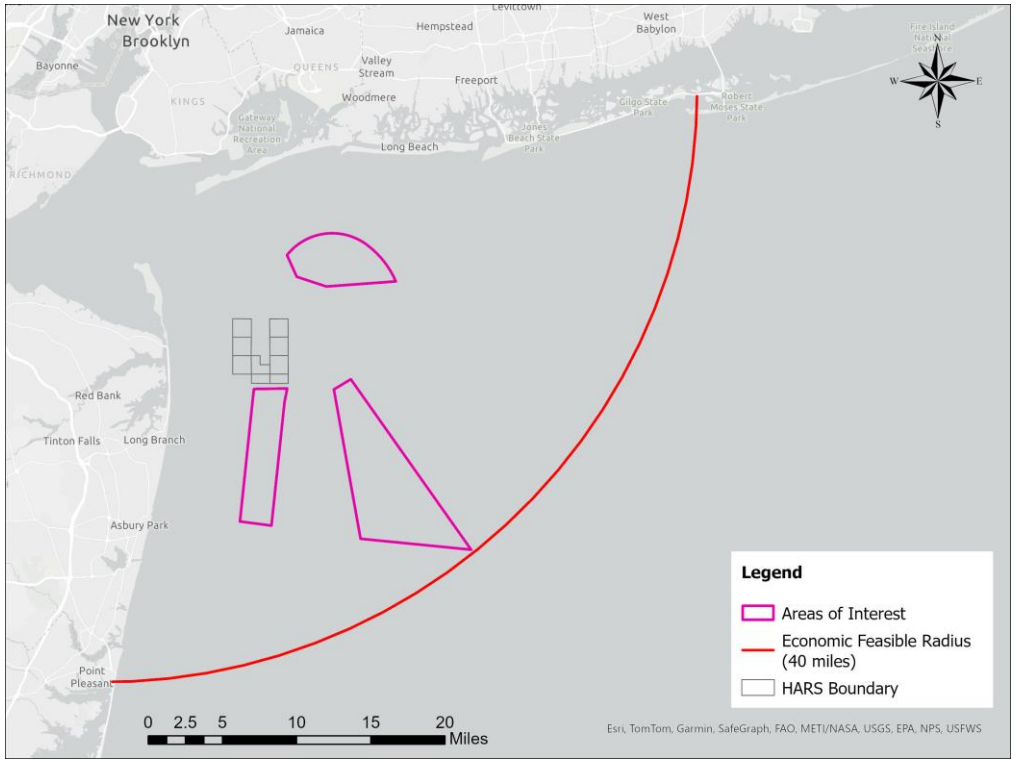
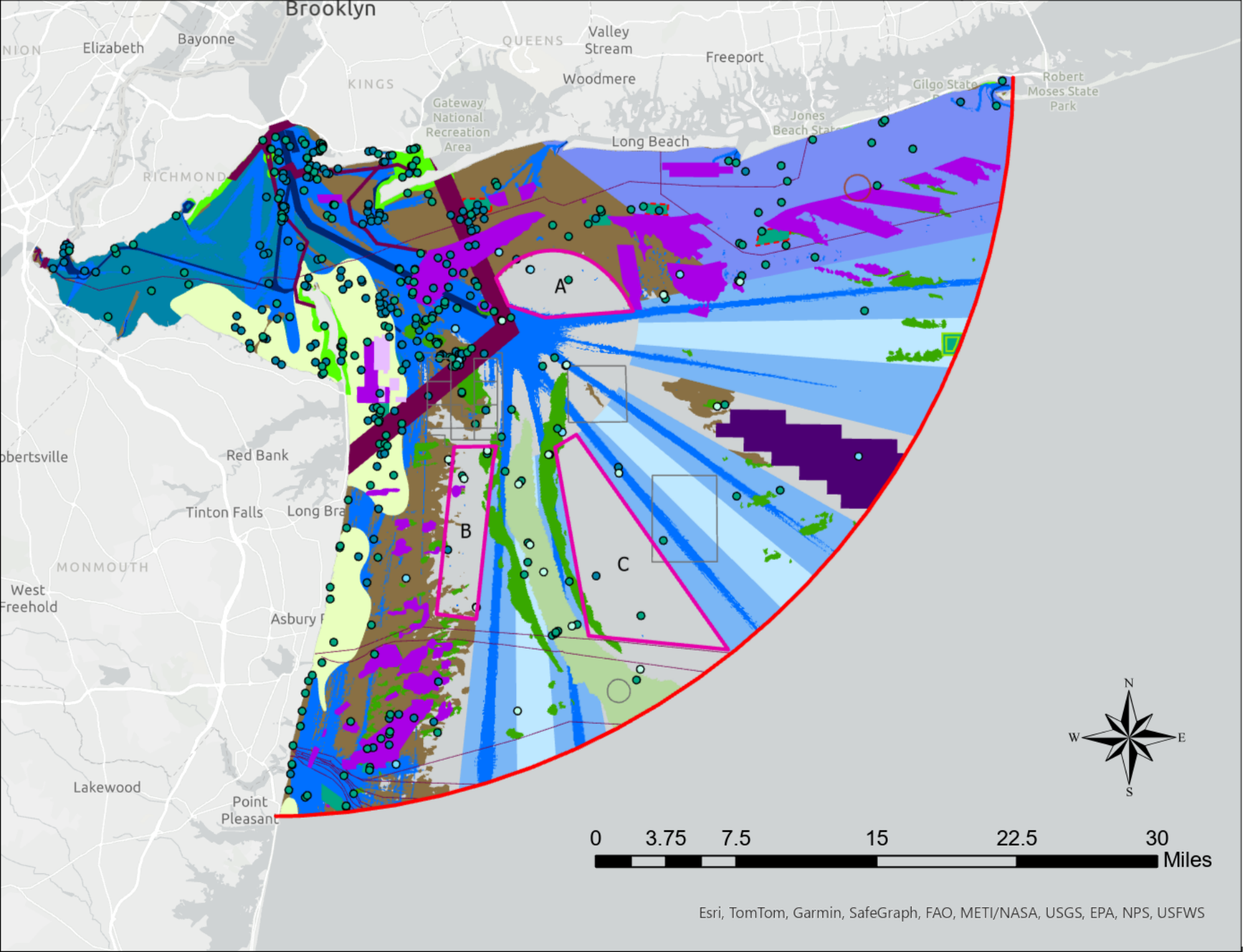
Identifying Areas of Interest in the NY Bight

Considerations include depth, navigation/vessel traffic, obstructions/resources, habitat, and fisheries





Legend

- Areas of Interest
- Economic Feasible Radius (40 miles)
- HARS Boundary
- Depth <75'
- Federal Navigation Channels
- Anchorage Areas
- High Vessel Traffic Areas
- Regulated Navigation Areas
- Shipping Lanes
- Shipping Lane Separations
- Wind Lease Areas
- Submarine Cables
- Sand Resource Extraction Areas
- Borrow Areas
- Unexploded Ordinance Areas
- Historic Dumping Grounds
- Wrecks
- Obstructions
- Proposed New Reef Sites
- Proposed Reef Expansions
- NY/NJ Artificial Reefs
- Sand Shoals
- Canyon (> approx. 130')
- Marine Protected Areas
- NJ Marine Conservation Focal Areas

Zone of Siting and Feasibility

On June 1, 2023, the U.S. Army Corps of Engineers' (Army Corps) New York District requested that the Environmental Protection Agency Region 2 (EPA) evaluate environmentally acceptable alternatives to allow for continuing ocean management of Historic Area Remediation Site (HARS)-suitable dredged material. In the request, the Army Corps presented the Zone of Siting and Feasibility (ZSF). The ZSF is constrained by a 40-mile radius from a central location in New York Harbor called the Economic Feasible Radius (shown on the map in red). The radius represents the maximum distance from the harbor at which dredged material can be feasibly managed from economic and operational perspectives.

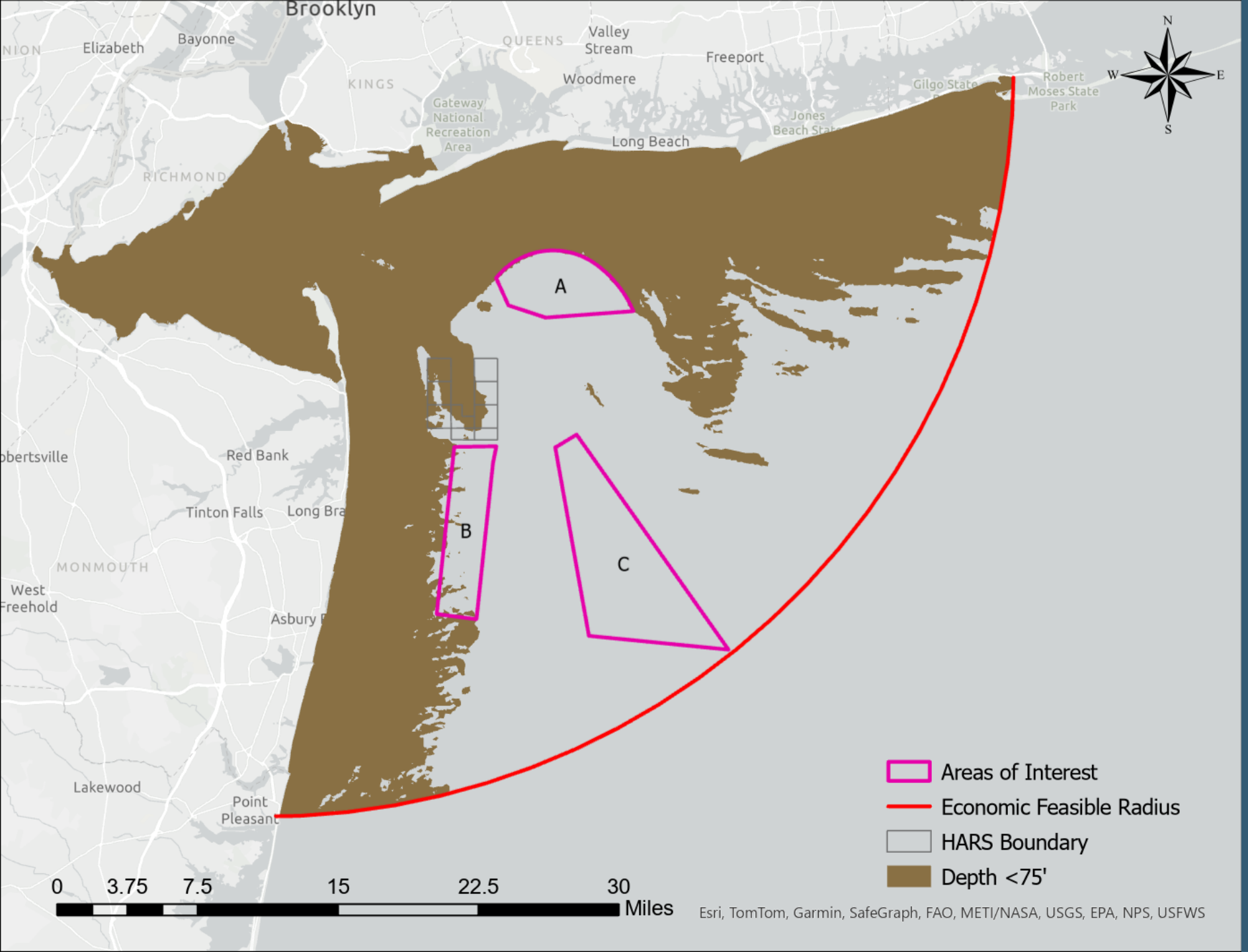
In response to the request, EPA has identified multiple preliminary alternatives for ocean management of HARS-suitable dredged material. Some alternatives would be located within the existing HARS boundary (shown on the map in gray). Some beneficial use alternatives might be located outside the HARS and would require the identification and designation of a new site location within the New York Bight ZSF where conflicts with existing uses would be minimal.

