

# Regional Ocean Planning: Crossing Boundaries to Make Better Ocean Decisions

Renewable Natural Resources Foundation  
December 6, 2018

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North Regional Director  
NOAA Office for Coastal Management



## I. Merits

Rationale for Ocean Planning

Why Does it Make Sense in the Northeast?

## II. Methods

Planning Process To Fit Our Culture

## III. Outcome

Ocean Planning Now Informs Real Decisions

## IV. Political Windows of Opportunity

# Ecosystem Services Needed from the Ocean



People benefit from ocean resources in many ways, including jobs, food, energy, safety and security, recreational and wildlife viewing opportunities, transportation, and cultural and spiritual enjoyment.



Outer Continental Shelf Lands Act

Ocean and Coastal Mapping

Clean Water Act

National Historic

Hydrographic Ser

National Marine

Sanctuaries Act (NMSA)

Coast & Geodetic  
Survey Act of  
1947

(NDRF) and Ready Reserve  
Fleet (RRF)

E.O. 13158 - Chesapeake Bay  
Protection and Restoration

E.O. 13158 - Marine Protected Areas (MPAs)

Submerged  
Lands Act

Clean Air 1990 -  
Act (CAA) on of  
Wetlands

Coastal Barrier Resources Act

Rivers and Harbors Act of 1

waterways  
Safety Act

Natural C

Comprehensive Environ

Coastal Zone  
Management Act  
(CZMA)

ity Act

ly Inde

National Invasive Species Act

llution Act of 1990 (OPA90)

National M

Fisnery Conservation Zones

National Environmental Policy  
Act (NEPA)

Rese  
Act  
Marine Plastic Pollution Research and  
Control Act (MPPRCA)

Demonstration (RD&D) Ocean Act

Federal Power Act (FPA)

National weather Service (NWS) Organic Act

1899

Marine Mammal  
Protection Act (MMPA)

5

(CRCA)

Marine  
Security Act

erged

Ocean Thermal Energy  
Conversion Act (OTECA)

Ocean Exploration and NOAA

Research Program Act of 2001

Lands Act

Research, and

Federal Ocean Acidification

National Invasive Species Act

Sanctuaries Act

Integrated Coastal and Ocean Observing System Act

E.O. 13178 - Northwestern  
Islands Coral

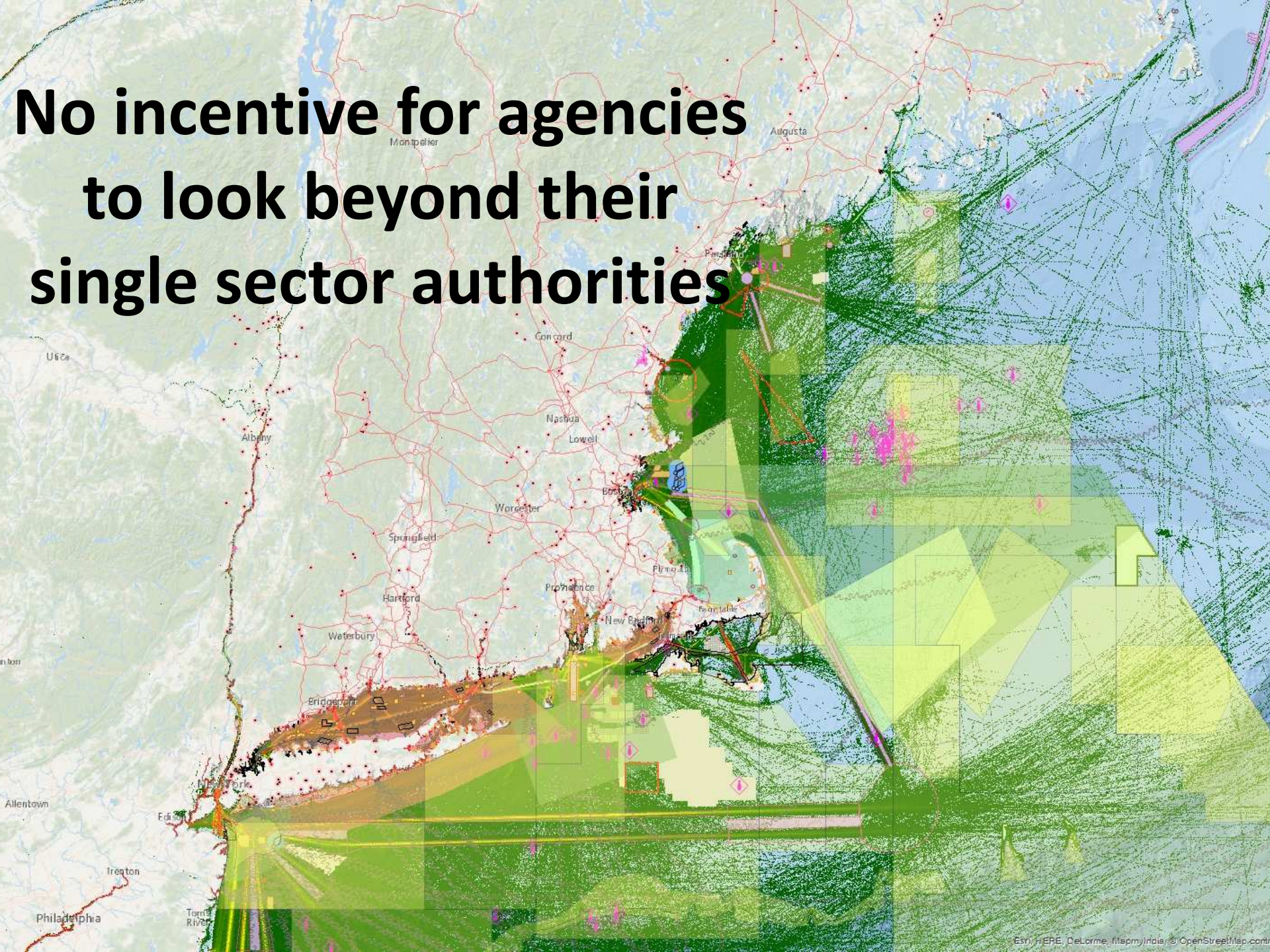
Magnuson Act of 1950

ational Aquaculture Act

Reef Ecosystem Reserve



**No incentive for agencies  
to look beyond their  
single sector authorities**





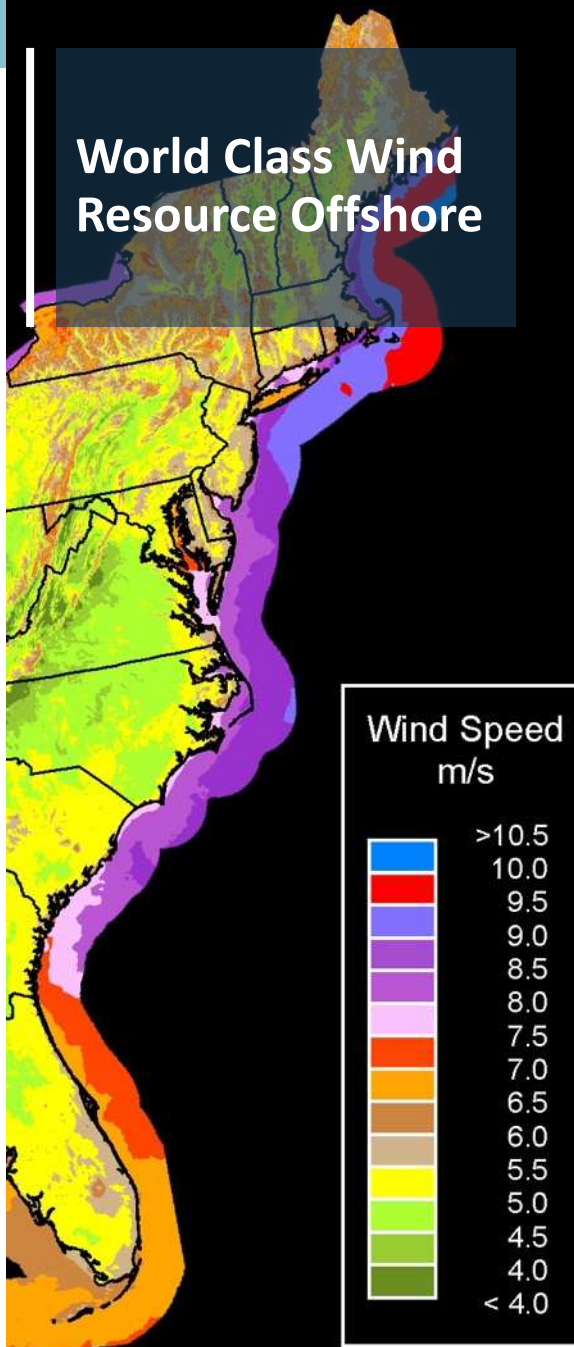
# Recipe for Successful Regional Ocean Planning in the Northeast

- ✓ Pre-existing relationships
- ✓ Precedent at other scales
- ✓ Legal impetus
- ✓ Funding
- ✓ Real drivers

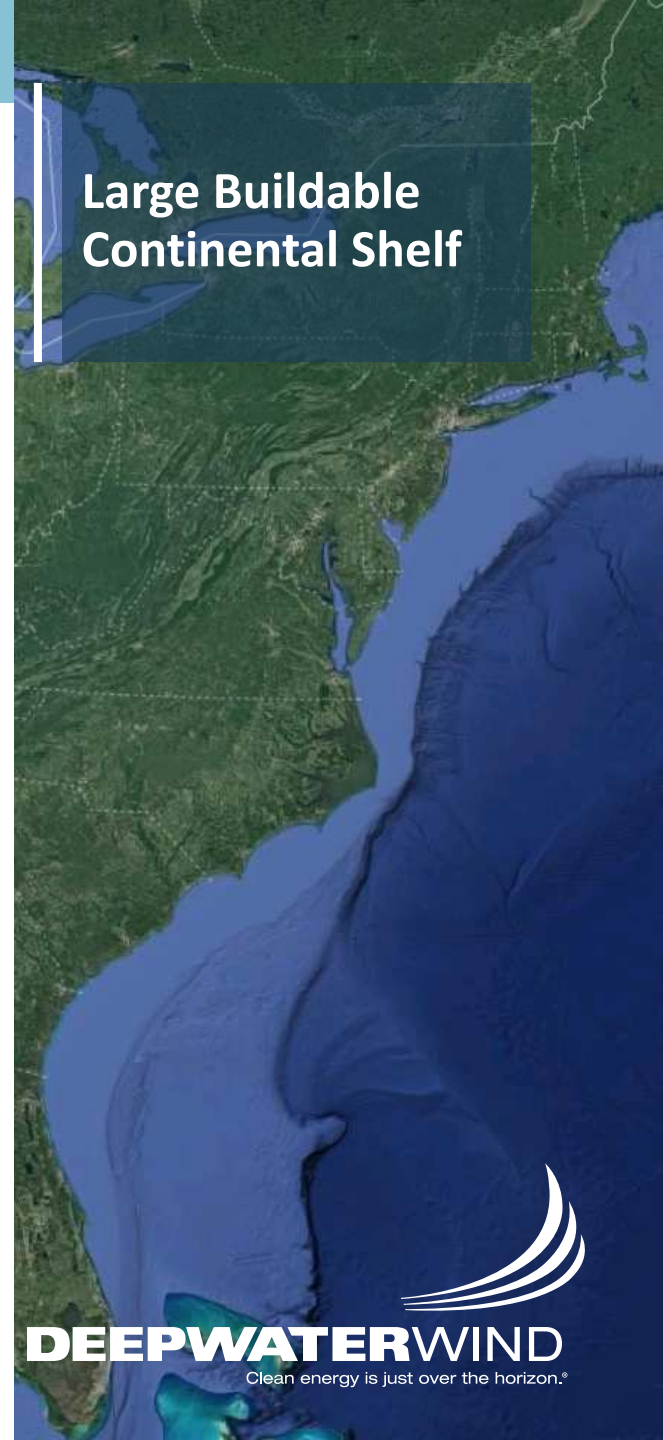
**Huge Coastal  
Electricity Demand**



**World Class Wind  
Resource Offshore**



**Large Buildable  
Continental Shelf**



# Existing US Offshore Wind Power Market



## State Offshore Wind Targets

Massachusetts\*

1600 MW

Rhode Island\*

400 MW

Connecticut\*

200 MW

New York

2400 MW

New Jersey

3500 MW

Maryland

360 MW

**TOTAL:**

**8000 MW**

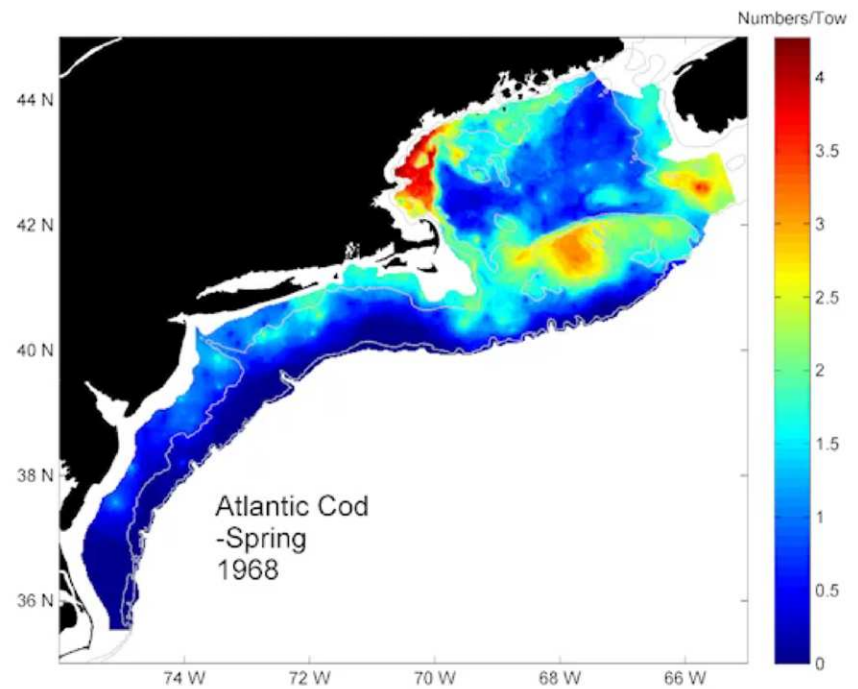
Massachusetts has awarded 800MW  
Rhode Island has awarded 400MW  
Connecticut has awarded 200MW



