

New York State Offshore Wind Master Plan 2.0: Deepwater



OSW Technical Working Group Presentation
October 25, 2022



NYSERDA

Offshore Wind Goals for New York State

- > **July 2019, New York State signed into law the Climate Leadership and Community Protection Act (CLCPA). The CLCPA:**
 - Mandates the installation of 9GW of offshore wind by 2035
 - Requires New York State to achieve a total 85 percent reduction in emissions below 1990 levels with a 40 percent reduction in emissions by 2030 and a 100 percent zero-emissions electricity by 2040
 - Created a Climate Action Council (CAC) charged with developing a scoping plan to provide recommendations to meet CLCPA targets and place New York on a path toward carbon neutrality
- > **The CAC draft report suggests that up to 20GW of offshore wind energy may be necessary to ensure NYS achieves its Climate Act mandate. Depending on final CAC findings:**
 - Additional lease areas may be needed
 - Other planning, analysis, and engagement will be warranted
 - Limiting factor for OSW target is transmission and points of interconnection to the grid

Master Plan 2.0: Deep Water

- > Serve as an **organizing principle** for all OSW work that will ensure a continued, robust, transparent, and proactive approach to meeting New York's goals of 9GW and beyond.
- > An opportunity for NYS to evaluate and **characterize the risks and opportunities** for offshore wind development in a comprehensive, sequential, and logical approach for achieving 9GWs and beyond.
- > Build on the success of New York's original master plan and **unlock the next frontier of offshore wind** development.

MP2.0 OUTCOME:

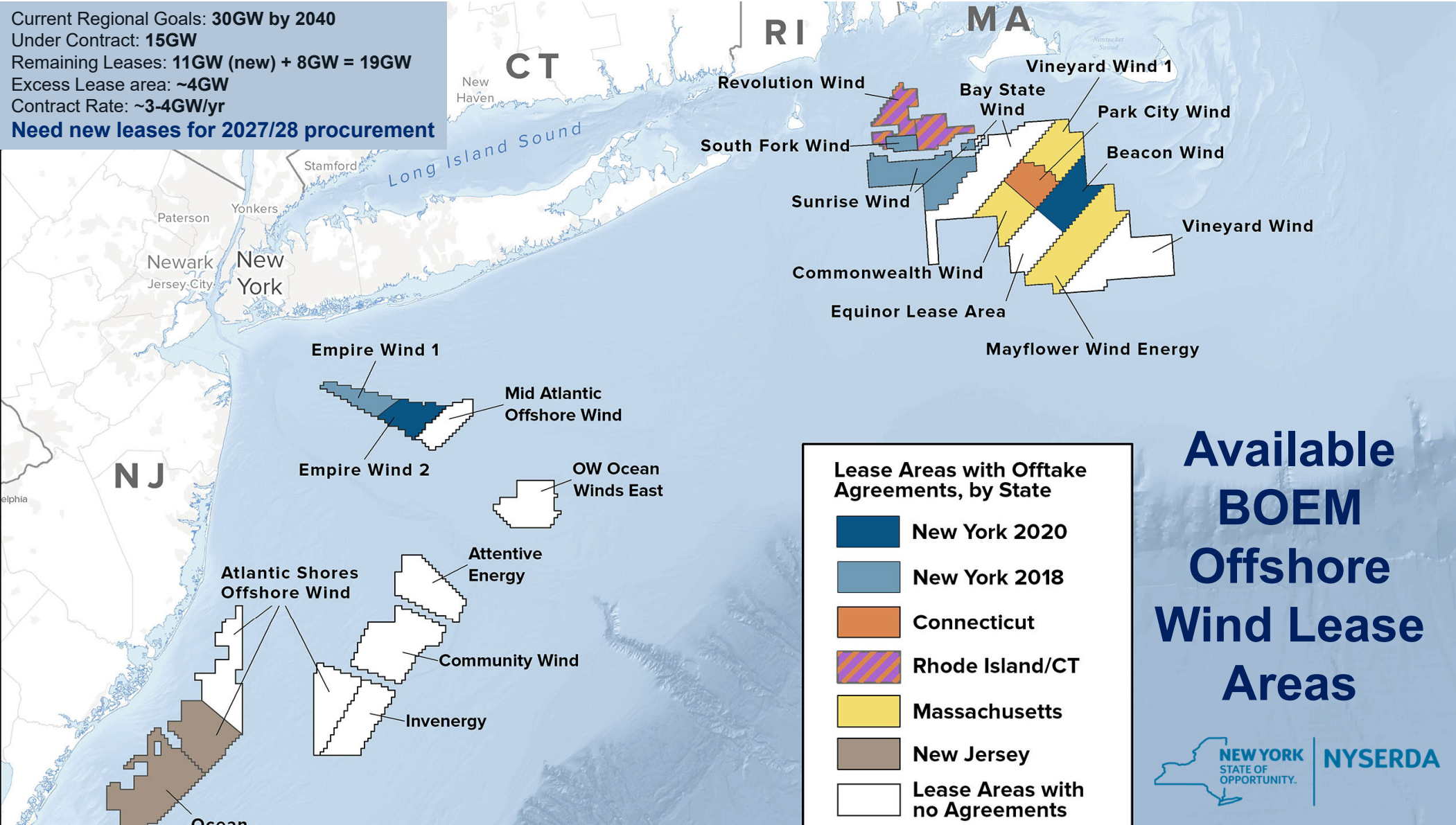
- > A Master Plan describing NYS's integrated approach to the continued development of the OSW industry, and NYS serving as a hub for that industry;
 - The identification of additional areas in the region that are deeper than 60-meters to recommend to BOEM for consideration as future lease areas, and;
 - Provide a clear process to address transmission/interconnection related concerns.

"Building on the success of New York's award-winning Offshore Wind Master Plan, NYSERDA will initiate a new Master Plan 2.0: Deep Water to unlock the next frontier of offshore wind development."

Governor Hochul, January 2022, State of the State Address



Current Regional Goals: **30GW by 2040**
 Under Contract: **15GW**
 Remaining Leases: **11GW (new) + 8GW = 19GW**
 Excess Lease area: **~4GW**
 Contract Rate: **~3-4GW/yr**
Need new leases for 2027/28 procurement



Available BOEM Offshore Wind Lease Areas



Timing for Pre-development Activities

BOEM Wind Energy Authorization Process



To begin procuring >9GW goal in 2027/28:

- Need to set new goals and request new leases in 2023/24
- Need to start to aggregate data and develop Area for Consideration now.



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Master Plan 2.0 and Blueprint Schedule

