



REQUEST FOR PROPOSALS

for

PASSIVE ACOUSTIC MONITORING FOR NORTH ATLANTIC RIGHT WHALES

October 18, 2024

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Introduction

The Atlantic States Marine Fisheries Commission (Commission or ASMFC) will be issuing approximately \$1,225,000 in grants to fund the use of bottom-mounted archival passive acoustic monitoring to better understand North Atlantic right whale spatiotemporal distribution. This funding is for a one-year study period and may be extended up to three years contingent on Congressional appropriation.

ASMFC releases this Request for Proposals (RFP) to identify a qualified vendor to purchase, assemble, deploy, maintain, process and share the resulting data, and communicate the information from six bottom-mounted archival passive acoustic monitoring devices off of New York and New Jersey's coasts. ASMFC may extend and/or add funding to the solicitation should further Congressional appropriations become available.

About ASMFC

The Commission was formed in 1942 by the 15 Atlantic coastal states to assist in managing and conserving their shared coastal fishery resources. The Commission's mission is to promote cooperative management of fisheries – marine, shell, and diadromous – of the Atlantic coast of the US by the protection and enhancement of such fisheries, and by the avoidance of physical waste of the fisheries from any cause.

The Commission serves as a deliberative body of the Atlantic coastal states, coordinating the conservation and management of 27 nearshore fish species. The Commission is the primary management entity for the American lobster, the East Coast's most valuable single species fishery.

Supporting our fisheries management process are programs focused on fisheries science, habitat conservation, and law enforcement. Through these programs, the states collectively ensure the sound conservation and management of their shared coastal fishery resources and the resulting benefits to the fishing and non-fishing public.

The Commission is a funded through federal grants and state dues, with the majority of our budget dedicated to working with the 15 Atlantic coast states on cooperative fisheries management. Please visit <https://www.asmfc.org/> for more information about the Commission.

Project Background

The New York Bight is a vital migration corridor and foraging area for the critically endangered North Atlantic right whale. This project will use bottom-mounted archival passive acoustic monitoring to better understand North Atlantic right whale spatiotemporal distribution. This is part of a larger effort by the states and federal government to better inform future management measures, reducing entanglements and minimizing impacts to pot/trap fisheries, including with the lobster fishery.

In fiscal year 2023, Congress appropriated funds that could be used to monitor the North Atlantic right whale and conduct research to inform future management actions, including potential

modifications to the Atlantic Large Whale Take Reduction Plan (ALWTRP) related to fixed gear including Atlantic mixed species trap/pot fisheries.

Purpose

The purpose of this project is to generate data on the North Atlantic right whale vocal behavior and spatiotemporal distribution to inform future management actions on seasonal area closures. This project is part of a larger effort by the states and federal government to improve data inputs and reduce uncertainty in the existing right whale decision support tool. With a better understanding of risk along the East Coast, future fisheries management actions reducing entanglements and minimizing regulatory impacts to pot/trap fisheries may be possible.

Scope of Work

The awardee shall follow current best management practices as outlined by NOAA's Minimum Recommendations for Use of Passive Acoustic Listening Systems in Offshore Wind Energy Development and Mitigation Programs by [Van Parijs et al.](#), and the [Regional Wildlife Science Center's Long-term and archival passive acoustic monitoring \(PAM\) data, Data Management & Storage Best Practices document](#), wherever applicable in this project.

Passive Acoustic Monitoring Requirements

Acoustic data shall be collected using six bottom-mounted archival passive acoustic monitoring devices. Knowledgeable and experienced personnel of the awardee shall design, operate, and oversee the deployment and maintenance of each passive acoustic monitoring device.