**DEEPWATERWIND**  
Clean energy is just over the horizon.®









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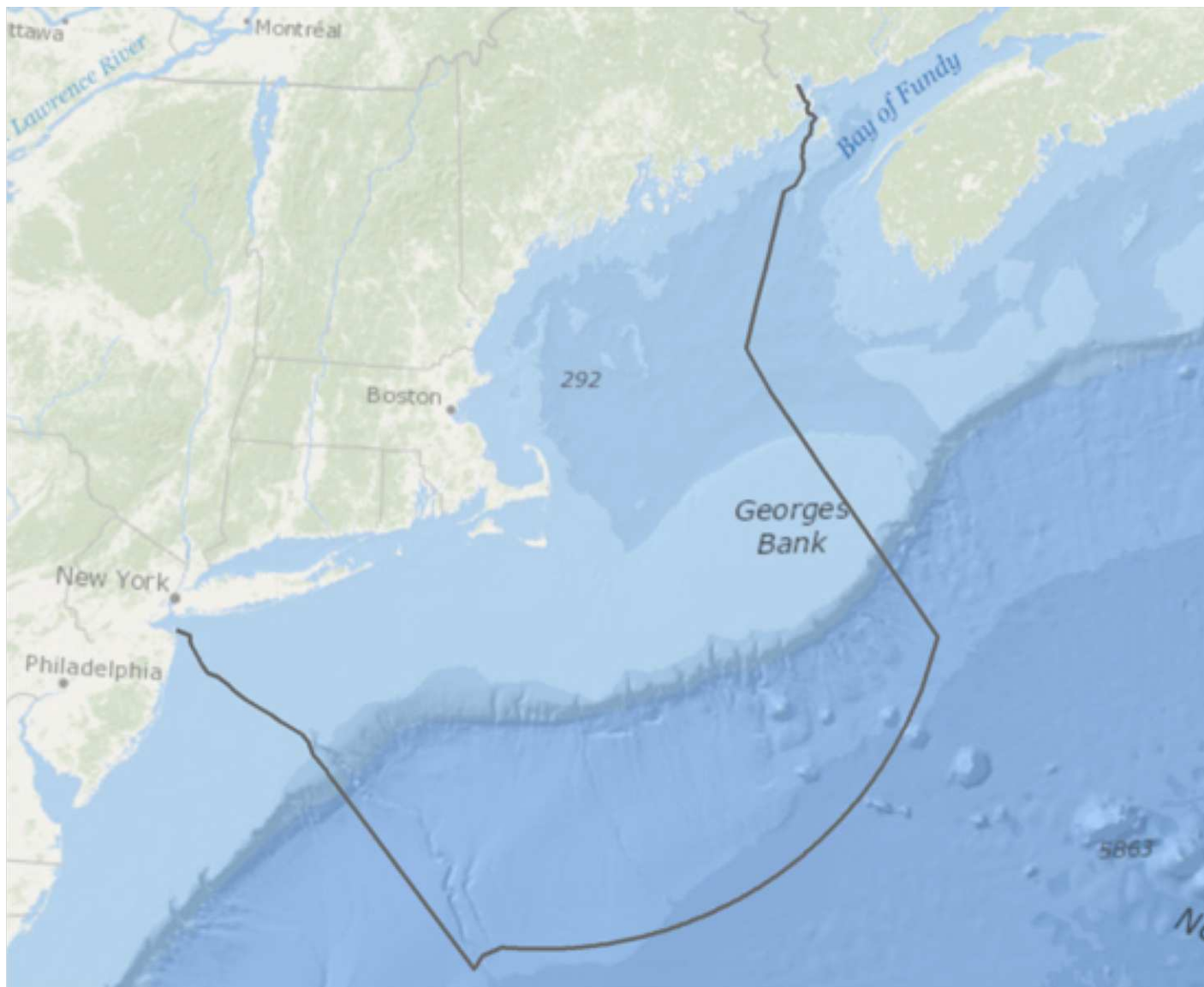
Ocean Planning Now Informs Real Decisions

## IV. Political Windows of Opportunity

# NE Regional Ocean Planning Boundary

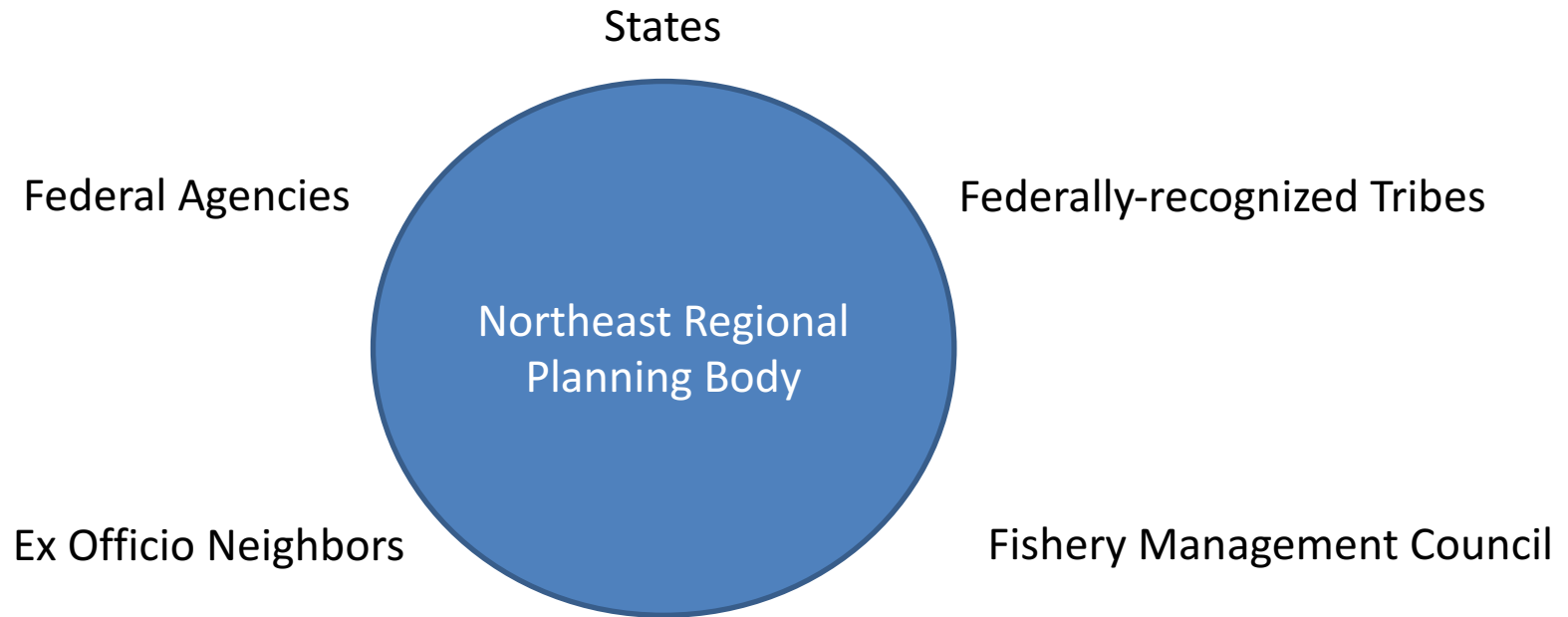


NORTHEAST OCEANPLAN





# National Ocean Policy Dictated Composition



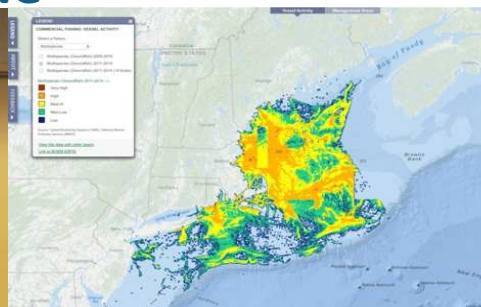
# Northeast Ocean Plan Goals



## HEALTHY OCEAN AND COASTAL ECOSYSTEMS



## EFFECTIVE DECISION MAKING



## COMPATIBILITY AMONG OCEAN USES







# OCEAN RESOURCES & ACTIVITIES



MARINE LIFE &  
HABITAT



NATIONAL  
SECURITY



AQUACULTURE



RESTORATION



COMMERCIAL &  
RECREATIONAL  
FISHING



OFFSHORE SAND  
RESOURCES



CULTURAL  
RESOURCES



RECREATION



MARINE  
TRANSPORTATION



ENERGY &  
INFRASTRUCTURE



# OUTREACH + ENGAGEMENT

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**Regional Stakeholder forums + workshops**

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**State public meetings + advisory groups**

---

**Subject specific projects + targeted outreach + work groups**

---

**Website + social media + eblasts**

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**Existing meetings + events**



# What Does the Northeast Ocean Plan Do?



- Makes accessible an unprecedented amount of integrated ocean information
- Commits federal agencies to use information in their decisions
- Helps identify conflicts, compatibilities, and potentially affected stakeholders
- Encourages government to work better together and engage the public
- Identifies future priority science and research needs





# NORTHEAST OCEAN DATA PORTAL

## NORTHEAST OCEAN DATA

Maps and data for ocean planning in the northeastern United States

[HOME](#)

[MAPS](#) ▾

[DATA](#) ▾

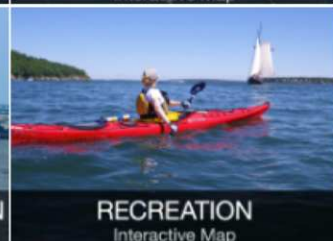
[ABOUT](#) ▾



### DATA EXPLORER

Interact with any combination of data in the Data Explorer — Human Activities, Marine Life, and Environment