Areas of Interest

The Port of New York/New Jersey is the largest cargo port on the East Coast and the second largest in the United States, so large cargo vessels continually make their way through the Bight. Commercial vessel activity in the Bight also includes passenger/cruise ships and fishing vessels that support a diverse fishing industry. Beyond ship traffic, a network of undersea communications and power transfer cables are present within the Bight. Natural and cultural (i.e., shipwrecks) resources and a range of habitats, such as rock, muddy bottom, sand shoals, and canyon areas support a wide range of marine life.

To identify areas of interest within the ZSF to be considered further as a potential location for a new beneficial use site and to minimize conflicts with existing uses, EPA performed an overlay analysis using publicly available data including bathymetry, navigation/vessel traffic, obstructions/resources, habitat, and fisheries. The ZSF and the coastline make up the boundary of EPA's search area. Datasets were clipped to the search area boundary for analysis.

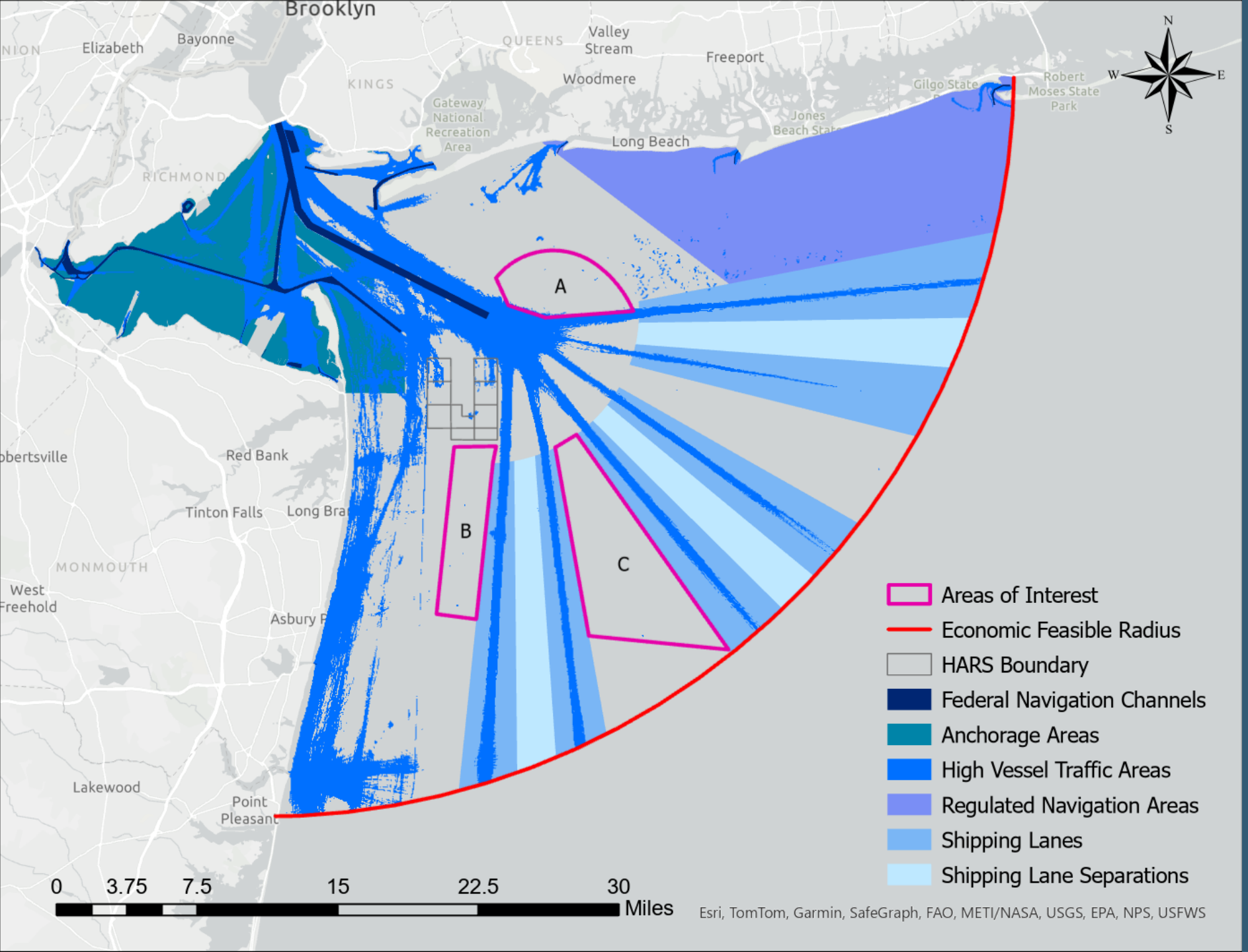
The three largest polygons identified after overlaying the datasets are the areas of interest (shown on the map in pink). These do not represent proposed site boundaries; rather, they represent areas within which a site(s) might be designated upon selection of an associated alternative.



Depth

EPA excluded all areas with a depth less than 75' from consideration (shown on the map in brown). These areas are at depths where mounding of material cannot occur without the potential to create a navigational hazard. EPA created this layer using a publicly available regional bathymetry dataset published by the National Ocean and Atmospheric Administration (NOAA) and The Nature Conservancy (TNC).

Data



Navigation/ Vessel Traffic

Federal Navigation Channels

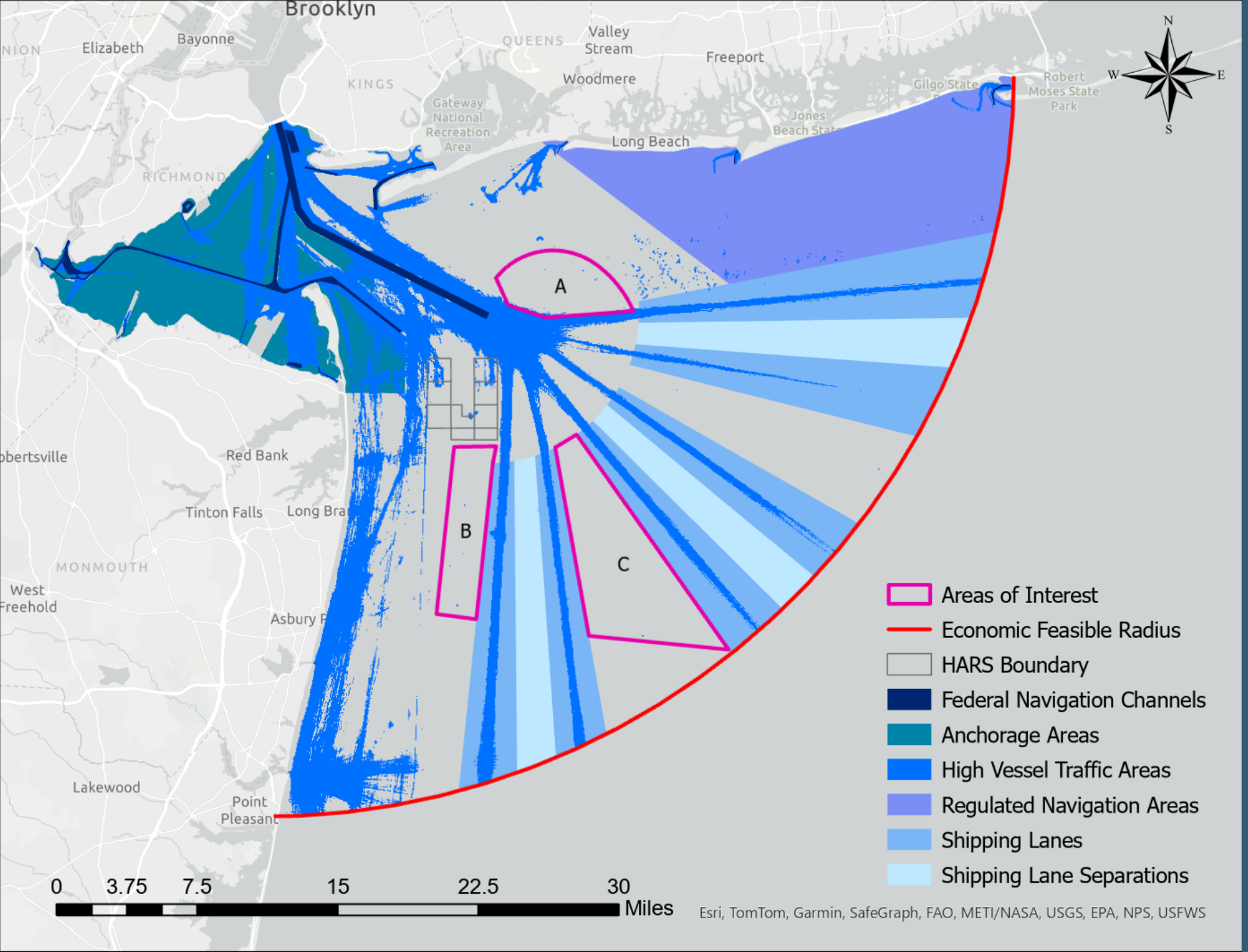
EPA excluded federal navigation channels from consideration (shown on the map in dark blue). EPA used a publicly available dataset that includes all navigation channels maintained by USACE districts.

Data

Anchorage Areas

EPA excluded anchorage areas from consideration (shown on the map in gray/blue). Source data was published by NOAA Office for Coastal Management.

Data



Navigation/ Vessel Traffic

Vessel Traffic

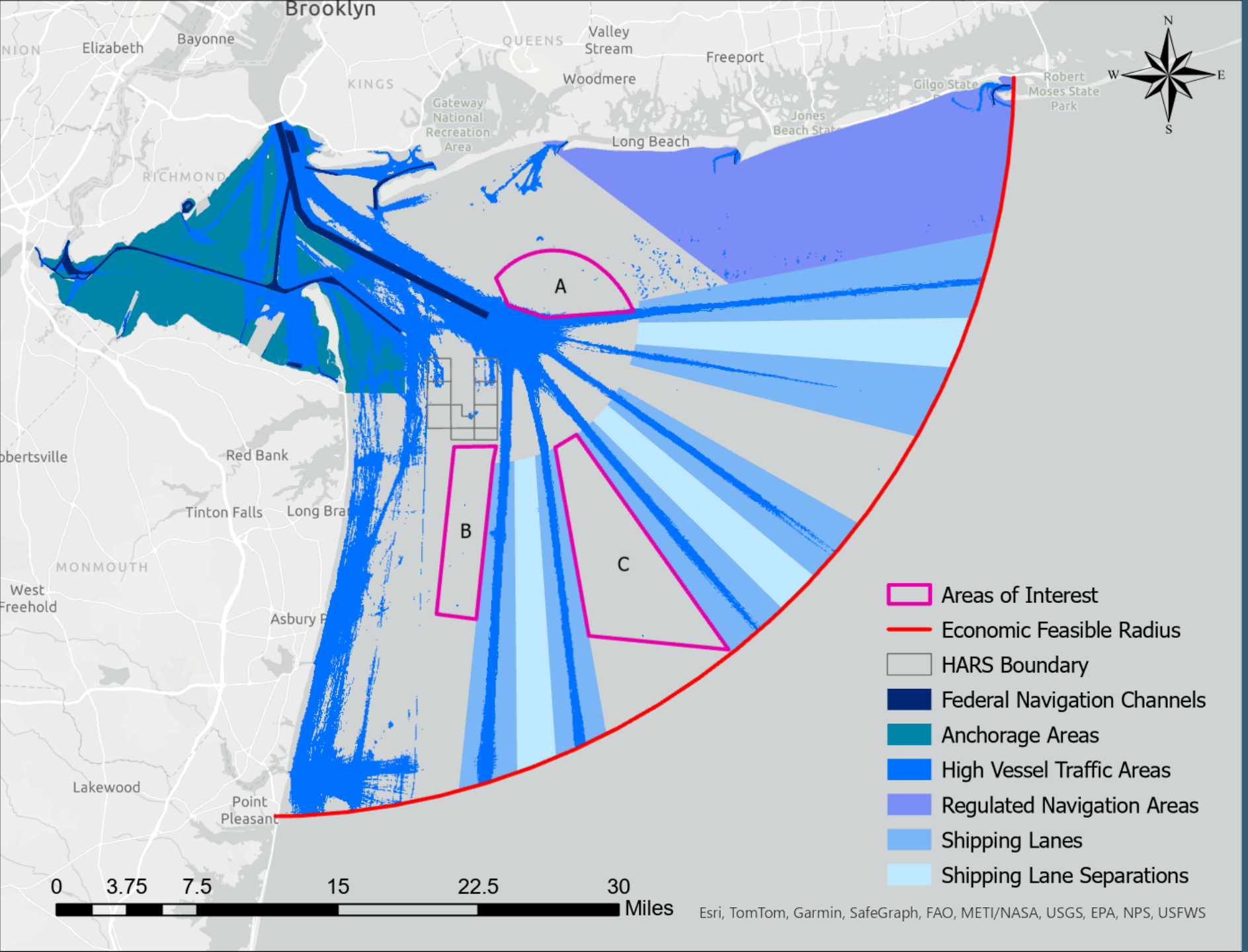
EPA excluded high traffic areas from consideration (shown on the map in blue). EPA identified high traffic areas using NOAA vessel count data by selecting areas with vessel counts greater than 75.

