

## **Attachment 1**

### **Delaware Department of Natural Resources and Environmental Control Comments The Bureau of Ocean Energy Management Request for Information: Commercial Leasing for Wind Power Development on the Central Atlantic Outer Continental Shelf**

#### **a) Geological, geophysical, and biological bathymetric conditions (including bottom and shallow hazards and whether seafloor is covered with living organisms).**

Benthic habitats will be fundamentally altered due to the installation of wind turbines and associated scour protection structures. DNREC suggests the mapping of benthic features at appropriate spatial scales before, during, and after construction to allow for the examination of changes to benthic resources, and the impacts that these changes may have on fish, fisheries, marine mammals, and other marine life. Geological and geophysical (G&G) and high-resolution geophysical surveys (HRG) will provide information on the seafloor and sub-surface conditions as they pertain to the proposed projects' siting, design, construction and operation. Information collected should include, but is not limited to, water depths, coverage, seismic penetration depth, site conditions and resolution. While one written report has been provided to DNREC summarizing laboratory testing of collected sediment samples and evaluation and assessment of geotechnical engineering properties in portions of the Call Area, additional information for site characterization is recommended, including but not limited to, the following: geohazards, seabed topography, rock outcrops, slope stability and the presence of shallow gas or gas hydrates.

#### **b) Known archaeological and cultural resource sites on the seabed.**

Comments for this item (b) is incorporated into the comments for item (c) below.

#### **c) Information regarding the identification of historic properties or potential effects to historic properties from leasing, site assessment activities (including the construction of meteorological towers or the installation of meteorological buoys), or commercial wind energy development in the Call Area. This includes potential offshore archaeological sites or other historic properties within the areas described in this notice and onshore historic properties that could potentially be affected by renewable energy activities within the Call Area. This information will inform BOEM's review of future undertakings under section 106 of the National Historic Preservation Act (NHPA) and under the National Environmental Policy Act (NEPA).**

Submerged cultural and historic resources, traditional cultural places, and visual resources associated with historic properties may be impacted by offshore wind development in the proposed Call Area. In consultation with Delaware's State Historic Preservation Office (DE SHPO), DNREC encourages BOEM to initiate consultation under Section 106 of the National Historic Preservation Act as soon as possible, as governed by the Regional Programmatic Agreement, to consider potential effects on historic properties from any leases in the subject area.

According to information from the Automated Wreck and Obstruction Information System (AWOIS) and NOAA's electronic navigational charts (ENC), numerous obstructions including shipwrecks have been identified in Area A (Attachment 2). The majority of these obstructions have not been surveyed and would need to be further evaluated for archaeological potential. Furthermore, there are numerous listed or eligible structures identified on the National Register within a 35-mile radius of Area A (Attachment 3). These properties have the potential to be visually affected by any renewable energy activities within the Call Area.

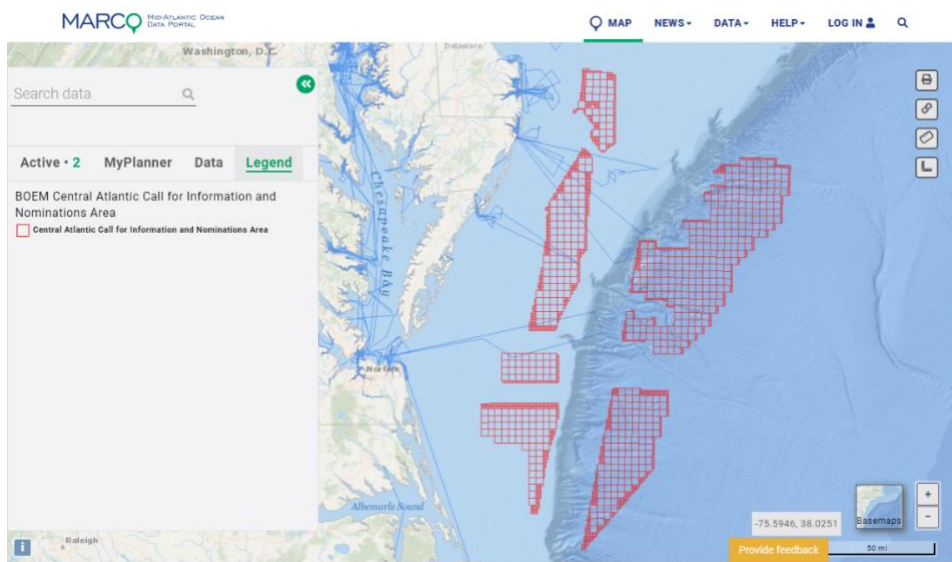
**d) Information about potentially conflicting uses of the Call Area, including navigation (in particular, commercial shipping and recreational vessel use), recreation, and fisheries (commercial and recreational). Additional information regarding recreational and commercial fisheries including, but not limited to, the use of the areas, the types of fishing gear used, seasonal use, and recommendations for reducing use conflicts.**