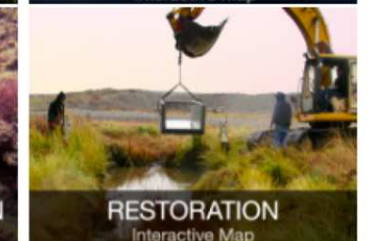
#### Human Activities



#### Marine Life

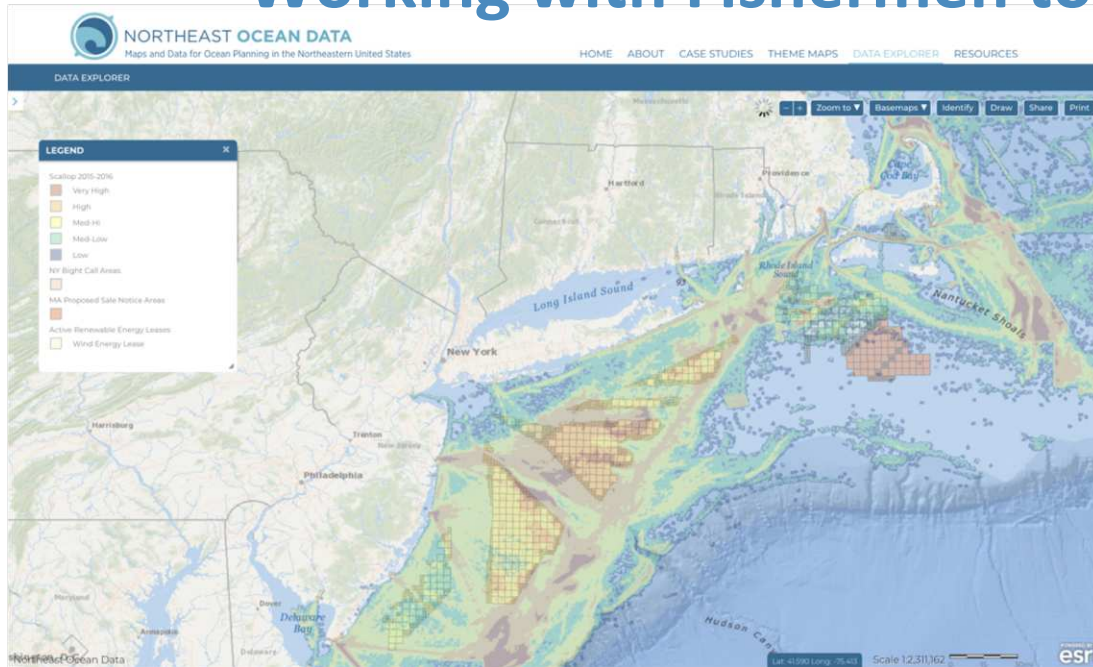


#### Environment



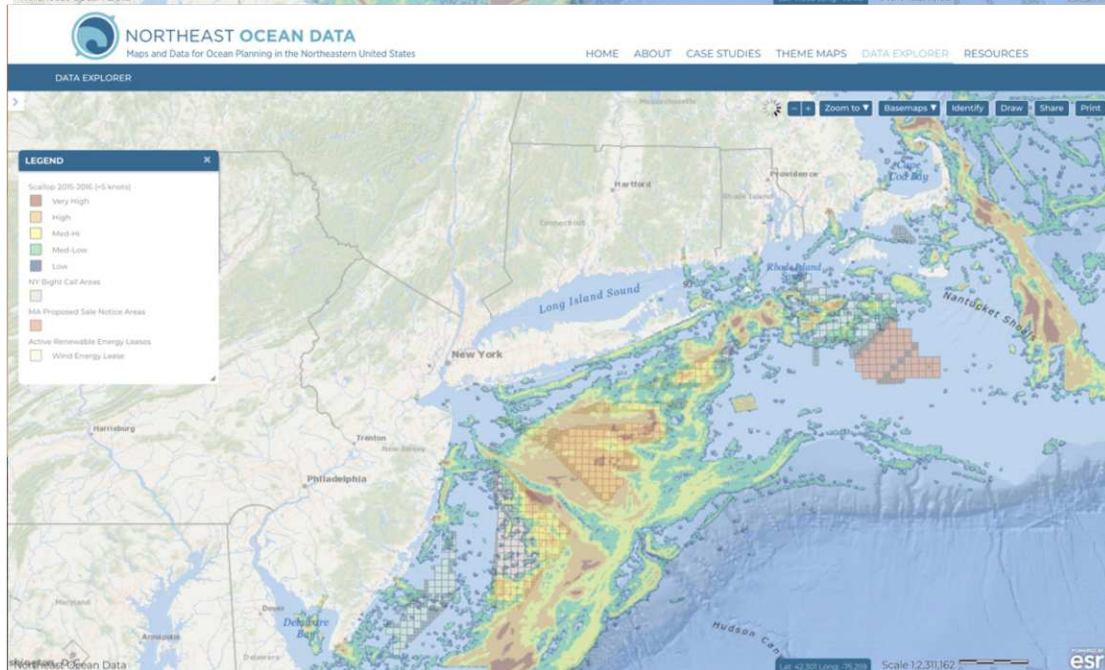
NortheastOceanData.org

# Working with Fishermen to Improve Data



Scallop fishing vessel activity  
2015-2016

*Source: NOAA Vessel  
Monitoring System (VMS)*



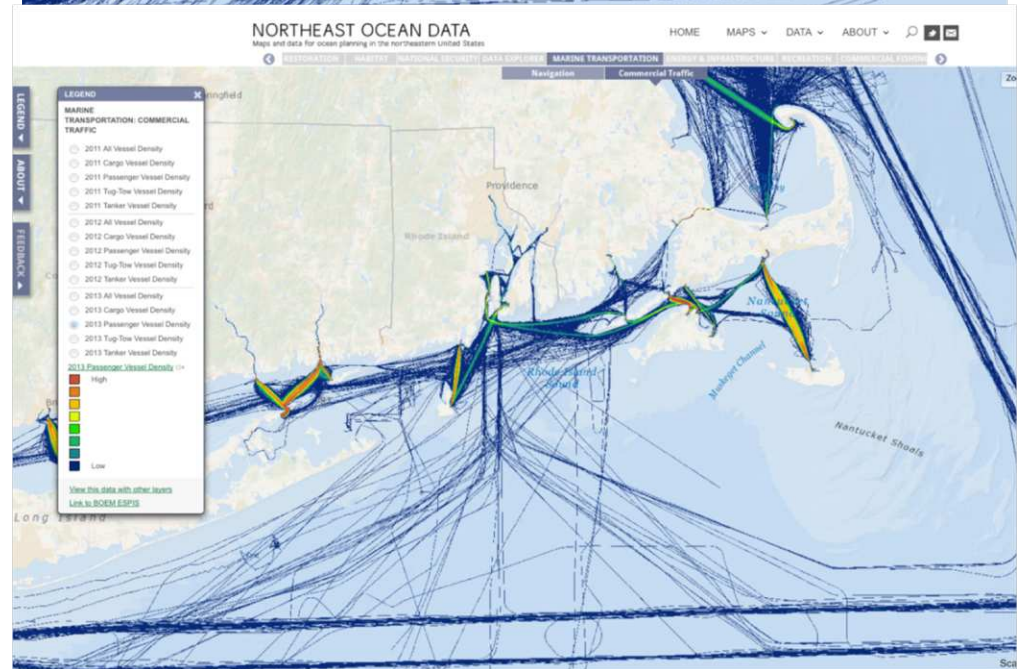
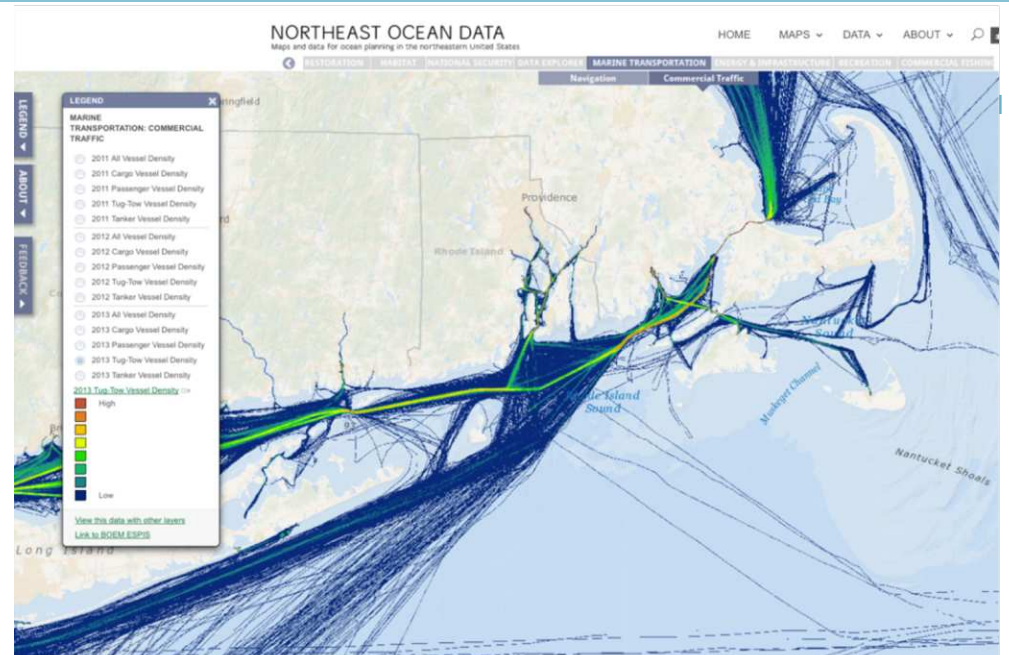
Scallop fishing vessel  
activity at less than 5  
knots (likely fishing speed)  
2015-2016



## Tug and Tow



## Passenger

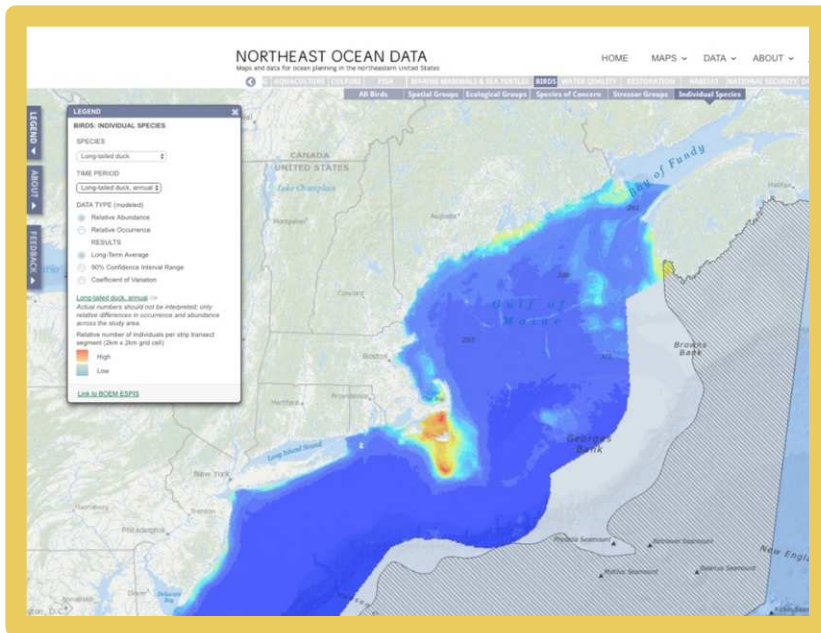






MARINE LIFE &  
HABITAT

## Marine Life & Habitat



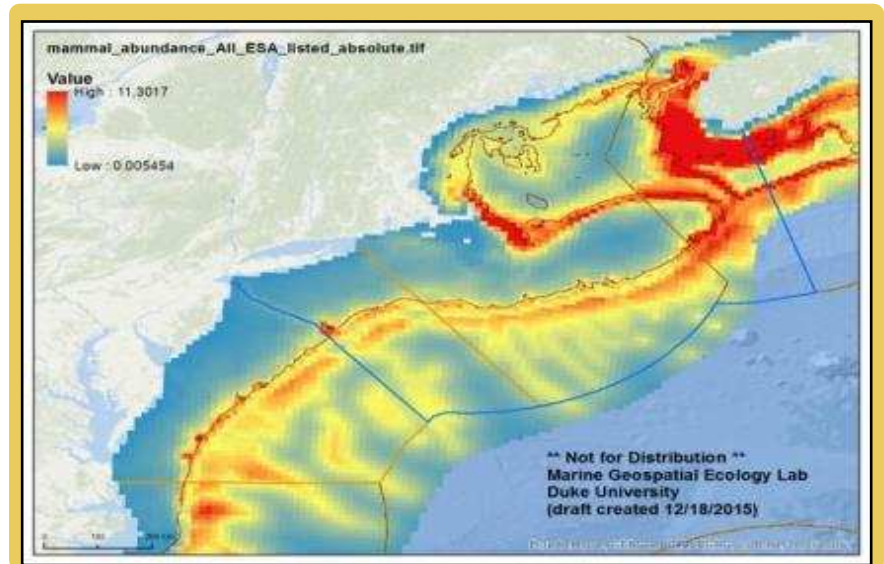
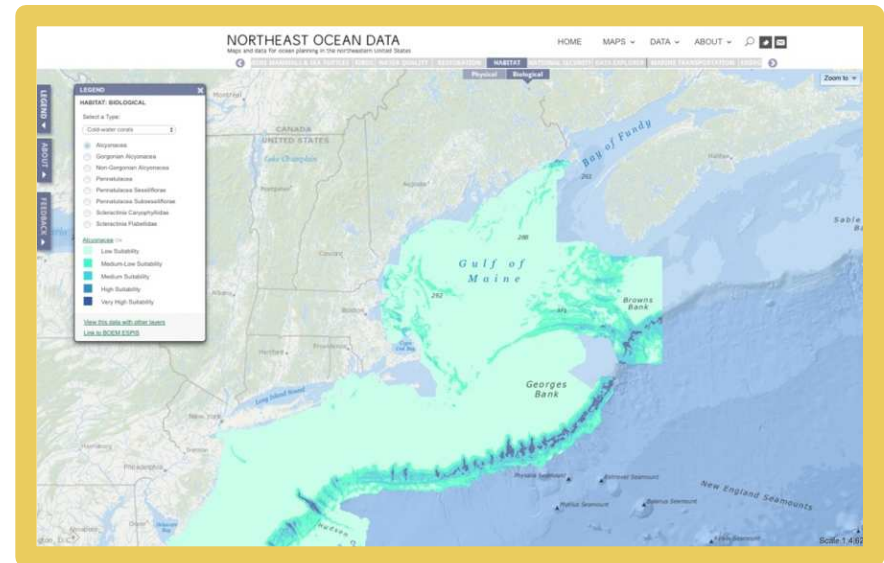
Long-tailed duck predicted annual  
relative abundance