There will be two sets of devices for every deployment location to allow for hot swapping, the replacement of devices without a loss of recording continuity. All devices will use a sampling rate that is sufficient for recording North Atlantic right whale vocal activity (e.g., upcalls and gun shots). The awardee shall follow the Passive Acoustic Monitoring System and Data Analysis Requirements recommended by NOAA (Van Parijs et al. 2021). This includes recommendations on reducing self-noise in the mooring system, and calibration of the system to ensure adequate sensitivity in the finalized locations. Recorders shall sample continuously and will be routinely serviced at a frequency of every four months via hot swapping. The awardee shall be responsible for the cost of replacing any lost receivers and mooring hardware. After a device has been pulled from the ocean, its data will be downloaded and analyzed, and the hardware will be refurbished.

Locations

Proposed locations are listed in the geographic scope section of this RFP. Precise locations should be informed by site-specific conditions and expertise. In planning for precise recorder locations, the awardee will follow the recommendations from Regional Wildlife Science Collaborative's (RWSC) Data Management & Storage Best Practices for Long-term and Archival Passive Acoustic Monitoring Data Best section on minimizing bottom disturbance from underwater mooring systems. The awardee will work with agencies including but not limited to New Jersey Department of Environmental Protection, New York State Department of Environmental Conservation, ASMFC, the RWSC's Marine Mammal Subcommittee, NOAA, BOEM, and the US

Navy to finalize locations. The awardee's proposal shall describe a plan to notify the fishing community of these devices and areas to avoid.

Equipment

The awardee must provide all equipment, supplies, and services needed to carry out this project including all bottom-mounted archival acoustic recorders.

Vessel and Personnel Requirements

The awardee must provide a vessel that is able to deploy and recover bottom-mounted acoustic recorders. The vessel must be at least 65 feet in registered length and seaworthy to at least 100 miles from shore. The vessel's main engine shall be rated at a minimum continuous 450 to 1200 horsepower. The awardee must provide a Captain with a United States Coast Guard (USCG) Masters license with ocean endorsement and appropriate tonnage for the vessel being used for the survey.

The vessel must abide by US Coast Guard (USCG) safety rules effective September 15, 1991, and as provided for in 46 CFR Part 28 of the Commercial Fishing Industry Vessel Safety Act of 1988. This includes USCG inspection and that the vessel be equipped with appropriate safety features and equipment. The vessel must pass a USCG safety examination prior to the start of the project and maintain currency of inspection throughout the course of the project.

The vessel must have all required emergency instructions clearly posted. All crew and scientists must take a sea safety training course prior to the start of the field work. Training must be current (within the last five years). The awardee shall provide USCG-approved immersion suits for all vessel personnel who do not have their own; they will also provide USCG-approved life jackets. The captain of the vessel is required to conduct safety drills and instruction at least once a month when cruises are taking place; this includes all individuals sailing donning their immersion suits. Safety orientations must be given at the beginning of each leg of the cruise.

In addition to having all USCG-required safety equipment on board, the vessel will have functional redundant GPS navigation systems and a functional marine radar system. The vessel captain(s) must be familiar with the operation of all said equipment. The vessel must also have on board a functional cellular phone and VHF radio.

Any exceptions to the vessel and personnel requirements should be noted in the proposal.

Data Collection

The awardee will integrate the NOAA and BOEM Minimum Recommendations for Use of Passive Acoustic Listening Systems in Offshore Wind Energy Development and Mitigation Programs by Van Parijs et al., 2021. Data shall be downloaded, while onshore, from the receivers after they have been swapped out.

Data Analysis

Passive acoustic monitoring data analysis for North Atlantic right whale acoustic presence should occur through the manual processing of acoustic data by experts familiar with North Atlantic right

whale vocalizations, or by using a peer reviewed automatic detection algorithm for North Atlantic right whale vocalizations in combination with human verification of true positives (i.e., North Atlantic right whale vocalizations) and false positives (i.e., sounds that are not North Atlantic right whale vocalizations). A performance evaluation of the automatic detection algorithm, using either precision recall or receiver operating characteristic (ROC) curves, should also be conducted to quantify the detectors performance. This performance analysis should be included in the final report.

