NTAP Full Panel Meeting

July 20, 2023

Update on action items from last meeting

Address questions raised about moving fixed gear, number of invalid tows.	Invalid tows assessment updated (will add to website); added lobster pot discussion to FAQ document (still in draft form)
Distribute NEAMAP definition document.	Not done - on agenda for today's meeting
Plan restrictor rope research working group meeting to further discuss data, drafting a paper for peer review, future studies, and application of knowledge.	Done - on agenda for today's meeting
Use breakout group results and discussion to draft a memo to present to Councils on priority concerns/research recommendations of NTAP.	Done, decided to hold off on the memo to the councils until we have discussion about how to address the inconsistency and refit of the Bigelow
Release 2nd draft of the Operations Manual for review.	Done, also completed final version, posted to website, and sent via email to members

Operations manual

Timeline

- Spring-summer 2022: Drafted 1st draft with subcommittee
- 11/10 - 12/15/2022: NTAP review - 1st draft emailed to NTAP and 1 external reviewer
- 11/21/2022: NTAP meeting to discuss the 1st draft
- 12/15/2022 - 2/23/2022: Drafted 2nd draft with subcommittee
- 2/23 - 3/15/2023: NTAP review - 2nd draft review by NTAP, Councils, and a few external reviewers
- 3/15 - 6/2/2023: NEFSC drafted 3rd (final) draft
- 6/2 - 6/20/2023: Subcommittee review - 3rd draft reviewed by Subcommittee, email discussions
- Final draft released July 7, 2023 (original goal was April 30)

Major changes in 2nd draft review

- Extensive work “cleaning it up” - reorganizing, removing redundancy, ensuring consistency with Council policies
- Code of conduct - simplified
- Reviewing and commenting on NTAP research and Council priorities - clarified language, ensured that proper perspective was used (NTAP is a Council AP)

Final products

- Document with two primary sections - operations & orientation
- On website and distributed via email
- Annual “NTAP Member Orientation” in December
- An Appendix document with frequently asked questions that is still being developed

Operations manual

A “living document” - owned by NTAP.

Any member can suggest a change

- Send to co-chairs and/or MAFMC NTAP Coordinator or NEFSC NTAP Lead
- Changes approved by co-chairs will be made by either MAFMC NTAP Coordinator or NEFSC NTAP Lead
- Depending on amount of change/timeliness of change, document may be updated immediately or less frequently, will consider need for full panel review

Bottom Trawl Survey Update

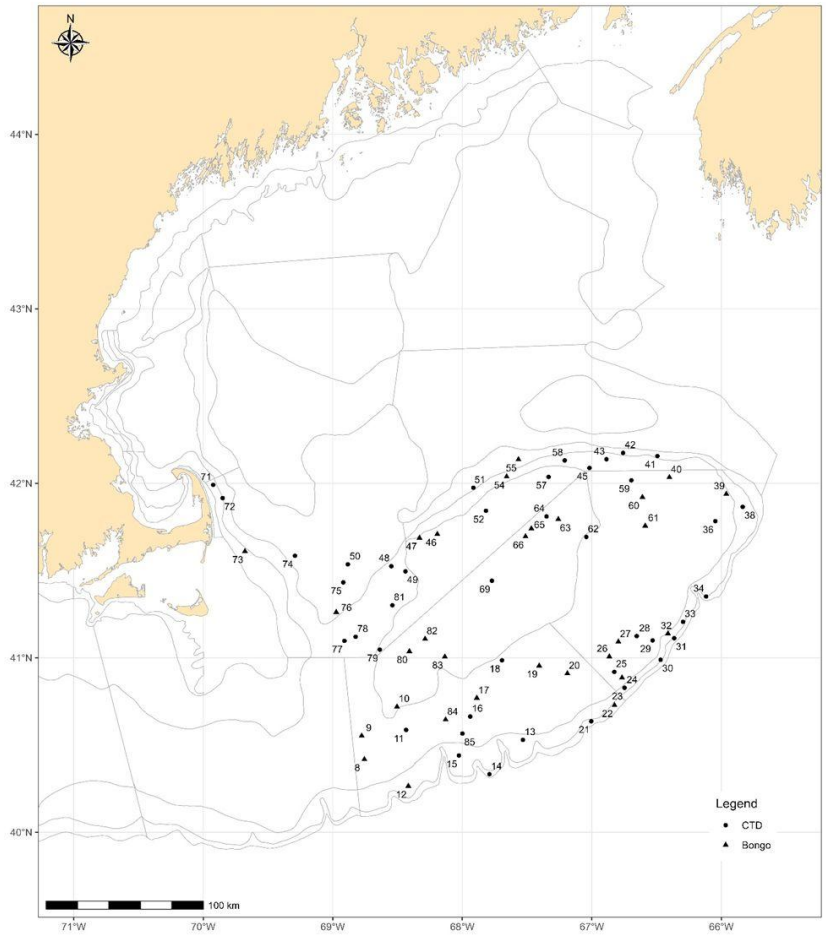
Spring 2023:

- Bigelow delayed 2 months getting out of shipyard (May 8th departure)
- Lost 43 of 60 sea days, significant loss of survey area coverage
- OMAO unable to properly staff the vessel resulting in only 12 hour operations per day, further impacting area coverage
- Tows were conducted during daylight hours (6am-6pm) only due to inexperienced vessel crew
- NEFSC prioritized Georges Bank at nearly full sampling density to meet TRAC obligations
- 70 of 377 planned stations completed