ESA-listed Whales



NORTHEAST OCEANPLAN

## Deep Sea Corals

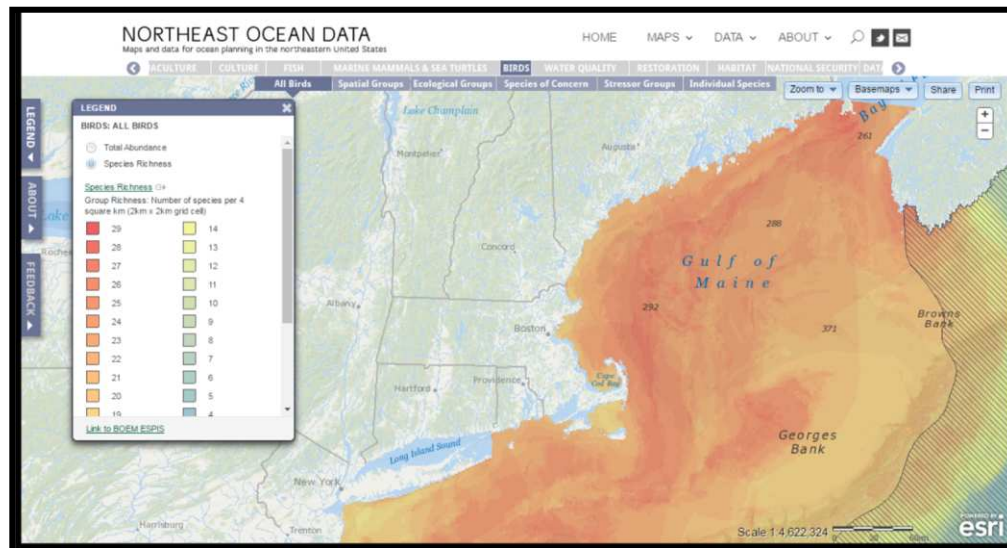




# Marine Life & Habitat

Explored components of ecological function

- High productivity
- High biodiversity
- High species abundance
- Vulnerable marine resources
- Rare marine resources



Richness of all modeled bird species

Example of one existing input dataset (available via the NE Ocean Data Portal) to help characterize areas of high biodiversity

# Using the Plan to Inform Decisions

1. Overview of **importance** of each ocean resource or activity to ocean management
2. **Regulatory and management landscape** of that resource/activity
3. Peer-reviewed **maps and data** available on portal
4. Regulatory and management **actions** identified by RPB agencies
  - ✓ Maintain, update and develop additional data for the Portal
  - ✓ Inform regulatory/environmental review and management decisions
  - ✓ Identify potentially affected stakeholders and resources
  - ✓ Enhance interagency coordination



NORTHEAST OCEANPLAN

Ocean Resources & Activities



MARINE LIFE & HABITAT



CULTURAL RESOURCES



MARINE TRANSPORTATION



NATIONAL SECURITY



COMMERCIAL & RECREATIONAL FISHING



RECREATION



ENERGY & INFRASTRUCTURE



AQUACULTURE



OFFSHORE SAND RESOURCES

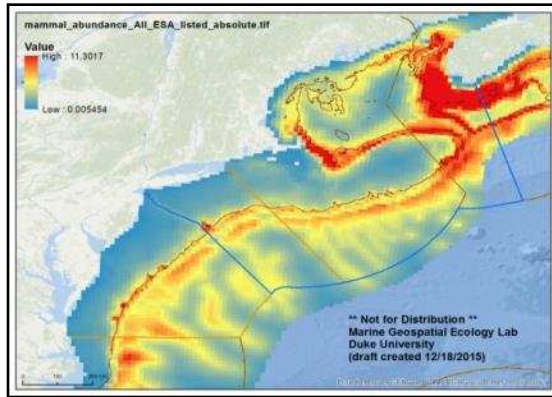


RESTORATION

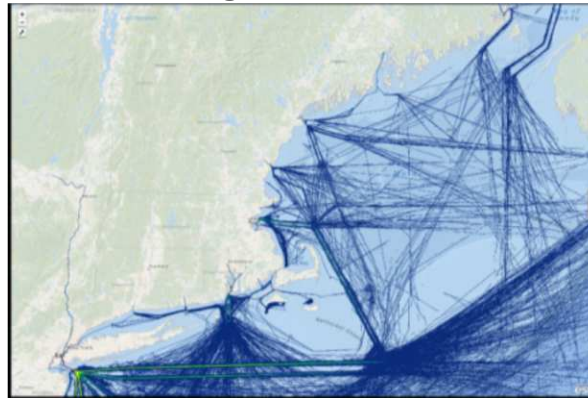


# Consider Regional Context for Energy & Infrastructure

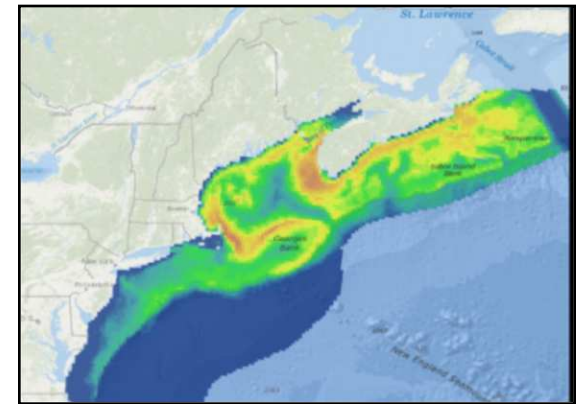
ESA listed whales



Cargo Vessels



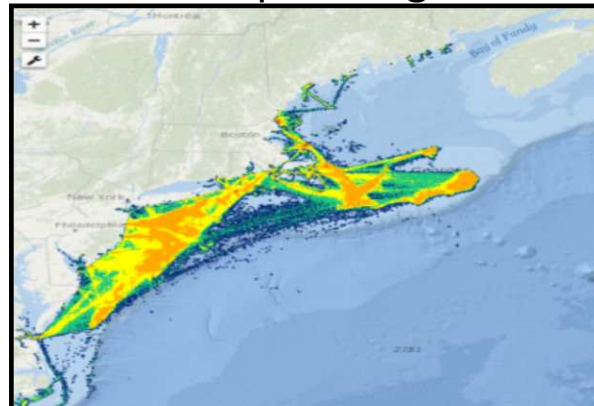
Humpback whales



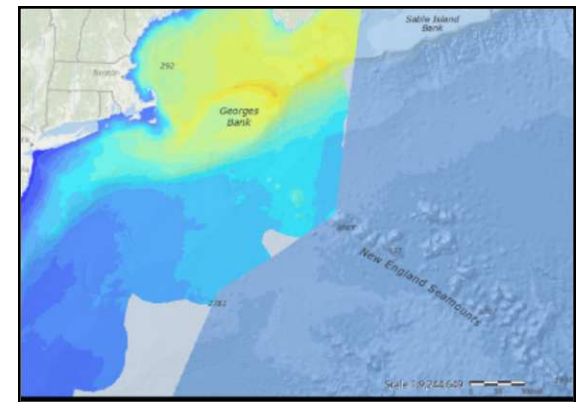
Rec Boating



Scallop Fishing



Shearwaters



# PLAN IMPLEMENTATION

Best practices provide flexible but consistent guidance to promote agency coordination by supporting:

BOEM  
USFWS  
FERC  
Army Corps  
NOAA  
EPA  
USCG  
Navy  
DOT  
USDA  
DOE  
FMCs  
States  
Tribes

- ✓ **Agreement across agencies** to use relevant information from portal, plan, stakeholders, other sources
- ✓ **Early understanding** of proposed project and broader issues
- ✓ **Clear and efficient direction** for the applicant
- ✓ **Informed and engaged** ocean stakeholders
- ✓ **Coordinated** federal, state, tribal review

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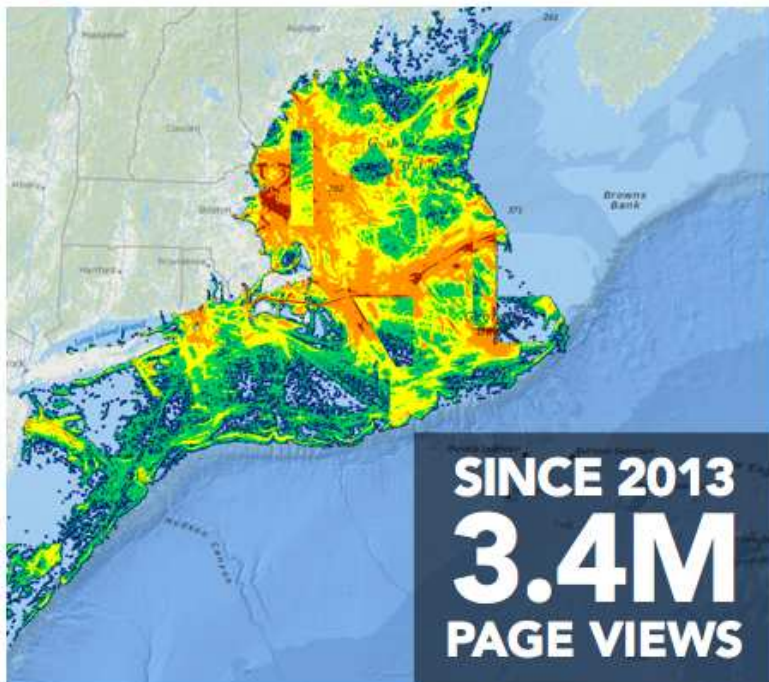


# Northeast Ocean Data Portal - Use Statistics



NORTHEAST OCEAN DATA

www.NortheastOceanData.org

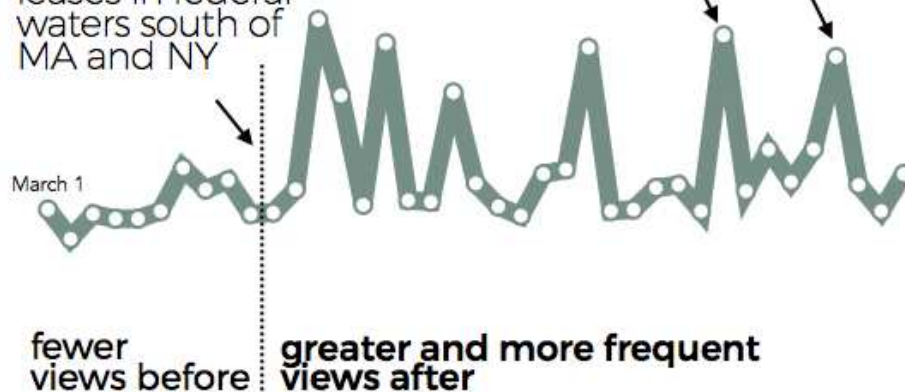


## COMMERCIAL FISHING

[VESSEL MONITORING SYSTEM DATA]

March 10, 2017  
BOEM announces  
3 unsolicited bids  
for offshore wind  
leases in federal  
waters south of  
MA and NY

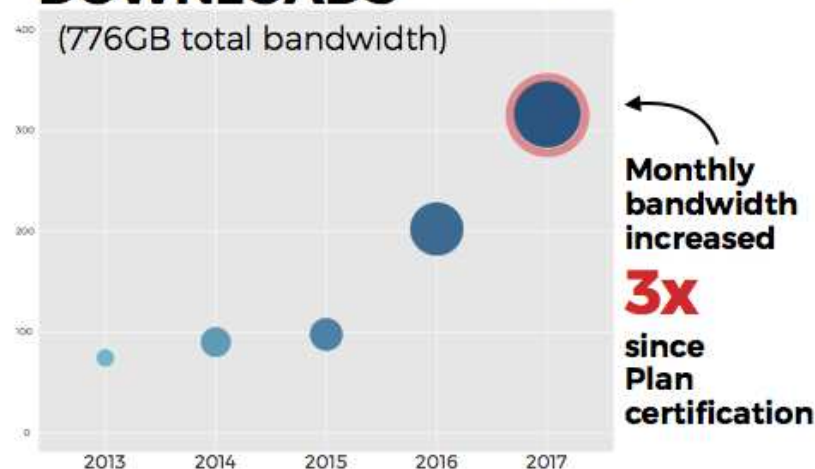
April 14, 18 - 20  
New England Fishery  
Management Council  
meetings



## Visitation



## INCREASING DATA DOWNLOADS





# Northeast Ocean Data Portal - Select Users

## Planning and Management

- NE Fishery Management Council
- USCG waterways management
- USCG Port Access Route Study for Nantucket Sound
- US Navy identify areas for testing underwater autonomous vessels
- NOAA charts
- CT Blue Plan for Long Island Sound
- NY Geographic Information Gateway
- NYSERDA Offshore Wind Master Plan
- Boston Harbor Barrier Feasibility Study
- MA oil and hazardous materials flow study
- EPA Burial At Sea
- **Tribal identification of culturally sensitive areas**

