

**North Atlantic Right Whale Recovery Plan
Northeast US Implementation Team
July 25-27, 2023**

**Thomas P. O'Neill Federal Building
Boston, MA
Draft**

KEY OUTCOMES MEMORANDUM

I. Overview

The North Atlantic Right Whale Recovery Plan Northeast U.S. Implementation Team (NEIT) conducted a three-day meeting on July 25 - 27, 2023 at the Thomas P. O'Neill, Jr. Federal Building in Boston, MA. The agenda can be found in Appendix A, and the NEIT deliberations focused on the following primary objectives:

- Share updates on right whale status and recovery
- Review updates and discuss climate and ecosystem impacts in the Greater Atlantic Region
- Review updates and discuss wind and aquaculture development in the Greater Atlantic Region
- Plan for fall/ winter NEIT meeting

This Key Outcomes Memorandum summarizes the primary results of the NEIT deliberations from the discussions noted above. In general, the synthesis integrates the main themes discussed at the meeting and are presented in five main sections: Overview, Participants, Meeting Materials, Key Outcomes, and Next Steps. The Key Outcomes section is further segmented into the following sections:

- Welcome and Meeting Kick Off. This section provides a brief overview of the meeting purpose and agenda review.
- NEIT Business. This section includes the NEIT process and meeting planning.
- Focused NEIT discussions. This section includes focused discussions, including any resulting in consensus actions and/or recommendations.
- Consensus Actions. This section summarizes any consensus actions to be taken by the Team.
- Consensus Recommendations. This section summarizes any consensus recommendations of the Team.
- Other. This section summarizes other topics discussed during the meeting as applicable.

II. Participants

The NEIT meeting was attended by 13 of the 14 Team Members: Erin Summers (Team Lead), Katie Moore, Bob Glenn, Desray Reeb, Mark Baumgartner, Danielle Cholewiak, William McLellan, Roxanne Gillett, Cindy Driscoll, Joel Bell, Elise Lacaille, Cori Rose and Meghan Rickard. Dave Wiley was unable to attend and will be filled-in on team deliberations.

Diane Borggaard (NEIT Liaison), Colleen Coogan, and Kara Shervanick (SEIT Liaison) represented NOAA Fisheries (NMFS). Other NMFS staff and outside subject matter experts attended specific portions via webinar to give presentations to the team and/or answer questions. Corie Grewal (Integrated Statistics, Inc. in support of NMFS GARFO) attended to facilitate the hybrid nature of the meeting and capture notes and key discussions.

The Key Outcomes Memorandum was distributed to the entire Team for feedback.

III. Meeting Materials

The following materials were provided to NEIT members via email prior to or at the meeting:

- Draft meeting agenda
- 2023 GARFO Right Whale Outreach Summary
- 2022 GARFO Aquaculture Projects Update
- NEIT Wind Webinar Presentations
- NEIT Pilgrim NPP Webinar Presentations
- 1st and 2nd Quarter 2023 NOAA OLE Council Reports
- NEIT Priorities Tracker
- NEIT Activities Status Tracker

IV. Key Outcomes

Below is a summary of the main topics and items discussed during the three-day meeting. This summary is not intended to be a meeting transcript and is not necessarily in chronological order of discussions. Rather, it provides an overview of the main topics covered, the primary points and options raised in the discussions, and areas of full or emerging consensus.

A. Welcome and Meeting Kick Off

The meeting began with a welcome and brief introduction from the new team lead, E. Summers. She also provided more information on the agenda and logistics for the week. D. Borggaard thanked E. Summers for taking on the team lead position for a two year period and for assisting with planning this first-in person meeting since the COVID-19 pandemic.

B. NEIT Business

D. Borggaard provided various NMFS updates to keep the NEIT informed of activities that the team expressed interest in. This included updates on efforts underway such as regional coordination for the draft North Atlantic Right Whale Emergency Response Plan, developments regarding the Atlantic Large Whale Take Reduction Team (ALWTRT), and bilateral coordination with Canada. Updates included the recent releases of the [North Atlantic Right Whale 5-Year Review](#) from December 2022 and the [Northeast Regional Action Plan to Implement the NOAA Fisheries Climate Science Strategy](#) through 2024. D. Borggaard noted that many NMFS staff contributed to the updates, and thanked C. Grewal for all her help, and NMFS would continue to keep the NEIT informed of these efforts and any future outcomes. M. Baumgartner asked if GARFO and the ALWTRT required any NEIT support to consider the direction of on-demand gear research in the wake of the CAA, which has paused some ALWTRP rulemaking for several years. D. Borggaard noted she would follow up with the TRT coordinator to determine if that was something needed for the NEIT to pursue.

