITH	RI	34.1
643.	POINT JUDITH	RI	33
644.	POINT JUDITH	RI	31.8
645.	POINT JUDITH	RI	31.3
646.	POINT JUDITH	RI	30.1
647.	POINT JUDITH	RI	29.7
648.	POINT JUDITH	RI	29.6
649.	POINT JUDITH	RI	28.5
650.	POINT JUDITH	RI	28.2
651.	POINT JUDITH	RI	28.2
652.	POINT JUDITH	RI	25
653.	POINT JUDITH	RI	23
654.	POINT JUDITH	RI	21
655.	POINT JUDITH	RI	18
656.	POINT JUDITH	RI	16
657.	POINT JUDITH	RI	14
658.	POINT JUDITH	RI	12
659.	POINT JUDITH	RI	10
660.	POINT LOOKOUT	NY	62
661.	POINT LOOKOUT	NY	56.8
662.	PORT JEFFERSON	NY	61.6
663.	PORT JEFFERSON	NY	24
664.	PORT JEFFERSON	NY	22

665.	PORTSMOUTH	RI	62
666.	PORTSMOUTH	RI	24
667.	PROVIDENCE	RI	66.6
668.	SAKONET PT	RI	26
669.	SAKONNET	RI	8
670.	SAKONNET	RI	50
671.	SAKONNET	RI	45
672.	SAKONNET	RI	32
673.	SAKONNET	RI	18
674.	SAKONNET	RI	15
675.	SAKONNET POINT	RI	53
676.	SAKONNET POINT	RI	40.8
677.	SAKONNET POINT	RI	38.8
678.	SAKONNET POINT	RI	35
679.	SHINNECOCK	NY	68.5
680.	SHINNECOCK	NY	64.8
681.	SHINNECOCK	NY	55
682.	SHINNECOCK	NY	50
683.	SHINNECOCK	NY	49.9
684.	SHINNECOCK	NY	47.7
685.	SHINNECOCK	NY	45
686.	SHINNECOCK	NY	40
687.	SHINNECOCK	NY	38.8
688.	SHINNECOCK	NY	38.2
689.	SHINNECOCK	NY	38
690.	SHINNECOCK	NY	35
691.	SHINNECOCK	NY	34.6
692.	SHINNECOCK	NY	31.7

693.	SHINNECOCK	NY	15
694.	SNUG HARBOR	RI	64
695.	SNUG HARBOR	RI	45
696.	SNUG HARBOR	RI	45
697.	SNUG HARBOR	RI	37.5
698.	SNUG HARBOR	RI	37
699.	SNUG HARBOR	RI	36
700.	SNUG HARBOR	RI	33.3
701.	SNUG HARBOR	RI	32.9
702.	SOUTH DARTMOUTH	MA	32
703.	SOUTH DARTMOUTH	MA	28.6
704.	SOUTH DARTMOUTH	MA	28
705.	SOUTH KINGSTOWN	RI	74
706.	SOUTH KINGSTOWN	RI	23
707.	SOUTHOLD	NY	38
708.	SOUTHOLD	NY	29.1
709.	SOUTHOLD	NY	28
710.	STONINGTON	CT	9.4
711.	STONINGTON	CT	81.4
712.	STONINGTON	CT	77
713.	STONINGTON	CT	74.1
714.	STONINGTON	CT	71.9
715.	STONINGTON	CT	53.4
716.	STONINGTON	CT	50
717.	STONINGTON	CT	43.3
718.	STONINGTON	CT	42.9

719.	STONINGTON	CT	42.2
720.	STONINGTON	CT	42
721.	STONINGTON	CT	39.5
722.	STONINGTON	CT	36
723.	STONINGTON	CT	32
724.	STONINGTON	CT	30.4
725.	STONINGTON	CT	30.3
726.	STRATFORD	CT	54
727.	TIVERTON	RI	69.2
728.	TIVERTON	RI	50
729.	TIVERTON	RI	42
730.	TIVERTON	RI	40
731.	TIVERTON	RI	38.3
732.	TIVERTON	RI	30
733.	VINEYARD HAVEN	MA	65.8
734.	VINEYARD HAVEN	MA	49.3
735.	VINEYARD HAVEN	MA	39.9
736.	VINEYARD HAVEN	MA	29
737.	VINEYARD HAVEN	MA	22.9
738.	WAKEFIELD	RI	38
739.	WAKEFIELD	RI	37.1
740.	WAKEFIELD	RI	35.8
741.	WAKEFIELD	RI	35.1
742.	WAKEFIELD	RI	13
743.	WAKEFIELD	RI	13
744.	WAKEFIELD	RI	12
745.	WARREN	RI	92.9
746.	WARWICK	RI	43

747.	WARWICK	RI	38
748.	WARWICK	RI	37.3
749.	WARWICK	RI	23
750.	WARWICK	RI	23
751.	WATCH HILL	RI	32.7
752.	WATERFORD	CT	80
753.	WATERFORD	CT	52.6
754.	WATERFORD	CT	48.8
755.	WATERFORD	CT	42.2
756.	WATERFORD	CT	41.8
757.	WATERFORD	CT	38.7
758.	WATERFORD	CT	36
759.	WATERFORD	CT	30.6
760.	WESTERLY	RI	41.5
761.	WESTERLY	RI	36.4
762.	WESTPORT	MA	63
763.	WESTPORT	MA	47
764.	WESTPORT	MA	46
765.	WESTPORT	MA	45.2
766.	WESTPORT	MA	44
767.	WESTPORT	MA	43.9
768.	WESTPORT	MA	41.8
769.	WESTPORT	MA	39.3
770.	WESTPORT	MA	38
771.	WESTPORT	MA	36.8
772.	WESTPORT	MA	36.7
773.	WESTPORT	MA	35
774.	WESTPORT	MA	19

775.	WESTPORT	MA	12
776.	WESTPORT POINT	MA	47.4
777.	WESTPORT POINT	MA	37
778.	WICKFORD	RI	37.6
779.	WICKFORD	RI	24
780.	WICKFORD	RI	22
781.	WICKFORD	RI	12

