

New York State Offshore Wind Master Plan

BOEM New York State Task Force Meeting
October 3, 2017



NYSERDA

New York State Energy Plan – 2030 Clean Energy Goals

40% Reduction in greenhouse gas emissions from 1990 levels

Reducing greenhouse gas (GHG) emissions from the energy sector—power generation, industry, buildings, and transportation—is critical to protecting the health and welfare of New Yorkers and reaching the longer term goal of decreasing total carbon emissions 80% by 2050.

50% Electricity will come from renewable energy sources

Renewable resources, including solar, wind, hydropower, and biomass, will play a vital role in reducing electricity price volatility and curbing carbon emissions.

23% Decrease in energy consumption in buildings from 2012 levels

Energy efficiency results in lower energy bills and is the single most cost-effective tool in achieving clean energy objectives. 600 trillion British thermal units (TBtu) in energy efficiency gains equates to a 23% reduction from 2012 in energy consumption in buildings.

New York State will commit to building:

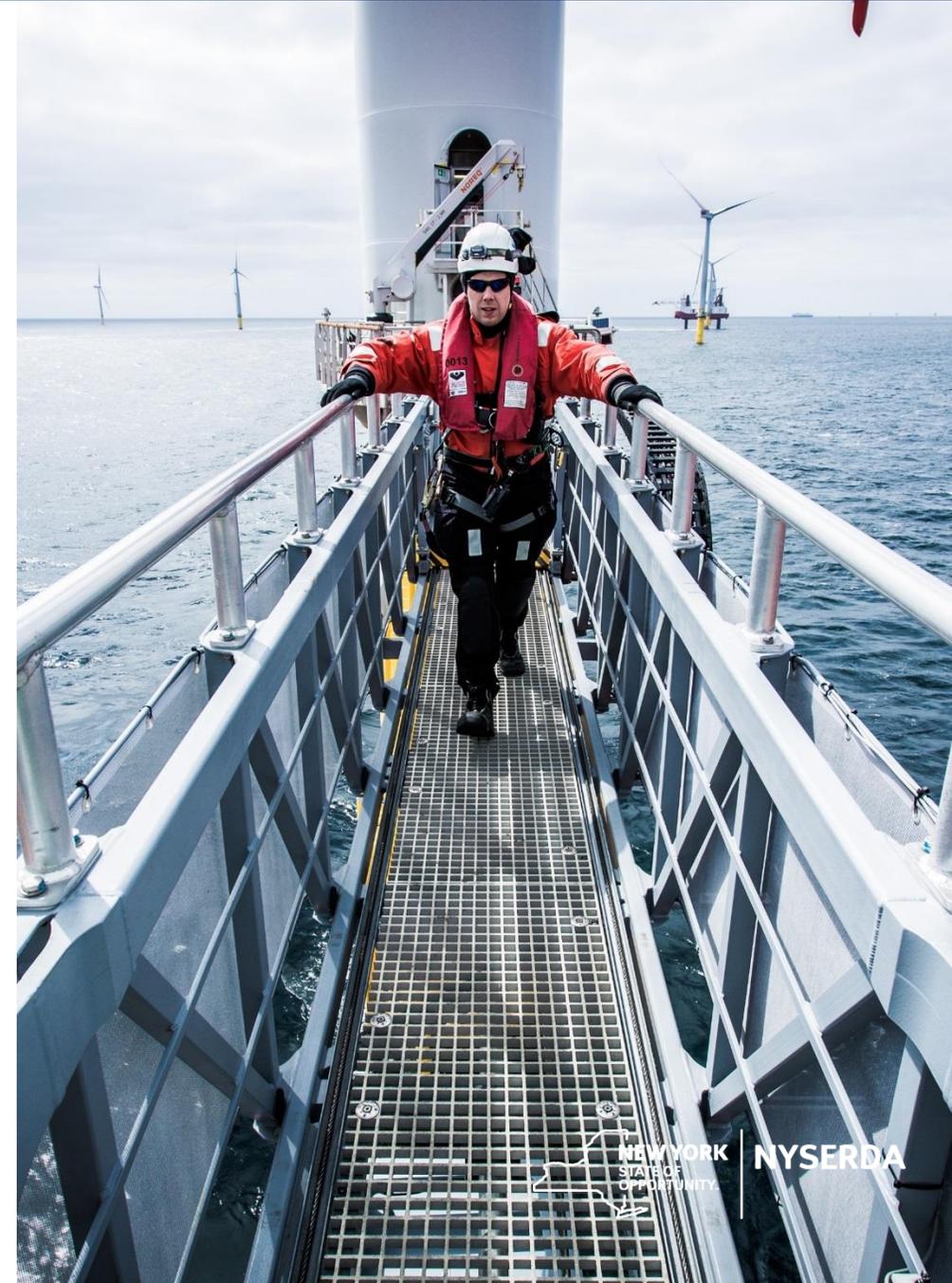
up to 2,400 megawatts of offshore wind power by 2030, which will generate enough power for up to **1.2 million homes.**

Offshore Wind Master Plan

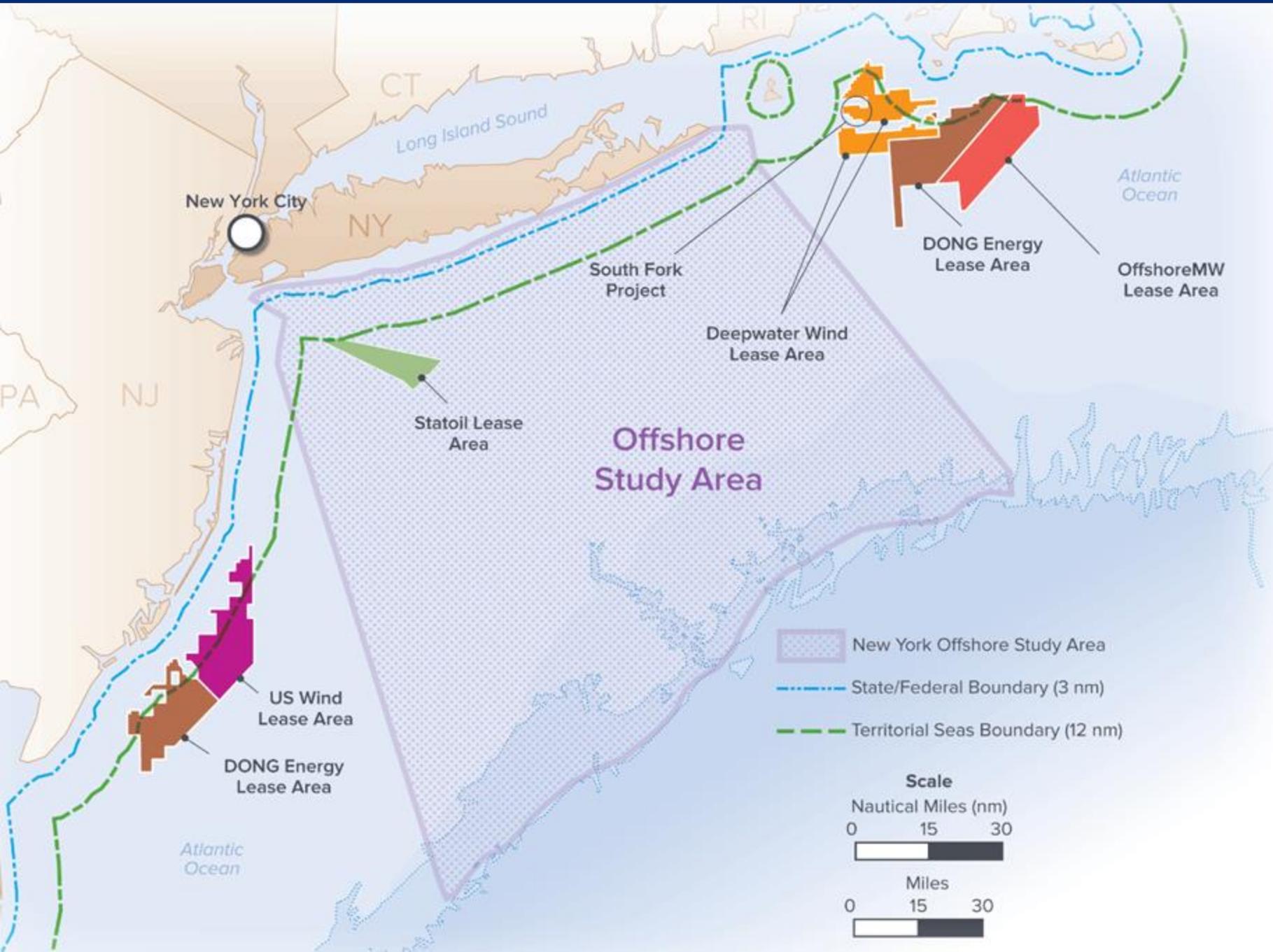
A comprehensive State roadmap for advancing development of offshore wind in a cost effective and responsible manner