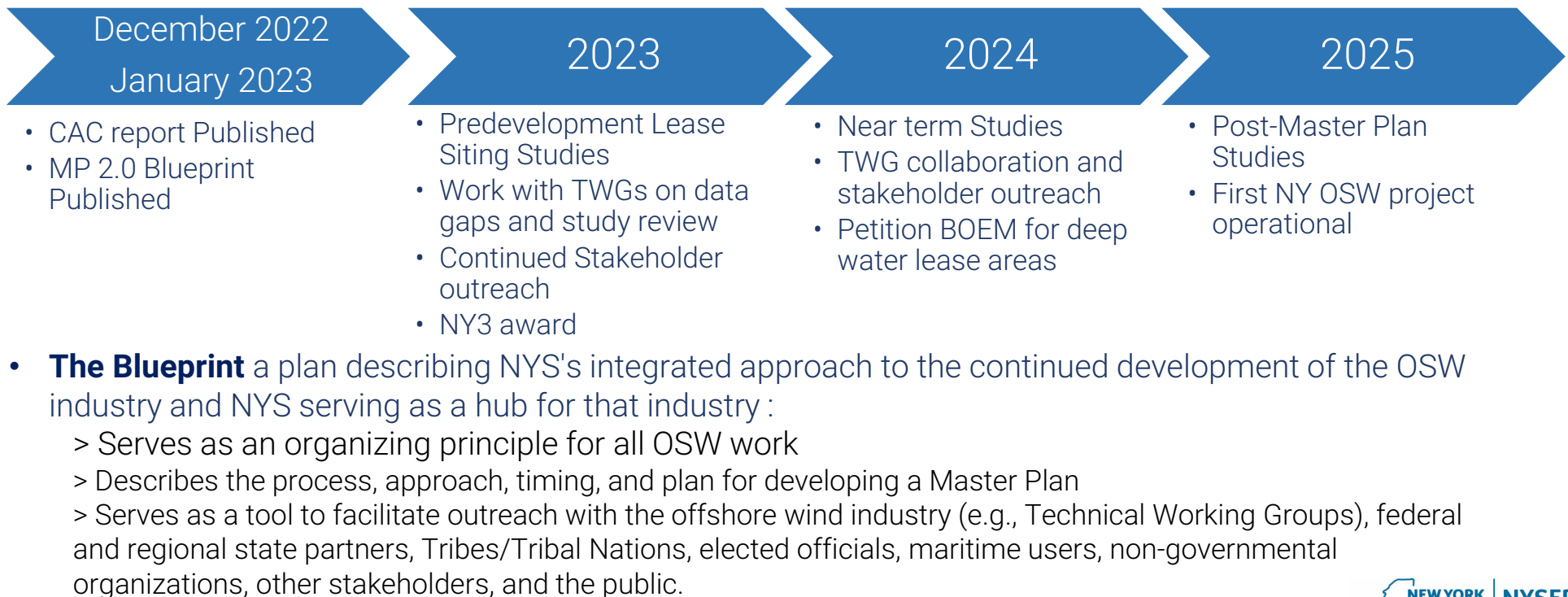
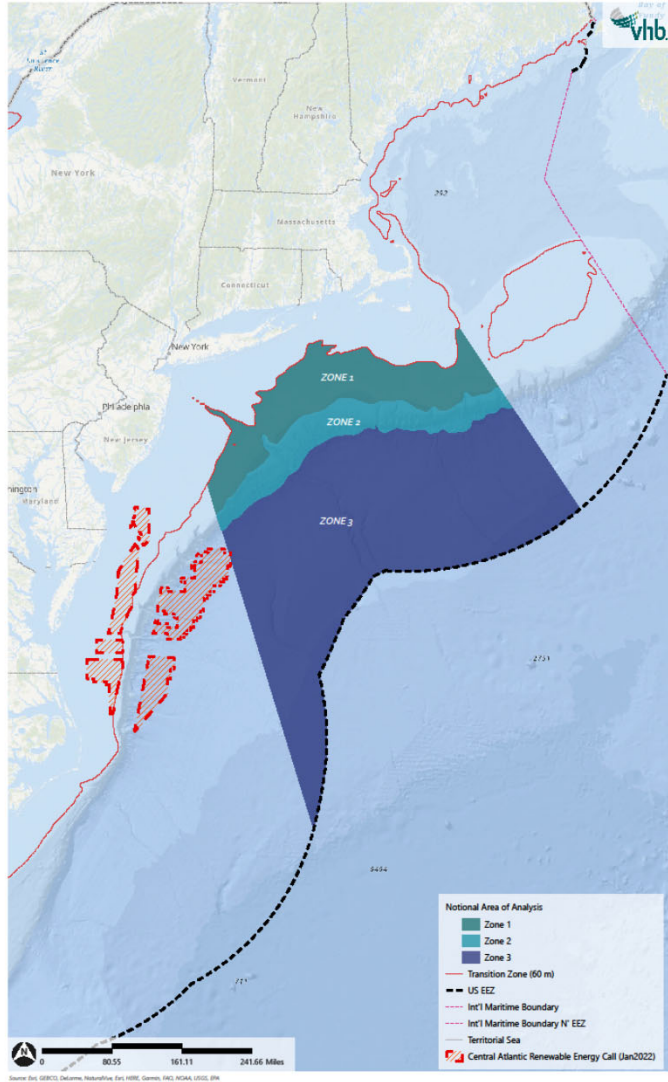


Figure 1: Notional Area of Analysis Overview
NYSERDA OSW | East Coast US



Proposed MP 2.0 Geographic Scope

MP 1.0 Assessed ~4,000 sq. mi. and resulted in ~11GW
Master Plan Study Area:

- > Zone 1: 11,564 sq. mi.
- > Zone 2: 6,787 sq. mi.
- > Zone 3: 44,770 sq. mi.

Study area extends east from the 60-meter contour out past the continental shelf break to the edge of the United States exclusive economic zone.

Zone 1 (remaining shelf) extends from the 60-meter contour to the continental shelf break.

Zone 2 spans the steeply sloped continental shelf break (*unique canyon habitats*)

Zone 3 extends from the continental shelf break out to the of U.S. Exclusive Economic Zone.



Master Plan 2.0 Blueprint

Each topical area will describe the background and current condition, successes to date, emerging needs and general or specific approaches to addressing those needs. The narrative will weave topics together (e.g., DACs/Workforce; Outreach/eNGOs; Permitting/Supply Chain etc.).

Topical Areas:

- Stakeholder Engagement
- Site assessment and new lease areas
- Transmission and Interconnection
- Empowering DAC's and EJ Communities
- Technology Assessment
- Ports, Vessels and Supply Chain
- Workforce Development
- Environmental Concerns
- Considering Fishing
- Maritime Activities

Master Plan Component Details

Engaging Stakeholders

The Master Plan will detail engagement with DACs/EJ communities, maritime, fishing, coastal communities, regional States, Indigenous Nations, eNGOs, Supply Chain/Industry, elected officials, students, and the general public

OUTCOMES:

- > Use of existing TWGs and resources for key technical stakeholders
- > Mechanisms to support engagement with regional states
- > Elected officials
- > General public engagement
- > K-12 programming

Site Assessment and New Lease Areas

The Master Plan will provide a comprehensive assessment of regional resources and recommend new lease areas based on regional goals and lease area availability

OUTCOMES:

- > **Deconflict Zones as with first Master Plan**
 - Analyses of Zones 1-3
 - Deconflict areas for development
 - Utilize regional monitoring and scientific efforts
 - Describe available data and data gaps
- > Petition BOEM for additional lease areas (2023/2024)

Transmission and Interconnection

The Master Plan will describe the approach to cost-effectively achieving stated goals.

OUTCOMES:

- > Describe the implementation of plan for interconnecting 9+GW by 2035
- > Examine the Feasibility of new OSW targets based on ability to interconnection to New York's electrical grid

Empowering DACs and Environmental Justice Communities

The Master Plan will provide a comprehensive approach to supporting DACs in the OSW Workforce and EJ concerns more broadly

OUTCOMES:

- > Describe outcome of engagement with new EJ-TWG
- > Workforce and Training development currently underway to consider more jobs and longer-term industries
- > Continued achievement of decarbonization and reduction of fossil fuel plants in high-risk/industrial communities
- > Just Transition

Technology

The Master Plan will evaluate technology advancements that will maximize benefits and minimize costs for New York State.

OUTCOMES:

- > Provide the research and analysis necessary to better position the State to take advantage of opportunities afforded by emerging deep water offshore wind technologies (e.g., deep-fixed or floating)
- > Assess available and emerging technologies and develop estimates of costs, benefits, and risks for deep water offshore wind technologies
- > Understand generalized technology approaches and how it could affect resources and stakeholder concerns



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Ports, Vessels, and Supply Chain

The Master Plan will examine the logistics to developing and sustaining offshore wind manufacturing facilities, ports, and vessel industry affordably and efficiently.

OUTCOMES:

- > Analysis to help ensure future proofing existing infrastructure investments
- > Assess how New York could best expand its position as the hub for offshore wind energy by leveraging the emerging supply chain and expertise
- > Options to address permitting challenges
- > Approaches to address the vessel's challenges

Workforce Development

Master Plan will examine the needs to fulfill the emerging job opportunities and seek to identify, attract, train and employ New Yorkers in the Offshore wind Industry with a special attention to DACs.

