



**NOAA  
FISHERIES**



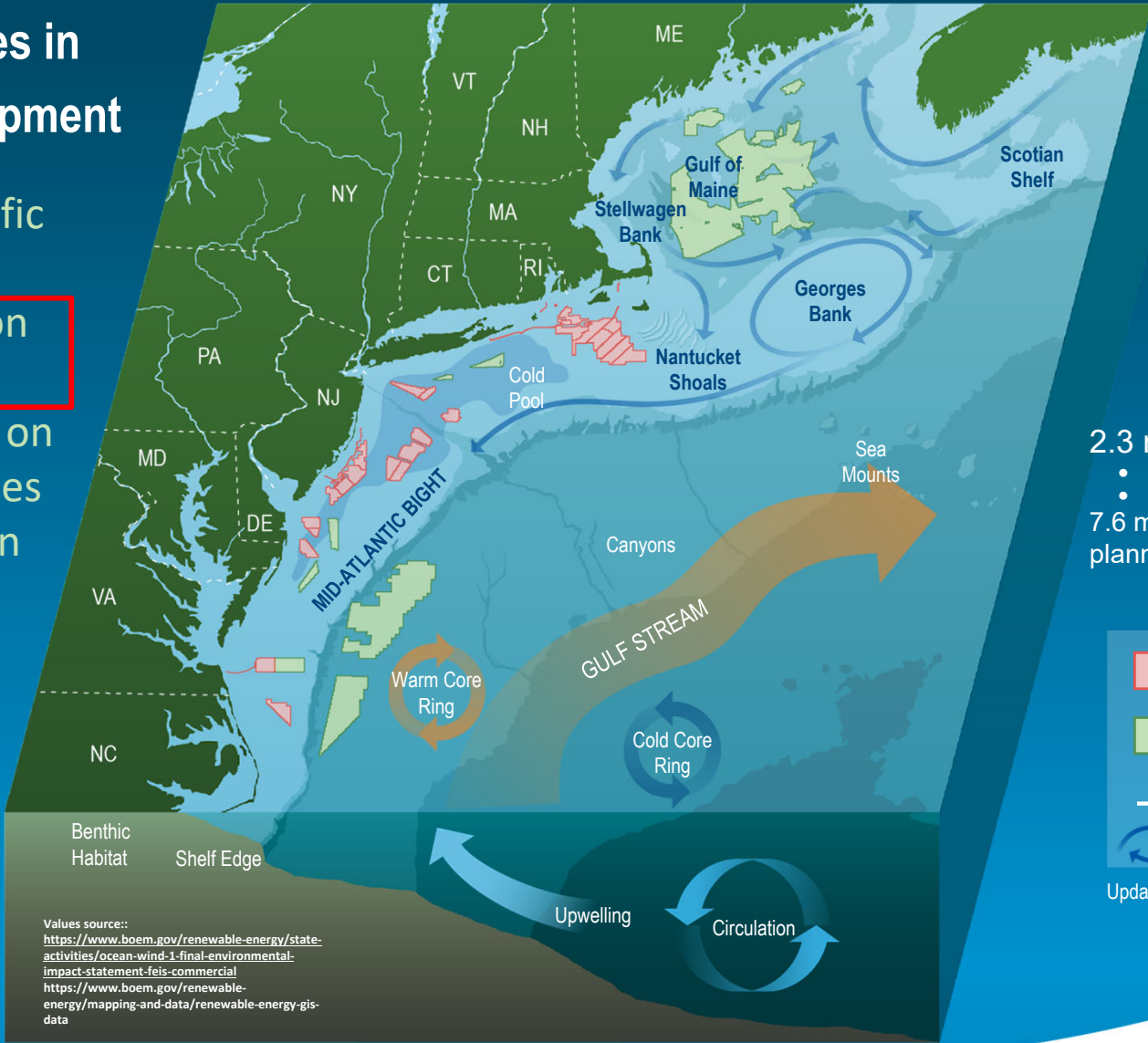
# NEFSC Survey Mitigation Plan Updates

Madison Hall – NEFSC - OWEB

NTAP – Arlington, VA – February 8, 2024

# Role of NOAA Fisheries in Offshore Wind Development

- Regulatory & Scientific Support for OWD
- Mitigating Impacts on Scientific Surveys
- Advancing Research on NOAA Trust Resources
- Advancing science on mitigation



Values source:  
<https://www.boem.gov/renewable-energy/state-activities/ocean-wind-1-final-environmental-impact-statement-feis-commercial>  
<https://www.boem.gov/renewable-energy/mapping-and-data/renewable-energy-gis-data>