APPENDIX I

WEATHER INFORMATION

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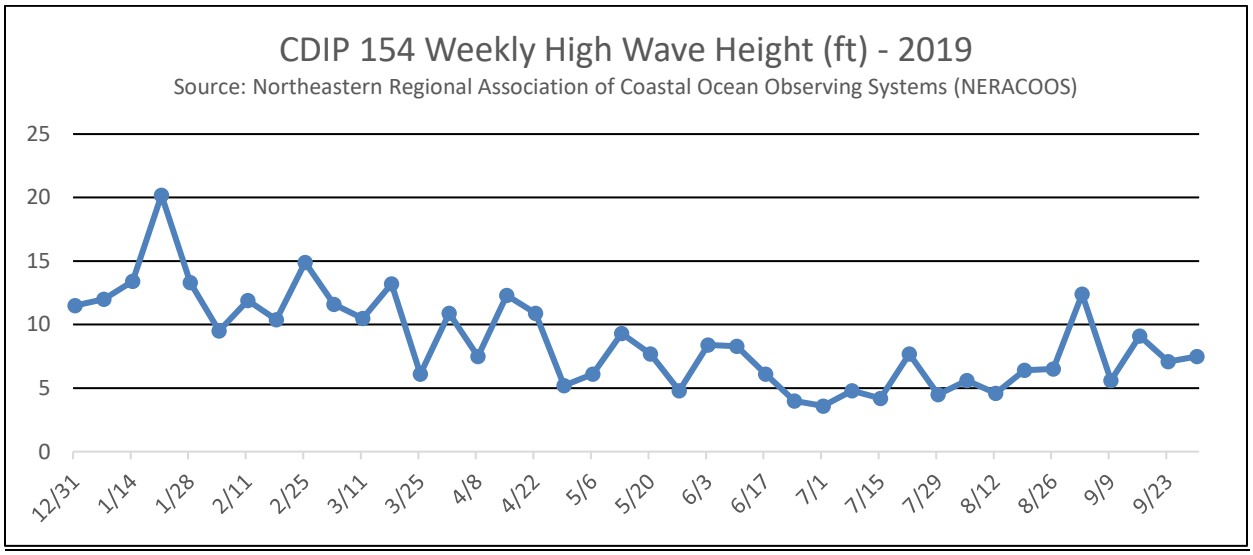
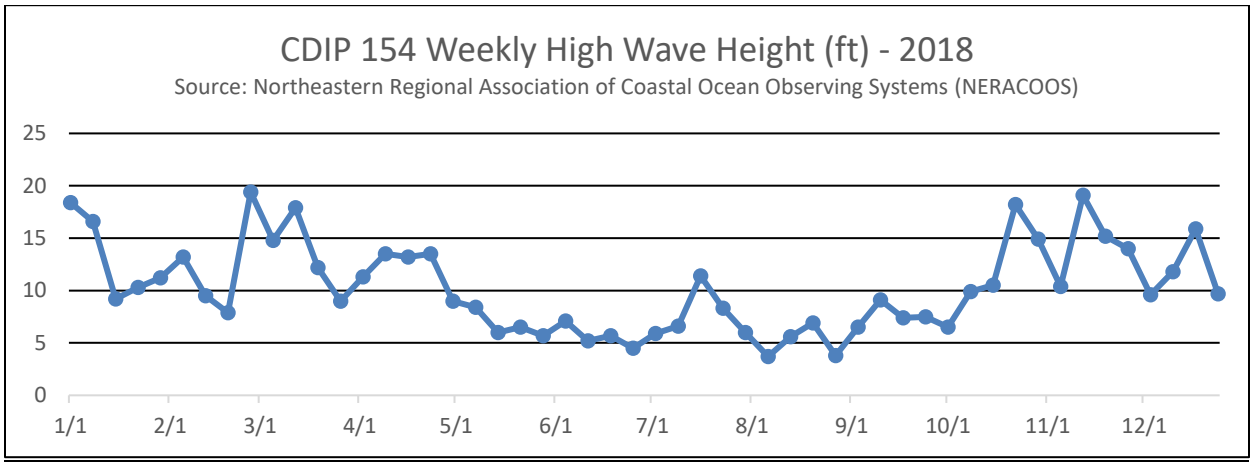
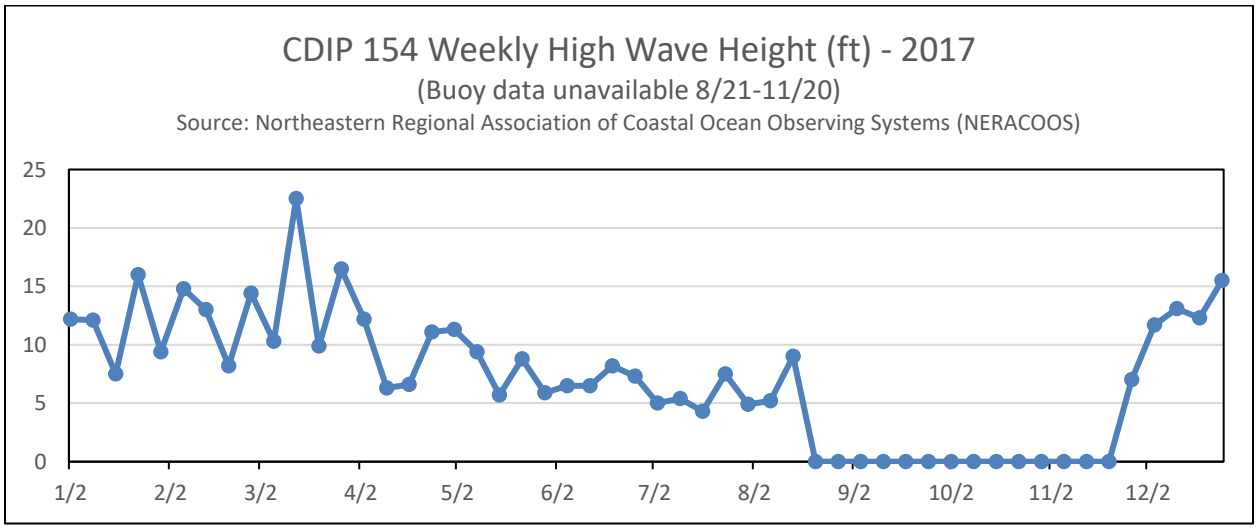
Weather Station Locations