## Regulatory and Siting

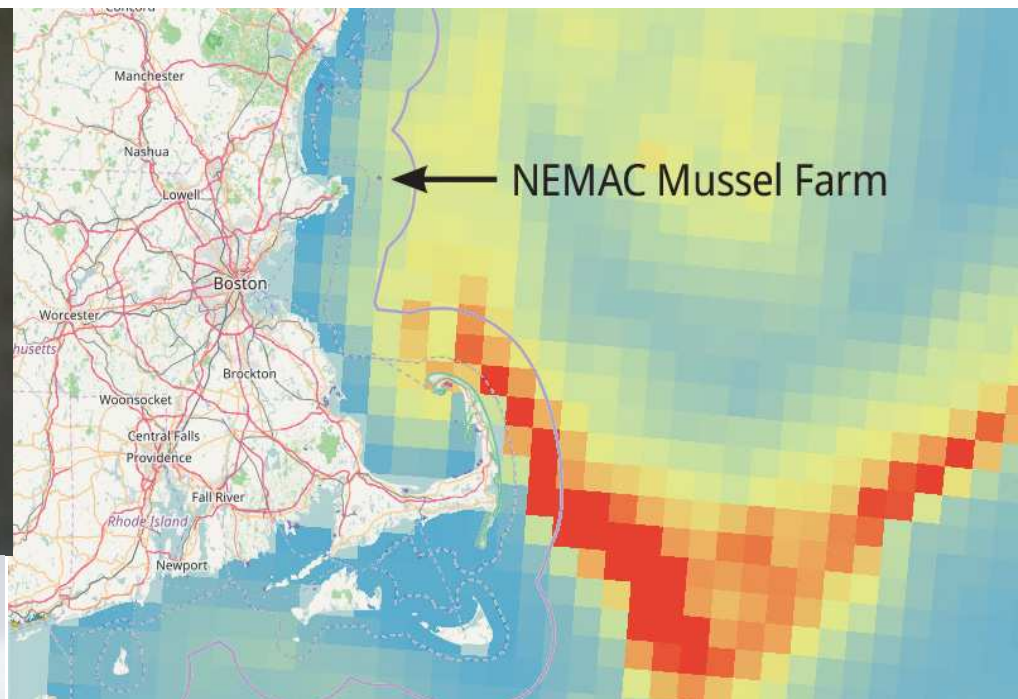
- **Offshore wind**
- **NEMAC Mussel Farm**
- **NERACOOS wave buoy**
- Manna Fish Farm Alternative Siting Analysis
- Proposed Atlantic Link Transmission Cable through the Gulf of Maine
- Informs State coastal effects test and federal consistency under CZMA
- Consultants supporting permitting and leasing, and developing custom apps for regulated clients
- Federal Agency Permitting and NEPA Review
  - USACE Regulatory Division permitting
  - BOEM Guidelines for Renewable Energy Activities
  - EPA to review other agency EA and EIS and comment on other agency actions
  - NOAA Office of Habitat Protection and Protected Resources Division consultations

## Education and Research

- UMass Dartmouth; UMass Boston
- UMaine
- Brown
- Boston University
- URI
- **Island Institute**
- Pew
- Old Dominion University



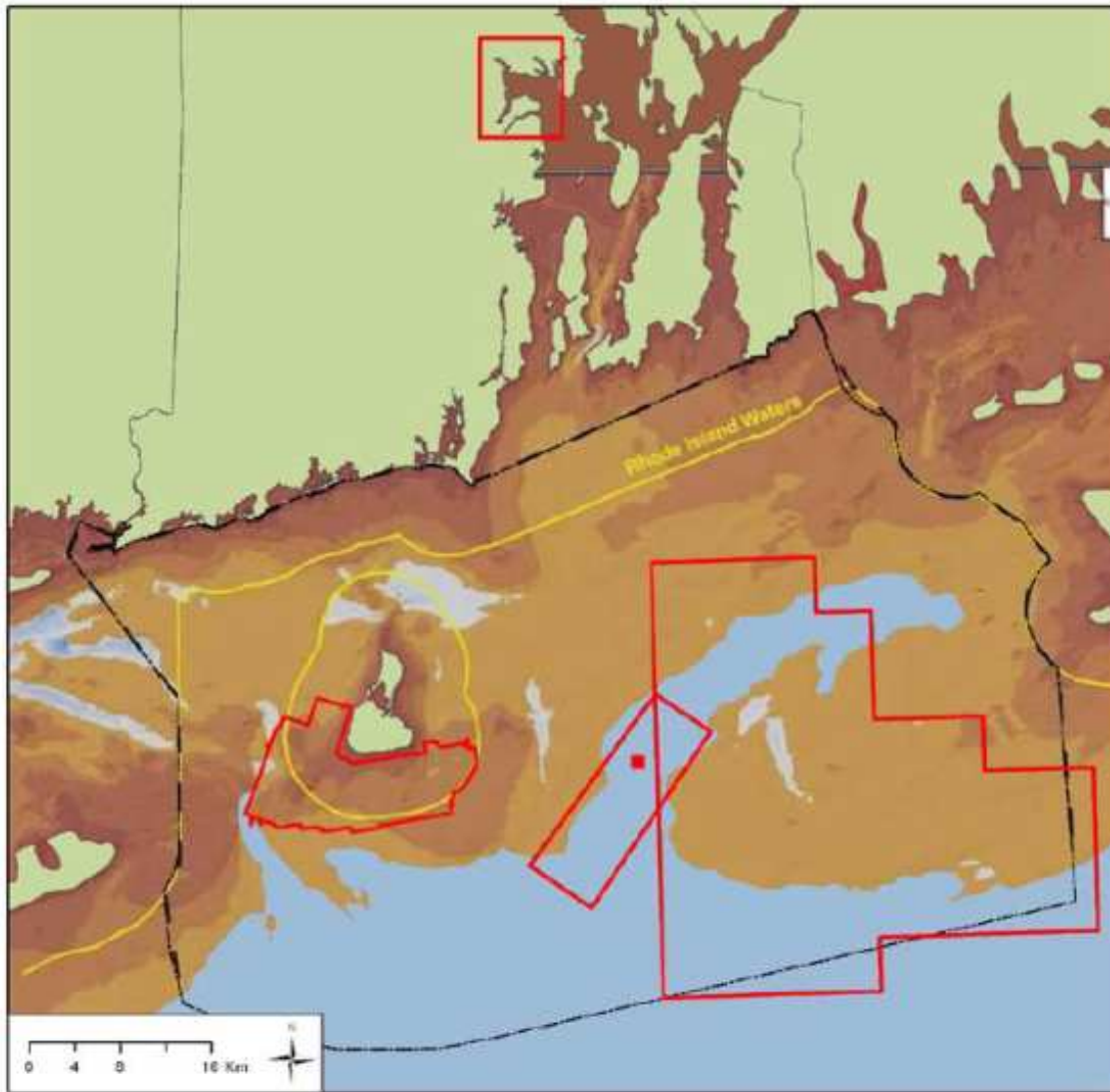
## First Shellfish Aquaculture in Atlantic Federal Waters



Northeast Ocean Data map showing the farm is not located in an area of abundant ESA-listed whales (red)



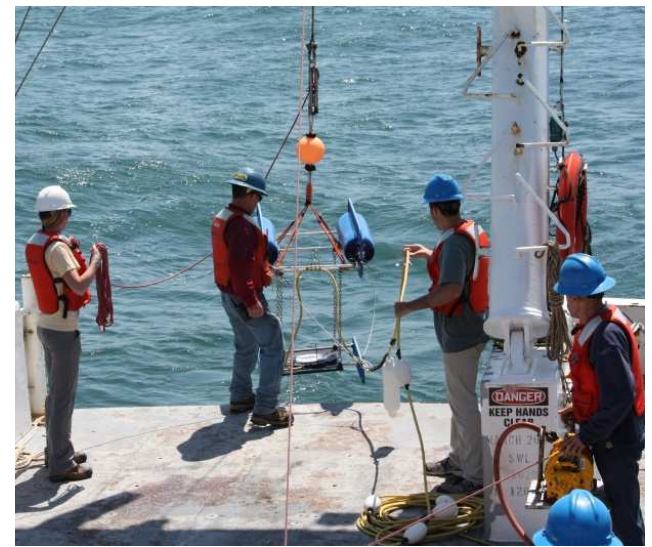
# Identifying Tribal Culturally Sensitive Areas



## Map Key

- Study Areas
- Paleoshoreline (11,000 yBP)
- RI OSAMP Study Area

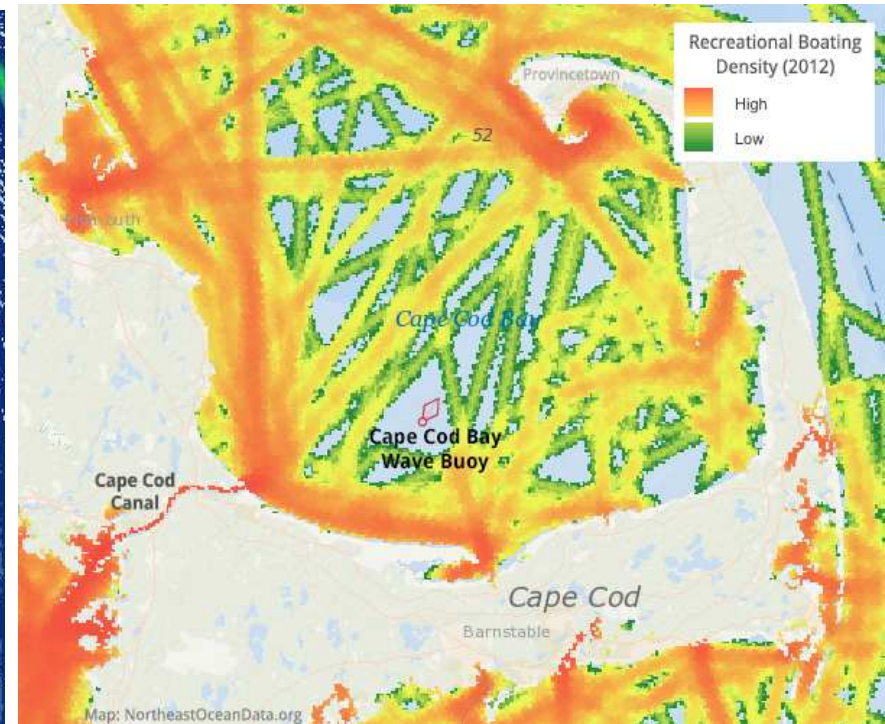
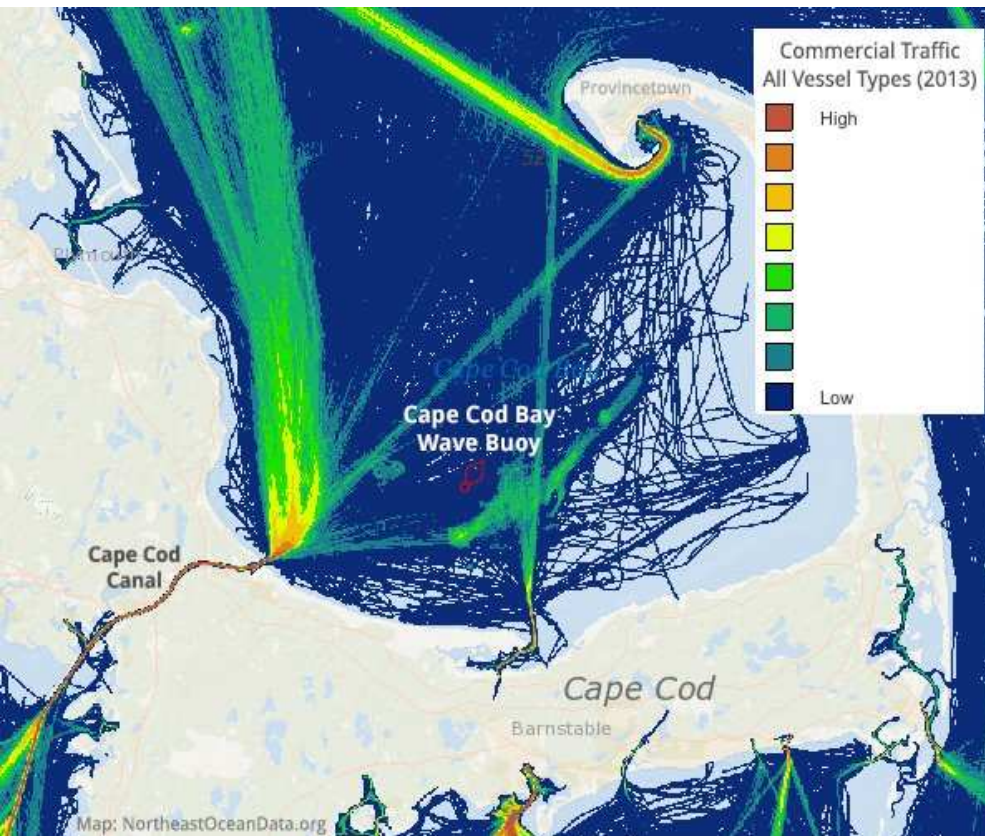
Paleoshoreline location at 11,000 calendar yBP.  
Sea level approximately 40 m below present.  
Sources:  
Sea level data from Peltier and Fairbanks, 2006.  
Elevation data from P. Jordan, RI DEM.  
Maps created by B. A. Oakely, URI Geoscience Dept.