Data

Regulated Navigation Areas

EPA excluded regulated navigation areas from consideration (shown on the map in light blue/purple). Source data was published by NOAA Office for Coastal Management.

Data

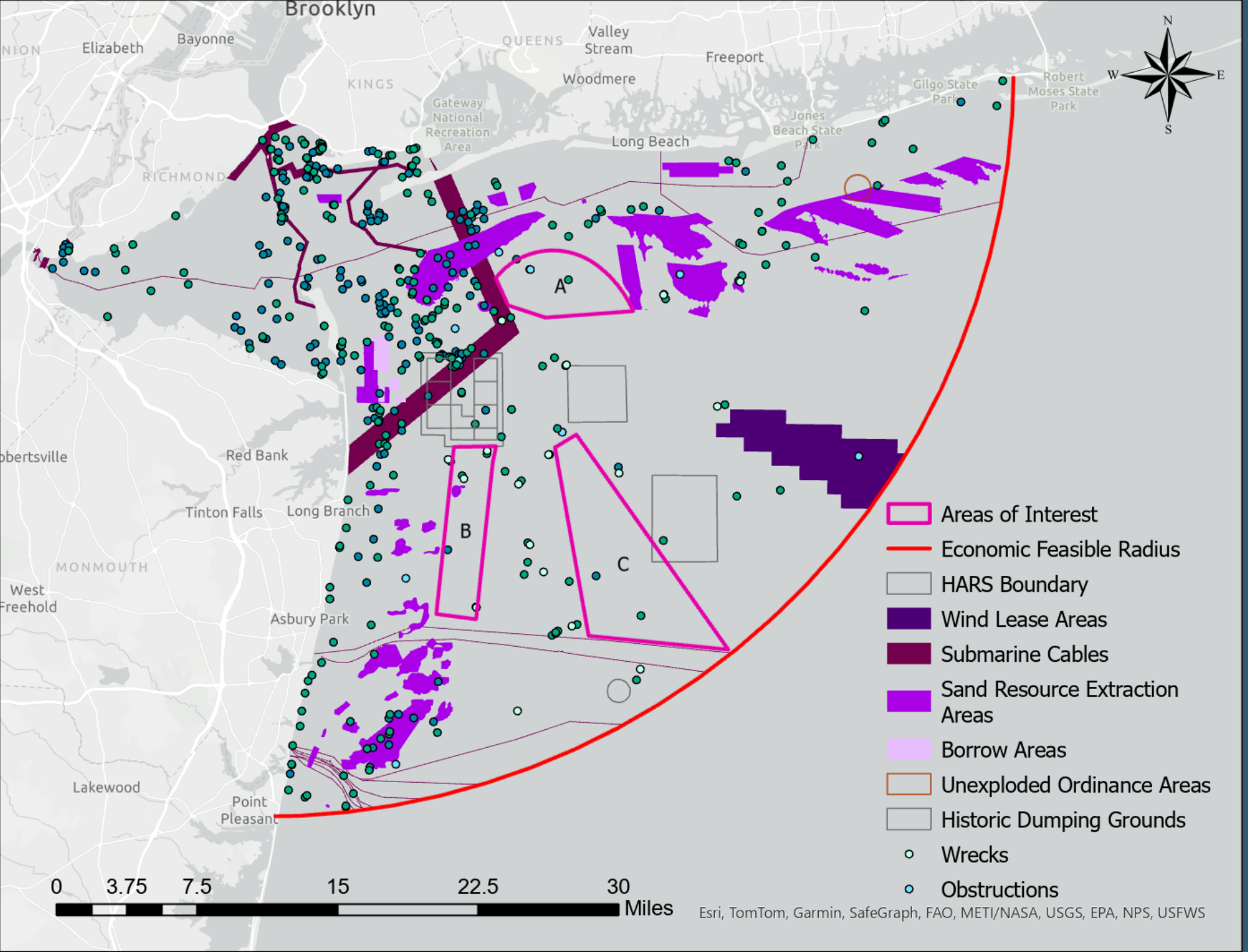


Navigation/ Vessel Traffic

Shipping Lanes/Separations

EPA excluded shipping lanes and shipping lane separations from consideration (shown on the map in light blues). Source data is published in NOAA's Electronic Navigation Charts (ENC).

Data



Resources/ Obstructions

Wind Lease Areas

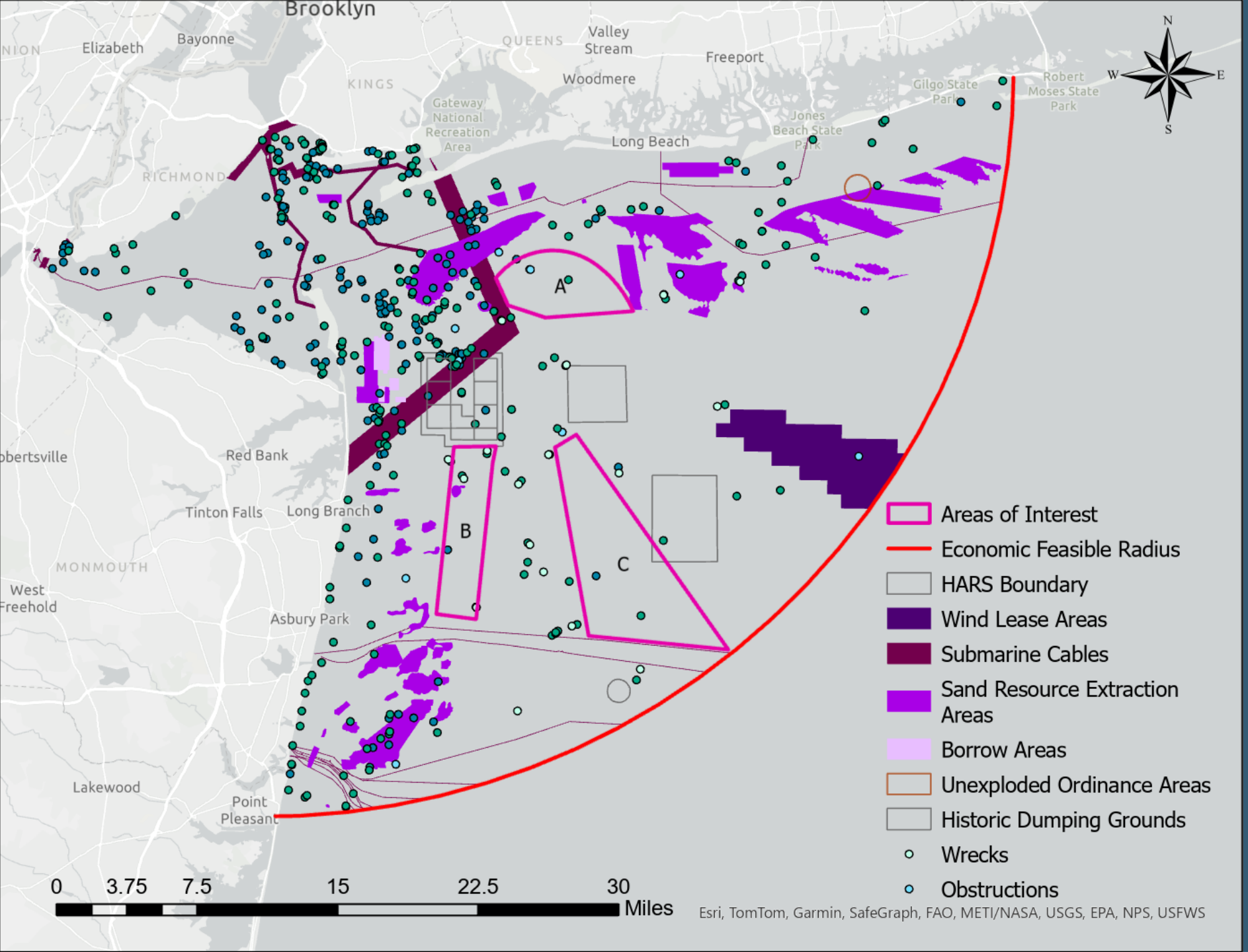
EPA excluded wind lease areas from consideration (shown on the map in dark purple). Source data was published by BOEM.

Data

Submarine Cables

EPA excluded areas with submarine cables from consideration (shown on the map in dark pink). Source data was published by NYSDOS.

