Atlantic States Marine Fisheries Commission

American Lobster Management Board

February 22, 2022
1:00 p.m. – 3:30 p.m.

Link to register for webinar:
https://attendee.gotowebinar.com/register/2930590334961190923 (Webinar ID: 845-804-555)

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Draft Agenda

The times listed are approximate; the order in which these items will be taken is subject to change; other items may be added as necessary.

1. Welcome/Call to Order (*J. McNamee*) 1:00 p.m.

2. Board Consent 1:00 p.m.
   - Approval of Agenda
   - Approval of Proceedings from January 2022

3. Public Comment 1:05 p.m.

4. Consider American Lobster Addendum XXIX on Electronic Vessel Tracking in the Federal American Lobster and Jonah Crab Fisheries for Final Approval 1:15 p.m.
   Final Action
   - Review Management Options and Public Comment Summary *(C. Starks)*
   - Advisory Panel Report (*G. Moore*)
   - Consider Final Approval of Addendum

5. Other Business/Adjourn 3:00 p.m.

Atlantic States Marine Fisheries Commission

DRAFT ADDENDUM XXIX TO AMENDMENT 3 TO THE AMERICAN LOBSTER FISHERY MANAGEMENT PLAN & DRAFT ADDENDUM IV TO THE JONAH CRAB FISHERY MANAGEMENT PLAN FOR PUBLIC COMMENT

Electronic Vessel Tracking for Federal Permit Holders

December 2021

Sustainable and Cooperative Management of Atlantic Coastal Fisheries

American Lobster Draft Addendum XXIX/Jonah Crab Draft Addendum IV for Public Comment

Public Comment Process and Proposed Timeline

In August 2021, the American Lobster Management Board (Board) initiated Draft Addendum XXIX to Amendment 3 to the American Lobster Fishery Management Plan/Addendum IV to the Jonah Crab Fishery Management Plan (abbreviated as Addendum XXIX in this document) to consider implementing electronic tracking requirements for federally-permitted vessels in the American lobster and Jonah crab fishery. The purpose of this action is to collect high resolution spatial and temporal effort data to address a number of challenges facing the fishery, including stock assessment, protected species interactions, marine spatial planning, and offshore enforcement. This document presents background on the Atlantic States Marine Fisheries Commission's management of lobster and Jonah crab, the addendum process and timeline, a statement of the problem, and management measures for public consideration and comment.

The public is encouraged to submit comments regarding the proposed management options in this document at any time during the addendum process. The final date comments will be accepted is **January 31, 2022 at 5:00 p.m**. **EST.** Comments may be submitted by mail, email, or fax. If you have any questions or would like to submit comments, please use the contact information below.

Mail: Caitlin Starks
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1050 N. Highland St. Suite 200A-N
Arlington, VA 22201
Fax: (703) 842-0741

Email: comments@asmfc.org
(Subject line: Lobster Draft Addendum XXIX)

Aug – Nov 2021	Draft Addendum for Public Comment Developed
December 2021	Board Reviews Draft and Makes Necessary Changes
January 2022	Public Comment Period Including Public Hearings
Winter 2022	Board Reviews Public Comment, Selects Management Measures, Final Approval of Addendum XXIX
TBD	Implementation of Addendum XXIX Provisions

American Lobster Draft Addendum XXIX/Jonah Crab Draft Addendum IV for Public Comment

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American Lobster Draft Addendum XXIX/Jonah Crab Draft Addendum IV for Public Comment

1.0 Introduction

The Atlantic States Marine Fisheries Commission (Commission) has coordinated the interstate management of American lobster (*Homarus americanus)* and Jonah crab (*Cancer borealis*) from 0-3 miles offshore since 1996 and 2015, respectively. American lobster is currently managed under Amendment 3 and Addenda I-XXVI to the Fishery Management Plan (FMP). Jonah crab is managed under the Interstate Fishery Management Plan and Addenda I-III. Management authority in the Exclusive Economic Zone (EEZ) from 3-200 miles from shore lies with NOAA Fisheries. The management unit for both species includes all coastal migratory stocks between Maine and Virginia. The management unit encompasses seven Lobster Conservation Management Areas (LCMAs) and two lobster stocks: the Gulf of Maine/Georges Bank (GOM/GBK) stock and the Southern New England (SNE) stock (Figure 1).

The American Lobster Management Board (Board) initiated Draft Addendum XXIX to consider implementing electronic vessel tracking requirements for federally-permitted vessels in the lobster and Jonah crab fisheries to collect location and spatial effort data. For several years, the Board has recognized the critical need for high-resolution spatial and temporal data to characterize effort in the federal American lobster and Jonah crab fisheries. In February 2018, the Board approved Addendum XXVI to improve the spatial resolution of lobster and Jonah crab harvester data to address ongoing marine spatial planning activities and assessment challenges. At the same time, the Board approved a one-year pilot program to test electronic tracking devices in the lobster and Jonah crab fishery. The intent of this pilot program was to identify appropriate tracking devices for use in the fishery and inform a Board decision on whether electronic tracking should be pursued in part, or all, of the lobster and Jonah crab fishery. Simultaneously, the Board supported additional work focusing on data integration and hardware testing. These projects lay the groundwork for implementing electronic tracking in the fishing fleet.

Based on recommendations from a work group comprising representatives from NOAA Fisheries, state and federal law enforcement, and members of the Board, Draft Addendum XXIX was initiated to consider requirements for electronic vessel tracking for federally-permitted vessels in the lobster and Jonah crab fishery under the authority of the Atlantic Coastal Fishery Cooperative Management Act (ACFCMA). The goal of the addendum is to collect high-resolution spatial and temporal data to characterize effort in the federal American lobster and Jonah crab fisheries for management and enforcement needs. These data will improve stock assessment, inform discussions and management decisions related to protected species and marine spatial planning, and enhance offshore enforcement.

2.0 Overview

2.1 Statement of the Problem

To date, the majority of spatial analyses of lobster and Jonah crab fishery data have been constrained to NOAA statistical areas and state management areas, hindering the ability to

quantify effort in specific regions or identify important transit routes and fishing grounds. The application of electronic vessel tracking to this fishery could significantly improve the information available to fishery managers and stock assessment scientists. In particular, a number of challenges the fishery is currently facing pose a critical need for electronic tracking data in the offshore fishery:

1) The stock assessment is currently limited by the coarse spatial scale of available harvest data for American lobster. NOAA Fisheries statistical areas and latitude/longitude coordinates are collected on the NOAA Fisheries Greater Atlantic Regional Fisheries Office (GARFO) Vessel Trip Report (VTR), however the collected spatial data represent the location of where the majority of the fishing effort occurred. The nature of the coarse spatial data is insufficient for management and scientific purposes. Though harvester reporting at the 10-minute square level was adopted for federally-permitted lobster vessels reporting to the states and the federal VTR continued to collect latitude and longitude for each trip, the precision of spatial information is not consistent across federal permit holders. This finer scale data does not provide the precision to accurately apportion effort within the stock units.

2) Due to interactions between protected marine resources and the lobster and Jonah crab fisheries, the fisheries will be required to implement significant risk reduction efforts under the Atlantic Large Whale Take Reduction Plan. These risk reduction efforts are based on models that estimate the location of vertical buoy lines using effort data of a similarly coarse resolution.

3) Recent executive orders have prioritized the development of offshore renewable energy and the conservation of US waters. The development of emerging ocean uses such as wind energy, aquaculture, and marine protected areas may all create marine spatial planning challenges for the lobster and Jonah crab fisheries.

4) The large geographic footprint and low density of lobster gear in the offshore federal management area makes it difficult to locate gear for compliance checks, reducing the efficiency and efficacy of offshore enforcement efforts.

Each of these issues pose an acute need for high-resolution data on where and when fishery effort in the federal fleet occurs. Electronic tracking requirements in the federal fishery would fill this information gap and support fishery managers in addressing the aforementioned challenges.

2.2 Background

2.2.1 Electronic Tracking Pilot Program

When Addendum XXVI/III to the Lobster and Jonah Crab FMPs, respectively, were approved in February 2018, a one year pilot program was established to test electronic tracking devices on lobster and/or Jonah crab fishing vessels. Given the variety of vessels and the spatial distribution of the fishery (both in distance from shore and breadth along the coast), the pilot program tested multiple tracking devices in various conditions to identify technologies for use the lobster and Jonah crab fisheries.

The project assessed tracking devices from several different vendors by placing them on volunteer vessels from Maine and Massachusetts with lobster permits from June 2019 to May 2020. The project evaluated the technologies by looking at ease of compliance (or non-compliance), ability to determine trap hauls from steaming activity, industry feedback, cost-per fisherman, and law enforcement feedback. The results of the pilot showed that though the devices differed somewhat in features and performance, they all were able to deliver vessel positions and detect individual trap hauls. It also found that cellular based systems were both lower in cost and permitted faster ping rates than satellite systems. For example, the costs associated with cellular tracking devices tested during the pilot program range from $150 to $650 for the initial purchase of the tracking unit, and annual data service plans that would meet the proposed tracking requirements range from $191 to $420 per year. These costs are provided as examples only and may change dependent on which devices are approved for use in the fishery.

In addition to the pilot program testing tracking devices, the Board supported work on data integration and additional hardware testing. Specifically, this project focused on linking spatial data collected on vessel tracking devices to harvester reports submitted on eTrips Mobile. Recognizing the critical need for data to characterize spatial and temporal effort of the lobster fishery and the potential of available technology to address this need at low costs, the Board initiated Addendum XXIX in August 2021 to consider the adoption of electronic tracking devices in the federal fleet of the lobster and Jonah crab fisheries.

2.2.2 Stock Assessment

A complicating factor in the management of lobster is that the boundaries of the LCMAs do not align with the biological boundaries of the stocks (GOM/GBK vs. SNE). This is particularly problematic in LCMAs 2 and 3 which span both stocks. The intricacy of the stock boundaries is further complicated by the fact that many vessels fishing out of Rhode Island and Massachusetts that harvest lobsters on Georges Bank, must travel through the SNE stock area to reach their port of landing. In addition, these vessels may be permitted to fish in multiple management areas, including areas that span both lobster stocks.

To date, the stock assessment has only been able to analyze stock composition data at the spatial resolution of the NOAA statistical area. This is because not all lobster permit holders report at a finer scale than the NOAA statistical area; for each trip some provide a single latitude and longitude point meant to represent where the majority of fishing occurred, some provide 10 minute square(s) fished, and some provide only the statistical area fished. This creates challenges for the assessment because some parameters in the stock assessment model vary at a finer spatial scale than statistical area. For example, size composition data for lobster catch are currently generated by matching statistical area-specific total harvest data and biosampling data, but preliminary work has indicated size composition varies at a finer spatial scale. Improved spatial resolution of total harvest data from vessel tracking will improve size composition data used in the stock assessment models to improve the accuracy of exploitation and reference abundance estimates.

2.2.3 Fishery Interactions with Right Whales and Protected Resources

To meet the goals of the Marine Mammal Protection Act and the Endangered Species Act, NOAA Fisheries recently published a final rule to amend the regulations implementing the Atlantic Large Whale Take Reduction Plan (ALWTRP) to reduce the incidental mortality and serious injury to North Atlantic right whales (*Eubalaena glacialis*), fin whales (*Balaenoptera physalus*), and humpback whales (*Megaptera novaeangliae*) in commercial lobster and Jonah crab trap/pot fisheries in the Northeast Atlantic (86 FR 51970). This action is being taken to reduce the risks to endangered North Atlantic right whales and other large whales associated with the presence of fishing gear in waters where these animals occur. The ALWTRP includes a significant reduction in the number of vertical buoy lines in the fishery in order to reduce right whale encounters with buoy lines. Weak rope requirements are included to reduce mortalities and serious injuries when entanglements do occur by increasing the chance of right whales freeing themselves from gear. The ALWTRP also includes changes to seasonal restricted areas closed to pot/trap gear that uses stationary vertical buoy lines. Current and future requirements for gear modifications are expected to have a substantial economic impact on the fishing industry.

The required risk reductions included in the ALWTRP are informed by the co-occurrence model, which pairs information regarding the distribution of whales and commercial fishing gear to predict areas where whales may be prone to entanglement. Electronic vessel tracking data would significantly improve the models used to assess the location of vertical lines in the fishery and their associated risk to right whales in the ALWTRP. The Biological Opinion[1] released in May 2021 outlines a Conservation Framework that intends to reduce mortality and serious injury to North Atlantic Right Whales by 95% over ten years. Within this Framework, additional risk reductions could be required in the US lobster fishery starting in 2025. Therefore, it is critical to

[1] The Biological Opinion issued on May 27, 2021 can be found here: https://www.greateratlantic.fisheries.noaa.gov/public/nema/PRD/Final%20Fisheries%20BiOp_05_28_21.pdf?fbclid=IwAR3ombXyORsm5o0aFYuoU84W-oUUIEMQUIK5_bqv2FnmVRuEBV3p_pFOenA

gather and provide updated and enhanced spatial effort data to improve the associated risk reduction models ahead of this timeline.

2.2.4 Marine Spatial Planning

It is critically important to record the footprint of the US lobster fishery as spatial allocation discussions occur as a result of emerging ocean uses such as aquaculture, marine protected areas, and offshore energy development. For example, in 2016, the New England Fishery Management Council (NEFMC) took action on an Omnibus Deep-Sea Coral Amendment, which looked to provide protection to corals in the northwest Atlantic Ocean through the creation of discrete regions and/or broad depth zones. Given the harvest of lobster and Jonah crab occurs offshore, the Commission was asked to provide information on the magnitude of lobster and Jonah crab catch in specific regions in order to understand potential economic impacts. At the time, the lobster and Jonah crab fishery management plans required harvesters to report landings via NOAA statistical areas, regions much larger than those being considered for coral protection. As a result, the spatial resolution of catch and effort data for the lobster and Jonah crab fishery proved too coarse; without fine scale spatial information, impacts to the lobster and Jonah crab fishery had to be estimated by piecing together information from harvester reports, industry surveys, and fishermen interviews. Similar challenges occurred when the Northeast Canyons and Seamounts Marine National Monument was established in 2016, and it is expected that these challenges will continue given increased activity surrounding offshore wind, aquaculture, and oil and gas exploration. Additionally, in January 2021 President Biden issued an Executive Order on Tackling the Climate Crisis at Home and Abroad. Included in this Executive Order is a goal of protecting 30% of US waters by 2030. Given this goal, documentation of the US lobster fishery footprint is essential for consideration in future discussions and decisions regarding marine protected areas.

2.2.5 Offshore Enforcement

A potential benefit of collecting electronic vessel tracking data is the ability to improve enforcement in the offshore area. It has long been recognized that enforcement efforts in the offshore federal lobster fishery need to be improved, a particular concern given the rapid increase in landings and value during the last decade. As a result, there are ongoing efforts to enhance enforcement capabilities, including discussions around an offshore enforcement vessel capable of hauling and re-setting long trawls.

Enforcement personnel have consistently noted that having the ability to differentiate when a boat is steaming versus hauling is critical to efforts to inspect gear and identify when fishermen are using illegal gear. Even if location data are not reported in real-time, once a fishing location can be identified from vessel tracking data, enforcement personnel would be able to go to that location to inspect gear for appropriate markings, buoys, escape vents, and ghost panels. Given finite enforcement resources, information on distinct fishing locations would improve the efficiency and capability of offshore enforcement efforts.

3.0 Proposed Management Options

This section proposes to add to Section 3.1 of Addendum XXVI to American Lobster Amendment 3 and Section 3.4.1 of the FMP for Jonah Crab under the adaptive management procedures established in section 3.6 of the FMP for American Lobster and 4.4 of the FMP for Jonah Crab.

The intent of the proposed management options is to enhance harvester effort data collection. The Board is seeking public comment on each of the options included in the Draft Addendum.

Option A: Status quo

Under this option no changes to current management and monitoring requirements for lobster and Jonah crab would be implemented.

Option B: Implement electronic tracking requirements for federally-permitted lobster and Jonah crab vessels with commercial trap gear area permits

If Option B is chosen, federal lobster and Jonah crab vessels issued commercial trap gear area permits would be required to install an approved electronic tracking device to collect and transmit spatial data in order to participate in the trap gear fishery. This means any federally-permitted vessel without an approved electronic tracking device is prohibited from landing lobster or Jonah crab taken with trap gear. Federal permit holders would be required to install and activate an approved device prior to beginning a lobster or Jonah crab fishing trip with trap gear. The device must remain on board the vessel and powered at all times when the vessel is in the water, unless the device is authorized to power down by the principal port state. Possible reasons for authorization to power down include but are not limited to vessel haul out/repairs and device failure reported to the principal port state. Tampering with an approved tracking device or signal is prohibited; tampering includes any activity that may affect the unit's ability to operate or signal properly, or to accurately compute or report the vessel's position. These requirements would apply to all federal permit categories included in Table 1.

Table 1. Applicable Federal Permit Categories*

Federal Permit Category Name	Federal Permit Category Abbr.	Description
Commercial Trap Gear Area 1	A1	May harvest lobster in Federal Lobster Management Area 1 using trap gear
Commercial Trap Gear Area 2	A2	May harvest lobster in Federal Lobster Management Area 2 using trap gear
Commercial Trap Gear Area 3	A3	May harvest lobster in Federal Lobster Management Area 3 using trap gear
Commercial Trap Gear Area 4	A4	May harvest lobster in Federal Lobster Management Area 4 using trap gear
Commercial Trap Gear Area 5	A5	May harvest lobster in Federal Lobster Management Area 5 using trap gear
Commercial Trap Gear Outer Cape Area	AOC	May harvest lobster in Federal Lobster Management Outer Cape Area using trap gear
Commercial Trap Gear Area 5 Waiver	A5W	May harvest lobster in Federal LMA 5 under the black sea bass pot waiver

*Commercial Trap Gear Area 6 is excluded, as the area occurs in state waters and requires a valid CT or NY state lobster license to fish in this area. If a vessel is permitted for Commercial Trap Gear Area 6 only, these requirements do not apply.

For additional clarity on situations for which the electronic tracking requirements would not apply, several examples are provided below:

- A person with a state-only lobster permit and no federal commercial trap gear area permit
- A permit holder with federal commercial trap gear permit that has been placed in confirmation of permit history (CPH), a permit status for when a vessel with limited access permits has sunk, been destroyed, or has been sold to another person without its permit history
- A vessel with a federal commercial trap gear permit that does not fish trap gear at any point in the fishing year (i.e., only fishes other gear under a federal lobster commercial/non-trap permit, charter/party non-trap permit, and/or does not fish any trap gear at any point in the fishing year)

Specifications that would be required of tracking devices to be approved for use in the fishery are described in Section 3.1. Administrative processes for the tracking program are described in Section 3.2. If Option B is adopted a separate document will be developed that will include additional details and standard operating procedures to guide the management agencies in implementing the vessel tracking requirements.

3.1 Tracker Specifications and Approval

3.1.1 Required Components and Minimum Technological Standards

The minimum criteria that must be met by tracking devices and product vendors for approval for use in the fishery are summarized in Table 2. Additional details on these requirements is included in the subsequent sections.

Table 2. Required criteria for approval of vessel tracking devices and vendors

Requirements of Tracking Devices and Vendors
• Collection of location data at a minimum rate of one ping per minute for at least 90% of the fishing trip • Data events must contain device's current datetime, latitude, longitude, device and vessel identifier • Minimum accuracy of 100 m (328.1 ft) accuracy and position fix precision to the decimal minute hundredths • Ruggedness specifications allowing function in the marine environment • Ability to PUSH location data to the ACCSP trip locations API • Vendor customer service requirements • Vendor must maintain the confidentiality of personally identifying information and other protected data in accordance with federal law

Data Collection Rates

A tracking device must collect location data at a minimum rate of one ping per minute for at least 90% of the fishing trip. A "ping" refers to a data event created by a tracking device containing the device's current datetime, latitude, longitude, device/vessel identifier and other optional data fields. The above rate is necessary to distinguish lobster fishing activity from transiting activity and can allow estimation of the number of traps per trawl (See Appendix A). Data transmission from the tracking device to the vendor should be initiated as soon as possible but no more than 60 minutes from the time the fishing trip is completed.

If the tracking device can determine when the vessel is in its berth, the device may automatically decrease the tracker ping rate. If the device is unable to automatically detect a berth location, the device must remain connected and pinging at one ping per minute at all times. This recommendation is designed to permit vendors' efforts to minimize cellular data and power consumption while the vessel is in port. For example, if pinging at a slower rate in the port, the tracking device could run on an internal battery and sleep between pings to save power versus being hard-wired to the vessel's power system. Additionally, this feature would improve data quality and allow for validation of track data against self-reported VTR trip start and end times.

Precision and Accuracy Requirements

A tracking device must meet minimum precision and accuracy requirements, specifically a minimum of 100 m (328.1 ft) accuracy and position fix precision to the decimal minute hundredths. It is expected that most modern tracking devices will be capable of significantly higher accuracies than 100 m.

Tracking Hardware Considerations

A tracking device must have ruggedness specifications that allow it to function in the marine environment, which may depend on where the device is installed on the vessel.

No specific requirement is specified for how a device shall be powered, provided that the tracking device can satisfy the technical requirements set forth in this section. Devices will likely be powered by some combination of vessel power, internal battery, and/or solar. The Commission level work group will be responsible for determining whether a device satisfies hardware requirements.

Data Submission Requirements

Tracking vendors must be able to PUSH location data to the Atlantic Coastal Cooperative Statistics Program (ACCSP) trip locations API and meet all specifications of this interface (https://accsp-software.github.io/spec-unified-api-prod/#tag/eTrips/paths/~1trip_locations/post). In addition to the device identifier, datetime, latitude, and longitude, vendors must also include a vessel identifier (Coast Guard number or state registration number) in the API submission. This data element is necessary to identify the vessel the device is tracking at the time of the ping. Data transmission from the vendor to the ACCSP trip locations API should occur in near real time upon receipt.

Tracking vendors must send test data to the ACCSP trip locations API as proof of the ability to satisfy the data submission requirements. The vendor is expected to have a mechanism for setting the vessel identifier in the administrative web interface to their tracking system.

Customer Service Requirements

Device vendors will serve as the primary contact for the vessel tracking devices distributed by their company. This includes technical support related to hardware and any device-specific software. Vendors should provide diagnostic and troubleshooting support to permit holders, state agencies, and ACCSP, which is available seven days per week and year-round. Response times for customer service shall not exceed 24 hours. Detailed installation instructions must be provided to permit holders or their designated agents by vendors. Procedures should be established that assist permit holders to properly maintain their device. In the event of tracker

malfunction, vendors must be available to troubleshoot, repair, or replace the device. Vendors must have the capability to diagnose and resolve communication anomalies with permit holders or state agencies. Upon request of ACCSP, state partners, or NOAA Fisheries, vendors should be available to assist with vessel tracking system operation, resolving technical issues, and related data analyses.

3.1.2 Device Approval Process

The approval of vendors and devices will be undertaken by a Commission-level work group process. The work group will be comprised of state, federal, and Commission staff. Changes to the requirements of tracking devices can be made by this working group with approval of the Lobster Board. The work group will review device specifications to determine if a device meets the required components and minimum technological standards. Vendors will be required to provide the ASMFC work group with the information in Table 3.

Table 3. Information that must be submitted by vendors to device approval work group

Information to be provided by vendors for work group review and device approval

• Company information (name, contact, etc.)
• Customer service policy/capabilities (what assistance can be provided for troubleshooting)
• Complete cost information for devices and data
• Devices capable of a one ping per minute rate
• Whether devices can detect when the vessel is berthed/in port
• Precision (fixed) of 5 decimal places and accuracy capability (100 m max)
  ○ Does device evaluate quality of positional fix prior to pinging or does it just ping every minute?
  ○ Is the device capable of reporting horizontal accuracy and/or any other ping metadata?
• Which cellular providers and bands the device utilizes
• Whether vendor can PUSH the vessel ID (Coast Guard number or state registration number) as part of the location data to the ACCSP trip locations API, as well as meet all additional provisions of this interface: (https://accsp-software.github.io/spec-unified-api-prod/#tag/eTrips/paths/~1trip_locations/post)
• Power supply specifications
• Installation instructions/requirements
• Ruggedness specifications
• Ability to maintain the confidentiality of personally identifying information and other protected data in accordance with federal law

3.2 Administrative Processes

This section describes the required administrative processes that must be implemented at the state and federal level to facilitate the collection and management of data under the electronic vessel tracking requirements for federal permit-holders in the lobster and Jonah crab pot/trap fisheries. Additionally, it describes the recommended roles and responsibilities of the states, federal agencies, and ACCSP in the processes involved in data reporting, validation, and management.

3.2.1 State-Level Administrative Processes

Certification of Device Installation

States shall certify the installation and activation of approved vessel tracking devices for permit holders whose principal port listed on the federal fishery permit is within their state. Principal port is contained in the GARFO permit data which will be made accessible to states. An affidavit with uniform language will be distributed by the states to permit holders (see Appendix B for affidavit language). This affidavit certifies an approved tracking device is installed on each vessel and is activated for transmitting spatial data. These requirements apply to all fishing trips regardless of the landing state, trip type, location fished, or target species. Each affidavit must be signed and returned to states prior to departing on the first fishing trip after the program implementation date. For initial implementation of this project, states will collaborate to define a deadline by which permit holders will need to have a certified tracker installed. A state may require additional information to certify installation such as photographs, notarized affidavits, or inspections, but this is not required.

GARFO will provide states with American lobster-trap gear area permit ownership information, enabling states to contact permit holders and complete the process of certification of installation. In the event a vessel tracker is transferred between permit holders, states will instruct harvesters to contact tracking device vendors to complete the transfer of a vessel tracker.

Permit Holder Support

State agencies will communicate with permit holders to assist them in properly complying with the vessel tracking requirements. States are expected to respond to general inquiries from permit holders that land in their state, troubleshoot where feasible, and transfer inquires to the appropriate body for answers as needed (e.g., device issues to the vendors, electronic reporting app issues to the appropriate electronic vessel trip report provider help desk, etc.). Staff should be available to confirm with harvesters that vessel tracks are being received by ACCSP. States are not required to aid with the installation or troubleshooting of vessel trackers. If there is an issue with hardware or software related to tracker, states may assist the permit holder in contacting device vendors. It is the permit holder's responsibility to work with the vendor when they discover or are notified by the state of an issue.