D. Borggaard also noted that there may be a number of upcoming NMFS developments regarding North Atlantic right whales that may be of interest to the team, and that she would coordinate with Erin to schedule webinars for the team on various topics as they were released. For example, Dan Linden, a Population Evaluation Tool (PET) subgroup member from the Northeast Fisheries Science Center, joined remotely to provide a brief update on the Population Viability Analysis (PVA) that the subgroup is developing with the intent to provide the team with more information via webinar in the near future.

Mike Henry, the Acting Assistant Director of the Office of Law Enforcement (OLE)'s Northeast Enforcement Division, provided an update on recent right whale-related enforcement efforts to the team. He noted that enforcing right whale regulations is a regional priority for OLE, and that they have numerous efforts to enforce the vessel speed rule and the ALWTRP. He described operations and provided investigative updates from cases pertaining to the vessel speed rule¹, and detailed how OLE works with partners from the Coast Guard and through Joint Enforcement Agreements with state law enforcement. This included several new resources that OLE has invested in to investigate gear and vessel speeds². Mike noted that OLE is continuing to invest in this technology to enforce right whale regulations, especially in preparation for the upcoming final vessel speed rule, and that OLE and their partnerships with other law enforcement entities are important for the use of all of these tools. W. McLellan mentioned that in addition to current law enforcement activities for right whales, there has been increasing concern for large whale necropsy

¹ For example, see NOAA Office of Law Enforcement "[Council report - Second Quarter, FY 2023](#)". As noted in these reports, "OLE does not release information on any ongoing or open investigations."

² For example, see "North Atlantic Right Whale Enforcement Efforts" in the "[The NOAA Fisheries Navigator](#)".

teams who have been occasionally threatened on the beach by members of the public. Mike noted that he was aware of the issue and that JEA partners and OLE officers are engaged with stranding networks and are on-hand to document threats and monitor the scene. The team reviewed NARW mortalities to date and discussed mortality investigations with M. Henry, including the case of right whale #3343, a mortality determined to stem from a catastrophic blunt force traumatic injury consistent with a vessel strike. M. Henry noted that OLE was investigating the case. The team expressed interest in this case, including examining any available hindcast model. Later in the meeting, the team referred back to M. Henry's updates, concluding that they found it very valuable to hear about OLE's right whale related work and that it is highly important for GARFO to continue to support OLE as more right whale regulations are developed and implemented. W. McLellan also noted that the NEIT should recognize OLE's support of stranding investigations, especially as that is a relatively new responsibility that they have taken on. They determined that they would provide a recommendation to GARFO to provide much needed resources and assistance to OLE and their JEA partners whenever feasible, pending D. Wiley's consensus agreement.

D. Cholewiak provided various updates from the NEFSC. She announced that the NEFSC and the North Atlantic Right Whale Consortium would begin producing just one population estimate a year rather than two separate estimates at two different times of the year. Going forward, the population estimate will be reported in a NOAA Tech Memo released ahead of the Consortium meeting in late October that is then cited in the annual North Atlantic Right Whale Report Card. Other NEFSC updates included aerial, vessel, and acoustic based survey effort over the past year, plans for upcoming surveys, Decision Support Tool updates, developments towards a five-year Health Assessment Strategy, and other research projects (e.g., using geospatial AI to detect right whales, suction cup tagging via drones etc.).

K. Shervanick provided updates from the Southeast Regional Office (SERO) and the Southeast Implementation Team (SEIT). Barb Zoodsma, the previous SEIT Liaison, retired in December 2022 and Kara will be the new SEIT Liaison. In addition to Kara, Clay George joined SERO as the Large Whale Recovery Coordinator in the spring. Clay was previously a member of the SEIT and the ALWTRT. The SEIT held an in-person meeting in May to discuss updates after the 2022-2023 calving season.