Key Elements

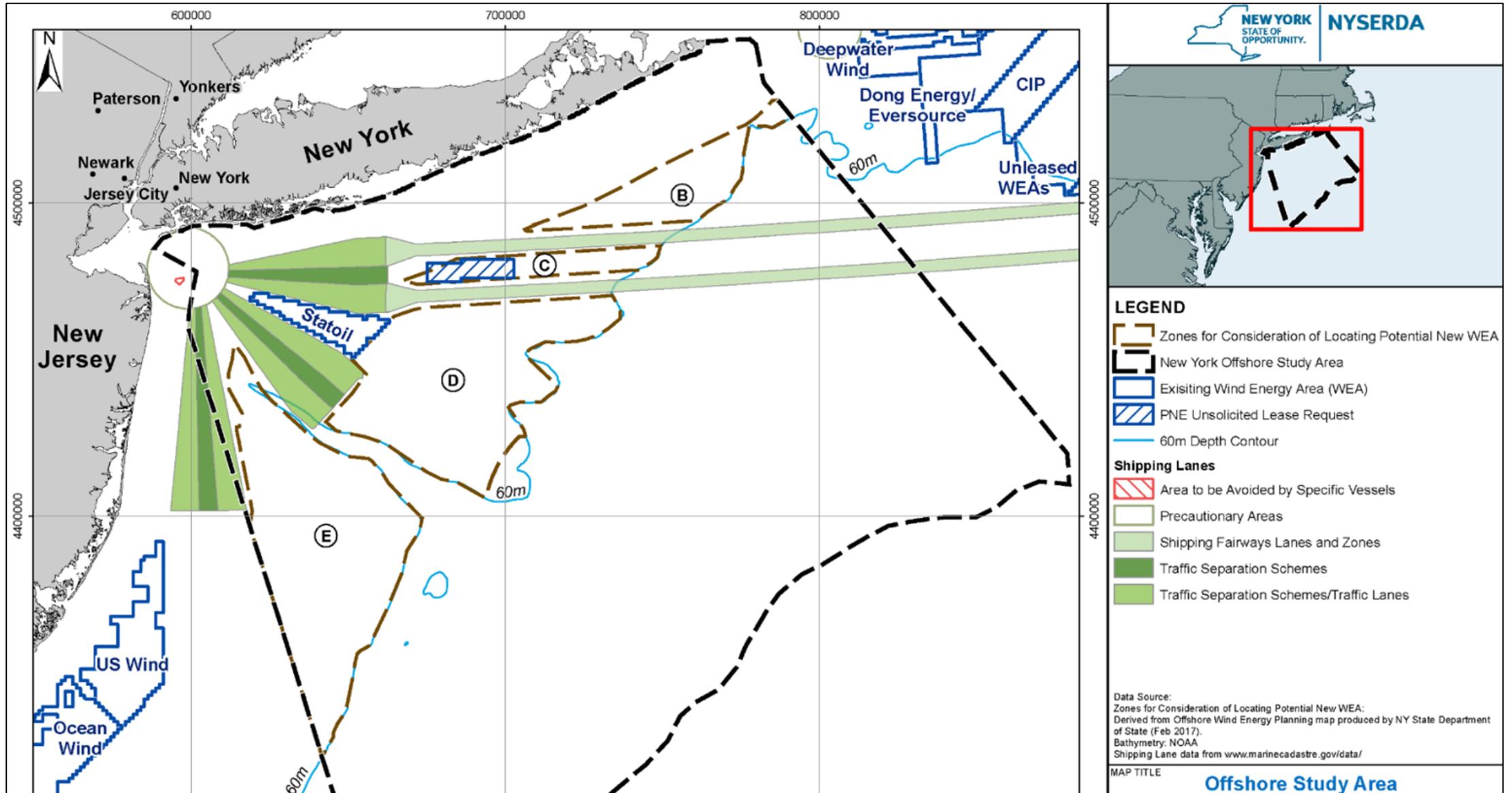
- Public engagement
- Environmental, social, regulatory, economic, and infrastructure related studies
- Site identification and guidelines for developers
- Analysis and support for cost effective electricity purchase



Master Plan Offshore Study Area

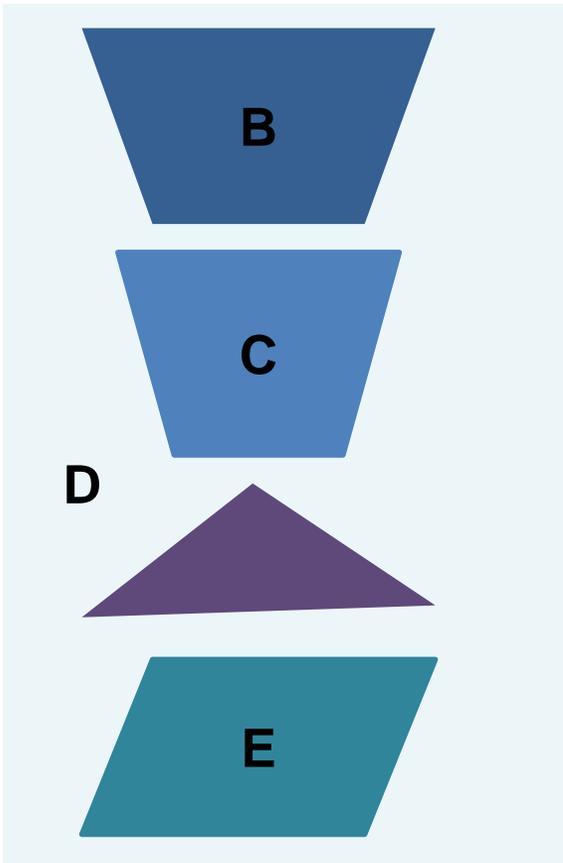


Initial Offshore Wind Zones for Consideration

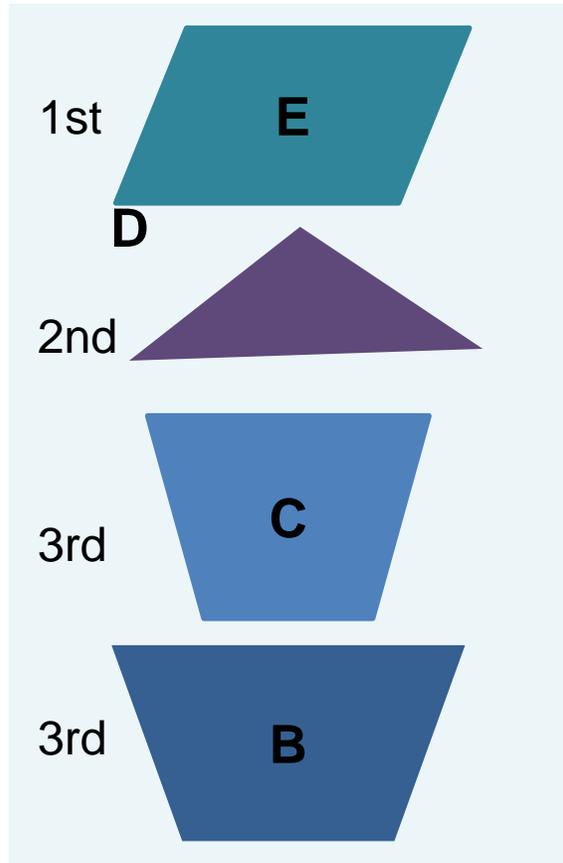


Area for Consideration Identification Process

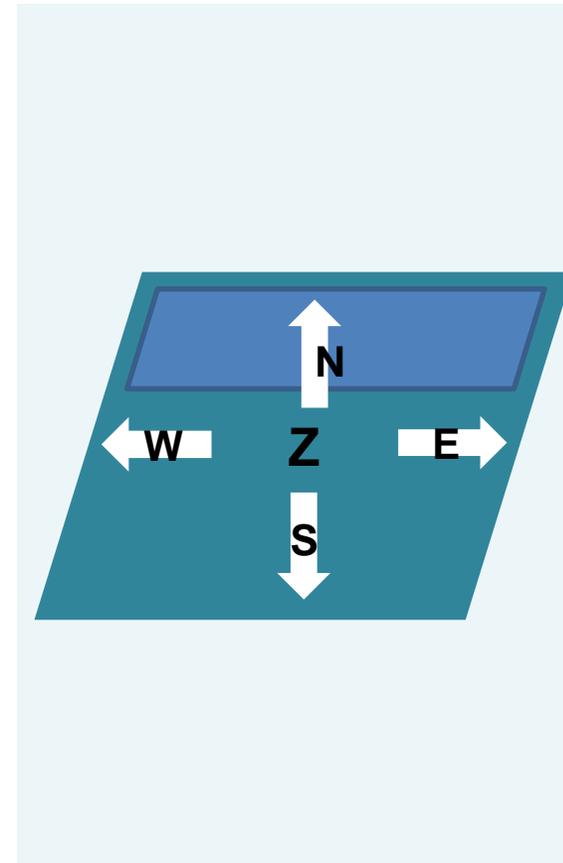
Step 1
Identify Zones



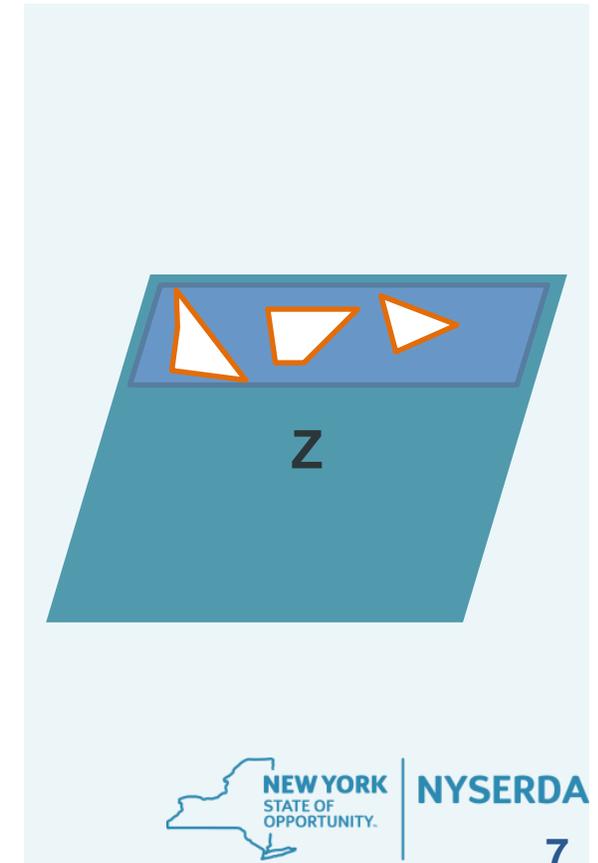
Step 2
Order Zones by Preference



Step 3
Identify Regional Preferences Within Zone(s)



Step 4
Locate Nominal Sites within Regional Preference



Public Engagement

- Commercial and Recreational Fishing
- Consumer Advocates
- Elected Officials
- Indigenous Nations
- Labor and Business
- Long Island and New York City Communities
- Non-Governmental Organizations
- Offshore Wind Energy Industry
- State and Federal Agencies
- Submarine Cables and Offshore Infrastructure Owners

Technical Studies and Siting Summaries

- Offshore Wind Master Plan will be supported by 20+ studies, informed by:
 - State, federal and academic data sets and models; published literature; stakeholder feedback; published GIS, etc.
- Draft studies provided to external reviewers, including:
 - Indigenous Nations
 - Federal Agencies: BOEM, USFWS, NOAA, USACE, USCG, USDOD, ACHP
 - State Agencies: NYSDOS, NYSDPS, NYSDEC, NYS Parks, NYSEDC, NYSDOL, NY/NJ Port Authority
 - NGOs: NWF, NRDC, TNC, WCS, CCE, Audubon, Uprose, Surf Rider
 - Other: Legal, 3rd party technical review, fishing groups/Captains, etc.
- Some study reviews were supported by webinars
- Reports are being edited based on comments now
- Studies that influence spatial representation distilled into Area for Consideration identification work
- Each study area is based on different types and granularity of data, and requires independent consideration relating to potential conflicts

Master Plan Studies and Surveys

Environmental

- Marine Wildlife Survey
- Sea Floor and Benthic Survey (Mapping and Environmental Assessment)
- Birds and Bats
- Environmental Sensitivity and Permitting Risk Analysis
- Fish and Fisheries
- Marine Mammals and Sea Turtles
- Metocean (Wind, Waves, and Current) Characterization
- Sand and Gravel Resources