Data analysis products shall include maps, tables and GIS files organized in a geodatabase. For each year of the project the awardee shall:

- Analyze each receiver for NARW vocalizations and summarize detections as hourly, daily, monthly, seasonal, and annual presence.
- Report the number and percentage of days per deployment (calendar days and recorded days) in which at least one NARW call was heard.
- For each month (12) and season (4), describe the overall cumulative pattern of daily detections.
- Describe the spatial distribution for NARWs by month, season, and survey year.
- Estimate acoustic detection ranges for NARWs at each receiver location and calculate ambient noise levels to evaluate the potential for acoustic masking.

Data Storage and Sharing

The awardee shall follow all the recommendations for data management and storage best practices as outlined in RWSC'S Long-term and Archival Passive Acoustic Monitoring (PAM) Data document. The awardee shall develop a data management plan consistent with these recommendations. The plan will include an outline for a system of data storage, sharing and submission for all data and products. The plan will also include information on the software/hardware used, file names and file structure for these items. The data management plan shall be completed prior to the first recorder servicing.

The awardee shall use [NOAA's Passive Acoustic Reporting System Templates for data](#). All acoustic data, metadata, detection time series data, summary data, detection statistics and visualizations shall be uploaded to NOAA's National Centers for Environmental Information (NCEI) 120 days after the end of the survey year. NARW detection data and metadata will be uploaded to NOAA Fisheries Northeast Fisheries Science Center's Passive Acoustic Cetacean Map (PACM) 120 days after the end of the survey year.

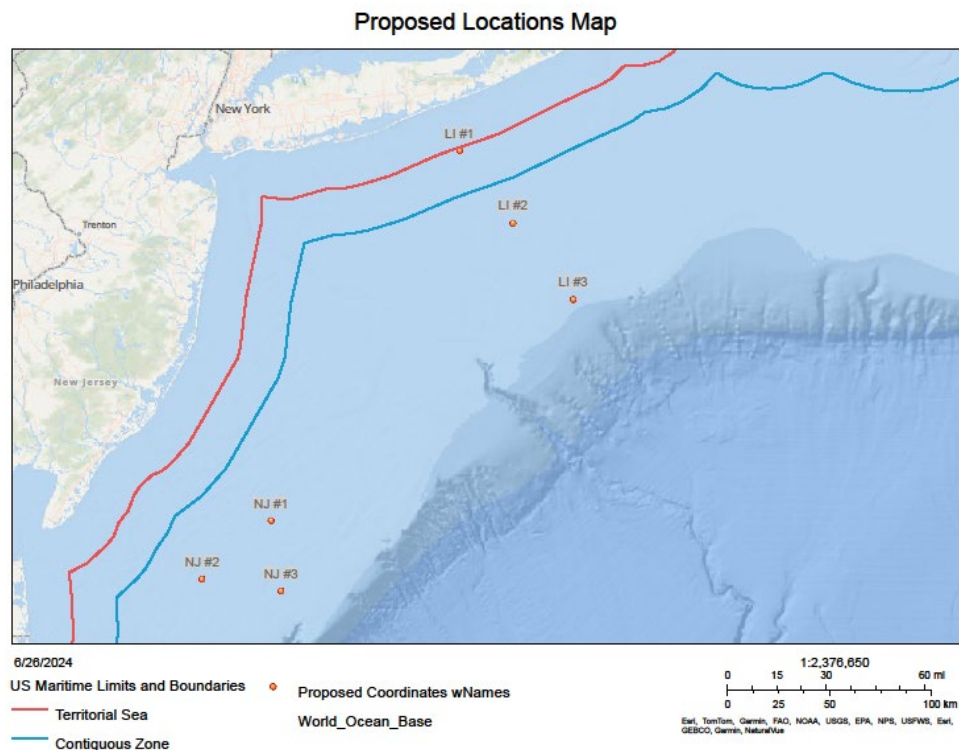
Geographic Scope

Six total passive acoustic monitoring devices will be deployed in the New York Bight. Three off the coast of New Jersey and three off of New York's Long Island. Below are approximate locations for the six receivers. These locations were chosen in consultation with NOAA Fisheries, with the goal of better understanding NARW spatiotemporal distribution. These locations avoid current offshore wind energy lease areas and occur at chokepoints of Van Parijs et al.'s 40x40 km grid (see Supplementary Figure SI within Van Parijs et al. 2021). If the proposer believes there are locations that better fit these criteria with the project goals in mind, they may suggest those

changes, with justification, in their proposal.