Data validation and compliance monitoring will be the responsibility of the states. States will contact permit holders to resolve data issues for trips landing in their state. Specifically, state agencies will be tasked with resolving mismatches between vessel trip reports and associated vessel tracking information, or when tracking data are missing or incomplete. Additionally, states must validate that the data collected from a tracker meets the specifications defined by ASMFC.

The administrative processes for permit holder support will be further developed and refined prior to implementation of the management program. A final data validation system and protocol will be developed by ACCSP and state and federal partners. This will include developing and testing data QA/QC for each jurisdiction prior to implementation of the program.

3.2.2 Federal-Level Administrative Processes

The following processes will be the responsibility of GARFO to facilitate the implementation of the tracking program:

Federal Permit Data

To successfully administer a vessel tracking program, states will need access to up-to-date Federal American lobster permit data. GARFO will provide states with American lobster-trap gear area permit ownership information. The following information will be available:

- Vessel permit number
- Vessel name
- Hull ID (state registration or US Coast Guard Documentation Number)
- Permit endorsement
- Permit issuance date
- Permit expiration date
- Permit-holder name
- Permit-holder contact information
- Principal port and state

Electronic Vessel Trip Report Data Processing

Upon completion of rulemaking to implement federal harvester electronic vessel trip report (eVTR) requirements for federal lobster permits, GARFO will incorporate federal lobster eVTR data into its quality assurance program. Electronic reporting applications ensure the submission of complete and valid vessel trip reports, but do not ensure quality. Upon submission, eVTRs will be further validated to ensure a high level of data quality. Errors identified through the quality assurance program will be resolved through GARFO outreach efforts resulting in corrections and resubmissions of eVTR. Federal eVTR data will be available to ACCSP in near real-time, which can be used by ACCSP and state partners in identifying fishing activity in the vessel tracking data.

3.2.3 Data Reporting, Validation and Management Processes

This section outlines the expected processes for data reporting, validation and management for electronic vessel tracking. It also identifies the recommended roles and responsibilities of state and federal agencies and partner organizations in administrating these data processes.

Data Dissemination and Confidentiality

ACCSP will maintain the confidentiality of trip and location data that have been submitted to ACCSP via API in addition to the trip data already maintained under its authority. Data will be accessible to the appropriate state or federal entities with confidential data access. A map interface will be available in the SAFIS Management System (SMS) for authorized federal and state administrators to query and visualize trip locations.

Data Flow

ACCSP will support data flows for integrated and non-integrated trip report and location data from American lobster and Jonah crab federal permit holders required to collect location data via an approved tracking device. Figure 1 shows the flow of trip data and location data (vessel tracks) from the vessel to the ACCSP SAFIS database. Each step is broken down and described below.

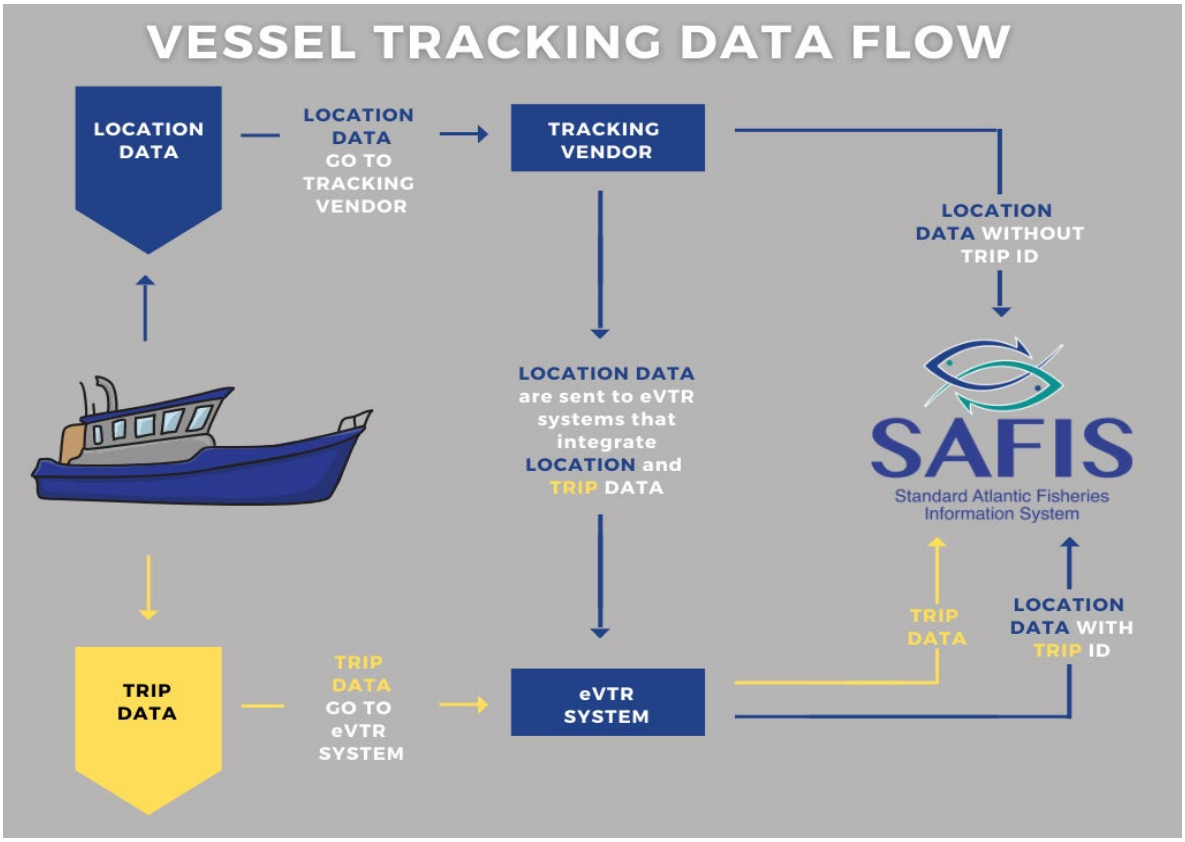

Figure 1. Vessel Tracking Data Flow

Trip Data

EVTR data must be submitted using a NOAA Fisheries GARFO approved eVTR application. All eVTR submissions will be available in SAFIS at or near real-time.

Location Data (Vessel Tracks)

Tracking vendors must submit location data to the SAFIS database via the ACCSP trip locations API. Vendors will need to obtain the necessary API key, and devices must be capable of providing data in accordance with the API specifications.

SAFIS API

All parties, including ACCSP partners and vendors, submitting trip data and/or location data to the SAFIS Unified API (https://accsp-software.github.io/spec-unified-api-prod/) will need to obtain the necessary API keys and must be able to provide data in accordance with the API specifications.

Data Management

ACCSP maintains the database structures and processing required to store trip and location data. ACCSP will develop a process to match non-integrated trip and location data after they have been submitted to ACCSP. The trip ID will be assigned to the appropriate trip location data. The system will require the following by each partner:

- NOAA Fisheries is responsible for providing vessel registration (hull ID) and vessel permit number data contained in eVTR data to ACCSP. All eVTR data submitted to GARFO will be sent to ACCSP via API at or near real-time.
- State management agencies would be responsible for working with tracking vendors to ensure data are being sent to ACCSP in accordance with the requirements outlined for certification. Two levels of coordination will be in place.
    - In Level 1, the device approval work group will coordinate with the vendor to address overall device issues that have arisen post certification.
    - In Level 2, individual state management agencies will work with the permit holder(s) to resolve issues specific to a single or small number of isolated devices.
    - Details on the roles and responsibilities for specific issues will be outlined in the standard operating procedures document.
- Vendors will submit accurate vessel registration information and other required data elements to the ACCSP Trip Location API.

ACCSP will run trip matching programs at specified intervals. Criteria for matching reported trip data with location data will be developed with federal and state input. Data auditing reports, as specified in the standard operating procedures document, will be made available to the appropriate state and/or federal entities with confidential data access.

Data Quality

GARFO and the state management agencies will be responsible for data reporting compliance; GARFO is responsible for validation of eVTR data, and state management agencies are responsible for validation of trip location data. The matching of trip and location data by ACCSP will be subject to the accuracy of the trip report data.

4.0 Compliance

If the existing FMP is revised by approval of this draft addendum, the American Lobster Management Board will designate dates by which states will be required to implement the provisions included in the addendum. A final implementation schedule will be identified based on the management options chosen, and implementation of federal reporting requirements as recommended in Addendum XXVI.

5.0 Recommendations for Actions in Federal Waters

The management of American lobster in the EEZ is the responsibility of the Secretary of Commerce through the National Marine Fisheries Service. The Atlantic States Marine Fisheries Commission recommends that the federal government promulgate all necessary regulations in Section 3.0 to implement complementary measures to those approved in this addendum.

6.0 References

Atlantic States Marine Fisheries Commission (ASMFC). 1997. Amendment 3 to the Interstate Fishery Management Plan for American Lobster.

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Appendix A. Ping Rate Analysis

Lobster Vessel Tracking Ping Rate Analysis

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9/23/2021

Introduction

Conversations regarding requirements for cellular-based vessel tracking in the federal lobster fishery have repeatedly recommended a one-minute ping interval as being necessary to distinguish fishing from non-fishing activity. This analysis utilizes data collected from tracking devices deployed on federal lobster vessels off the coast of Maine to illustrate the ability to discern and quantify effort at varying ping rates.

Goals of High-Resolution Tracking Data

The primary goal considered in this analysis is to utilize high-resolution tracking data to extract the locations and size of trawls. These locations can be used to quantify vertical line concentrations spatiotemporally. Although a harvester report may be available with additional information on gear configuration, such as the number of sets or total number of traps, tracking data of sufficient resolution should be capable of predicting gear configuration and gear quantities. Collecting this information from tracking data would likely provided higher accuracy and could ease reporting burdens on harvesters.

Five trap trawls are currently the smallest permissible trawl that can be fished in federal waters of the Gulf of Maine. While there may be future utility in detecting smaller gear events, this analysis will consider the necessary minimum detectable gear size to be a five trap trawl.

Extracting Effort from Tracking Data

The following overview of current methods for automated extraction of trawl locations from lobster fishing tracking data is provided before analyzing the impact of ping rate on the ability to discern effort.

Machine learning models generally fall into the categories of supervised and unsupervised. Supervised models are built using groundtruthed training data containing classified events to train a model to predict the probability of those events in unclassifed data. For example, lobster tracking data where each ping was labeled as hauling/non-hauling based on a hauler sensor or observer data could be used to build a supervised model. Unfortunately, at present there are few instances of high-resolution classified lobster fishing tracking data. As such, the following details current efforts to produce an unsupervised effort detection model based on several prevalent unsupervised machine learning techniques.

Estimation of fishing effort based on velocity alone has been shown to overestimate fishing effort in some fisheries (Arasteh et al. 2020). Different vessels transit at varying speeds, and even for a single vessel within a single trip, transiting speeds may vary based on sea conditions. However, within the lobster fishery the density distribution of velocity as calculated between sequential points in a trip typically exhibits a bimodal or multimodal pattern corresponding with vessel activity (steaming, hauling, and setting.) Gaussian Mixture Modeling (GMM) has been utilized successfully to classify vessel activity in Scottish small-scale fisheries, including those fishing 10-50 trap trawls for European lobster. Establishing velocity thresholds using a GMM calculated on a per trip basis was shown to be effective at correctly labeling vessel activity, and also had rapid processing times compared with other models (Mendo, Smout, Photopoulou, et al. 2019). This study also found that multivariate models incorporating turning angle between pings resulted in minimal increases in activity detection accuracy, likely because hauling of trawls often presented as straight trajectories similar to transiting. Since tracking data for lobster vessels demonstrates similar patterns, velocity is therefore used as the primary variable to classify vessel activity within this analysis.

The following example uses tracking data obtained from a Succorfish SC2 pinging at a one-minute interval. The vessel was fishing ten trap trawls and was carrying a DMR observer who recorded a GPS point at the beginning of each trawl.

All processing in this analysis was completed in R 4.0.1 on a 64-bit Windows machine (R Core Team 2020), relying heavily on the tidyverse (Wickham 2019), sf (Pebesma 2018) and Rcpp (Eddelbuettel 2013) packages.

Preprocessing

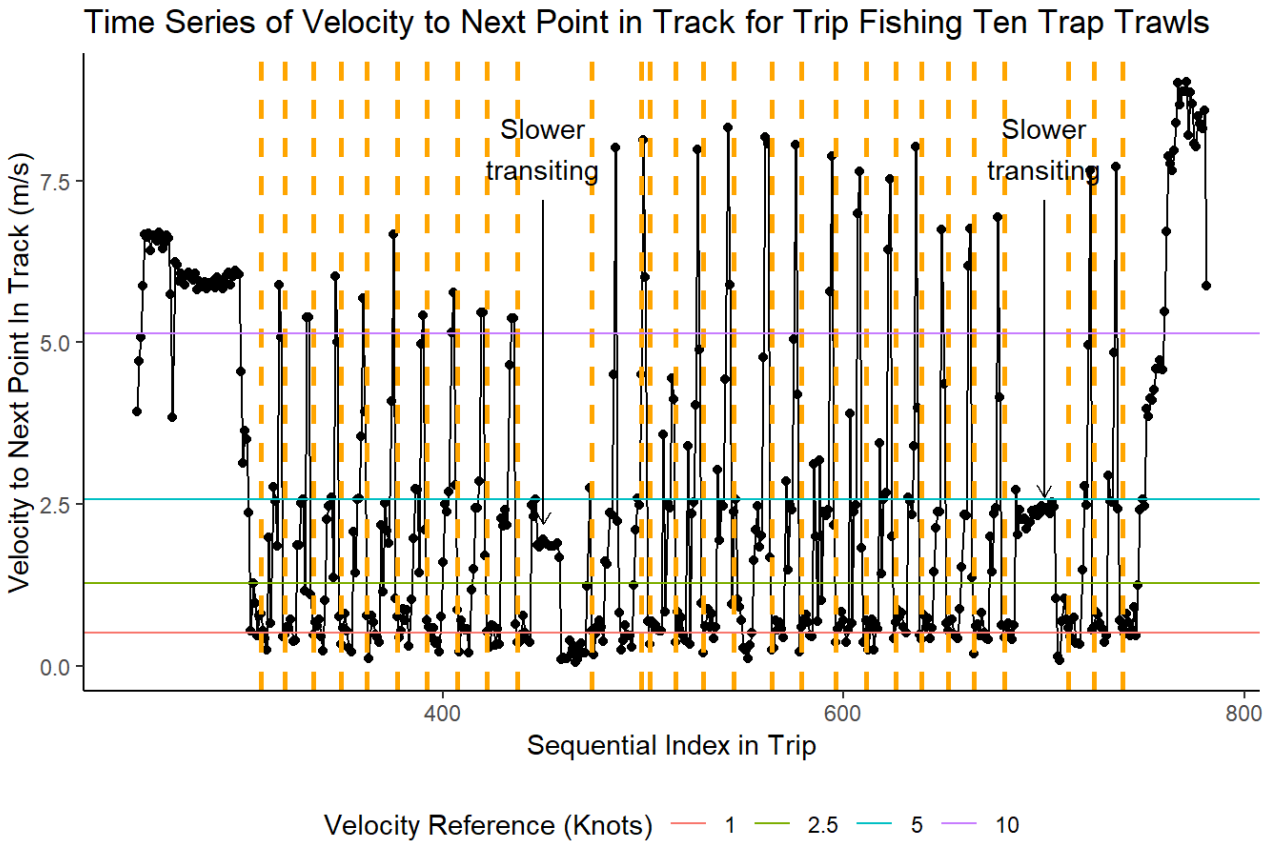
Raw tracking data was pre-processed to split the data into daily tracks and calculate metadata for each ping. This metadata most notably included the spatial and temporal difference between successive pings. Once tracking data had been divided into tracks, polyline features for each track were also created in pre-processing. Pre-processing was handled by a R/C++ package created by the author, and details of this processing are beyond the scope of this analysis.

Removal of Pings-in-Port

The removal of pings in port is necessary prior to analysis of vessel tracking data. This was accomplished programmatically by taking the first and last point in the trip and calculating the distance between them. If the distance was below a reasonable threshold for indicating the vessel returned to port, points within a given radius of the centroid of the first and last point in the track were removed. Spatial filtering of pings within known port areas can also be utilized to remove pings in port from tracking data (Mendo, Smout, Photopoulou, et al. 2019).

After removal of pings in port, the minimum and maximum datetimes of the remaining points were used to calculate the trip start and end times, as well as the total trip temporal and spatial length.

The following plot shows the velocity for each point in the example trip, along with the timestamps of known trawl locations from the onboard observer.

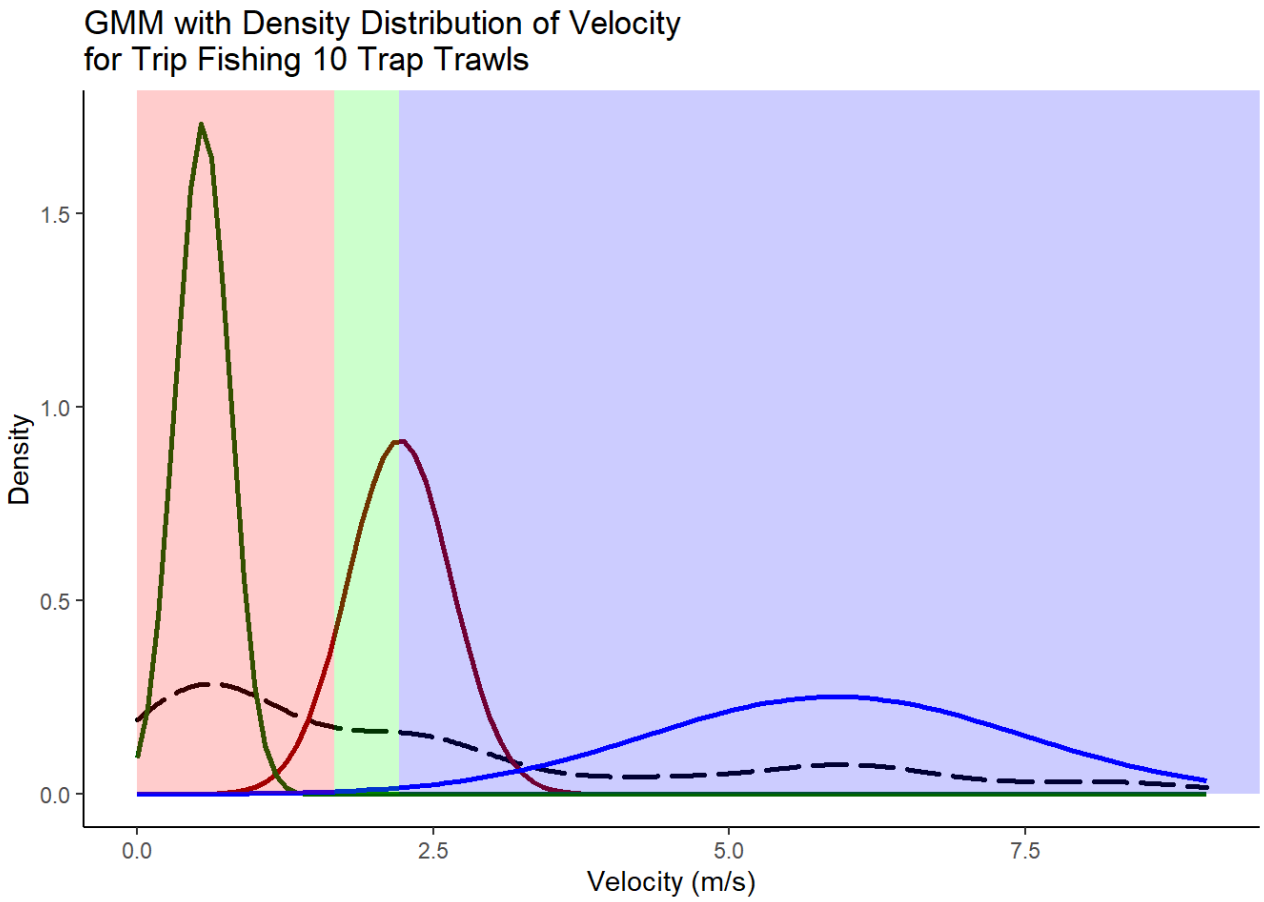


Orange vertical lines are haul begin times collected by an onboard observer.

Gaussian Mixture Model

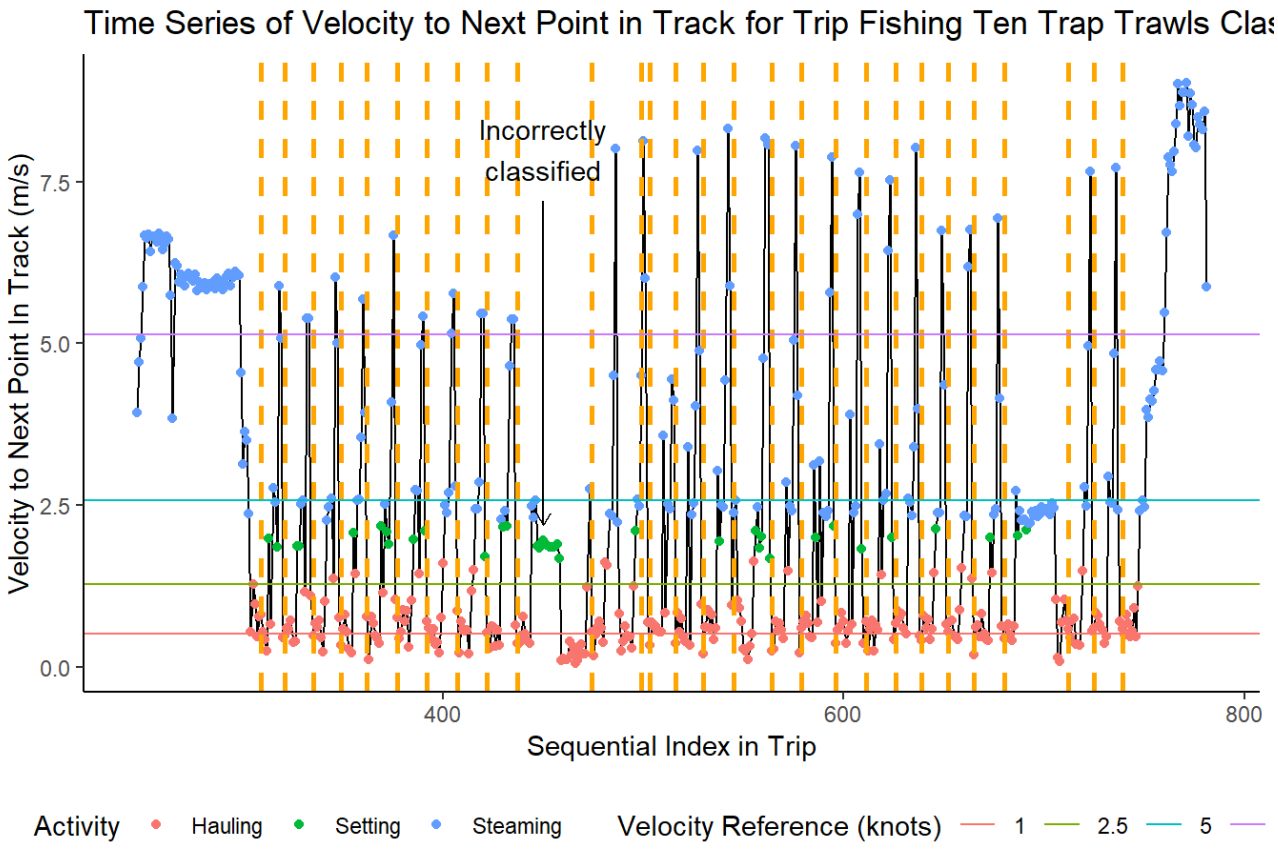
The vector of velocities between sequential points in the trip was used to fit a Gaussian Mixture Model using the mixtools (Young et al. 2020) R package as per the method described in Mendo, Smout, Photopoulou, et al. (2019). An expectation-maximization (EM) algorithm was utilized to fit the model to three components corresponding to steaming, hauling, and setting activity. The upper threshold for hauling velocity was defined as 2 SD from the mean of the first distribution (Ibid). Since setting of gear can be difficult to detect and may overlap speeds used when hauling and steaming, a more conservative estimate from the upper hauling limit to the mean of the second distribution was utilized to classify gear setting. Steaming was classified using velocities above the second mean.

The velocity density distribution (dashed) and the normal distributions resulting from the EM fitted GMM for the example trip are shown below. Velocities corresponding to hauling (red), setting (green) and steaming (blue) are also highlighted.



Initial Activity Classification

Points in the trip track were than classified using the velocity thresholds established by the GMM.



Orange vertical lines are haul begin times collected by an onboard observer.

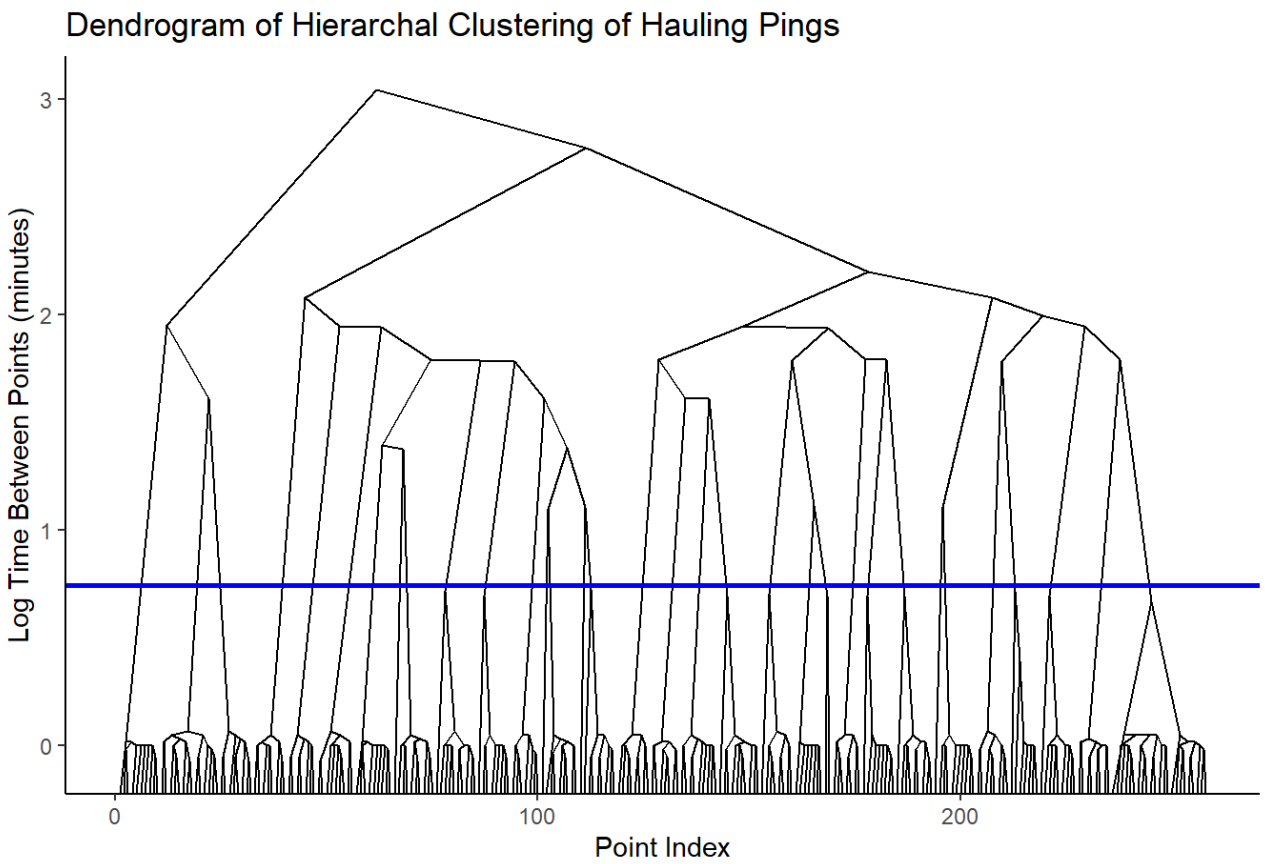
Delineation of Hauls and Sets

Since above plot shows only individual pings classified as activities, clustering of classified points was necessary to identify discreet hauling and setting events. This also allowed for the removal of misclassified pings based on filtering criteria, for example a single ping classified as setting between two clusters of hauling pings.