OUTCOMES:

- > Expansion of Workforce Training Centers
- > Identify opportunities to recruiting talent to the work pool while not undermining existing industries in New York
- > Development of specialized services to support DAC worker recruitment
- > Processes to enhance engagement with labor and apprenticeship programs

Environmental Concerns

The Master Plan will describe key areas to be addresses to ensure environmentally responsible development of offshore wind and the supporting infrastructure

OUTCOMES:

- > Data sharing and availability approaches
- > Regional coordination and regional monitoring networks and opportunities
- > Research needs relating to existing and emerging technologies
- > Permitting challenges for offshore projects, cabling and supply chains
- > Options to provide leadership in procurements

Considering Fishing

The Master Plan will describe key areas to be addresses to ensure the fishing industry is engaged and considered in decision making to support coexistence

OUTCOMES:

- > Use regional synthesis and efforts to collect fisheries data (i.e., new gears, fixed/pots), recreational (longshore, migrating pelagic species)
- > Regional state work on equity in fisheries compensatory compensation
- > Research relating to fishing access, gear changeout, aquaculture and related
- > Implications of new OSW technologies on fishing access

Maritime Activities

Master Plan will build on navigation and shipping studies to ensure safety for mariners without impact to commercial port operations

OUTCOMES:

- > Collaboration with federal and maritime industry partners to identify offshore areas with minimal maritime traffic
- > Ensure safe routes for shipping through wind energy areas in deeper waters of the New York Bight

Initial Studies in Consideration

Studies to Inform Master Plan: Pre-Development Lease Siting (2023)

- > Birds and Bats Study
- > Fish and Fisheries Study
- > Marine Mammals and Sea Turtles Study
- > Marine Recreational Uses Study
- > Environmental Sensitivity Analysis
- > Cultural Resources Study
- > Shipping and Navigation Study
- > Consideration of Potential Cumulative Effects
- > Multibeam Echo Sounder and Benthic Survey Data

Studies to Inform Master Plan: Near term (2023-24)

- > Transmission Planning, Integration Study(s)
- > Deep Water OSW Technology
- > Wind Wake Effect

- > The Workforce Opportunity of Offshore Wind in New York
- > Disadvantaged Communities and EJ-TWG Studies
- > Stakeholder Outreach and Engagement
- > WTIV + JA Barge Vessel Study (initiated)
- > Energy Supply Chain Analysis (initiated)
- > OSW Supply Chain Value Proposition (initiated)
- > Port Performance Permitting, Fatal Flaw, Mitigation Fund (initiated)

Post-Master Plan Studies (2024-25)

- > Supply Chain Reassessment Study
- > Health and Safety Study
- > Offshore Wind Resource Assessment
- > Reassessment of Ports and Infrastructure

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NYSERDA **COWI**

Maritime Technical Working Group

Anchorage Area Assessment and Loss of Propulsion and Steerage Studys

October 25, 2022



Introduction

- › Anchorage Area Assessment
Nancy Zhou, Ph.D., P.E.
- › Assessment of Loss of Propulsion and Steering Data
Georges Valcour, P.E., PSM

Photo: USCG Office Vessel of Compliance Seal (via Google)



NYSERDA

COWI

Anchorage Area Assessment

October 25, 2022
M-TWG Fall Meeting



Anchorage Area Assessment

MEMO


TITLE Draft - Anchorage Area Assessment Companion Memo

DATE 15 Aug 2022

TO NYSERDA & NYSDOS


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1 Introduction

1.1 Context

The offshore wind Maritime Technical Work State Department of State (DOS) and support decision-making advisory entity formed to maritime and/or offshore wind responsibility offshore wind (OSW) development. Development members', the M-TWG's 2021 Shared Research added when available identified the need to anchorage areas and common practice anchorage Assessment seeks to provide objective data be useful for shared learning and to enhance development practices.

1.2 Scope of Work

The primary goal of this Anchorage Area Assessment within New York State waters commonly use quantify the frequency with which vessels use

The present Task builds upon the framework 9GW Port Uses and Navigation Assessment F vessel traffic models developed through that patterns in New York State. Key questions and Agenda also shaped the technical approach and main purpose is to:

- Assess the locations of informal, common

It is noted that extreme weather events may impact the usage of anchorages over discrete time periods, however discretization of the storm impacts from the overall data set was not assessed. For the calendar year of 2017 five non-major storms were recorded (three minor and two moderate) to impact New York.

4.3.2 Spatial Delineation

All figures shown in this section illustrate the density maps of idling AIS pings overlaid by the DAAs. Some of the high-density areas match well with the DAAs, e.g., the one in the Upper New York Bay Area (Figure 5). Some of the DAAs have rather low density of idling events, e.g., the DAAs near Staten Island (Figure 6). Moreover, several CPAAs not overlapping the DAAs can be observed, and of them the most prominent ones are near Great Neck, in Sag Harbor Bay, and near Bear Mountain.

CPAA polygons were drawn based on the Idling AIS ping density maps generated in the GIS.




Figure 2 Idling AIS ping density map overlaid by the Designated Anchorage Area (DAA) at Sag Harbor Bay, Long Island Sound. CPAA is outlined in blue dashed line.