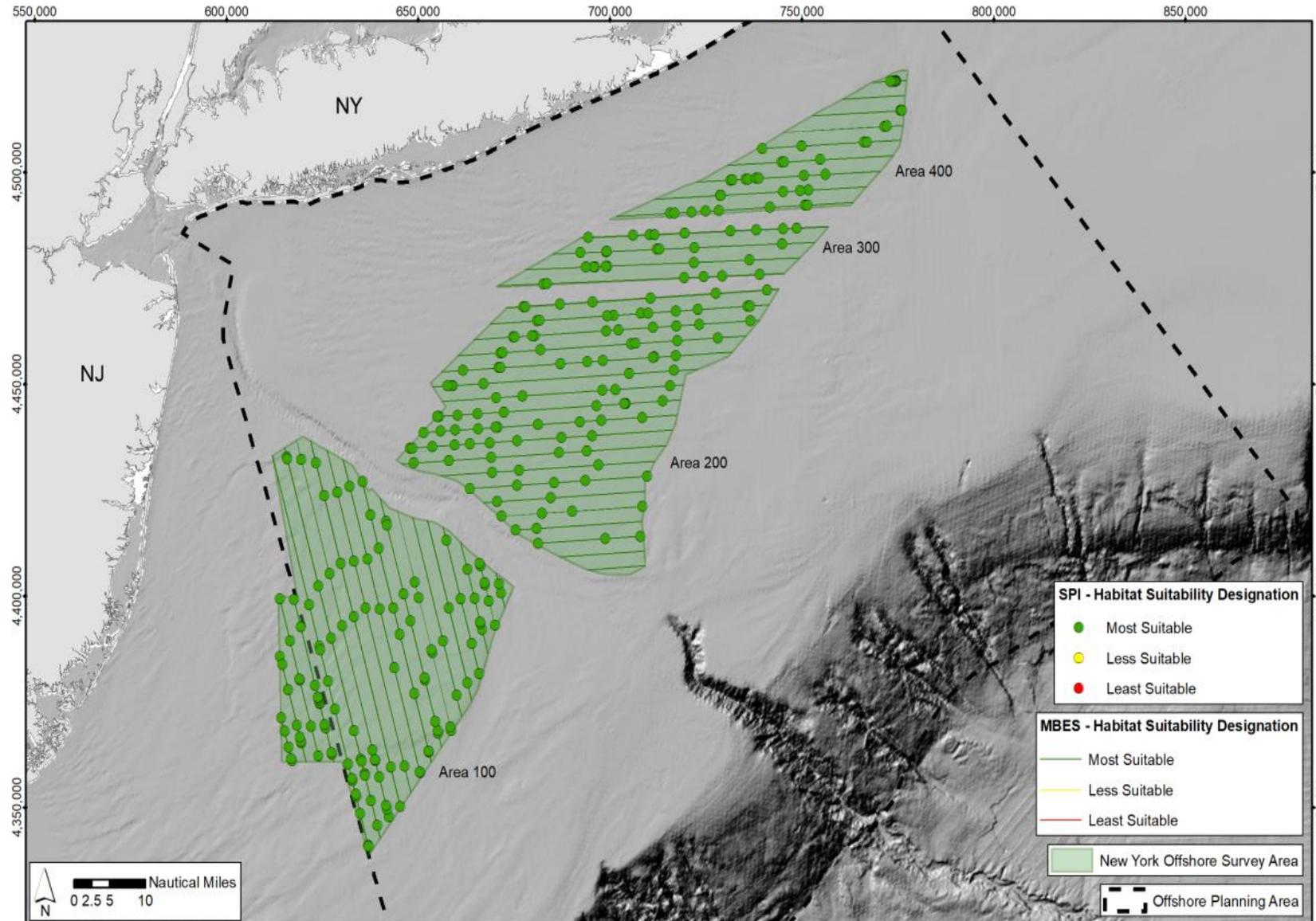
Social and Regulatory

- Aviation and Radar
- Grid Interconnection
- Health and Safety
- Shipping and Navigation
- Marine Archeology and Cultural Resources
- Onshore Permitting Constraints
- Recreational Uses
- Visual Simulation

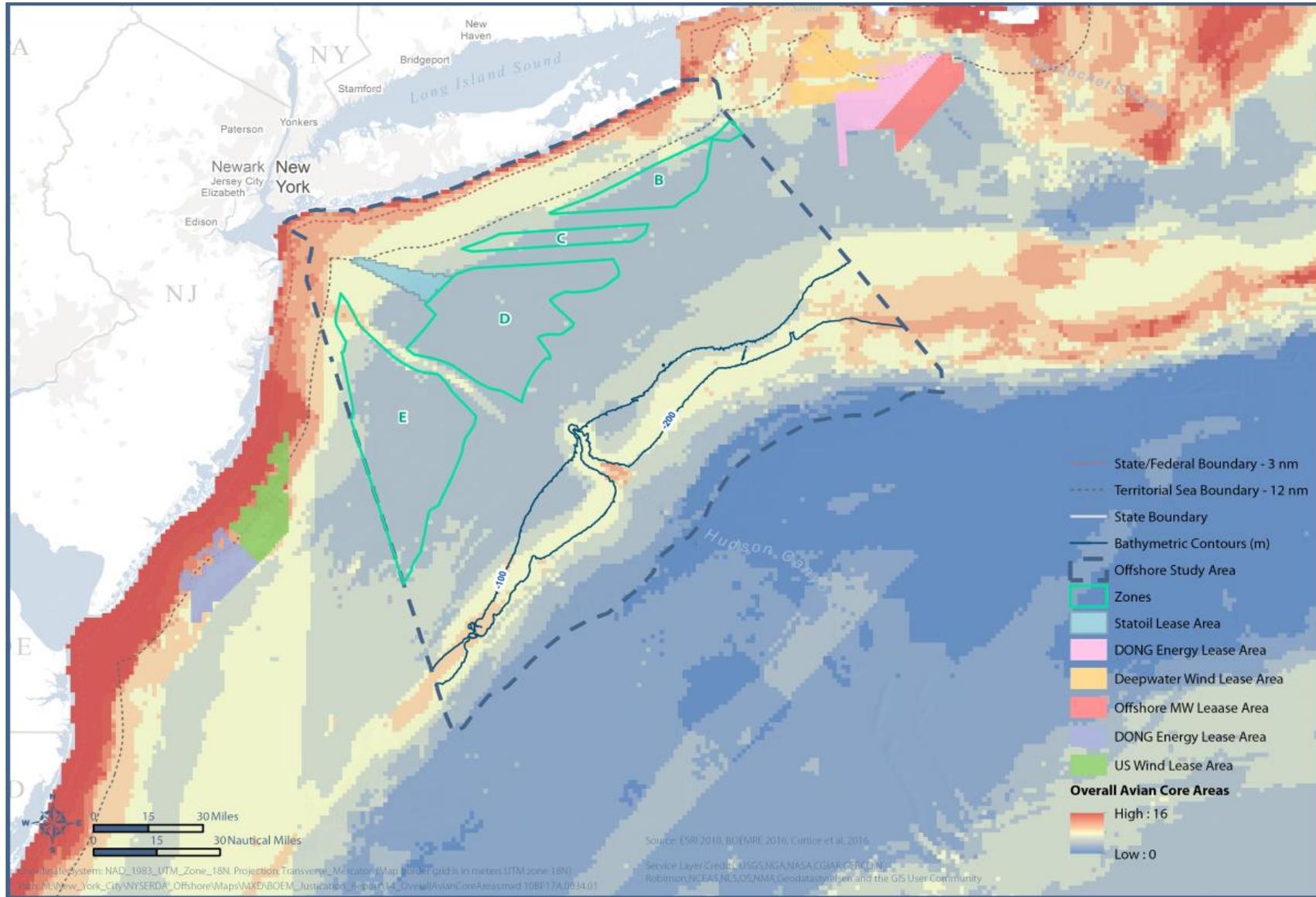
Economic and Infrastructure

- Economic Development, related to:
 - Jobs and Workforce Skills
 - Manufacturing Assets
 - Port Infrastructure
- Pipelines, Cable, and Third Party Infrastructure
- Ports and Supply Chain
- Vessels
- Project Cost Projections