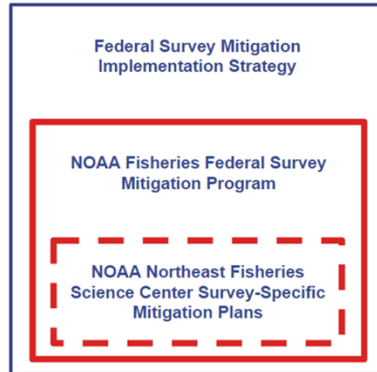
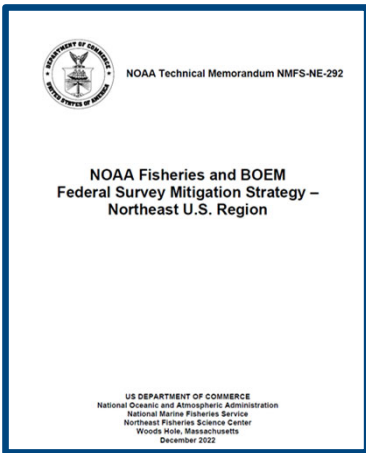
2.3 million lease acres  
● ~ 3,500 turbines  
● ~11,000 cable miles  
7.6 million acres under planning consideration

- Lease Areas
- Planning Areas
- - State Boundaries
- ↻ Currents

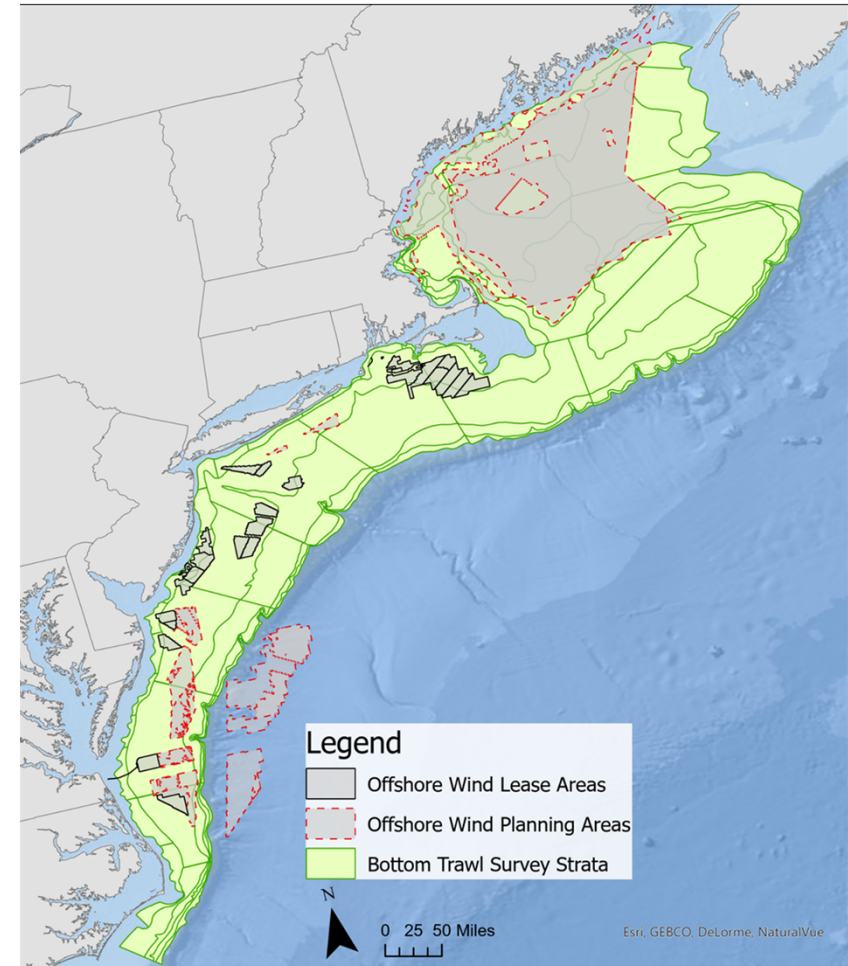
Updated 10-19-2023



# Federal Survey Mitigation



- [NOAA/BOEM Survey Mitigation Strategy published](#) (Hare et al. 2022)
- 14 NEFSC Surveys will be disrupted by OWD in our Region
- NOAA BOEM Survey Mitigation Implementation Team
  - New Leasee requirements
  - Initial new NEFSC resources
  - Survey Mitigation Program and Plans under development



# NE Survey-Specific Mitigation Plans

## NEFSC Fisheries Surveys

1. Spring Multi-Species Bottom Trawl Survey
2. Fall Multi-Species Bottom Trawl Survey
3. Integrated Benthic/Atlantic Sea Scallop Survey
4. Surf Clam/Ocean Quahog Survey
5. Gulf of Maine Northern Shrimp Survey
6. Cooperative Atlantic States Shark Pupping and Nursery
7. Coastal Shark Bottom Longline Survey
8. Cooperative Shark Tagging Program
9. Ecosystem Monitoring Program
10. Continuous Plankton Recorder Survey
11. Cooperative Gulf of Maine Bottom Long-line Survey