Trip data was filtered into pings representing hauling and setting, and a matrix of the time difference in minutes between all pings in each data set was calculated. Hierarchical clustering was performed on the resulting matrices, using the single linkage method. The single linkage method clusters points based on the minimum distance between clusters; in this case, “distance” was the minimum time difference in minutes between distinct hauls and sets.

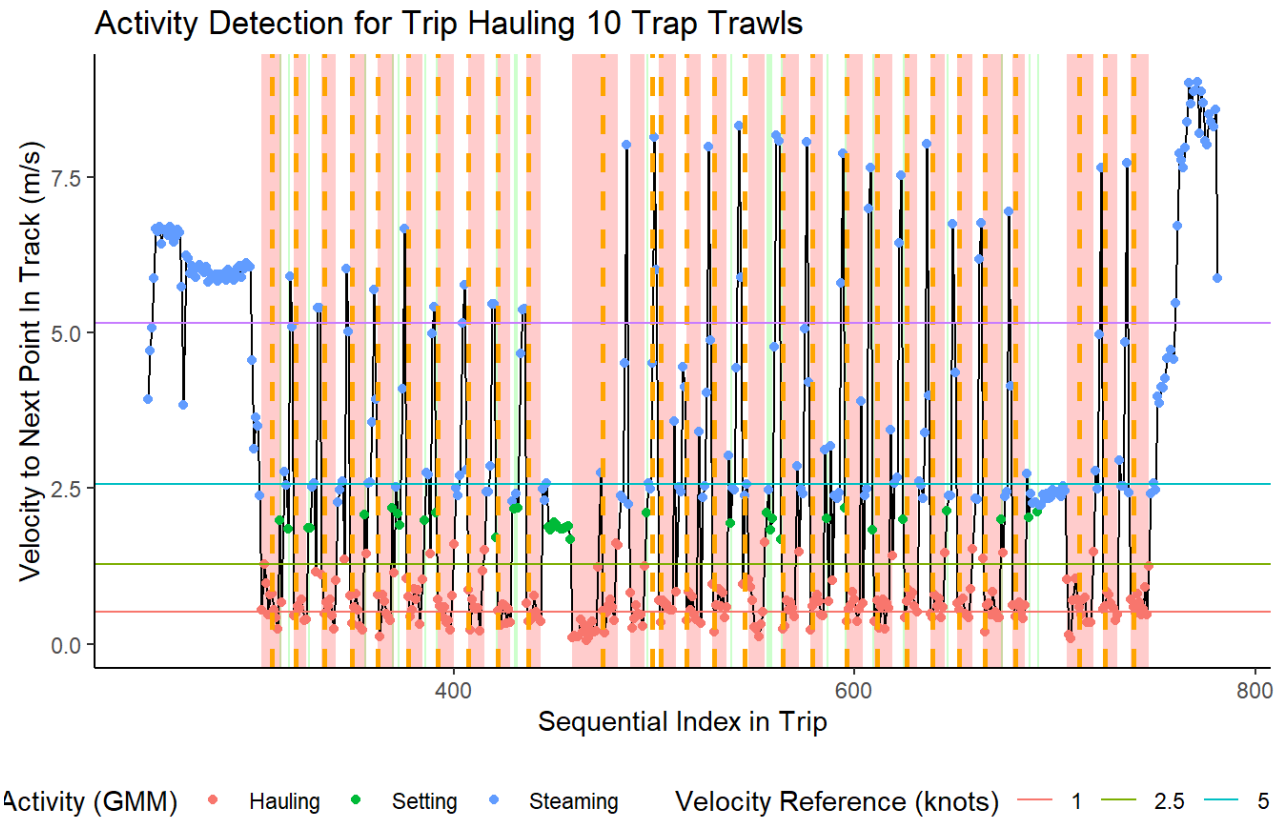
For this analysis, a common sense value of 2.1 minutes between hauls was utilized, such that at minimum one ping would occur between successive haul events. The same value was utilized for clustering sets. Deriving the value to cut the hauling clustering tree using the above GMM method applied to the sequential distance between hauling pings could be another approach, but was not explored in this analysis.

The dendrogram of hierarchal clustering of pings classified as hauling in the example trip is shown below, produced using the R package ggdendro (de Vries and Ripley 2020).



Constrictions on the minimum haul temporal length and maximum set temporal length were also applied to all trips, such that hauls less than 2 minutes and sets greater than 6 minutes were excluded. In production, these values could be adjusted based on the spatial area fished or on gear configuration details from a harvester report.

In the following plot, the duration of the parsed hauling and setting events from the example trip are highlighted. Observer-derived points were within the extracted haul spans, with the exception of one point that appeared to have been taken after the haul was complete. Detection of setting was much more difficult.

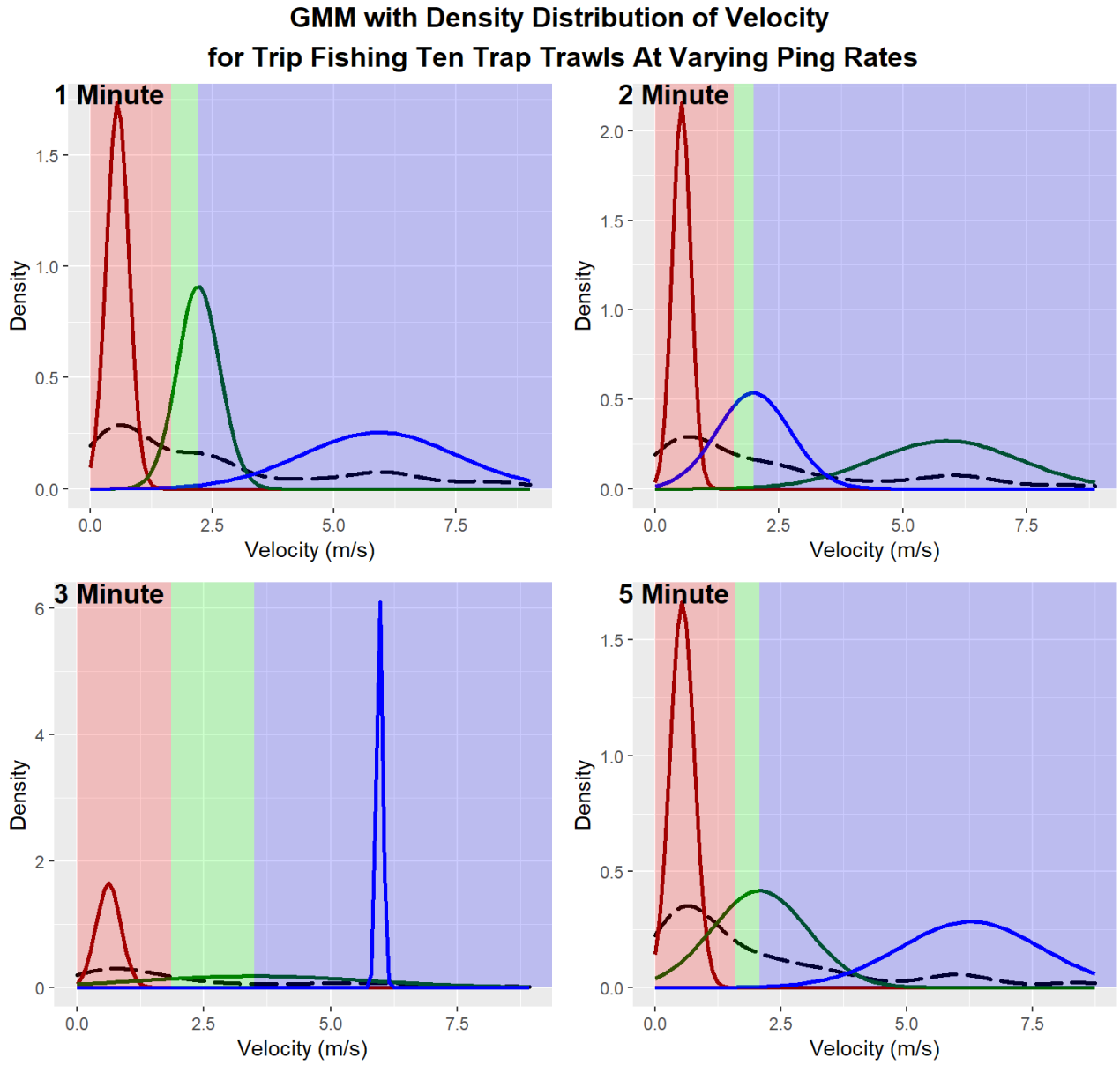


Light red bars are filtered haul durations. Light green bars are filtered set durations.
Orange dashed vertical lines are haul begin times collected by an onboard observer.

Ping Rate Analysis

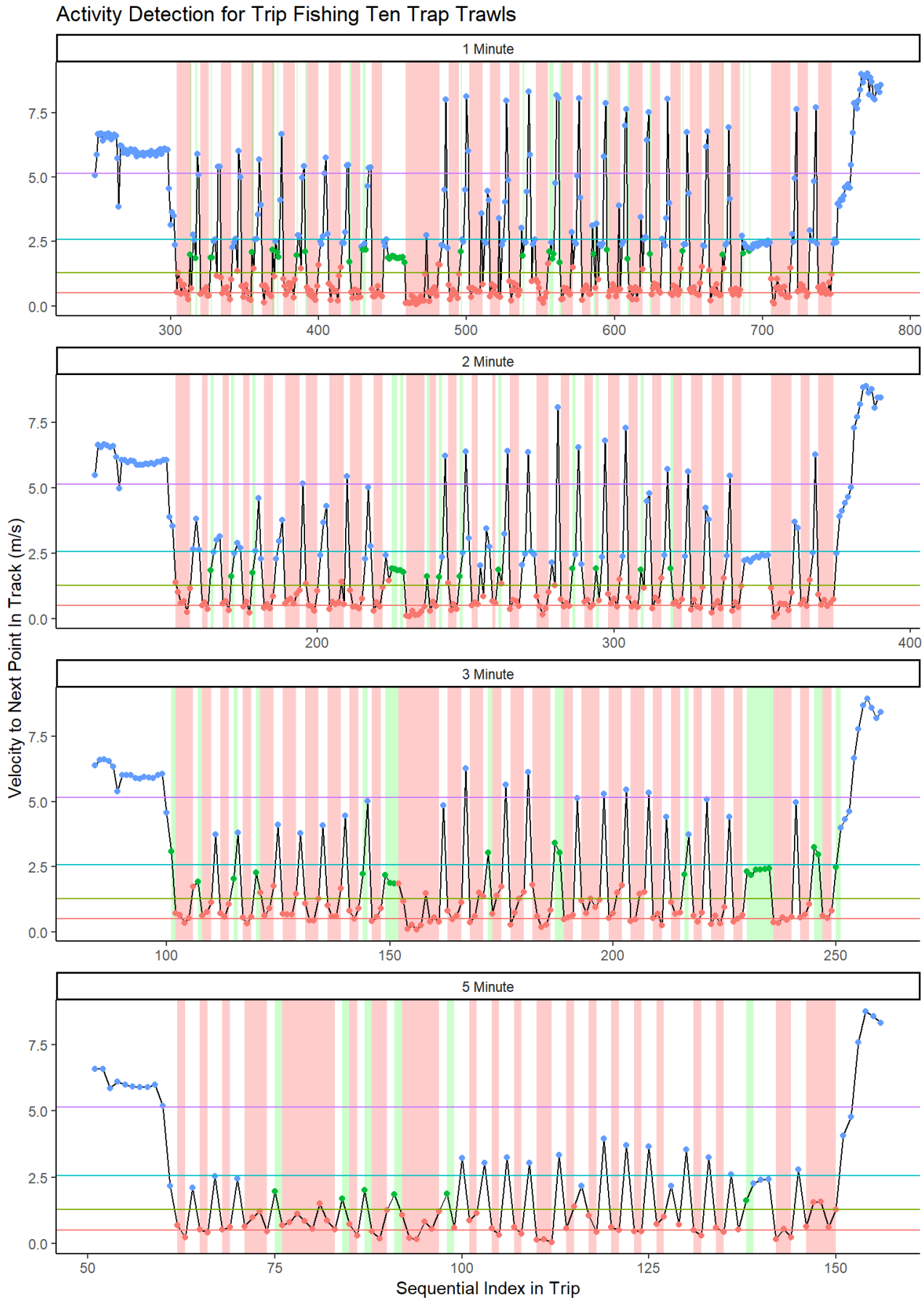
In the following scenarios, tracking data from trips fishing a variety of gear configurations were subsampled to lower ping rates. The above method of detecting effort was utilized, with notable differences in the ability to detect vessel activity occurring as ping rate decreased.

The first example used the same trip fishing ten trap trawls as above. GMM results were similar at different ping rates, with the exception of three minutes.



Dashed lines are velocity density distribution. Colored lines GMM normal distributions.
Velocities classified as hauling, setting, and steaming are colored red, green, and blue respectively.

Trawls were detected at the one, two and three minute ping rates.



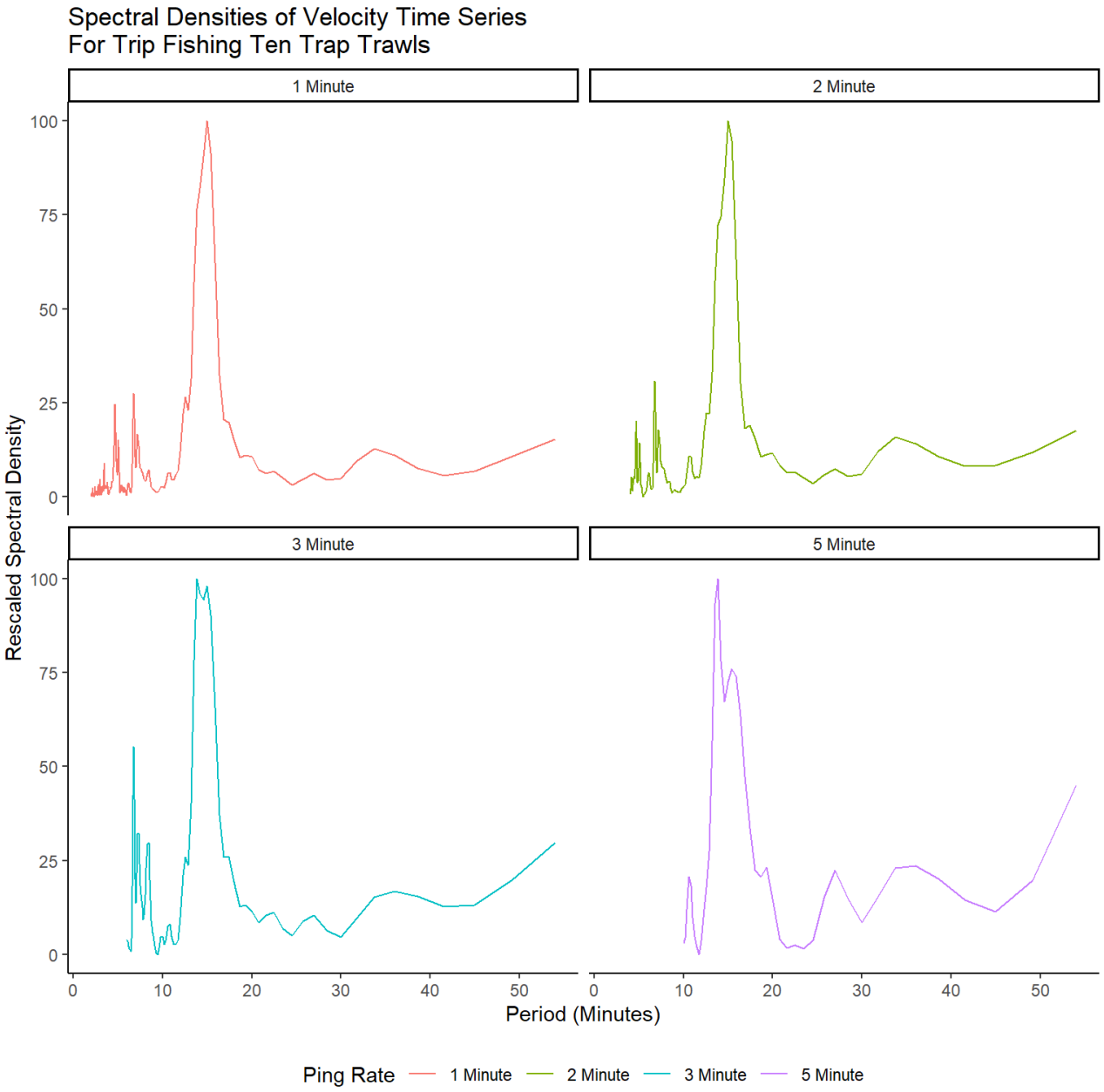
Light red bars are filtered haul durations. Light green bars are filtered set durations.

Trawl Location vs Trawl Size

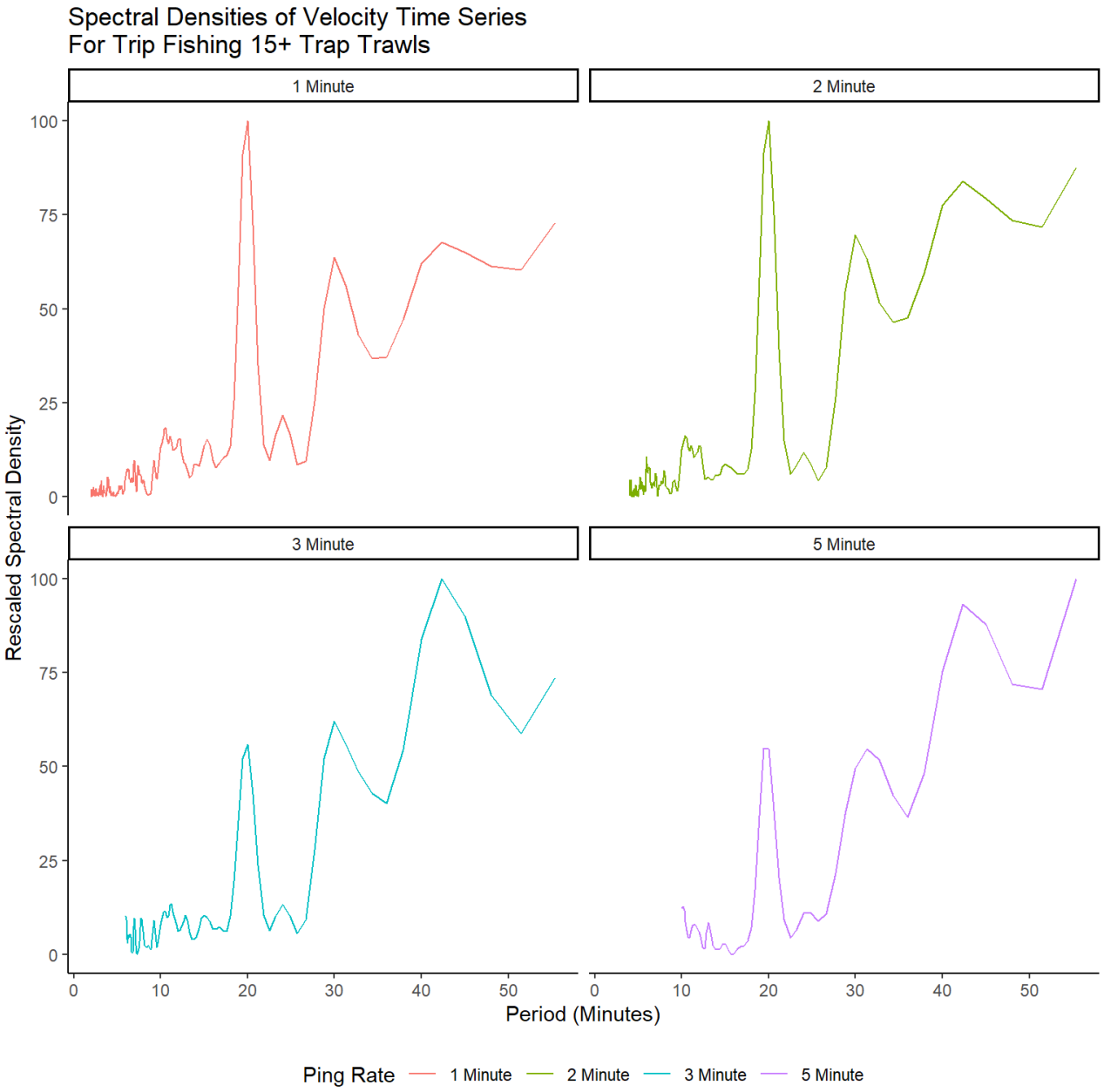
In the plot above, clusters of pings around known trawl locations remain visible at ping rates slower than one minute. The one-minute and two-minute time series demonstrate flat-bottomed valleys corresponding to trawls. As the ping rate decreases, fewer pings occur during the haul and the pattern becomes more saw-toothed; there is still an indication of fishing activity, but the temporal resolution of the haul length decreases as the amount of time each ping represents increases. If the ten trap trawls fished in this example trip took 15 minutes to haul, at a one minute ping rate the temporal length of the haul could be estimated within 12% of the actual haul length (15 minutes +/- 1 minute). At a 5 minute ping rate, if the detected haul consisted of only one ping, this could represent anywhere from 5-15 minutes of fishing effort. Faster ping rates are therefore essential to estimating trawl size; measured temporal/spatial lengths of trawls combined with the minimum and maximum trawl sizes permitted in the area fished could provide probabilities of trawl size.

The Rhythm of Work

The plot above also shows a consistent rhythm of hauling familiar to anyone who has worked in fixed gear fisheries. In many cases hauling is so consistent that a frequency corresponding to the haul time can be detected in tracking data. This may also be another possible future method for detecting trawl configurations. In the plot below, the Fast Fourier Transform has been taken of the velocity time series at different frequencies. The resulting spectral densities demonstrate the occurrence of repeating frequencies within the time series (likely the length of the trawl including setting). Note how the 1 minute and 2 minute time series have sharply defined peaks at 15 minutes, while the peaks widen to either side of 15 minutes as the ping rate decreases.



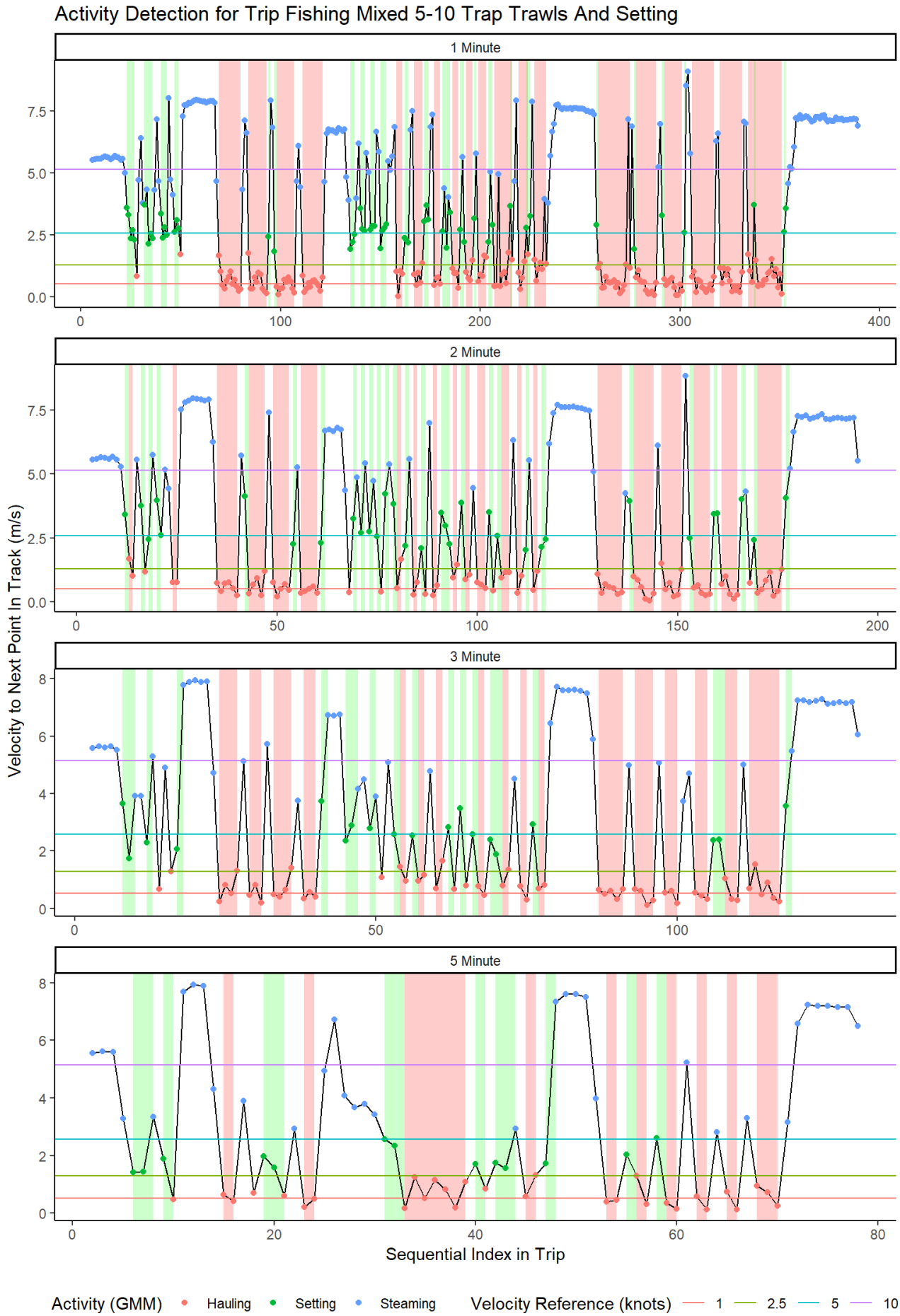
Another spectral analysis from a vessel fishing 15+ trap trawls is shown below, indicating a haul/set period of about 20 minutes. Other frequencies become more prevalent than the 20 minute signal at slower ping rates. It is likely that cleaner spectral densities would be acquired by applying the Fast Fourier Transform to vectors of pings classified as hauling/non-hauling versus raw velocity. However, the utility of this method in analyzing vessel tracking data has yet to be determined, and is presented more as a curiosity and comment on the consistency of hauling in the lobster fishery.