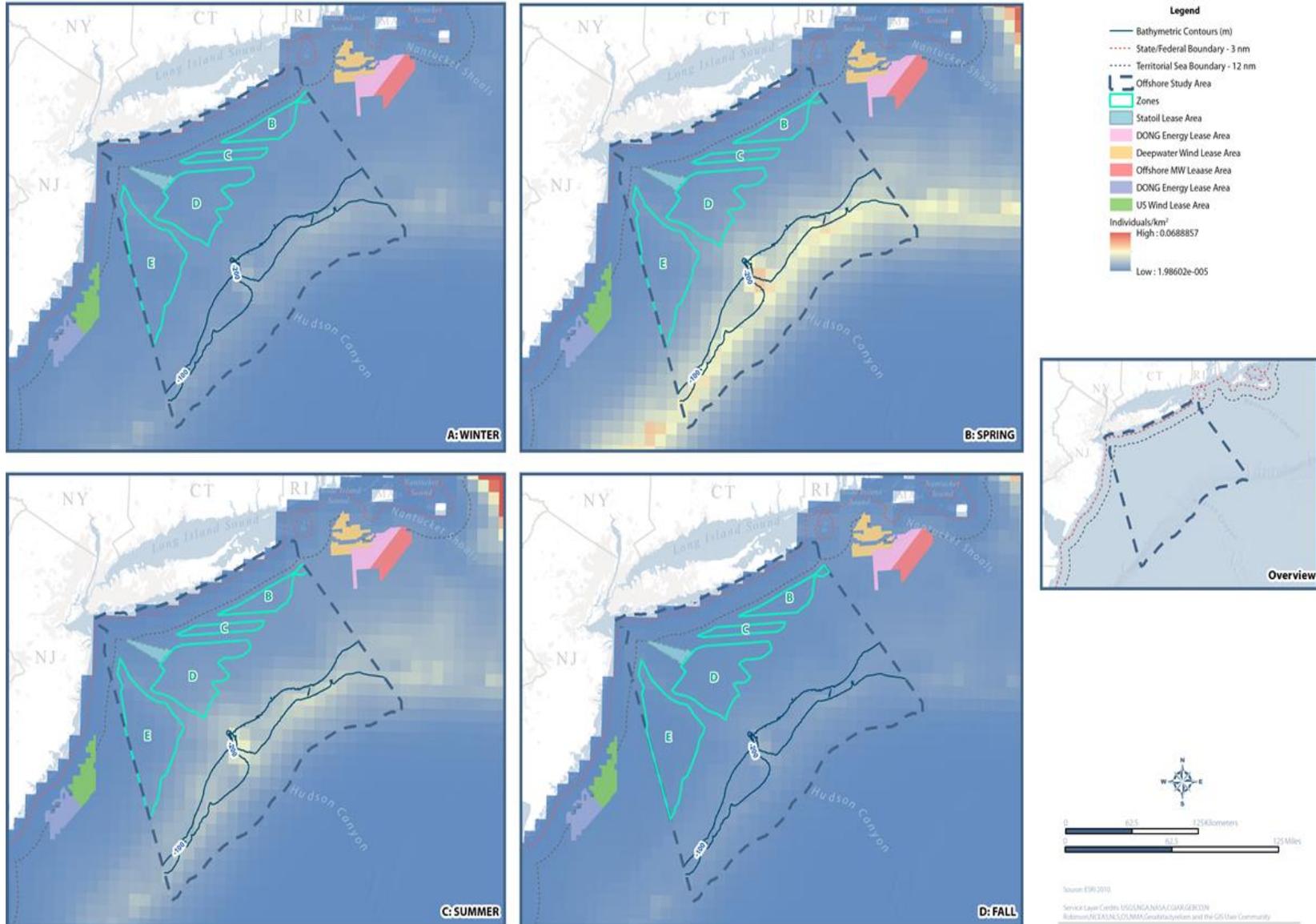
Geological and Physical Environment



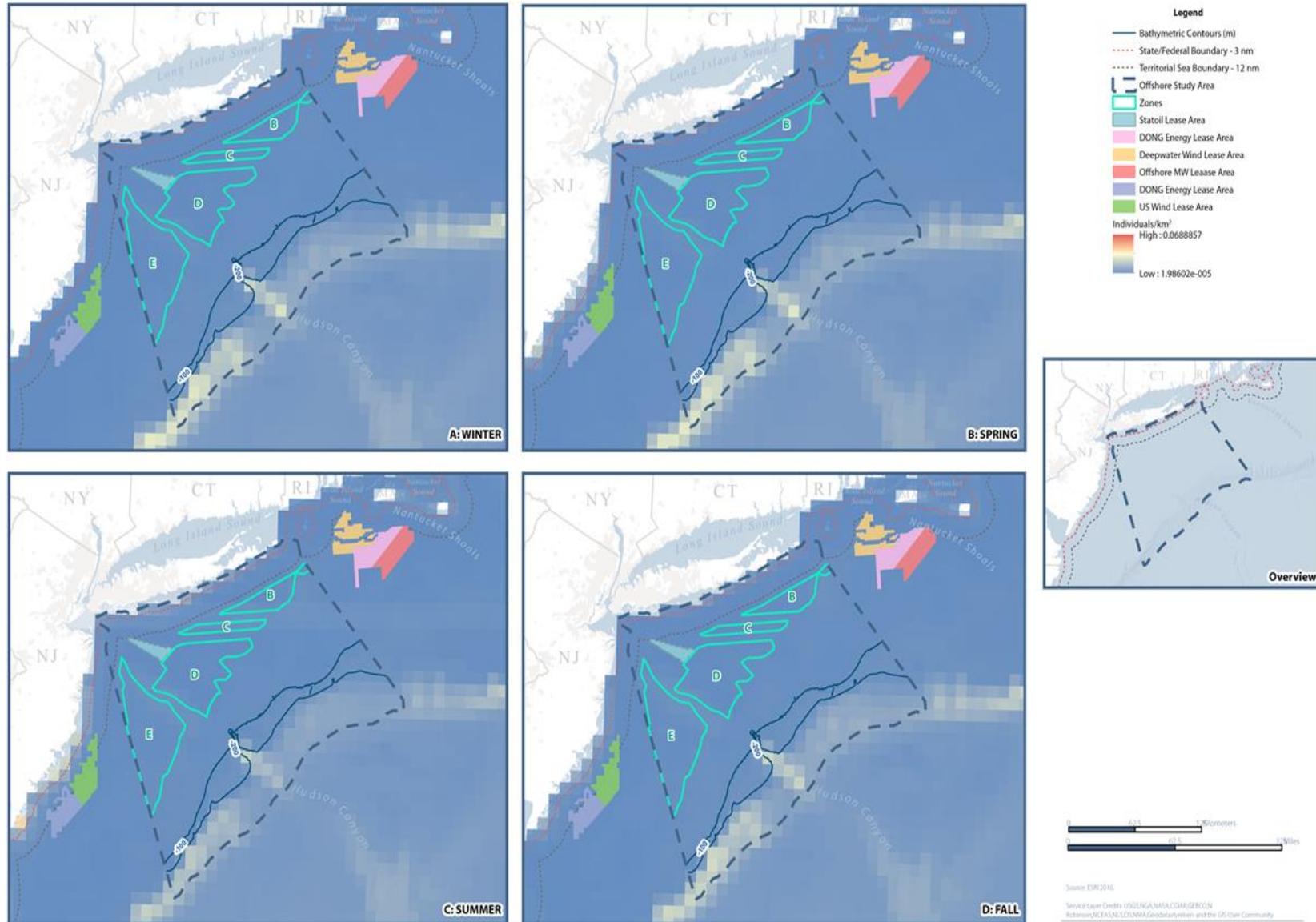
Birds and Bats



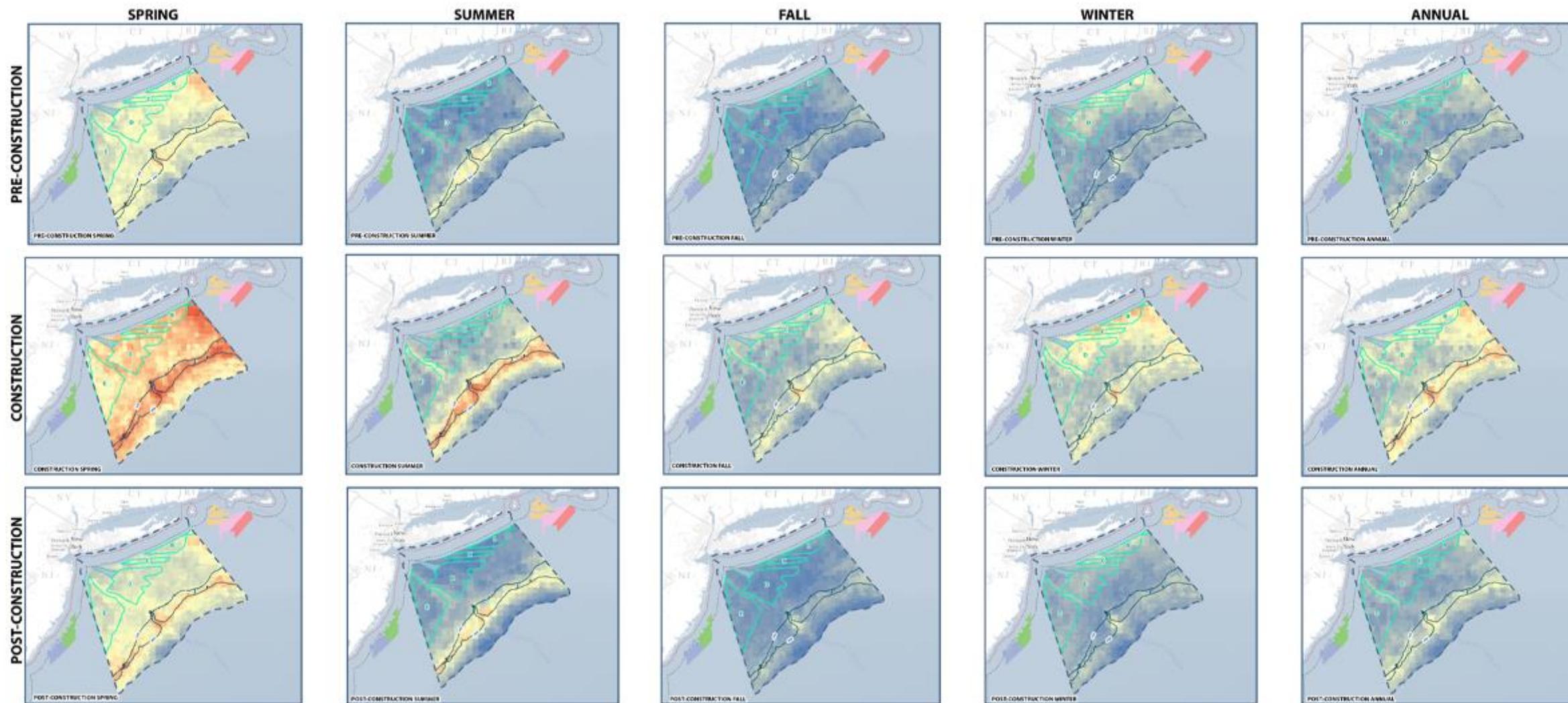
Marine Mammals – Low-Frequency Cetaceans



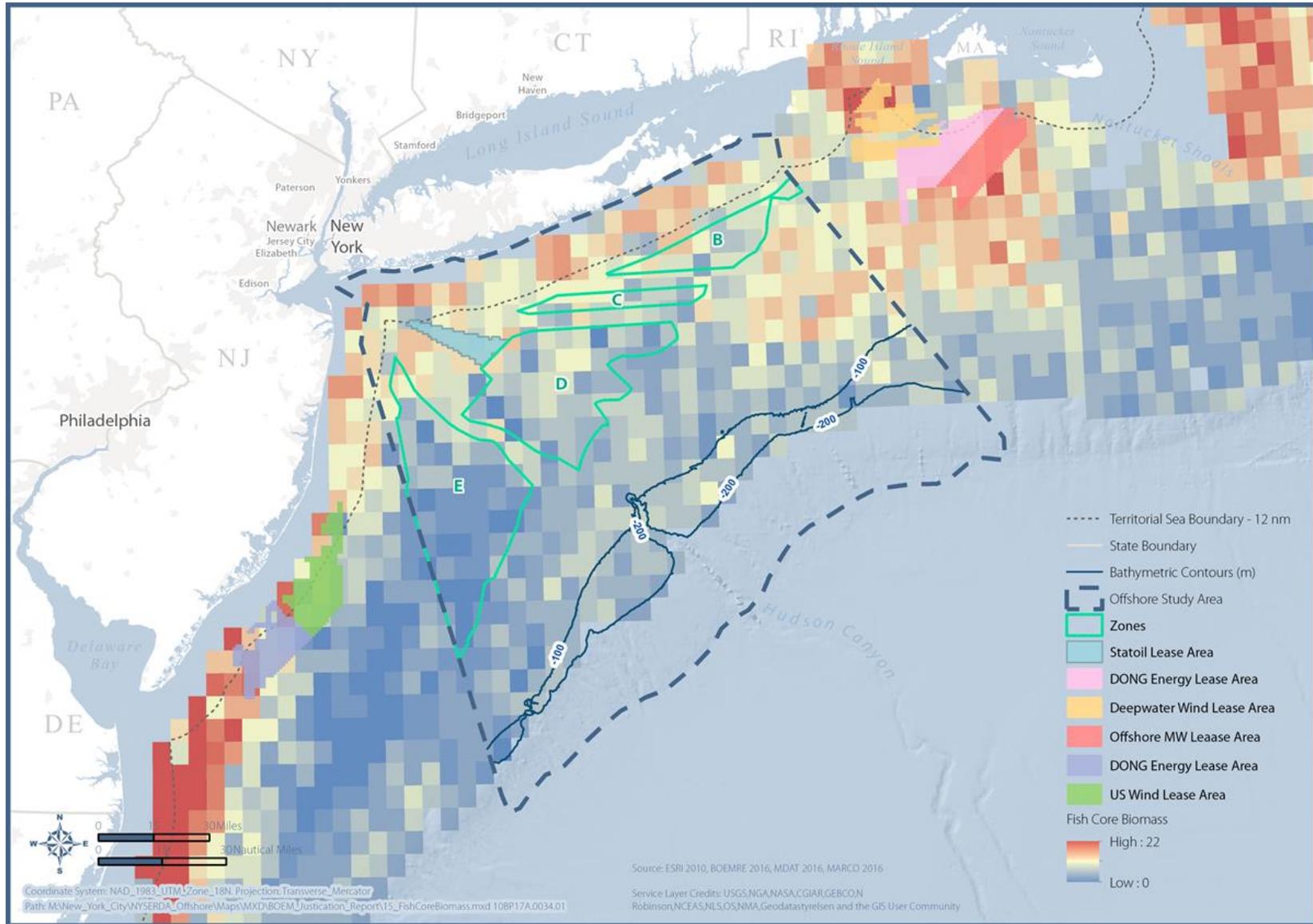
Marine Mammals – Mid-Frequency Cetaceans