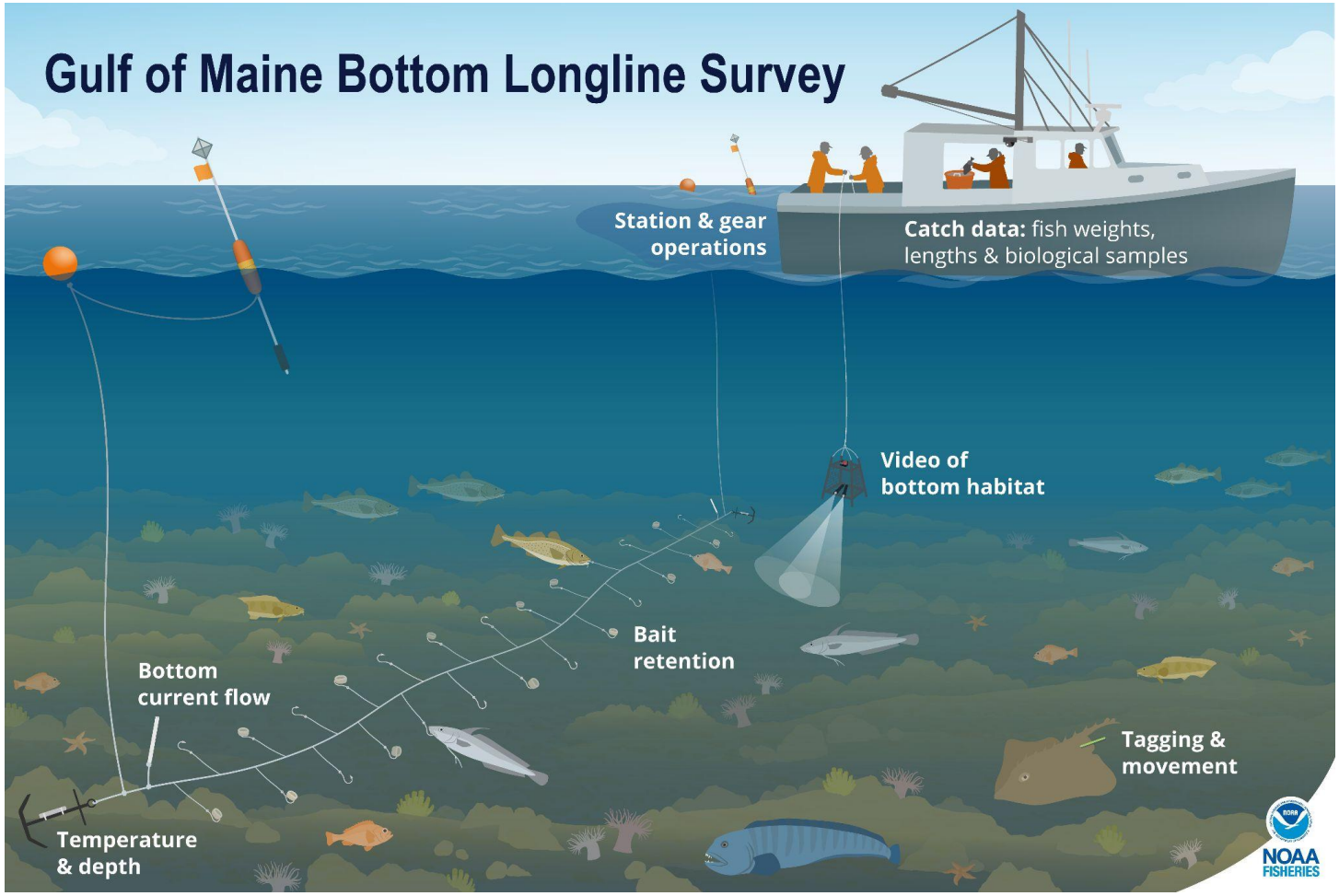
Autumn 2023:

- On track to begin September 9th with full survey area coverage planned

2023 Spring Trawl Locations Georges Bank



Gulf of Maine Bottom Longline Survey Update



Gulf of Maine Bottom Longline Survey Update

Stations:

- Completed 100% of stations (45 total) in spring 2023

Highlights:

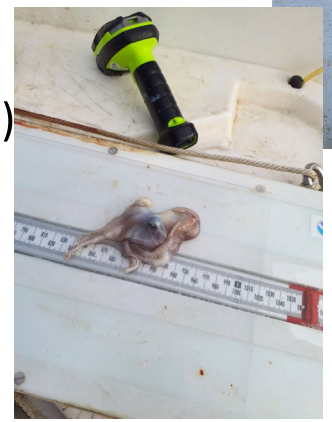
- High barndoor skate and red hake catches
- High white hake catches - for spring, esp. large individuals
- Some evidence of strong 2020 haddock year class
- 2nd Largest halibut caught to date (63 inches)

Lowlights:

- Low overall catch rates
- Some technical issues (laptops, new data collection software)

Blogs (for more info!):

- Bottom Longline Survey Gets Seal of Approval
- Whale Tails, Wrymouths, and Other Bottom Longline Survey Surprises



NEAMAP update

- NEAMAP surveys by VIMS, MA, and ME/NH were successful.
  - The ME-NH survey started on May 2nd and ended on June 2nd, sampling 81% of planned stations. A combination of bad weather the first week of the survey, fixed gear, and mechanical issues on the boat during the last week of the survey affected our completion rate.
  - The Mass DMF trawl survey was successful this spring. It sampled 98% (101 of 103) of planned stations. The survey was completed over 16 consecutive days with a representative tow for all assigned stations in GOM and backside of Cape Cod. One station each in Nantucket Sound and Buzzards Bay were lost due to excessive weed/algae (both destroyed our nets). Nantucket Sound and Buzzards Bay continue to have large aggregations of scup and weed/algae dominating catch.
  - The VIMS spring survey occurred from April 24 – May 28 and sampled at all of the 150 sites that were selected for the cruise. No major issues to report.

Mass DMF 13-minute scup tow (minimum acceptable time for a successful tow)

Updates kindly provided by Rebecca Peters, Steve Wilcox, and Jim Gartland

Communication updates

COMMUNICATING NTAP RESEARCH WITH ASSESSMENT SCIENTISTS

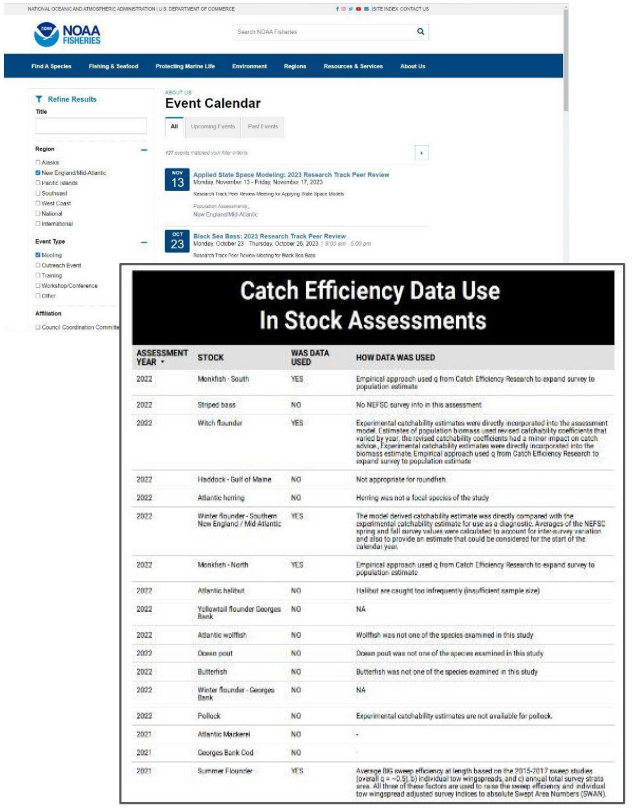
- NRCC 2023-2027 Stock Assessment Schedule
- The NOAA Fisheries Event Calendar
- Individual Research track Stock Assessment webpages
- NEFSC NTAP Team reviews it monthly