Case Studies from Other Trips

Mix of 5-10 Trap Trawls

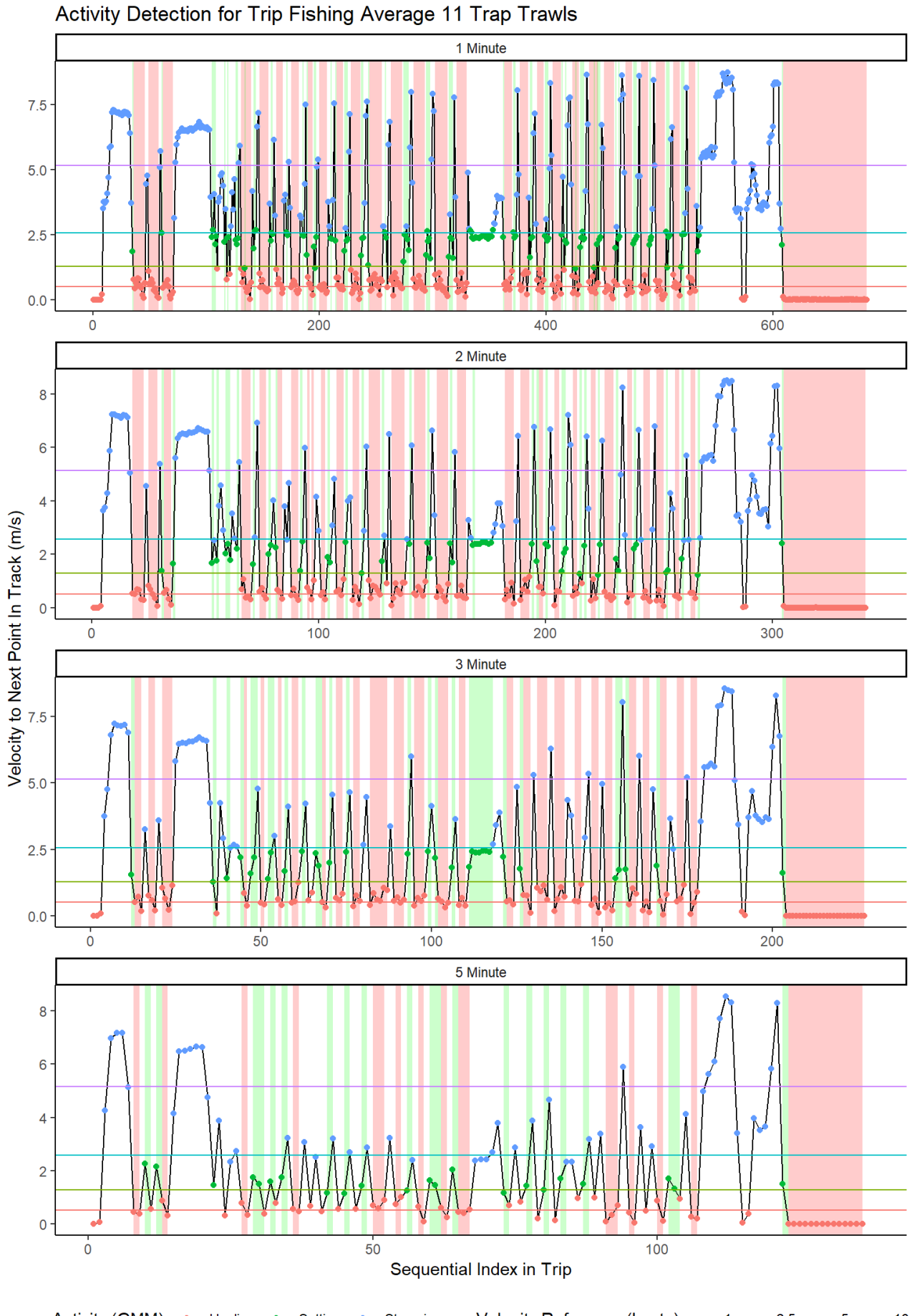
The following trip consisted of a mix of trawl sizes between 5 and 10 traps per trawls. Larger trawls were fished at the beginning and end of the trip, with shorter trawls in the middle. Several gear events that appeared in the spatial data to be sets (no hauling) were correctly classified. Detection of all trawls decreased at slower ping rates; most notably, the smaller trawls became harder to detect even at a 2 minute rate, with some trawls only being represented by a single ping.


Activity Detection for Trip Fishing Mixed 5-10 Trap Trawls And Setting
1 Minute
2 Minute
3 Minute
5 Minute
Velocity to Next Point In Track (m/s)
Sequential Index in Trip
Activity (GMM)
Hauling
Setting
Steaming
Velocity Reference (knots)
1
2.5
5
10
Light red bars are filtered haul durations. Light green bars are filtered set durations.

Spectral analysis of this trip showed no strong signals corresponding to haul periods for the different gear configurations; it is possible that applying the Fast Fourier Transform using windowed approach (iterating over the trip subsetting 1-hour window for example) may allow for detecting of haul period signals for mixed gear configurations.

Mix of 10 and 15 Trap Trawls (Average 11)

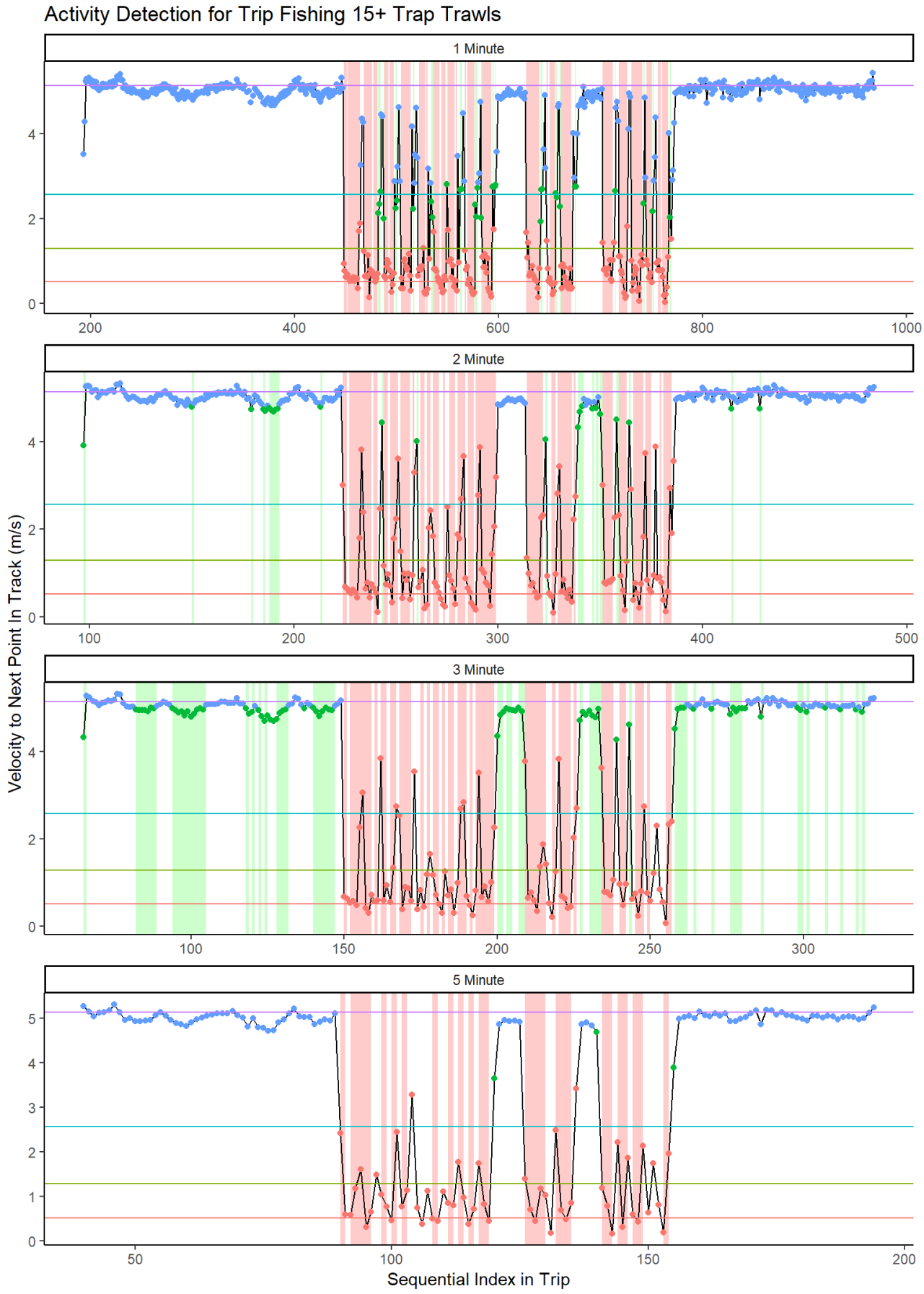
This trip had 25 reported hauls, which were detectable at the one and two minute ping rates. A cluster of points toward the end of the trip that was likely setting activity was misclassified as steaming. A notable issue occurred removing pings in port where the vessel moved to a new location at the end of the day.



Light red bars are filtered haul durations. Light green bars are filtered set durations.

15+ Trap Trawls

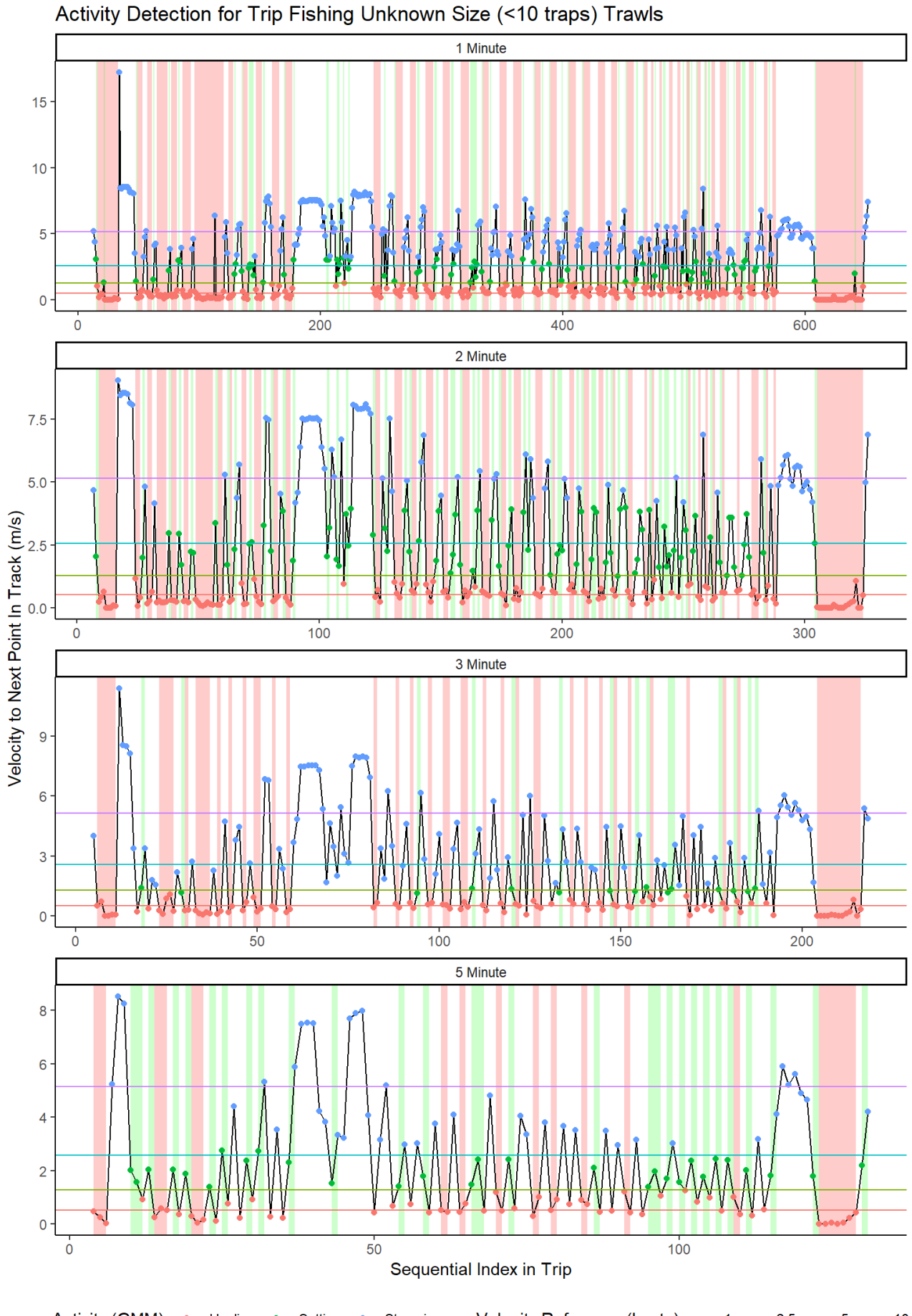
Trawls within this example trip were mostly detected; however, a notable issue is visible where several of the hauls were split into two hauls even though adjacent pings were correctly classified as hauling. This was likely due to dropped pings; the device lost GNSS reception causing the time difference between adjacent pings to be 2 or 3 minutes. When the resulting hauling classified data was clustered, the clustering threshold fell below this time difference causing two separate hauls to emerge. It will likely be necessary to interpolate dropped pings to avoid this issue. This example also highlights the necessity of a consistent ping rate during fishing.



Light red bars are filtered haul durations. Light green bars are filtered set durations.

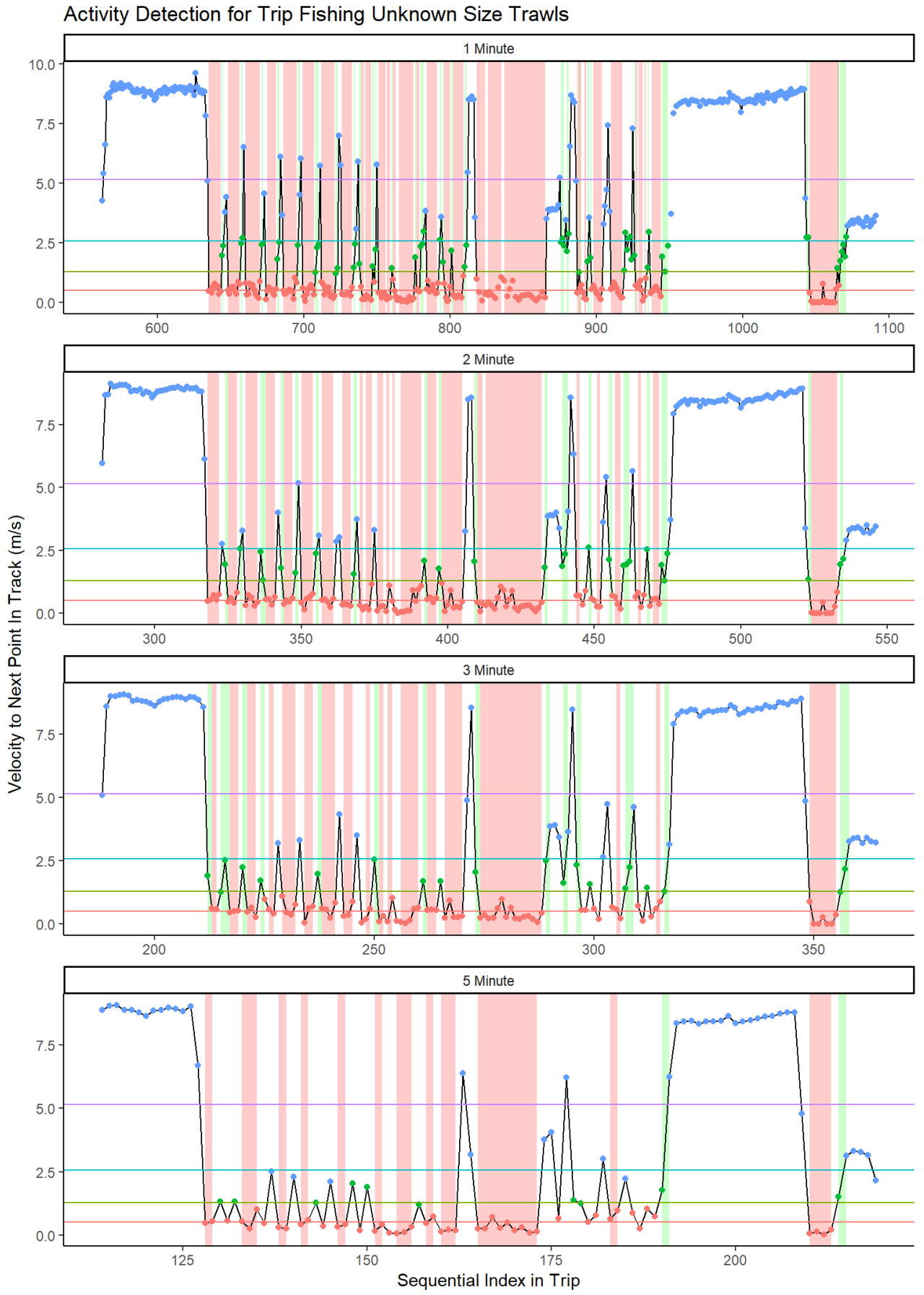
Unknown Trawls - Vessel 1

Unknown size trawls (likely < 10 traps) from a vessel not used in previous examples. Some pings in port were not removed, indicating the need for larger buffer size from the beginning of the track.


Activity Detection for Trip Fishing Unknown Size (<10 traps) Trawls
1 Minute
2 Minute
3 Minute
5 Minute
Velocity to Next Point In Track (m/s)
Sequential Index in Trip
Activity (GMM)
Hauling
Setting
Steaming
Velocity Reference (knots)
1
2.5
5
10
Light red bars are filtered haul durations. Light green bars are filtered set durations.

Unknown Trawls - Vessel 2

Unknown size trawls from a vessel not used in previous examples.



Light red bars are filtered haul durations. Light green bars are filtered set durations.

Data Size Considerations

Ping Data Structure

The following is the minimal datatype sizes necessary to represent a ping attributes in a relational database. Actual implementations would likely utilize structure requiring more space; these numbers are intended to represent the absolute minimum space to store ping data in an uncompressed state.

Attribute	Optimal Data Type	Attribute Size Bytes	Comments
Device ID	16-bit unsigned integer	2	Able to represent 65,536 unique devices/vessels. Actual device ID per manufacturer likely much longer than this, but can use lookup table in DB.
Time	64-bit unsigned integer	8	Most devices transmit ping time as the UNIX epoch or an ISO datetime string, store as UNIX epoch.
Latitude	single-precision float	4	Precise to 7 decimal places.
Longitude	single-precision float	4	Precise to 7 decimal places.
Horizontal Accuracy	16-bit unsigned integer	2	Store accuracy to one decimal * 10 - ie, accuracy of 2.45 meters stored as 25

Database Size

A single vessel pinging at a one minute rate 24 hours a day would produce 525,960 pings annually. Thus, the full federal lobster fleet of ~1600 vessels would produce 841,536,000 pings. Given the above minimum size of 20 bytes per ping, this would result in 16.83GB of data annually. Minimizing pinging while in port and/or removing pings in port prior to long-term storage would further reduce this figure by likely more than 50%.

Ping rates slower than one minute would decrease data storage sizes accordingly. However, given the relatively small amount of data that would be produced by the entire fleet at even a one minute rate, reductions in ping rate would likely realize minimal cost savings if any relative to the loss of data resolution.

Conclusions

- For trawls <10 traps in length, a one minute ping rate is necessary to distinguish the location of individual trawls. The size of the trawl relative to other small trawl sizes may not be discernible even at a one minute rate due to differences in hauling speed between vessels, locations and conditions. These results are consistent with findings in the Scottish European lobster creel fishery that a one minute ping rate was necessary to delimit hauling of 10-50 trap creels (Mendo, Smout, Russo, et al. 2019).

- A one minute ping rate can allow for the detection of setting of gear when no hauling occurred.
- The location of trawls of 10 traps and greater can be distinguished at up to a 3 minute ping rate. However, as with smaller trawls, the precision with with the size of the trawl can be estimated will decrease at slower ping rates.
- The lack of groundtruthed classified ping data makes calculating metrics on the performance of effort detection algorithms difficult. With validated training data, such as haul times from an onboard observer or a hauler sensor connected to the tracker, it may be possible to build better models and calculate metrics of their accuracies.

References

Arasteh, Saeed, Mohammad A. Tayebi, Zahra Zohrevand, Uwe Glässer, Amir Yaghoubi Shahir, Parvaneh Saeedi, and Hans Wehn. 2020. “Fishing Vessels Activity Detection from Longitudinal AIS Data.” In *Proceedings of the 28th International Conference on Advances in Geographic Information Systems*. ACM. https://doi.org/10.1145/3397536.3422267 (https://doi.org/10.1145/3397536.3422267).

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Mendo, Tania, Sophie Smout, Tommaso Russo, Lorenzo D’Andrea, and Mark James. 2019. “Effect of Temporal and Spatial Resolution on Identification of Fishing Activities in Small-Scale Fisheries Using Pots and Traps.” Edited by Christos Maravelias. *ICES Journal of Marine Science* 76 (6): 1601–9. https://doi.org/10.1093/icesjms/fsz073 (https://doi.org/10.1093/icesjms/fsz073).

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R Core Team. 2020. *R: A Language and Environment for Statistical Computing*. Vienna, Austria: R Foundation for Statistical Computing. https://www.R-project.org/ (https://www.R-project.org/).

Wickham, Hadley. 2019. *Tidyverse: Easily Install and Load the Tidyverse*. https://CRAN.R-project.org/package=tidyverse (https://CRAN.R-project.org/package=tidyverse).

Young, Derek, Tatiana Benaglia, Didier Chauveau, and David Hunter. 2020. *Mixtools: Tools for Analyzing Finite Mixture Models*. https://CRAN.R-project.org/package=mixtools (https://CRAN.R-project.org/package=mixtools).

Appendix B. Standard Affidavit Language for Tracking Device Certification

NOTICE TO FEDERAL AMERICAN LOBSTER COMMERCIAL TRAP GEAR AREA PERMIT HOLDERS

Under the authority of the Atlantic Coastal Fisheries Cooperative Management Act, Addendum XXIX to Amendment 3 to the Interstate Fishery Management Plan for American Lobster and Addendum IV to the Fishery Management Plan for Jonah crab requires all vessels with a federal American Lobster Trap Gear Area permit to have an approved vessel tracker installed as of *Month DD, YYYY*. Tracking devices must be installed prior to the permit holder's first fishing trip. This vessel tracker must remain powered and transmitting when the vessel is in the water regardless of landing state, trip type, location fished, or target species. All devices must follow the specifications outlined in Section 3.1 of Addendum XXIX. A list of approved devices along with vendor contact information is attached to this document.

The principal port on your Federal Fishery Permit lies within the [*Principal Port State*], thus the [*Principal Port State Agency*] will be tasked with certifying the installation of your vessel tracking device. In the event you believe your tracker is not functioning correctly and must be serviced, please contact [*Principal Port State Agency*], and inform them of your situation.

Please complete, sign and return this form once an approved device has been installed on your vessel.

Federal Fishery Permit Number:

Documentation or Vessel Registration Number:

Vessel Name:

Vessel Tracking Device Vendor:

Vessel Tracking Device Identifier:

I certify that the above vessel tracking device is installed and properly functioning to the best of my knowledge.

Permit Holder Signature:

Permit Holder Printed Name:

Date:

Atlantic States Marine Fisheries Commission

1050 N. Highland Street • Suite 200A-N • Arlington, VA 22201
703.842.0740 • 703.842.0741 (fax) • www.asmfc.org

MEMORANDUM

TO: **American Lobster Management Board**

FROM: **Caitlin Starks, Senior FMP Coordinator**

DATE: **February 7, 2022**

SUBJECT: **Public Comment on Draft Addendum XXIX on Electronic Vessel Tracking**

The following pages represent a draft summary of all public comments received by ASMFC on American Lobster Draft Addendum XXIX/ Jonah Crab Draft Addendum IV as of 5:00 PM (EST) on January 31, 2022 (closing deadline).

Comment totals for the Draft Addenda are provided in the table below, followed by summaries of the state public hearings, and written comments sent by organizations and individuals. A total of 32 written comments were received. These included 11 letters from organizations, one letter from NOAA Fisheries, and the remainder from individual industry stakeholders and concerned citizens. Six virtual public hearings were held; some were state specific while others were regionally focused. The total public attendance across the six hearings was 98, though some individuals attended multiple public hearings. Thirty-five individuals provided comment at public hearings.

The following tables are provided to give the Board an overview of the support for each of the management options contained in Draft Addendum XXIX. Comment totals by state for comments provided during public hearings were tallied based on the home state identified by the attendee, rather than which hearing was attended. It should also be noted that some individuals provided comments at a public hearing and also submitted written comments, and these are counted separately in the tables below. Additional comments that did not indicate support for a particular option are included in the public hearing summaries and written comments. Prevailing themes from the comments, including rationales for support or opposition and general considerations, are highlighted below.