Data



Resources/ Obstructions

Sand Resource Extraction Areas

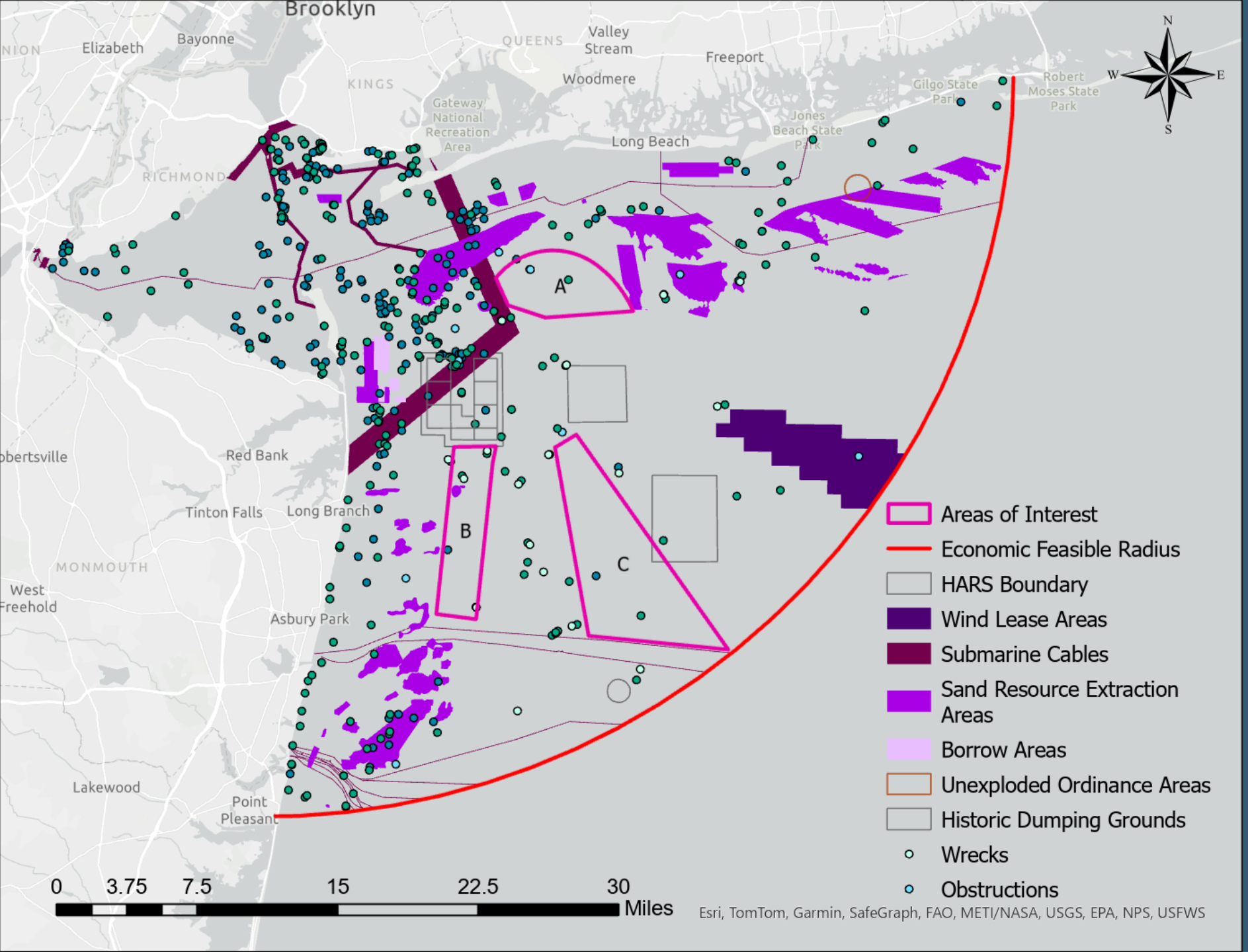
EPA excluded sand resource extraction areas from consideration (shown on the map in purple). An overlap with Area B was left temporarily for the purpose of simplifying the area of interest polygon. Source data was published by NOAA.

Data

Borrow Areas

EPA excluded borrow areas from consideration (shown on the map in light purple). Source data was published by USACE.

Data



Resources/ Obstructions

Unexploded Ordinance Areas

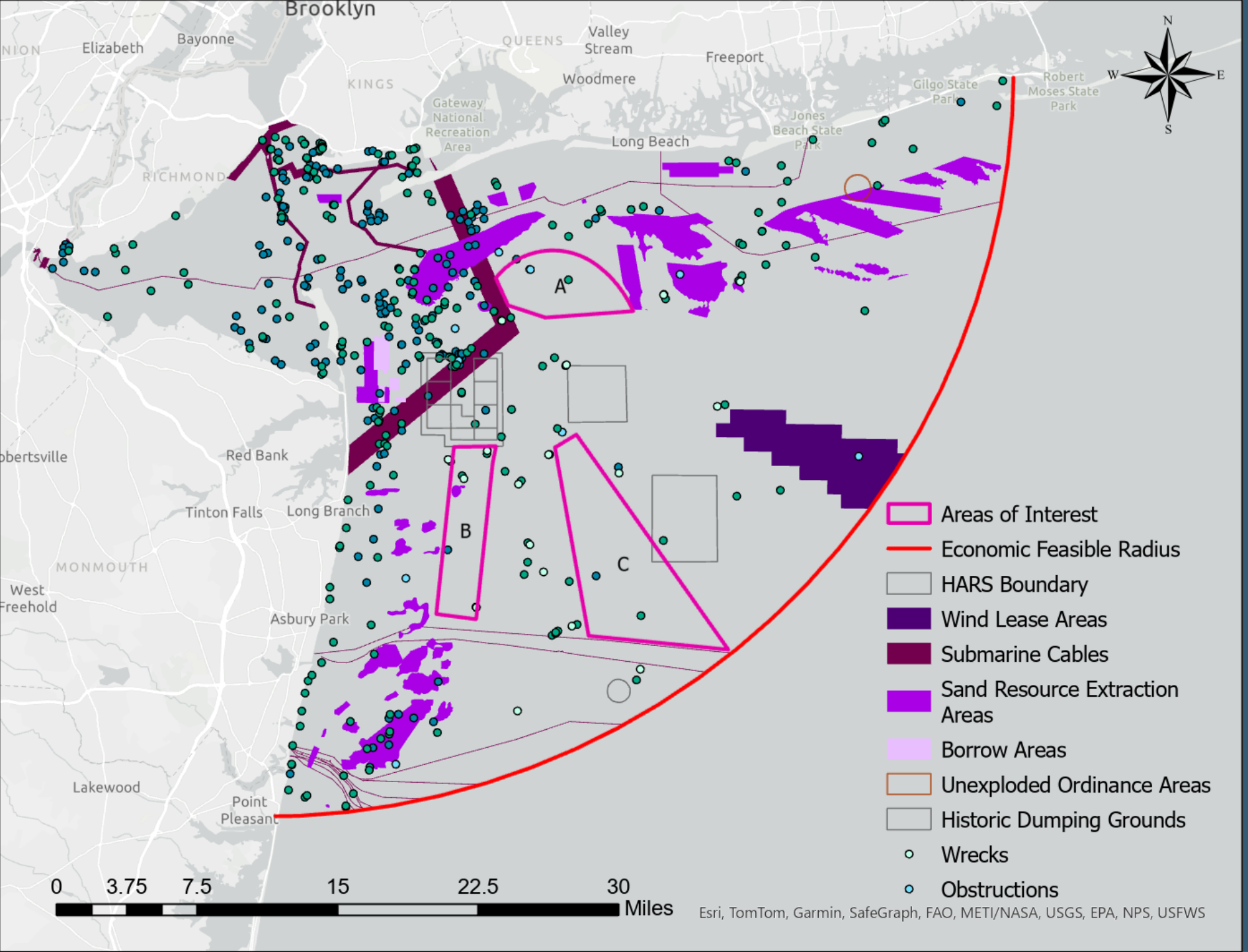
EPA excluded unexploded ordinance areas from consideration (shown on the map in dark red). Source data was published by NOAA.

Data

Historic Dumping Grounds

Historic dumping grounds were mapped to provide information about areas that may require further study. Data was published by NOAA and available through the ENC.

Data

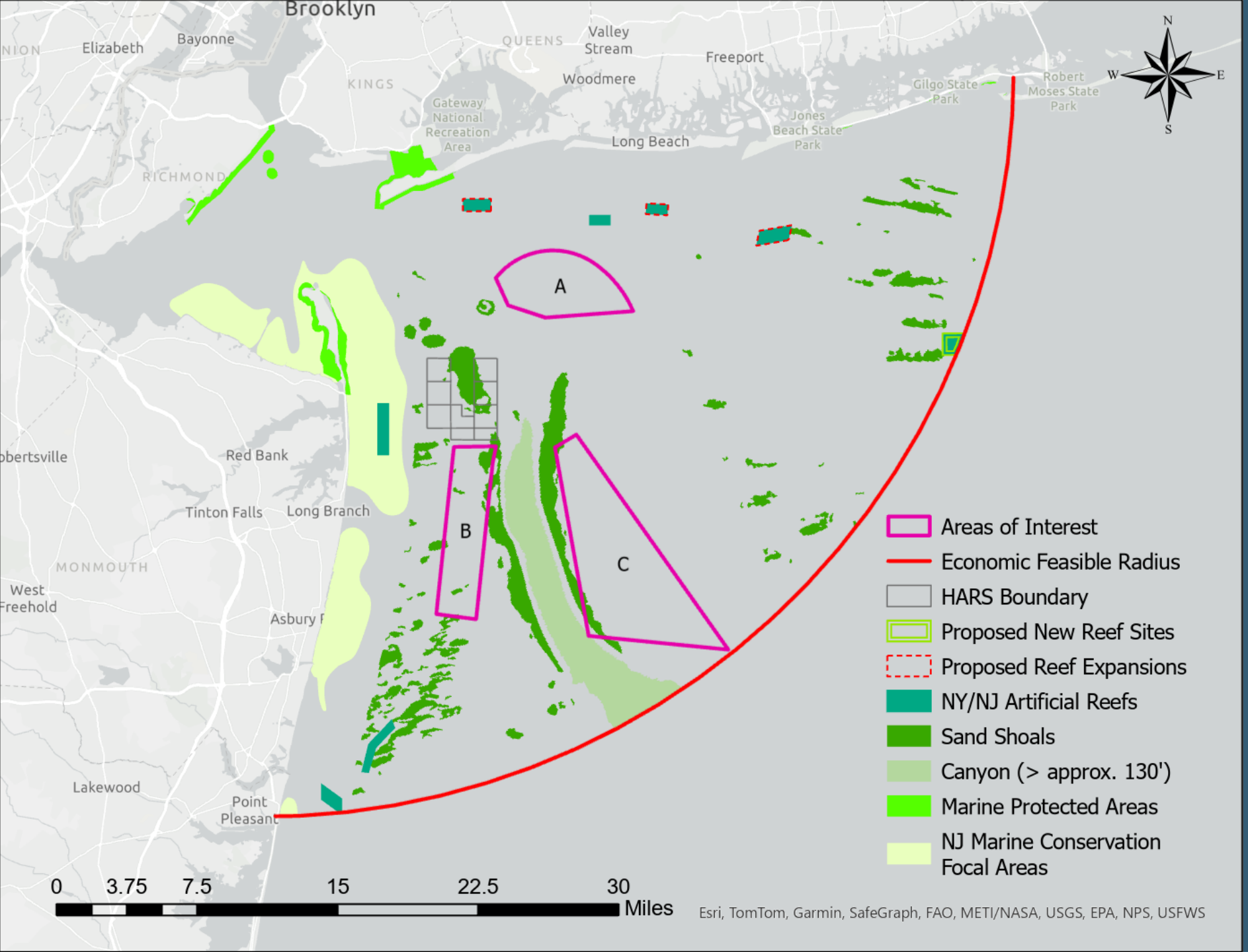


Resources/ Obstructions

Wrecks and Obstructions

Wrecks and obstructions were mapped to provide information about areas that may require further study. Data was published by NOAA and available through the ENC and AWOIS services.