HOW NTAP RESEARCH IS USED IN ASSESSMENTS

- Dashboard for NTAP research in assessments

OTHER UPDATES

- NEFSC Restrictor Rope Project Page live



Backing up Bigelow decision matrix

https://docs.google.com/presentation/d/1BClk__w2hET2_7z7_CG0KRD8HwVBflXh/edit?usp=drive_link&ouid=115285634448007191829&rtpof=true&sd=true

LUNCH

WE’LL BE BACK AT 2:00 PM

Offshore wind: fisheries monitoring surveys & survey mitigation

Offshore wind fisheries monitoring surveys

- NEAMAP definition discussion
- What studies are being done?
- Offshore wind reorganization at NEFSC
- Survey mitigation implementation strategy
- Survey specific mitigation plans for BTS and BLLS

NEAMAP definition

- From January meeting: Concerned about the “NEAMAP” brand being misused without NEAMAP approval, ROSA is working on creating a document of guidance after reaching out to BOEM asking what they can do. NEAMAP survey definition documentation being worked on to be distributed.
- Need to reach out to ASMFC NEAMAP committee, new staff leadership this spring

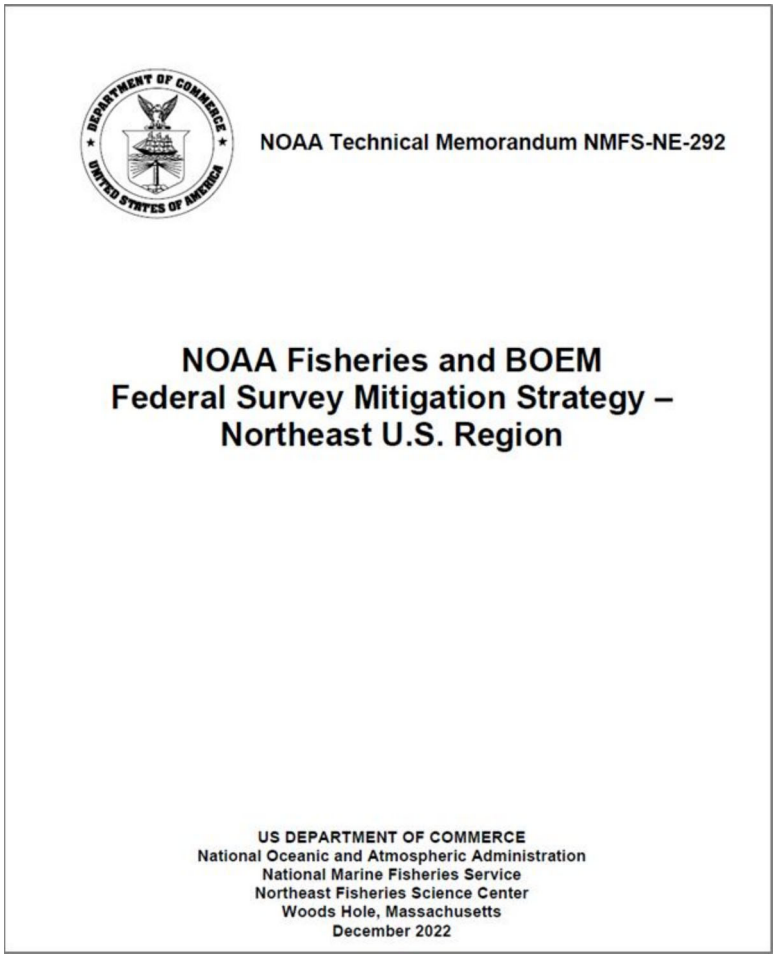
Fisheries Resource Monitoring at Offshore Wind Farms

- Developers must conduct fisheries resource monitoring as part of their site characterization
- There are no requirements for how or what to monitor
- Monitoring Guidelines are available from BOEM and ROSA
- NOAA Fisheries can provide comments and scientific advice on developer monitoring plans

https://www.fisheries.noaa.gov/new-england-mid-atlantic/science-data/offshore-wind-energy-development-new-england-mid-atlantic-waters

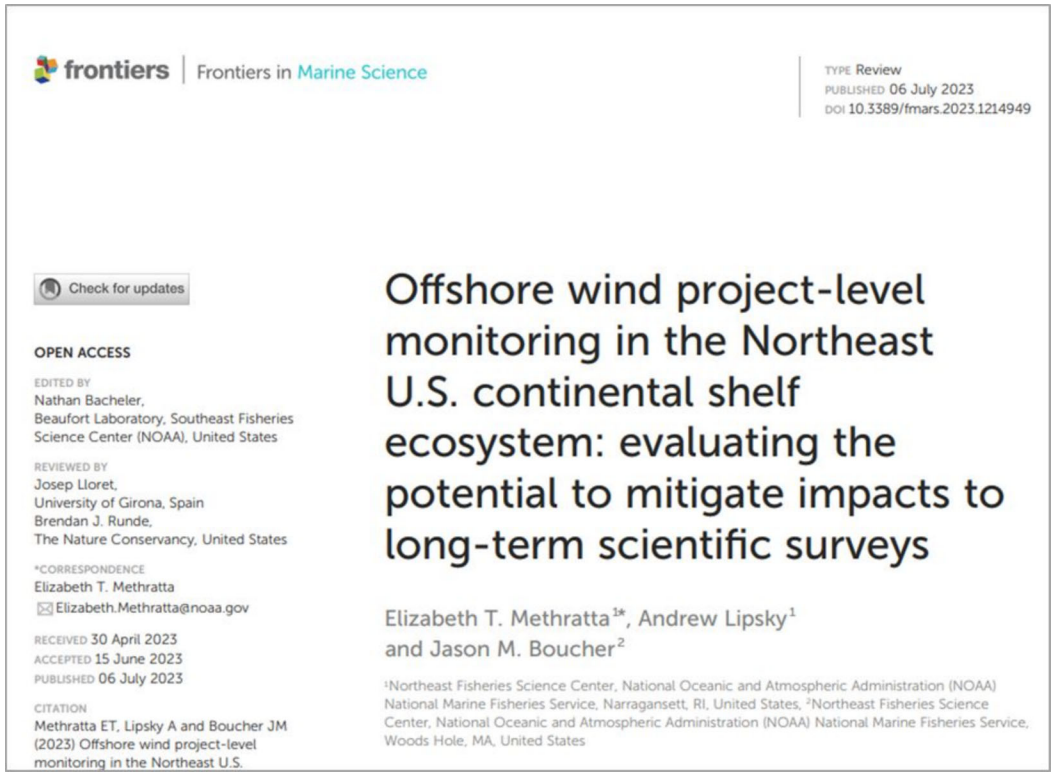
Fisheries Resource Monitoring at OWFs & Survey Impact Mitigation