Table 1. Written Comments Submitted to ASMFC

	Option A. Status Quo	Option B. Electronic Vessel Tracking Requirements
Written Comments		
Individual	13	2
Organization	3	7
Total	**16**	**9**

Table 2. Comments Provided at Public Hearings

	Option A. Status Quo	Option B. Electronic Vessel Tracking Requirements
Public Hearings		
ME	8	1
NH	7	
MA	4	1
RI	6	
CT		
NY		
NJ	1	
DE	1	
MD		
VA		
Unknown		1
Total	**27**	**3**

Prevailing themes from the public comments on Addendum XXIX are highlighted below.

Rationales for Option A. Status Quo

- Concerns that the data collected through electronic vessel tracking will be in ways that would harm the fishery rather than help
    - For example, VMS in other fisheries has been used predominantly to close areas to fishing and for enforcement of those closures
    - Fear that data will be used by energy developers to reduce ocean access for fishermen
    - Doubt that data to show important fishing grounds will make a difference to developers
- Marine spatial planning efforts seek to define static use areas in the ocean when commercial fisheries are dynamic; electronic vessel tracking is not capable of identifying fishing grounds that were historically important or those which may emerge as important fishing areas in the future.
- Fishermen should not be financially responsible for the collection of these data; ASMFC, states, and/or NOAA should provide funding to purchase, operate, and maintain the equipment required to implement this program
    - The costs of devices and data plans will be too high for small business operators
- Concerns that device malfunctions would force fishermen to lose days at sea
- Opposition to being required to have multiple types of devices for different fisheries on a single vessel; VMS should be permitted for this program.
- Lack of information about the devices, vendors, actual costs, and device reliability and accessibility, power
- Concerns about data privacy
    - Unclear how much access would be granted to outside parties through legal action, e.g., freedom of information act requests
    - Do not want secret fishing locations to be known by others
- ASMFC should fully implement Addendum XXVI and its recommendations before requiring vessel tracking as this would satisfy the objectives of Draft Addendum XXIX
- Existing data from trip reports and logbooks should be fully utilized instead of requiring trackers
- Vessel tracking is an invasion of privacy; not all vessel activity is for fishing.
- Tracking does not provide information on lobster catch rates in a particular area

Rationales for Option B. Electronic Tracking Requirements

- Support for the collection of higher quality data for better science
    - Current spatial information of effort in the lobster fishery is too coarse
- Higher resolution spatial data obtained by tracking devices could significantly improve the stock assessments for lobster and Jonah crabs
- Electronic vessel tracking data would significantly improve the effort models used to assess the location of vertical lines in the lobster fishery and their associated risk to right whales
- Need to address longstanding concerns about offshore enforcement
- The data collected would be of enormous value to understanding economic trade-offs for management measures such as area closures and marine spatial planning decisions
- Tracking data can help inform managers about how climate change is impacting the stock and the fishery
- Vessel tracking for federally permitted lobster vessels is important for enforcing the management measures required by the Atlantic Large Whale Take Reduction Plan
- Program should be implemented as soon as possible to provide data and put it to use
- Tracking on lobster vessels should have been required long ago

General Considerations

- Financial support for fishermen could reduce resistance to this proposal
- The Commission should consider allowing the use of existing AIS technology to meet the requirements of this program
- ASMFC should follow this action with an addendum that would improve harvest reporting in state waters
- Area 5 Waiver permits should be exempt from tracking requirements because it is primarily a black sea bass fishery with only very few lobsters landed as bycatch

Lobster Addendum XXIX & Jonah crab Addendum IV Public Hearings

Connecticut and New York Webinar Hearing

January 12, 2022

5 Public Participants

Public: William Bartlett, Barry Saxe, Ed Smith, Tor Vincent, Xiang Zhang

Commissioners: David Borden (RI), Colleen Bouffard (CT), Maureen Davidson (NY), Emerson Hasbrouck (NY), Allison Murphy (NOAA)

Staff: Caitlin Starks (ASMFC), Julie Simpson (ASMFC), Craig Weedon (MD), John Maniscalco (NY), Kim McKown (NY), Melissa Albino Hegeman (NY), Renee St. Amand (CT)

Hearing Overview

The attendees did not provide any comments.

Lobster Addendum XXIX & Jonah crab Addendum IV Public Hearings
New Jersey, Delaware, Maryland, and Virginia Webinar Hearing
January 13, 2022
5 Public Participants

Public: Sonny Gwin (MD), Denise Wagner (NJ), Joseph Wagner Jr (NJ), Wes Townsend (DE), Betsy Fitzgerald (ME)

Commissioners: Patrick Geer (VA), John Clark (DE), David Borden (RI)

Staff: Caitlin Starks (ASMFC), Toni Kerns (ASMFC), Julie Simpson (ASMFC), Emilie Franke (ASMFC), Chad Power (NJ), Craig Weedon (MD), David Stormer (DE), Somers Smott (VA), Scott Newlin (DE), Jeff Brust (NJ), Peter Clarke (NJ)

Hearing Overview

- Two attendees supported Option A, status quo
  - Concerns with tracking included costs to the fishermen being too high for smaller harvesters, difficulty of using the technology and potential for devices to malfunction, and the potential for data to cause conflicts between fishermen.
- One attendee expressed mixed thoughts on addendum. He generally supports tracking for the purposes it is intended for but is concerned with the pace of the addendum, costs, and potential technological challenges.
- A question was raised about whether the requirements would apply to someone with a federal lobster permit who was fishing conch traps but no lobster traps during the fishing year.
- Virginia state staff spoke on behalf of some fishermen who could not attend, saying they are concerned that this will cost too much for how little they make on lobster

Public Comment Summary

Denise Wagner (NJ)

- Supports Option A, status quo, at least for Area 5
  - A5 does not have a large lobster fishery
  - Area 5 waiver should be exempt. They are not required to buy lobster tags, lobsters are bycatch, low numbers of lobster are caught.
- There should be reimbursement for the tracking devices. The federal government already set precedent for reimbursement with scallop industry (a multimillion dollar industry), and the lobster industry is much smaller than the scallop industry. Industry needs time to come up with the funding.
- Concerned that tracking data will reveal personal fishing locations and cause conflicts between vessels fighting over those areas
- Concerned about tracking devices not working – what do you do if your tracking device just stops working?
- Concerned about the difficulty of reporting systems and using tracking devices
- The cost of Installation should also be factored in

Sonny Gwin (MD)

- Concerned about the fast pace of this addendum and trying to implement too quickly

- Concerned that devices may have technical issues/may not work
- Generally supports tracking to understand fishing footprint to use in conversations about interactions with aquaculture, etc.
- Concerned about the cost

Wes Townsend (DE)

- Supports Option A, status quo
- Tracking would be a burden on the fishermen, Delaware fisherman catch very little compared to Maine
- Not much gear from Delaware Bay south, so the tracking data would not provide much information

Lobster Addendum XXIX & Jonah crab Addendum IV Public Hearings

Maine Webinar Hearing
January 18, 2022
27 Public Participants

Public: Nick Faulkingham (ME), Lange Solberg, Frank Mcdonald, Jodie Jordan, John Swoboda, Fred Penney (MA), Nathaniel Burola (ME), Sue Thompson, Gabe Shadis, Amalia Harrington (ME), Walter WilleyIV, Heidi Henninger, Amy Knowlton, Barry Saxe, Russell Wray, Jacob Thompson (ME), Joseph Fessenden, Marianne LaCroix (ME), Zack Klyver, Purcie Bennett-Nickerson, Ethan Genter, Virginia Olsen, Patrice McCarron (ME), Clinton Collamore, Barbara Skapa (ME), Brian Thibeault, Andy Santapaola (MA)

Commissioners: Pat Keliher (ME), David Borden (RI)

Staff: Caitlin Starks (ASMFC), Toni Kerns (ASMFC), Julie Simpson (ASMFC), Megan Ware (ME), William DeVoe (ME), Lorraine Morris (ME), Kathleen Reardon (ME), Allison Murphy (NOAA), Anna Webb (MA), Story Reed (MA), Derek Perry (MA), Steven Wilcox (MA)

Hearing Overview

- 9 attendees provided public comments; 8 supported Option A, status quo and 1 supported Option B.
- Supporters of Option A had several main concerns with tracking:
    - Tracking data would more likely be used against the fishery rather than help them
    - Fishermen should not have to bear the costs of tracking devices when it is not for their benefit
    - Tracking data will show current locations, but the fishery and gear will not necessarily be in the same place in the future.
- It was suggested that rather than require this for the full fleet, it should be implemented as a pilot program for data collection with a smaller percentage of the fleet.
- The comment in support of Option B was because of the benefits of more precise understanding of when and where fishing activity is actually taking place, especially for enforcement and reducing entanglement risk to whales.

Public Comment Summary

Virginia Olsen:

- Supports Option A, status quo
- Concerned that tracking data will show where we are fishing now, but that might not be where we are fishing in 5-10 years. If wind sighting is based on current fishing areas that might hurt us in the future.

Jacob Thompson (Vinalhaven, ME):

- Supports Option A, status quo
- Any information we give to the government hurts us more than helps.
- I don't think wind cares where we fish based on meetings we've had in Maine.
- We do not need any more cost to fishers, as we are already being squeezed, and we do not have much more time to fish with whale issues.
- They do not track the whales or know where they are so how will this help? They know there are no whales where we fish now but it is still closed for part of the year.

Nick Falkingham (Jonesport, ME):

- Supports Option A, status quo
- Agrees with Jacob's comments that government overreach is never good for the fisherman.
- More closures will make gear density get worse, and then trackers will make things worse because if they see the gear getting denser we will get more closures for the whales.

Fred Penney (Boston, MA; Massachusetts Lobstermen's Association):

- Supports Option A, status quo
- Not happy with another cost put onto the fishermen when the benefit is for enforcement, not for fishermen. Already losing months of income. You should pay for this and not us.
- Agree that the density of fishing now is not necessarily going to be the same in the future; we don't fish in the same place from year to year.
- Doubts about whether this program even works.

Gabe Shadis (Bristol, ME):

- Supports Option A, status quo
- Concerned about the data being compiled used it to come to conclusions. Since we already have a closed area, the trackers will show no gear density there, and then it will be wide open for other development by wind, oil, or aquaculture.
- Several enforcement entities are implementing policies like closures, so our location data and gear is going to shift around.
- Federal interests and global energy conglomerates will have all the data they need to do what they want with fisheries, and small fishermen do not have the resources to defend themselves against it.
- Fishermen cannot pay for this.
- This will put crosshairs on the coastal fisheries, and in Maine we depend on our fisheries more than people give credit for.

Brian Thibeault (LCMA 2):

- Supports Option A, status quo
- Agree with comment made about applying this to a smaller percentage of the fleet as a pilot program for data collection, rather than requiring it for the full fleet.
- Atlantic Ocean is the new frontier for a lot money. Making new regulations for the industry is too steep. There are too many pending regulations on table and we don't know what is going to happen for whales and wind.
- Putting more on the industry's plate is unnecessary at this point.
- Wind developers already know where we are, and where gear density is.

Walter Willey IV (ME):

- Supports Option A, status quo
- Agree with Jacob's comments. Think we do not need to give this information to the state to help the whale and windmill people. It is not fair to the fishermen and they do not need to know everything we are doing.
- We do not even see whales anymore.
- The state is asking too much of us, and they should stand up for the industry.

Andy Santapaola (Gloucester, MA):

- Supports Option A, status quo
- State and federal government already has the information they need.
- We already have closures and other restrictions, over the years we have been crushed with more regulations. Things like this will just make it worse for industry.

Russel Wray (Maine, Citizens Opposing Active Sonar Threats - COAST):

**comments taken by phone due to audio issue on webinar*

- COAST fully supports Option B for several reasons. Requiring electronic vessel tracking of federal permit holders will allow for a more precise understanding of when and where fishing activity is actually taking place, meaning managers and law enforcement can better do their jobs, and not have to rely on ballpark information. It will make it easier for enforcement to locate gear, including non-compliant gear, and for managers to help insure a healthy lobster stock. Good for lobsters and good for fishermen.
- In addition, and very importantly, electronic tracking will better enable managers to minimize co-occurrence of persistent vertical lines and whales, helping reduce entanglement risk, and all the suffering that entanglements cause, for North Atlantic right and other whales. That will be good for the whales, meaning it's also good for our oceans, lobsters and fishermen, and the rest of us.
- COAST believes electronic tracking should go into effect in 2023. The earlier this more precise data can be collected, the sooner it can be put to good use.

Lobster Addendum XXIX & Jonah crab Addendum IV Public Hearings

Maine Webinar Hearing
January 19, 2022
21 Public Participants

Public: Erica Fuller (MA), Zack Klyver (ME) Joseph Fessenden (ME), Virginia Olsen (ME), Russell Sylvestre (RI), Kristan Porter (ME), Margaret Campbell (ME), Greg Mataronas (RI), Matt Gilley (ME), Patrice McCarron (ME), Aubrey Ellertson (MA), David Dauphinee, Amalia Harrington (ME), Chris Smith, Jason Mitschele (ME), Brian Thibeault (RI), Nathaniel Burola (ME), Ted McCaffrey, Patrick Duckworth (RI), Josiah Couture, Brennan Strong (ME)

Commissioners: Pat Keliher (ME), David Borden (RI),

Staff: Caitlin Starks (ASMFC), Toni Kerns (ASMFC), Julie Simpson (ASMFC), Mike Rinaldi (ASMFC), Megan Ware (ME), William DeVoe (ME), Lorraine Morris (ME), Kathleen Reardon (ME), Jeff Nichols (ME), Meredith Mendelson (ME), Allison Murphy (NOAA), Anna Webb (MA)

Hearing Overview

- 8 attendees provided public comments in support of Option A
- Supporters of Option A had several main concerns with tracking:
    - Concerns around additional expenses and regulations at a time when a lot of new regulations are being placed on the fishery.
    - Concerns that tracking data will be used against the industry, particularly in whale and wind conversations.
    - Concerns about how tracking devices would function in cold weather and what the power draw would be on a boat's battery
- There were also questions raised about how the power down authorization program would work in the event of a tracking device failure.

Public Comment Summary

Brian Thibeault (RI, LMA 2):

- Supports Option A, status quo
- Concerned about how the data collected will be interpreted. Given differences between boat speed between trawls, fishermen practices, and amount of crew (as examples), the plots of hauling vs. steaming will be different between fishermen and expressed concern about what wrong data interpretations might mean.
- Commented there are too many regulations and new ones are continually being made.

Greg Mataronas (RI, LMA 2)

- Supports Option A, status quo
- Vessel tracking is cost prohibitive for fishermen who are small businesses. Between whale measures and wind lease areas, the industry is already at a breaking point.
- Concerned about the historical nature of the fishery because the requirements to get into the fishery are becoming more burdensome; it will be harder for the next generation to enter the fishery.

- Questions about the data storage requirements associated with a 1-minute ping rate. Also noted the volume of data that will be generated and the fact that ASMFC and NOAA already have issues getting through existing responsibilities.
- Concerned about the cold weather ruggedness of the tracking units, particularly in winter when only 1 out of 10 days is a fishing day. Realizing you have a dead battery on a tracking device in the winter means you lose 10 days, not just 1 day.
- Had a question about the power-down authorization if a device breaks. Will there be an automated system for getting a power down authorization at 2am when I am getting to my boat?
- Expressed concern that the online only public hearings are restricting public comment and the Board should not move forward with minimal public input. In-person public hearings should be required.

Matt Gilley (ME, LMA1)
- Supports Option A, status quo
- Stated that this is asking fishermen to pay for more data for the whale and wind folks.

Virginia Olsen (ME, LMA1)
- Supports Option A, status quo
- Agreed with a previous speaker regarding concerns about the power draw of a tracking device, particularly in cold weather.
- Requested more details on what the permission for a power down authorization would consist of.
- Commented that this about spatial planning and not the stock assessment and instead of requiring trackers, needed data could be collected by asking additional questions at the dock.

Russell Slyvestre (RI, LMA2)
- Supports Option A, status quo
- He did not see the benefit of tracking but fishermen would have to pay.
- Expressed concern that the data would be used against the industry.

Jason Mitschele (ME, LMA1)
- Supports Option A, status quo
- Commented that there are other ways information can be collected.

Brennan Strong (ME, LMA1)
- Supports Option A, status quo
- He noted that he just got his LMA1 lobster permit and that a tracking requirement would be expensive and time consuming.
- Commented that there are too many new regulations right now.

Patrick Duckworth (RI, LMA2)
- Supports Option A, status quo
- Already has VMS and doesn't want to be required to buy another unit.

Lobster Addendum XXIX & Jonah crab Addendum IV Public Hearings

New Hampshire Hybrid Hearing

January 19, 2022

16 Public Participants (11 in person, 5 virtual)

Public: Heidi Henninger, Cassandra Leeman (ME), Ken Stanvick, Liam Sullivan, Bobby Nudd (NH), Chris Adamaitis (NH), Vincent Prien (NH), Pete Flanigan (NH), Jeff Riccio (NH), Erik Anderson (NH), Ross Nugent (NH), Jim Titone (NH), Bob Bryant (NH), Greg Marshall (NH), Jeff Thurlow (NH/MA), Mike Flanigan (NH)

Commissioners/Council Members: Cheri Patterson (NH), Dennis Abbott (NH), Ritchie White (NH), David Borden (RI)

Staff: Caitlin Starks (ASMFC), Toni Kerns (ASMFC), Julie Simpson (ASMFC), Allison Murphy (NOAA), Renee Zobel (NH), Anna Webb (MA), Nicholas Buchan (MA)

Hearing Overview

- All public attendees that commented supported Option A, status quo
- Many were concerned that there are too many unanswered questions regarding how these requirements would be implemented in practice
- In particular, concerns were raised about what would happen if the tracking device were to malfunction; harvesters did not want to be unable to go fishing if their device was not working
- Multiple attendees also felt that the tracking data would be used against the fishery rather than to help them
- Several people said fishermen should not have to pay for the devices because these data are most useful for other purposes (e.g., protected resources, aquaculture, wind development)
- There were concerns that the technology has not been sufficiently tested on enough vessels

Public Comment Summary

Ross Nugent (NH, LCMA 1 lobster):

- Supports Option A, status quo
- Additional information is needed and the processes are not fully fleshed out

Erik Anderson (NH, commercial lobster):

- Supports Option A, status quo
- Does not think this is developed enough for final action to be taken in 2022.
- Believes ASMFC has underestimated the volume of data that will come from this and will not be capable of processing it
- Has reservations about this information being used for protected species; does not think the data will have value in the protected species arena, and doubts if it will be beneficial for other applications.
- Worried that this information could be processed or developed incorrectly and could be used against the fishery for regulatory actions.
- Seems like there are conceptual benefits, but it could backfire in reality.

Liam Sullivan (RI, LCMA 2 lobster):

- Supports Option A, status quo

- It is hard not to look at this and think the data are most useful for offshore development and right whale issues.
- Questions whether it would be really be used to defend fishing grounds, or instead to remove fishermen from those areas in the future. Offshore development employs expensive lawyers that can find ways to work around the rules, so giving them more data gives them more opportunities to figure out how to move into the fishing grounds.

Chris Adamaitis (NH, commercial lobster)

- Supports Option A, status quo
- Has listened to many older fishermen who have gone through their devices malfunctioning, and that leaves them tied to the dock. There needs to be a plan so they are not forced to stop fishing because of a device malfunction, before implementing something like this.

Vincent Prien (NH)

- Supports Option A, status quo
- Concerned with the electronic aspect of this proposal. Has fished for a long time and thinks VMS was a disaster because if the computer wasn't working, they had to wait forever to be allowed to go fishing. It was also very expensive.
- It seems like this is a cash cow for somebody to make money.
- It is more government regulation that is not needed.
- Already have eVTRs where we report where we fish, when we fish, what we catch, etc.

Jeff Riccio (NH)

- Supports Option A, status quo
- Too many unanswered questions and too soon to be implementing this. Fishermen need answers before the Board votes on this.

Michael Flanigan (NH)

- Supports Option A, status quo
- Why is this any different than AIS? Seems like AIS is more accurate.
- This seems like too much

Bobby Nudd (NH)

- Supports Option A, status quo
- The lobster AP needs to be consulted on this.
- Understands the need for improved data, but is very concerned about this data becoming available to some organizations with a history of using this data in ways that end up being detrimental to fishery through public media.
- If this requirement goes through, afraid there may be unintended consequences to the fishery.

Greg Marshall (NH)

- Supports Option A, status quo
- Does not want to be tracked and feels like it is an invasion of privacy

Jeff Thurlow (MA)

- Supports Option A, status quo
- Agrees with reasons that were stated before

Lobster Addendum XXIX & Jonah crab Addendum IV Public Hearings

Massachusetts and Rhode Island Webinar Hearing

January 20, 2022

24 Public Participants

Public: Thomas Achterberg (RI), Charles B., Thomas Balf, Leah Baumwell, Kalil Boghdan (MA), Peter Brodeur (RI), Beth Casoni (MA), Jane Davenport, Katharine Deuel (MA), Joseph Fessenden (ME), Jay Kim (ME), Eric Lorentzen (MA), David Magee (MA), Marc Palombo (MA), Derek Pascale (RI), Jocelyn Runnebaum, Arthur Sawyer (MA), Scott Schaffer (MA), Robert Stewart, Liam Sullivan (RI), John J. Swoboda Jr (RI), Russell Sylvestre (RI), Brian Thibeault (RI), Barbara Skapa

Commissioners: David Borden (RI), Raymond Kane (MA), Jason Mcnamee (RI), Daniel Mckiernan (MA)

Staff: Caitlin Starks (ASMFC), Toni Kerns (ASMFC), Julie Simpson (ASMFC), William DeVoe (ME), Kathleen Reardon (ME), Allison Murphy (NOAA), Anna Webb (MA), Nicholas Buchan (MA), Crystal Franco (NOAA), Marianne Ferguson (NOAA), Scott Olszewski (RI), Richard Balouskus (RI), Story Reed (MA) Kelly Whitmore (MA), Steven Wilcox (MA)

Hearing Overview

- 3 attendees provided public comments in support of Option A
- 2 attendees supported Option B
- Other comments did not explicitly support either option but provided considerations for the Board
- Questions/concerns with tracking requirement included:
    - The proposed costs will impact harvesters; financial support from the agencies is needed and a precedent was set for it by funding provided to the scallop fleet for their VMS equipment.
    - Concerns about the units not being readily available or being difficult to find should be considered.
    - Installing these devices on small boats/skiffs may present practical difficulties.
    - Concerns about data from when the vessel is not fishing being recorded.
    - Information already exists from trip reports and log books to provide what managers need for wind and whale issues.

Public Comment Summary

Brian Thibeault (RI, LMA 2):

- Supports Option A, status quo
- Reason is because there are still a lot of questions with uncertain answers.
- Regarding funding, for small businesses this will be a burden as it is already difficult times. Even this relatively small cost will have an impact.
- Regarding the availability of units, thinks it needs to be certain that they would be available for everyone, because if they are not readily available it defeats the purpose of the program.
- Supports option A until there is definite availability and funding to pay for it.
- Would like to see an expanded pilot program in the next year and wants to see what the data look like so we can better understand this.
- Asked about confidentiality concerns about data becoming public information and personal fishing data being compromised.

    - Staff explained that no one would be able to access the confidential track data for individuals except managers and law enforcement.
- The wind companies already have maps of fishing areas - there are no spots in the ocean that is not highlighted on their maps. There is no consideration by them of this usage map for lobster. It hasn't seemed to reflect a difference to them. It may help for conservation or mitigation purposes, but it could also hurt if they claim there is no usage in their immediate area.

John Swoboda Jr. (RI)

- Has filled out VTRs for years and thinks all the info the managers want/need are in the VTRs so this seems redundant.
    - Dan McKiernan responded that many lobstermen do not have a VTR requirement, and the resolution of data is not adequate to describe the fishing grounds.
- Concerned about trackers showing when the vessel is used recreationally (not lobstering) and whether that will get confused for fishing activity.
- Commended the commission for the speed of this action, but there are so many uncertainties so cannot yet form an opinion.

Peter Brodeur (RI)

- Supports status quo.
- The expense of having VMS on every lobster, crab, or gill net boat fishing federal waters will be high. The last few years since VMS were required in the scallop fishery, NOAA assisted many of those boats and acquiring funds to pay for the required equipment. Monthly fees vary between suppliers, and with the amount of information that needs to be sent. The number of scallop boats pales in comparison to the number of lobster boats being asked to comply with this proposal, so is anyone going to step up to the plate to provide financial assistance to the small business operators that make up the majority of the lobster fleet?
- Since 1984 fishermen have been sending NOAA VTRs or logbooks to the states. In those records are areas, length of trip, landings and other useful information to show our use of the ocean and I hope these data have been used for wind and whales over the years. I have brought this up at other hearings and asked if those records have been used by those programs and teams, and it seems like they just do not want to access them. Now we are now asked to put VMS on anything that floats to prove that we are fishing. Is NOAA too lazy to put our records to use? The existing information may not cover everyone, but it goes a long way to drawing up the heat maps. The only benefit to this is the exact location of up and down lines.
- I want to point out that one of the hot spots, Coxes ledge, has been very profitable to many different fleets, but does anyone thing that any records would have stopped the wind farm from coming there?
- Asked a question about the units' power sources, internal batteries, size, and waterproofness.
- Stated that at the end of the season when they take the gear out of the water and are not fishing for several months, it seems like that should be a reason to not allow the device to be powered down.
- Some vessels at his dock are very small boats or skiffs with federal permits; it seems like installing a device on those small boats would be difficult or not feasible in some cases.
- There is pertinent info in VTRs that seems like it has been hidden away in a closet. That should be used before implementing additional regulations. Extra work should be done at NOAA to provide the information that is already there. There are already heat maps for showing where gear density is.

Jane Davenport, Defenders of Wildlife, DC

- Urge the approval of option B. The need for better temporal and spatial information for lobster is long overdue and would benefit all stakeholders. From a conservation perspective we are In favor of the addendum for several reasons.
    - We need high resolution data to be used in the decision support tool for the ALTWRT to inform future actions. A criticism of the LMA1 restricted area recently promulgated is that it didn't have effort data for the LMA 1 area. NMFS is obligated to make decisions on best available data. This addendum will increase quantity and quality of lobster effort data to inform future management measures.
    - This data will help law enforcement in offshore fishery. It is a huge area with no dedicated vessel and no specialized expertise to haul and resent long trawls. It serves the interest of law abiding fishermen to make sure everyone is in compliance and hold anyone who is not accountable.
    - Will benefit the lobster resource by improving the stock assessment.
    - It is also important to understand footprint of the fishery because of competing ocean uses. Future plans for offshore wind, aquaculture, and MPAs need to be considered, and need to be informed by data to show where lobster fishery is operating. This is a cost effective solution to benefit all stakeholders.