In addition to NMFS updates on the current status of North Atlantic right whales, W. McLellan provided a detailed update on two known right whale mortalities between December 2022 (when the most recent previous NEIT meeting took place) and July 2023.

A number of team members provided detailed updates per the draft agenda. Massachusetts DMF provided an overview of their Gear Retrieval Program in the MA Restricted Area over the 2022 and 2023 seasons. Notably, DMF also brought a recent tentative determination by

Massachusetts Department of Environmental Protection (MADEP) to deny a surface water discharge permit modification for the Pilgrim Power Plant to the team's attention. The team discussed the potential power plant discharge in two webinars with the Nuclear Regulatory Commission and the Environmental Protection Agency this spring after hearing about it initially from D. Wiley at the December 2022 meeting. This update from the state of Massachusetts was commended by the team, who determined thereafter that they may now table that topic pending any further updates from the state or from D. Wiley, who was unable to attend the meeting. Maine DMR announced that they will now have 100% harvester reporting from the lobster fishery, which will likely bump up reports with additional data. They also described recent gear research undertakings and the State's proposal for a research lease for floating offshore wind turbines in the Gulf of Maine. Many of the state representatives provided information on the funding received through the Consolidated Appropriations Act (CAA), which was divided for each state through the Atlantic States Marine Fisheries Commission.

The U.S. Navy familiarized the team with their website on [marine species monitoring projects](#), which lists all active marine species monitoring projects in the Atlantic and includes blog posts on recent monitoring operations. Updates from Woods Hole Oceanographic Institute (WHOI) centered on passive acoustic monitoring buoy and glider placement along the eastern seaboard, as well as work on gear location marking and interoperability issues with on-demand fishing. BOEM provided an update on offshore wind farm lease areas in the Atlantic, including where each area was in the leasing, permitting, and development process, and an update on the draft [BOEM and NOAA Fisheries North Atlantic Right Whale and Offshore Wind Strategy](#). Fisheries and Oceans Canada (DFO) and Transport Canada (TC) provided updates to the team on the various recovery activities occurring in Canada, such as right whale surveillance efforts and current measures for fishery and vessel traffic management.

NEIT business consisted of revisiting the team activities tracker, the NEIT public email account activity, and discussing potential winter meeting dates. The winter NEIT meeting will likely take place sometime in January or February and may be in-person or via webinar, but the team is likely to convene for some topic-based webinars before the full winter meeting (e.g., in the fall). The winter meeting will focus on agenda items, including those that the team did not get to during this meeting, such as evaluating the final vessel speed rule if released before the meeting date, revisiting the team's top priorities, and priority planning for 2024-2028.

NMFS Leadership Visit

At the conclusion of Day 1, the team heard from Michael Pentony, the GARFO Regional Administrator, and Sam Rauch, the Deputy Assistant Administrator for Regulatory

Programs. Both were able to join the team in-person prior to attending the North Atlantic Right Whale Partner in the Spotlight award presentation at the Massachusetts Statehouse. Both reiterated the importance of the team and thanked members for their partnership and actions thus far to promote the recovery of right whales. M. Pentony acknowledged the team's recent accomplishments, including providing input on the North Atlantic Right Whale Species in the Spotlight Action Plan.

C. Focused Discussions

Offshore Wind Development Discussion

The team held a webinar in March to hear more about the offshore wind energy industry and its potential impacts on right whales in their habitat from NMFS and BOEM, which stemmed from initial presentations and discussions at the December 2022 meeting. As a follow up to the presentations provided at the March webinar by Jaclyn Daly at NMFS Headquarters (on the permitting process under the MMPA) and Desray Reeb at BOEM (on the mitigation and monitoring sections of the BOEM/NOAA Draft NARW and Offshore Wind Strategy not addressed in the MMPA presentation), the team discussed this topic and potential options for providing recommendations to GARFO. E. Summers provided a quick recap of the content of the March webinar presentations. D. Borggaard and D. Reeb reemphasized the ability of the team to continue to provide comments on the BOEM and NOAA Fisheries North Atlantic Right Whale and Offshore Wind Strategy after it is released, as the intention will be for the Strategy to be a living document that is updated with new information as an understanding of interactions between right whales and offshore wind farms develops further. The team discussed recent news from the Vineyard Wind construction site, specifically, that initial pile driving activities were louder than permitted and developers were required to include a second bubble curtain to adequately quiet the noise generated. D. Reeb noted that this knowledge would be used to inform future Construction and Operation Plans now that the actual level of noise generated is better understood. M. Baumgartner explained that current monitoring practices prior to pile driving activities may miss whales moving through an area because current passive acoustic monitoring clearance zones are spatially and temporally small, so the chances of detection are small. The team considered the potential for providing recommendations on monitoring strategies or methodology for offshore wind projects going forward, including research ideas to determine detection changes with range, monitoring via necropsy response, and data management and analysis. The team also discussed developing monitoring strategies that may also translate to other threats, such as fisheries or dredging projects. E. Summers determined that the Monitoring Working Group (which based on discussions would include the full team initially) would be reconvened to continue conversations on monitoring strategies, with a focus on offshore wind. The team concluded that they would review the most recent Incidental Harassment Authorization (IHA) issued by NMFS and work to provide comments on the next draft IHA released for public