- OWD will interfere with NOAA Fisheries' long term scientific surveys
- BOEM/NOAA Survey Mitigation Strategy (Hare et al. 2022) calls for an evaluation and integration, where feasible, of wind energy development monitoring studies with NOAA Fisheries surveys (Action 2.2.1)



Evaluation of Monitoring Plans through the Lens of Survey Impact Mitigation

- Recent paper collated fisheries & benthic monitoring plans from 9 offshore wind projects
- There were 67 separate studies proposed across all 9 plans
- We evaluated plan attributes and asked whether these studies could provide data that could be integrated with NOAA Fisheries' long term scientific surveys and thus mitigate survey impacts



frontiers | Frontiers in Marine Science

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Check for updates

OPEN ACCESS

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RECEIVED 30 April 2023
ACCEPTED 15 June 2023
PUBLISHED 06 July 2023

CITATION
Methratta ET, Lipsky A and Boucher JM (2023) Offshore wind project-level monitoring in the Northeast U.S.

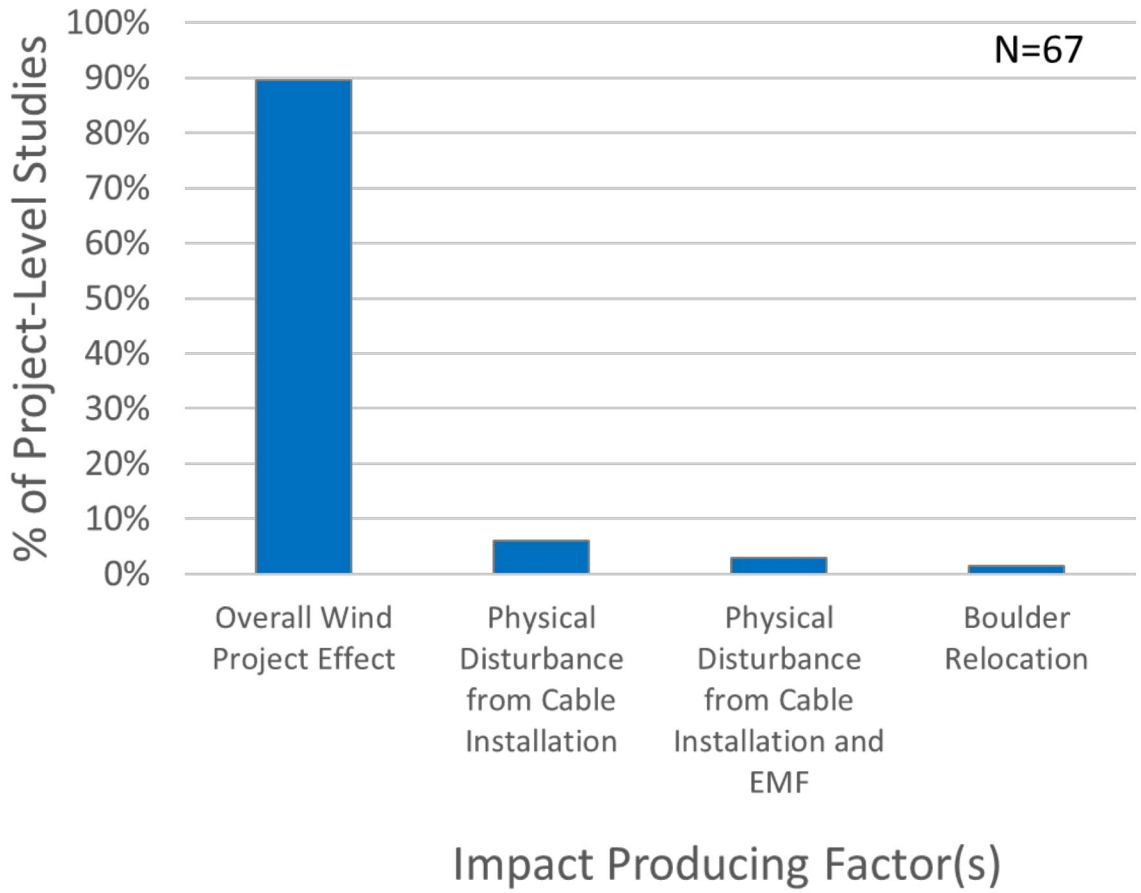
Offshore wind project-level monitoring in the Northeast U.S. continental shelf ecosystem: evaluating the potential to mitigate impacts to long-term scientific surveys

Elizabeth T. Methratta[1*], Andrew Lipsky[1] and Jason M. Boucher[2]

[1]Northeast Fisheries Science Center, National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service, Narragansett, RI, United States, [2]Northeast Fisheries Science Center, National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service, Woods Hole, MA, United States

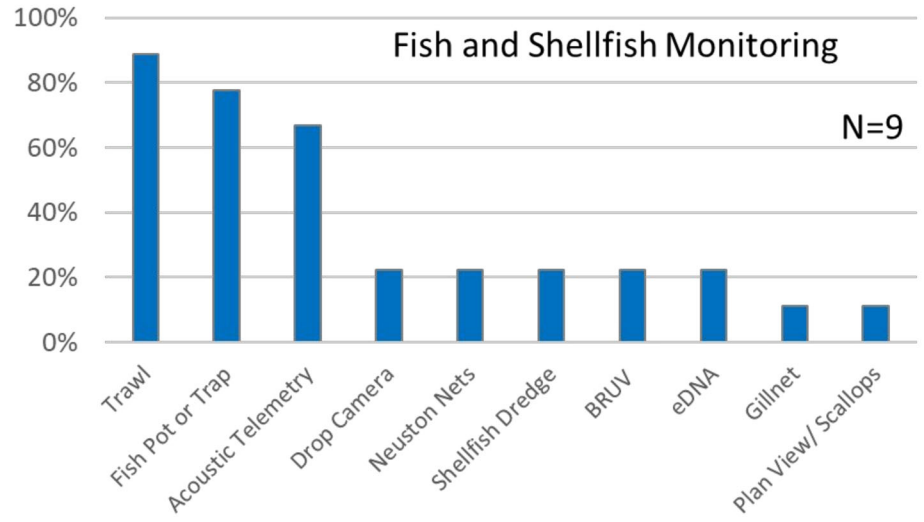
What Effects will be Studied?