Data



Habitat

NY/NJ Artificial Reefs

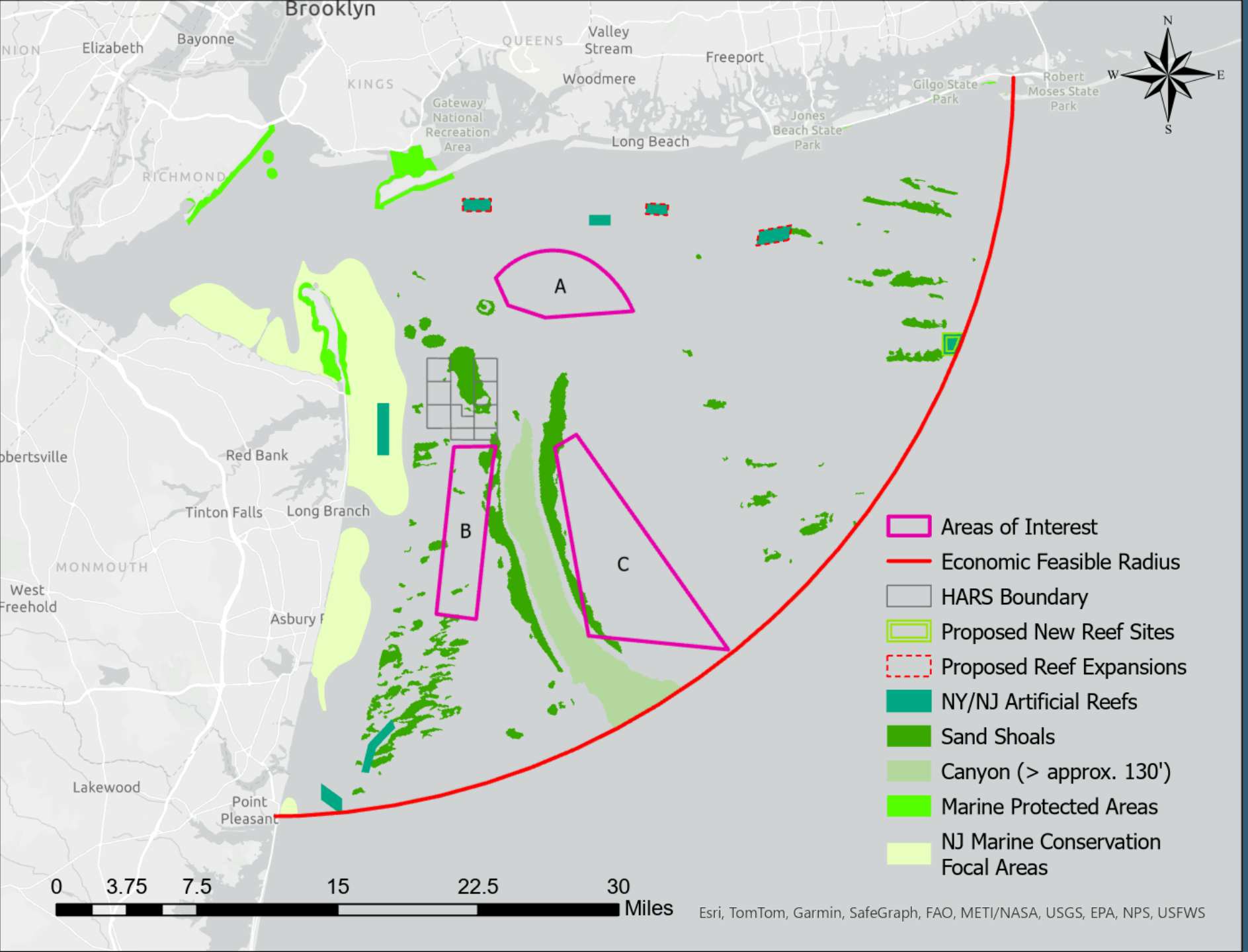
EPA excluded areas in NY/NJ with artificial reefs from consideration (shown on the map in teal). Source data was published by NJDEP.

Data

NY Artificial Reefs – Planned

Expansions EPA excluded NY artificial reef planned expansions from consideration (shown on the map in dashed red and double line green outlines). Source data was published by NYDEC.

Data



Habitat

Sand Shoals

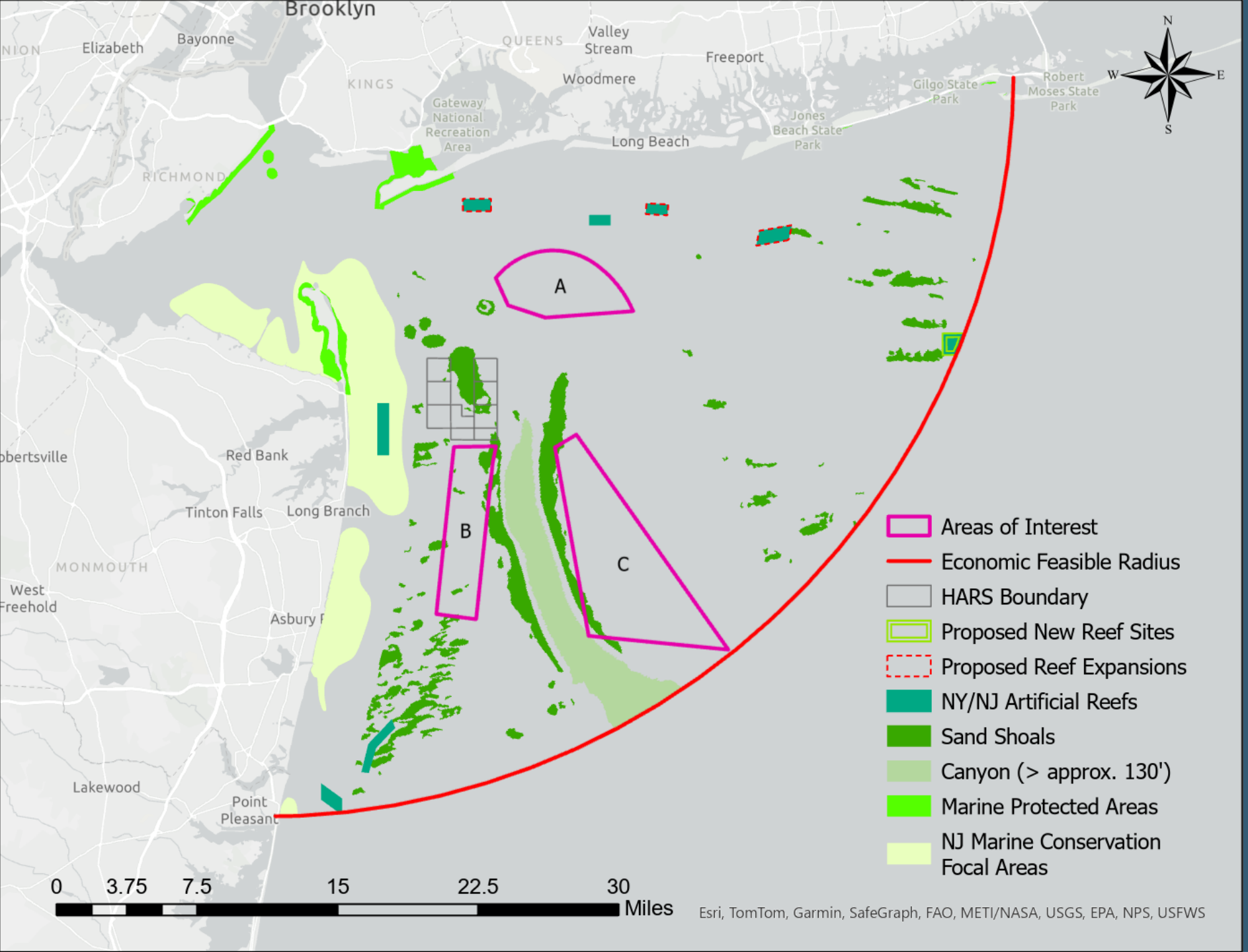
This dataset was included to provide contextual information on locations, shapes, and sizes of sand shoals in the NY Bight. Source data was published by BOEM.

Data

Canyon

EPA excluded the canyon feature from consideration (shown on the map in pale green). To identify the deep canyon feature, EPA used the TNC/NOAA Regional Bathymetry dataset to select areas with depths greater than approximately 130'. (See depth consideration for link to data source).

Data



Habitat

Marine Protected Areas

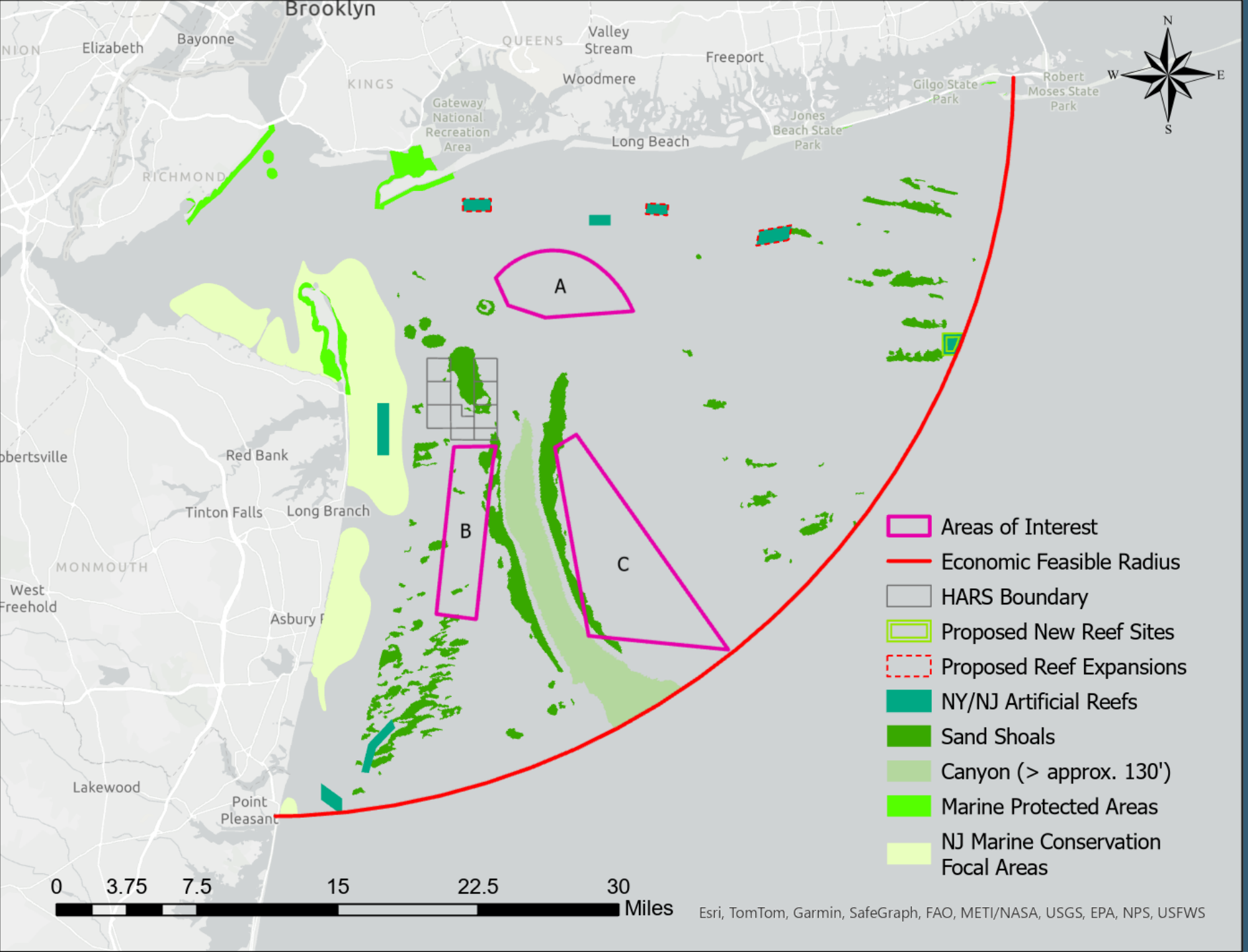
EPA excluded marine protected areas from consideration (shown on the map in lime green). Source data was published by NOAA.

Data

NJ Marine Conservation Focal Areas

EPA excluded NJ marine conservation focal areas from consideration (shown on the map in yellow green). Source data was published by NJDEP.