#### *Navigation*

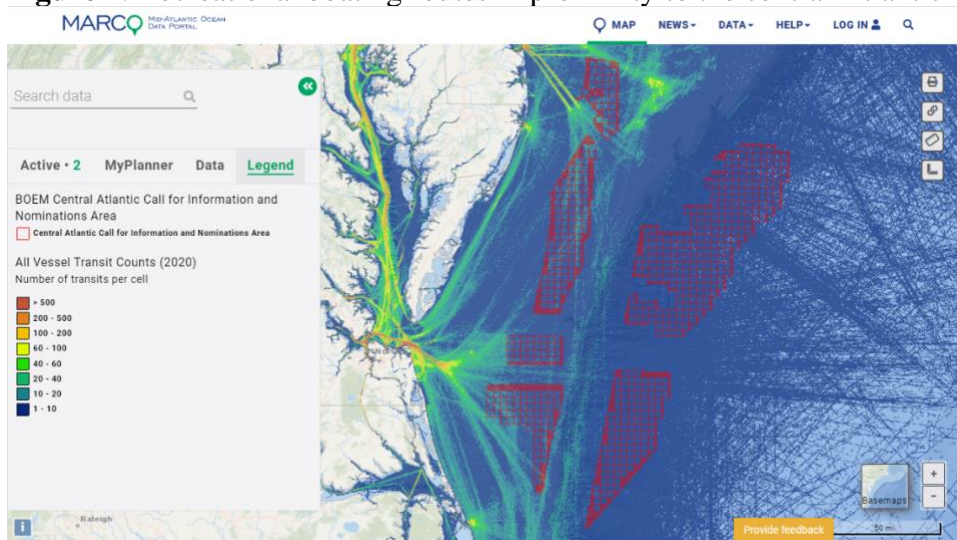
DNREC appreciates BOEM's commitment to minimize conflict with existing navigation routes and applauds the exclusion of the Delaware Bay Southeastern Approach Offshore Precautionary Area as identified by the August 2021 United States Coast Guard (USCG) Port Access Route Study (PARS) for New Jersey and the Delaware Bay from the Call Area.

DNREC has identified additional potential conflicts for BOEM's consideration. Due to the narrow corridor between Areas A and B for vessels to travel through, there is concern regarding the potential for uncharacteristically high vessel traffic through that area. Based upon data from the Mid-Atlantic Regional Council on the Ocean (MARCO) data portal, there are several lanes of recreational boating routes traversing Area B and one lane traversing Area C (Figure 1). Furthermore, there is a high concentration of vessel transit in the following Areas (Figure 2):

- Area A
  - Top right corner
  - Southern portion
- Area B
  - Top portion
  - Heavy traffic lane going North to South
- Area D
  - Western-most top portion



**Figure 1.** Recreational boating routes in proximity to the central Atlantic Call Area



**Figure 2.** Vessel transit counts in proximity to the central Atlantic Call Area

### ***Fisheries***

Delaware is a steward of the species that inhabit the tidal waters and the fisheries it manages and has an interest in ensuring that these species are not negatively affected by non-fishing activities occurring in the marine environment. The central Atlantic Call Area proposed by BOEM appears to overlap with important benthic, invertebrate and finfish resources and habitat, as well as commercial and recreational fishing off the coast of Delaware. Delaware promotes the safe operation of commercial and recreational fisheries and provides input and guidance on the conduct of other marine uses in a manner that encourages compatibility with sustainable fishing and fishing communities. BOEM should acknowledge these overlaps and clarify what aspects of the cumulative impacts will be evaluated. Moreover, individual project and cumulative impacts

should be considered as it relates to all life stages of fish, habitats and fisheries ; and if avoidance is not possible, impacts should be minimized and mitigated to the fullest extent possible.