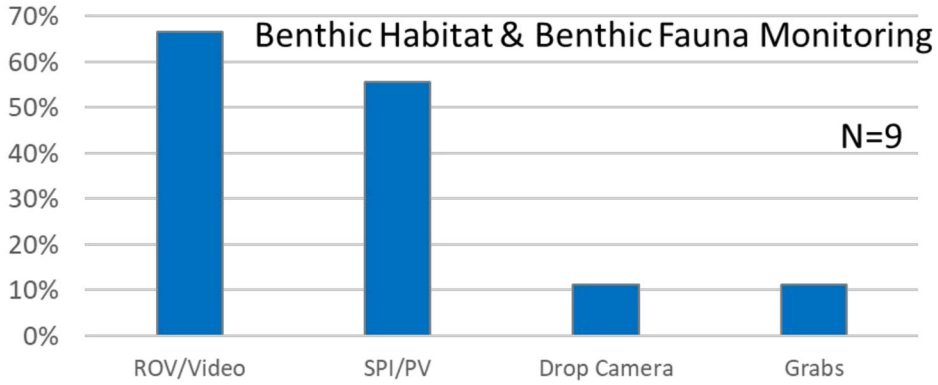
- The majority of monitoring studies are aimed at evaluating overall windfarm effects rather than a specific impact producing factor



What Gear Types will be used for Monitoring?

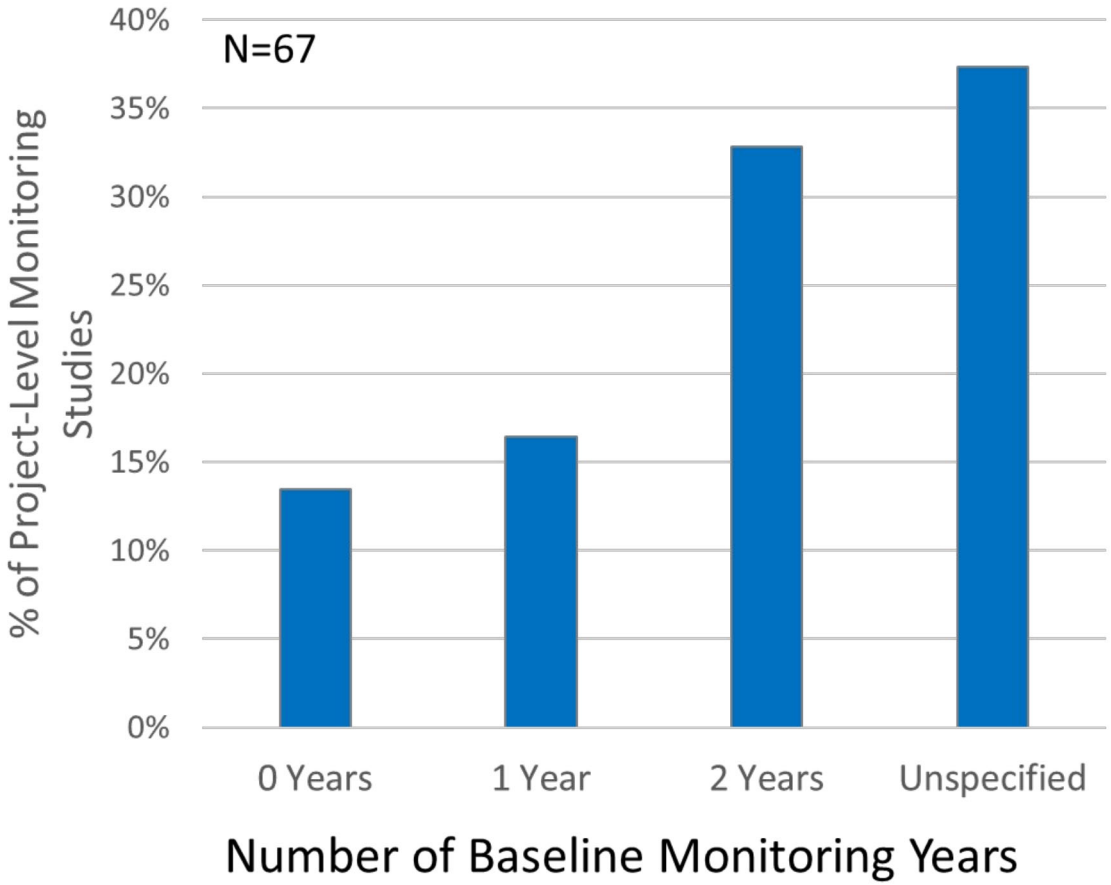
- Nearly every project proposes to conduct bottom trawl studies
- Fish pots and acoustic telemetry are also common methods proposed for finfish monitoring
- ROV/video and SPI/PV are common methods proposed to study benthic habitat and fauna





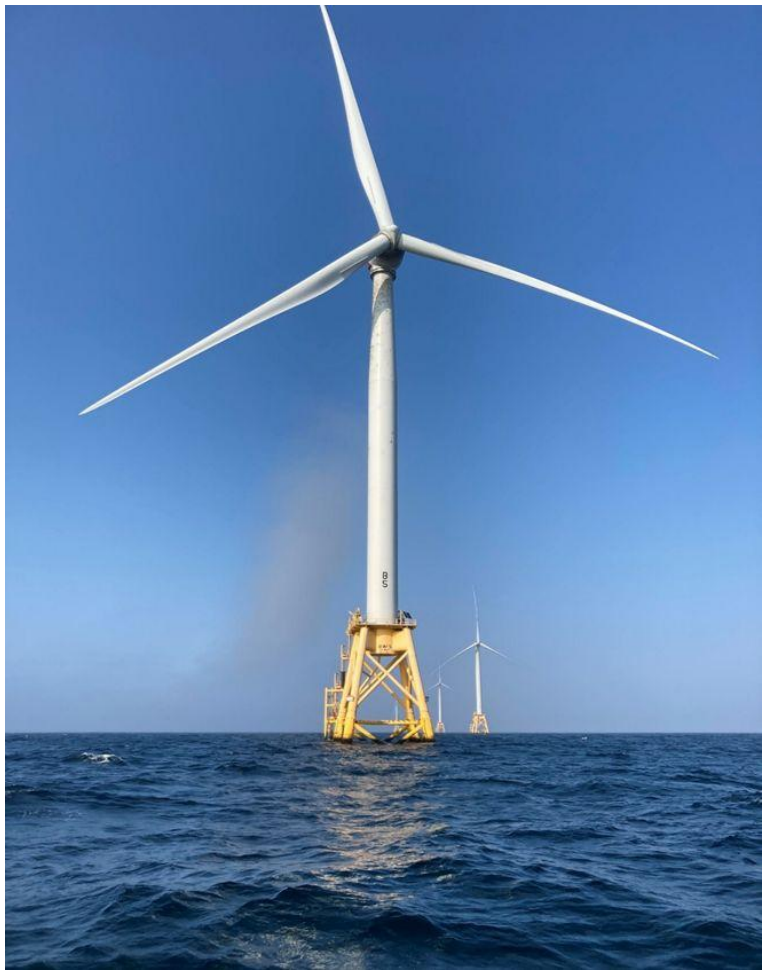
Duration of Baseline Data Collection

- The majority of studies plan to conduct <=2 years of baseline data collection



Do OWF monitoring studies as currently designed mitigate survey impacts?