## Aids to Navigation: Siting a Wave-Monitoring Buoy in Cape Cod Bay

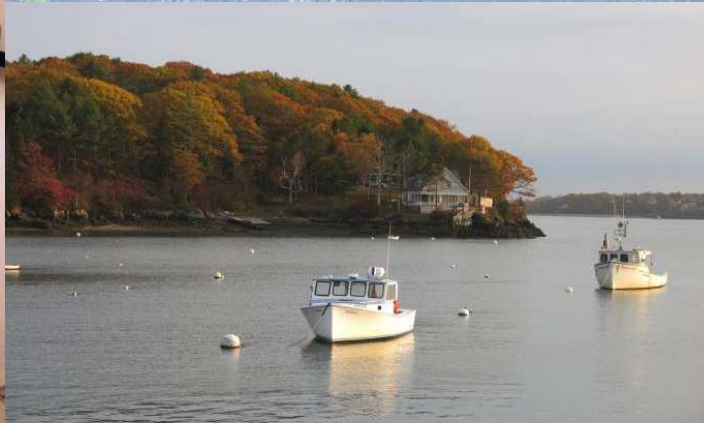
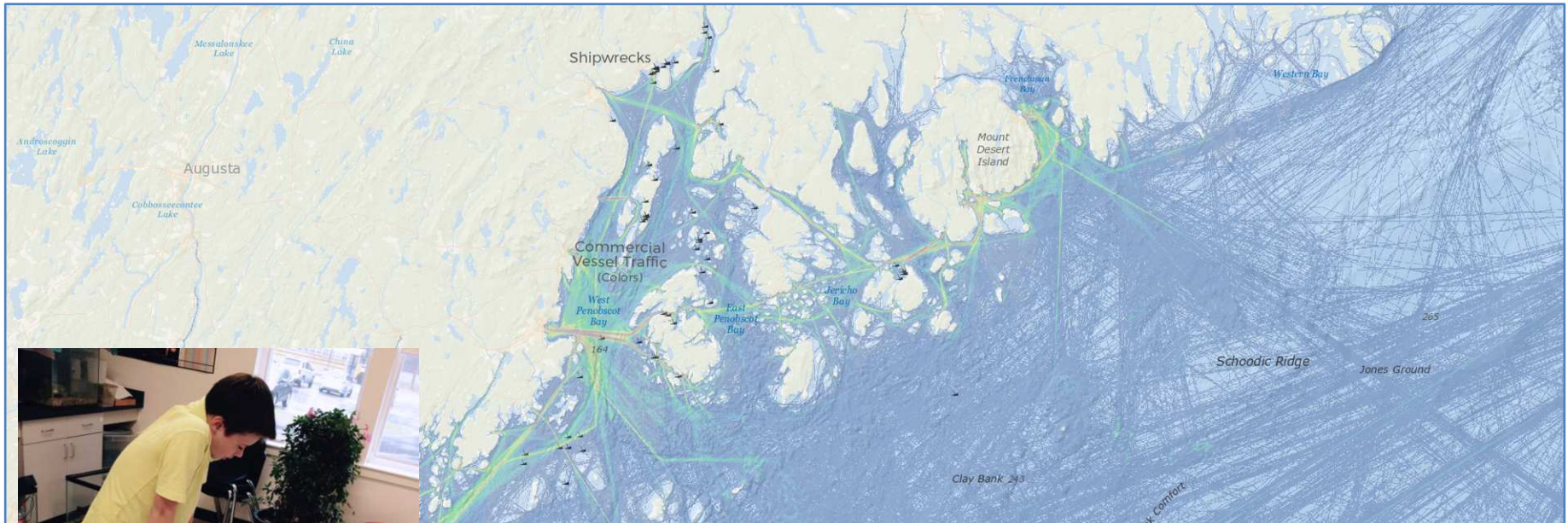


NERACOOS and partners used maps of commercial vessel traffic to identify a low-traffic area for siting the new wave-monitoring buoy. Also used recreational boating density.





# Inspiring K-12 Students to Investigate the Ocean Ecosystem and Ocean Uses



Rebecca Clark Uchenna

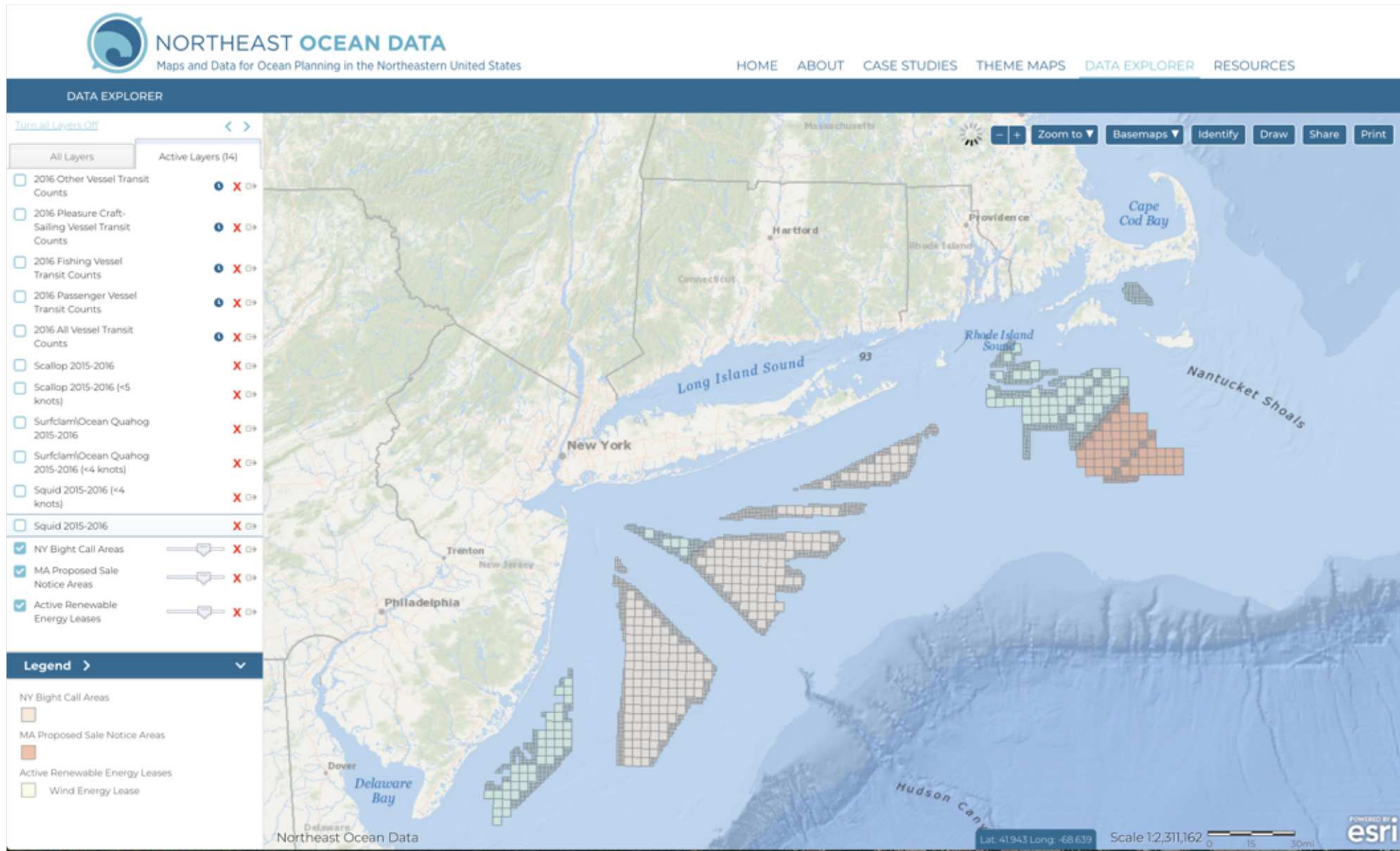
Rebecca Clark Uchenna



# Informing Offshore Wind Development

Active wind energy areas MA to NJ

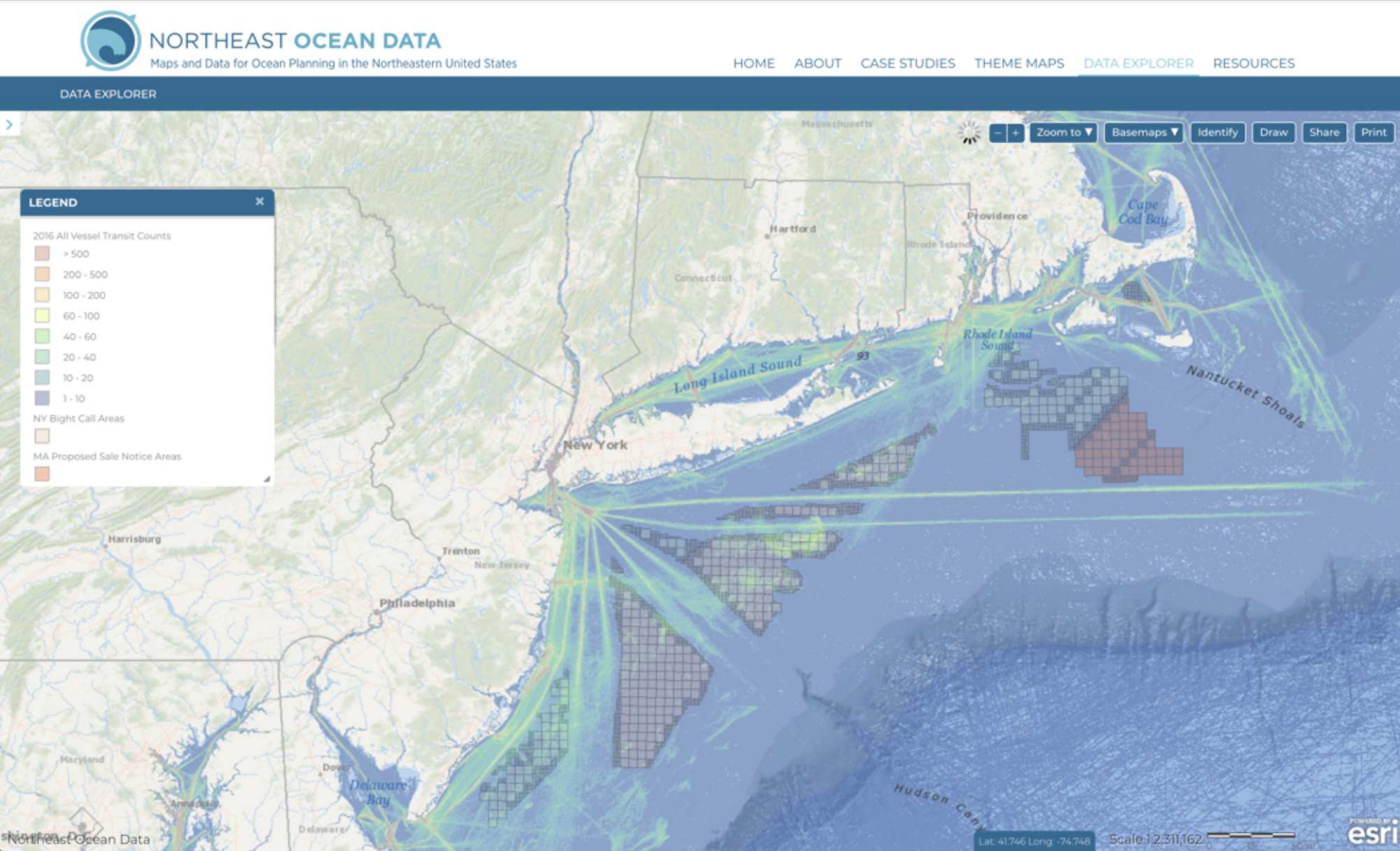
(note: these areas are at very different stages)



# Informing Offshore Wind Development

All vessel activity 2016

Source: USCG Automatic Identification System (AIS)

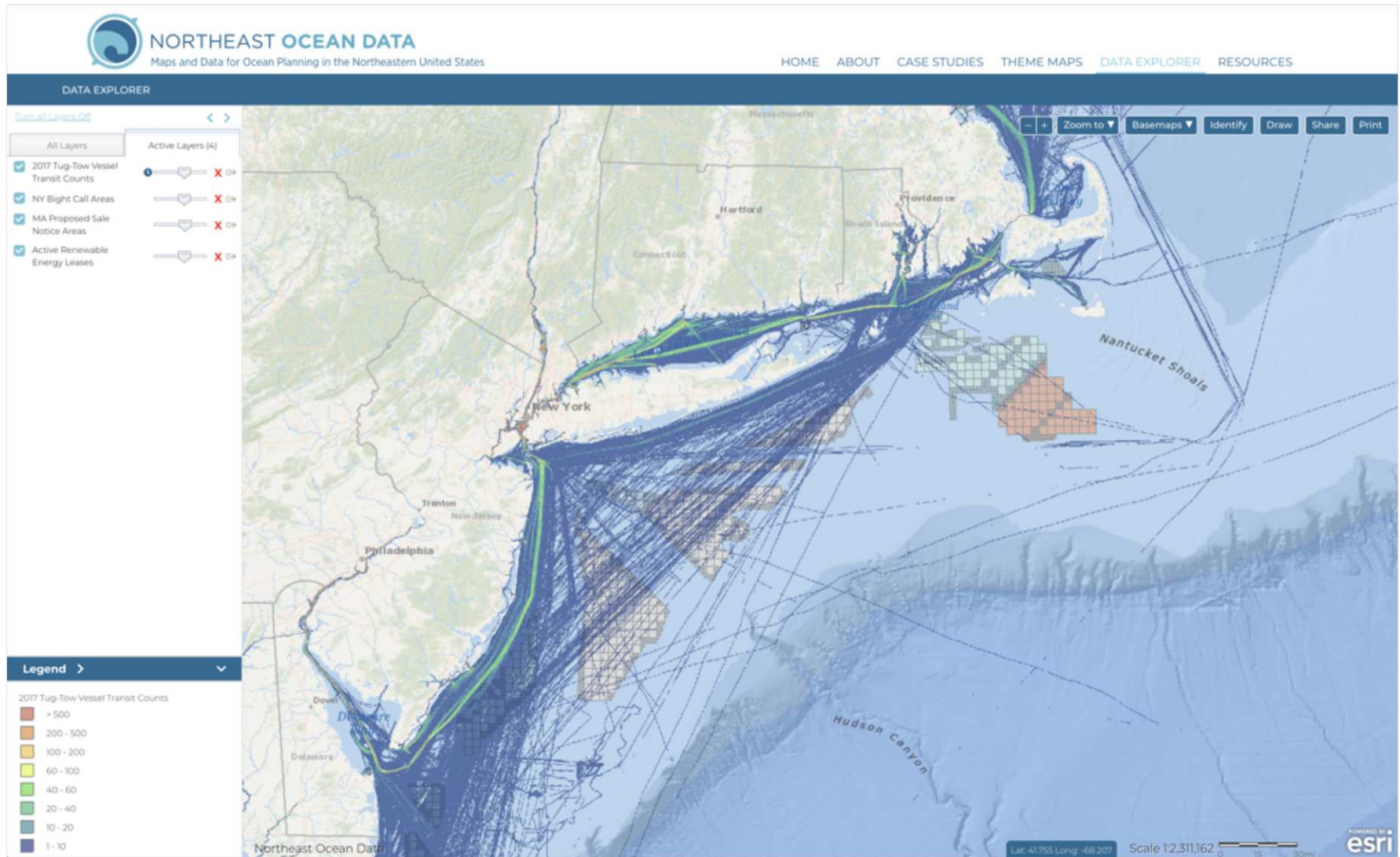




# Informing Offshore Wind Development

Tug tow vessel activity 2016

Source: USCG Automatic Identification System (AIS)