DNREC looks forward to the release of BOEM's Fisheries Mitigation Guidance and expects BOEM to require lease holders in the final central Atlantic areas to incorporate the practices into their mitigation measures.

In general, potential impacts to commercial and recreational fisheries should be evaluated for each phase of development – construction, operations, and decommissioning – across fishery species and fisheries from the following aspects:

- Acoustic impacts
- Electromagnetic fields
- Micrometeorological effects
- Hydrodynamic changes
- Benthic changes
- Artificial reef effect
- Sensitive areas within or near footprint
- Species potentially affected
- Monitoring and research
- Fishery vessel exclusion, displacement, or increased collision risk
- Physical habitat conversions and losses, such as scour and sedimentation

DNREC has identified key fish species that have potential for multiple encounters with offshore wind turbines and infrastructure in the planning area.

- Key Migratory and Diadromous species for Delaware:
  - American eel, Atlantic Sturgeon, Shad and River Herring, Atlantic Striped Bass\*, Horseshoe Crab, Jonah Crab, Blue Crab\*, American Lobster, Spot\*
- Key marine species in areas of potential turbines and/or cables:
  - Menhaden\*, Black Sea Bass\*\*\*, Tautog\*\*, skates, rays, sharks\*\*, tunas\*\*, Cobia\*\*, Cunner, Hakes, Red drum, Sheepshead, Summer Flounder\*\*, Knobbed Conch, Smooth Conch, Whelk\*, Triggerfish\*\*, Tilefish\*\*, Scup\*\*, Atlantic Croaker\*\*, Bluefish\*\*, Weakfish\*\*
- Sessile species:
  - Clams, Oyster

\* *Identified as being important to Delaware's commercial fishing industry*

\*\* *Identified as being important to Delaware's recreational fishing industry*

\*\*\* *Identified as being important both commercially and recreationally*

As the planning and analysis phase moves forward, DNREC recommends the following as it relates to fisheries:

In reference to survey activities and equipment,

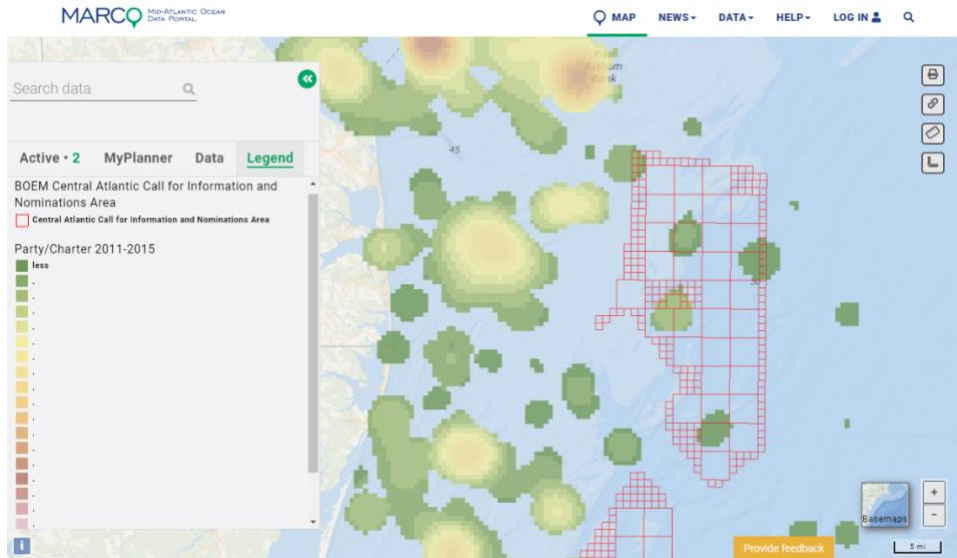
- Noise generated from low-frequency sound produced by survey equipment and instruments may result in decreased catch rates of fish during the survey period. Decreased catch rates may be most notable in hook and line fisheries because behavior changes may reduce the availability of the fish to be captured in the fishery. Fishing

captains in the area have shared their observations that survey vessel operations disrupt their fishing activities. These disruptions appear to be temporary, but BOEM should acknowledge that they are occurring, and can negatively impact private anglers and the recreational for-hire industry.