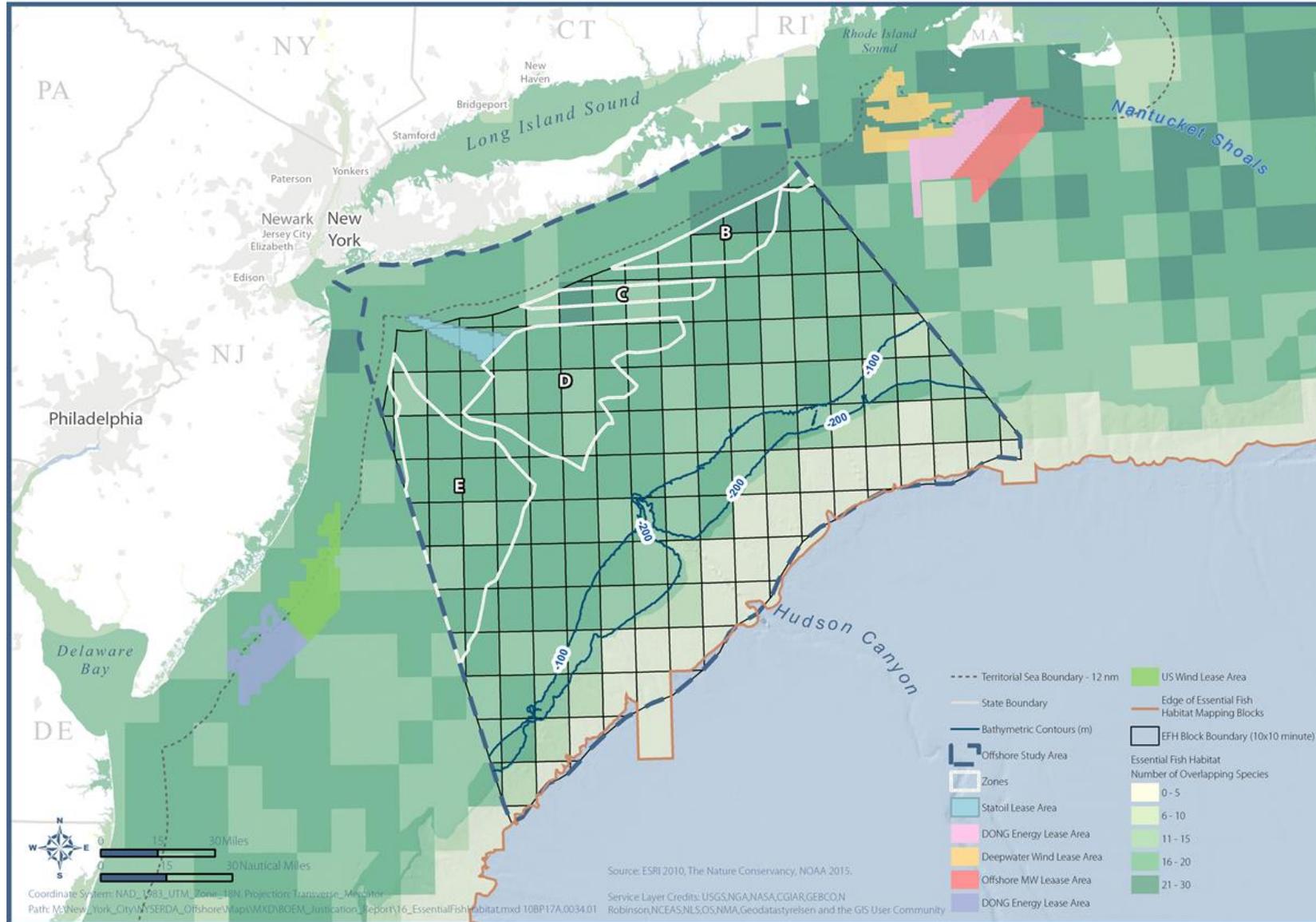
Environmental Sensitivity



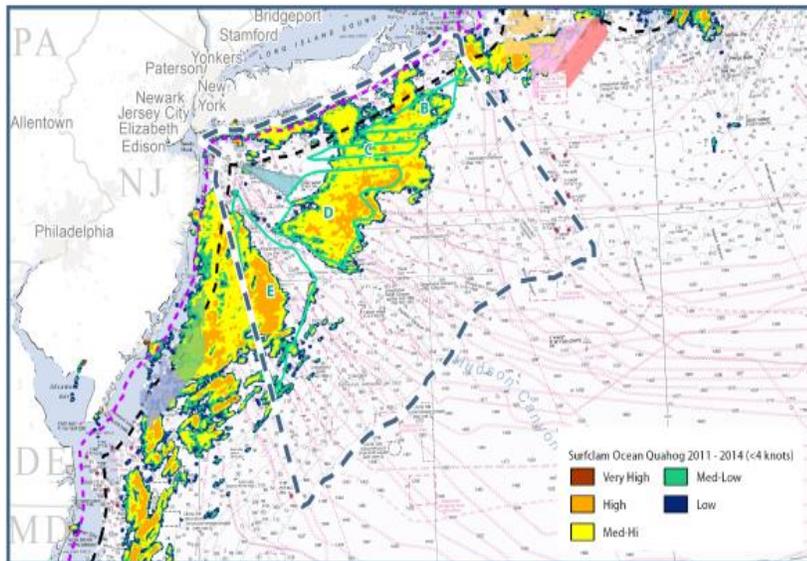
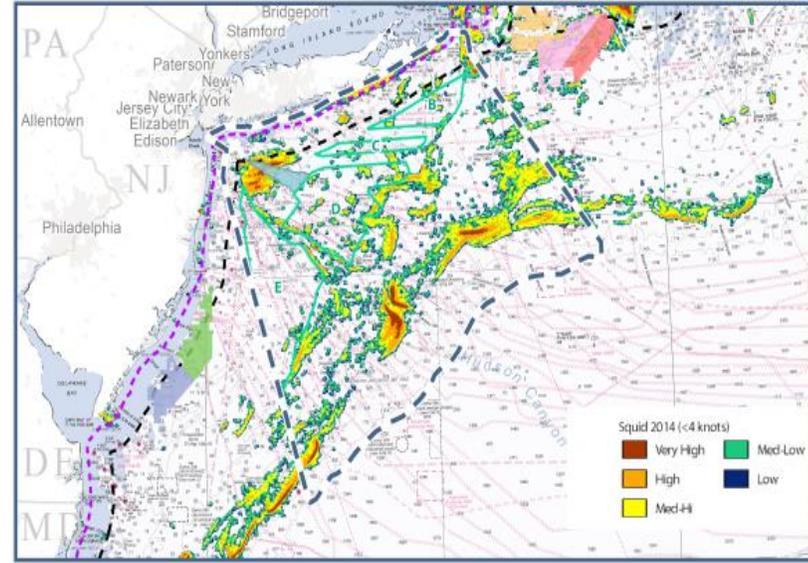
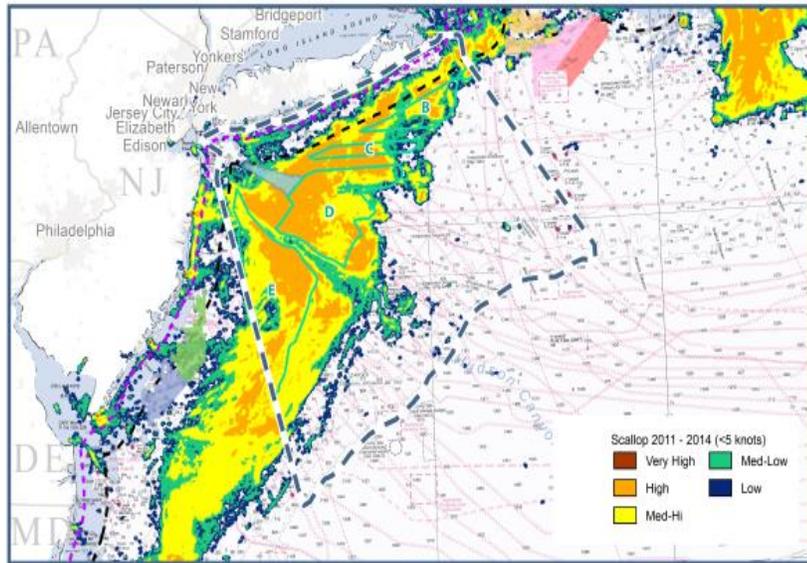
Fish Core Biomass