## Proposed New or Expanded Fisheries/Habitat Surveys

12. Recreational Hook & Line Survey
13. Fish Trap/Video Survey- SEAMAP expand
14. Pelagic Acoustic Survey
15. Passive Acoustic Monitoring Surveys
16. eDNA Survey

## Protected Species Surveys

17. North Atlantic right whale Aerial Survey
18. Marine Mammal & Sea Turtle Vessel Survey
19. Marine Mammal & Sea Turtle Aerial Surveys
  - Marine Mammal Abundance Survey
  - Sea Turtle Ecology Survey
  - North Atlantic Right Whale Ecology Survey



# Mitigation Plans Elements (in process)

Outline how each plan is being impacted by Offshore Wind Development (4 major components)

- Preclusion
- Impacts on statistical design of survey
- Alteration of habitats (benthic, pelagic) and airspace
- Reduced sampling productivity

Mitigation Plan (6 major components)

- Evaluate survey design
- Identify and develop new survey approaches
- Calibrate and integrate new approaches
- Develop interim provisional survey indices
- Outline wind energy monitoring needed to fill regional scientific survey data needs
- Develop and communicate new data streams

# Mitigation Plans – Review (in process)

NE Survey-Specific Mitigation Plan Review Process for each plan includes both an internal and external review. The **internal review** process includes:

- Internal (NEFSC) offshore wind stakeholders including other survey leads
- NEFSC leadership

Upon completion of the internal review, the plans will then be put into an **external review**, which includes separate reviews for the Fisheries and Protected Species Plans:

- *Fisheries* - under development- Discussions with MAFMC/NEFMC/ASFMC underway- initial thoughts are for a Council (MAFMC & NEFMC) SSC panel with Commission participation to review and provide input into Draft Plans (more to come)
- *Protected Species* - under development

SURVEY	DRAFT 1	DRAFT 2	FINAL DRAFT (INTERNAL)	FINAL DRAFT (EXTERNAL)
	Submit, Comment, Respond	Submit, Comment, Respond	Submit (to NEFSC leadership), Comment, Respond	Submit (to Panel), Comment, Respond
BTS	Completed	In Process		
NARW Aerial	Completed	In Process		
PAM	Completed	In Process		
eDNA	Completed	In Process		
COASTSPAN	Completed		In Process	
MM&ST Aerial	Completed		In Process	
MM&ST Vessel	Completed		In Process	
Scallop		Completed		
Clam		Completed		
Northern Shrimp		Completed		
Gulf of Maine BLL		Completed		
Hook and Line		Completed		
Coastal Shark BLL		Completed		
Coop Shark Tagging		Completed		
EcoMon		Completed		
CPR		Completed		
Seal Aerial		Completed		
MM&ST Sea Turtle		Completed		
Biological Samples with QA/QC		Completed		

# Mitigation Plan Status Spotlight – Gulf of Maine Bottom Longline Survey

## Evaluate survey design

- Many unknowns remain that prevent full evaluation (e.g. location of turbines by bottom type, anchor designs, turbine spacing, location of cables)
- New analyses of sampling density and impacts to the spatial footprint consistent
- An analysis of historical BLLS data to compare indices of abundance including/excluding data from WEA

## Identify and develop new survey approaches

- Some degree of sampling may be possible as vessels are small, limitations currently unknown. Ability to operate safely at night or in unfavorable weather needs to be evaluated.
- Could reduce gear length if turbines adequately spaced

## Calibrate and integrate new approaches

- Paired sampling between short/ traditional gear across seasons/strata/habitats



# Mitigation Plan Status Spotlight – Bottom Trawl Survey

## Evaluate survey design

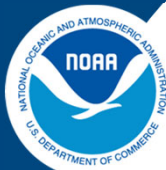
- Develop spatially-explicit model to explore the impact of scenarios likely to occur because of the development of offshore wind.
- Examine influence of historical data from Wind Energy Areas (WEAs) on index-based-assessments by including/excluding data from WEAs

## Identify and develop new survey approaches

- Restratification (more spatially consistent strata, allow for more optimal shelf-wide station allocation, minimize impacts on stock assessments)
- Generalized Random Tessellation Stratified (GRTS) sampling design
- Perimeter sampling around WEAs

## Calibrate and integrate new approaches

- Smaller vessel for sampling inside WEAs
- Scaled-down gear
- Passive gear
- Remote sensing



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# Thank You

