

# Read Ahead for Roundtable Discussion with U.S. Coast Guard Regarding Offshore Approaches to the Delaware Bay March 9, 2021

This document is intended to provide an overview of the navigational issues and routing measures the Coast Guard has identified and is considering for further evaluation. We invite you to read it ahead of the Mariners' Advisory Committee for the Bay & River Delaware hosted roundtable discussion scheduled for 10:00 am, March 9, 2021, and to provide responses during the discussion to our questions asked below.

Disclaimer: This document is being provided for discussion purposes only. It does not represent any legally binding agency position but rather is being used to further discussion pertaining to the Coast Guard Port Access Route Study for the Seacoast of New Jersey Including Offshore Approaches to the Delaware Bay. Therefore, it is not intended to, nor does it impose legally binding requirements on any party, including the Coast Guard, other Federal or State agencies, or the regulated community.

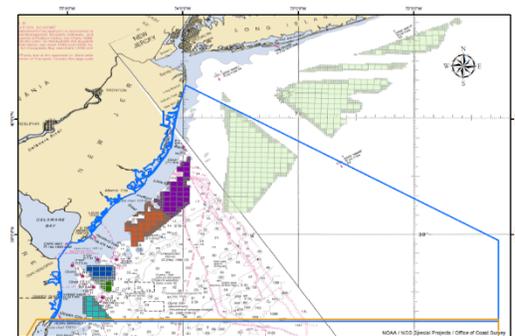
## Roundtable Discussion Purpose

1. To identify impacts to navigational safety, Coast Guard missions, and traditional uses of the water based on known conflicts between potential offshore developments, offshore anchoring practices, and safe access routes to the entrance of Delaware Bay.
2. To identify the routing measure alternatives, maximize navigational safety; preserve Coast Guard mission space, and strike a balance between traditional and new uses of the waterway and which alternatives the Coast Guard Navigation Center should further evaluate as part of the PARS process.<sup>1</sup>

## Seacoast of New Jersey Including Offshore Approaches to the Delaware Bay, Delaware

The Coast Guard is conducting a Port Access Route Study (PARS) to determine whether existing or additional vessel routing measures are necessary along the seacoast of New Jersey and approaches to the Delaware Bay.

*The PARS will consider whether existing or additional routing measures are necessary to improve navigation safety due to factors such as planned or potential offshore development, current port capabilities and planned improvements, increased vessel traffic, existing and potential anchorage areas, changing vessel traffic patterns, weather conditions, or navigational difficulty.*



New Jersey Port Access Route Study Area

During this study, the Coast Guard is considering the views of the maritime community, environmental groups, and other stakeholders.

In support of the study, the Coast Guard Navigation Center may conduct a risk assessment that analyses potential routing measures. The purpose of these roundtable discussions is to seek input on the routing

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<sup>1</sup> Once completed, the Fifth District will publish a draft of the NJ PARS Study along with routing measure recommendations and supporting analysis in the Federal Register for public comment. After those comments are considered, the Study will be finalized, a final Notice of Study Results will be published in the Federal Register, and the Study will be forward to Coast Guard Headquarters (Commandant, CG-NAV) for their consideration.

measure alternatives the Coast Guard Navigation Center should include in their risk assessment. *We are attempting to strike a balance between deep draft routes, the towing vessel routes, the lease areas, and the need for anchoring offshore.*

The recommendations of the study may lead to future rulemakings or international agreements.

## **Ship's Routing to Organize and Improve Shipping Movement**

### **Purpose**

The purpose of ship's routing is to improve the safety of navigation in converging areas and in areas where the density of traffic is great or where freedom of movement of shipping is inhibited by restricted sea room, the existence of obstructions to navigation, limited depths or unfavorable meteorological conditions.

### **Objectives**

The objectives of any routing system will depend upon the particular hazardous circumstances which it is intended to alleviate, but may include some or all of the following:

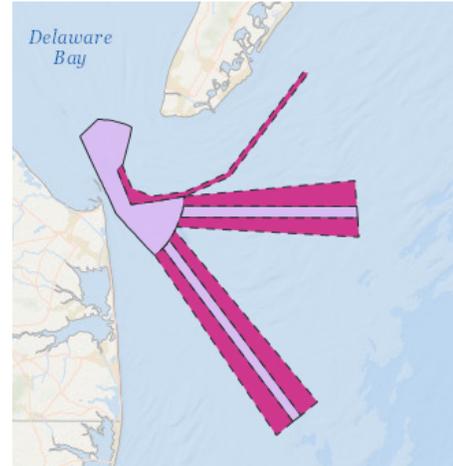
1. The separation of opposing streams of traffic so as to reduce the incidence of head-on encounters.
2. The reduction of dangers of collision between crossing traffic and shipping in established traffic lanes.
3. The simplification of the patterns of traffic flows in converging areas.
4. The organization of safe traffic flow in areas of concentrated offshore development.
5. The organization of traffic flow in or around areas where navigation by all vessels or by certain classes of vessels is dangerous or undesirable.
6. The reduction of risk of grounding to provide special guidance to vessels in areas where water depths are uncertain or critical.
7. The guidance of traffic clear of fishing grounds or the organization of traffic around fishing grounds.

Any system of one or more routes or routing measures are implemented to reduce the risk of marine casualties. Examples of potential measures include fairways, traffic separation schemes, two-way routes, recommended tracks, areas to be avoided, inshore traffic zones, roundabouts, precautionary areas and deep-water routes.

## Background of Existing Delaware Bay Approach Traffic Separation Scheme

### Excerpts of Final Rule, 65 FR 12945, Mar. 10, 2000<sup>2</sup>

Summary: The Coast Guard is codifying the existing traffic separation scheme (TSS) in the approaches to Delaware Bay. *The current scheme consists of an Eastern approach, a Southeastern approach, a two-way route for use by tug and tow traffic, and a precautionary area configured to exclude shoal areas too shallow for deep draft vessels. Its arrangement separates large inbound vessels from tug and barge traffic on traditional New Jersey coastal routes.* The TSS reduces the number of near misses and the probability of an incident that could result in a major chemical or petroleum oil spill.



Existing Traffic Separation Scheme  
Image Source: MARCO Data Portal

### Background and Purpose:

The 1978 amendments to the Ports and Waterways Safety Act (PWSA), 33 U.S.C. 1223(c), require that a port access route study (PARS) be conducted before establishing or adjusting a traffic separation scheme (TSS). *A TSS is an internationally recognized routing measure used to minimize the risk of collision by separating vessels, through traffic lanes, into opposing streams of traffic.* To be internationally recognized, a TSS must be approved by the International Maritime Organization (IMO). The IMO approves a TSS only if the TSS complies with IMO principles and guidelines on ships routing. Rule 10 of the International Regulations for Preventing Collisions at Sea, 1972 (COLREG 1972) prescribes the conduct of vessels within or near a TSS adopted by IMO.

The Traffic Separation Scheme in the Approaches to Delaware Bay was originally adopted and implemented by the Inter-Governmental Maritime Consultative Organization (as the IMO was formerly known) on October 28, 1969. A change to the Southeastern Approach lanes was implemented on March 15, 1976.

On March 22, 1994, a notice in the Federal Register (59 FR 14126) announced that we were conducting a PARS for the Approaches to Delaware Bay. *We started the PARS because of concerns expressed by the maritime community about the many near misses between deep-draft vessels and tugs with tows at the Delaware Bay Entrance.* A notice of study results for the Approaches to Delaware Bay was published in the Federal Register on September 22, 1995 (60 FR 49237).

*The study showed that navigation safety, economic, and environmental considerations necessitated amending the TSS to better separate large inbound vessels from tug and barge traffic transiting easterly and northerly along their traditional New Jersey coastal route. In the old configuration near misses occurred frequently. The probability of a major chemical or petroleum oil spill was too great to ignore. Therefore, we proposed to IMO that the Eastern Approach TSS be adjusted; that a Two-Way Traffic Route for tug and barge traffic entering and departing Delaware Bay be established; and that the*

<sup>2</sup> See: [file:///d05ms-3tplhl2/Public/\(dpw\)%20Public%20Folder/24-PARS/6.%20PARS%20-%20DELAWARE%20BAY%20-%20MD,%20DE%20&%20NJ%20SEACOASTS/1.%20USCG-2020-0172,%20NOS%20DEVELOPMENT/Del%20Bay%20TSS%20Final%20Rule,%20Mar%2010,%202000.pdf](file:///d05ms-3tplhl2/Public/(dpw)%20Public%20Folder/24-PARS/6.%20PARS%20-%20DELAWARE%20BAY%20-%20MD,%20DE%20&%20NJ%20SEACOASTS/1.%20USCG-2020-0172,%20NOS%20DEVELOPMENT/Del%20Bay%20TSS%20Final%20Rule,%20Mar%2010,%202000.pdf).