Liam Sullivan (RI)

- Asked if there has been any discussion of funding assistance. Staff responded that there have been discussions to try and secure funding to help offset costs.
- The costs that have been presented may not be much to the larger operations, but for smaller ops it would be a bigger hit.

Derek Pascale (RI)

- Has anyone looked into the availability of units with different companies? These days it is difficult to get things and it wouldn't surprise me if this is implemented and lots of units are ordered and it takes months to get them.

Arthur (Sookey) Sawyer (MA)

- Asked if people who already have trackers for other federal fisheries will have to get these devices also?
- The feds paid for VMS for other fisheries so it would only be right for them to find the money to find this.

Marc Palombo (MA, AOLA, MLA)

- Supports Option B, because he supports anything that will help enforcement. There is little to no enforcement in Area 3, and this is a start.

Beth Casoni (MA, MLA)

- Supports status quo. Will provide written comments.

Eric Lorentzen (MA)

- Provided comments in the chat during the hearing:

- If the trackers were to be approved, I would like to see a more simplified reporting report/requirement. For example, not having to report the 10 minute square and management area since the tracker would capture that data. I want these devices to make catch reports easier by not having to fill out so much information.

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
GREATER ATLANTIC REGIONAL FISHERIES OFFICE
55 Great Republic Drive
Gloucester, MA 01930

January 28, 2022

Robert Beal, Executive Director
Atlantic States Marine Fisheries Commission
1050 N. Highland Street, Suite 200A-N
Arlington, VA 22201

Dear Bob,

Please accept the following comments on the proposed vessel tracking program for the American lobster and Jonah crab fisheries, as outlined in draft Addendum XXIX to Amendment 3 of the Interstate Fishery Management Plan for American Lobster and draft Addendum IV to the Interstate Fishery Management Plan for Jonah Crab. I want to highlight and commend the efficient work of Commission staff and this action's Plan Development Team in developing this draft addendum. It provides a thorough, well organized, and plain-language explanation of the main components of this program.

Overall, we are supportive of the proposed vessel tracking program for the Federal lobster and Jonah crab fisheries, as these data will enhance our ability to manage, enforce, and assess impacts to the fishery. The types of positioning systems envisioned for use are cost-effective and balance the impacts to industry with the need for the data collection program. We have two suggested modifications intended to increase the effectiveness of this program.

First, we suggest eliminating Federal Area 5 waiver lobster permits from requiring these tracking devices. While these permit holders fish with traps, they do so under an exemption program to target black sea bass that treats these permits similarly to the non-trap permit designation, which was excluded from the proposed requirements in this document. While collecting this information may have some benefits for evaluating interactions with other ocean uses, the small number of Area 5 waiver permits we issue each year (12-14 in the last 3 years) minimizes the utility of this information, especially when compared to the several hundred black sea bass permits issued each year. Rather than burdening this handful of permits, pursuing a more comprehensive black sea bass monitoring program in conjunction with the Mid-Atlantic Fishery Management Council would provide more complete black sea bass fishery information.

Second, consistent with requirements in our Federal vessel monitoring system regulations, it may be useful to consider requiring that vessel tracking service provider companies support state or Federal enforcement investigations. Federal regulations at 50 CFR 600.1515 state that

1. All technical aspects of the vessel monitoring system may be admitted as evidence,
2. That service providers must provide technical and expert support for litigation, and
3. That service providers must sign a non-disclosure agreement to ensure the confidentiality of the program.

While not all of these requirements may be necessary, highlighting the need for investigative and litigation support will likely aid enforcement's nexus with this data collection program.

I understand that additional details concerning the state implementation of this program will be developed through standard operating procedures, likely to occur late this spring and summer. My staff are committed to providing the Commission, ACCSP, and states with continued support where there is a nexus with Federal data collections, with information on the Federal vessel monitoring system requirements that may serve as an example for state implementation, and with the data necessary to manage this program. As always, I look forward to working with you and the Commission to facilitate the cooperative management of our fisheries and marine resources.

Sincerely,

Michael Pentony
Regional Administrator

cc: Caitlin Starks, Fishery Management Plan Coordinator, ASMFC

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Caitlin Starks
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Arlington, VA 22201

January 31, 2022

Dear Ms. Starks:

The Maine Lobstermen's Association (MLA) provides these written comments in response to the Atlantic States Marine Fisheries Commission (ASMFC) American Lobster Draft Addendum XXIX (29) for Public Comment. The MLA was founded in 1954 and is the oldest and largest fishing industry association on the East coast. The MLA advocates for a sustainable lobster resource and the fishermen and communities that depend on it.

The MLA understands the overall objective of this addendum – to collect data to better characterize efforts in the lobster fishery to improve stock assessment, inform discussions and management decisions related to protected species, and enhance offshore enforcement. However, we are very concerned about mandating the use of electronic vessel trackers in the LMA 1 federal lobster fleet to provide these data. Rather than adopt Addendum 29, the MLA urges the ASMFC to fully implement the provisions of Addendum XXVI (26), including 100% trip level reporting for all commercial lobstermen by ten-minute square, and to implement the three recommendations to address data deficiencies for federal lobster permit holders who are not required to report through a state program.

The ASFMC must identify what data deficiencies will exist after full implementation of Addendum 26, and then focus on whether electronic vessel tracking is the best approach to address any data gaps. As described below, MLA members have many concerns with using electronic vessel tracking to collect data.

<u>Addendum 26 and its Recommendations are not Fully Implemented</u>

In 2018, ASMFC adopted Addendum 26 to the Lobster FMP to "to improve harvester reporting and biological data collection in state and federal waters" and "utilize the latest technology to improve the spatial resolution of harvester data, increase the collection of fishery effort data, and promote the collection of biological data offshore." This management action requires all states to implement 100% harvester trip level reporting by 2023 and requires new data elements, such as number of buoy lines fished and data collection by ten-minute square.

The ASFMC determined that one of the deficiencies in Addendum 26 is that not all federal permit holders are required to participate in trip level harvester reporting. However, that is not the case for Maine's state lobstermen or federal permit holders. To address concerns with data collection for federal

permit holders, Addendum 26 recommends 1) establishing a harvester reporting requirement for federal permit holders (presumably those federal permit holders not reporting through a state); 2) creation of a fixed gear vessel trip report (VTR) for federal permit holders; and 3) implementation of a targeted lobster sampling program in federal waters. The MLA is not aware that any of these measures have been implemented.

The MLA strongly urges the ASMFC to fully implement Addendum 26 and act on its three recommendations before putting additional operational burdens and costs on all LMA 1 federal permit holders by mandating electronic vessel tracking. MLA also urges ASMFC to consider improvements to Addendum 26. For example, better spatial resolution of lobster fishing effort could be achieved by requiring lobstermen to report each of the ten-minute squares in which they fish, rather than being limited to one. ASMFC should also proactively work with NMFS to implement a harvester data collection program for federally-permitted lobster vessels that do not report through a state.

Full implementation of Addendum 26 and its recommendations will significantly improve our understanding of effort in the American lobster fishery at a much finer spatial-temporal scale and thus satisfy the objectives ASMFC has identified under Addendum 29.

Concerns with Addendum XXIX (29)

MLA members have identified many concerns with the mandatory vessel tracking for federal permit holders proposed under Addendum 29 which relate to a) how the data will be used and potential for benefit versus harm; and b) operational concerns and cost to the industry.

a) Concern over Data Usage and the Potential for Benefit versus Harm

MLA members express strong concern with how data collected through electronic vessel tracking will be used. From a lobsterman's perspective, VMS in other fisheries has been used predominantly to close areas to fishing and for enforcement of those closures. Lobstermen are not aware of examples in which VMS data has benefitted these fisheries.

Maine lobstermen feel certain that adopting electronic vessel tracking in the Area 1 federal lobster fleet will lead to future closure of prime fishing grounds under the federal ten-year whale plan. Maine lobstermen are currently subject to a nearly 1,000 square mile closure in offshore LMA 1 for four months each year, based on detection of a very small number of right whales in that area (73% of whale detections from the survey were in Area 3)[1].

NMFS has adopted a strategy that is punitive towards the lobster fishery because the agency assumes that all buoy lines pose significant risk to right whales, even when the presence of right whales is extremely low. As demonstrated in the most recent Final Whale Rule, NMFS's Decision Support Tool (DST) used to assess the percentage of risk reduction from right whale conservation measures, is very sensitive to the number of vertical lines in an area. The LMA 1 closure demonstrates that the detection of just a few right whales in an area where vertical line density is higher than that of adjacent areas will result in a closure. Identifying areas of high buoy line density, as will be done through electronic vessel tracking, is akin to identifying areas for closure to protect right whales.

The entire Northeast lobster fishery is facing a new 60% risk reduction in 2025 and another 87% risk reduction in 2030, and NMFS has postured these reductions may be required sooner based on revised

[1] Maine Department of Marine Resources comments on Proposed Rule, March 1, 2021. *See* https://www.maine.gov/dmr/science-research/species/lobster/documents/ME%20DMR%20Comment%20Letter%20on%20Proposed%20Rule%20-%20color.pdf

PBR and right whale population estimates. Adopting electronic vessel tracking will identify prime fishing bottom, and if any right whales are detected near these areas, they will very likely be closed to lobster fishing.

The MLA strongly urges ASMFC to fully understand the probability that providing electronic vessel tracking data will translate directly into a closure of prime lobster fishing bottom in LMA 1 under the ten-year whale plan before mandating electronic vessel tracking for this portion of the federal lobster fleet.

MLA members are also concerned that they do not fully understand how data collected through electronic vessel tracking, at fishermen's expense, will be used. The Addendum makes broad statements that these data will be used to improve stock assessment, inform management decisions related to protected species and marine spatial planning, and enhance offshore enforcement. While it may seem a cliché for fishermen to oppose electronic vessel tracking for fear that these data will be used against them, in today's world it is not. Lobstermen are being aggressively targeted by the federal government and environmental community for draconian risk reductions under the guise of right whale protection. Lobstermen are seen as obstacles by multi-national energy companies seeking leases to industrialize large expanses of the ocean with offshore wind farms. Lobstermen are expected to trust in marine spatial planning which seeks to define static use areas in the ocean when the Gulf of Maine and commercial fisheries are dynamic. Electronic vessel tracking is not capable of informing such dynamic processes – it cannot identify fishing grounds that were historically important or those which may emerge as important fishing areas in the future.

Fishermen should no longer be considered paranoid or their concerns commonplace when it is nearly certain that some portion will lose access to fishing grounds as these pressures mount. Fishermen are well-justified in not wanting to accelerate this process or to pay for it. Managers must acknowledge these very real threats facing commercial lobstermen and be honest about the strong potential that data collected through electronic vessel tracking will, in fact, hurt many commercial fishing businesses.

It is incumbent upon ASFMC to provide a more thoughtful and informed response to fishermen when they ask how these data will be used. At a minimum, ASMFC should be able to clearly explain to lobstermen how VMS data collected in other fisheries have either benefitted or harmed these fleets and be more specific in how the program envisioned for lobstermen may harm or benefit the lobster fleet. Generic responses relating to improvements in stock assessment, management, and enforcement do not begin to address these very real concerns.

b) Operational Concerns and Cost to the Industry

MLA members express a variety of operational concerns regarding implementing the proposed electronic vessel monitoring program. As stated above, many lobstermen do not believe that this data collection effort will benefit the fleet, and in fact, sincerely worry that these data will be used against them. Given the lack of understanding for how these data will be used, and whether these data will benefit or harm them, the MLA does not support requiring lobstermen to be financially responsible for the electronic vessel tracking program. If ASMFC ultimately moves forward with this Addendum, it should provide funding to purchase, operate, and maintain the equipment required to implement this program.

The MLA is opposed to requiring fishermen to operate more than one electronic vessel tracking system aboard their vessel. There are many lobstermen who participate in other federal fisheries which require

VMS. Managers must review existing VMS systems and ensure that lobstermen are required to use only one system which best addresses the data needs across these fisheries.

MLA members are also concerned with the lack of information on who will produce these units, the actual cost of units and monthly data charges, the reliability of the units and ramifications if a unit malfunctions. Members are also concerned about the requirement that the unit must be in operation even when the vessel is not fishing. Specifically, lobstermen question the actual costs, whether a lobsterman will be able to fish if the unit malfunctions, the cost to maintain the units and to receive technical support if a unit malfunctions, and questions about battery life and keeping the units active when a vessel is in port. The ASMFC has indicated a willingness to address these questions, however, Commission staff were not able to provide specific answers during the public hearings.

The lobster industry is facing significant pressures through massive risk reductions required under NMFS's ten-year whale plan and pressure to make room for large-scale offshore wind farms. They justifiably worry that implementing an electronic vessel tracking program at this time is just one more barrier to maintaining a successful and profitable fishery.

Finally, it is important to be mindful that the virtual public hearings necessitated by Covid restrictions are not effective in soliciting public comment from fishermen. It is very likely that many lobstermen remain unaware of this draft Addendum and they would likely raise additional concerns that have not yet been brought forward.

In closing, the MLA supports improving data collection to better understand effort in the American lobster fishery. However, the Association believes that Addendum 26 already lays out a plan, yet to be fully implemented, that will achieve this goal. We remain very skeptical that an electronic vessel monitoring program for the LMA 1 lobster fishery will benefit the fleet, and in fact, we worry that this program may instead cause harm.

Thank you for your consideration.

Sincerely,

Patrice McCarron
Executive Director

ATLANTIC OFFSHORE LOBSTERMEN'S ASSOCIATION

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Caitlin Starks
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Arlington, VA 22201
Submitted via email

Dear Caitlin,

The Atlantic Offshore Lobstermen's Association submits the following comments on American lobster FMP Draft Addendum XXIX / Jonah Crab FMP Draft Addendum IV. The Association generally supports the objectives sought by implementing electronic tracking as a means of documenting the footprint of the fishery, (Option B), however our membership is not uniformly in favor of this alternative. We recognize that this program offers a cost-efficient means to gather much needed spatiotemporal data to inform decisions on wind power siting, whale entanglement risk reduction, and other issues. However, we have questions and concerns regarding the proposed tracking program as outlined, which we describe below.

Our members main concerns are threefold:

Privacy
AOLA members are legitimately concerned about data privacy. While the draft addenda address data handling and confidentiality procedures, they are silent on the issue of privacy and access to data by outside parties through legal action, e.g., freedom of information act (FOIA) requests. We ask that the Lobster Board receive a legal briefing on whether or not these data could be petitioned for via FOIA request, or other judicial/legal action, before this program is implemented. Further, we strongly suggest that the Commission convene the Lobster Board Advisory Panel expeditiously to discuss the issues of privacy, confidentiality, data ownership/management/access, as there may be other related issues that we have failed to consider.

Enforcement
The draft document notes that the state agencies will be tasked with resolving "mismatches between vessel trip reports and associated vessel tracking information, or when tracking data are missing or incomplete." A standard needs to be developed by ASMFC, prior to implementation, which specifies when such inconsistencies trigger an enforcement investigation and what enforcement body has the lead in investigations.

Also related to enforcement, it is a normal practice for federal lobster and red crab trap gear to be fished close to boundary lines (e.g., LMA jurisdictions, the Hague Line, just outside closure areas). The location of the vessel when setting gear should be the legal standard for enforcement, not the location of the vessel when gear is hauled, as ocean conditions may require the vessel to

temporarily cross a line to reach a buoy and commence hauling. In these cases, enforcement needs to factor in the precision and accuracy of the tracking devices, and a buffer may need to be considered before enforcement actions are taken. The details of boundary area enforcement should be published prior to implementation of this program or, at a minimum, discussed by the Lobster Board Advisory Panel in advance of implementation.

Further, while we understand it is not the intent of the draft addendum to use tracking data to enforce trap limits, we note that offshore vessels frequently, and legally, haul the same gear multiple times on a single trip. Similar concerns about using tracking data to count traps hauled were raised repeatedly at public hearings.

Extent of Program

As this program is outlined, it is primarily proposed as a data gathering tool. With that framing in mind, data may not need to be collected into perpetuity to establish an accurate spatiotemporal footprint of the federal lobster fleet. Therefore, we suggest the Board consider adding a provision to Option B that builds in a requisite re-evaluation of the program 2-3 years after implementation.

The following additional items are relevant if Option B is approved. If the intent is to expand on and clarify these items in an implementation and operations procedures document, the Board might consider simplifying the final addenda to exclude all but the minimum requirements of each party.

Management Options

It is unclear whether a tracking device needs to be installed and active for the whole federal fishing year (section 3.2.1) or only prior to the first fishing trip where lobster/jonah crab gear will be fished (section 3.0 Option B). For example, if a permit holder declares into the LMA3 fishery, but fishes exclusively with red crab pots from May 1 – Nov 1 only fishing lobster trap gear in the winter, when is a tracker required?

The third clarifying bullet under proposed option B may need to be refined to exempt vessels participating in federal non-lobster/jonah crab trap gear fisheries, such as with fish or red crab pots, if that is the intent of the Board. Specifically changing: "does not fish trap gear at any point in the fishing year" to "does not fish lobster trap gear at any point in the fishing year."

Tracker Specifications and Approval

We suggest that a requirement be added to Table 2 that requires all devices to have a means for the user (vessel crew) to visually confirm that the device is on, working, and transmitting, such as external indicator lights. ACCSP should also develop an automatic process (text or email) to notify fishermen and the responsible state agency if unit data is not being received.

The operations procedure document should outline processes and responsibilities to identify and fix broken devices. Vessel operators should not be penalized for cases of unidentified technology failure, particularly in cases where a defect is not detected until the vessel returns to cellular

transmission range or not until the data validation process. In the case of a device malfunction discovered mid-trip, we support a provision that allows the trip, including multi-day trips, to continue. In cases where a device cannot be fixed or replaced promptly, we support state waivers to allow for short periods of fishing without tracking.

We also believe it is important to have a method to quickly approve qualified devices, as they become available, to ensure a wide range of options. The suite of certified products needs to include systems that allow vessel owners and fleet managers to view their own data, for example via a secure web server that is kept synchronized with data transmissions to ACCSP. We encourage ASMFC to communicate with current VMS, electronic reporting, and electronic monitoring providers to see if there is interest in offering solutions to this fleet. Many of these companies have partnerships to offer integrated reporting and tracking solutions, which could be particularly beneficial to permit holders already using vessel monitoring, communications, and/or reporting technologies.

To that aim, we ask that the ASMFC include a provision to allow lobster vessels with communication and/or compliance VMS systems to be exempt from additional tracker requirements, provided the vessel's existing satellite-based system is utilizing an acceptable ping rate. It takes LMA3 vessels approximately one hour to haul each 35-45 trap trawl. Therefore, a ten or fifteen minute ping rate, would be sufficient to document hauling locations for this portion of the federal fleet. VMS devices offer a proven technology capable of real time tracking and data transmission, as well as offering value added features for trip vessels, such as weather updates, email communication and eVTR integration. Permit holders should be given the option to increase the ping rate on existing technology, rather than be required to add duplicative cellular trackers.

State-Level Administrative Processes

We suggest the program be administered in a cycle the matches the federal fishing year or trap tag calendar. The states and NMFS should agree to a specific deadline for the transmission of GARFO permit data to state agencies, or implement a process that occurs on a routine schedule.

Federal-Level Administration Processes

We are unsure about the appropriateness of including eVTR language in this document. If the Board wishes to retain this language, it should be clarified to make clear that GARFO will include available eVTRs in their QA program from the implementation date forward. While lobster only permit holders are not yet required to submit eVTRs, a majority of LMA3 lobster vessels already do so as a requirement of other endorsements on the vessel's permit.

Thank you for the opportunity to comment and I look forward to discussing these and other issues at the Board meeting.

David Borden

Executive Director

Conservation Law Foundation
Center for Biological Diversity • Defenders of Wildlife • Whale and Dolphin Conservation

January 31, 2022

Caitlin Starks
Lobster FMP Coordinator
Atlantic States Marine Fisheries Commission
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Arlington, VA 22201
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Sent via Email: comments@asmfc.org

Re: Public Comment on Draft Addendum XXIX to Amendment 3 to the American Lobster FMP and Draft Addendum IV to the Jonah Crab FMP (Draft Addendum XXIX)[1]

Dear Ms. Starks,

These comments are submitted on behalf of Conservation Law Foundation, Center for Biological Diversity, Defenders of Wildlife, and Whale and Dolphin Conservation. Our organizations write in strong support of Draft Addendum XXIX (Addendum) and the requirement for federal permit holders in the American lobster fishery, including those targeting Jonah crabs, to use an electronic vessel tracking system consistent with certain requirements. The need for high-resolution spatial and temporal data to appropriately characterize the effort in the federal American lobster and Jonah crab fisheries in future management decisions, is long overdue.

While we stand by our previous recommendations for Vessel Monitoring Systems (VMS) on all federal fisheries, we recognize that vessel trackers are a more cost-effective solution to address several long-standing issues in the fishery at this time. Areas where enhanced data collection could improve future management actions in the lobster fishery include: (1) stock assessments, (2) protected species interactions, (3) future marine spatial planning, and (4) enforcement.

Specifically, our organizations urge you to adopt <u>Option B</u> and Require Electronic Vessel Tracking for Federal Permit Holders: Option B will require all federal lobster and Jonah crab vessels issued commercial trap gear area permits to install an approved electronic tracking device that collects and transmit spatial data to participate in the fishery. Further it will prohibit such vessels from landing lobster or Jonah crab taken with trap gear without an approved device. And, finally, permit holders will be required to activate an approved device prior to beginning a trip, keep the device powered on at all times unless authorized to power down by port state, and prohibited from tampering with the device. See Table 1.

We support the required criteria for approved units in Table 2 (p. 8) that ensure appropriate data collection rates: Required criteria include the ability to collect location data

[1] http://www.asmfc.org/files/PublicInput/LobsterDraftAdd_XXIX_JonahCrabDraftAdd_IV_PublicComment_Dec2021.pdf.

at a minimum rate of one ping per minute for at least 90 percent of the fishing trip to best distinguish lobster fishing activity from transiting activity, the location of individual trawls, and to estimate the number of traps per trawl. At a minimum, a "ping" will collect the device's current datetime, latitude, longitude, and device/vessel identifier. And that data initiated from the tracking device will be transmitted to the vendor as soon as possible, but no more than 60 minutes from the time the fishing trip concludes.

The data storage approach is reasonable: Atlantic Coastal Cooperative Statistics Program houses the data received from tracking vendors as well as the eVTR data from GARFO, matches the vessel tracks to the relevant trip, and maintains data confidentiality in accordance with federal law with dissemination to authorized entities only. This is a reasonable approach and would appear to address the confidentiality concerns raised by lobstermen at public hearings.

* * *

High resolution spatial and temporal effort data is necessary to address several challenges facing the fishery, including:

1. **Stock Assessment Limitations**

Higher resolution spatial data, such as that obtained by tracking devices, could significantly improve the stock assessments for lobster and Jonah crabs. Currently the assessments are only able to analyze stock composition data by NOAA statistical area due to differing state and federal reporting requirements. This creates challenges because some of the parameters in the model vary at a finer spatial scale than statistical area. Tracking data will both improve the assignment of effort between the stock units (Gulf of Maine, Georges Bank, and Southern New England) and improve the size composition data used in the model to improve the accuracy of exploitation and abundance.

2. **Fishery Interactions with Protect Species**

Currently, the Atlantic Large Whale Take Reduction Plan aims to reduce serious injuries and mortalities to large whales in the American lobster fishery by a minimum of 60 percent. However, that risk reduction goal was based on a potential biological removal rate (PBR) of 0.9. According to NOAA Fisheries most recent right whale draft Stock Assessment Report, PBR has declined to 0.7. Therefore, the 60 percent risk reduction target is insufficient given the declining status of North Atlantic right whales. Putting that aside, the required risk reductions over the next ten years will be informed by the Decision Support Tool (developed by the Northeast Fisheries Science Center, Industrial Economics, and Duke University), which marries information on the distribution of whales with distribution on commercial fishing gear, as well as the strength and weight of that gear, to predict areas where whales may be prone to entanglement and to estimate risk reduction from various management measures. The use of electronic vessel tracking data would significantly improve the effort models used to assess the location of vertical lines in the lobster fishery and their associated risk to right whales.

3. Future Marine Spatial Planning in the Region

Several recent actions in the Northeast, including the coral amendments developed by the New England and Mid-Atlantic Fishery Management Councils and the designation of Wind Energy Areas, lacked fine spatial data on the "footprint" of the lobster fishery, as well as other fisheries. Increasingly, our ocean waters are being identified as sites for offshore aquaculture farms, conservation to increase ocean resiliency to climate change and protect biodiversity, and offshore energy development such as what is contemplated in the Gulf of Maine. Rather than rely on coarse and potentially inaccurate data, the ASMFC should approve this amendment so that future planning for ocean use and conservation benefit from more accurate and precise data.

4. Law Enforcement Challenges:

There have been longstanding concerns about enforcement in the lobster fishery, particularly in the offshore where the geographic size of the area and distance from shore, lack of a dedicated offshore enforcement vessel capable of inspecting, hauling, and re-setting long trawls, and the need for specialized expertise, loom large.[2] In addition to other efforts to enhance enforcement capabilities, the ability to differentiate hauling from transiting would be critical to identifying when illegal fishing is occurring. In most instances it is not necessary for law enforcement personnel to know this data in real time as the data transmitted upon reaching port will identify critical issues and allow for follow-up actions. The one-minute ping rate will allow for the detection of setting of gear when no hauling occurred (such as when gear is wet stored), and for greater precision when estimating the length of smaller trawls. We agree with the Addendum's conclusion that "[g]iven finite enforcement resources, information on distinct fishing locations would improve the efficiency and capability of offshore enforcement efforts." (see p. 5).

Conclusion

Slides shown during the public hearings confirm the results of the pilot project – several vendors can supply devices that deliver vessel positions and detect individual trap hauls at much lower cost and faster ping rate than satellite systems, delivering valuable information for future use by scientists, managers, and decision-makers. We urge you to move forward on this Addendum and thank you for considering these comments.