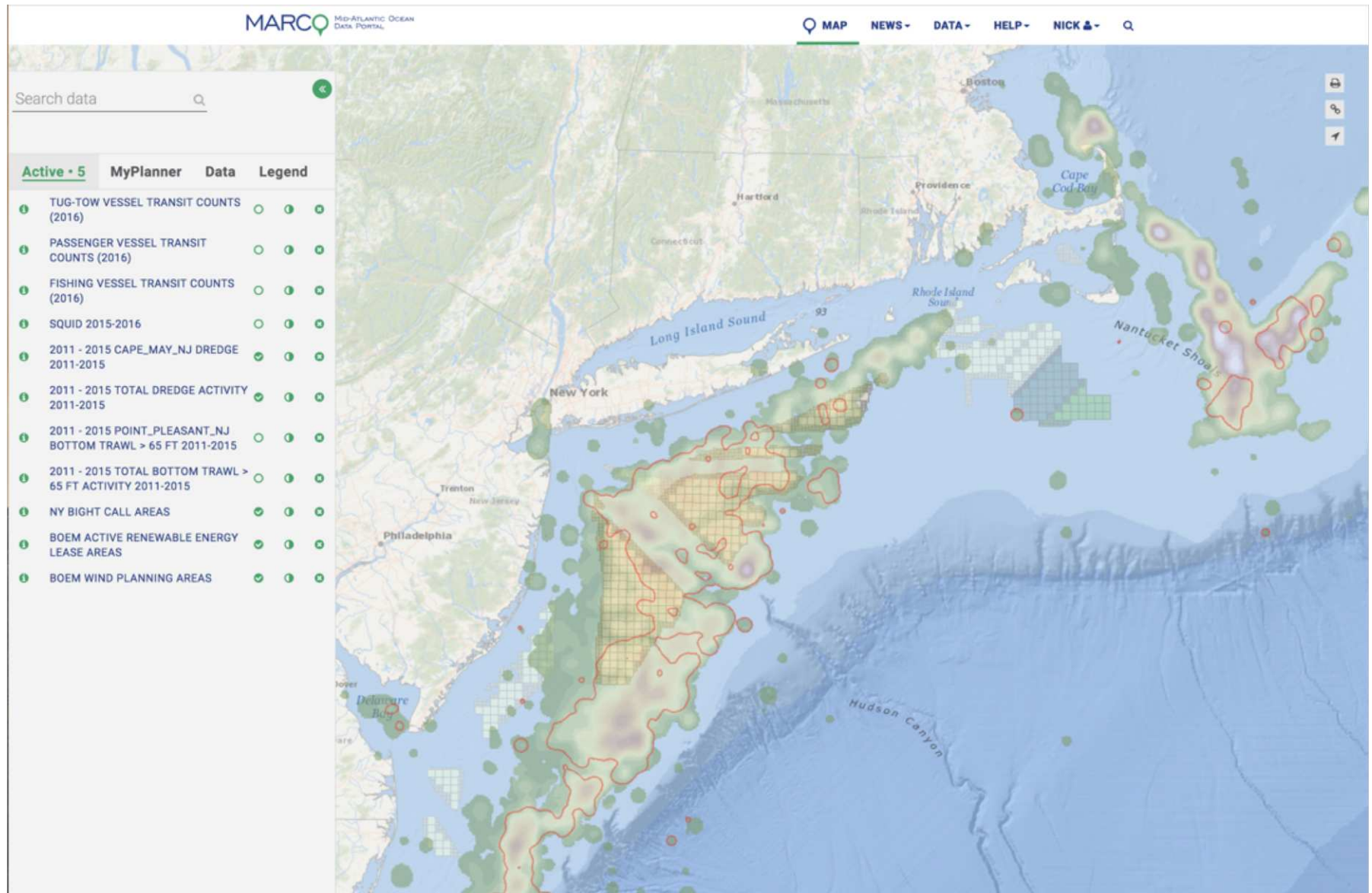




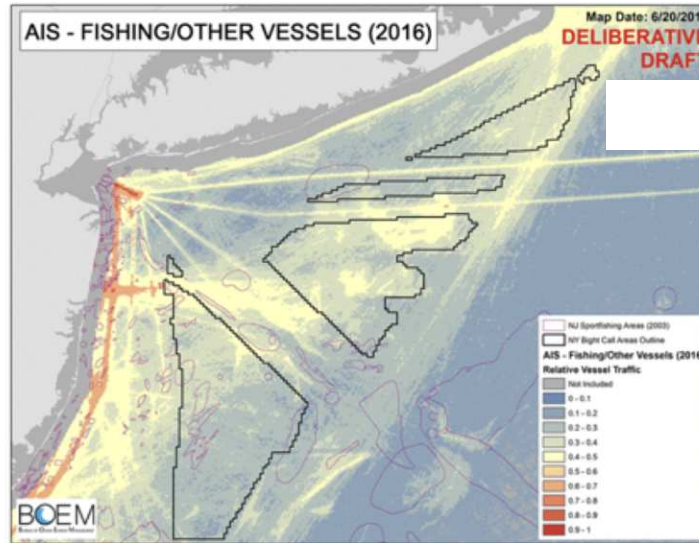
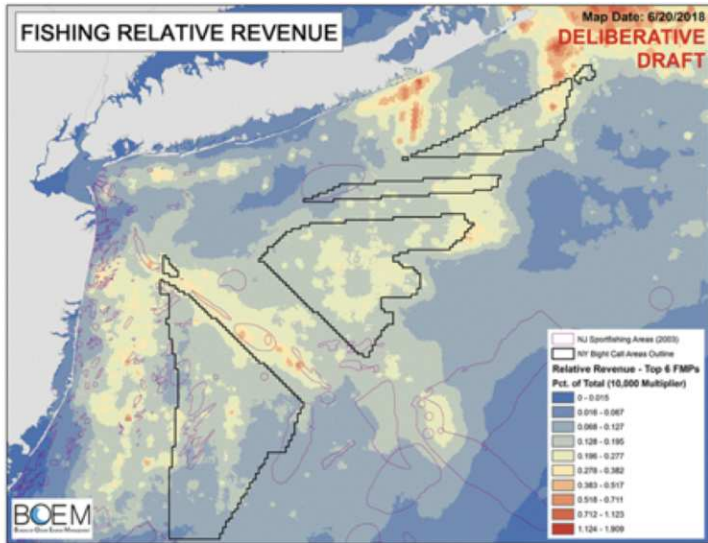
# Informing Offshore Wind Development

Cape May, NJ dredge fleet 2011-2015

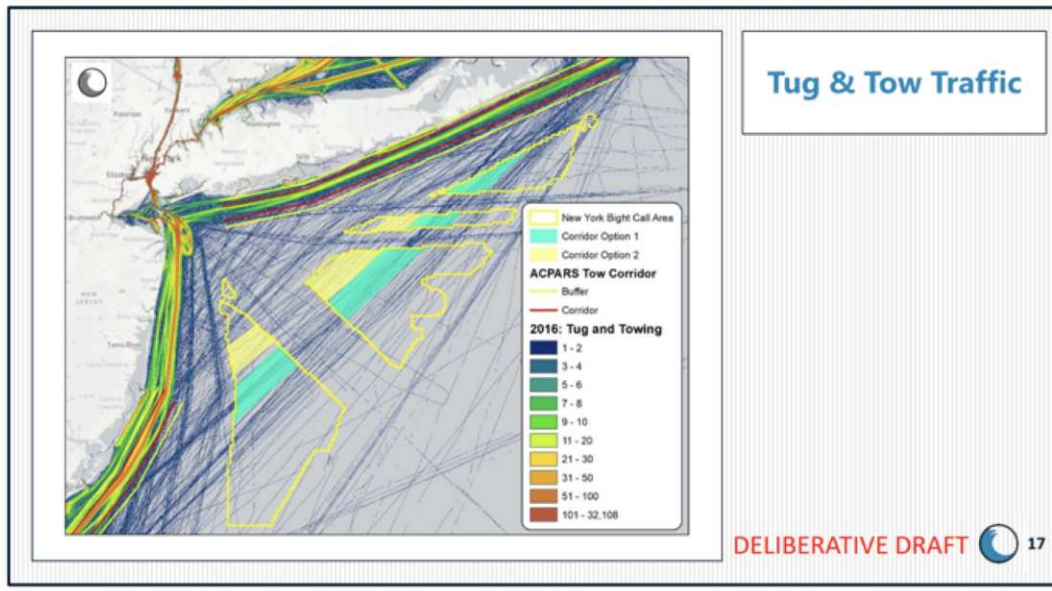
Source: NOAA Vessel Trip Report and Dealer Reports



# Informing Offshore Wind Development



Recent BOEM analyses using Portal data to inform the refinement of potential wind energy areas





# Informing Offshore Wind Development

Squid fishing vessel activity at less than 4 knots (likely fishing speed) 2015-2016

Source: NOAA Vessel Monitoring System (VMS)