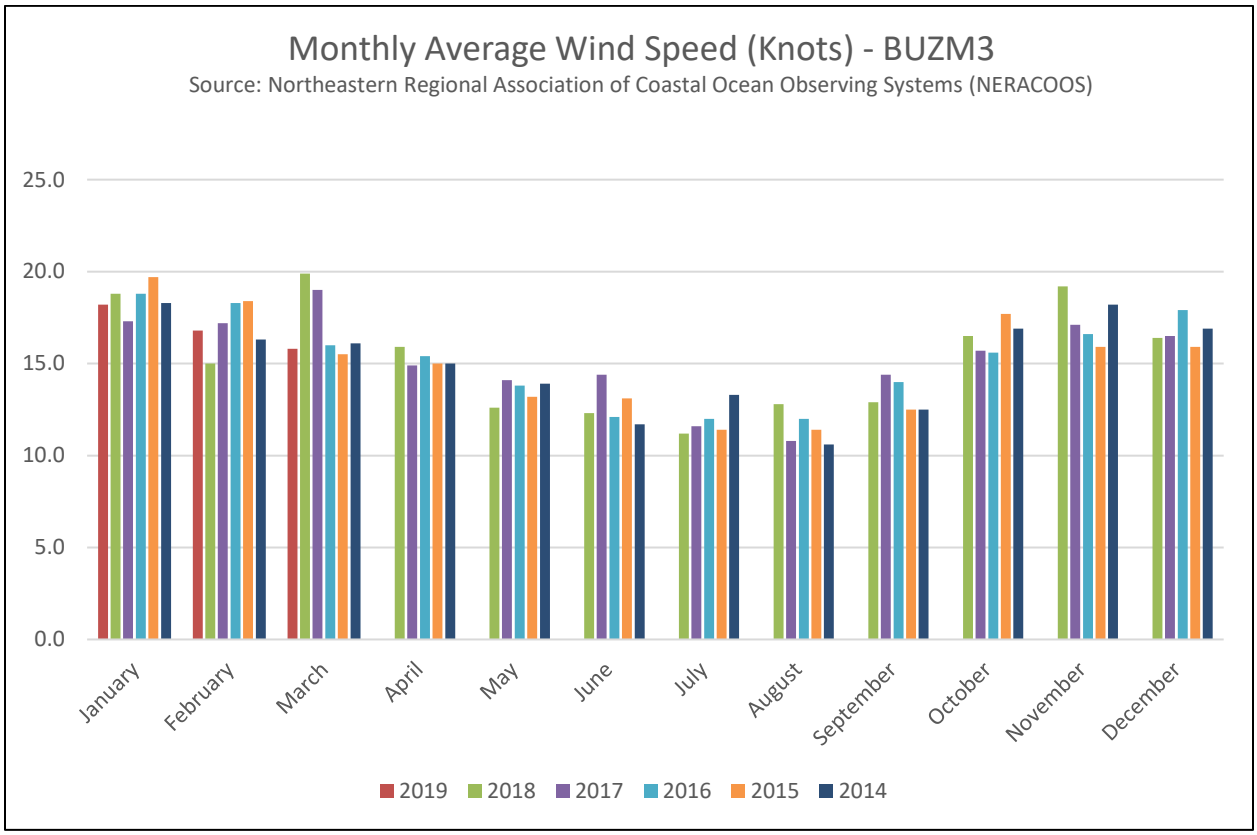
Weekly High Wave Height



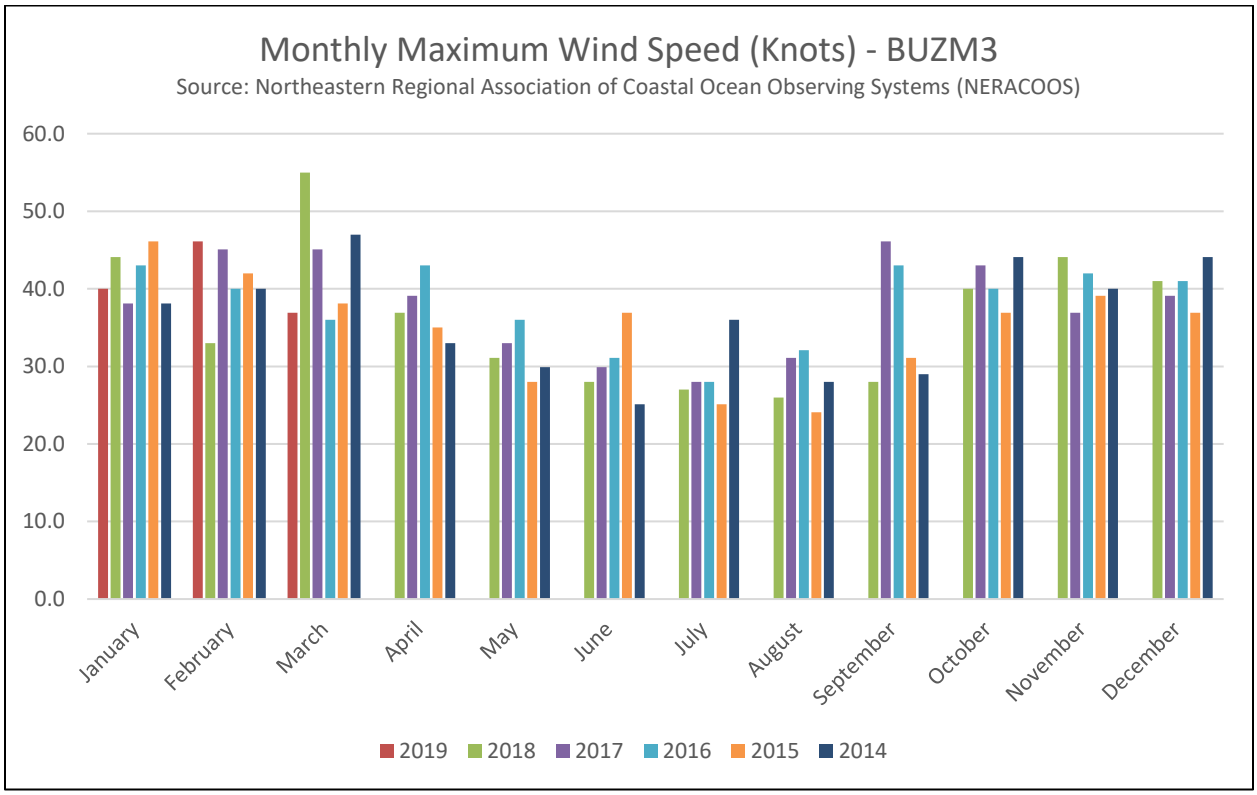


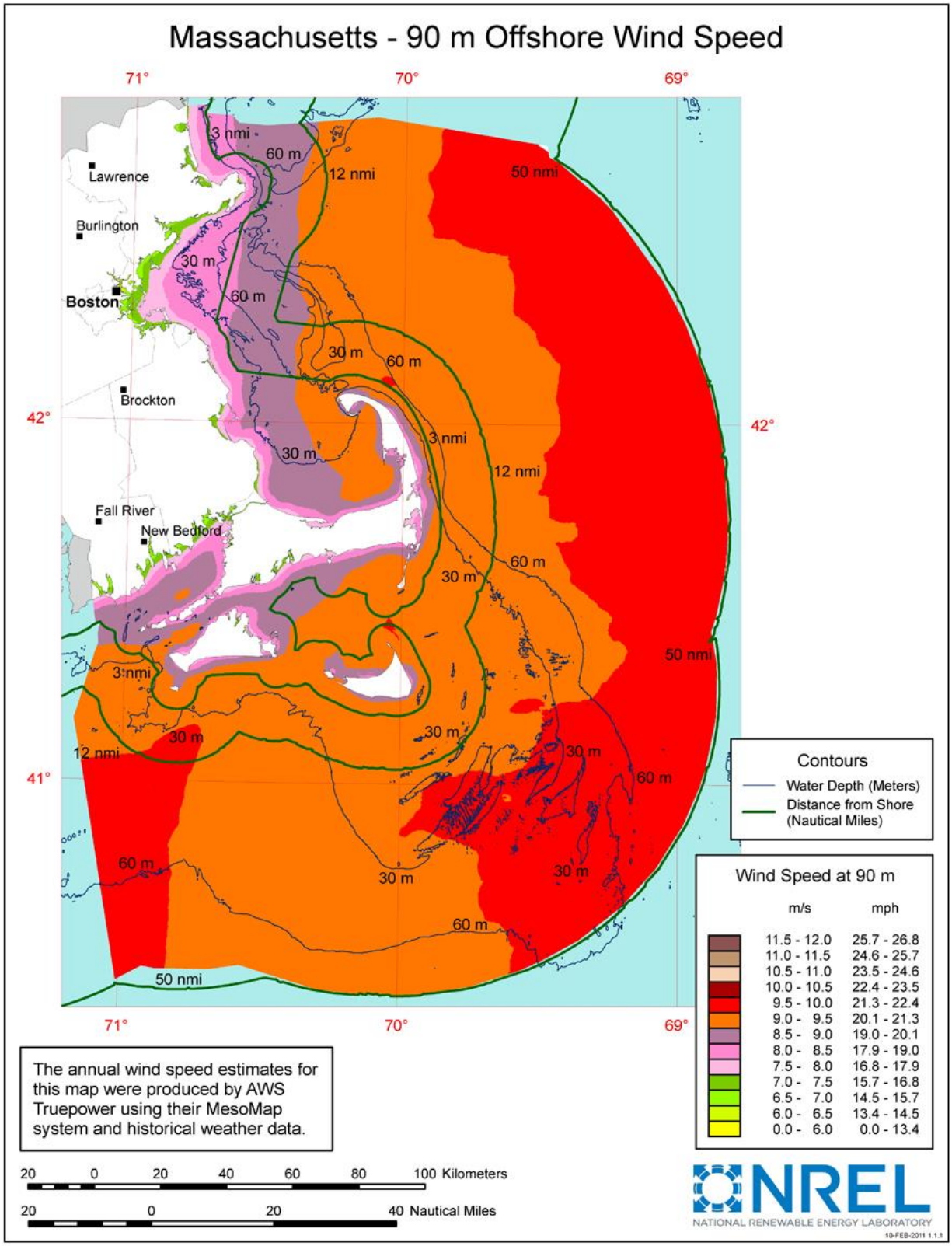


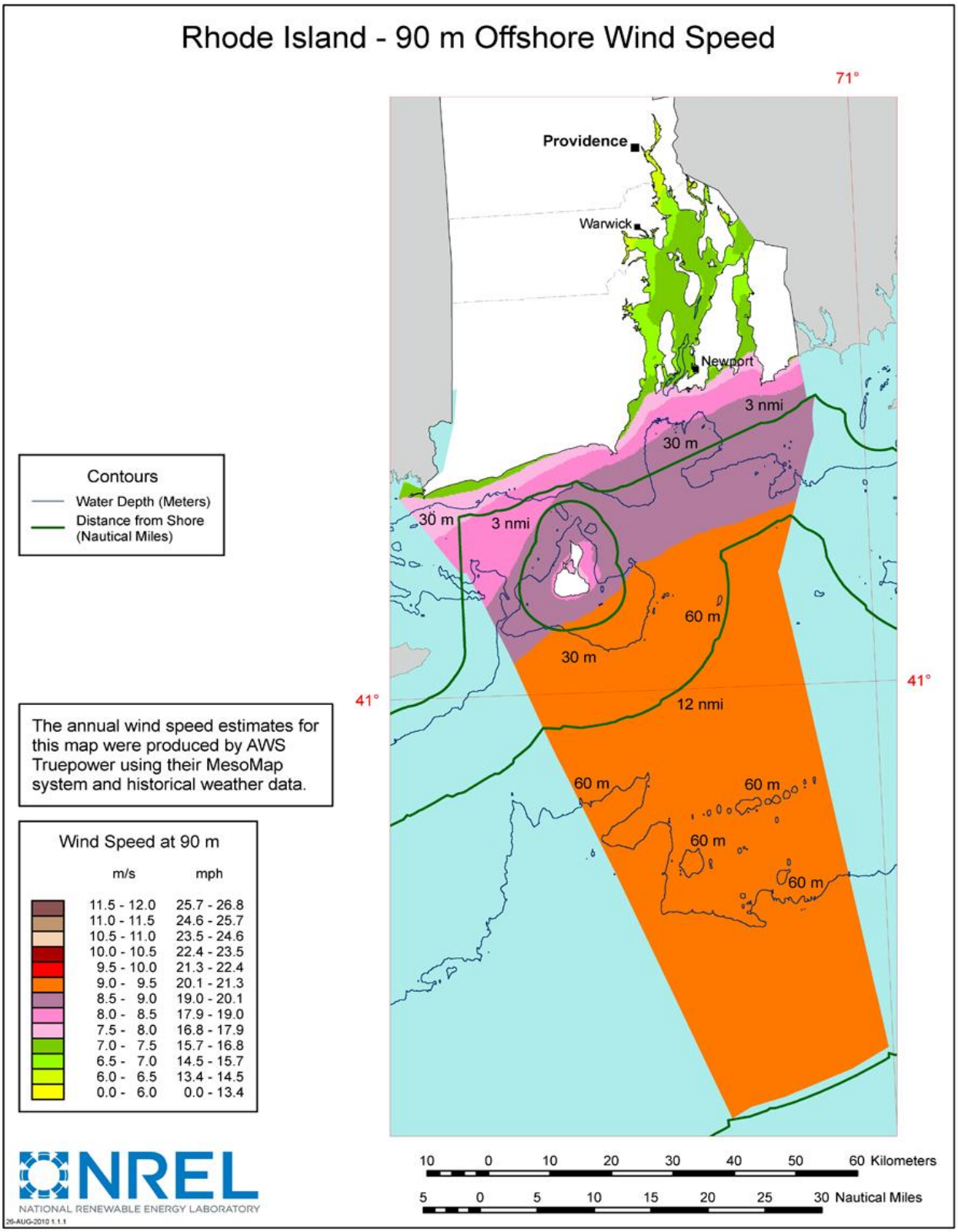
Monthly Average Wind Speed



Monthly Maximum Wind Speed




Massachusetts - 90 m Offshore Wind Speed
71°
70°
69°
42°
41°
Lawrence
Burlington
Boston
Brockton
Fall River
New Bedford
3 nmi
12 nmi
50 nmi
30 m
60 m
Contours
Water Depth (Meters)
Distance from Shore (Nautical Miles)
Wind Speed at 90 m
m/s
mph
11.5 - 12.0 25.7 - 26.8
11.0 - 11.5 24.6 - 25.7
10.5 - 11.0 23.5 - 24.6
10.0 - 10.5 22.4 - 23.5
9.5 - 10.0 21.3 - 22.4
9.0 - 9.5 20.1 - 21.3
8.5 - 9.0 19.0 - 20.1
8.0 - 8.5 17.9 - 19.0
7.5 - 8.0 16.8 - 17.9
7.0 - 7.5 15.7 - 16.8
6.5 - 7.0 14.5 - 15.7
6.0 - 6.5 13.4 - 14.5
0.0 - 6.0 0.0 - 13.4
The annual wind speed estimates for this map were produced by AWS Truepower using their MesoMap system and historical weather data.
20 0 20 40 60 80 100 Kilometers
20 0 20 40 Nautical Miles
NREL
NATIONAL RENEWABLE ENERGY LABORATORY
10-FEB-2011 1.1.1