comment. D. Reeb noted that she may also be able to provide another webinar with BOEM staff to talk about the current practices and research happening for acoustic monitoring, and would follow up with the team. D. Borggaard will follow up with J. Daly (as a follow-up to her presentation to the NEIT and discussions at the meeting) to relay the NEIT's interest in commenting on the next IHA when it is available.

Aquaculture Presentation and Discussion

Ellen Keane, the NMFS GARFO Protected Resources Division Aquaculture Coordinator, joined the meeting remotely to provide the team with an update on regional aquaculture development since an aquaculture webinar was held for the team in 2019. She also introduced David Fredriksson, Professor of Ocean Engineering at the University of New Hampshire, who attended the session in-person to provide the team with an overview of research underway to reduce entanglement risk for large whales in aquaculture gear. The team had several questions on the feasibility of alternative gear structures and modifications, and were interested in the innovation potential of this emerging industry. D. Borggaard noted that GARFO is interested in any feedback from the team on potential priorities for aquaculture research before August 31 if there was any at this time, but that feedback would be welcomed beyond that date as well. E. Keane also let the team know that aquaculture is currently a Category III on the List of Fisheries under the Marine Mammal Protection Act. The team was interested in the potential for aquaculture to be upgraded in 2024 to Category II based on the equivalency of vertical and horizontal lines in the water column, which would make it eligible to comply with the Take Reduction Plan. They determined that they would make a recommendation to GARFO PRD pending D. Wiley's consensus regarding the List of Fisheries Category, and would continue to discuss ideas for recommendations on innovation for gear structures and modifications via email.

Ecosystem and Climate Presentations and Discussion

During the NEIT's December 2022 meeting, the team discussed priorities on emerging risks and kicked off conversations on offshore wind development in the Greater Atlantic Region. Climate and ecosystem changes were other risks that the team were interested in considering, so Dr. Vince Saba and Dr. Sarah Gaichas from the NEFSC joined the team to provide presentations on Northeast U.S. Climate and Ecosystem work underway, respectively. V. Saba's presentation focused on climate modeling efforts at the NEFSC, including projections of the impacts of ocean warming on species such as *Calanus finmarchicus* and habitat models for species such as American lobster, and efforts such as the Northeast Regional Action Plan for 2022-2024, which provides regional actions based on the objectives laid out in the National Climate Science Strategy³. S. Gaichas presented on

³ See the [National Climate Action Plan](#) for more information on national objectives and links for regional action plans.

the [State of the Ecosystem report](#), which is put together by the NEFSC each year to provide the Fishery Management Councils with information on the ecosystem as a whole to help include climate and ecosystem information in management decision processes. She also introduced species conceptual models that show which environmental indicators are positive or negative for each life stage, and noted that it is something that could be done for North Atlantic right whales. The team did not fully determine the path forward for a species conceptual model, but they were interested in a figure presented to show right whale hotspot persistence overlaid with offshore wind lease areas, since offshore wind development is a potential risk to meeting fishery management objectives that the Atlantic States Marine Fisheries Commission has flagged for monitoring. The team was interested in who developed the figure and where the model had come from and determined that the Duke Roberts model was the underlying model, which excludes data from important habitats such as Cape Cod Bay. The NEIT considered that the Commission may not be fully aware of Roberts model limitations and that it would be good practice to have any right whale related figures or models examined by NEFSC right whale experts to ensure they are properly labeled and well understood before being presented to the Council. They determined that this would be a good recommendation to GARFO, pending D. Wiley's consensus.