- Improve communication (e.g., notices to mariners) between BOEM, offshore wind developers and the commercial and recreational fishing community regarding the use of survey equipment, such as sub-bottom profilers that may be of concern to fishing activities.
- Conduct research on the effects of acoustic mapping systems such as, chirp sonars, mid-frequency active sonar and related technologies on hearing loss in fish and impacts to invertebrates.
- Conduct research to determine impacts to regional hydrodynamics through the modification of the wind field and from the turbine foundations. Previous studies at European wind farms indicate locally enhanced turbulence in the wake of the foundations, increased sediment erosion, and turbidity in the water column<sup>1</sup>.

In reference to offshore wind farm development,

- Conduct research to determine how impacts to fisheries may vary based on target species, gear type, fishing location, and other factors to determine the suitability of the Call Area for wind development.
- Conduct research to gain a better understanding of the influence of electromagnetic fields (EMFs) on species. Baseline studies of behaviors without additional anthropogenic EMFs are important for comparison to differing EMF intensities, cable properties, and power transmissions. Studies should also be performed in the context of determining the likelihood of encounters with various species.
- If areas are closed to fishing activity post-construction, the fishable area would be considerably reduced. BOEM and the developers should consider providing safe access to the area by the fishing community.
- Fishing vessels use long-established relatively fixed transit lanes, so offshore wind energy development design and construction should consider the location and directionality of these lanes to maximize safety and minimize impacts to existing fishing. As mentioned above, based upon data from the MARCO data portal, there are several lanes of recreational boating routes traversing Area B and one lane traversing Area C (Figure 1), as well as several hotspots of party/charter boat activity in Area A (Figure 3)



**Figure 3.** Party/charter boat visitation frequency in proximity to central Atlantic Call Area A

In reference to specific fisheries, the whelk fishery is important to Delaware. Although it largely occurs shoreward of Call Area A, additional information is needed on the impact of offshore wind energy development on whelk population dynamics and possible interactions with the commercial fishery.

The National Oceanic and Atmospheric Administration (NOAA) Northeast Fisheries Science Center (NEFSC) Surfclam Surveys are heavily present in Areas A and B. NOAA has been conducting more than 50 standardized fisheries surveys for over 30 years and these surveys are critical components for the sustainable management of ocean fisheries throughout the nation. Moreover, these surveys are essential in the recovery of protected species, habitat conservation, and understanding the impacts of climate change on ocean ecosystems. During the environmental review of the first offshore wind energy project in federal waters, BOEM and NOAA Fisheries identified major adverse impacts to the NOAA Fisheries surveys conducted in the Northeastern US. Impacts to surveys include the exclusion of survey ships from the wind energy development areas due to operational and safety limitations, restrictions to the random-stratified statistical survey design, alterations of benthic and pelagic habitats, impediments to the airspace in and around the wind energy development areas, and reduced sampling productivity. DNREC looks forward to the finalization and implementation of the NOAA/BOEM Federal Survey Mitigation Strategy.

**g) Information on the constraints and advantages of possible electrical cable transmission routes, including onshore landing and interconnection points for cables connecting offshore wind energy facilities to the onshore electrical grid and future demand for electricity in the U.S. mid-Atlantic region.**

It is necessary to acknowledge the potential impacts to State resources and uses from the resulting transmission infrastructure. DNREC offers the following considerations on potential impacts from the installation and maintenance of energy transmission cables and other infrastructure in response:

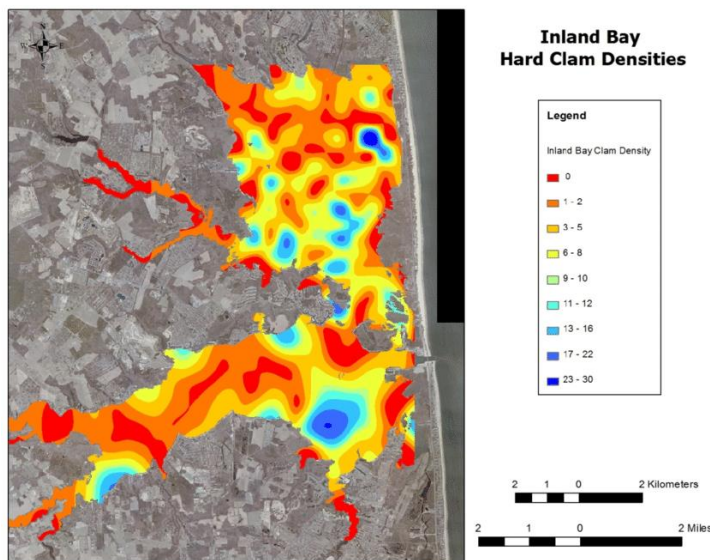
- Beach Preservation Regulations
  - Temporary and permanent installations on or proximal to the regulated beach need to make application to the DNREC, Division of Watershed Stewardship for approval. Additionally, any construction or data collection activity, including directional drilling or vibrocore sampling, that affects a beach must be approved in advance.
- Benthic communities
  - The installation and maintenance of energy transmission cables can disturb benthic ecology and habitats. Cables running through seagrass beds, natural and artificial reefs, and other natural habit could negatively impact existing benthic communities. Monitoring, mapping, and avoidance are recommended.
- Contaminated sediments
  - Contaminated sediment could become resuspended with disturbance associated with burying the cable lines, with an increasing concern the further upstream in the Delaware River the disturbance occurs. Monitoring and placement considerations are recommended.
- National Security
  - A naval restricted area is located in State waters off of Cape Henlopen, Delaware, as demonstrated in the MARCO data portal.
- Sand resources
  - Future cabling routes, support structures of any kind, and landfalling points must account for and avoid existing and proposed sand borrow areas used for beach nourishment projects in Delaware.
  - In addition to the mapped established offshore sand resource areas, Delaware and the USACE are in the process of mapping and establishing additional sand resource areas. These areas include Indian River Inlet ebb and flood shoals, areas surrounding established borrow areas, and additional areas on the outer continental shelf. Mapping data are available from DNREC.
- Shellfish beds
  - DNREC recommends that areas identified as Shellfish Aquaculture Development Areas (SADA) in the Inland Bays be avoided for offshore wind cable activities, as



wind energy development could interfere with shellfish aquaculture activities and cables could have negative interaction with current or future shellfish aquaculture gear or markings (poles, anchors, netting, etc.). A map of the SADA can be found at the following link:

<https://dnrec.maps.arcgis.com/apps/PublicInformation/index.html?appid=50d387d56725401e920001e46fa73f27>

- DNREC recommends that areas of high natural hard clam (*Mercenaria mercenaria*) density of two or more hard clams/square yard be avoided in offshore wind development/cable-laying in the Inland Bays. Hard clams are an important natural resource for the state and the overwhelming majority of recreational and commercial clamming takes place in the Inland Bays. Delaware has enjoyed a stable hard clam population in the Inland Bays for decades, and in order to best protect the resource it is important to avoid work, sediment disturbance, and burial in the areas of higher density populations. Areas of hard clam density are indicated on Figure 4.
- Unexploded Ordnance (UXO)
  - UXO is a known issue off the coast of Delaware and could present a concern in the installation and maintenance of transmission cables. UXO should be a consideration when planning transmission routes.
- Wetlands
  - Wetlands have the potential to be disturbed or destroyed with the installation of energy transmission cables. Wetlands should be avoided when siting locations to bring energy transmission cables on land. Any transmission cables located channel-ward of mean low water are subject to a yearly subaqueous lands fee. More information on those yearly lease fees can be found at <https://documents.dnrec.delaware.gov/wr/Documents/WSLS%20Fee%20Sheet.pdf>.



**Figure 4.** Hard clam density in the Inland Bays



As transmission routes are identified, DNREC requests early coordination regarding electric system capacity, cable installation methods, and cable monitoring methods to minimize impacts to State uses and resources. Cable burial must be at sufficient depth in or around these areas to

avoid direct contact and potential impacts. Cable installation must account for other ocean uses such as fishing interests, sand borrow areas, artificial reefs, and navigation channels. A recommended strategy to minimize impacts is the use of shared transmission systems for multiple offshore wind farm projects. This approach reduces the number of transmission cables required offshore, the number of beach landings, and other inland impacts. In conjunction, DNREC recommends the use of high voltage direct current (HVDC) cables as opposed to high voltage alternating current (HDAC) cables due to the reduced number of cables necessary to transmit energy.

**i) Information regarding the size and number of WEAs, taking into consideration the offshore wind energy goals of States bordering the Call Area. BOEM is also seeking further information on what additional factors should be considered in this process.**

Delaware is contemplating options for future procurement of offshore wind to meet the state's energy needs and renewable energy and climate policy goals. While no procurement commitment or goal has been established at this time, the state is seeking to maximize its options for future development of offshore wind.