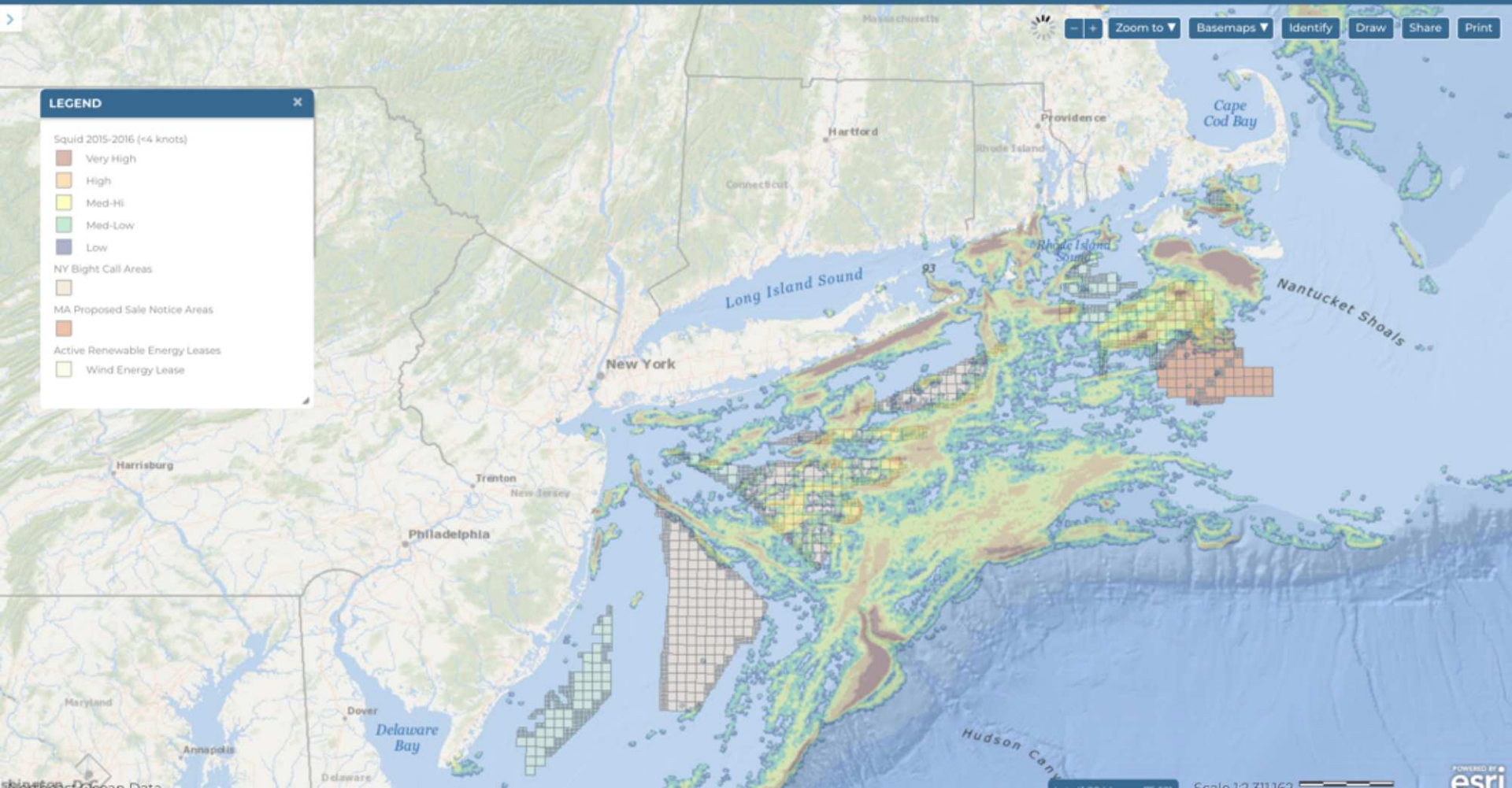


NORTHEAST OCEAN DATA

Maps and Data for Ocean Planning in the Northeastern United States

HOME ABOUT CASE STUDIES THEME MAPS DATA EXPLORER RESOURCES

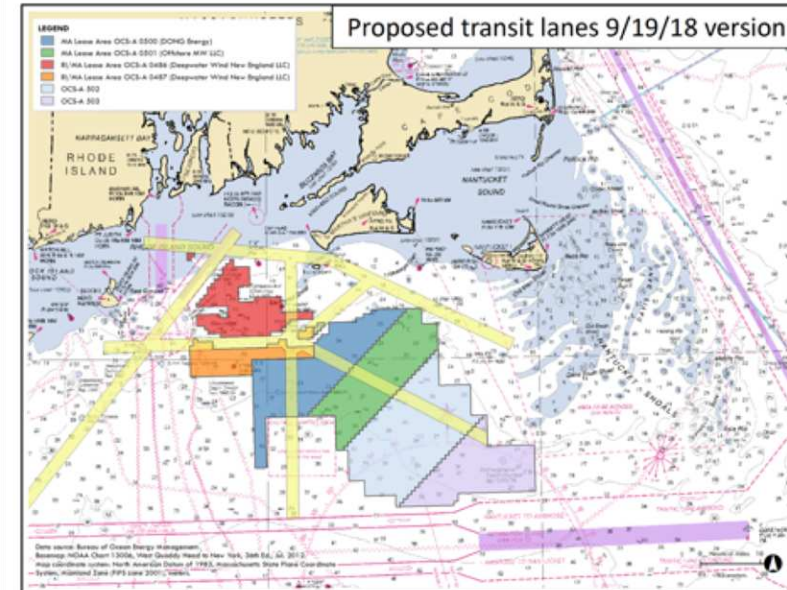
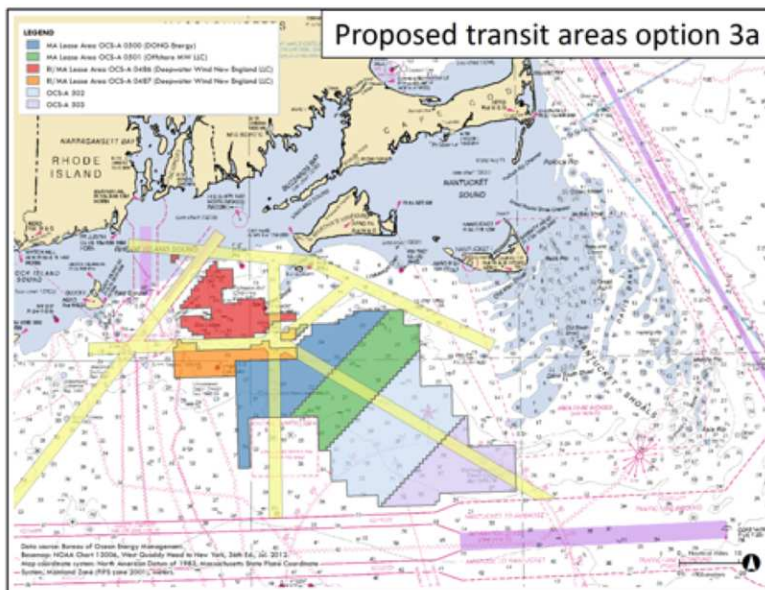
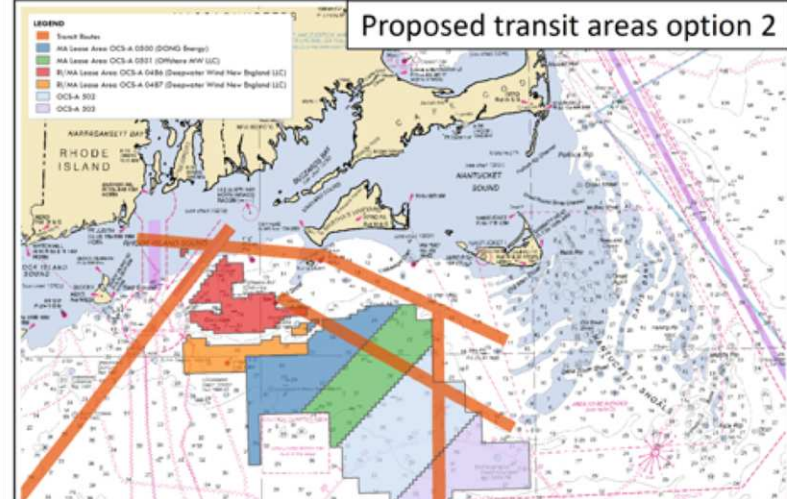
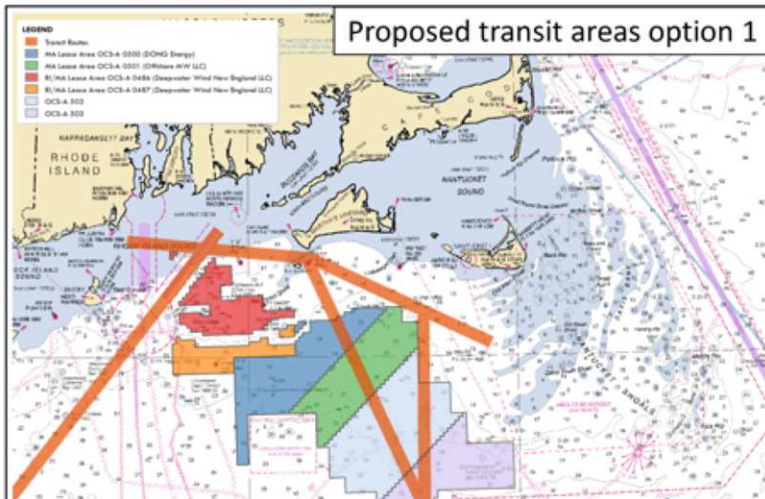
DATA EXPLORER





# Informing Offshore Wind Development

Potential transit  
corridors through  
offshore wind leases



# Outline



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## IV. **Political Windows of Opportunity**

# In Any Administration...

NORTHEAST OCEANPLAN

Better Data =  
More Informed, Transparent Decisions

Keep it Grounded





# Political Window of Opportunity

*Ocean Policy to Advance the Economic, Security, and Environmental Interests of the United States*

EO 13840 signed on June 19, 2018

Focus on:

- Accessible and usable ocean data
- State-convened regional ocean partnerships
- Streamlining cooperation



## For more information:

NEoceanplanning.org

Northeastoceandata.org (Northeast Ocean  
Data Portal)

[Betsy.Nicholson@noaa.gov](mailto:Betsy.Nicholson@noaa.gov)

617-869-9148

NORTHEAST OCEANPLAN



Block Island Wind Project



# Top Ten Ocean and Coastal Issues\*

1. Offshore aquaculture siting
2. Fisheries management
3. Community resilience and climate adaptation
4. Offshore renewable energy siting and leasing
5. Sand and sediment management
6. Species and habitat management
7. Water quality, including marine debris, ocean acidification, harmful algal blooms, and oil spills
8. Oil and gas exploration and extraction
9. Ocean disposal
10. Maritime and navigation safety



*\*ranked by number of regions reporting*

# Top Ten Data Needs\*

- Jurisdictions and regulated areas (various agencies)
- Abundance and distribution of marine species (NOAA, DoD, BOEM, FWS)
- Synthesized oceanographic parameters (NOAA IOOS)
- Commercial fishing effort - Vessel Monitoring System (VMS) (NOAA NMFS)
- Vessel traffic - Automatic Identification Systems (USCG, MARAD)
- Human and cultural use areas (NPS, BIA, NOAA)
- Commercial fishing effort - Vessel Trip Report (VTR) (NOAA NMFS)
- Bathymetry (NOAA, USGS)
- Sand and borrow sites (BOEM, USACE)
- Species and habitat locations (NOAA, BOEM, USGS, FWS)

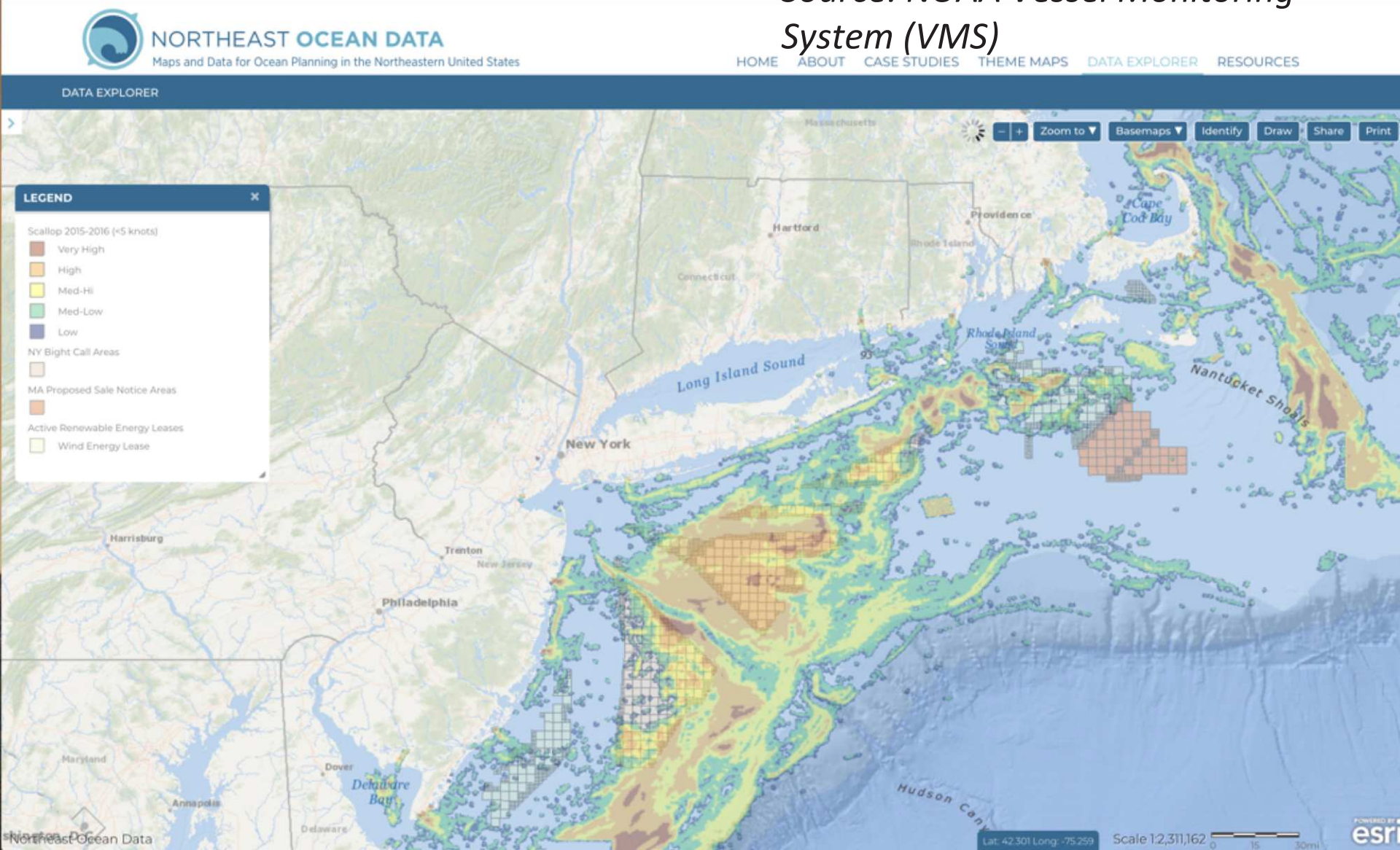
*\*ranked by number of regions reporting*



# Informing Offshore Wind Development

Scallop fishing vessel activity at less than 5 knots (likely fishing speed)  
2015-2016

Source: NOAA Vessel Monitoring System (VMS)





# SCIENCE AND RESEARCH PRIORITIES

1. Improve understanding of marine life and habitats
2. **Improve understanding of tribal cultural resources (e.g, paleocultural reconstruction mapping)**
3. Improve understanding of human activities, coastal communities, socioeconomics, and interactions between uses
4. Characterize the vulnerability of marine resources to specific stressors
5. Characterize changing environmental conditions, particularly resulting from climate change, and characterize resulting impacts to existing resources and uses
6. Advance ecosystem-based management (EBM) by building on the previous priorities and also including cumulative impacts and ecosystem services





# Informing Offshore Wind Development

Squid fishing vessel activity 2015-2016

Source: NOAA Vessel Monitoring System (VMS)



NORTHEAST OCEAN DATA

Maps and Data for Ocean Planning in the Northeastern United States

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