Table 1: Names and approximate coordinates in decimal degrees for the six passive acoustic monitoring devices being proposed.

Name	Latitude	Longitude
LI #1	-72.5851	40.58477
LI #2	-72.2791	40.27084
LI #3	-71.9356	39.93752
NJ #1	-73.6634	38.96366
NJ #2	-74.0582	38.70407
NJ #3	-73.607	38.65204



Map 1: Proposed approximate locations for the six passive acoustic monitoring devices (orange dots). The US Territorial Sea appears as a red line, and the Contiguous Zone appears as a blue line.

Basic Timeline

An awardee’s proposal should anticipate an immediate start date following selection and completion of all necessary documentation (e.g., contract with ASMFC) to maximize data available to NOAA’s ALWTRP. The awardee shall hot swap the devices every four months, at a minimum, depending on device data storage rates, weather and awardee capacity. Further deadlines are listed in the Deliverables section below.

The awardee will bill ASMFC on a monthly basis for costs incurred within that month.

Deliverables

Output #	Product	Details	Due Date
1	Communications Plan	<ul style="list-style-type: none"> • Protocol used throughout all aspects of the project for communication between ASMFC and the awardee. Includes phone numbers and emails for the primary point of contact for ASMFC and the awardee as well as backup contacts • Plan for notifying the fishing community of these devices and areas to avoid 	Before the initial deployment
2	Data Management Plan	<ul style="list-style-type: none"> • An outline for data storage, sharing, and submission for all raw data and data products, including software/hardware used, file names, and file structure • Includes a plan for data submission to NOAA NEFSC Passive Acoustic Research Group and NOAA National Center for Environmental Information Passive Acoustic Data Archive 	Before the first retrieval trip
3	Trip Reports	<ul style="list-style-type: none"> • Placement and retrieval of recorders (date, coordinates, depth, unit number, etc.) • Any problems encountered • Map of receiver locations 	Within 30 days of the completion of each trip
5	Interim Reports	<ul style="list-style-type: none"> • Report of all activities conducted under this funding within each window • ASMFC's six-month reporting schedule for these funds spans October 1st, 2024, through March 31st, 2025, and April 1st, 2025 through Sept 30th, 2025. 	March 21 st , 2025, and September 20 th , 2025.
4	Data	<ul style="list-style-type: none"> • Raw acoustic data • QA/QCed acoustic data and event data • Spreadsheet containing deployment and retrieval dates and times, unit number, receiver coordinates, etc. • Maps and GIS files used to create the maps, including a geodatabase with feature classes representing sampling effort and all species detections • A copy of the Passive Acoustic Cetacean Map (PACM) submission files • A summary of the NCEI Passive Acoustic Data Archive submission 	Six months after retrieval.

6	Final Report	<ul style="list-style-type: none"> • Dates of receiver deployment and recovery and maps of receiver locations • Any problems encountered • (If applicable) Include the performance evaluation of the automatic detection algorithm, using either precision recall or ROC curves • Summary of species detected by date (day, month, season) and by receiver • Daily, monthly, and seasonal presence of NARWs— number and percentage of days per deployment in which at least one whale call was heard; overall pattern of daily detections for each month and season; spatial distribution of the calls on each receiver for month and season • Analysis of interannual variability of the parameters above • Calculations of detector performance analysis, including ambient noise, and acoustic masking potential • Maps of spatial distribution of North Atlantic right whales encountered by month (12) and season (4) • All final report figures and tables shall include a photo version of the file (e.g., PNG or JPG) 	Six months after the end of the survey year
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Eligible Applicants