Erica Fuller
Conservation Law Foundation

Jane Davenport
Defenders of Wildlife

Kristen Monsell
Center for Biological Diversity

Regina Asmutis-Silvia
Whale and Dolphin Conservation

[2] *See* Nov. 4, 2021 Op Ed published by David Goethel in the Seacoastonline available at: https://www.seacoastonline.com/story/opinion/letters/2021/11/04/opinion-column-grievous-assault-lobster-resource/8539764002/; *see also* 2019 Lobster Fishery Enforcement Report to Congress attached to this letter as Exhibit 1.

REPORT TO CONGRESS

NORTHEAST LOBSTER FISHERY ENFORCEMENT

Developed pursuant to: Senate Report (175-275) accompanying the Consolidated Appropriations Act, 2019 (Public Law 116-6)

Chris Oliver, Assistant Administrator
National Marine Fisheries Service
National Oceanic and Atmospheric Administration

Neil A. Jacobs, Ph.D.,
Assistant Secretary of Commerce for Environmental Observation and Prediction,
Performing the Duties of Under Secretary of Commerce for Oceans and Atmosphere

THE SENATE REPORT (115-275) ACCOMPANYING THE CONSOLIDATED APPROPRIATIONS ACT, 2019 (PUBLIC LAW 116-6) INCLUDED THE FOLLOWING LANGUAGE

"Northeast Lobster Enforcement.—The Committee encourages continued collaboration between States, NOAA, and the U.S. Coast Guard to improve Federal capacity for offshore lobster enforcement in the Northeast. Offshore enforcement of fixed-gear fisheries, such as lobster, is critical to ensure fishing gear is compliant and minimizes negative impacts on whale health. The Committee directs NOAA to report to the Committee within 180 days on its progress on this issue and any further steps needed to ensure adequate enforcement of offshore lobster fishing."

THIS REPORT RESPONDS TO THE SENATE COMMITTEE'S REQUEST.

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Executive Summary

The National Oceanic and Atmospheric Administration (NOAA) has conducted meetings with the United States Coast Guard (USCG), our state Cooperative Enforcement Partners, and our Atlantic Large Whale Take Reduction Program team to discuss the challenges in offshore lobster fishery enforcement, as well as options for how to best address the situation. As a result of this review, it was recognized that enforcement in Lobster Conservation Management Area 3 (see Appendix A) is challenging given the distance from shore, the need for specialized equipment and expertise, safety concerns, and the extensive size of the fishing area. Given these challenges, a multifaceted approach is required to effectively enhance enforcement of the offshore lobster fishery.

Enhanced enforcement of the offshore lobster fishery would promote the accomplishment of two goals: 1) increased compliance with the Atlantic Large Whale Take Reduction regulations, which are designed to limit marine mammal entanglements; and 2) increased compliance with trap allocations. The options considered have the added benefit of improving the data available to the agency regarding conduct of the offshore lobster fishery and compliance with current regulations that will support lobster management and large whale conservation.

I. Federal Management of the Offshore Lobster Fishery

The Federal offshore lobster fishery extends from Maine to North Carolina. There are seven Lobster Conservation Management Areas, designated as Area 1, Area 2, Area 3, Area 4, Area 5, Area 6, and the Outer Cape Cod Area (see Appendix A for a map of the seven Lobster Conservation Management Areas). The American lobster fishery is cooperatively managed by the states and the NOAA National Marine Fisheries Service under the framework of the Atlantic States Marine Fisheries Commission.

The area examined in this report is the offshore Lobster Conservation Management Area 3, which is larger than all the other areas combined. The trap allocation for Area 3 is 1,945 traps per permit, and more than 60 vessels typically fish in excess of 100 miles from shore. Although the western boundary of Area 3 is close enough to shore that federally deputized state law enforcement partners can reach it during favorable weather with existing patrol vessels, states lack the capability to retrieve, inspect, and reset lobster traps due to the distance from shore and the water depth in most of Area 3. NOAA's Office of Law Enforcement (OLE) vessels are similarly constrained. USCG has the ability to reach the entirety of Area 3, but their current vessel configurations do not allow them to retrieve and reset lobster traps.

Lobster fishing managed in Federal waters (3 to 200 miles offshore) must adhere to regulations implemented through the Atlantic Coastal Fisheries Cooperative Management Act, including but not limited to the following:

- Fishermen must have a permit to harvest lobster. A temporary moratorium on the issuance of Federal lobster permits, which limits the amount of available permits to control the number of fishermen harvesting lobster, was extended indefinitely in 1999.

- Limits on the minimum and maximum size of lobsters that can be harvested, which varies by management area.
- Prohibition on possession of lobster meat and lobster parts. Lobsters must be landed live and whole to ensure they are of legal size.
- Measures to protect egg-bearing females – fishermen may not harvest them and, in most areas, if one is caught in their trap, they must notch its tail fin in a "v" shape before returning it to the water. The harvest of "v-notched" lobsters is also prohibited.
- Gear restrictions and specifications, including trap size, gear marking requirements, escape vents, and ghost panels.
- Trap limits, which vary among management areas.
- All Federal lobster dealers must submit weekly electronic reports for all lobsters they purchase from fishermen with Federal permits. Federal lobster permit holders are not required to report landings unless they have another Federal fishery permit, in addition to their Federal lobster permit, that requires landings reports (e.g., Northeast multispecies permit).
- Area-specific measures have been enacted to reduce fishing effort on the Southern New England stock, including biological and effort control management measures.

A related concern regarding offshore lobster fishing is the ongoing mortality rate of the endangered North Atlantic right whale. In recent years, most documented fishing gear entanglements of large whales that result in serious injury and mortality come from trap/pot gear. These traps lie on the ocean floor and are connected to buoys at the surface by long vertical buoy lines. While many whales determined to have succumbed to entanglement are found without gear attached, when gear is present it is often consistent with vertical lines from fixed gear.

II. Offshore Lobster Enforcement Challenges

Due to the distance from shore and the large total area it encompasses, enforcement of Federal lobster fishery regulations within Area 3 has been a challenge.

In an effort to address these longstanding challenges, NOAA and USCG recently increased the sharing of lobster fishery-related information resulting from dockside contacts, overflights, patrols, and vessel monitoring activities. In July 2017, NOAA held the first of a series of enforcement meetings with state and Federal law enforcement partners that included intelligence planning, USCG vessel capabilities, enforcement operations, and legal considerations. A significant observation from these meetings was that none of the states, USCG, or OLE currently has the capability to physically travel to the offshore fishing grounds, retrieve traps from the ocean floor, and reset those traps safely and properly.

As a result of these meetings, the following enforcement challenges were identified:

1. Trap limits and trap tagging requirements. In cooperation with the states and lobster industry, and pursuant to the Atlantic States Marine Fisheries Commission's Interstate Fishery Management Plan for American Lobster, NOAA has implemented a lobster management program in offshore Area 3 based on effort control through limited entry

and permit-based trap allocations. These allocations change annually due to a series of trap reductions at the start of each fishing year, and permit holders can buy and sell partial allocation on an annual basis to mitigate the trap reductions. The result of this effort control is a relatively low number of traps – approximately 112,000 traps compared to more than 1 million in the Federal waters of Area 1. One management and enforcement concern is whether offshore fishermen are actually reducing or adjusting their traps each year commensurate with the trap cuts and trap allocation transfers. The current regulations require a uniquely numbered tag be attached to each trap a fisherman is permitted to use to prevent fishermen from fishing more traps than they are allowed. However, without actively hauling gear to check the tag or deploying some type of technology to monitor traps or fishing activity, effective enforcement of trap allocations and associated reductions is a significant challenge and, consequently, the level of compliance is difficult to determine.

2. Lack of fisheries data. NOAA and its enforcement partners have been hampered by a lack of reliable fisheries data regarding offshore lobster industry activity in Area 3. Knowing where fishing activity is taking place is crucial in determining where to focus limited enforcement resources. However, the current offshore lobster fishery requirements do not allow for the appropriate level of tracking and reporting that would be conducive to effective enforcement (see initiatives described in Section III below.)
3. Gear configuration, marking, and specifications. The gear used in Area 3 "soaks" in the fishing grounds all season. As a result, enforcement of trap gear specifications such as trap size, escape vent size, ghost panels, and surface gear marking requirements requires an ability for law enforcement to either pull gear where it is located, or to monitor gear while it is being retrieved by fishermen.

III. Offshore Lobster Enforcement Initiatives Under Consideration

NOAA has identified the following as the most viable initiatives to increase Federal enforcement activities in the Area 3 Offshore Management Area.

A. Mandatory Vessel Trip Reports

At present, there are no requirements for trip reporting for offshore "lobster only" permitted vessels fishing in Area 3. Adding a vessel trip report (VTR) requirement that includes data on location, gear (traps per trawl), and haul times would be a vital first step in improving compliance monitoring and enforcement efforts.

NOAA has already initiated the rulemaking process to expand the harvester reporting requirement to all Federal lobster vessels, including those trap fishing vessels operating in Area 3. The proposed rule is expected to be published in late 2019 with implementation of the requirement at the start of the 2020 fishing year. This action would require an additional 1,434 Federal lobster permit holders (47 percent of the 3,056 permit holders) to submit a VTR for each fishing trip.

Requiring all Federal lobster vessels to report through the VTR program will provide important information on where the fishery is occurring. This information with support

compliance monitoring and enforcement efforts, as well as lobster management and whale conservation.

B. Mandatory Vessel Monitoring System

Unlike many other fisheries in the area, there is currently no vessel monitoring system (VMS) requirement within the Federal lobster fishery. Implementing a VMS requirement would allow law enforcement personnel to know in real time when and where a vessel is fishing, as well as activity associated with the vessel's tracks. Real-time vessel location data is essential for an effective and efficient on-the-water enforcement capability.

To explore the feasibility of this option, NOAA is working with the offshore lobster industry and others to develop a pilot program to test various VMSs that would also support enhanced fisheries data collection. A pilot program will help determine which systems and technologies are best suited to provide enhanced fishery-dependent data (e.g., location, effort, traps hauled, etc.).

C. Electronic Monitoring

The use of electronic monitoring (EM) technology is one promising option that could increase deterrence and improve enforcement targeting efforts. EM creates an opportunity to see the fishery and gear through video recordings, without enforcement officers physically boarding vessels at sea. Onboard camera systems could be installed on lobster fishery vessels to monitor trap configuration, gear, markings, and allocation.

While camera systems are not a perfect substitute for a physical boarding, and the types of violations that an EM system is able to detect are not all-inclusive, EM could fill a critical gap by monitoring activity onboard vessels. It can also assist enforcement of regulations relating to trap counts, tagging and marking requirements, gear configuration (i.e., use of weak links, escape vents, and ghost panels), and discards for stock assessment. Because EM records the gear being hauled onboard during normal fishing operations, it allows for increased compliance monitoring without the need for law enforcement to haul and inspect the gear, thereby minimizing any loss of fishing time and protecting fishing gear from being damaged or improperly reset during law enforcement inspection operations.

To explore the feasibility of this option, NOAA will initiate a pilot program involving the testing of various EM technology on offshore lobster vessels in Fiscal Year 2020.

D. Dedicated Law Enforcement Patrol Vessel

Presently, there is no dedicated or properly configured law enforcement vessel capable of patrolling the mid and far edges of Lobster Conservation Management Area 3. A capable patrol vessel would be a valuable tool in enforcing regulations by allowing for the

physical retrieval of gear for inspection and the direct observation of trap marking, allocation, and configuration.

While significant consideration has been given to acquiring a large dedicated and properly configured offshore lobster law enforcement vessel to be manned by OLE and federally deputized state law enforcement partners, this option was assessed to be impractical due to the varied labor and personnel regulations in each state and the amount of time required to be "on station" to make patrols effective and efficient. In addition, the skill set needed to safely operate an offshore vessel and pull and reset offshore lobster gear is considerably different than that required for the lighter near-shore gear in shallow waters – creating a significant officer safety issue.

As a second option, USCG has the ability to reach the entirety of Area 3, but also presently lacks the specialized equipment and trained personnel capable of safely retrieving and resetting lobster traps. In addition, in a "traditional" fisheries boarding by USCG, the fishing vessel and its crew, not the patrol vessel, retrieve their own gear so that it can be properly and safely hauled in and inspected. Configuring a USCG vessel to haul and reset commercial lobster gear would be a significant deviation from this current approach.

A third option is to use the skills and resources of the NOAA Commissioned Officer Corps aboard NOAA research vessels, under the direction of OLE, to haul and reset traps. While this option is still under review, the requirement and challenges to properly and safely haul and reset commercial offshore lobster gear are significant considerations.

E. Increased Observer Coverage

A final option under consideration is to increase observer coverage in the offshore lobster fleet to improve data available for lobster fishery management and enforcement. Currently, very few observer sea days are allocated for the lobster trap fishery in Area 3, leading to gaps in the amount of fishery-dependent data available for the lobster fishery. Furthermore, observer data is a useful means of checking self-reported data from VTRs and other sources. While it is important to maintain the clear distinction of the role of fishery observers as biologists collecting fishery, gear, protected resource data, etc., they currently collect information on fishing gear characteristics of fisheries where they are deployed.

Additional observer days would allow NOAA to gather this data rather than continue to rely on sporadic offshore sampling efforts by the industry through Federal grants and other funds.

Summary

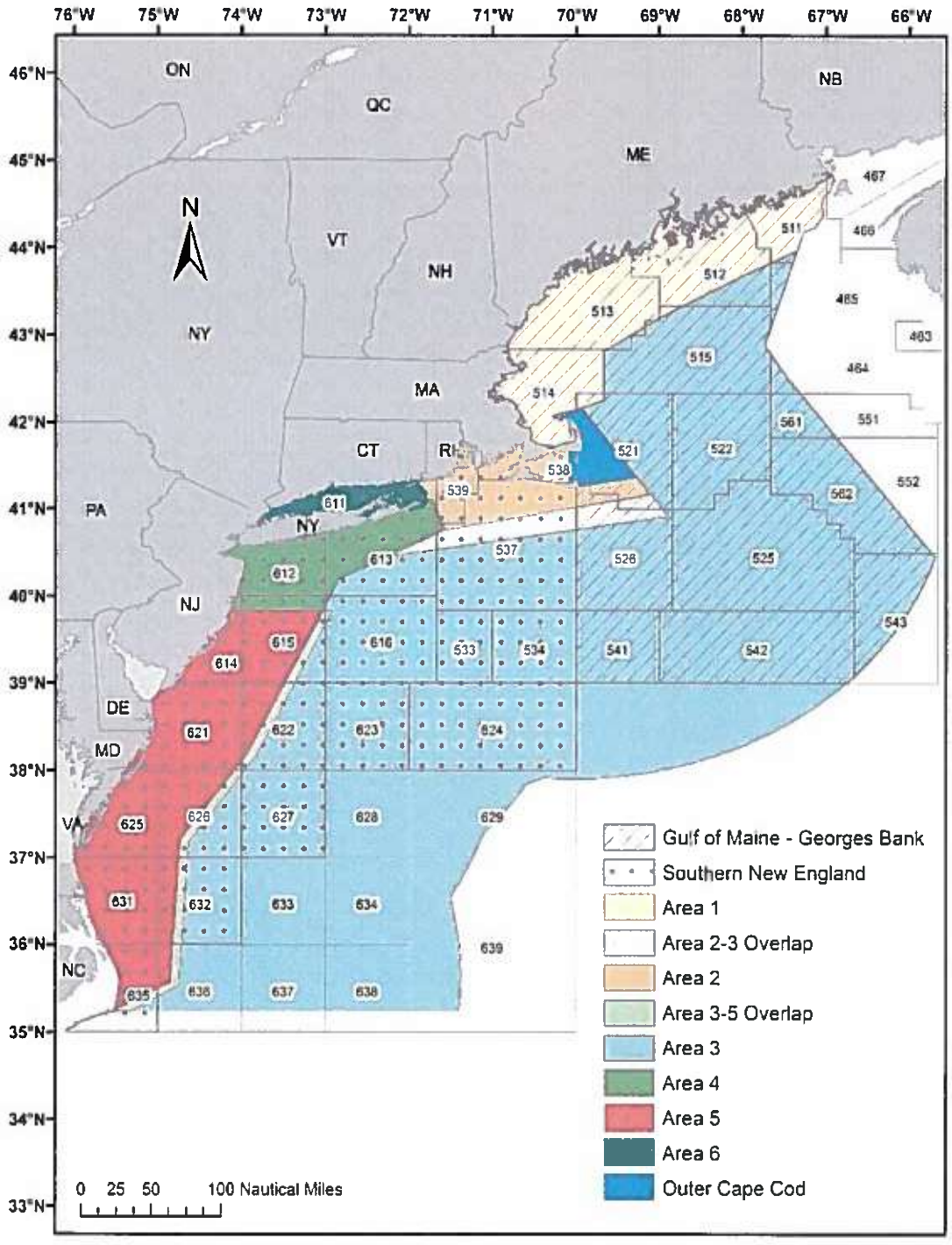
NOAA and its state and Federal partners have endeavored to identify ways in which offshore enforcement in the Federal lobster fishery can be enhanced.

The field evidence shows entanglement from vertical lines to be a significant contributor to recent North Atlantic right whale entanglements, which adds a sense of urgency to increased enforcement efforts, especially given the lack of reliable information regarding the potential undocumented number of traps and lines in far offshore waters.

The most viable enforcement measures under consideration include an expanded mandatory VTR requirement, a new VMS requirement, an EM pilot project, and increasing onboard observer coverage. Options for acquiring or configuring a vessel to provide a dedicated on-the-water law enforcement capability were also considered.

While all the options would increase current enforcement efforts, no single option is a complete solution. Rather, a combination of mutually reinforcing initiatives, such as VMS+EM with a "traditional" USCG at-sea boarding response to monitor fishing effort and compliance with lobster fishery regulations, would provide the most effective deterrent to those who seek to circumvent those regulations.

Appendix A: Map of Offshore Lobster Enforcement Areas



The Nature Conservancy
Protecting nature. Preserving life.

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Ms. Caitlin Starks
American Lobster FMP Coordinator
1050 N. Highland St.
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Arlington, Virginia 22201

Dear Ms. Starks,

On behalf of The Nature Conservancy (TNC) in Maine, thank you for the opportunity to **comment in favor of the action alternative (Option B) of the American lobster and Jonah crab draft addendums**, XXIX and IV respectively.

The Nature Conservancy is a nonprofit conservation organization dedicated to conserving the lands and waters on which all life depends. Guided by science, we create innovative, on-the- ground solutions to our world's toughest challenges so that nature and people can thrive together. Working in more than 70 countries, we use a collaborative approach that engages local communities, governments, the private sector, and other partners.

TNC believes that timely and accurate catch information is a critical component of successful and sustainable fisheries management programs. It provides scientists the data needed to develop accurate and reliable stock assessments, a critical aspect of sustainable fisheries management. As the draft addendum highlights, for several years the American Lobster Management Board has recognized the critical need for high-resolution spatial and temporal data to characterize effort in the federal American lobster and Jonah crab fisheries (Draft Addendum, pg. 1). The draft addendum recognizes that vessel tracking would 1) provide fine scale effort data to accurately apportion effort within the stock units; 2) provide finer scale resolution of trap locations for use in estimating risk reduction under the Atlantic Large Whale Take Reduction Plan; 3) provide necessary data on the American lobster and Jonah crab fishery, not currently available, in marine spatial planning conversations around offshore wind and marine protected areas; and 4) improve the efficiency and efficacy of offshore enforcement efforts. We agree these are all critical issues to address with implementing Addendums XXIX and IV. However, we want to highlight how critical the implementation of vessel tracking is for the stock assessments, and therefore sustainable management, of American lobster and Jonah crab.

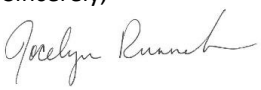
Currently, the American lobster stock assessment estimates fishing effort in a variety of ways depending on the data available. The 2020 American lobster peer reviewed stock assessment report states that: "the standard unit of fishing effort is difficult to define in the American lobster fishery, there is no linear relationship between the number of traps fished and fishing effort" (ASMFC, 2020, pg. 46). We believe this is a critical limitation to the American lobster stock assessment and the proposed vessel tracking approach is a very reasonable, and cost effective, approach to resolving this issue. Additionally, the effort data used, total numbers of licenses and trap limits, does not account for any changes in fishing effort over time because latent effort is included (ASMFC, 2020, pg. 3). The 2020 lobster stock assessment peer review panel highlighted the need to improve the estimates of total trap hauls by season and location to improve the understanding of changes to the fishery which can be paired with the documented changes in habitat suitability from the fisheries independent data sources (ASMFC, 2020 p. 3-4). We know climate change is impacting the American lobster stock, but we don't have a clear sense of how the fishery is responding to that change. This is going to be important for managers to understand as uncertainty from climate change increases with warming waters.

To date, there has not been a stock assessment for Jonah crab in the United States (ASMFC, 2021). "Landings of Jonah crab from U.S. waters have increased significantly over the last 20 years, quadrupling from an average of 4.8 million pounds per year during 1997-1999 to an average of 20.1 million pounds per year during 2017-2019" (ASMFC, 2021 pg. 22). However, we do not have a clear sense of stock status for this fishery. The Jonah crab pre-assessment workshop report indicated that Jonah crab fishing effort is not yet well characterized

and will be an important data need for the development of a stock assessment. There is essentially no data on the seasonal dynamics, fishing strategies, and socioeconomic aspects of the fishery (ASMFC, 2021 pg. 2). The proposed vessel tracking addendum will help develop a standardized and accurate approach to evaluating effort, provide an avenue for understanding the seasonal dynamics and socioeconomic aspects of the fishery by pairing effort data with available catch data, and will likely provide some insight on fishing strategy as well. We believe that vessel tracking will allow for a more robust stock assessment approach to be considered for this fishery.

We strongly encourage the American Lobster Management Board to pass Option B of the American lobster and Jonah crab draft addendums XXIX and IV to improve the stock assessment and management for these species. Thank you for considering our comments on the Addendum and please feel free to contact me directly if you would like to discuss in more detail.

Sincerely,



Jocelyn Runnebaum, PhD
Marine Scientist | The Nature Conservancy in Maine

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ASMFC. (2020). 2020 American Lobster Benchmark Stock Assessment and Peer Review Report. http://www.asmfc.org/uploads/file/5fb2c4a82020AmLobsterBenchmarkStockAssmt_PeerReviewReport.pdf

Caitlin Starks
Atlantic States Marine Fisheries Commission
1050 N. Highland St. Suite 200A-N
Arlington, VA 22201
Fax: (703) 842-0741

RE: American Lobster Draft Addendum XXIX

Email: comments@asmfc.org
Subject Line: Lobster Draft Addendum XXIX

We support the purpose of this action, which is to introduce electronic vessel monitoring to collect high resolution spatial and temporal effort data which will provide valuable and critically needed information to support stock assessments, appropriately address protected species interactions, improve marine spatial planning, and aid in offshore enforcement of the lobster and Jonah crab fisheries. The fact that this one technological improvement to collecting fishing information would then help inform management, science and conservation across atleast four important areas shows the potential value in this addendum.

We would request the ASMFC vote in favor of *Option B: Implement electronic tracking requirements for federally permitted lobster and Jonah crab vessels with commercial trap gear area permits*. Option B would improve the management of the fishery in the four following areas:

Stock Assessment
Presently as outlined in the addendum the stock units don't overlap with management areas. Tracking data for the fleet showing where the catch is happening would improve the science and long-term management of the fishery.

Protected Species
NOAA is currently giving the lobster fishery a ten-year time frame to significantly reduce risk to right whales by 98% and to reduce risk of entanglement to other large whale species. Entanglement in vertical lines is a moral and humane issue that the public and seafood consumers want fishery managers to solve. Presently the ALWTRT is relying heavily on models to calculate risk and the amount of risk reduction needed. The present Decision support tool made for use in the analysis is only as good as the data that is introduced so that it mirrors the reality of where fishing is happening and where whales are located.

Understanding the economic impact valuation of NOAA closures to lobster fisheries like those recently implemented under the NOAA whale rules is important. Throughout the process NOAA officials asked for information from the fishery and states. In the final rule, NOAA proposed a LMA1 clousure and suggested that 45 vessels would be impacted. Many within the lobster industry and State officials it would affect significantly more fishermen. Without finer scale data a clear sense of what the outcome would be was hard to understand. The data in this case would be of enormous value to understanding the trade offs and coming up with strong management.

Marine Spatial Planning

The addendum describes how Aquaculture, Offshore Wind, MPA's, etc. are all areas where lobster fishery may be competing for area and habitat. The recent NEFMC Omnibus Habitat Coral amendment proved extremely challenging given the lack of precise data hard to determine where fishing was taking place. All of these issues will need to understand where fishing is happening over time and show the fluid and mobile nature of the fishery.

Offshore Enforcement

Clearly law enforcement has a challenge in needing to patrol such a vast ocean. To know where the highest and densest fishing takes place and temporal peaks will improve the work of law enforcement.

For your consideration,

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Massachusetts Lobstermen's Association

8 Otis Place ~ Scituate, MA 02066
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January 24, 2022

Caitlin Starks
Atlantic States Marine Fisheries Commission
050 N. Highland St. Suite 200A-N
Lobster Arlington, VA 22201

Via Email: comments@asmfc.org

RE: Draft Addendum XXIX

Dear Ms. Starks,

The Massachusetts Lobstermen's Association submits this letter of comment on behalf of its' 1800 members on the; Atlantic States Marine Fisheries Commission on DRAFT ADDENDUM XXIX TO AMENDMENT 3 TO THE AMERICAN LOBSTER FISHERY MANAGEMENT PLAN & DRAFT ADDENDUM IV TO THE JONAH CRAB FISHERY MANAGEMENT PLAN (Addendum XXIX) Electronic on Vessel Tracking for Federal Permit Holders.

While the objective of Addendum XXIX is to give a high resolution and temporal image on effort data to better depict what the effort is of the commercial lobster industry to better serve new users. The MLA does not support the implementation of vessel tracking systems for the commercial lobster industry as a management measure to better serve stock assessments, protected species interactions, marine spatial planning, and offshore enforcement. The MLA is deeply active in all of these areas and is wary that vessel tracking will benefit the commercial lobstermen and be anything but another expense.