**k) Habitats that may require special attention during siting and construction.**

Delaware currently maintains one of the most active and robust artificial reef programs along the Atlantic Coast, with fourteen artificial reef sites in the Delaware Bay and Atlantic Ocean. DNREC commends the exclusion of artificial reef site Del-Jersey-Land (site 13) from the Central Atlantic Call Area. However, there appears to be some remaining overlap with the site and the Call Area. Additionally, the artificial reef site draws a high presence of recreational use. The use of this site by recreationists should be considered as BOEM defines the Wind Energy Area.

A specific concern for Delaware is the potential impact of offshore wind development on Horseshoe Crab population dynamics. Call Area A overlaps considerably with the Carl N. Shuster Horseshoe Crab Reserve at the mouth of the Delaware Bay. BOEM should consider the potential impact of the development process on east-west Horseshoe Crab movement patterns, electromagnetic field-species avoidance behavior, benthic habitat fragmentation and corresponding Horseshoe Crab utilization of the area.

DNREC urges the evaluation of the Call Area to consider the distribution of naturally occurring soft and stony corals in the deep-water portions of the energy development area and potential cable corridors. A large area to the east of the canyons, in which Call Area E is proposed, is designated as the Frank R. Lautenberg Deep-Sea Coral Protection Area due to scientific research efforts undertaken by the NOAA and BOEM because the fishing industry, research community, environmental organizations, and government organizations agree the area is a

valuable ecological resource. Interconnection to shore from this location would be challenging and careful consideration should be taken to avoid impacts to the corals and canyons from transmission cables.

**l) Information regarding the identification of protected species, federally designated (or proposed) critical habitat, essential fish habitat, or areas that are environmentally sensitive or crucial to marine productivity and are State or federally managed for their conservation value.**

According to the NOAA Office for Coastal Management, the entire Call Area is designated as Essential Fish Habitat for 19 highly migratory shark species and 11 highly migratory fish species<sup>9</sup>. Of these species, the sandbar, night, sand tiger, scalloped hammerhead, bigeye thresher, oceanic whitetip, dusky, basking, shortfin mako, and longfin mako sharks are considered by Delaware to be Tier 1 Species of Greatest Conservation Need, as well as the Atlantic bluefin tuna<sup>3</sup>.

***Marine Mammals***

The effects of offshore wind farm activities on marine mammals are poorly understood. Sound created from wind farm construction, operations, and maintenance have the potential to harm and/or harass marine mammals that are protected by state and federal laws. These sounds have potential to cause severe auditory injury as well as behavioral changes. Several of the marine mammal species occupying the proposed central Atlantic Call Area A, including the offshore waters of Delaware, are currently experiencing population declines. One species, the North Atlantic right whale (*Eubalaena glacialis*), is known to occur in the Atlantic coastal waters along the continental shelf, migrating seasonally through the proposed Call Area. The North Atlantic right whale is one of the world's most endangered whale species with fewer than 400 individuals remaining. Vessel strikes, entanglements, and ocean noise are some of the greatest threats to this species. Noise can interfere with communication, navigation, locating food, locating mates, avoiding predators, and can interrupt their normal behavior. Ocean noise from human activities has increased in the Northwest Atlantic and activities from offshore wind farms are likely to increase this noise, resulting in the potential for continued population declines of protected marine species such as the North Atlantic right whale and other protected marine mammal species.

Hydrodynamic changes in the water column from installation of turbines have the potential to occur in the Call Area A during and after construction. These changes may have a negative effect on prey availability for protected species such as baleen whales. These whales feed on zooplankton which could be affected by changes in the turbidity of the water column. Changes in prey abundance could negatively affect foraging ability or potentially alter migration patterns of these animals.