Rhode Island - 90 m Offshore Wind Speed
71°
Providence
Warwick
Newport
3 nmi
30 m
30 m
3 nmi
60 m
30 m
41°
41°
12 nmi
60 m
60 m
60 m
60 m
Contours
Water Depth (Meters)
Distance from Shore (Nautical Miles)
The annual wind speed estimates for this map were produced by AWS Truepower using their MesoMap system and historical weather data.
Wind Speed at 90 m
m/s mph
11.5 - 12.0 25.7 - 26.8
11.0 - 11.5 24.6 - 25.7
10.5 - 11.0 23.5 - 24.6
10.0 - 10.5 22.4 - 23.5
9.5 - 10.0 21.3 - 22.4
9.0 - 9.5 20.1 - 21.3
8.5 - 9.0 19.0 - 20.1
8.0 - 8.5 17.9 - 19.0
7.5 - 8.0 16.8 - 17.9
7.0 - 7.5 15.7 - 16.8
6.5 - 7.0 14.5 - 15.7
6.0 - 6.5 13.4 - 14.5
0.0 - 6.0 0.0 - 13.4
NREL
NATIONAL RENEWABLE ENERGY LABORATORY
26-AUG-2010 1.1.1
10 0 10 20 30 40 50 60 Kilometers
5 0 5 10 15 20 25 30 Nautical Miles

ENCLOSURE 1

Federal Register Notice USCG-2019-0131

(84 FR 11314)

March 26, 2019

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to give notice that the Advisory Committee on Blood and Tissue Safety and Availability (ACBTSA) will hold a meeting on April 15–16, 2019. The notice is being amended to include a registration link for any individuals who wish to attend the meeting in-person, as well as a link to the ACBTSA website for more information.

DATES: The meeting will take place Monday April 15, 2019, from 8 a.m.–4:30 p.m. and Tuesday April 16, 2019, from 8:30 a.m.–4 p.m.

ADDRESSES: U.S. Department of Health & Human Services, Hubert H. Humphrey Building, (Conference Room 800), 200 Independence Ave. SW, Washington, DC 20201. Members of the public may also attend the meeting via webcast. Instructions for attending this virtual meeting will be posted prior to the meeting at: *https://www.hhs.gov/ash/advisory-committees/tickbornedisease/meetings/index.html.*

FOR FURTHER INFORMATION CONTACT: Mr. James Berger, Designated Federal Officer for the ACBTSA, Senior Advisor for Blood and Tissue Policy, Office of the Assistant Secretary for Health, Department of Health and Human Services, Mary E. Switzer Building, 330 C Street SW, Suite L100, Washington, DC 20024. Phone: (202) 795–7697; Fax: (202) 691–2102; Email: *ACBTSA@hhs.gov.*

SUPPLEMENTARY INFORMATION: In-person attendance at the meetings is limited by security restrictions and the space available; therefore preregistration for public members is required and can be accomplished by registering at *https://www.eventbrite.com/e/50th-meeting-of-the-hhs-advisory-committee-on-blood-tissue-safety-availability-tickets-55285257694* by Monday, April 8, 2019. Members of the public may also attend the meeting via webcast. Instructions for attending this virtual meeting will be posted prior to the meeting at: *https://www.hhs.gov/ash/advisory-committees/tickbornedisease/meetings/index.html.* Non-U.S. citizens who plan to attend in person are required to provide additional information and must notify the Working Group support staff via email at *tickbornedisease@hhs.gov* before March 15, 2019. Members of the public who wish to attend the meetings should enter from Independence Avenue. Please allow extra time to get through security.

Dated: March 13, 2019.

James J. Berger,

Senior Advisor for Blood and Tissue Policy.

[FR Doc. 2019–05716 Filed 3–25–19; 8:45 am]

BILLING CODE 4150–28–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meeting

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meeting.

The meeting will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Center for Scientific Review Special Emphasis Panel; International Research Training and Mentored Research Career Development Projects.

Date: April 2–3, 2019.

Time: 1:00 p.m. to 2:30 p.m.

Agenda: To review and evaluate grant applications.

Place: Embassy Suites at the Chevy Chase Pavilion, 4300 Military Road NW, Washington, DC 20015.

Contact Person: Seetha Bhagavan, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 5194, MSC 7846, Bethesda, MD 20892, (301) 237–9838, *bhagavas@csr.nih.gov.*

This notice is being published less than 15 days prior to the meeting due to the timing limitations imposed by the review and funding cycle.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: March 20, 2019.

Natasha M. Copeland,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2019–05673 Filed 3–25–19; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HOMELAND SECURITY

Coast Guard

[Docket No. USCG–2019–0131]

Port Access Route Study: The Areas Offshore of Massachusetts and Rhode Island

AGENCY: Coast Guard, DHS.

ACTION: Notice of study and public meetings; request for comments.

SUMMARY: In order to provide safe access routes for the movement of vessel traffic offshore of the Massachusetts and Rhode Island area of the United States for vessels proceeding to or from ports or places of the United States and transiting within the United States Exclusive Economic Zone (EEZ), the Coast Guard is conducting a Massachusetts and Rhode Island Port Access Route Study (MARIPARS) to evaluate the need for establishing vessel routing measures. The information gathered during this MARIPARS may result in the establishment of one or more vessel routing measures. The goal of the MARIPARS is to enhance navigational safety by examining existing shipping routes and waterway uses. The recommendations of the study may lead to future rulemaking action or appropriate international agreements.

DATES: Comments and related material must be received by the Coast Guard on or before May 28, 2019. Two public meetings will be held to provide an opportunity for comments about the MARIPARS on Tuesday, April 23, 2019, from 6 p.m. to 9 p.m. and on Thursday, April 25, 2019, from 6 p.m. to 9 p.m. Written comments and related material may also be submitted to Coast Guard personnel at the meetings. All comments and related material submitted after the meetings must be received by the Coast Guard on or before May 28, 2019. Commenters should be aware that the electronic Federal Docket Management System will not accept comments after midnight Eastern Daylight Time on the last day of the comment period.

ADDRESSES: You may submit comments identified by docket number USCG–2019–0131 using the Federal eRulemaking Portal at *http://www.regulations.gov.* See the "Public Participation and Request for Comments" portion of the **SUPPLEMENTARY INFORMATION** section for further instructions on submitting comments.

The public meeting on Tuesday, April 23, 2019, from 6 p.m. to 9 p.m., will be

held at Corless Auditorium (Watkins Laboratory Building), University of Rhode Island, Graduate School of Oceanography at 215 South Ferry Road, Narragansett, RI 02882–1197.

The public meeting on Thursday, April 25, 2019, from 6 p.m. to 9 p.m., will be held at Flanagan Hall, Massachusetts Maritime Academy at 101 Academy Drive, Buzzards Bay, MA 02532.

FOR FURTHER INFORMATION CONTACT: If you have questions about this notice or study call or email the Project Officer, Mr. Edward G. LeBlanc, Chief of Coast Guard Sector Southeastern New England Waterways Management Division, telephone (401) 435–2351; email *Edward.G.LeBlanc@uscg.mil.*

SUPPLEMENTARY INFORMATION:

I. Public Participation and Request for Comments

We encourage you to participate in this study by submitting comments and related materials to the online public docket or orally at the public meetings. All comments received will be posted, without change, to *http://www.regulations.gov* and will include any personal information you have provided.

A. Submitting Comments: If you submit comments to the online public docket, please include the docket number for this rulemaking (USCG–2019–0131), indicate the specific section of this document to which each comment applies, and provide a reason for each suggestion or recommendation. We accept anonymous comments.

To submit your comment online, go to *http://www.regulations.gov,* and insert ''USCG–2019–0131'' in the ''search box.'' Click ''Search''. Then click ''Comment Now.'' We will consider all comments and material received during the comment period.