- State supplementing the comparable NOAA Fisheries survey as an objective? NO
- Calibrated to an existing NOAA Fisheries survey? NO
- Address Preclusion? NO
- Address impacts to statistical survey design? NO
- Address habitat change and responses to habitat change after construction and for the lifetime of the wind project? NO
- Address practical sampling issues? NO
- Provide a functionally equivalent sample to the comparable NOAA Fisheries survey? MOSTLY NO



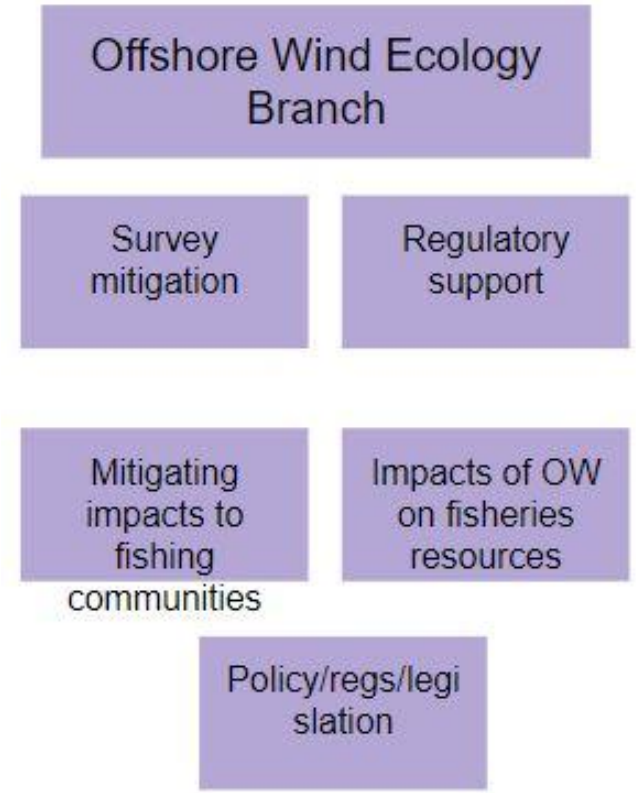
ROSA database

ROSA
Responsible Offshore
Science Alliance

- Identifies 30 unique fisheries research projects

A two-part Fish FORWRD database, part of the Regional Framework: one that synthesizes existing research priorities and one that compiles research being undertaken by programs along the East Coast. The analysis of data in these databases highlights gaps in research that can inform future research prioritization. The associated report outlines how to use these databases and how the databases were created. The report also includes a form to suggest additional ongoing research projects for the database.

Offshore wind re-org at NEFSC



- Partial permanent funding received.
- Supporting staff hiring and research (including external grants).
- Branch Chief is Andy Lipsky
- Going into Population and Ecosystems Monitoring and Analysis Division in FY24 (October 2023)

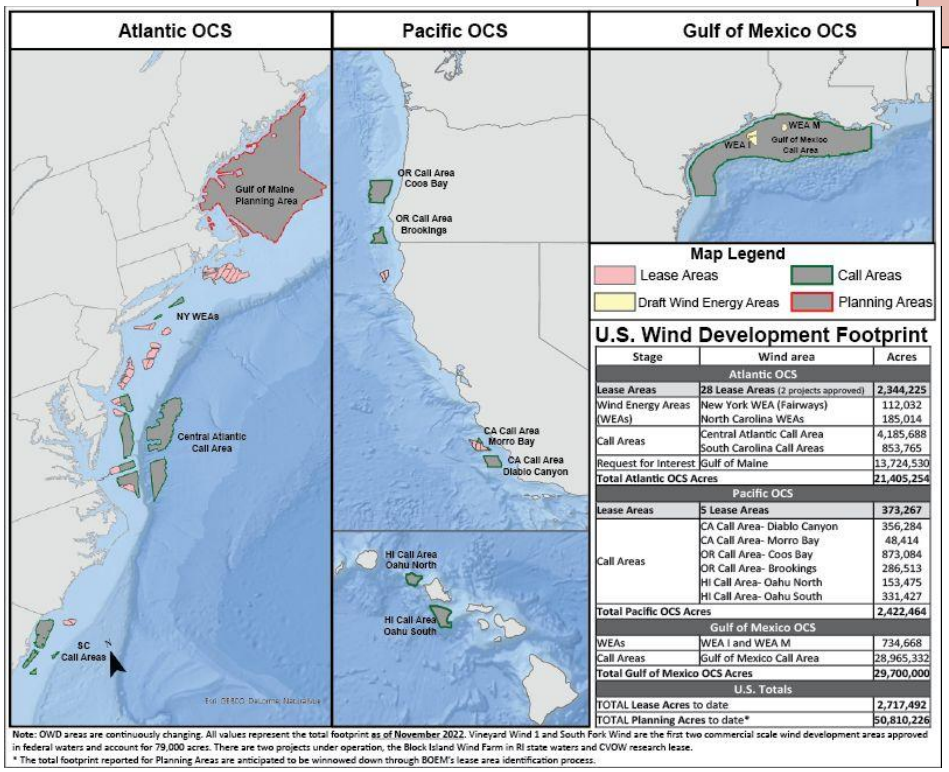
Offshore wind development (OWD) will affect NMFS survey enterprise

NMFS Surveys:

- **50** long-term, standardized surveys
- Many time series **>30 years**

NMFS Surveys Support Assessment of:

- **500** Fish Stocks and Stock Complexes
- **120** Marine Mammal Species
- **163** Threatened and Endangered Species