***Sea Turtles***

The effects of offshore wind farm activities on sea turtles are poorly understood. Sound created from construction activities, maintenance, and operations have the potential to harm, harass, or

kill sea turtles. There are five species of federally protected sea turtles that are known to occur in Delaware waters and are likely to occur in Call Area A. These include the loggerhead (*Caretta caretta*), leatherback (*Dermochelys coriacea*), green (*Chelonia mydas*), Kemp's ridley (*Lepidochelys kempii*), and hawksbill (*Eretmochelys imbricata*). Data from the MARCO data portal indicates that at least 3 (loggerhead, leatherback, green) of the known sea turtle species

that occur in Delaware waters occur within or near Call Area A. Loggerhead sea turtles have been observed in high abundance in Call Area A during the spring, summer, and fall while leatherback sea turtles have been observed in moderate abundance during the summer months. Moderate numbers of green sea turtles have been observed near Call Area A during the summer months. There is little information to determine potential impacts to sea turtles from sound generated by pile driving or wind farm construction and maintenance activities. It is also unknown how the accumulation of benthic marine species utilizing the turbine foundations may, if at all, impact foraging behavior of sea turtles.

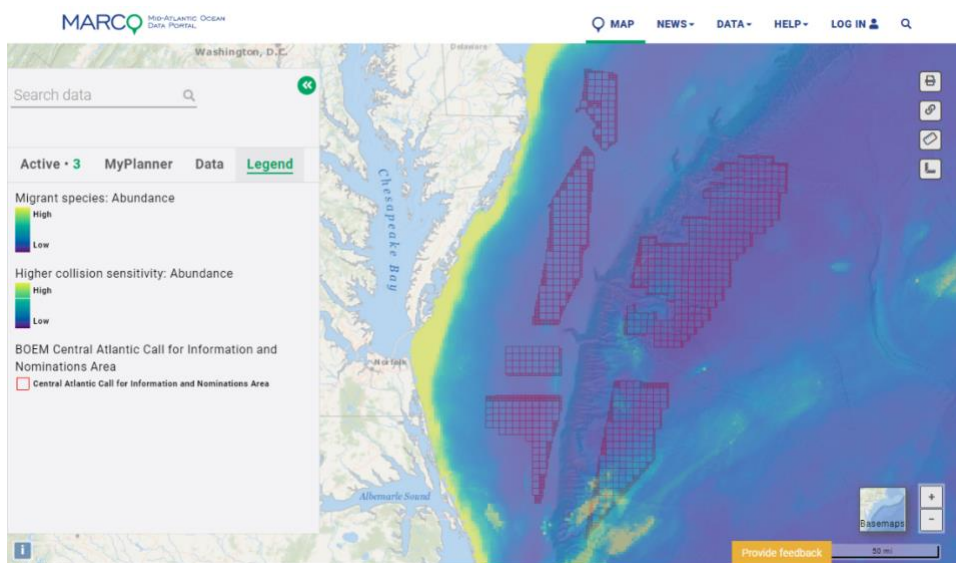
#### *Marine Mammal and Sea Turtle Research*

Call Area A encompasses an area of 235,222 acres where protected marine mammal and sea turtle species are known to migrate through and likely forage. Changes in prey availability, abundance, and diversity could occur from project activities. Changes in migration patterns of marine species could also occur. As the planning and analysis phase moves forward, the DNREC recommends the following:

- Support research on potential impacts to marine mammals and sea turtles from changes in turbulence resulting from increased artificial structures in the water column. Research should include food resource monitoring in waters experiencing increased turbidity resulting from modifications to the wind field and installed turbine foundations.
- Support research on the effects of electromagnetic fields (EMF) on marine mammals and sea turtles to determine the potential for these EMF to disrupt or alter migration patterns of these species.

#### *Coastal Birds*

The Delaware Bay, a site of hemispheric importance, hosts thousands of migrating shorebirds on their northward migration to the arctic in May and early June including the federally threatened rufa red knots (*Calidris canutus rufa*). The Atlantic Coast beaches of Delaware support breeding shorebirds including state endangered American oystercatchers (*Haematopus palliatus*) and state endangered and federally threatened piping plovers (*Charadrius meoidus*). Furthermore, Delaware's coastal waterways and marsh islands support breeding and foraging seabirds listed as Species of Greatest Conservation Concern<sup>2</sup> (SGCN) in Delaware, such as common terns (*Sterna hirundo*) and a variety of gull species. The proposed BOEM offshore planning area sits within the Atlantic Flyway corridor used by these species and the fixed turbines pose a collision risk. Additionally, the MARCO data portal demonstrates a high abundance of migrant bird species, as well as higher collision sensitivity bird species, in the southern-most portion of Call Area F that should be taken into consideration by BOEM (Figure 5).