Gulf of Maine Monitoring Discussion

D. Cholewiak asked the team for input on an aerial survey design in the Gulf of Maine to help fill data gaps in the Duke Roberts model, which shows right whale abundance and distribution across the species range and is often used in management decisions, including for the TRT Decision Support Tool and the proposed vessel speed rule. The design would also address having broadscale monitoring in the Gulf of Maine. The initial plan designed by the NEFSC is for a 12 month contract, but E. Summers mentioned that with CAA funds, the state of Maine would be willing to continue the survey effort for additional years to build up the dataset. The NEFSC design works to cover areas not covered by the New England Aquarium's aerial surveys, and is maximized to compliment that effort and for safety and consistency. E. Summers noted that any additional data for the Gulf of Maine would be helpful for understanding abundance and distribution in that area. D. Cholewiak noted that this work would also be overlaid with acoustic effort from the state of Maine and glider work in the area. The team liked the overall design of the proposal although some members noted that the project would be most effective over a longer duration and so hoped that Maine could ensure continuance. E. Summers noted that Maine would try to reflect this in the state of Maine's forthcoming request for continuity of funding. D. Cholewiak told the team to reach out to her with any additional thoughts or ideas. The team briefly discussed tracking aerial survey efforts across organizations, and D. Cholewiak noted that the Atlantic States Marine Fisheries Commission had reached out to discuss coordination. She will provide more information to state representatives and others after

that discussion takes place to inform their efforts. W. McLellan brought up better supporting the Aquarium's identification efforts at the end of each surveillance season, perhaps by having individual aerial survey teams or their organizations doing more of the identification before sending data to the Aquarium catalog, or with a contractor or intern position. The team introduced the idea of considering these coordination and streamlining efforts in the reformed Monitoring Working Group.

D. Consensus Actions

- The team agreed to table the Pilgrim Power Plant discussion pending additional input from D. Wiley. Other information supplied by B. Glenn from MADEP may also inform future discussions on this topic.
- E. Summers will reconvene the Monitoring Working Group with the full team to begin to discuss developing a possible recommendation to GARFO on Offshore Wind Development monitoring analyses and options for future monitoring for upcoming IHAs based on lessons learned from early development. The Working Group will also continue to provide any feedback that is requested on the Gulf of Maine Monitoring scheme that D. Cholewiak and E. Summers presented at the meeting.

E. Consensus Recommendations

- The NEIT emphasizes the importance of enforcement efforts and recommends that any available resources be considered to contribute to support NOAA OLE and other enforcement efforts as the final Vessel Speed Rule is released, on-demand gear development is moved forward, and stranding events continue to require support to obtain mortality information. All three initiatives will require significant additional personnel and resource investments from OLE and partners.
- The NEIT recommends that NMFS consider revisiting the Category III listing for aquaculture on the NMFS MMPA List of Fisheries, on the basis that aquaculture gear is equivalent in risk to the vertical and horizontal line structure of other fishing gear (e.g., gillnet) listed higher on the List of Fisheries.
- The NEIT recommends that any portions of climate and ecosystem documents with North Atlantic right whale species status information produced by the NEFSC for the benefit of the Fishery Management Councils should be reviewed by NMFS species experts to ensure consistency with other right whale information prior to release to the Councils.

V. Next Steps

- D. Borggaard will coordinate with E. Summers to provide webinars on the NMFS Vessel Speed Rule (many NEIT members suggested an NEIT focused discussion), budget, and the PVA when those items are more widely available later this year.