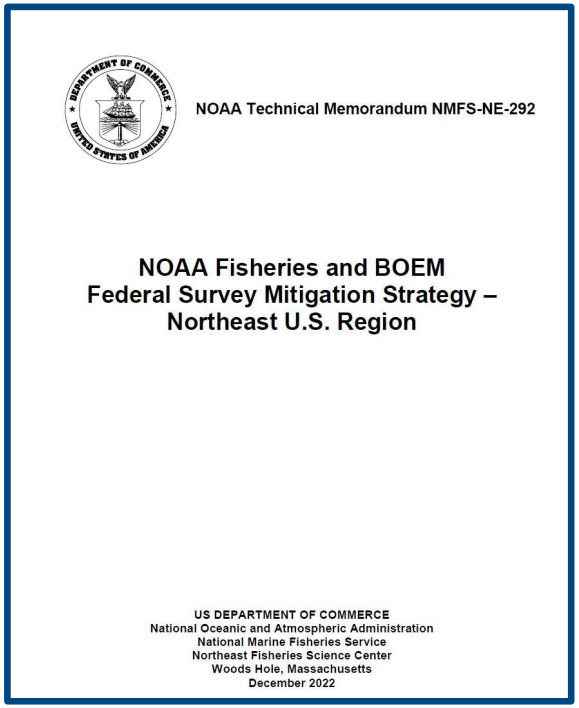
U.S. Wind Development Footprint

Stage	Wind area	Acres
Atlantic OCS		
Lease Areas	**28 Lease Areas** (2 projects approved)	**2,344,225**
Wind Energy Areas (WEAs)	New York WEA (Fairways)	112,032
	North Carolina WEAs	185,014
Call Areas	Central Atlantic Call Area	4,185,688
	South Carolina Call Areas	853,765
Request for Interest	Gulf of Maine	13,724,530
Total Atlantic OCS Acres		**21,405,254**
Pacific OCS		
Lease Areas	**5 Lease Areas**	**373,267**
Call Areas	CA Call Area- Diablo Canyon	356,284
	CA Call Area- Morro Bay	48,414
	OR Call Area- Coos Bay	873,084
	OR Call Area- Brookings	286,513
	HI Call Area- Oahu North	153,475
	HI Call Area- Oahu South	331,427
Total Pacific OCS Acres		**2,422,464**
Gulf of Mexico OCS		
WEAs	WEA I and WEA M	734,668
Call Areas	Gulf of Mexico Call Area	28,965,332
Total Gulf of Mexico OCS Acres		**29,700,000**
U.S. Totals		
TOTAL **Lease Acres** to date		**2,717,492**
TOTAL **Planning Acres** to date*		**50,810,226**

Note: OWD areas are continuously changing. All values represent the total footprint as of November 2022. Vineyard Wind 1 and South Fork Wind are the first two commercial scale wind development areas approved in federal waters and account for 79,000 acres. There are two projects under operation, the Block Island Wind Farm in RI state waters and CVOW research lease.
* The total footprint reported for Planning Areas are anticipated to be winnowed down through BOEM's lease area identification process.

Deploy 30 Gigawatts of Offshore Wind by 2030; 110 GW by 2050

Federal Survey Mitigation Implementation Strategy



https://www.fisheries.noaa.gov/feature-story/efforts-mitigate-impacts-offshore-wind-energy-development-noaa-fisheries-surveys

Background:

- Established impact framework - 4 ways OWD impacts surveys + 6 steps to mitigate
- 14 surveys affected by offshore wind development

Actions:

- Developed national survey mitigation strategy with BOEM -can be applied across regions
- Developing a regional program and survey specific mitigation plans (14 surveys impacted)
  - initial drafts completed for all existing surveys
  - assessing cross-Center infrastructure, administration, and staffing needs

Northeast Survey Mitigation Implementation Team (NESMIT)

Meets every 2-4 weeks

Working toward implementing Strategy Actions

1. Organized the team
2. Prioritized the action item list (14 items)
3. Take action on timely actions
   a. ROD for Ocean Wind
4. Identify other needs and address as pertinent

Action #	Action	Rank
1.2.2	Review the resources available for the Survey Mitigation Program and Survey-Specific Mitigation Plans and perform a funding gap analysis.	Low-Med
1.2.3	Develop an inter-agency resource plan to support the Survey Mitigation Program and Survey-Specific Mitigation Plans	Med-High
1.3.1	Develop an inventory of plan components that could be funded or implemented by developers or other entities	Med-High
1.3.2	Develop measures that could be implemented through lease terms, COP conditions, or other mechanisms, which require lessees to clearly and consistently support this Implementation Strategy	High
4.1.1	Implementation Team meet quarterly to assess Implementation Strategy progress, review input received, and update actions	Medium
4.2.1	Meet annually as an Implementation Team to assess the Federal Survey Mitigation Program and Survey-Specific Mitigation Plans, review input received, and propose plan updates	Medium
4.2.2	Annually review impacts of offshore wind energy pre-construction, construction, and operation activities on ongoing survey operations and products	Med-High
4.2.3	Develop and annually update a dashboard for tracking the mitigation of impacts of offshore wind energy development on NOAA Fisheries surveys (see Action 5.3.3)	Medium
4.3.1	Implementation Team will release an annual Request for Information (RFI) for survey technologies to be considered as part of the Federal Survey Mitigation Program and summarize information received for review by NOAA and BOEM	Low-Med
4.4.1	Develop and update monthly dashboard for planning areas, leased areas, site assessment activities, construction and operation activities, and decommissioning activities including area, number of turbines, and energy production (see Action 5.3.3)	Low-Med
5.2.2	Complete a communication plan for this Strategy and the Northeast Federal Survey Mitigation Program	Medium
5.2.3	Develop a NOAA website linked to the BOEM website that describes and tracks the Federal Survey Mitigation Program and the Survey-Specific Mitigation Plans	Low-Med
5.3.3	Provide updates on the Strategy implementation to ROSA, RWSC, and other relevant groups.	Low-Med

Bottom trawl survey mitigation plan

CINAR grant with UMass SMAST

- Regional stakeholder workshops
  - January and February 2022
  - Solicit input regarding aspects of offshore wind development thought to be most impactful to the bottom trawl survey
  - Identify priority species of interest
  - Solicit input regarding productivity and distribution change scenarios that should be evaluated in this project
- Survey Simulation Experimentation and Evaluation Project (SEEP)
  - Develop a spatial modeling framework to simulate a variety of abundance and distribution scenarios that can be used to evaluate modified survey designs

Project Website: https://thefaylab.github.io/sseep/

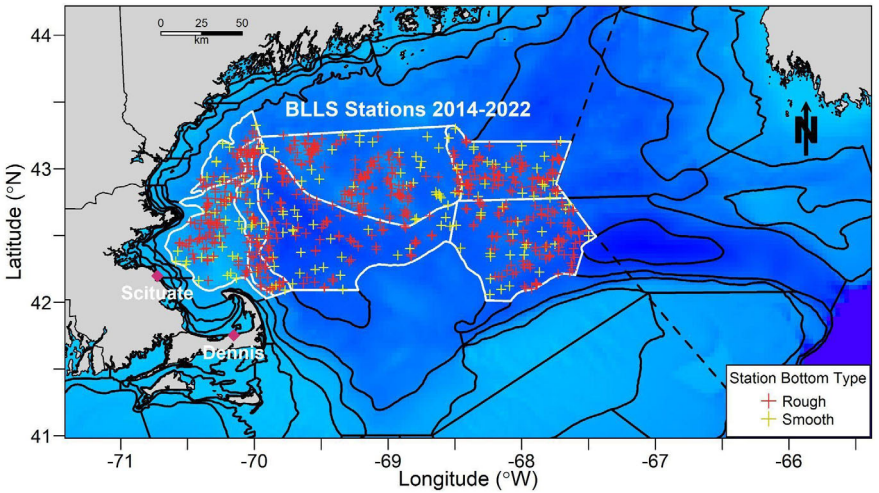
Bottom trawl survey mitigation plan

Contract with Dr. Paul Rago (Saltwater Inc.)