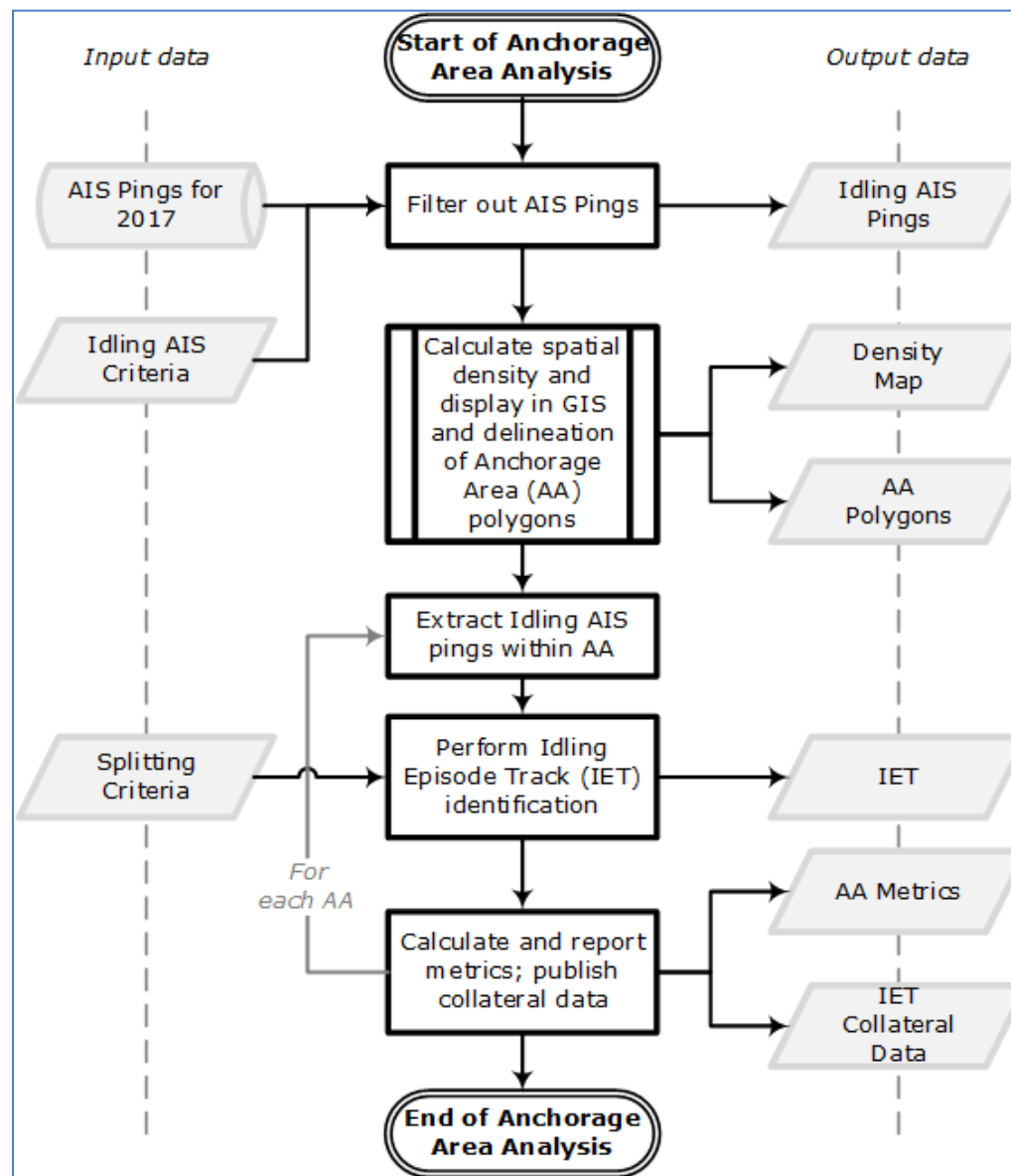
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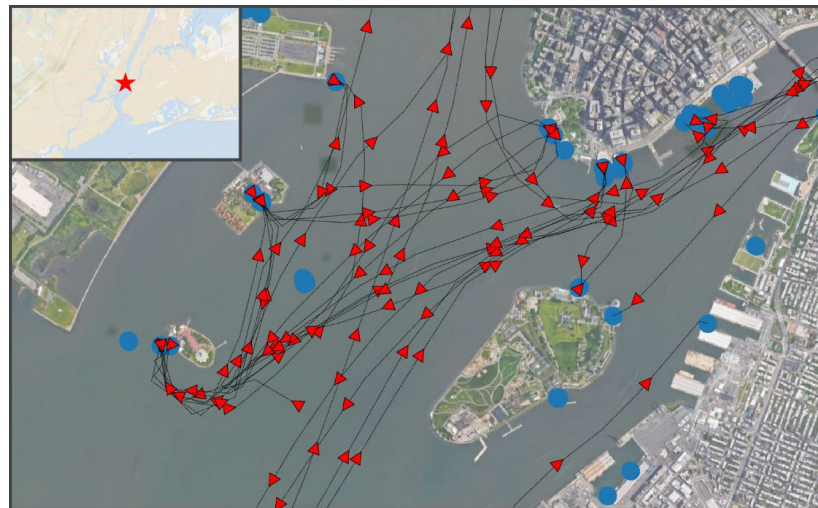
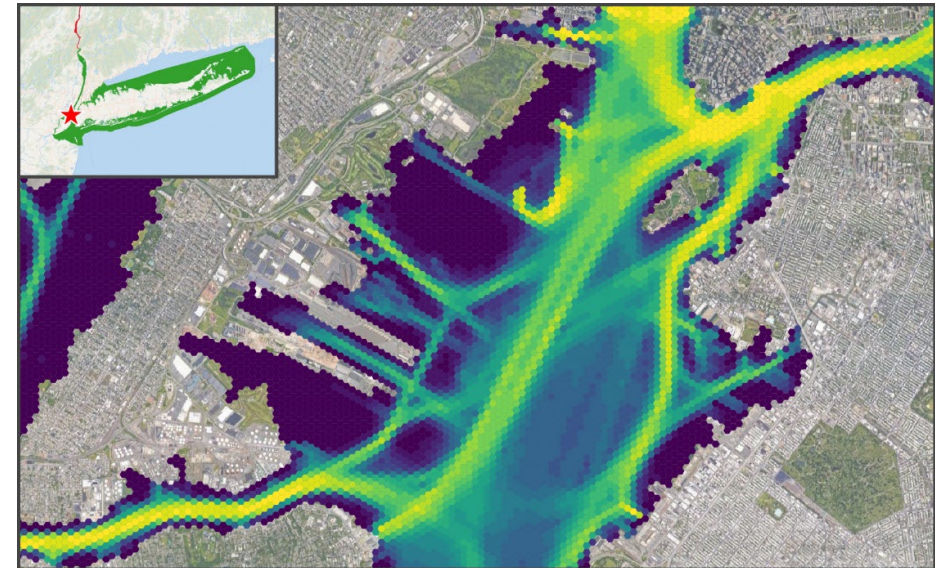
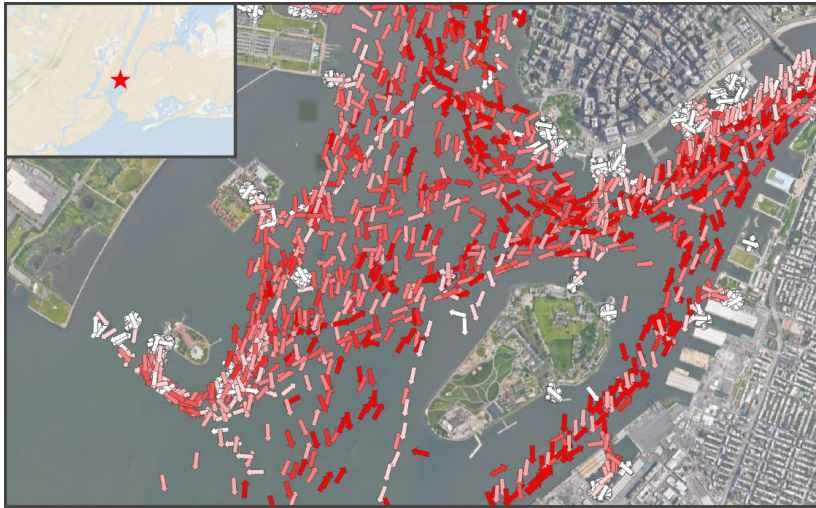
Goal:

- Identify areas within New York State waters commonly used by vessels as anchorages - Designated Anchorage Areas (DAAs), Common Practice Anchorage Areas (CPAAs)
- Quantify the frequency with which vessels use those areas

Anchorage Area Assessment – Flow Chart



Vessel Traffic Model Developed in the NYSERDA TWO 06 – 9 Gigawatt Port Uses and Navigation Assessment Report