B. Public Meetings: We plan to hold two public meetings to receive oral comments on this notice. If you bring written comments to the public meeting, you may submit them to Mr. Edward G. LeBlanc. These comments will be added to our online public docket. We recommend that you include your name and a mailing address, an email address, or a telephone number in the body of your document so that we can contact you if we have questions regarding your submission. Attendance at the public meeting is not required. We will provide a written summary of the oral comments received and will place that summary in the docket.

The first public meeting on Tuesday, April 23, 2019, from 6 p.m. to 9 p.m., will be held at Corless Auditorium (Watkins Laboratory Building), University of Rhode Island, Graduate School of Oceanography, 215 South Ferry Road, Narragansett, RI 02882–1197.

The second public meeting on Thursday, April 25, 2019, from 6 p.m. to 9 p.m., will be held at Flanagan Hall, Massachusetts Maritime Academy, 101 Academy Drive, Buzzards Bay, MA 02532.

For information on facilities or services for individuals with disabilities or to request special assistance at the public meeting, contact Mr. Edward Leblanc at the telephone number or email address indicated under the **FOR FURTHER INFORMATION CONTACT** section of this notice.

C. Viewing the comments and documents: To view the comments and documents mentioned in this preamble as being available in the docket, go to *http://www.regulations.gov,* click on the ''read comments'' box, which will then become highlighted in blue. In the ''Keyword'' box insert ''USCG–2019–0131'' and click ''Search.'' Click the ''Open Docket Folder'' in the ''Actions'' column.

D. Privacy Act: Anyone can search the electronic form of comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, *etc.*). You may review a Privacy Act, system of records notice regarding our public dockets in the January 17, 2008, issue of the **Federal Register** (73 FR 3316) *https://www.federalregister.gov/documents/2008/01/17/E8-785/privacy-act-of-1974-system-of-records.*

II. Purpose and Background

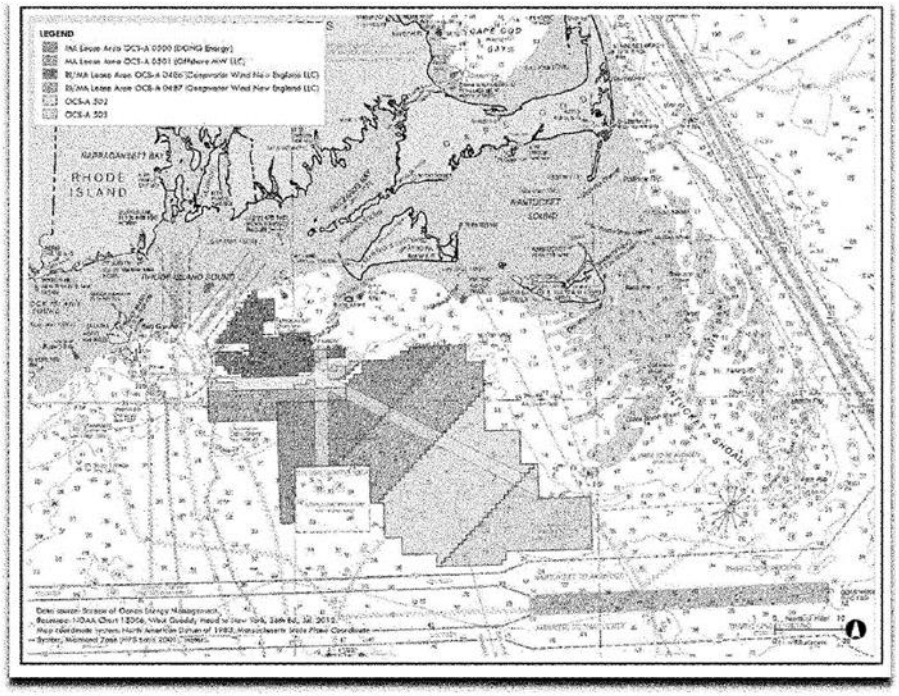
A. Requirement for Port Access Route Studies: Under 46 U.S.C. 70003 the Commandant of the Coast Guard may designate necessary fairways and traffic separation schemes (TSSs) to provide safe access routes for vessels proceeding to and from U.S. ports. The designation of fairways and TSSs recognizes the paramount right of navigation over all other uses in the designated areas.

Before establishing or adjusting fairways or TSSs, 46 U.S.C. 70003 requires the Coast Guard to conduct a port access route study (PARS), *i.e.* a study of potential traffic density and the need for safe access routes for vessels. Through the study process, we must coordinate with Federal, State, and foreign state agencies (as appropriate) and consider the views of maritime community representatives, environmental groups, and other interested stakeholders. A primary purpose of this coordination is, to the extent practicable, to reconcile the need for safe access routes with other reasonable waterway uses such as construction and operation of renewable energy facilities and other uses of the Atlantic Ocean in the study area.

B. *Previous port access route studies:* In 2011, the Coast Guard conducted a PARS which focused on the entire Atlantic Coast from Maine to Florida to analyze all vessel traffic proceeding to and from all Atlantic Coast ports and transiting through the United States Exclusive Economic Zone (EEZ). The Atlantic Coast Port Access Route Study Final Report is available at the Coast Guard Navigation Center website *https://navcen.uscg.gov/pdf/PARS/ACPARS_Final_Report_08Jul2015_Combined_Appendix_Enclosures_Final_After_LMI_Review.pdf.*

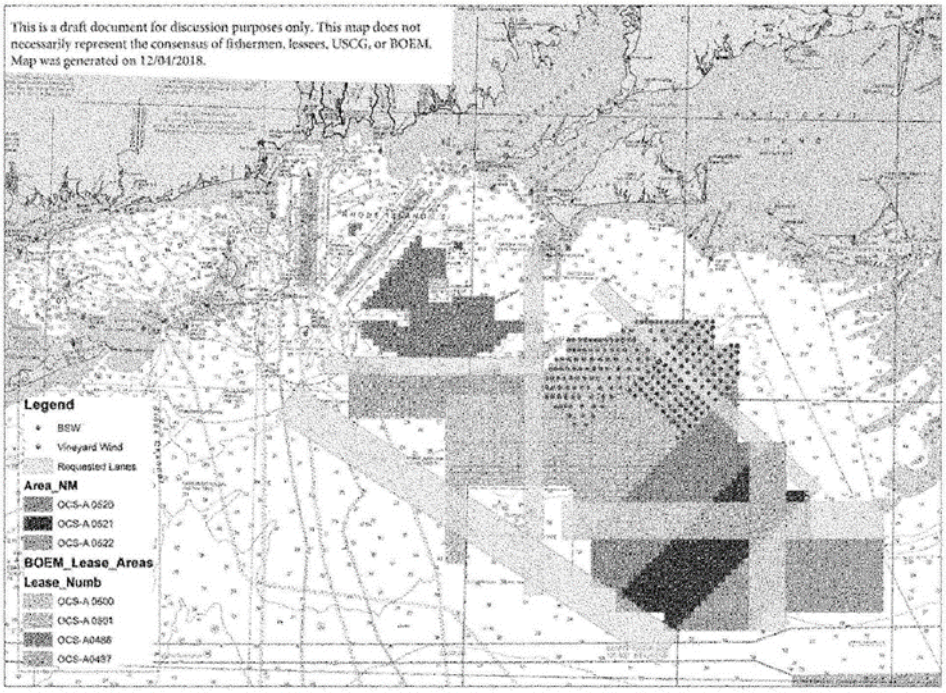
C. Necessity for a new port access route study: The Bureau of Ocean Energy Management (BOEM) has leased seven adjacent areas of the outer continental shelf (OCS) south of Martha's Vineyard and east of Rhode Island that together constitute the MA/RI Wind Energy Area (WEA). Potentially seven distinct offshore renewable energy installations (''wind farms'') could be constructed, each with its own number, size, type of wind turbines, and distinct turbine layout. The topic of safe navigation routes to facilitate vessel transit through the MA/RI WEA has been discussed at various forums throughout southeastern New England. The forums have included participation by the Coast Guard, other federal, state, and local agencies, fishing industry representatives, and a myriad of stakeholders. Various different transit plans have been proposed through these different forums.

In September 2018, the Massachusetts Coastal Zone Management Fisheries Working Group offered a vessel transit layout as depicted at *https://www.mass.gov/service-details/fisheries-working-group-on-offshore-wind-energy* and below:



A colored illustration is available in the docket.

In December 2018, the Responsible Offshore Development Alliance (RODA), *https://www.rodafisheries.org/,* offered an alternative layout for consideration by stakeholders:



A colored illustration is available in the docket.

Though neither of these alternatives achieved consensus of all stakeholders, they serve as a basis for further discussion of the issue and are provided here for that purpose. Comments on these alternative proposals are welcome, but comments need not be limited to them.