*precautionary area be reconfigured*. IMO adopted and implemented our recommendations in 1996. We received no comments concerning our NPRM. Since the IMO adopted and implemented traffic separation scheme and precautionary area exist, and have been used since 1996, we are publishing this rule to update Subpart B of 33 CFR part 167 to include a description of the Off Delaware Bay Approach Traffic Separation Scheme and Precautionary Area. By codifying the existing TSS and precautionary area, we will make the Code of Federal Regulations consistent with IMO's Ships' Routing Guide.

### **AIS Traffic Analysis**

The Coast Guard Navigation Center has completed several analyses using Nationwide Automated Identification System (NAIS) data from 2017-2019. These analyses are available for review using the following links:

[Vessel Traffic Analysis for New Jersey PARS](#)

[Offshore Anchoring Practices Analysis](#)

[Towing Vessel Transit Analysis](#)

Additionally, the [Mid-Atlantic Ocean Data Portal](#) is an excellent ocean planning resource center and interactive mapping tool.

### **An Overview of USCG Marine Planning Guidelines, Appendix E to COMDTINST 160003.2B<sup>3</sup>**

The Coast Guard has developed marine planning guidelines to assist offshore developers and marine planners with their evaluation of the navigational impacts of any projects with multiple permanent fixed structures. The coastal areas include multiple users such as commercial shipping, tug and barge operations, commercial and recreational fishing, research vessels, offshore support vessels, oil and gas exploration and production, sand and gravel mining, offshore wind farms, and aquaculture apparatus. The guidelines consider sea space necessary for ships to maneuver safely, and discuss other factors to be considered when determining appropriate separation distances for the siting of offshore structures near shipping routes and other multiple use areas.

These guidelines are not regulatory. They do not impact the boundaries of any existing leases for site characterization and site assessment activities, but do inform suitability of siting structures within a lease area. Below is an overview of these guidelines.

#### Port Approaches and Traffic Separation Schemes

1. Recommends 2 NM be maintained between structures and TSS boundaries.
2. Recommends 5 NM be maintained between structures and TSS terminations.

#### Coastwise Shipping Route

1. Identify navigation safety corridor to ensure adequate sea area for vessels to transit;
2. Provide inshore corridors for coastal ships and tug/barge operations;
3. Minimize displacement of routes further offshore;
4. Avoid displacing vessels where it will result in mixing vessel types; and

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<sup>3</sup> See [https://media.defense.gov/2019/Jul/10/2002155400/-1/-1/0/CI\\_16003\\_2B.PDF](https://media.defense.gov/2019/Jul/10/2002155400/-1/-1/0/CI_16003_2B.PDF).

5. Consider cumulative and cascading impacts of multiple offshore wind projects.

#### Offshore Deep Draft Route

1. Avoid creating an obstruction or hazard on both sides of an existing route; and
2. If not practicable to avoid structures or hazards on both sides of a route, a navigation safety corridor should be of sufficient size to provide for the safe transit of the largest vessels.

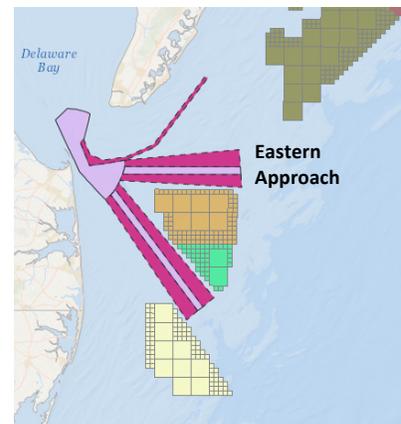
#### **Development of Routing Measure Alternatives, Delaware Bay Approach TSS**

During the roundtable discussion, we will review existing routing measures and seek input on whether additional measures are necessary to improve navigation safety due to recent (i.e., since the last port access route study was completed in 1994-95) or foreseeable changes in the maritime environment. We will do this by seeking consensus on known conflicts, navigational impacts of these changes, and risk mitigations in the form of routing measures that should be further evaluated by the Coast Guard.

#### **Eastern Approach<sup>4</sup>**

##### Known conflicts or potential contribution to risk:

1. Vessels have significantly increased in size since TSS was established.
2. The marine planning guidelines recommended safe distances may not be maintained if the lease area to the south is developed.<sup>5</sup>
3. The cumulative impacts of the lease areas may create a natural choke point at the entrance, increasing both the traffic density and complexity of vessel interactions in close proximity of navigation hazards.
4. The approach runs parallel to a lease area and thus vessels will be exposed to navigational hazards for an extended time.