Researchers at U.S. academic institutions, research laboratories, for-profit companies/firms, nonprofits, and state agencies are all eligible. Proposals from foreign entities are not eligible. Proposals involving multiple investigators are welcome. U.S. federal government agencies, including Regional Fishery Management Councils, are not eligible to receive funding through this solicitation. Federal staff may be collaborators on proposed projects, as long as they are not compensated for their contribution to the project.

Proposal Instructions

Applicants must submit proposals via email to Alexander Law, Legislative Program Coordinator, at alaw@asmfc.org by **11:59 PM EST on November 15, 2024**. Proposal PDFs should be searchable and should be created by direct conversion and should not be scanned. For identification purposes, all electronic files must be named using the proposer’s entity name in the title of the document. The proposal should include all information listed in the Required Elements section. Any incomplete proposal may be subject to disqualification from consideration. Proposal format must be in a format with at least 12-point font, single spaced with 1 inch page margins. Submissions should be brief as this will assist reviewers and program staff in dealing effectively with proposals.

Required Elements

1. Title
2. Investigator(s) Name(s), Institution(s) and Contact Information
3. Proposal Description
 - a. Provide a clear presentation of the proposed plan and associated rationale for the proposed work.
 - b. Methodology: Describe what methodologies will be applied to carry out the proposed work and how will they be implemented (i.e., describe study design, a detailed description of the experimental protocol, laboratory or field activities, spatial and temporal extent of any field activities, data to be collected, quality assurance procedures, etc.). Include which personnel listed in Expertise (see below) will be responsible for all activities. Proposals should include how applicant(s) will coordinate with relevant national, regional, state or local research initiatives, including coordination with the Regional Wildlife Science Collaborative and fishing the community.
 - c. Schedule of activities: Provide a schedule for the key elements of the proposed work, including in what sequence they occur and approximately how long they will take, with hard limits on sampling, sequence of activities, and approximate duration. Any changes to this schedule shall be approved through a contract amendment.
 - d. Expected Outcomes: Describe the expected outcomes of the proposed work, including mechanisms for evaluating success. Include a description of the limitations of the project.
4. Budget
 - a. Itemized budget and justification. The budget must be itemized as shown below and associated justification provided. The Commission has the option to limit award recipient indirect cost recovery at 10%. Applicants may request a copy of the Commission’s indirect policy if needed for application materials.

Categories	*TIME OF STUDY*
Personnel (Hourly rate x hours OR % of time)	\$
Fringe Benefits	\$
Travel	\$
Equipment	\$
Supplies	\$
Contractual	\$
Construction	\$
Other	\$
Direct Charges Total	\$
Indirect Charges	\$
Totals	\$ (Max)

5. Expertise

- a. The Principal Investigator (PI)(s) and all key personnel should be identified. Applicant(s) must provide abridged CV(s) for all key personnel at the end of the proposal, which must include education, positions held, and record of relevant publications, prior funding (including dollar amounts), and any prior experience conducting the type of work proposed. Applicant(s) must outline PI responsibilities by connecting the expertise of the PI(s) to the tasks laid out in the proposed research section (i.e., which investigator(s) will be addressing which tasks).

6. Resources

- a. Applicant(s) must demonstrate possession of or access to sufficient resources to successfully complete the proposed work.

Payment Schedule for Awarded Contract

Awardee will bill ASMFC on a monthly basis for costs incurred within that month.