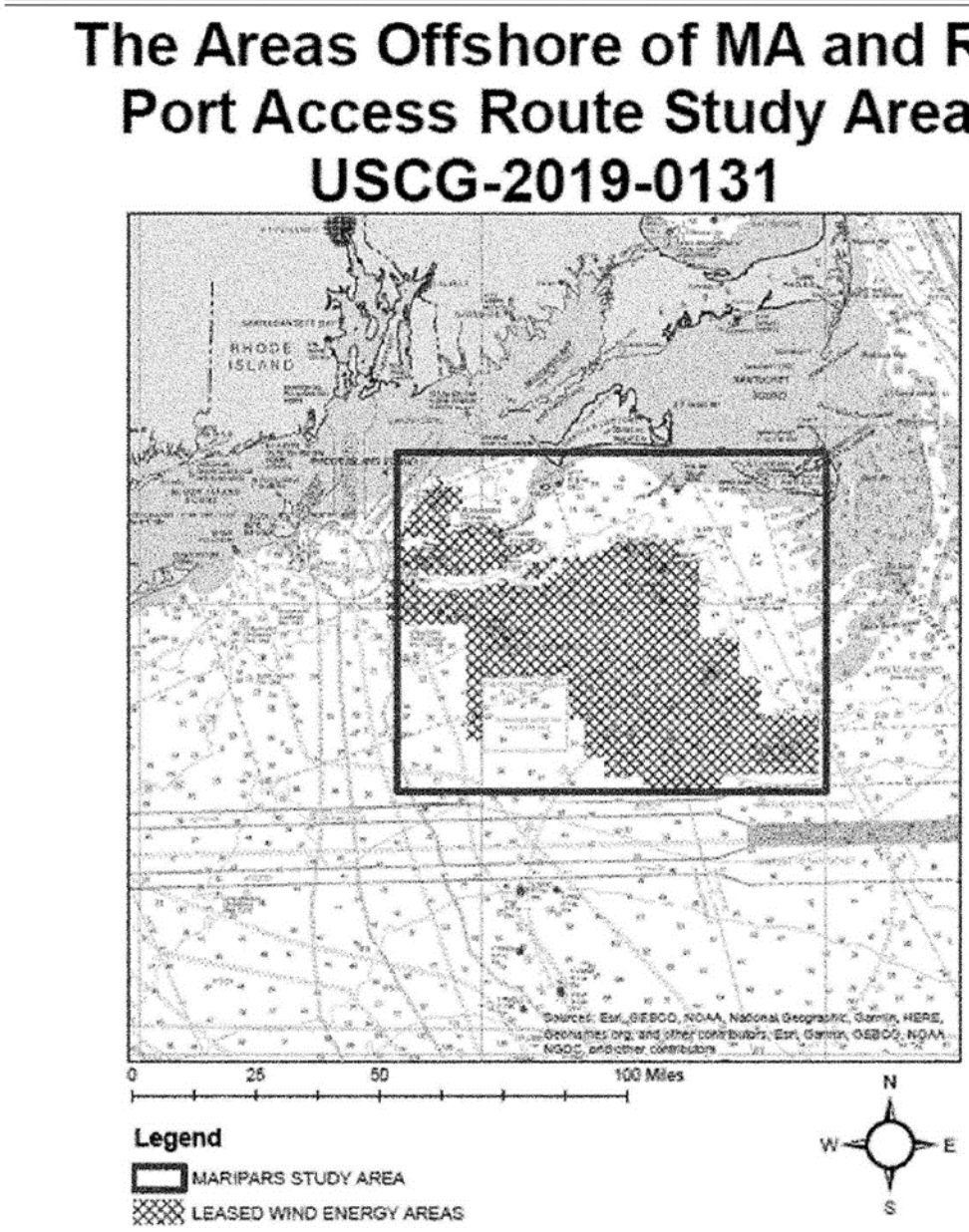
III. This PARS: Timeline, Study Area, and Process

The First Coast Guard District Waterways Management Division and Coast Guard Sector Southeastern New England Waterways Management Division will conduct this PARS. The study will begin upon publication of this notice and should take approximately six months to complete.

The study area is described as an area bounded by a line connecting the following geographic positions:

- 41°20′ N, 070°00′ W;
- 40°35′ N, 070°00′ W;
- 40°35′ N, 071°15′ W;
- 41°20′ N, 071°15′ W.

Below is an illustration showing the study area.



A color illustration is available in the docket.

The Coast Guard will use the PARS process described in Appendix D to Commandant Instruction 16003.2A, Marine Planning to Operate and Maintain the National Marine Transportation System (MTS) and Implement National Policy, which is available in the docket or see *https://media.defense.gov/2017/Mar/15/*

2001716995/-1/-1/0/CI_16003_2A.PDF, as a guide.

IV. Possible Scope of the Recommendations

We are attempting to determine what, if any, navigational safety concerns exist with vessel transits in the study area. We expect that information gathered during the study will help us identify anticipated impacts to navigation that may be experienced by mariners intending to transit in, around and through the study area which includes the MA/RI Wind Energy Area (MA/RI WEA) which is an area of wind farm leases south of Martha's Vineyard. All leases are currently being studied for development including the construction of wind energy generating turbines affixed to the sea floor. These installations could impact routes used to access ports (*e.g.,* transiting from Georges Bank through the MA/RI WEA to New Bedford; or from the vicinity of Montauk, NY/Point Judith, RI, to Georges Bank, etc.). Impacts could result from factors such as number, size, type, and layout of wind farm turbines and electric service platform(s), subsea cabling, increased vessel traffic, changing vessel traffic patterns, weather conditions, or navigational difficulty. Comments should include or reference data (both empirical and anecdotal) where available, published studies (academic, government, or industry), and other supporting documentation.

As part of this study, we may collect and analyze data and other information on vessel traffic characteristics and trends in an attempt to balance the needs of all waterway users.

This MARIPARS includes the following objectives:

1. Determine present vessel traffic types, patterns, and density;
2. Determine potential vessel traffic types, patterns, and density;
3. Determine if existing vessel routing measures are adequate;
4. Determine if existing vessel routing measures require modifications;
5. Determine the type of modifications;
6. Define and justify the needs for new vessel routing measures;
7. Determine the type of new vessel routing measures; and
8. Determine if the usage of the vessel routing measures must be mandatory for specific classes of vessels.

We will publish the results of the PARS in the **Federal Register**. It is possible the study may validate the status quo (no routing measures) and conclude that no changes are necessary. It is also possible the study may recommend one or more changes to enhance navigational safety and the efficiency of vessel traffic management. The recommendations may lead to future rulemakings or appropriate international agreements.

This notice is published under the authority of 46 U.S.C. 70004 and 5 U.S.C. 552(a).

Dated: March 21, 2019.

G. D. Case,

Captain, U.S. Coast Guard, Acting Commander, First Coast Guard District.

[FR Doc. 2019–05730 Filed 3–25–19; 8:45 am]

BILLING CODE 9110–04–P

DEPARTMENT OF HOMELAND SECURITY

U.S. Customs and Border Protection

Accreditation and Approval of NMK Resources, Inc. (Kenner, LA) as a Commercial Gauger and Laboratory

AGENCY: U.S. Customs and Border Protection, Department of Homeland Security.

ACTION: Notice of accreditation and approval of NMK Resources, Inc. (Kenner, LA), as a commercial gauger and laboratory.

SUMMARY: Notice is hereby given, pursuant to CBP regulations, that NMK Resources, Inc. (Kenner, LA), has been approved to gauge petroleum and certain petroleum products and accredited to test petroleum and certain petroleum products for customs purposes for the next three years as of July 20, 2017.

DATES: NMK Resources, Inc. (Kenner, LA) was approved and accredited as a commercial gauger and laboratory as of July 20, 2017. The next triennial inspection date will be scheduled for July 2020.

FOR FURTHER INFORMATION CONTACT: Melanie Glass, Laboratories and Scientific Services, U.S. Customs and Border Protection, 1300 Pennsylvania Avenue NW, Suite 1500N, Washington, DC 20229, tel. 202–344–1060.

SUPPLEMENTARY INFORMATION: Notice is hereby given pursuant to 19 CFR 151.12 and 19 CFR 151.13, that NMK Resources, Inc. 2330 Helena Street, Kenner, LA 70065, has been approved to gauge petroleum and certain petroleum products and accredited to test petroleum and certain petroleum products for customs purposes, in accordance with the provisions of 19 CFR 151.12 and 19 CFR 151.13.

NMK Resources, Inc. (Kenner, LA) is approved for the following gauging procedures for petroleum and certain petroleum products from the American Petroleum Institute (API):

API chapters	Title
3	Tank Gauging.
7	Temperature Determination.
8	Sampling.
11	Physical Properties.
12	Calculations.
17	Maritime Measurement.

NMK Resources, Inc. (Kenner, LA) is accredited for the following laboratory analysis procedures and methods for petroleum and certain petroleum products set forth by the U.S. Customs and Border Protection Laboratory Methods (CBPL) and American Society for Testing and Materials (ASTM):

CBPL No.	ASTM	Title
27–01	D287	Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method).
27–04	D95	Standard Test Method for Water in Petroleum Products and Bituminous Materials by Distillation.
27–06	D473	Standard Test Method for Sediment in Crude Oils and Fuel Oils by the Extraction Method.
27–11	D445	Standard Test Method for Kinematic Viscosity of Transparent and Opaque Liquids.
27–13	D4294	Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy-Dispersive X-ray Fluorescence Spectrometry.
27–48	D4052	Standard Test Method for Density and Relative Density of Liquids by Digital Density Meter.
27–50	D93	Standard Test Methods for Flash-Point by Pensky-Martens Closed Cup Tester.