Anchorage Area Assessment - Criteria

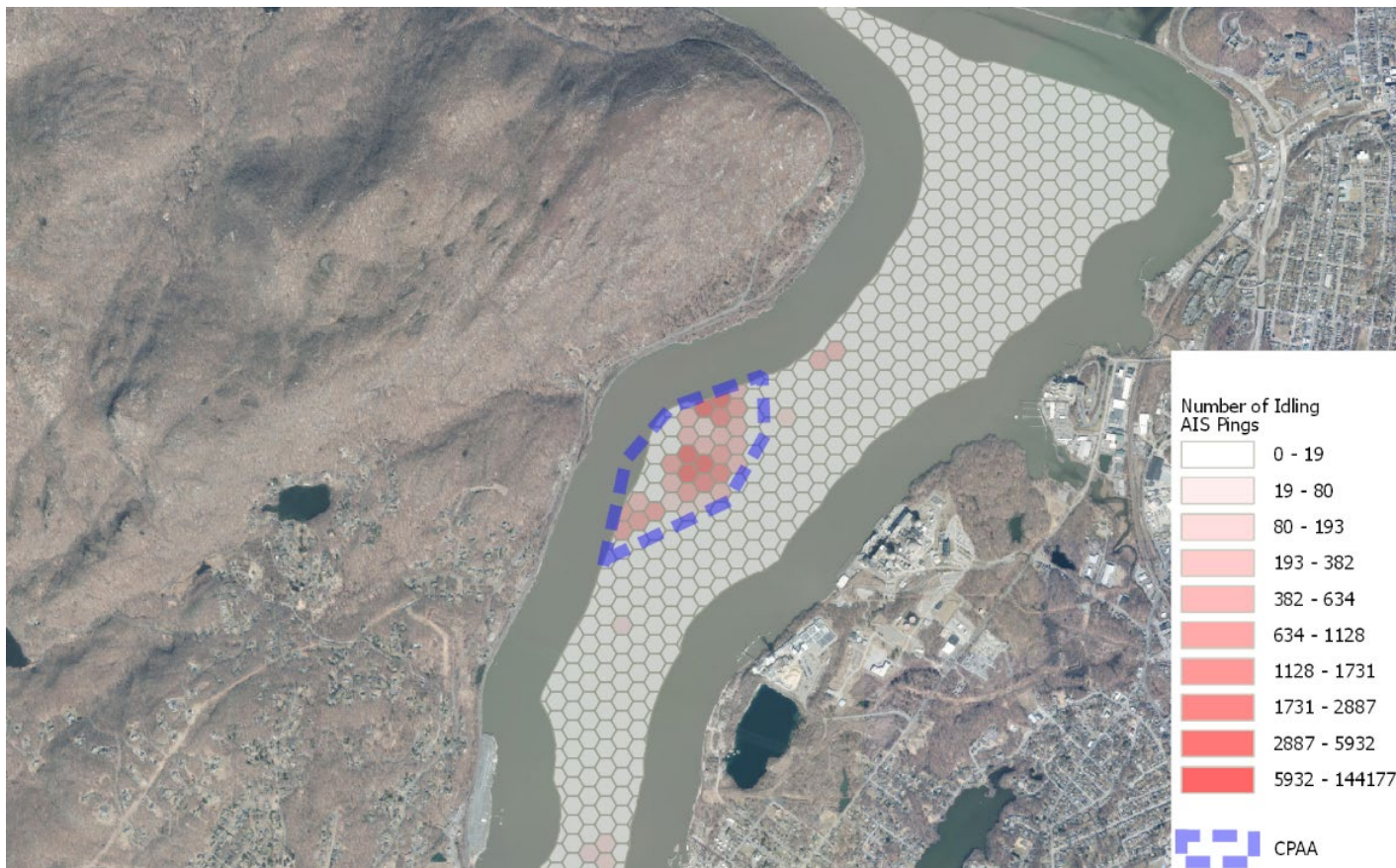
Idling AIS Pings:

- Pings with Speed Over Ground (SOG) between 0 and 1 knots (inclusive) – generally consistent with the 2020 PARS NJ study
- Pings located > 1000 ft away from the shoreline – to reduce the potential influence of moored vessels

Idling Episode Tracks:

- Tracks are firstly built by connecting idling AIS pings of the same vessel
- Tracks are then split if either:
 - A time difference between two consecutive idling AIS pings > 30 min; or
 - A distance between two consecutive idling AIS pings > 1 statute mile
- These criteria are consistent with those used by Marine Cadastre

Anchorage Areas of Interest



Bear Mountain

- A CPAA (outside of a Designated Anchorage Area) with relatively high density of idling AIS pings
- This CPAA aligns with one of the historical anchorage areas in Tomkins Cove as suggested by the HRSNOC Report on NDAA Hudson River Anchorage Study
- Idling vessels are mainly tugs/tows and “other”

Anchorage Areas of Interest



Great Neck, Western Long Island Sound

- A CPAA (outside of a Designated Anchorage Area) with relatively high density of idling AIS pings
- Idling vessels are mainly tugs/tows and pleasure crafts/sailing

Anchorage Areas of Interest



Upper New York Bay

- **DAAs with high density of idling AIS pings**
- **Idling vessels are mainly commercial type vessels**

Anchorage Areas of Interest



Staten Island, Raritan Bay

- **DAAs with low density of idling AIS pings**
- **Idling vessels are mainly tugs/tows and pleasure crafts/sailing**

Anchorage Areas of Interest



Sag Harbor Bay

- A CPAA (outside of a Designated Anchorage Area) with relatively high density of idling AIS pings
- Idling vessels are mainly pleasure crafts/sailing.

Summary of Metrics for All Common Practice Anchorage Areas (CPAAs) and Designated Anchorage Areas (DAAs)

AA ID	Area [sq mi]	Number of Idling AIS pings in 2017 [-]	Number of unique IET in 2017 [-]	Number of unique IET in 2017 [-] lasting longer than 30 minutes	Average duration of IET in 2017 [min]	Median duration of IET in 2017 [min]	Total duration of IET in 2017 [dd hh:mm:ss]	Occupancy metric [hr/sq mi]
Sag Harbor Bay (CPAA)	0.822	298808	1772	947	564.8	39.0	695 00:59:32	20293.2
Bear Mountain (CPAA)	0.167	9882	44	33	569.3	676.5	17 9:28:10	2499.8
Great Neck (CPAA)	0.875	125178	383	264	473.6	212	125 22:54:12	3454.7
Upper New York Bay (DAA)	5.384	2752847	15981	9378	366.4	52.2	4066 7:42:6	18126.2
Staten Island (DAA)	76.204	454481	5151	2009	211.8	16.8	757 14:38:53	238.6

Next Steps

- **Application to the optimization of planning of Offshore Wind Cables**
- **Assistance to Federal Agencies in updating the designated official anchorage areas**
- **Application to logistical support during emergency response and recovery (e.g., hurricanes)**

Questions?



NYSERDA **COWI**

Maritime Technical Working Group Loss of Propulsion and Steering Study

October 25, 2022

COWI



NYSERDA

Loss of Propulsion and Steering

OCTOBER 17, 2022
NEW YORK STATE DEPARTMENT OF STATE

MARITIME TECHNICAL WORKING GROUP ASSESSMENT OF LOSS OF PROPULSION AND STEERING DATA

SUMMARY REPORT

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Purpose:

Identify and assess the occurrence and frequency of loss of propulsion and loss of steering events, and emergency maneuvers within the approaches of the New York and New Jersey harbors to provide objective data into the discussion.

Approach:

- › Public Database and System Reporting Case/Event Analysis
- › Data input interpretation/inspection
- › Engage in feedback/discussions with NYSDOS, NYSERDA and M-TWG

Data Sources and Outreach

Primary Sources:

- › MISLE System Deficiency, Notification, and Inspection Reports (USCG)
- › Marine Casualty Reports filed with agencies and organizations

Other sources considered:

- › USCG
- › NTSB
- › USDHS Reports
- › Media Reports and News Articles
- › Notice of Arrival Information