Data



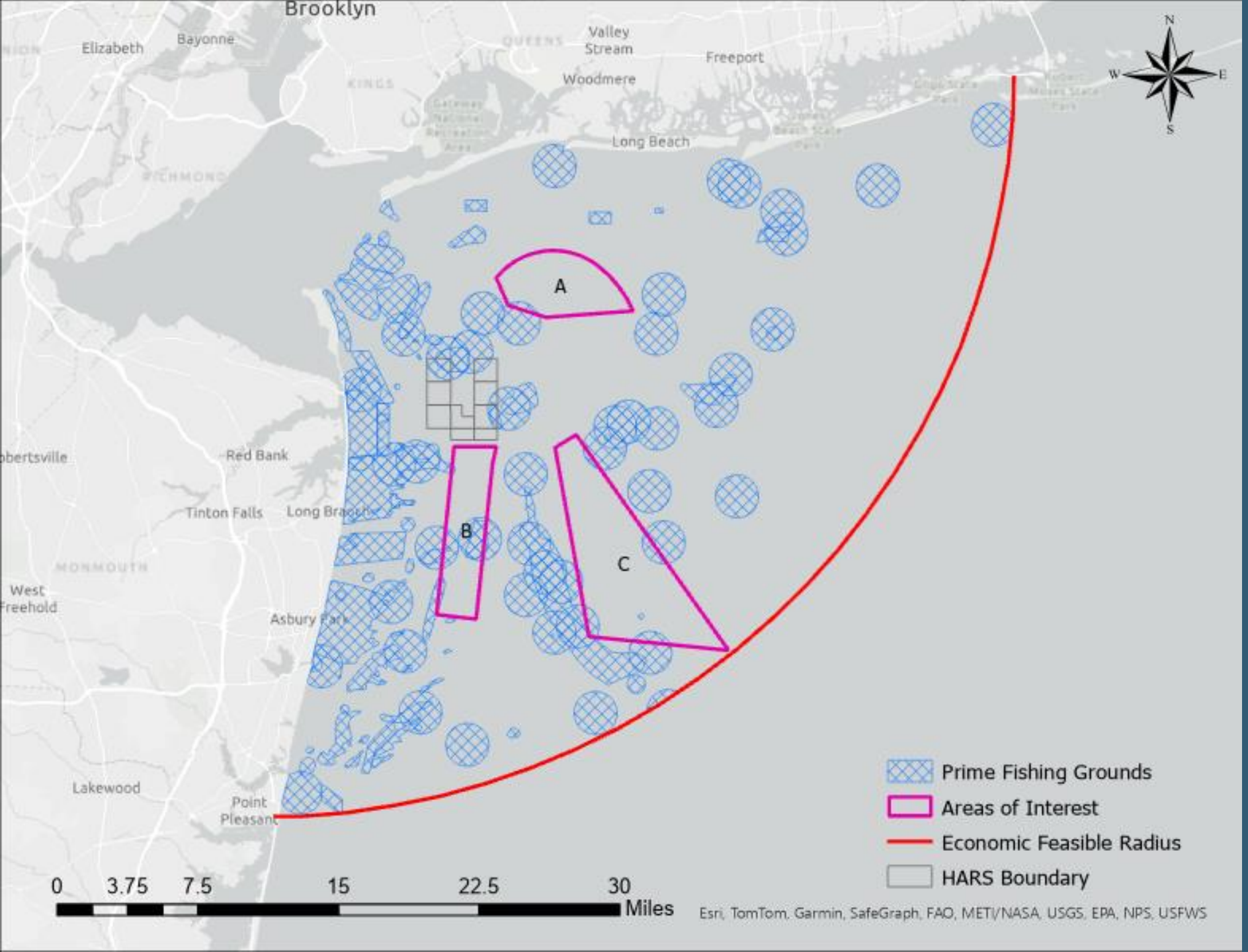
Habitat

Essential Fish Habitat & North Atlantic Right Whale SMA

The entire ZSF area contains essential fish habitat and/or North Atlantic Right Whale seasonal migration area (not shown on map). These will be addressed in consultations with NOAA.

Data

Data

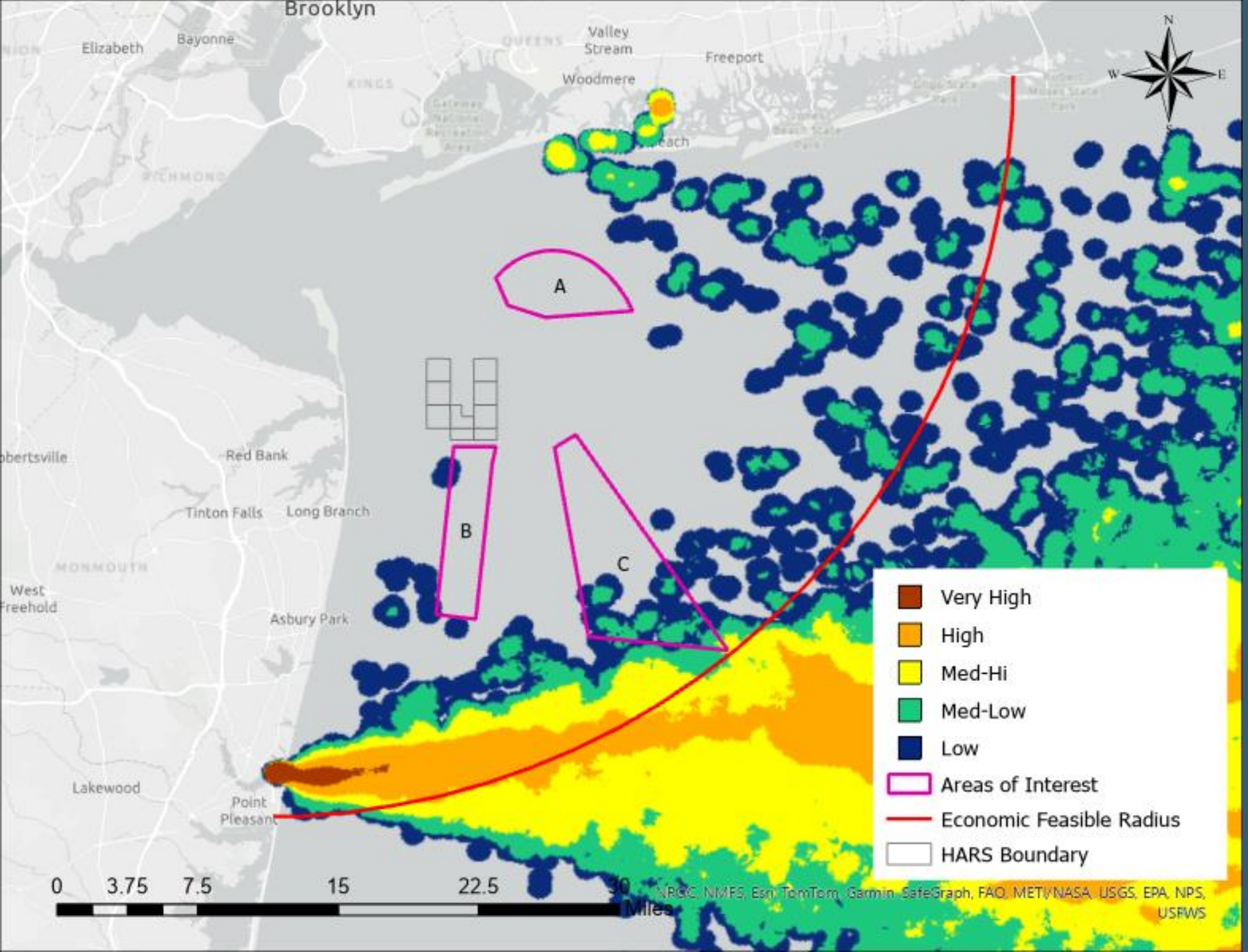


Fisheries

Prime Fishing Grounds of New Jersey

This dataset was included to provide contextual information about fishing grounds in the NY Bight. It was designed by NJDEP for Environmental Reviews as well as Commercial and Recreational Fishing grounds identification.

Data

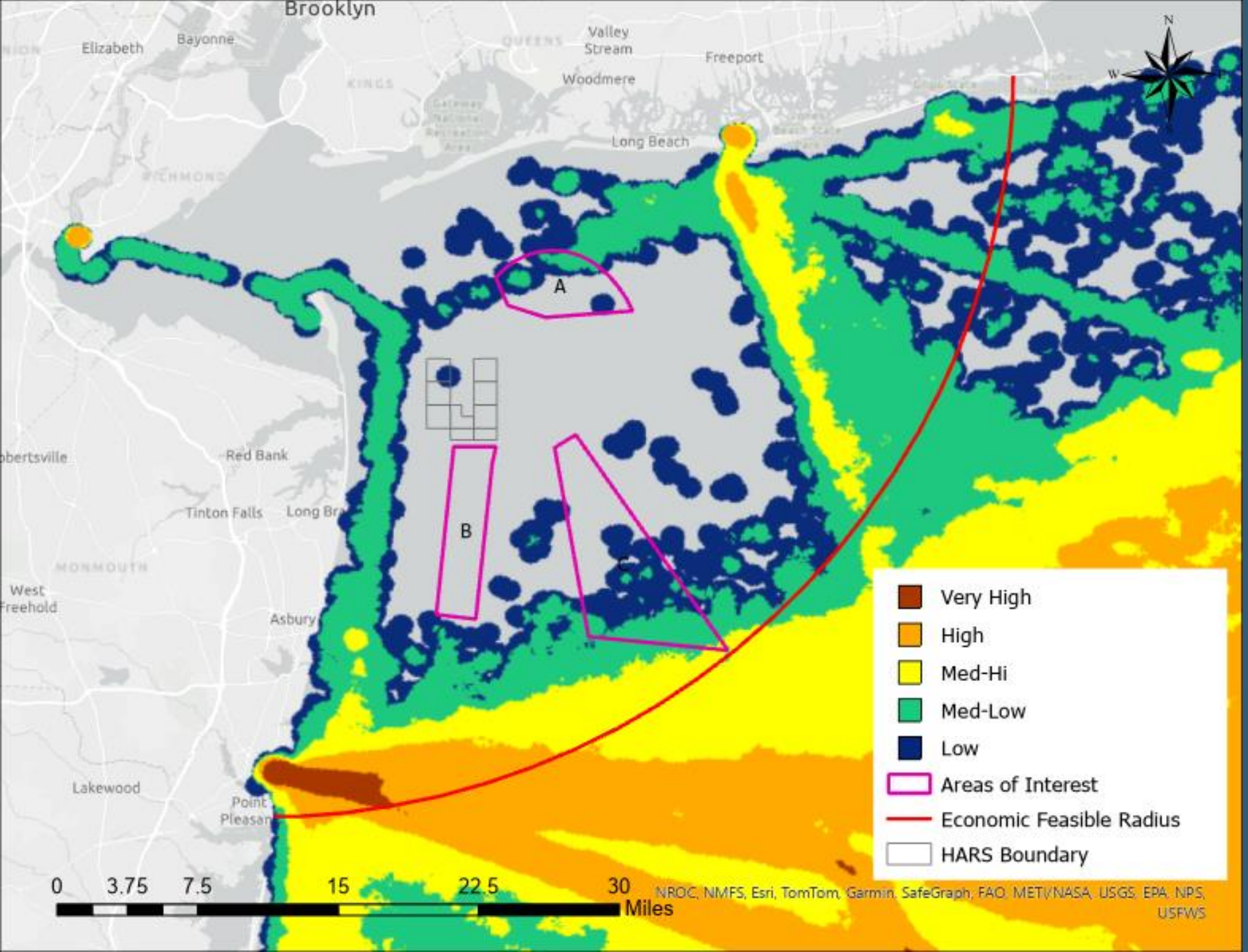


Fisheries

Ocean Quahog

This dataset characterizes the density of commercial fishing vessel activity for the ocean quahog fishery in the northeast and mid-Atlantic regions of the U.S. based on Vessel Monitoring Systems (VMS) from NMFS for the years 2015 to 2019.