Existing Traffic Separation Scheme  
Image Source: MARCO Data Portal

##### Potential mitigations of risk:

- Does the TSS need to be extended?
- Does the TSS need to be reoriented, or widened?
- Does the TSS need a precautionary area established at its terminus?
- Are there other modifications that should be considered?

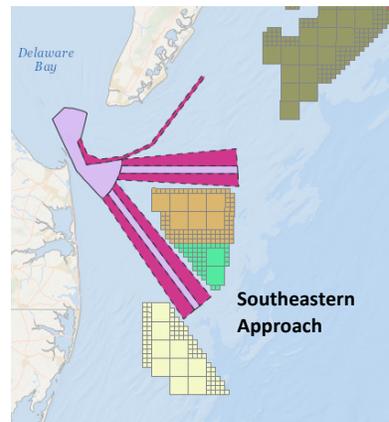
<sup>4</sup> See 33 CFR §167.171.

<sup>5</sup> While the USCG provides input to the Bureau of Ocean Energy Management (BOEM) on an offshore wind project's impact on safety of navigation, traditional uses of the waterway, and the Coast Guard's ability to conduct its missions, BOEM is the lead federal agency for siting of offshore wind projects and approves a project's turbine spacing, location and layout.

## Southeastern Approach<sup>6</sup>

### Known conflicts or potential contribution to risk:

1. Vessels have significantly increased in size since TSS was established.
2. The marine planning guidelines recommended safe distances may not be maintained if the lease areas to the north and south are developed.<sup>7</sup>
3. The cumulative impacts of the lease areas may create a natural choke point at the entrance, increasing both the traffic density and complexity of vessel interactions in close proximity of navigation hazards.
4. The approach runs parallel to the lease areas and thus vessels will be exposed to navigational hazards for an extended time.



Existing Traffic Separation Scheme  
Image Source: MARCO Data Portal

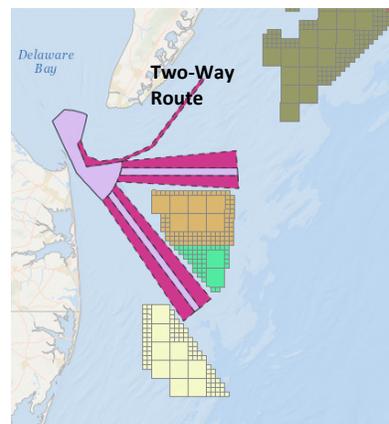
### Potential mitigations of risk:

- Does the TSS need to be extended?
- Does the TSS need a precautionary area established at its terminus?
- Are there other modifications that should be considered?

## Two-Way Traffic Route<sup>8</sup>

### Known conflicts or potential contributions to risk:

1. If developed, the lease areas will displace vessels and increase the density of vessels using the inshore corridors for coastal ships and tug/barge operations, thus increasing the density of vessels that use the two-way route, or that navigate in close proximity to it.



Existing Traffic Separation Scheme  
Image Source: MARCO Data Portal

### Potential mitigations of risk:

- Does the route need to be extended?
- Does the route need to be reoriented or widened?
- Does the traffic need to be further separated?
- Should a two-way route be established to the south, to separate large inbound vessels from tug and barge traffic transiting along their traditional DELMARVA routes?
- Are there other modifications that should be considered?

<sup>6</sup> See 33 CFR §167.172.

<sup>7</sup> While the USCG provides input to the Bureau of Ocean Energy Management (BOEM) on an offshore wind project's impact on safety of navigation, traditional uses of the waterway, and the Coast Guard's ability to conduct its missions, BOEM is the lead federal agency for siting of offshore wind projects and approves a project's turbine spacing, location and layout.

<sup>8</sup> See 33 CFR §167.173. A 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.

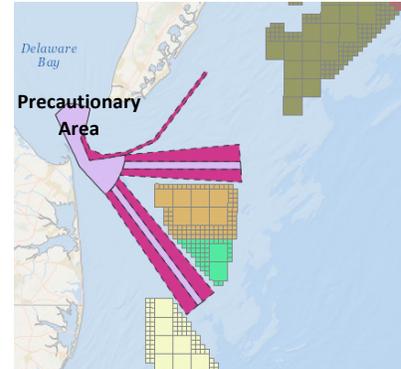
## Precautionary Area<sup>9</sup>

### Known conflicts or potential contributions to risk:

1. If developed, the lease areas will displace vessels and increase the density of vessels using the inshore corridors for coastal ships and tug/barge operations, thus increasing the density of vessels that enter the precautionary area or that navigate in close proximity to it.