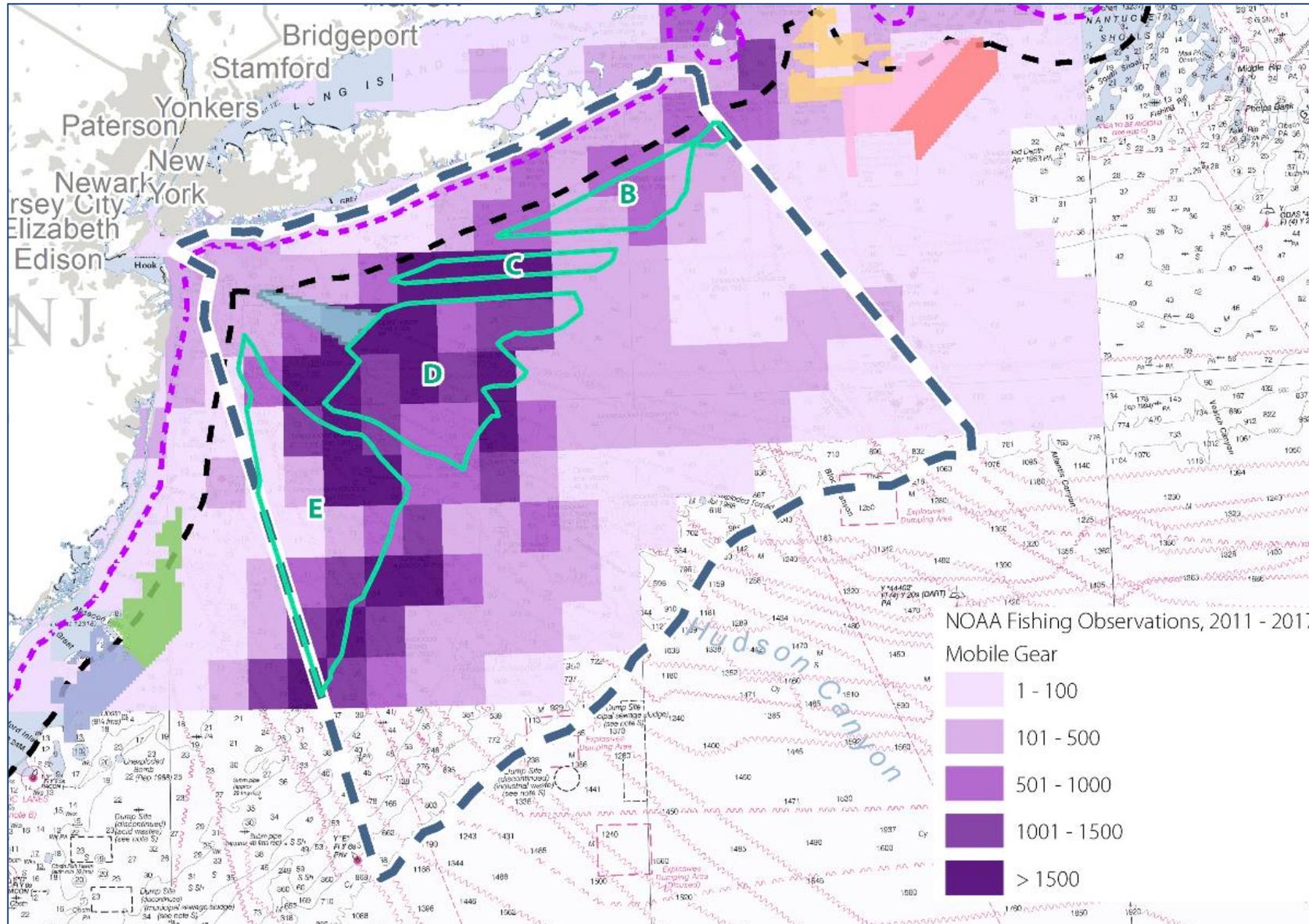
Essential Fish Habitat



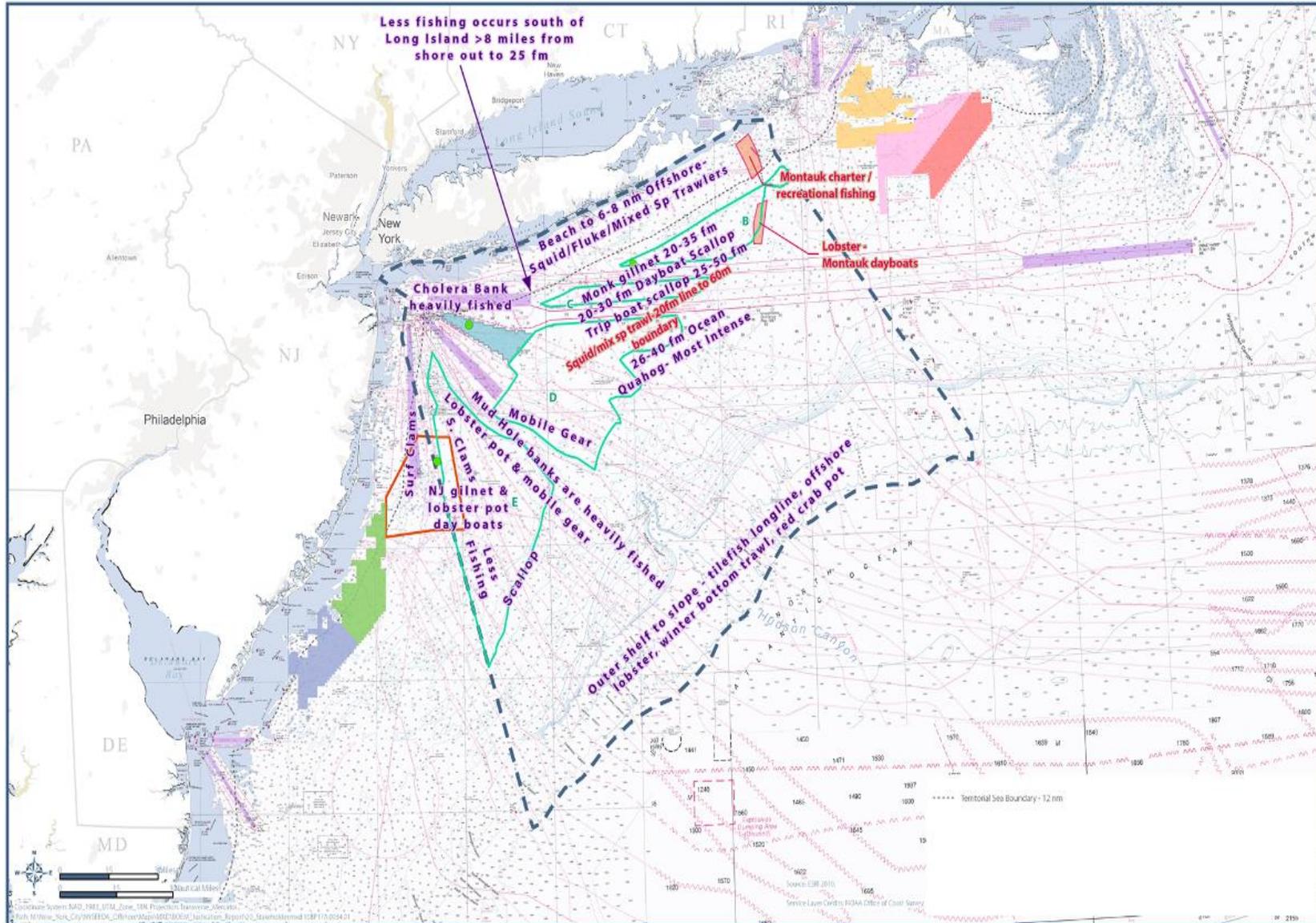
Commercial Fishing – VMS Data



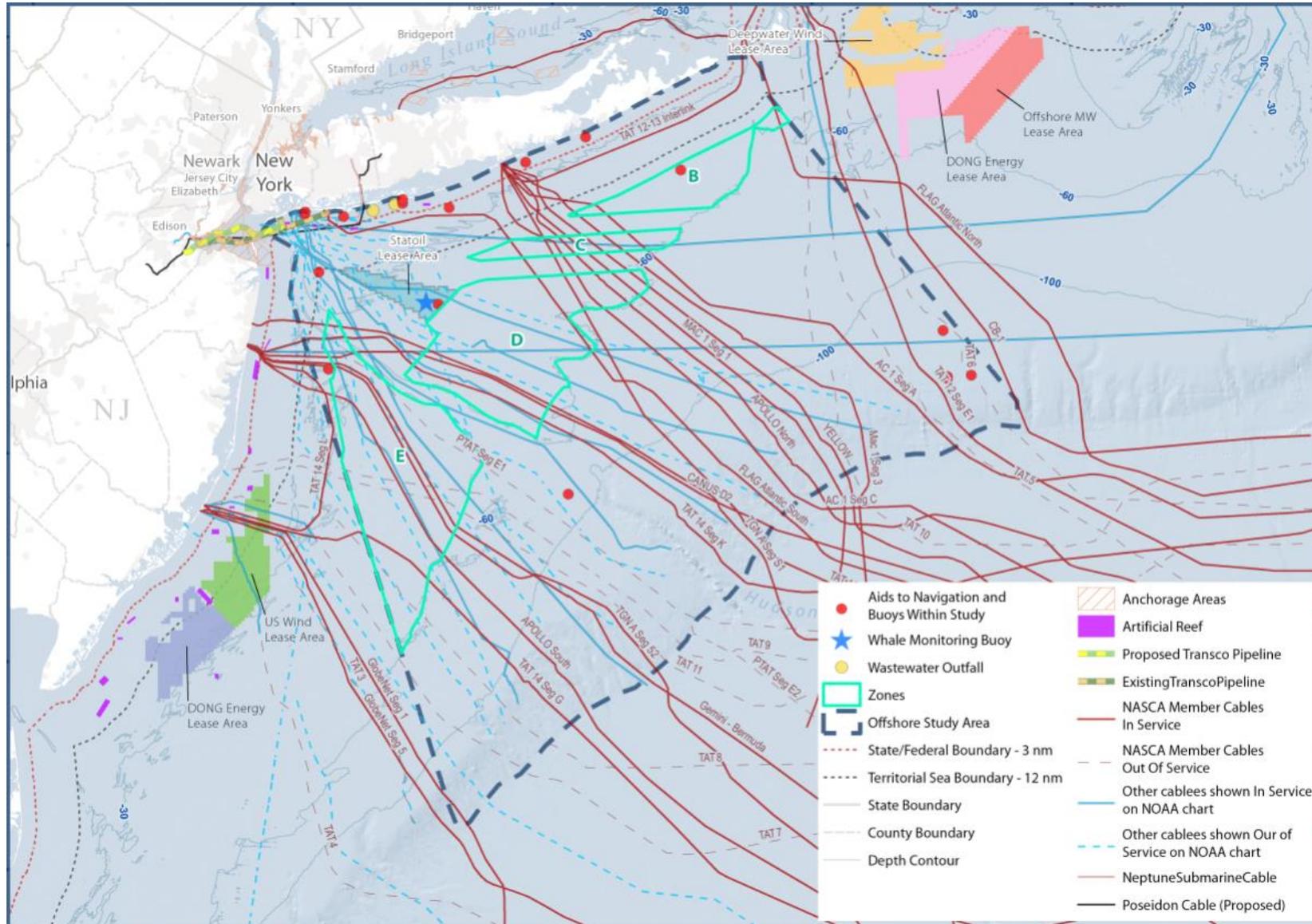
Commercial Fishing – Observer Data



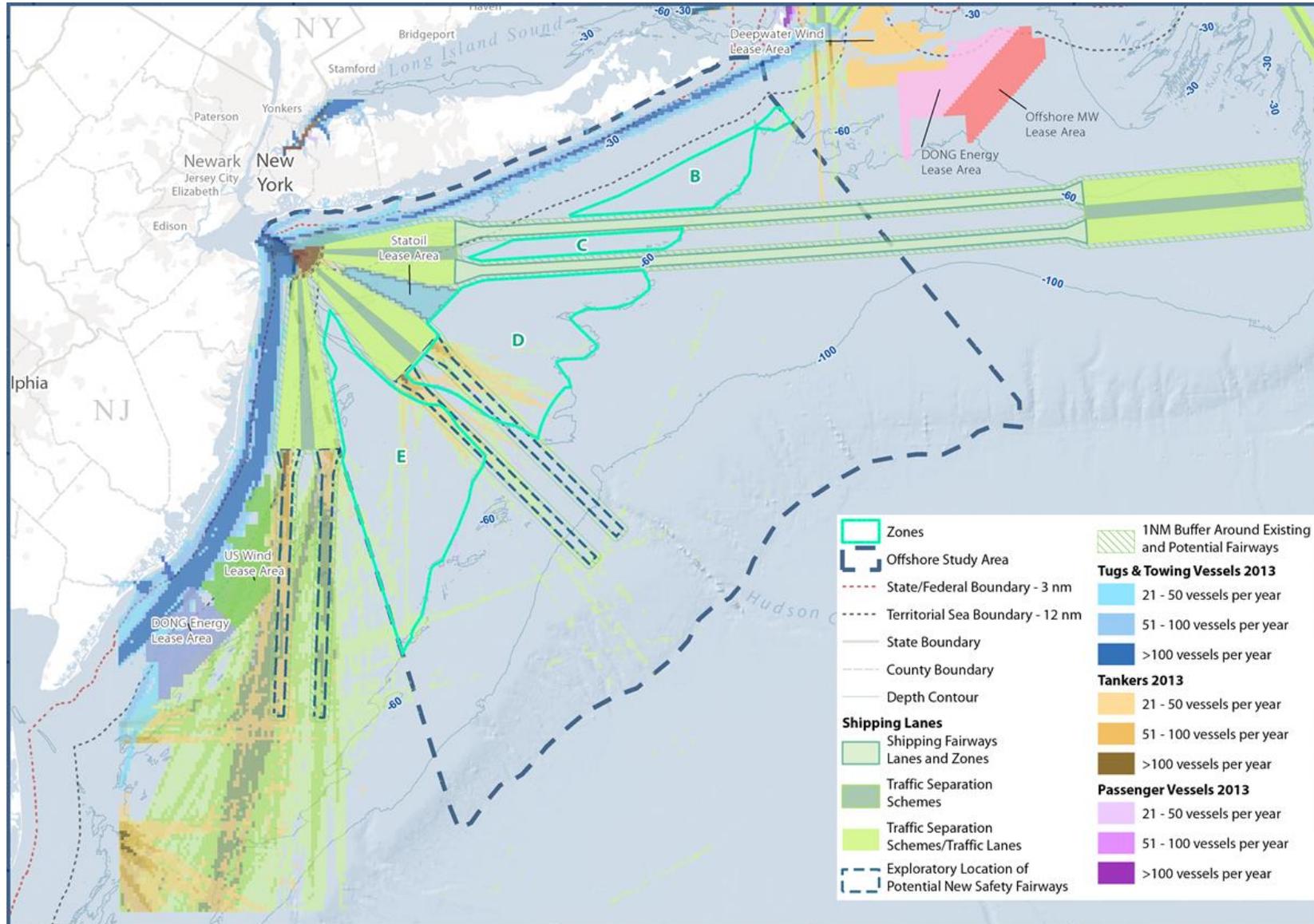
Commercial Fishing – Interview Data



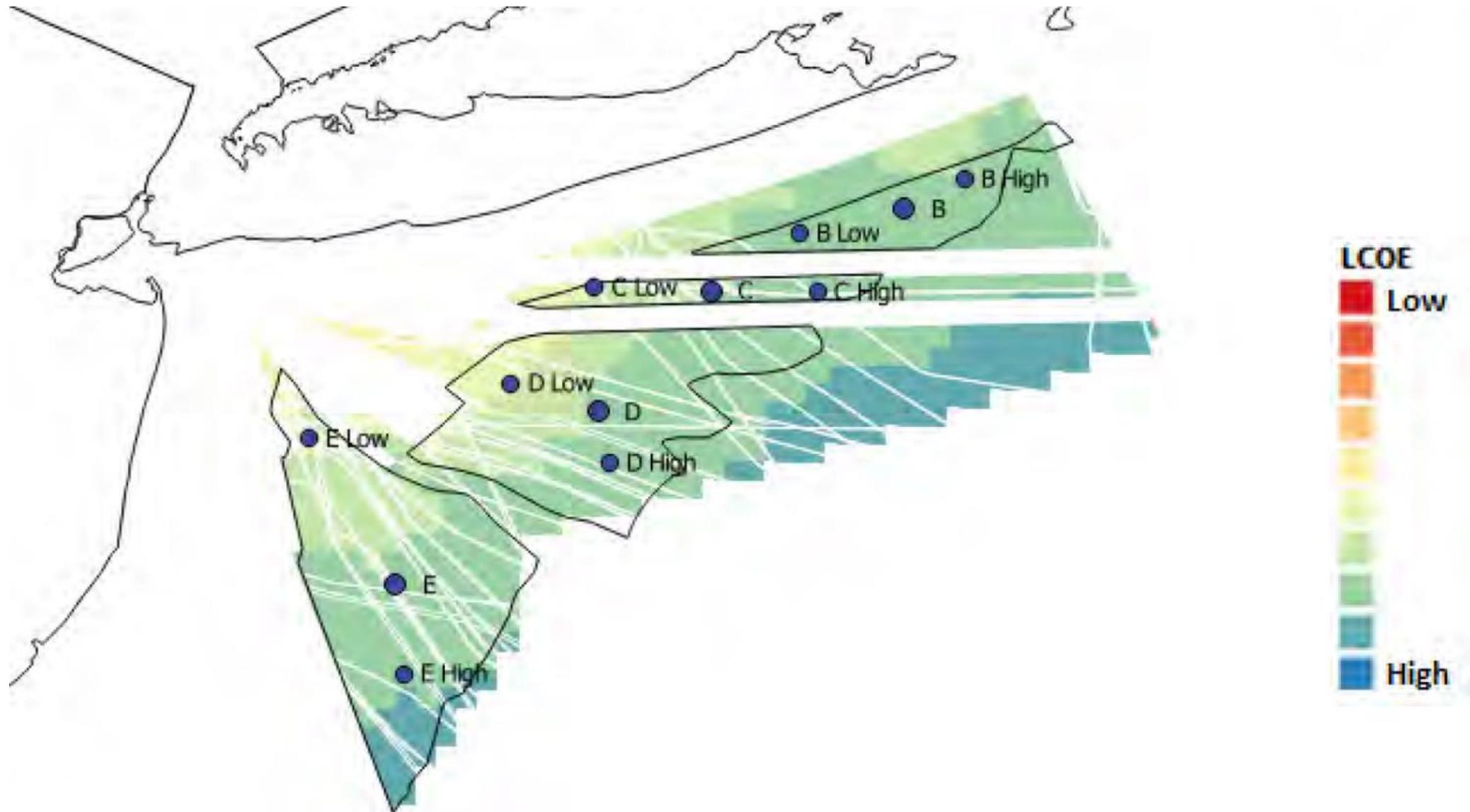
Cables, Pipelines & Infrastructure



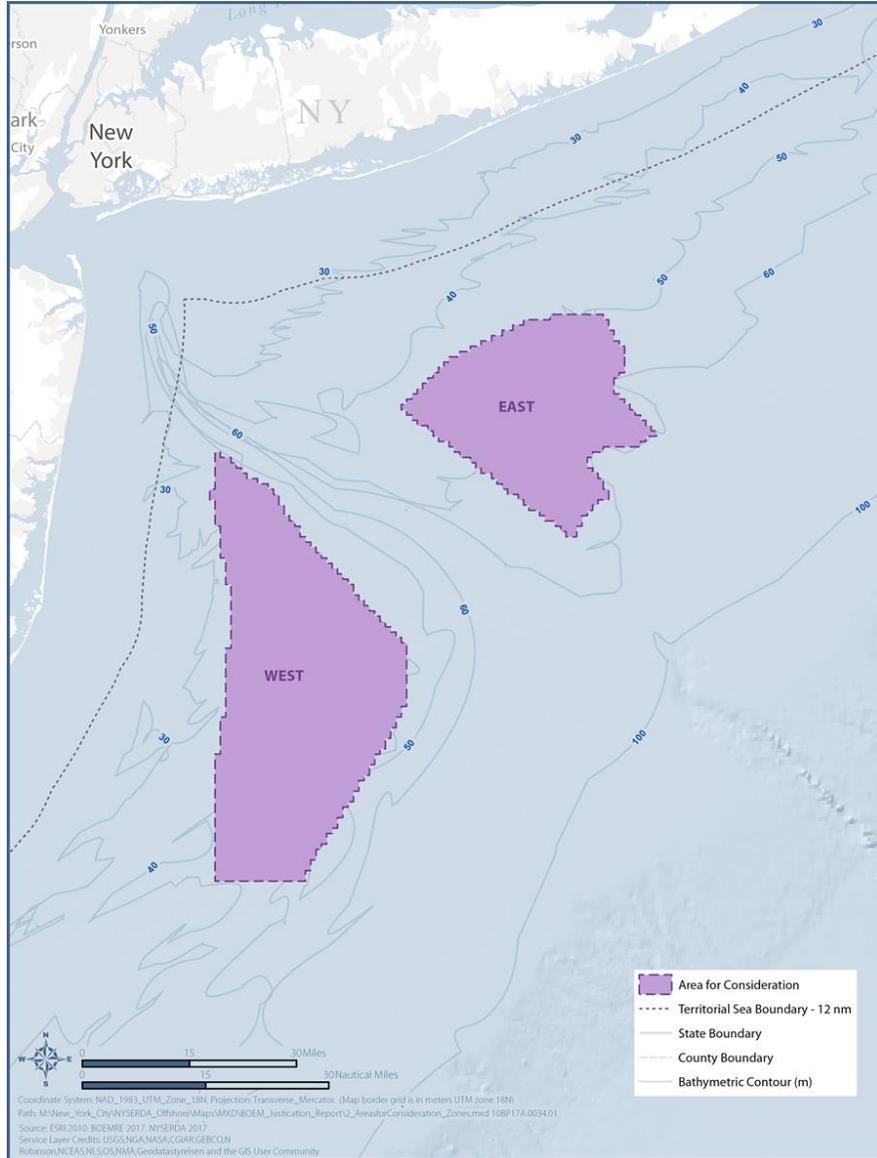
Shipping and Navigation



Relative Cost



Area for Consideration



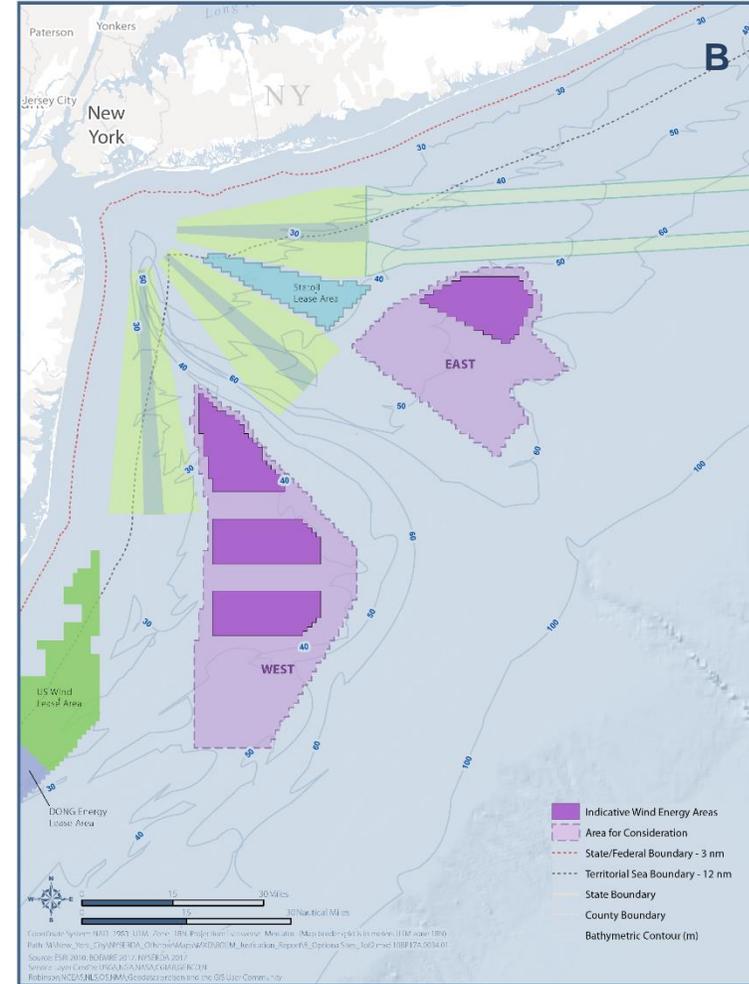
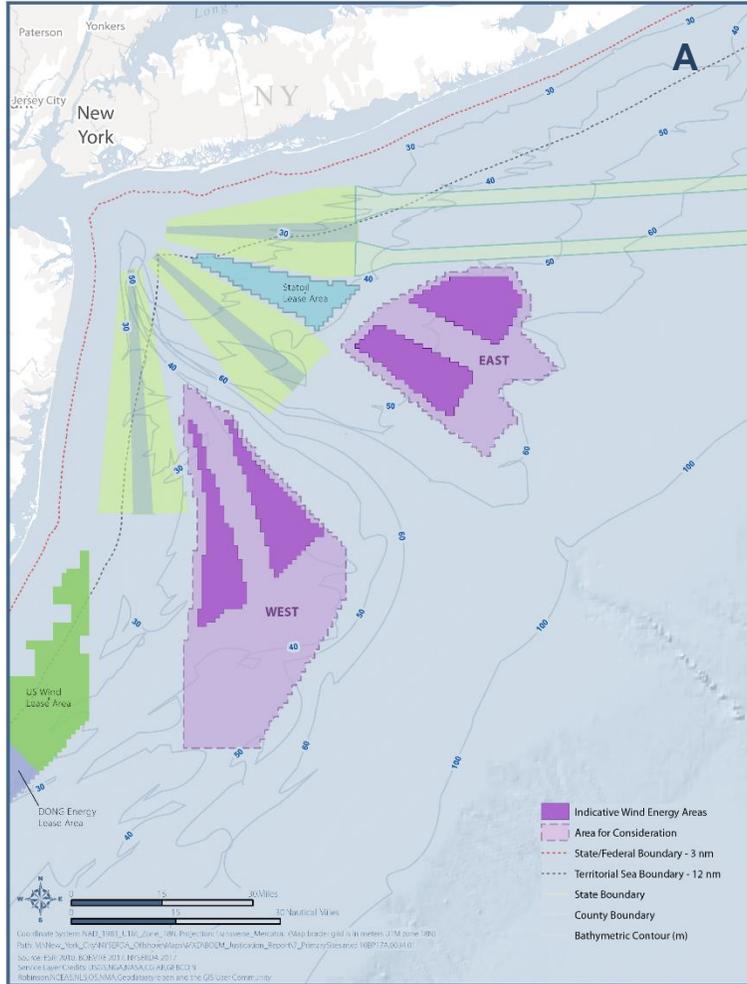
New York State identified an Area for Consideration and requests that BOEM identify and lease at least four new Wind Energy Areas (WEAs) within the area, each capable of supporting at least 800 MW of offshore wind.