Anyone wishing to employ this entity to conduct laboratory analyses and gauger services should request and receive written assurances from the entity that it is accredited or approved by the U.S. Customs and Border Protection to conduct the specific test or gauger service requested. Alternatively, inquiries regarding the specific test or

ENCLOSURE 2

Federal Register Notice USCG-2019-0131

(84 FR 14384)

April 10, 2019

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amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: National Institute of Neurological Disorders and Stroke Special Emphasis Panel; Network Clinical Trails.

Date: April 18, 2019.

Time: 1:00 p.m. to 4:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Neuroscience Center, 6001 Executive Boulevard, Rockville, MD 20852.

Contact Person: Shanta Rajaram, Ph.D., Scientific Review Officer, Scientific Review Branch, Division of Extramural Activities, NINDS/NIH/DHHS, NSC, 6001 Executive Blvd., Suite 3208, Bethesda, MD 20892–9529, (301) 435–6033, *rajarams@mail.nih.gov*.

This notice is being published less than 15 days prior to the meeting due to the timing limitations imposed by the review and funding cycle.

(Catalogue of Federal Domestic Assistance Program Nos. 93.853, Clinical Research Related to Neurological Disorders; 93.854, Biological Basis Research in the Neurosciences, National Institutes of Health, HHS)

Dated: April 4, 2019.

Sylvia L. Neal,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2019–07085 Filed 4–9–19; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Cancer Institute; Notice of Closed Meetings

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: National Cancer Institute Special Emphasis Panel; SEP–3: NCI Clinical and Translational R21 and Omnibus R03.

Date: June 6–7, 2019.

Time: 4:00 p.m. to 5:00 p.m.

Agenda: To review and evaluate grant applications.

Place: Bethesda North Marriott Hotel & Conference Center, 5701 Marinelli Road, North Bethesda, MD 20852.

Contact Person: Ombretta Salvucci, Ph.D., Scientific Review Officer, Special Review Branch, Division of Extramural Activities, National Cancer Institute, NIH, 9609 Medical Center Drive, Room 7W264, Bethesda, MD 20892–9750, 240–276–7286, *salvucco@mail.nih.gov*.

Name of Committee: National Cancer Institute Special Emphasis Panel; Integrating Biospecimen Science Approaches into Clinical Assay Development.

Date: June 18, 2019.

Time: 10:00 a.m. to 4:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Cancer Institute Shady Grove, 9609 Medical Center Drive, Room 7W246, Rockville, MD 20850 (Telephone Conference Call).

Contact Person: Jun Fang, Ph.D., Scientific Review Officer, Research Technology & Contract Review Branch, Division of Extramural Activities, National Cancer Institute, NIH, 9609 Medical Center Drive, Room 7W246, Bethesda, MD 20892–9750, 240–276–5460, *jfang@mail.nih.gov*.

Name of Committee: National Cancer Institute Special Emphasis Panel; SEP–10:NCI Clinical and Translational R21 and Omnibus R03.

Date: July 9, 2019.

Time: 8:00 a.m. to 4:00 p.m.

Agenda: To review and evaluate grant applications.

Place: Bethesda North Marriott Hotel & Conference Center, 5701 Marinelli Road, North Bethesda, MD 20852.

Contact Person: Jun Fang, Ph.D., Scientific Review Officer, Research Technology & Contract Review Branch, Division of Extramural Activities, National Cancer Institute, NIH, 9609 Medical Center Drive, Room 7W246, Bethesda, MD 20892–9750, 240–276–5460, *jfang@mail.nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.392, Cancer Construction; 93.393, Cancer Cause and Prevention Research; 93.394, Cancer Detection and Diagnosis Research; 93.395, Cancer Treatment Research; 93.396, Cancer Biology Research; 93.397, Cancer Centers Support; 93.398, Cancer Research Manpower; 93.399, Cancer Control, National Institutes of Health, HHS)

Dated: April 4, 2019.

Melanie J. Pantoja,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2019–07089 Filed 4–9–19; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HOMELAND SECURITY

Coast Guard

[Docket No. USCG–2019–0131]

Port Access Route Study: The Areas Offshore of Massachusetts and Rhode Island

AGENCY: Coast Guard, DHS.

ACTION: Notice of public meetings; request for comments.

SUMMARY: The Coast Guard announces an additional public meeting in Montauk, NY, to receive comments on a notice of study entitled ''Port Access Route Study: The Areas Offshore of Massachusetts and Rhode Island'' that was published in the **Federal Register** on Tuesday, March 26, 2019, (84 FR 11314). As stated in that document the Coast Guard is conducting a Massachusetts and Rhode Island Port Access Route Study (MARIPARS) to evaluate the need for establishing vessel routing measures.

DATES: Three public meetings will now be held to provide an opportunity for oral comments about the MARIPARS on Tuesday, April 23, 2019, from 6 p.m. to 9 p.m., Thursday, April 25, 2019, from 6 p.m. to 9 p.m., and on Monday, April 29, 2019, form 6 p.m. to 9 p.m. Written comments and related material may also be submitted to Coast Guard personnel specified at the meetings. The comment period for the notice of study closes on May 28, 2019. All comments and related material submitted after the meetings must be received by the Coast Guard on or before May 28, 2019. Commenters should be aware that the electronic Federal Docket Management System will not accept comments after midnight Eastern Daylight Time on the last day of the comment period.

ADDRESSES: You may submit comments identified by docket number USCG–2019–0131 using the Federal eRulemaking Portal at *http://www.regulations.gov*. See the ''Public Participation and Request for Comments'' portion of the **SUPPLEMENTARY INFORMATION** section for further instructions on submitting comments.

The public meeting on Tuesday, April 23, 2019, from 6 p.m. to 9 p.m., will be held at Corless Auditorium (Watkins Laboratory Building), University of Rhode Island, Graduate School of Oceanography at 215 South Ferry Road, Narragansett, RI 02882–1197.

The public meeting on Thursday, April 25, 2019, from 6 p.m. to 9 p.m., will be held at Flanagan Hall,

Massachusetts Maritime Academy at 101 Academy Drive, Buzzards Bay, MA 02532.

The public meeting on Monday, April 29, 2019, from 6 p.m. to 9 p.m., will be held at Inlet Seafood Restaurant at 541 East Lake Drive, Montauk, NY 11954.

FOR FURTHER INFORMATION CONTACT: If you have questions about this notice or study call or email the Project Officer, Mr. Edward G. LeBlanc, Chief of Coast Guard Sector Southeastern New England Waterways Management Division, telephone (401) 435–2351; email *Edward.G.LeBlanc@uscg.mil.*

SUPPLEMENTARY INFORMATION:

I. Purpose and Background

On Tuesday, March 26, 2019 we published a notice of study entitled "Port Access Route Study: The Areas Offshore of Massachusetts and Rhode Island" in the **Federal Register**, (84 FR 11314), *https://www.federalregister.gov/documents/2019/03/26/2019-05730/port-access-route-study-the-areas-offshore-of-massachusetts-and-rhode-island.* In it we stated our intention to hold two public meetings at a location in Massachusetts and Rhode Island. Since the publication of the notice in the **Federal Register** we have received a request to hold a public meeting in the Montauk, NY area. This document is the notice of that meeting.

II. Public Participation and Request for Comments

We encourage you to participate in this study by submitting comments and related materials to the online public docket or orally at the public meetings. All comments received will be posted, without change, to *http://www.regulations.gov* and will include any personal information you have provided.

A. Submitting Comments: If you submit comments to the online public docket, please include the docket number for this rulemaking (USCG–2019–0131), indicate the specific section of this document to which each comment applies, and provide a reason for each suggestion or recommendation. We accept anonymous comments.

To submit your comment online, go to *http://www.regulations.gov,* and insert "USCG–2019–0131" in the "search box". Click "Search". Then click "Comment Now". We will consider all comments and material received during the comment period.

B. Public Meetings: We now plan to hold three public meetings to receive oral comments on this notice. If you bring written comments to the public meeting, you may submit them to Coast Guard personnel specified at the meeting to receive written comments. These comments will be added to our online public docket. We recommend that you include your name and a mailing address, an email address, or a telephone number in the body of your document so that we can contact you if we have questions regarding your submission. Attendance at the public meeting is not required. We will provide a written summary of the oral comments received and will place that summary in the docket.

The first public meeting on Tuesday, April 23, 2019, from 6 p.m. to 9 p.m., will be held at Corless Auditorium (Watkins Laboratory Building), University of Rhode Island, Graduate School of Oceanography, 215 South Ferry Road, Narragansett, RI 02882–1197.