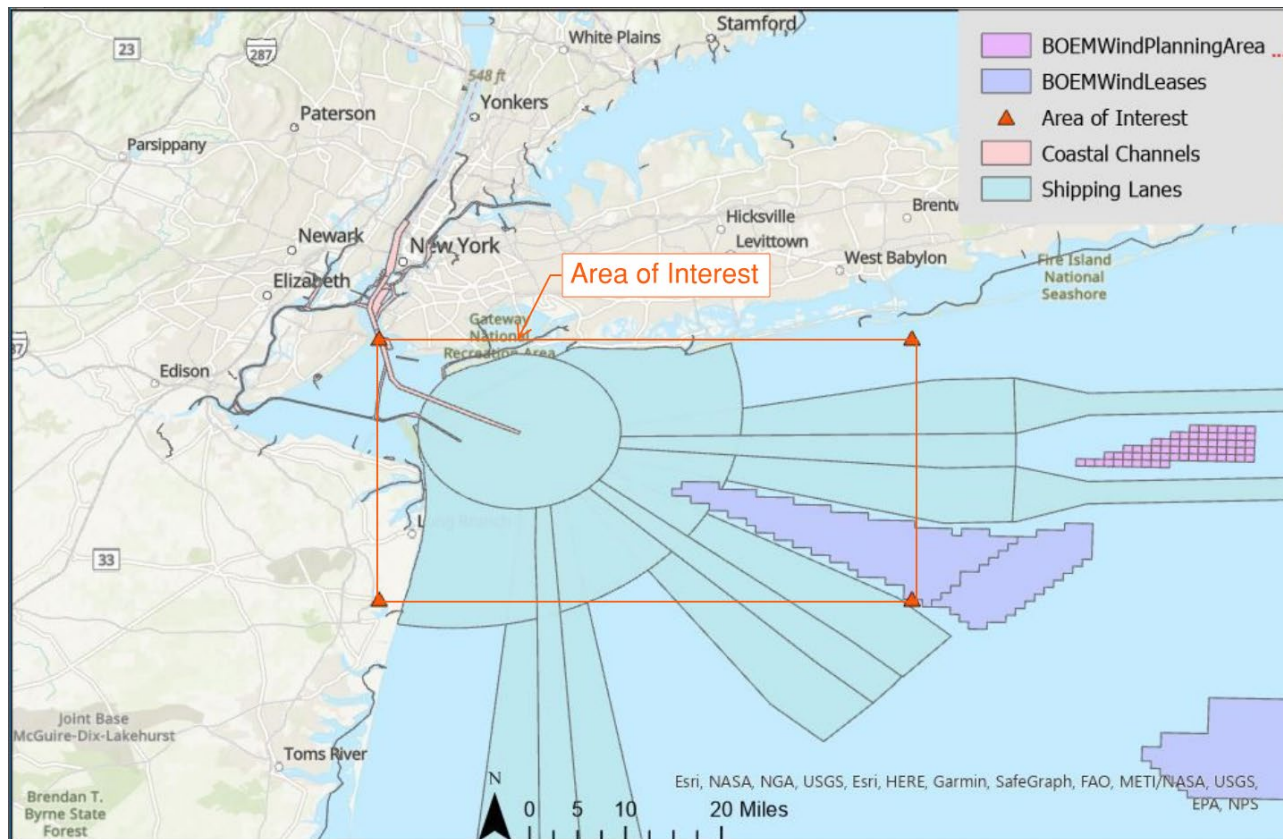
Outreach efforts:

- › COWI contacted and worked with USCG offices in New York and NAVCEN to obtain relevant information concerning events and gained additional information through a FOIA request
- › Sector Calls helped improve insight on the commercial industry at large. Detailed knowledge of loss of power could not be utilized as input, though these instances were confirmed to occur.
- › Sincere assistance with USCG was crucial to conducting this report.



Photo: USCG Office Vessel of Compliance Seal (via Google)

Area of Interest



Selection Details:

- › Identified for the assessment was to geographically encapsulate the approaches to the New York and New Jersey harbors as well as inbound and outbound vessel traffic corridors alongside the New York Bight region's closest Offshore Wind Farm (OWF).
- › Capture major vessel passage lines commuting E-W through Sector New York

Study Boundary Corners	GPS Coordinates (Degrees, Minutes, Seconds)
NW	40°36'3.32"N, 74° 2'55.84"W
NE	40°36'3.32"N, 73°14'20.84"W
SW	40°12'27.11"N, 74° 2'55.84"W
SE	40°12'27.11"N, 73°14'20.84"W

Vessels of Concern

Analyzed 2001- 2015 MISLE Data Vessel Types	Analyzed 2018 – 2022 MISLE Data Vessel Types	USCG “Equivalent Definition” per 46-CFR 2.01-7
Combination Carrier	General Dry Cargo Ship	Cargo
Container Ship	Bulk Carrier	Cargo
General	Refrigerator Cargo Ship	Cargo
Ro-Ro Cargo Ship	Ro-Ro Cargo Ship	Cargo
Offshore Supply Vessel	Offshore (OSV)	Other
Petroleum Oil Tank Ship	Tank Ship	Tanker
Towing Behind	Towing Vessel	Towing
Articulated Tug and Barge	Barge	Towing

Selection Details:

- › Identified for the assessment was to identify and select vessels with a “greater impact” to navigation hazards while operating within OWF regions.
- › Data sources would be processed to encapsulate only vessels with a deadweight tonnage (DWT) greater than 100 tons (90 metric tons) and a Length Overall (LOA) of at least 100ft (30 m).
- › Data sizes not present specifically in the data were processed based on USCF definition equivalent for “vessel types” identified in the table.

Not Considered:

- › Pleasure Craft, fishing vessels, and ferries

2001- 2015 MISLE Data (1 of 2)

2001 - 2015 MISLE Data – Notifications and Investigations (Reported)		
<i>Filtered: Area of Interest, Vessels of Concern</i>		
<i>Total Investigation(s) and Notifications related to concerning Steerage</i>	<i>Total Reported Events</i>	<i>Percentage of Total</i>
91	302	30.1%
<i>Total Investigation(s) related to concerning Loss of Propulsion</i>	<i>Total Reported Events</i>	<i>Percentage of Total</i>
8	302	2.6%

Key Findings:

- › Majority of the cases fall under a vessel loss of steerage, and vessel maneuverability being the most common reported issue in the area of interest.
- › Data limited in understanding if notifications refer clearly to a loss of steerage or propulsion.

2001- 2015 MISLE Data – Locations of Incidents (2 of 2)

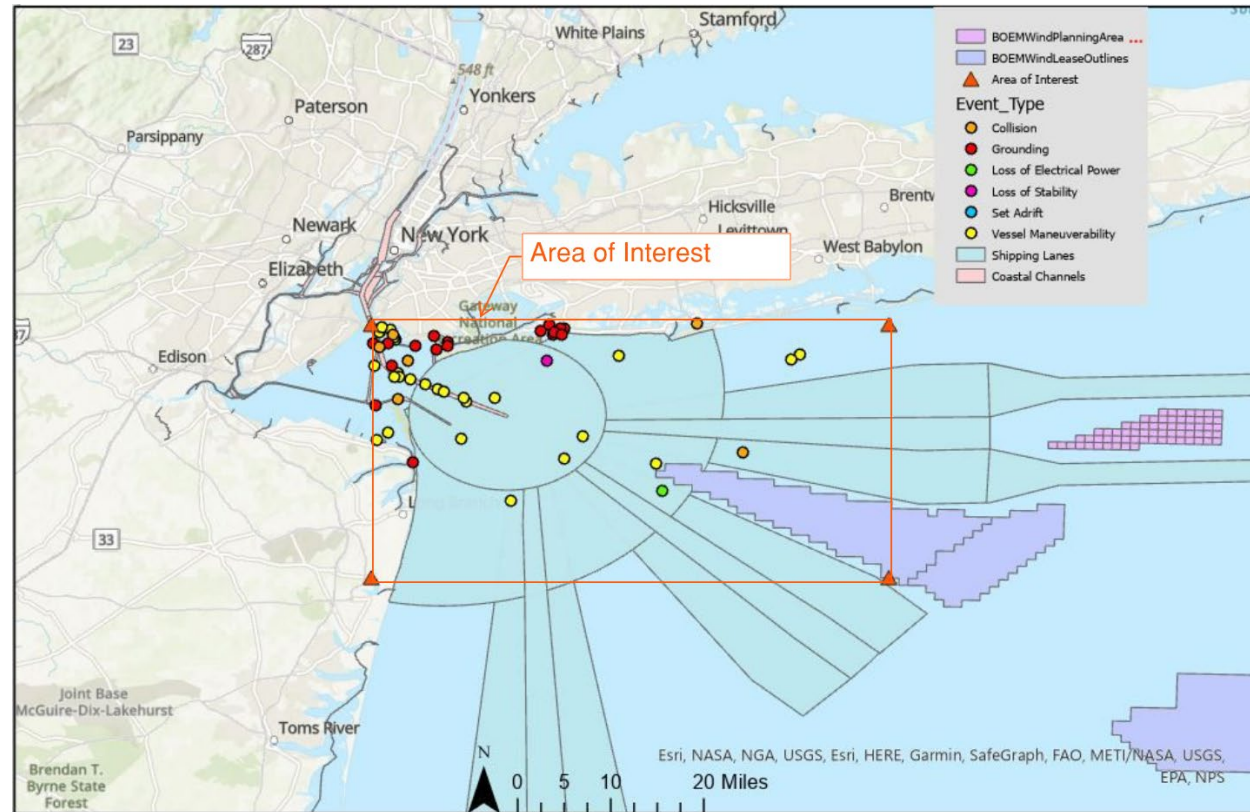


Photo: ARCGIS MarineCadastr WebView (via: marinecadastre.com)