**Figure 5.** Birds – Migrant species and higher collision sensitivity abundance in proximity to the central Atlantic Call Area

### *Marsh Birds*

Disturbance or destruction of wetlands resulting from installation of energy transmission cables can negatively affect marsh birds that use wetlands for nesting, feeding, and roosting. Birds of conservation concern that may be negatively impacted include the federally-threatened and state-endangered black rail (*Laterallus jamaicensis*), the state-endangered Forster's tern (*Sterna forsteri*) and northern harrier (*Circus cyaneus*), and several Tier 1 SGCN, such as the saltmarsh sparrow (*Ammodramus caudacutus*), seaside sparrow (*Ammodramus maritimus*), and clapper rail (*Rallus longirostris*). Furthermore, tidal high salt marsh and tidal low salt marsh have been identified as Habitats of Conservation Concern in Delaware, and such habitats are crucial for many nesting obligate marsh birds, such as the saltmarsh sparrow (*A. caudacutus*) and the seaside sparrow (*A. maritimus*), respectively. Disturbance and destruction of wetlands should therefore be avoided to prevent impacts to these sensitive marsh birds and their key habitats.

Research, long-term monitoring, and adaptive management plans are needed to safeguard birds. As the planning and analysis phase moves forward, the DNREC recommends conducting research to determine impacts to birds and working with biologists to prepare minimization/mitigation plans to reduce impacts to birds. Please refer to examples of research and planning as stated in the section on bats.

### **m) Other relevant socioeconomic, cultural, biological, and environmental data and information.**

### ***Socioeconomic***

DNREC encourages BOEM to establish lease stipulations to create good-paying union jobs and engage with Tribal governments, underserved communities, ocean users, and other stakeholders,

as being considered in the Public Sale Notice (PSN) for the lease sales offshore California; published in the Federal Register on May 31, 2022 (Docket No. BOEM-2022-0017).

Specifically, DNREC supports a bidding credit to bidders who have executed or commit to executing a community benefit agreement (CBA) with a group of ocean users, such as commercial fisheries, whose use of the lease area will be directly impacted by offshore wind development. The CBA package should include the potential for fisheries compensation.

### ***Bats***

Bat fatalities associated with wind turbines have been documented worldwide. Although the body of studies examining why bats are being killed and how to minimize and mitigate for those losses is expanding, many questions remain, especially for offshore facilities. Research has documented bats migrating over the ocean and foraging at sea where surface crustaceans and insects are plentiful<sup>3</sup>. Some species have even been reported landing on boats and on remote islands<sup>4,5,6</sup>.

Research conducted with offshore wind facilities in the Baltic Sea, prompted by observations of bats near existing turbines, documented over 12,000 observations of bats at sea from July to October in 2005, 2006 and 2008<sup>1</sup>. These researchers found that bats did not avoid turbines but appeared to be attracted to them – flying low over water for long distances and then suddenly flying higher when they reached the turbines. Ten species of bats were found foraging and resting on the turbines.

Although there has been less research done in U.S. waters, what has been done has confirmed that bats are using offshore airspace. Aerial and boat-based surveys in the Mid-Atlantic have documented bats as far as 44 km east of Rehoboth Beach and similar distances offshore of New Jersey and Virginia<sup>7,8</sup>. Some of those bats were documented >100m above sea level.

Research, long-term monitoring, and adaptive management plans are needed in order to safeguard wildlife. As the planning and analysis phase moves forward, the DNREC recommends the following:

- Conduct research to determine impacts to bats during construction and during turbine operation using the best available technology. Examples include, but may not be limited to:
  - Acoustic monitoring from stationary structures (e.g., buoys or floating platforms) as well as via boat transects.
  - Use of radar to determine migration patterns for bats and birds.
  - Bat migration studies that include monitoring offshore waters (MOTUS towers and Nano tags).
  - Use of sensors attached to turbines to detect collisions.

- Use of thermal cameras (in association with sensors) to film collisions and possibly identify species or species groups.
- Work with biologists in affected states to prepare a minimization/mitigation plan that could include the following to reduce impacts to bats:
  - Reduced use of turbines during migration seasons.
  - Use of acoustic deterrents if any are found to be effective.
  - Use of automated programs that predict when bat collisions are most likely to occur and curtail turbines only during those periods.
  - Ongoing research to determine regional and cumulative impacts to wildlife.

***Unexploded Ordnances***

Based on data from the MARCO data portal, there are UXOs located in OCS Blocks 6575, 6118, and 6935.