### Potential mitigations of risk:

- Does the area need to be modified?
- Are there other modifications that should be considered?



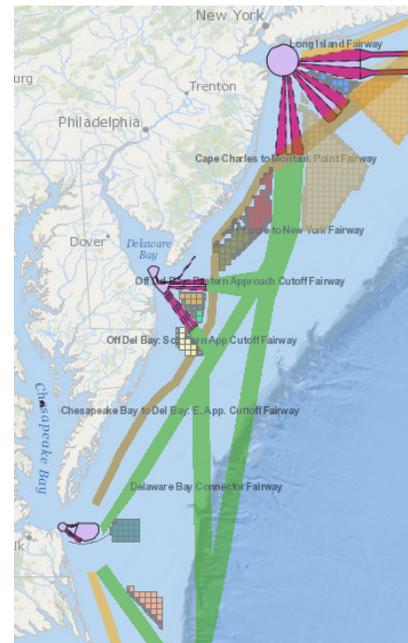
Existing Traffic Separation Scheme  
Image Source: MARCO Data Portal

## Shipping Safety Fairways along the Atlantic Coast

On June 19, 2020, the Coast Guard published an ANPRM seeking comments on the possible establishment of shipping safety fairways along the Atlantic Coast. This potential system of fairways is intended to ensure the traditional navigation routes are kept free from obstructions that could impact navigation safety. Comment period closed on August 18, 2020.

In conjunction with the New Jersey PARS, the Fifth District is reviewing the AIS traffic data and the proposed Atlantic Coast fairways in the study area. Upon its conclusion, the study may include recommendations to Coast Guard Headquarters regarding modifications to the proposed fairway system.

Coast Guard Headquarters will consider public comments received and the recommendations of the New Jersey PARS as it advances the regulatory project forward.



Proposed Atlantic Coast Fairways  
Image Source: MARCO Data Portal

<sup>9</sup> See 33 CFR §167.174. A precautionary area means a routing measure comprising of an area within defined limits where ships must navigate with particular caution and within which the direction of traffic flow may be recommended. The Delaware Bay precautionary area was configured to exclude shoal areas too shallow for deep draft vessels.

## Development of Recommendations for Proposed Atlantic Coast Shipping Safety Fairways

### Cape Charles to Montauk Point Fairway

#### Known conflicts:

1. The Maryland and New Jersey lease areas overlap the proposed fairway.

#### Potential mitigations:

- Offshore New Jersey, is the fairway able to be shifted to the west to clear the lease areas?
- Offshore Delaware and Maryland, is the fairway able to be shifted to the east to clear the lease areas?
- If shifted to the east, should a precautionary area be established to mitigate the increased traffic density and complexity of vessel interactions that will occur in close proximity to the navigation hazards?
- Offshore Delaware and Maryland, is the fairway able to be shifted to the west to clear the Maryland lease area?
- If shifted to the west, what routing measure(s) should be considered to mitigate the increased traffic density and complexity of vessel interactions that will occur in close proximity of the navigation hazards and existing TSSs?

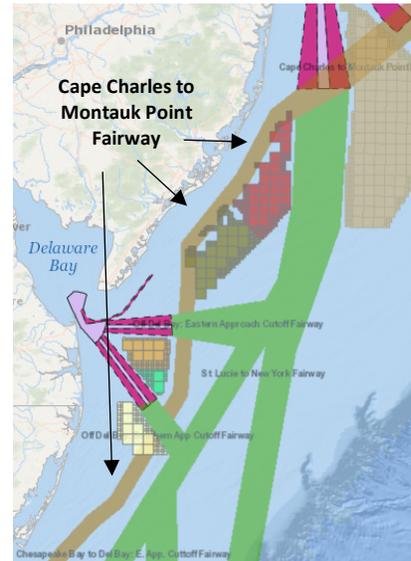


Image Source: MARCO Data Portal

## Development of Recommendations for Offshore Anchorages

Offshore lightering and anchoring are critically important to Delaware River ports and the marine transportation system. The lease areas offshore Maryland and Delaware, if developed, may displace the majority of these operations.

On Nov 29, 2019, the Coast Guard published a notice of inquiry, request for comments, on the need to establish new anchorage grounds in the Delaware Bay and Atlantic Ocean.