The second public meeting on Thursday, April 25, 2019, from 6 p.m. to 9 p.m., will be held at Flanagan Hall, Massachusetts Maritime Academy, 101 Academy Drive, Buzzards Bay, MA 02532.

The third public meeting on Monday, April 29,, 2019, from 6 p.m. to 9 p.m., will be held at Inlet Seafood Restaurant at 541 East Lake Drive, Montauk, NY 11954.

For information on facilities or services for individuals with disabilities or to request special assistance at the public meeting, contact Mr. Edward Leblanc at the telephone number or email address indicated under the **FOR FURTHER INFORMATION CONTACT** section of this notice.

C. Viewing the comments and documents: You may view the notice of study, comments submitted thus far, and documents mentioned in this preamble in our online docket by going to *http://www.regulations.gov.* Once there, click on the "read comments" box, which will then become highlighted in blue. In the "Keyword" box insert "USCG–2019–0131" and click "Search." Click the "Open Docket Folder" in the "Actions" column.

D. Privacy Act: Anyone can search the electronic form of comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, *etc.*). You may review a Privacy Act, system of records notice regarding our public dockets in the January 17, 2008, issue of the **Federal Register** (73 FR 3316) *https://www.federalregister.gov/documents/2008/01/17/E8-785/privacy-act-of-1974-system-of-records.*

This notice is published under the authority of 46 U.S.C. 70004 and 5 U.S.C. 552(a).

Dated: April 1, 2019.

A.J. Tiongson,

Rear Admiral, U.S. Coast Guard, Commander, First Coast Guard District.

[FR Doc. 2019–07069 Filed 4–9–19; 8:45 am]

BILLING CODE 9110–04–P

DEPARTMENT OF HOMELAND SECURITY

Transportation Security Administration

Revision of Agency Information Collection Activity Under OMB Review: Aircraft Operator Security

AGENCY: Transportation Security Administration, DHS.

ACTION: 30-Day notice.

SUMMARY: This notice announces that the Transportation Security Administration (TSA) has forwarded the Information Collection Request (ICR), Office of Management and Budget (OMB) control number 1652–0003, abstracted below to OMB for review and approval of a revision of the currently approved collection under the Paperwork Reduction Act (PRA). The ICR describes the nature of the information collection and its expected burden. Aircraft operators must provide certain information to TSA and adopt and implement a TSA-approved security program. These programs require aircraft operators to maintain and update records to ensure compliance with security provisions set forth in regulations.

DATES: Send your comments by May 10, 2019. A comment to OMB is most effective if OMB receives it within 30 days of publication.

ADDRESSES: Interested persons are invited to submit written comments on the proposed information collection to the Office of Information and Regulatory Affairs, OMB. Comments should be addressed to Desk Officer, Department of Homeland Security/TSA, and sent via electronic mail to *dhsdeskofficer@omb.eop.gov.*

FOR FURTHER INFORMATION CONTACT: Christina A. Walsh, TSA PRA Officer, Information Technology (IT), TSA–11, Transportation Security Administration, 601 South 12th Street, Arlington, VA 20598–6011; telephone (571) 227–2062; email *TSAPRA@tsa.dhs.gov.*

SUPPLEMENTARY INFORMATION: TSA published a **Federal Register** notice, with a 60-day comment period soliciting comments, of the following collection of

ENCLOSURE 3

Marine Safety Information Bulletin (MSIB) 01-19

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Commander, U.S. Coast Guard Sector Southeastern New England

1 Little Harbor Road
Woods Hole, MA 02543
Tel: 508-457-3211

MARINE SAFETY INFORMATION BULLETIN

[MSIB # 01-19]

26 March 2019

MA/RI WIND ENERGY AREA
PORT ACCESS ROUTE STUDY

The Coast Guard is conducting a Massachusetts and Rhode Island Port Access Route Study to evaluate the need for establishing vessel routing measures through the MA/RI Wind Energy Area (MA/RI WEA). The information gathered during this study may result in the establishment of one or more vessel routing measures through the MA/RI WEA. The goal of the study is to enhance navigational safety by examining existing shipping routes and waterway uses. The recommendations of the study may lead to future rulemaking action or appropriate international agreements.

A summary of the Federal Register announcement is attached which includes the process for submitting comments, and lists details on two scheduled public meetings.

For more complete information about this study and its purpose, and how to participate in the study, see the Federal Register announcement at https://www.govinfo.gov/content/pkg/FR-2019-03-26/pdf/2019-05730.pdf.

Questions regarding this Bulletin may be addressed to Mr. Edward G. LeBlanc at Edward.G.LeBlanc@uscg.mil, or 401-435-2351.

C. J. Glander
Captain, U.S. Coast Guard
Captain of the Port
Southeastern New England

MA/RI WIND ENERGY AREA
PORT ACCESS ROUTE STUDY

The Coast Guard is conducting a Massachusetts and Rhode Island Port Access Route Study (MARIPARS) to evaluate the need for establishing vessel routing measures through the MA/RI Wind Energy Area (MA/RI WEA). The information gathered during this MARIPARS may result in the establishment of one or more vessel routing measures. The goal of the MARIPARS is to enhance navigational safety by examining existing shipping routes and waterway uses. The recommendations of the study may lead to future rulemaking action or appropriate international agreements.

The Bureau of Ocean Energy Management (BOEM) has leased seven adjacent areas of the outer continental shelf (OCS) south of Martha's Vineyard and east of Rhode Island that together constitute the MA/RI WEA. Potentially seven distinct offshore renewable energy installations ("wind farms") could be constructed, each with its own number, size, type of wind turbines, and distinct turbine layout. The topic of safe navigation routes to facilitate vessel transit through the MA/RI WEA has been discussed at various forums throughout southeastern New England. The forums have included participation by the Coast Guard, other federal, state, and local agencies, fishing industry representatives, and myriad stakeholders. Various transit plans have been proposed through these different forums.

We are attempting to determine what, if any, navigational safety concerns exist with vessel transits in the study area. We expect that information gathered during the study will help us identify anticipated impacts to navigation that may be experienced by mariners intending to transit in, around and through the study area which includes the MA/RI WEA, which is an area of wind farm leases south of Martha's Vineyard. All leases are currently being studied for development including the construction of wind energy generating turbines affixed to the sea floor. These installations could impact routes used to access ports (e.g., transiting from Georges Bank through the MA/RI WEA to New Bedford; or from the vicinity of Montauk, NY/Point Judith, RI, to Georges Bank, etc.). Impacts could result from factors such as number, size, type, and layout of wind farm turbines and electric service platform(s), subsea cabling, increased vessel traffic, changing vessel traffic patterns, weather conditions, or navigational difficulty. Comments should include or reference data (both empirical and anecdotal) where available, published studies (academic, government, or industry), and other supporting documentation.

As part of this study, we may collect and analyze data and other information on vessel traffic characteristics and trends in an attempt to balance the needs of all waterway users.

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This study includes the following objectives:
1. Determine present vessel traffic types, patterns, and density;
2. Determine potential vessel traffic types, patterns, and density;
3. Determine if existing vessel routing measures are adequate;
4. Determine if existing vessel routing measures require modifications;
5. Determine the type of modifications;
6. Define and justify the needs for new vessel routing measures;
7. Determine the type of new vessel routing measures; and
8. Determine if the usage of the vessel routing measures must be mandatory for specific classes of vessels.

Public Meetings: Two public meetings will be held to receive public comments:

1. Tuesday, April 23, 2019, from 6 p.m. to 9 p.m., at Corless Auditorium (Watkins Laboratory Building), **University of Rhode Island, Graduate School of Oceanography**, 215 South Ferry Road, Narragansett, RI 02882-1197.

2. Thursday, April 25, 2019, from 6 p.m. to 9 p.m., at Flanagan Hall, **Massachusetts Maritime Academy,** 101 Academy Drive, Buzzards Bay, MA 02532.

Comments: Comments and related material must be received by the Coast Guard on or before May 28, 2019. You may submit comments identified by docket number USCG-2019-0131 using the Federal eRulemaking Portal at http://www.regulations.gov. If you submit comments to the online public docket, please include the docket number for this rulemaking (USCG-2019-0131), indicate the specific section of this document to which each comment applies, and provide a reason for each suggestion or recommendation. We accept anonymous comments.

To submit your comment online, go to *http://www.regulations.gov*, and insert "USCG-2019-0131" in the "search box." Click "Search". Then click "Comment Now." We will consider all comments and material received during the comment period.

Results: We will publish the results of the PARS in the **Federal Register**. It is possible the study may validate the status quo (no routing measures) and conclude that no changes are necessary. It is also possible the study may recommend one or more changes to enhance navigational safety and the efficiency of vessel traffic management. The recommendations may lead to future rulemakings or appropriate international agreements.

Questions: Questions regarding this study may be addressed to Mr. Edward G. LeBlanc at Edward.G.LeBlanc@uscg.mil, or 401-435-2351.