Balance of factors, including, but not limited to:

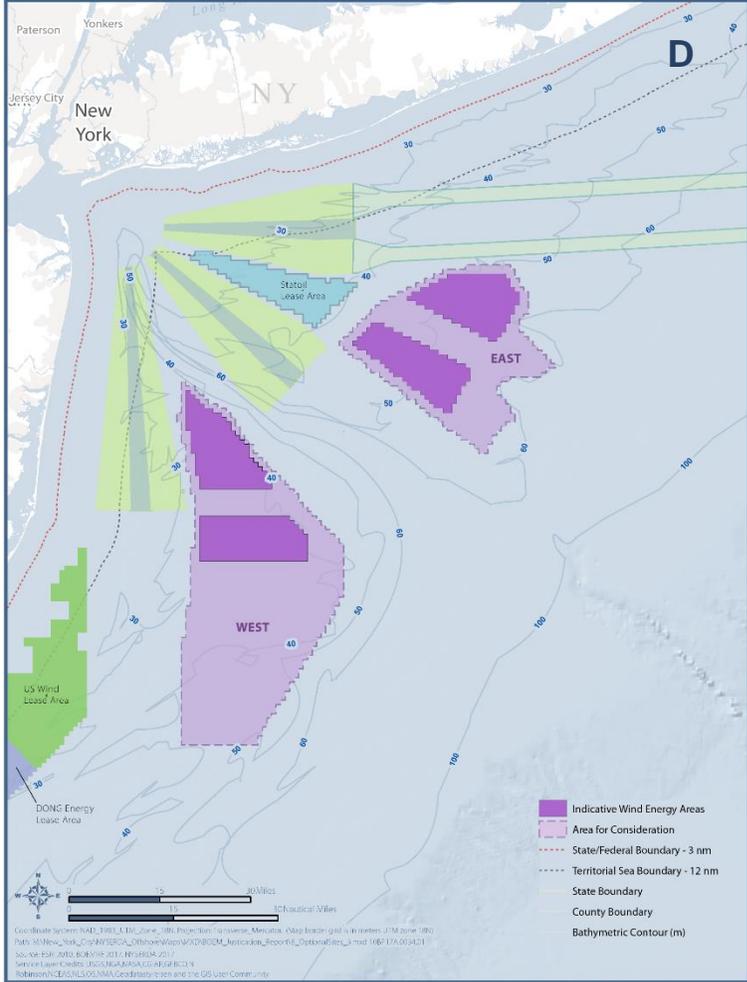
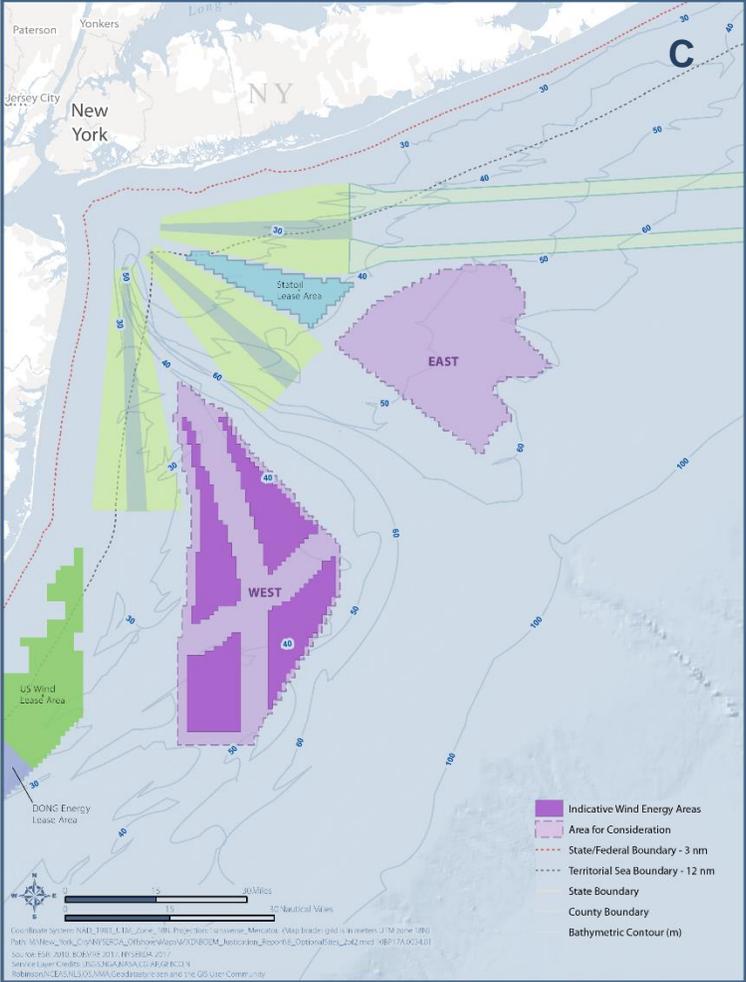
- Commercial Fishing
- Cost
- Cables and Pipelines
- Environment and Wildlife
- Grid Interconnection
- Visibility

Indicative Areas

Space is illustrated with the requested new WEAs and how they could be located within the Area for Consideration. The WEAs depicted may be shifted, reshaped or both.



Indicative Areas



Next Steps and Public Input Opportunities



Below are examples of public input opportunities for offshore wind projects in New York State.

New York State

Examples of opportunities for public input as part of the state permitting process:



NYSERDA

- Master Plan Open Houses



Department of Public Service

- Certificate of Environmental Compatibility and Public Need under Article VII for transmission facilities
- Procurement filings



Department of State

- Federal Consistency Certification under the Coastal Zone Management Program



Office of General Services

- State Submerged Lands Easement under the NY Public Lands Law



Other potential engagement opportunities may be available for specific offshore wind projects

Federal Agency

BUREAU OF OCEAN ENERGY MANAGEMENT (BOEM)



Wind Energy Area Identification Process



Environmental Analysis



Leasing



Site Assessment



Construction and Operations

2,400 MW BY 2030

Project Construction and Development