Key Findings:

- › Groundings appear to be clustered near West Long Beach, and on other cases near the Narrows and Sandy Hook (anchorage areas). Vessel maneuverability appears to occur at points all over the region and along already navigated waterways. (via NOAA charts 12327 and Marine Cadastre)

2017 – MISLE Data (1 of 2)

2017 MISLE Data – Investigations and Notifications		
<i>Filtered: Area of Interest, Vessels of Concern</i>		
<i>Total Reported Investigations related concerning Loss of Propulsion</i>	<i>Total Investigations (All Investigations)</i>	<i>Percentage of Events within Region</i>
6	54	11.1%
<i>Total Reported Notification(s) related to concerning Loss of Steerage</i>	<i>Total Reported Events (All Notifications)</i>	<i>Percentage of Events within Region</i>
55	188	29.0%
<i>Total Reported Notification(s) relating to concerning Loss of Propulsion</i>	<i>Total Reported Events (All Notifications)</i>	<i>Percentage of Events within Region</i>
1	188	0.5%

Key Findings:

- › Data limited in understanding if notifications refer clearly to a loss of steerage or propulsion
- › 6 of the total 54 investigations within the area of interest for the year of 2017 were identified as concerning loss of propulsion events.

2017 – MISLE Data (1 of 2)

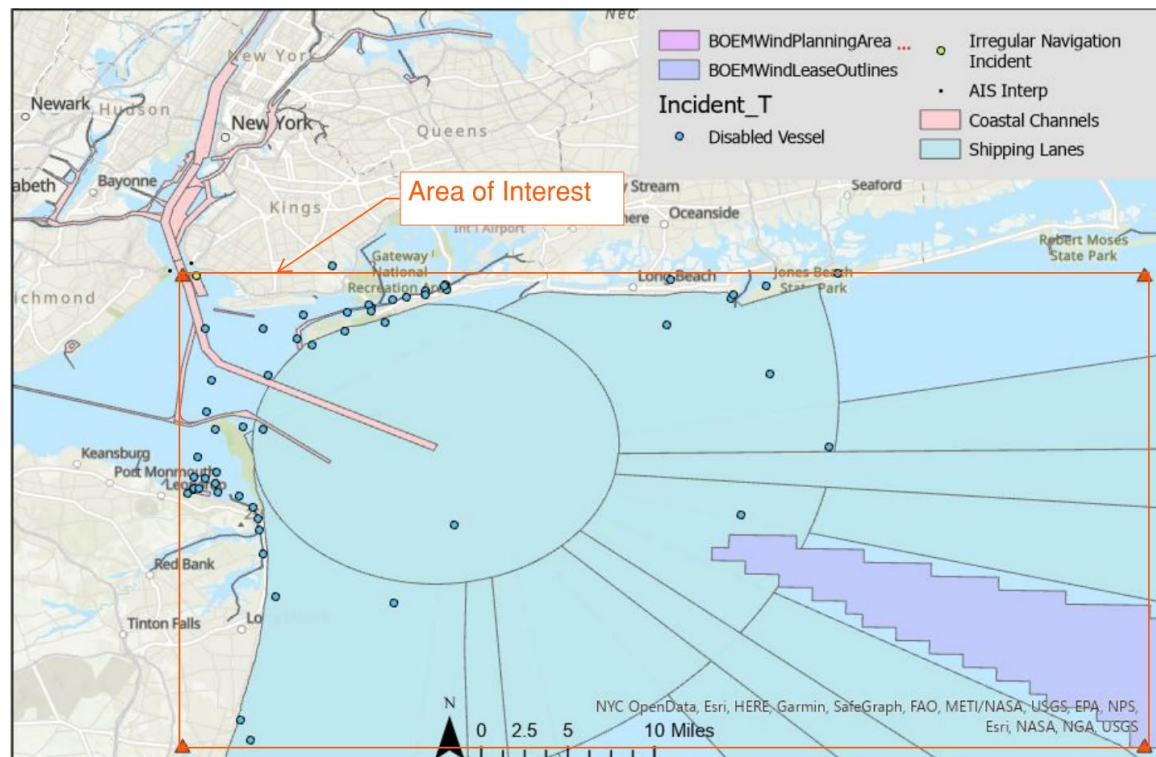


Figure denotes reported notifications by incident type concerning loss of Steerage and Propulsion Event Locations.

Key Findings:

- › Disabled vessel locations are clustered closer to land and may be notifications issued from already anchored or moored vessels. Vessels likely were disabled prior to departure.
- › Disable vessels within 1-2 nm of land may present concern to OWF structures. (very few presented here)
- › Less than 1% of reported notifications refer to loss of propulsion within area of interest.

2018-2022 Data

2018 - 2022 MISLE Data Reports/Investigated Components			
<i>Filtered: Sector New York, Vessels of Concern</i>			
Events of Reports Potentially Relating to Propulsion	Total Events which Clearly Indicate Loss of Propulsion	Total Reported Events (All Types and Inspections)	Percentage of Total
176	10	1,824	0.5%
107	8		0.4%

Key Findings:

- › Loss of propulsion events which can be clearly identified represent likely a much smaller number of reported investigations and inspections by a component definitions basis.
- › 283 cases show where there may have been and instance of where loss of propulsion or steerage may be present.

Loss of Propulsion and Steering - Findings

MISLE Data								
Filtered: Area of Interest/Sector, Vessels of Concern								
	2001-2015		2017				2018-2022	
	Notifications		Notifications		Investigations		Notifications (Including Investigations)	
	Quantity of Events	Percentage of Total Events	Quantity of Events	Percentage of Total Events	Quantity of Events	Percentage of Total Events	Quantity of Events	Percentage of Total Events
Events of Reports Potentially Relating to Propulsion	8 of 302	2.6%	1 of 188	1.0%	6 of 54	11.0%	176 of 1,824	9.6%
Events of Reports Clearly Indicating a Failure of Propulsion	Details of Incidents not Available within the Data Set		Details of Incidents not Available within the Data Set				10 of 1,824	0.5%
Events of Reports Potentially Relating to Steerage	91 of 302	30.1%	55 of 188	29.0%	Details of Incidents not Available within the Data Set		107 of 1,824	5.8%
Events of Reports Clearly Indicating Failure of Steerage	Details of Incidents not Available within the Data Set		Details of Incidents not Available within the Data Set				8 of 1,824	0.4%

Key Findings:

- › Notifications for 2017 represent 1% of the 188 identified notifications relating to loss of propulsion.
- › 0.5% and 0.4% of reported notifications and investigations by vessel components were clearly indicating loss of propulsion and loss of steerage, respectfully.
- › Details of incidents as they clearly related to the categories analyzed in this report were unable to be fully determined.
- › Cases which show correlations to relating to the two categories does make a strong case.