Data

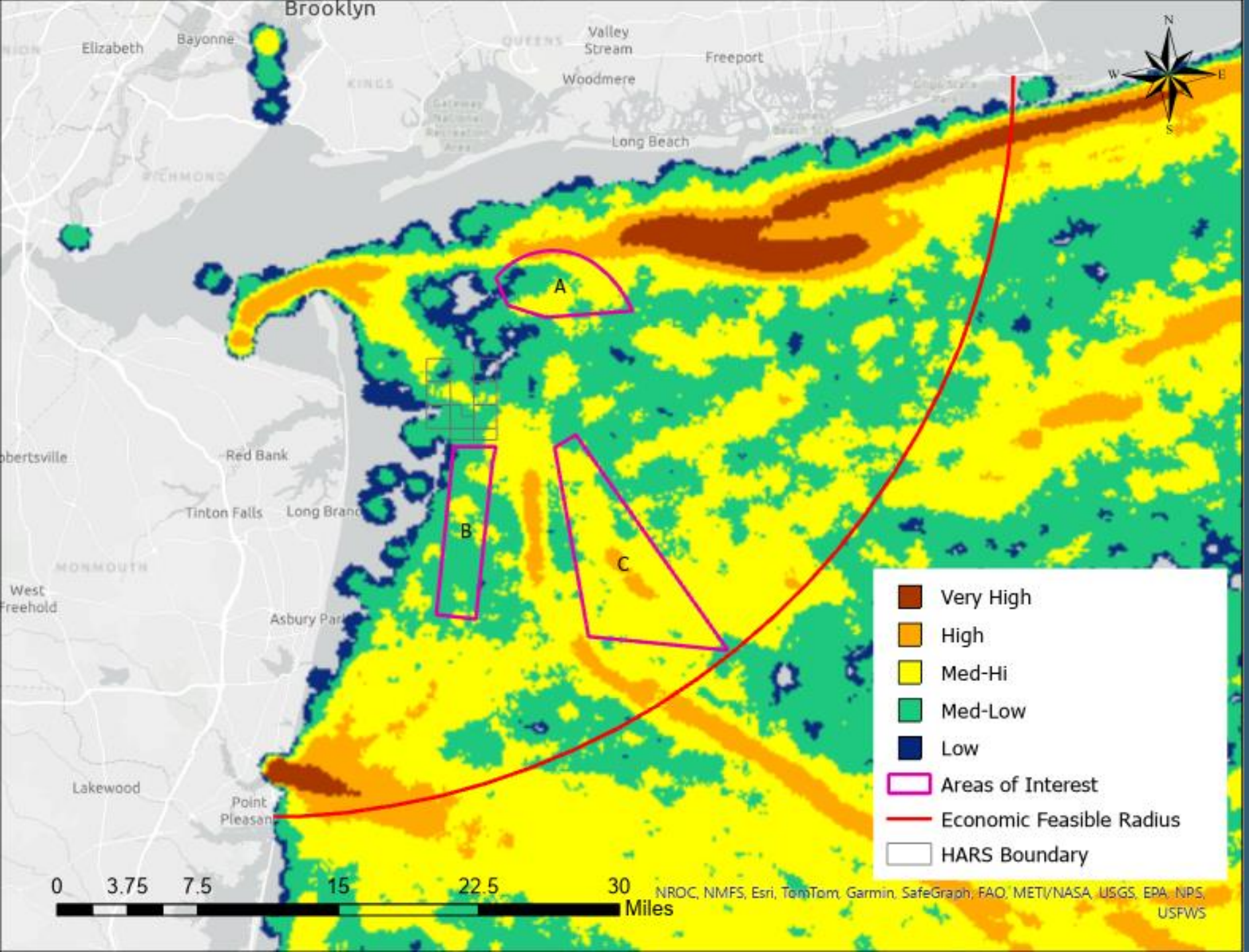


Fisheries

Scallop

This dataset characterizes the density of commercial fishing vessel activity for the scallop fishery in the northeast and mid-Atlantic regions of the U.S. based on Vessel Monitoring Systems (VMS) from NMFS for the years 2015 to 2019.

Data

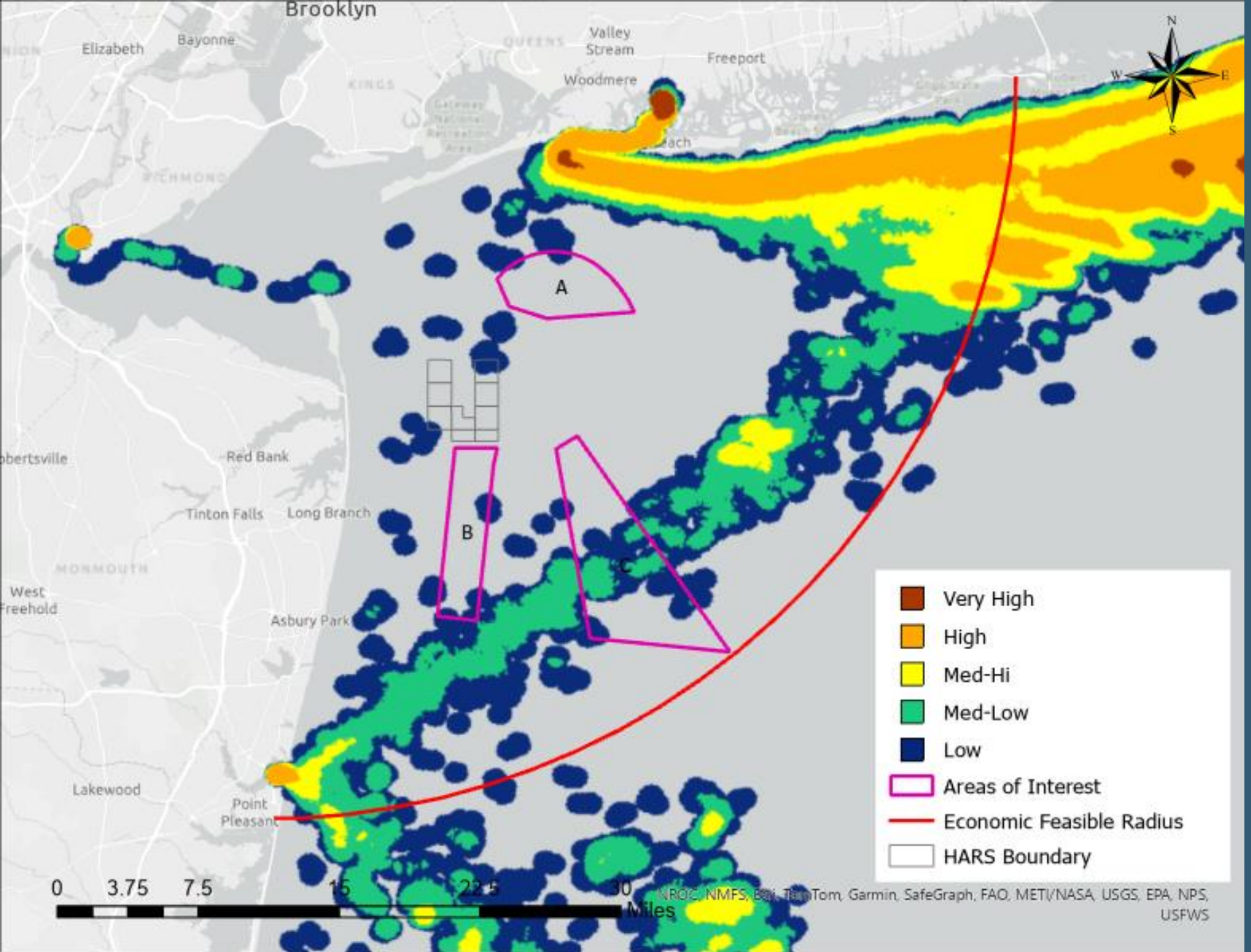


Fisheries

Squid, Mackerel, and Butterfish

This dataset characterizes the density of commercial fishing vessel activity for the squid, mackerel, and butterfish fishery in the northeast and mid-Atlantic regions of the U.S. based on Vessel Monitoring Systems (VMS) from NMFS for the years 2015 to 2019.

Data

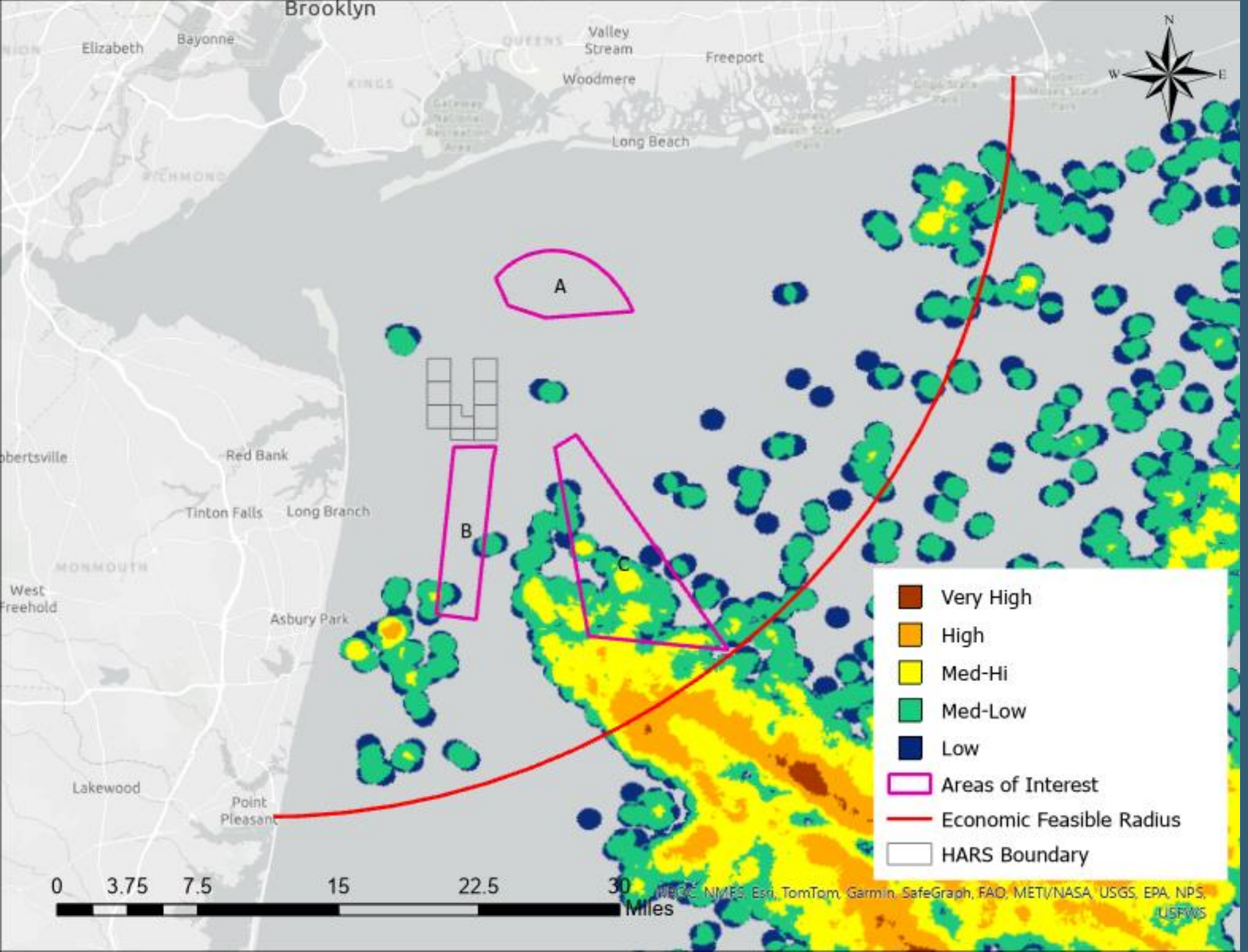


Fisheries

Surfclam

This dataset characterizes the density of commercial fishing vessel activity for the surf clam fishery in the northeast and mid-Atlantic regions of the U.S. based on Vessel Monitoring Systems (VMS) from NMFS for the years 2015 to 2019.