- Propose and evaluate alternative statistical sampling designs including a hybrid spatially balanced random and fixed sampling design in the vicinity of survey regions that may not be accessible in future years.
  - Evaluate historical sampling and alternative stratification and effort allocation
    - Including random sampling outside of wind development, perimeter sampling only around wind development and hybrid approach of perimeter sampling and fixed site sampling inside of wind development areas
  - These efforts are not independent of SSEEP and will benefit greatly from the spatial modeling framework to evaluate proposed survey designs

Bottom Longline Survey Mitigation Plan

- Fish 2 shorter inline but separate sets of BLL gear on either side of WE structures - treat as 1 ‘station’ analytically
  - 2 x 0.5 nm (500 hk) sections of the BLL - standard set ~ 1nm (1000 hk)
  - Set them end to end divided by wind infrastructure
- Preclusion from some areas could impact spatial coverage and station density
- May be able to test this mitigation strategy in the GOM Research Array
- Sources of Uncertainty:
  - Final wind energy areas are TBD and may only impact some portions of the BLLS region
  - Floating wind anchoring structures are not fully known and configuration could vary among the companies. Design choices could facilitate easier or further limit access to the WEA’s
  - GOM research array is outside BLLS footprint
  - Night time operational capacity w/in floating wind?
  - Insurance coverage?
  - Both Captains believe we may be able to fish w/in
    - But contingent on final structures and orientation

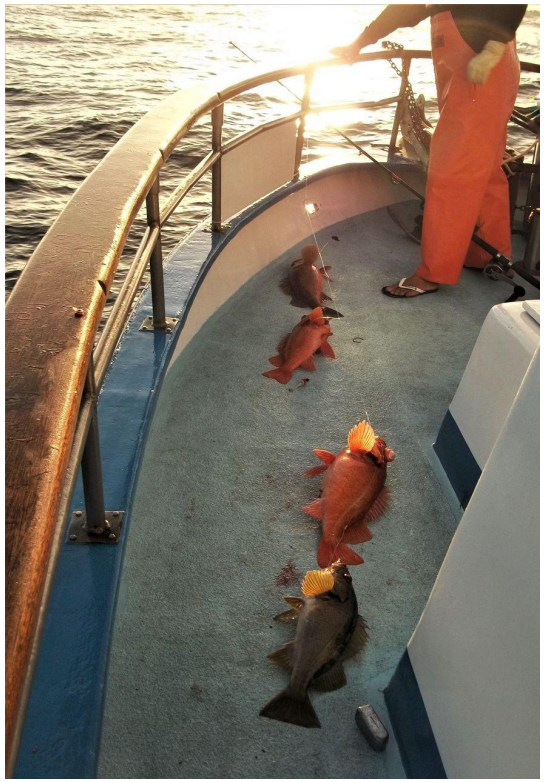


Hook and Line Survey Pilot Project

Goal: Develop and test the methodology for a new hook and line survey that can be safely deployed in any habitat type and alongside offshore wind turbines and provide data continuity for resources species in the Northeast region.

Approach:

- Develop survey design, gear, operations and protocols in partnership with fishing and science communities (summer/fall 2023)
  - Learn from Southern California Hook and Line Survey (NWFSC)
- Conduct pilot hook and line survey in the Gulf of Maine, Southern New England, and Mid-Atlantic in spring 2023 (in/around existing wind energy areas)
- Review operational success and challenges, analyze data to assess selectivity of gear, and identify necessary modifications to achieve survey goals (fall/winter 2024)



Offshore wind breaking news

- Vineyard Wind is going to prioritize installing foundations through the rest of the summer/early fall to meet pile driving time restrictions.
- Only the bottom portions of the foundations will be visible above the water instead of the additional transition pieces with navigation day markers and lights. Temporary navigation aids will be installed on top of the bottom portions of the foundations.
- Navigating through this area may be a bit more difficult given the lower profile of the bottom foundation pieces.

Restrictor rope research

Brainstorm next research project

Goal: 3-5 specific projects we can seek funding for/advocate for to Councils

Background:

Survey and discussion at last several NTAP meetings

No consensus on relative importance of catch efficiency studies but consensus around importance of adapting to offshore wind

Link to Research Track Assessments, Council priorities, and Cooperative Research Summit findings should be taken into consideration

Brainstorm new projects

1. Restrictor rope expansion
    a. Test hypothesis that gear performance is improved across depths, vessels, and crews
    b. Assess impact on catchability in Gulf of Maine environment
2. Gear testing
    a. New survey gear to supplement trawl survey - acoustics, optics, eDNA
3. Extending existing surveys into wind development areas
    a. NEAMAP expansion, calibration
    b. Is calibration needed to integrate multiple surveys
4. Offshore wind fisheries surveys/monitoring
    a. Standards for trawl surveys
    b. Creating a system where all surveys are linked, common database
5. Build tools to clarify the linkage between surveys and assessments
6. Bigelow contingency and mitigation planning
7. “Test bed” research array in South Fork/Vineyard Wind
    a. Fishability
    b. Testing of monitoring tools to augment or replace Bigelow sampling (acoustics, smaller vessel, eDNA)

For each project idea:

1. Does it address an NTAP objective?
2. Is it an identified Council research priority?
3. Are there known obstacles that prevent the work from being successful/useful/affordable etc?
4. Any connection to Moulton task force?
5. Does project meet multiple objectives?
6. Is anyone else doing this?

NTAP Objectives

- Understanding the trawl gear performance and methodology
  - *catchability and gear performance*
- Evaluate the potential to complement or supplement current NEFSC surveys -
  - *have intercomparable data between different surveys that are currently operating*
- Improving understanding and acceptance of NEFSC trawl survey data quality and results -
  - *how assessments use trawl survey data*