U-Turn Frequency (2 of 2)

Data Interpretation:

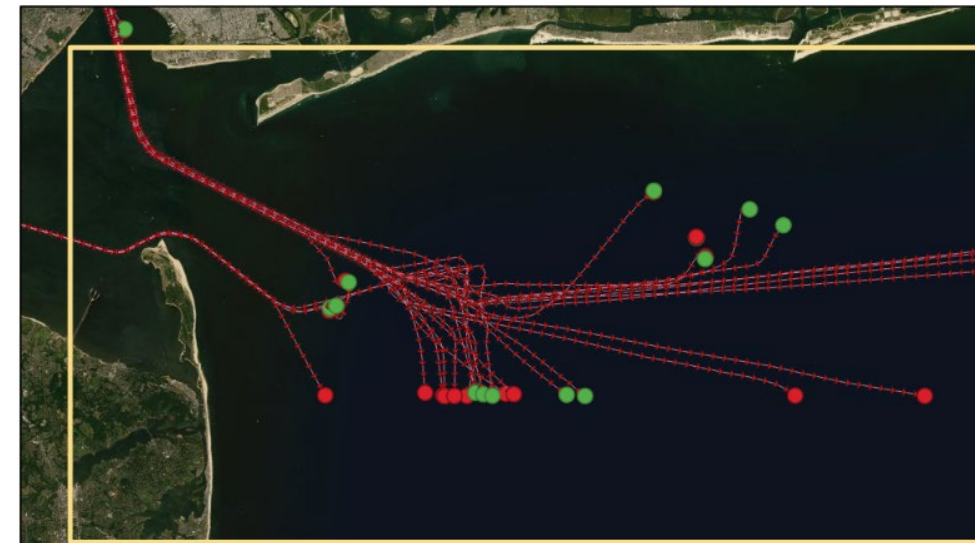
- › AIS tracks obtained from Offshore Wind Ports- Cumulative Vessel Traffic Assessment. (via COWI)

Data Interpretation Criteria:

1. A vessel undergoing a turn with a steady turning radius in relations of 2-38 of the PIANC design steadies turning guidelines (Outline in Section 3.1)
2. Vessel track must have continuous travel, with no break in speed over ground less than 3 knots.
3. Vessel track must be turning away from New York/New Jersey approaches (i.e. headed inland initially)
4. Vessels must adhere to “vessels of concern” as outlined in the report.

Key Findings:

- › No U-turns formally identified
- › Irregular Navigation Incidents represent 1% of the reported cases within the area of interest and amount to an order of magnitude of 1E-6 per vessel.



Example Traffic AIS Data Snapshot 01-05-2017 to 01-06-2017 for Vessel LOA above 100m

Key Takeaways

Application:

- › Application to agencies in determining required severity for updating processes or policy for mitigation.
- › Application for comparison with other areas of interest on frequency.
- › Assistance to developers in applying this information in risk assessment submittals.

Questions?

Data Source Processing

Data Processing – MISLE System			
Source	Definition	Data Category	Associated Data Field(s)
2001-2015 MISLE Data Investigations	Loss of Steerage	Event Type	Vessel maneuverability, Grounding, Collision
	Loss of Propulsion	Event Type	Loss of Electrical Power, Loss of Stability, Set Adrift
2017 MISLE Notifications	Loss of Steerage	Incident Class	Disabled Vessel
	Loss of Propulsion	Incident Class	Irregular Navigation Incident
2018-2022 MISLE Data Components	Loss of Steerage	Component	Rudder Angle Indicator, Steering Gear, Emergency Steering Position com.. Operation of Machinery, Other (machinery), Rudder/Tiller/Steering, Navigation Underway,
	Loss of Propulsion	Component	Emergency Source of Power, Functionality of Safety Systems, Propulsion Main Engine, Auxiliary Engine, Electrical, Machinery, Propulsion Starting System, Propulsion Transmission, Generator

Publicly Available Sources

- › Loss of Propulsion and Steerage must be reported under CG-2692 (Marine casualty reports)
- › 2001-2015 MISLE Database (MSMS System) “for research”
 - › Includes marine accidents and pollution incidents by a variety of factors including vessel or facility type, injuries, fatalities, pollutant details, location, and date.
- › 2018-2022 MISLE Deficiency Reports
 - › Includes notifications and investigations
 - › Does not include Security , Self-Reported, or Worklist items. The information displayed is also available on the U.S. Coast Guard Port State Information Exchange (PSIX)

Through FOIA

- › 2017 MISLE Data
 - › Includes information on marine casualties for vessels of concern within Area of Interest.

Verification Sources

- › PSIX
- › Marine Casualty Report Data (published on website)
- › NTSB Marine Incident Reports

2001- 2015 MISLE Data (1 of 2)

2001 - 2015 MISLE Data – Notifications and Investigations (Reported)		
Filtered: Area of Interest, Vessels of Concern		
Total Investigation(s) and Notifications related to concerning Steerage	Total Reported Events	Percentage of Total
91	302	30.1%
Total Investigation(s) related to concerning Loss of Propulsion	Total Reported Events	Percentage of Total
8	302	2.6%

2001 - 2015 MISLE Data Vessel Event Frequency				
Filtered: Area of Interest, Vessels of Concern				
Type of Event(s)	Total Events within Area of Interest	Event Subclass associated with Loss of Propulsion/ Steerage	Events related to loss of Propulsion/ Steerage per subclass description	Percentage of Total Events within Region
Total Reported Events	302			
Collision	7	Other	1	2%
Grounding	27	No Control	6	9%
Loss of Electrical Power	12	Total Loss	4	4%
Loss of Stability	2	Total and Partial Loss	2	1%
Set Adrift	4	Unintentional	2	1%
Vessel Maneuverability	87	Partial and Total Reductions	84	29%

Key Findings:

- › Majority of the cases fall under a vessel loss of steerage, and vessel maneuverability being the most common reported issue in the area of interest.
- › Data limited in understanding if notifications refer clearly to a loss of steerage or propulsion.

2017 – MISLE Data (1 of 2)

2017 MISLE Data – Investigations and Notifications		
Filtered: Area of Interest, Vessels of Concern		
Total Reported Investigations concerning Loss of Propulsion	<i>Total Investigations (All Investigations)</i>	<i>Percentage of Events within Region</i>
6	54	11.1%
Total Reported Notification(s) concerning Loss of Steerage	<i>Total Reported Events (All Notifications)</i>	<i>Percentage of Events within Region</i>
55	188	29.0%
Total Reported Notification(s) concerning Loss of Propulsion	<i>Total Reported Events (All Notifications)</i>	<i>Percentage of Events within Region</i>
1	188	0.5%

2017 MISLE Data - Investigations		
Filtered: Area of Interest, Vessels of Concern		
Incident Class	Total Events within Area of Interest	Percentage of Total Events within Region
Total Notifications	54	
Loss/Reduction of Vessel Propulsion	6	11%

2017 MISLE Data – Notifications		
Filtered: Area of Interest, Vessels of Concern		
Incident Class	Total Events within Area of Interest	Percentage of Total Events within Region
Total Notifications	188	
Disabled Vessel	55	29%
Irregular Navigation Incident	1	1%
Near Miss Situation	0	0%

Key Findings:

- › Data limited in understanding if notifications refer clearly to a loss of steerage or propulsion
- › 6 of the total 54 investigations within the area of interest for the year of 2017 were identified as concerning loss of propulsion events.

2018-2022 Data

2018 - 2022 MISLE Data - CASMAIN Reports/Investigated Components		
Filtered: Sector New York		
Components	Number of Reported Incidents/Investigations	Number of Cases which Clearly Indicate Loss of Propulsion/Steerage
Emergency Source of Power - Emergency generator	12	0
Functionality of Safety Systems	4	0
Propulsion Main Engine	46	9
Auxiliary Engine	33	1
Electrical	65	0
Machinery	11	0
Propulsion Starting System	2	0
Propulsion Transmission	1	0
Generator	2	0
Rudder Angle Indicator	3	0
Steering Gear	7	4
Emergency steering position com./ compass reading	2	1
Operation of machinery	10	1
Other (machinery)	83	2
Rudder/Tiller/Steering	1	0
Navigation Underway, General	1	0
Total	283	10
		8
Total Deficiencies within Sector New York		1,824

2018 - 2022 MISLE Data Reports/Investigated Components		
Filtered: Sector New York, Vessels of Concern		
Total Events which Clearly Indicate Loss of Propulsion	Total Reported Events (All Types and Inspections)	Percentage of Total
10	1,824	0.5%
8		0.4%

Key Findings:

- › Loss of propulsion events which can be clearly identified represent likely a much smaller number of reported investigations and inspections by a component definitions basis.
- › 283 cases show where there may have been and instance of where loss of propulsion or steerage may be present.