- D. Borggaard will follow up with the NMFS ALWTRT Coordinator and let the NEIT know if it would be beneficial for the team to consider discussing any aspects of on-demand fishing research to support the ALWTRT efforts (e.g., geolocation).
- D. Borggaard will work with M. Henry to distribute information from the February 2023 vessel strike to the team, including any publicly available hindcast model, when available.
- B. Glenn will follow up with the team on any future advancements of the Pilgrim Power Plant determination by MADEP, including any understanding of how the determination to deny was reached.
- D. Reeb will reach out to Erica Staaterman for a potential webinar to discuss the initiatives happening with acoustics and monitoring within BOEM to better inform the Monitoring Working Group.
- Based on the NEIT's continued interest in reviewing best practices related to emerging threats such as wind and aquaculture, GARFO will provide the team with more information on current guidance for agencies. For example, the [BOEM and NOAA Fisheries North Atlantic Right Whale and Offshore Wind Strategy](#), IHA and Section 7 consultations will be considered and facilitated by the following:
 - D. Reeb and D. Borggaard will keep the NEIT updated on the status of the NARW and OSW Strategy.
 - D. Borggaard will check in with Jaclyn Daly regarding NEIT's interest in reviewing the most recent IHA and develop possible recommendations for the next IHA comment period. D. Borggaard and the NMFS staff will pull out relevant sections of the most recent IHA for the team to help with this effort.
 - E. Summers will be in touch with the team for follow up discussion via email on other potential recommendations for offshore aquaculture development.
 - D. Borggaard will make recent GARFO Section 7 consultations for offshore wind and aquaculture in the region available for review of best practices.
- E. Summers will get consensus from D. Wiley on the listed actions, recommendations and next steps that stemmed from this meeting.
- E. Summers will send the team a poll for dates for the winter meeting from January to mid-February (before February 19).

Appendix A. Draft Meeting Agenda*

Day 1: General Updates and NMFS Leadership Visit

DAY 1			
Time	Topic	Lead(s)	Length
0830	Room is open; Plan adequate time to start promptly at 0900	--	
0900	Welcome, Introduction and Getting Organized	Diane Borggaard, Erin Summers	60 mins
1000	NMFS Updates	NMFS	60 mins
1100	BREAK	All	15 mins
1115	NMFS Updates (continued)	NMFS	45 mins
1200	LUNCH BREAK	All	60 mins
1300	RW Mortality Update	Bill McLellan	30 mins
1330	Team Member Round Robin Updates	All	75 mins
1445	BREAK	All	15 mins
1500	NMFS Leadership visit	NMFS	30 mins
1530	Adjourn		
1600	Partner in the Spotlight Award Presentation: MADMF	Massachusetts State House	60 mins

Day 2: Wind, Aquaculture, and Climate Presentations and Discussion

DAY 2			
Time	Topic	Lead(s)	Length
0830	Room is open; Plan adequate time to start promptly at 0900	--	
0900	Welcome, Recap of Day 1; Overview of Day 2	Diane Borggaard, Erin Summers	15 mins
0915	Wind Webinar Recap and Discussion	All	60 mins
1015	BREAK	All	15 mins
1030	Aquaculture Gear Overview and Technology Development to Reduce Risk to Large Whales	Ellen Keane, GARFO, David Fredriksson, UNH	90 mins
1200	LUNCH BREAK	All	60 mins

1300	Gulf of Maine monitoring (or TBD (e.g. Team Member Round Robin Updates continued))	Dani Cholewiak and Erin Summers	120 mins
1445	BREAK	All	15 mins
1500	NMFS Northeast U.S. Climate Presentation	Vince Saba, NEFSC	60 mins
1600	Revisit NEIT top priorities	All	50 mins
1700	Daily Wrap Up	Erin Summers, Diane Borggaard	10 mins
	Adjourn		

Day 3: Ecosystem Presentation and Wrap Up on Other Discussion Topics

Time	DAY 3 Topic	Lead(s)	Length
0730	Room is open; Plan adequate time to start promptly at 0800	--	
0800	Welcome, Recap of Day 2; Overview of Day 3	Diane Borggaard, Erin Summers	15 mins
0815	GOM Monitoring, Wrap up Pilgrim PP Discussion Potential Priorities Table Update	Erin Summers, Diane Borggaard, Corie Grewal	45 mins
0900	Wind and/or Pilgrim wastewater continued discussion	All	45 mins
0945	BREAK	All	15 mins
1000	NMFS Northeast U.S. Ecosystem Presentation	Sarah Gaichas, NEFSC	60 mins
1100	Fall/Winter Meeting Planning and Dates	Erin Summers, Diane Borggaard	45 mins
1145	Daily Wrap Up	Erin Summers, Diane Borggaard	15 mins
1200	Adjourn		

* Times listed are approximate; the order in which these items will be taken is subject to change; other items may be added as necessary. Agenda items may be adjusted to allow more time for various unfinished topical discussions, if necessary.