Data

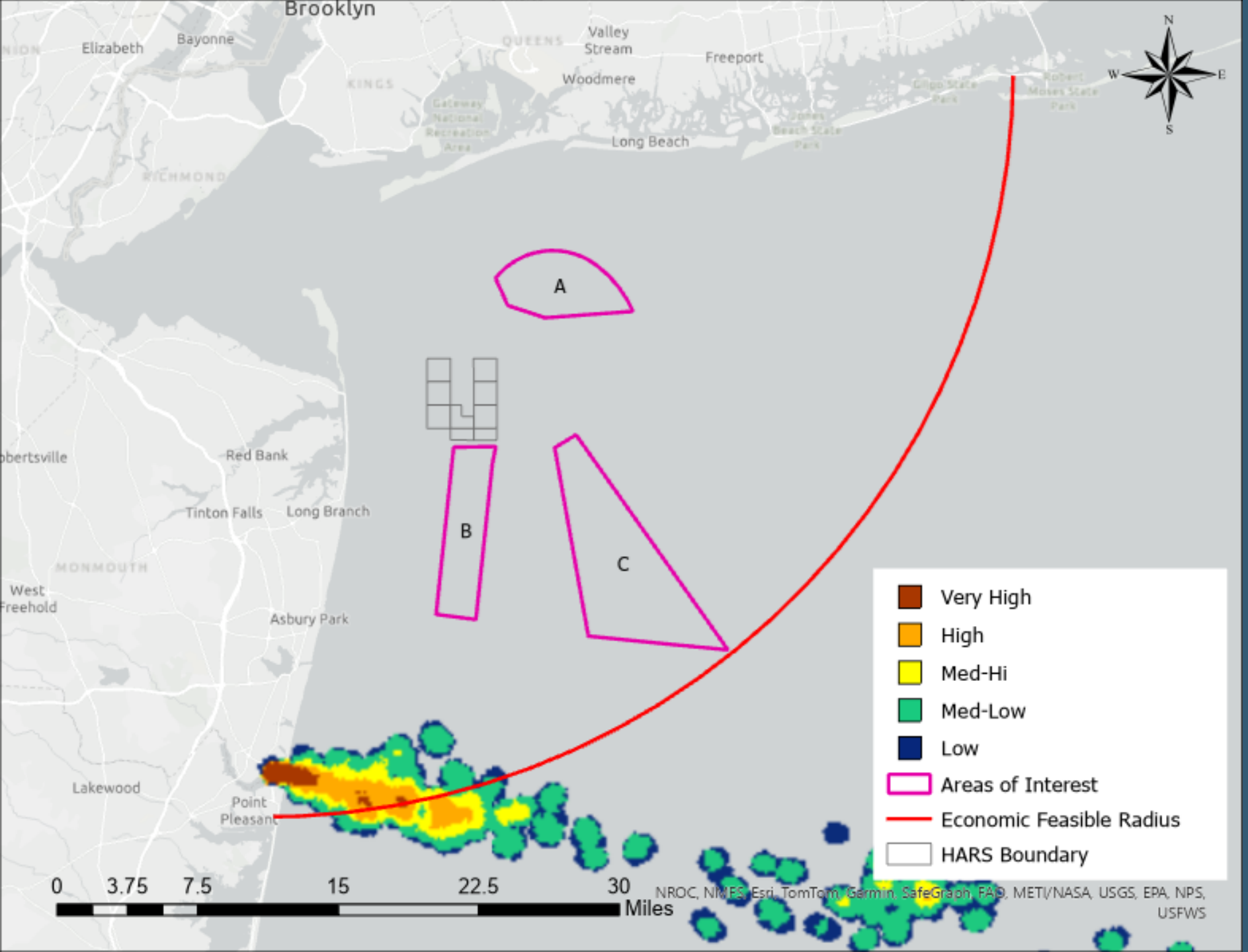


Fisheries

Herring

This dataset characterizes the density of commercial fishing vessel activity for the herring fishery in the northeast and mid-Atlantic regions of the U.S. based on Vessel Monitoring Systems (VMS) from NMFS for the years 2015 to 2019.

Data

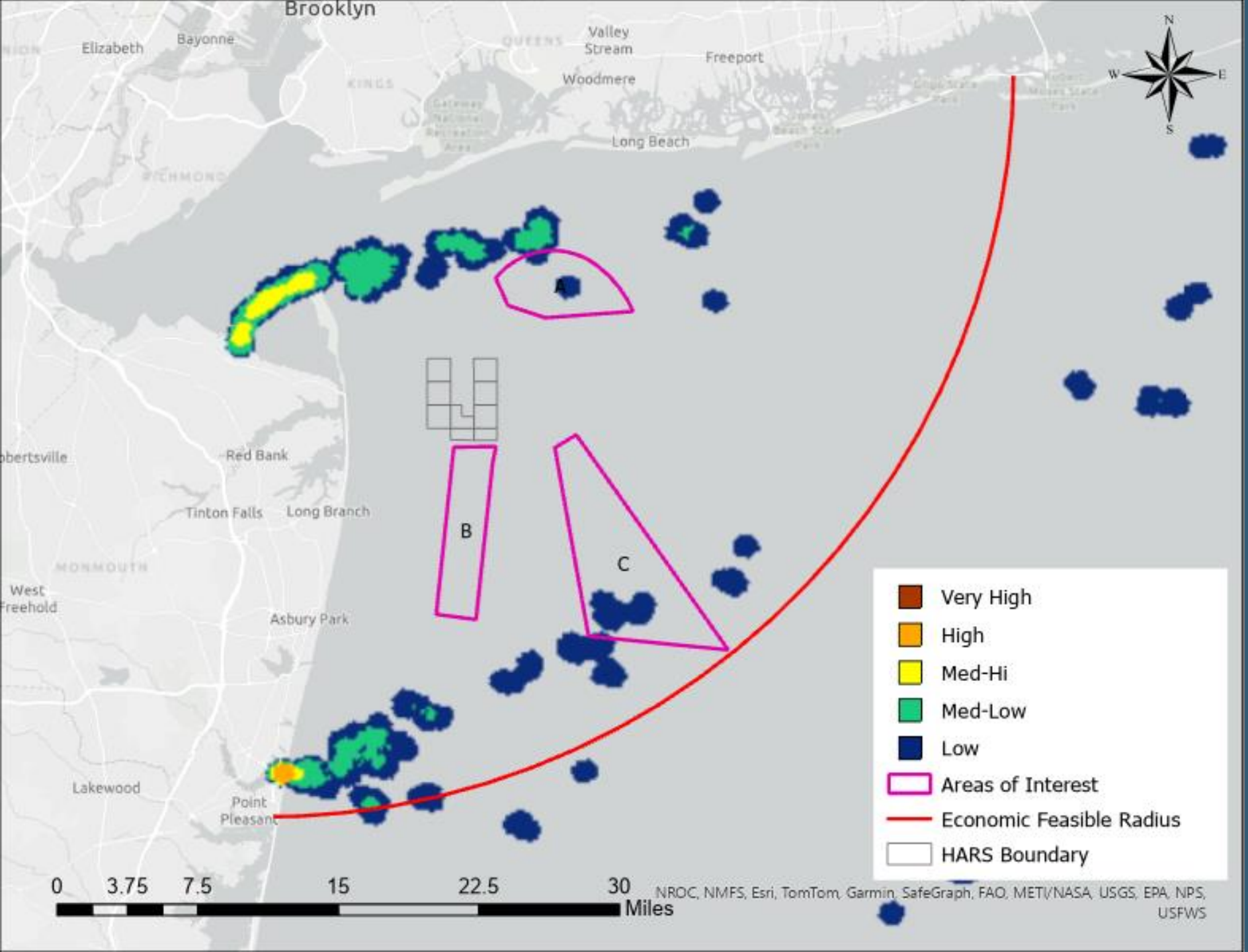


Fisheries

Monkfish

This dataset characterizes the density of commercial fishing vessel activity for the monkfish fishery in the northeast and mid-Atlantic regions of the U.S. based on Vessel Monitoring Systems (VMS) from NMFS for the years 2015 to 2019.

Data

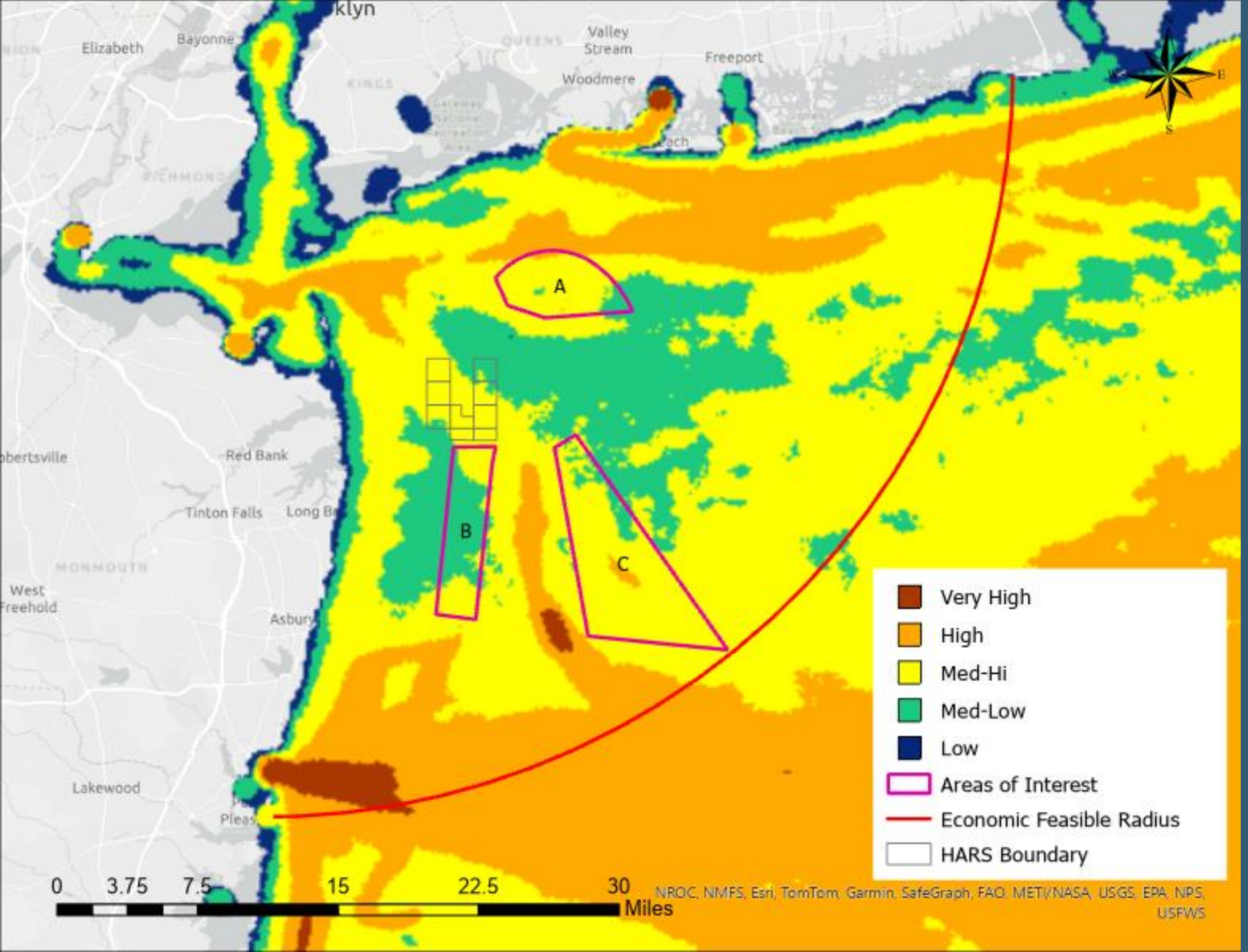


Fisheries

Multispecies

This dataset characterizes the density of commercial fishing vessel activity for the multispecies fishery in the northeast and mid-Atlantic regions of the U.S. based on Vessel Monitoring Systems (VMS) from NMFS for the years 2015 to 2019.

Data



Fisheries

All VMS

This dataset characterizes the density of commercial fishing vessel activity for fisheries in the northeast and mid-Atlantic regions of the U.S. based on Vessel Monitoring Systems (VMS) from NMFS for the years 2015 to 2019.

Data

Data