Evaluation Criteria

All proposals received in accordance with the RFP instructions will be evaluated to determine if they are complete and meet the specified requirements. All proposals which meet the above criterion will be reviewed, analyzed, evaluated, and scored in accordance with the criteria described below. During the evaluation period, ASMFC may request additional information in order to fairly evaluate a proposal. If such information is required, the proposer will be notified in writing (or by email) and will be permitted a reasonable period of time to respond. By use of numerical and narrative scoring techniques, proposals will be evaluated by the Proposal Review Committee against the factors specified below. The relative weights of the criteria – based on a 100 point scale – are shown in parentheses. The evaluation criteria are:

1. Proposal Description (40 Points)

- a. Plan: Is the plan for conducting the proposed work clearly presented, well-argued, and well-reasoned? How comprehensive, realistic, and explicit is the Proposal with respect to the project objectives and proposal requirements?
- b. Methodology: Do the methodologies that the PIs propose seem reasonable and based on best practice? Is there a clear plan for implementation of these methods (i.e., a study design, a detailed description of the experimental protocol, quality assurance procedures, a description of the data analysis and submission)? How suitable are the proposed project methods and overall research design for meeting the project objectives and yielding expected results? Are the methods outlined in detail and clearly designed to meet the project objectives? Proposals should include how applicant(s) will coordinate with relevant national, regional, state or local research initiatives who are conducting or overseeing similar work, including coordination with the Regional Wildlife Science Collaborative.
- c. Schedule of activities: what are the elements/major project milestone of this proposal, in what sequence will they occur, and approximately how long will they take? Is the schedule of activities reasonable and based on best practices?
- d. Expected Outcomes: What are the expected outcomes of the proposed work?

Does the plan include a mechanism for evaluating the success of the proposed work? Are specific measurable targets of success provided where applicable? How promising is the reporting and information transfer plan for successfully using project results to realize the potential benefits of the project? How well does the applicant explain how data and data products will be shared with appropriate regional entities?

2. Budget (30 Points)

- a. Is there a reasonable justification for the budget the applicant(s) request?
- b. Are all cost items explained/justified? Are the overall pricing and hourly rates in line with the rest of the market? Is there a detailed budget provided for the overall project, including sufficient detail in the supporting schedule for each cost element, its description, and amount to justify the budget?

3. Expertise and Resources (30 Points)

- a. Is/are the applicant(s) well qualified to undertake the proposed work? The applicant should include any relevant previous experience related to the proposed study. Does the proposer demonstrate experience in developing and leading a large-scale project and project team with the necessary educational, technical, operations, technology transfer, financing, and administrative experience for successfully completing the project? Are all roles and responsibilities clearly defined? Does the team include partnerships with other research groups? Does the Proposer demonstrate an understanding of the existing NARW research efforts?
- b. Do(es) the applicant(s) have sufficient resources at their disposal to successfully complete the proposed work?

Disclaimer

The RFP does not commit ASMFC to award a contract or to pay any costs incurred during the preparation of the proposal. ASMFC reserves the right to reject any or all of the proposals for completing the work. ASMFC also reserves the right to eliminate the need for the selected applicant to complete one or more tasks, pending the outcome of preceding related tasks or issues, and/or the availability of project partners to complete that task.

Request for Further Information

Please contact Alexander Law, ASMFC Legislative Program Coordinator, at 703.842.0722 or alaw@asmfc.org for questions regarding the request for proposals.

References

- Rekdahl, M., Wall Bell, C., Bell, J., Rice, A., Morse, L., Carduner, J., Davis, G., Staaterman, E., Meyer-Gutbrod, E., & Murray, A. (2022, December 14). Long-term and archival passive acoustic monitoring (PAM) data, Data Management & Storage Best Practices. Data Management & Storage Best Practices for Long-term and Archival Passive Acoustic Monitoring (PAM) Data - Long-term and Archival Passive Acoustic Monitoring (PAM) Data. <https://rwscolab.github.io/pam-data-mgmt/>
- Van Parijs, S. M., Baker, K., Carduner, J., Daly, J., Davis, G. E., Esch, C., Guan, S., Scholik-Schlomer, A., Sisson, N. B., & Staaterman, E. (2021). NOAA and Boem minimum

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