The location of the potential anchorage grounds were the result of previous stakeholders meetings and limited by the Coast Guard's authority to establish anchorages only within the U.S. Territorial Seas. In response to the notice, the Coast Guard received 42 comments.

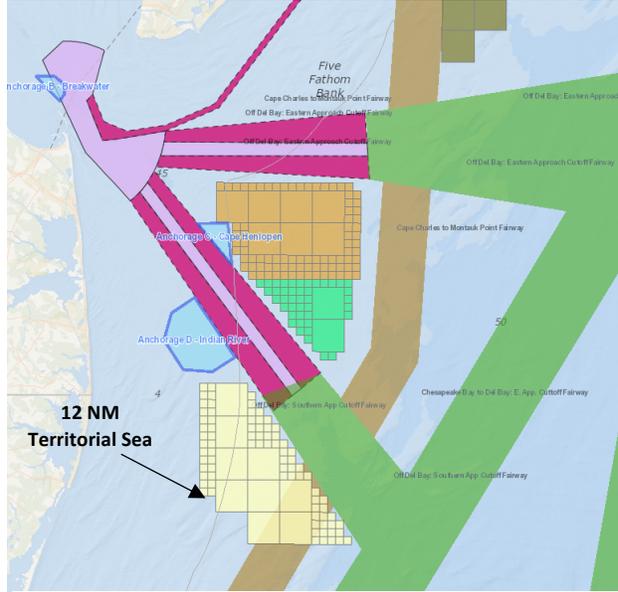


Image Source: MARCO Data Portal

Initial analysis of the comments showed an overwhelming percentage (66%) involved environmental concerns (including fuel bunkering spill concerns, endangered species concerns and sensitive areas in Anchorage B). Nine comments (21%) expressed concerns over view shed and tourism impacts. Five comments (12%) were supportive from maritime stakeholders. Three (7%) were from wind energy proponents that expressed concerns about anchorage locations impacting planned electrical transmission line routes.

On May 19, 2020, the Coast Guard held a conference call with Dr. Dewayne Fox from Delaware State University to better understand his research and concern regarding impacts from anchoring to the Atlantic Sturgeon in the Delaware Bay.

The Coast Guard reopened the comment period for 30 days, and held virtual public meetings on October 29 and November 4, 2020. The comment period closed on November 10, 2020.

As part of the New Jersey PARS, the Coast Guard Navigation Center completed an analysis of the Delaware Bay approaches to identify areas traditionally used for anchoring. On December 2, 2020, the Fifth District forwarded the anchorage analysis to BOEM, the windfarm developers, and the maritime advisory committee.

The Coast Guard Navigation Center completed a subsequent and more in-depth analysis of vessel traffic within the study area to include a separate study focusing on towing vessels. On February 22, 2021, Sector Delaware Bay posted these analyses along with the anchorage analysis on their CG Homeport site in support of stakeholder discussions.

The Fifth District is now considering the establishment of fairway anchorages under the Ports and Waterways Safety Act (PWSA), closer to areas traditionally used for anchoring, which would be a deviation from the potential anchorage grounds discussed in the Notice of Inquiry. Under the PWSA, the Coast Guard has authority to establish fairway anchorages beyond the Territorial Seas.

One area under consideration is the area southeast of the Delaware leases. While this alternative would require modifications to the proposed Atlantic Coast fairways, it would have the benefit of eliminating the need for inbound vessels to cross the TSS to anchor.



*Navigation Center Analysis, Anchored Vessels, 2019*

Potential modifications that would facilitate the establishment a fairway anchorage as depicted in the figure to the right include shifting the Montauk Point Fairway to the west, and making slight modifications to the orientation of the Chesapeake Bay to Delaware Bay Eastern Approach Cutoff, Delaware Bay Connector, and St. Lucie to New York fairways to open up sea space for anchoring and safe navigation.

Please note should the development of the lease areas maintain the marine planning guidelines recommended safe distances, there would be no prohibitions against vessels continuing anchoring in locations adjacent to the TSS and outside designated anchorage grounds provided buried transmission lines were not present.

Discussion Questions regarding the offshore anchorage requirements:

- Is the suggested fairway anchorage in a location conducive to port and vessel needs?
- If the CG establishes a fairway anchorage as proposed, is there still a need for other offshore anchorages as proposed in the Notice of Inquiry, docket number USCG-2019-0822, published November 29, 2019?
- Do current anchoring practices conflict with tug and tow traffic?