Established in 1963, the MLA is a member-driven organization that accepts and supports the interdependence of species conservation and the members' collective economic interests. The membership is comprised of fishermen from Maryland to Canada and encompasses a wide variety of gear types from fixed gear and mobile gear alike. The MLA continues to work conscientiously through the management process with the Division of Marine Fisheries, Atlantic States Marine Fisheries, Atlantic Large Whale Take Reduction Team, and the New England Fisheries Management Council to ensure the continued sustainability and profitability of the resources in which our commercial fishermen are engaged in.

The commercial lobstermen have been reporting their locations for many years now, and this data ought to be used as it is available today and free. The commercial lobster industry complied to the implementation of the 10-minute squares to give even a better depiction of the commercial lobster fisheries spatial foot-print and now, that is not good enough. The commercial lobster industry is continually being "asked" to do more, and at their expense, for the betterment of stock assessments, protected species interactions, marine spatial planning, and offshore enforcement without any compensation or appreciation. The MLA does not support any more and unnecessary financial burden to be placed on the commercial lobstermen.

During the recent public hearings on Addendum XXIX there were several comments on the use of these vessel tracking systems and who will have access to the data. As we are watching the industrialization of the Exclusive Economic Zone (EEZ), whether is it aquaculture or offshore wind, the MLA is concerned that this data will paint the commercial lobster industry into a corner, a box, and or right off the water. Zoning the ocean into user groups is being foreshadowed here, and the MLA cannot support the implementation of vessel tracking.

For the reasons noted above, the Massachusetts Lobstermen's Association **SUPPORTS Option A: Status quo** Under this option no changes to current management and monitoring requirements for lobster and Jonah crab would be implemented.

Thank you for your thoughtful deliberation and consideration on our comments.

Sincerely,
Beth Casoni
MLA, Executive Director

Maine Lobstering Union

IMLU Local 207: By Lobstermen, for Lobstermen

January 31, 2022

Caitlin Starks
Atlantic States Marine Fisheries Commission
FMP Coordinator
1050 N Highland St.
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Arlington, VA 22201

Electronic Comment Submission

Re: Comments Relating to Lobster Draft Addendum XXIX/ Jonah Crab Draft Addendum IV Electronic vessel tracking in the federal lobster and Jonah crab fisheries.

Dear Ms. Starks:

Thank you for the opportunity to comment on the electronic vessel tracking in the federal lobster and crab fisheries. On behalf of the Maine licensed commercial lobster and crab fishing license holders who are members of, and represented by, the Maine Lobstering Union (Local 207 of the International Association of Machinists and Aerospace Workers (IAMAW)), we write to express our concerns with Draft Addendum XXIX and IV. This is another reach into the wallets of hard-working fishermen at a time when they can least afford it. This data will not be used for "Stock Assessments, or Fishery interactions with protected resources" this data will be used for 2 things, Siting Offshore Wind and Enforcement. Maine is transitioning to mandatory reporting; why are you not even allowing the data to come in before we are asking for more information? This is a violation of our privacy at best, and something to take away our fishing grounds at worst.

We firmly stand behind STATUS QUO, no change.

Thank you,

The Maine Lobstering Union
Virginia Olsen
Local 207

150 Bar Harbor Rd, Trenton, ME 04605
(207) 240-0556

Citizens Opposing Active Sonar Threats (COAST)
536 Point Road
Hancock, ME 04640

January 30, 2022

Caitlin Starks, FMP Coordinator
1050 N. Highland St. Suite 200A-N
Arlington, VA 22201

I am writing on behalf of Citizens Opposing Active Sonar Threats (COAST) to provide comments on Lobster Draft Addendum XXIX.

COAST fully supports Option B for several reasons.

Requiring electronic vessel tracking of federal permit holders will allow for a more precise understanding of when and where fishing activity is actually taking place, meaning managers and law enforcement can better do their jobs, not having to rely on ballpark information.

It will make it easier for enforcement to locate gear, including non-compliant gear, and for managers to help insure a healthy lobster stock.

Ensuring a healthy lobster stock will benefit not only lobsters and the ecosystems they are part of, but also lobster fishermen.

In addition, and very importantly, electronic tracking will better enable managers to minimize co-occurrence of persistent vertical lines and whales, helping reduce entanglement risk and all the suffering that entanglements cause, for the critically endangered North Atlantic right whale, as well as for other whales and marine life.

This will benefit not only the whales, but also our oceans and all those who depend upon them, including lobsters and fishermen, and all the rest of us.

During the public hearings on this matter, it became clear that one of the reasons some fishermen oppose this requirement is due to the fact that they would be responsible for bearing the full costs of this electronic monitoring. We have seen a similar response from fishermen with regard to

the recent federal regulations aimed at reducing right whale entanglements. If fishermen were given financial assistance by federal and state governments in making the required gear changes, there would no doubt be far less resistance, and more willing compliance with those regulations. COAST believes that if fishermen were financially assisted by federal and state governments with purchasing and operating costs for the proposed electronic tracking, the same would hold true.

Lastly, COAST believes electronic tracking should go into effect in 2023. The earlier this more precise data can be collected, the sooner it can be put to good use.

Thank you for considering our comments.

Sincerely,

Russell Wray
Citizens Opposing Active Sonar Threats (COAST)

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Fishery Management Plan Coordinator, American lobster, Jonah crab
Atlantic States Marine Fisheries Commission
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Arlington, VA 22201

Via electronic mail to *comments@asmfc.org* subject line: Lobster Draft Addendum XXIX

Re: Comments on Atlantic States Marine Fisheries Commission Addendum XXIX

Ms. Starks:

Oceana is the largest international ocean conservation organization solely focused on protecting the world's oceans, with over 1.2 million members and supporters worldwide, including 340,000 members and supporters in the U.S. Atlantic states. Oceana has been engaged in the conservation and management of America's fisheries for nearly twenty years with a particular longstanding interest in reducing bycatch and improving the monitoring and transparency of America's fisheries. More recently Oceana has collaborated with our offices in Canada to campaign internationally to lower the instances of vessel strikes and reduce entanglements of critically endangered North Atlantic right whales in fixed gear fisheries in both the U.S. and Canada.

Throughout the recent Risk Reduction Rule development and rulemaking, it was apparent that the U.S. American lobster and Jonah crab fisheries suffer from a lack of high-quality spatial data to track effort and catch trends across the fishery throughout the year. Currently available low-resolution, fishery-dependent data hampers analysis of management options, slows management responses and leads to imprecise management. High-quality spatial data is critically important in crafting focused management measures that avoid entanglement while mitigating and minimizing the impacts on the fisheries.

Because of this clear need, Oceana fully supports the efforts of the Atlantic States Marine Fisheries Commission to require electronic vessel tracking for Federal permit holders in addendum XXIX to the lobster fishery management plan and addendum IV to the Jonah crab fishery management plan. Specifically, Oceana supports option A: (i)mplement electronic tracking requirements for federally-permitted lobster and Jonah crab vessels with commercial

trap gear area permits. This action is a strong first step to bridging data gaps in these fisheries and should be approved by the Commission as soon as possible. Additionally, Oceana recommends the Commission use the decision-making process at final approval of this action to commit to a follow-on action to ensure all vessels in these fisheries carry electronic tracking devices by a date certain.

Oceana offers the following comments on Section 3.1 of the addenda relative to the requirements for electronic tracking devices that will satisfy the needs of the fisheries.

Recommendation for Electronic Monitoring Requirements in Addendum

The draft addendum section 3.1 specifies a series of proposed requirements that electronic monitoring systems and vendors will need to satisfy to be approved for use in the affected fisheries.[1]

Section 3.1 also describes the general approval, certification and administrative processes that will support this program going forward. However, these general guidelines are unlikely to be enough to establish this urgently needed program in a timely manner. Additionally, it is unclear whether any existing systems meet these criteria or whether vendors are willing and able to create cost-effective technologies that meet these requirements.

In light of that uncertainty and the pressing need for effective monitoring of these fisheries, Oceana suggests that the Commission seriously consider adding an alternative adopting an existing technology to address the purpose and need of this action. Oceana recommends **requiring Class A Automatic Identification System (AIS) carriage and use on all federally permitted vessels in the American lobster and Jonah crab fisheries.**

Class A AIS is a cost-effective, existing technology that is used in marine industries and fisheries around the world. AIS provides high-quality spatial information that is transparent, presented in a universal format compatible with most data collection, storage and analysis programs, and meets most of the requirements set forth in Section 3.1. Additionally, AIS is already widely used in fisheries in the Northeast region, has been required for all U.S. fishing vessels over 65 feet in length since 2015, and has the added benefit of significantly improving safety and maritime domain awareness in the increasingly busy waters of the Northeast U.S.

Since 2015 all fishing vessels over 65 feet in length have been required to carry at least a Class B AIS device while operating in the navigable waters of the U.S., interpreted to be 12 nautical miles from shore by various agencies.[2] Therefore, many vessels in the affected fisheries already carry the lower quality AIS device and many likely carry Class A devices.

[1] Addendum Section 3.1 Table 2 (attached)

[2] Final Rule *Vessel Requirements for Notices of Arrival and Departure, and Automatic Identification System* 33 CFR § 164.46 (b)(2)(i) (80 Fed. Reg 5282 January 30, 2015)

Recent research suggests that even when not required to do so, close to 50% of fishing vessels in the NE region operate their AIS at sea beyond 12 nm.[3] Whether for safety, documentation of compliance, or documentation of fishing history, this demonstrates that AIS is not a burden to fishing and the benefits outweigh any concerns about confidentiality or fishing secrets.

AIS Meets Addendum Criteria

The Commission should carefully consider AIS carriage requirements relative to the requirements included in the draft addendum. Apart from the confidentiality and vendor requirements, AIS meets or exceeds the requirements with a universal technology that is used around the world.

Data Collection-

AIS signals are intended to help vessels identify one another and avoid at-sea collisions. AIS transponders come in three classes, A, B, and B+, which determine how frequently the vessel transmits a signal and how strong that signal is. Each of these classes report the information specified in the addendum action about the vessel's identity, speed, bearing, location, and time with an effective ping rate of 2-30 seconds. Class A transponders are the most robust and transmit every 2-5 seconds with the strongest signal. Class B devices broadcast a weaker signal at a fixed interval of 30 seconds, and Class B+ emit a medium strength signal with transmission intervals of 5-30 seconds.

Because of the increased signal strength, reporting frequency, and minimal cost difference, Class A devices should be required in the addendum. Coupled with machine learning capabilities of Global Fishing Watch, which has been designed to use this information to capture the behaviors and compliance of a variety of fisheries and gear types around the world, AIS devices will provide ample information to address the needs of these fisheries.

Data Utility-

AIS data has been used to support and inform assessment and management of fisheries around the world for years. AIS is increasing in popularity and power each year as more analytical tools are built based on AIS data and capabilities. Dozens of research projects around the world have harnessed the power of AIS and analytical tools like Global Fishing Watch to evaluate and manage fisheries issues.[4]

Durability and Interoperability

[3] Lynham, John. 2022. Fishing activity before closure, during closure, and after reopening of the Northeast Canyons and Seamounts Marine National Monument. Scientific Reports 12:917.

[4] *See* Global Fishing Watch Publications (https://globalfishingwatch.org/publications)

AIS units have been used in marine industrial settings for many years and have been designed specifically for these purposes. A wide range of technologies exist to collect, manage and share AIS data with shoreside users. Compatibility and interoperability between existing application programming interface (API) and data management systems is possible and may require less innovation and modification than vendor adaptation for this purpose.

Confidentiality of personally identifying information

Because AIS is designed explicitly to be shared among users to identify one another at sea and prevent collisions, the data will never be confidential. However, as the U.S. Coast Guard advised in its 2015 AIS rulemaking, concerns about divulging hot spots are outweighed by other factors:

> "(e)ven if analysis of AIS data would somehow attract vessels to the same spot, this situation would not supersede the importance of AIS in providing fishing vessels and other operators with situational awareness to help safely navigate while in close proximity to other vessels.[5]"

The pressing need for high quality spatial information to manage issues such as North Atlantic right whale entanglements supersede the concern for retaining confidentiality. Furthermore, it should be noted that fixed gear fisheries currently have little to no confidentiality since each buoy is individually identifiable to the vessel or permitholder and AIS data platforms only show where fishing activity has occurred *in the past*, but they do not predict where fish are currently located or where they might move to in the future.

Cost-effective-

Because many vessels are already equipped with AIS devices, action by the Atlantic States Marine Fisheries Commission to require use of the device while at-sea will likely create minimal costs for each vessel.

If, as we suggest, the Commission requires higher-quality Class A devices, this will still present a minimal one-time cost for each vessel between $700 - $2,600. Regardless of device type, both Class B and Class A AIS are likely to be significantly more cost-effective when compared to alternatives provided by third party providers that assess fees for both equipment purchases and ongoing use of the services.

Safety of Life at Sea-

Finally, the Commission should not underestimate the value of AIS for its original intended purpose of avoiding collisions at sea. Collisions between fishing vessels and other vessels,

[5] Final Rule Vessel Requirements for Notices of Arrival and Departure, and Automatic Identification System 33 CFR § 164.46 (b)(2)(i) (80 Fed. Reg 5282 January 30, 2015)

including large seagoing ships, are not uncommon and the waters of the Northeast are busier every year with vessel traffic operating in all conditions. Requiring AIS carriage and operation by all fishing vessels will improve visibility of the boats and provide additional safeguards against collisions.

Conclusion-

Oceana thanks the Commission for its work to improve the tools that are available to inform assessment and management of the American lobster and Jonah crab fisheries. Harnessing technology will improve management and fill the data gaps that have impeded effective management in recent years. The Commission should approve this action with a clear plan to have data collected on-the-water as soon as possible. The requirements described in the action are a step in the right direction, but the Commission should take the additional step to require vessels to use existing, cost-effective, and powerful Class A AIS. AIS is here now. It works and is supported by ample shoreside tools and should be adopted by the Commission for all vessels in these fisheries.

Thank you for considering these comments,

Gib Brogan

Oceana

Washington, DC

3.1.1 Required Components and Minimum Technological Standards

Addendum Table 2. Required criteria for approval of vessel tracking devices and vendors

- Collection of location data at a minimum rate of one ping per minute for at least 90% of the fishing trip
- Data events must contain device's current datetime, latitude, longitude, device and vessel identifier
- Minimum accuracy of 100 m (328.1 ft) accuracy and position fix precision to the decimal minute hundredths
- Ruggedness specifications allowing function in the marine environment
- Ability to PUSH location data to the ACCSP trip locations API
- Vendor customer service requirements
- Vendor must maintain the confidentiality of personally identifying information and other protected data in accordance with federal law[6]

[6] Addendum Section 3.1 Tracker Specifications and Approval (http://www.asmfc.org/files/PublicInput/LobsterDraftAdd_XXIX_JonahCrabDraftAdd_IV_PublicComment_Dec2021.pdf)

Automatic Identification System

AIS is an automatic vessel tracking system that can be used to prevent illegal fishing, provide transparency at sea, and enhance traceability of seafood.

What is AIS?

- Automatic Identification System (AIS) is a vessel tracking system that transmits a vessel's location, behavior, and identity. This includes the name, unique vessel identifier, callsign, size, flag state, and type of the vessel, along with its speed, direction, and geographical position.
- AIS was developed to increase maritime safety, reduce vessel collisions, and enhance awareness of vessel locations at sea. It functions as the "eyes of the boat," enabling vessels to "see" each other's location and activity – of critical importance at night and in hazardous conditions.
- With tens of thousands of ships operating daily in the U.S.'s waters, AIS technology is a vital tool in maintaining maritime domain awareness. AIS sends identity information as well as position and transit information, telling the Coast Guard who is in U.S. waters, where they've been, and which other ships they may have met up with.

Why is AIS critical?

- Commercial fishing has the highest fatality rate of any occupation, and its workers are over 30 times more likely to die on the job than the average. Using AIS is one way to improve safety in an incredibly dangerous profession.
- AIS is also invaluable for transparency and monitoring, as it allows fisheries managers and authorities to detect suspicious and illegal behavior. NGOs such as Global Fishing Watch use AIS data collected from satellites to map fishing activities across the world's oceans, so fisheries managers and others can use this publicly available information to track compliance with regulations and make informed decisions regarding fisheries.
- At an Oceana roundtable event focused on Illegal, Unreported and Unregulated (IUU) fishing, former Secretary of the Navy Ray Mabus said, "When [IUU boats] 'go dark,' they become a maritime danger to anyone in the area, and that includes our Navy — first because of the risk of collisions at sea, but also because you can't tell what they're up to. It could be IUU, but it could also be piracy, or human trafficking, or weapons smuggling, or almost anything."
- The transparency of knowing where vessels are, and what they are doing, brings illegal behavior to light and discourages environmentally, economically, and socially harmful fishing practices. This can include anything from foreign vessels illegally entering the United States' Exclusive Economic Zone and stealing fish, to fishing fleets pillaging endangered species in marine protected areas.

How does AIS work?

- The AIS device consists of a very high frequency (VHF) radio to broadcast the vessel's location and identity and a GPS receiver to detect incoming signals. These signals can be picked up by neighboring vessels, land-based receivers, and satellites.
- AIS transponders come in three classes, A, B, and B+, which determine how frequently the vessel transmits a signal and how strong that signal is. Class A transponders are the most robust, Class B devices broadcast a weaker signal at a fixed interval, and Class B+ emit a medium strength signal.

What are the legal requirements?

- The United Nations Convention on the Law of the Sea requires Class A AIS on all large cargo vessels (over 500 tons) and all passenger vessels regardless of size.
- The United States requires all fishing vessels over 65 feet to transmit AIS while operating in U.S. navigable waters, defined by The Coast Guard as the territorial seas of the U.S., which extend 12 nautical miles from shore.

What are the limitations?

- The effectiveness of AIS for safety and transparency is stunted by loose legal requirements; only U.S. vessels over 65 feet are required to carry AIS; 85% of fishing vessels are smaller than this.
- U.S. non-passenger vessels are only obligated to transmit AIS within "U.S. navigable waters," which are defined as waters within 12 nautical miles of shore.
- As a result, just 15% of the US commercial fishing vessels are required to broadcast AIS and only two-thirds of these vessels are visible on Global Fishing Watch.
- Vessel operators can tamper with their AIS to falsify their location or identity – a practice called "spoofing" – or turn off their AIS altogether. These behaviors can protect a vessel by concealing it from pirates or competitors but can also be used to mask illegal activity from the authorities and public.
- Class A transponders transmit position data every 2-5 seconds while Class B+ transmits every 5-30 seconds. Class B transponders are the weakest devices transmitting every 30 seconds. Many vessels equipped with AIS use the weaker Class B or B+ transponders, substantially reducing the safety and transparency benefits.
- Signal reception changes by geography. In the high seas, vessels are sparsely distributed so most signals are successfully transmitted and received. However, in areas of high vessel density, such as near port or in the South China Sea, the cloud of signals causes interference, and only a small fraction of messages reach their destination.
- Some fishermen fear losing their "secret" fishing spots. But most commercial fishing vessels are already using sophisticated technology to find and catch fish such as helicopters, satellite data, and fish-finding forecasts. Platforms like Global Fishing Watch use AIS to show where fishing activity has occurred in the past, but they do not predict where fish are currently located or where they might move to in the future.

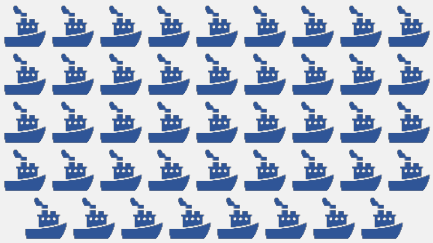
What can be done to improve transparency at sea?

- The United States should require commercial fishing vessels over 49 ft (15 m) to carry and continually broadcast AIS. The European Union already requires AIS for their fishing vessels 15m and greater.
- Regional fisheries management organizations can require AIS usage by all commercial fishing vessels in their territory.
- Fishing vessel owners can be required to give notice when and for what reason they stop transmitting AIS.
- Governments should transition to requiring Class A transponders for stronger and more reliable signal strength.

How does AIS compare to VMS?

- Some fishing vessels are required to carry VMS (vessel monitoring system) technology, which is also used to track vessels via satellite. VMS was designed for fisheries monitoring and provides myriad benefits: consistent detection by satellites, protection from spoofing, and more reliable signal transmission.
- However, in the U.S., VMS is required only on certain types of fishing vessels. Only 2,000 U.S. vessels are equipped with VMS vs. 44,000 with AIS. VMS data are proprietary and only accessible by the government to which the vessel is registered.
- The VMS device costs approximately $4,000 and can incur thousands more in fees throughout the vessel's lifetime. AIS devices cost between $700 - $2,600 and have no associated fees.
- While VMS is an essential monitoring tool, the high temporal resolution of AIS (which transmits signals every few seconds versus VMS's as little as once per hour) along with its lower cost, near real-time reporting, public availability, and mandatory carriage render it invaluable.
- AIS and VMS are two distinct systems that work best together.

By utilizing both VMS and AIS systems, the benefits are combined. With the high resolution (more signals per day) of AIS, in conjunction with the full coverage of VMS, monitoring is substantially improved.

	Automatic Identification System (AIS)	*Vessel Monitoring System (VMS)*
Publicly available data?	✓	✗
Potential pings per hour	1,800	1
Signals increase with vessel speed?	✓	✗
Required on all vessels greater than 65ft?	✓	✗
Number of vessels carrying (x1000)		
Tamper-proof?	✗	✓
Typical cost	$	$ $ $

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January 31, 2022

Ms. Caitlin Starks, FMP Coordinator
Atlantic States Marine Fisheries Commission
1050 North Highland Street, Suite 200 A-N
Arlington, Virginia 22201

Re: American Lobster Draft Addendum XXIX and Jonah Crab Draft Addendum IV

Dear Ms. Starks:

We are writing on behalf of The Pew Charitable Trusts to support the Atlantic States Marine Fisheries Commission's (ASMFC) efforts to implement vessel tracking to improve data on fishing effort in the American lobster and Jonah crab fisheries through Addendum XXIX to Amendment 3 to the American Lobster Fishery Management Plan and Addendum IV to the Jonah Crab Fishery Management Plan (Addendum XXIX/IV). If approved by the Lobster Management Board, Addendum XXIX/IV would require all American lobster and Jonah crab fishing vessels with federal commercial trap/pot permits to use an approved electronic vessel tracking device that collects and transmits fine-scale spatial data to determine when and where fishing is occurring. Any federally permitted vessel would be prohibited from landing American lobster and Jonah crab without an approved electronic tracking device. Addendum XXIX/IV would require that approved devices remain on board and be powered on when the vessel is in the water, unless authorized to power down by the principal port state.[1]

To be approved for use in the American lobster fishery and Jonah crab fishery (lobster fishery), electronic vessel tracking devices must meet certain criteria and specifications. The device must collect vessel location information at a rate of one ping per minute for at least 90 percent of the trip with high accuracy and precision to differentiate fishing activity from transient activity, and to allow for the estimation of number of traps per trawl.[2] This information would better inform future fishery stocks assessments, and improve marine mammal co-occurrence and risk-reduction models.[3] Current harvest regulations only require trip-level reporting and are limited to reporting location by federal statistical areas and state management areas.[4] Higher resolution spatial and temporal data are required for effective management and enforcement of the lobster fishery.

[1] ASMFC, December 2021. Draft Addendum XXIX to Amendment 3 to the American Lobster Fishery Management Plan and Addendum IV to the Jonah Crab Fishery Management Plan. P. 6.
[2] ASMFC, December 2021. Draft Addendum XXIX to Amendment 3 to the American Lobster Fishery Management Plan and Addendum IV to the Jonah Crab Fishery Management Plan. P. 8.
[3] ASMFC, December 2021. Draft Addendum XXIX to Amendment 3 to the American Lobster Fishery Management Plan and Addendum IV to the Jonah Crab Fishery Management Plan. P. 3-4.
[4] ASMFC, December 2021. Draft Addendum XXIX to Amendment 3 to the American Lobster Fishery Management Plan and Addendum IV to the Jonah Crab Fishery Management Plan. P. 1-2.

Pew's primary reason for supporting Addendum XXIX/IV is the critical need for high-resolution spatial effort data to show where and when the lobster fishery effort occurs to determine where and when vertical buoy lines from trap/pot gear interacts with North Atlantic right whales. To meet the mandates of the Marine Mammal Protection Act (MMPA) and the Endangered Species Act (ESA), the lobster fishery must reduce risk of entanglement interactions that cause mortality and serious injury (MS/I) to right whales. Addendum XXIX/IV would ensure updated and enhanced spatial effort data to improve risk reduction models. Recent information shows that the offshore lobster fishery is growing rapidly, making the need to understand the footprint of this sector of the fishery especially imperative.[5] Fine-scale information on where and when trap/pot lobster fishing occurs is also essential to improving lobster fishery management and enforcement. We support option B and urge the board and commission to approve and implement this option without delay.

Specifically, the ASMFC should:

1) **Approve management option B of Addendum XXIX/IV requiring electronic vessel tracking for federally permitted American lobster and Jonah crab vessels with commercial trap/pot gear permits, with implementation beginning no later than 2023; and**

2) **Follow this action with an addendum that would improve harvest reporting in state waters, exploring options for electronic tracking for all state-permitted American lobster and Jonah crab vessels.**

****

A. Background:

The situation for the North Atlantic right whale is dire. In July, 2020 the International Union for the Conservation of Nature elevated their status from "endangered" to "critically endangered" because they are "facing an extremely high risk of extinction in the wild."[6] Experts have determined that the 2020 estimate for the North Atlantic right whale population was approximately 336 whales, an 8 percent decline over the 2019 estimate.[7] There were only about 88 breeding females remaining by September 2021, the most crucial demographic for reproduction.[8] National Marine Fisheries Service (NMFS) has estimated that between 2011 and 2019 approximately 218 North Atlantic right whales died from entanglements and vessel strikes,

[5] ASMFC, December 2021. Draft Addendum XXIX to Amendment 3 to the American Lobster Fishery Management Plan and Addendum IV to the Jonah Crab Fishery Management Plan. P. 5.
[6] IUCN Red List Categories and Criteria. Version 3.1, p. 15.
[7] Pettis, et. al. (2022). North Atlantic Right Whale Consortium 2021 Annual Report Card. ("2021 Annual Report Card") p. 3.
[8] Pettis, et. al. (2022). North Atlantic Right Whale Consortium 2021 Annual Report Card. ("2021 Annual Report Card") p. 5.

"a rate of roughly 24 right whale deaths per year."[9] Since 2017, there have been 34 *known* mortalities and 16 *known* serious injuries in the U.S. and Canada, totaling 50 *known* mortalities and serious injuries.[10] Of those 50 M/SIs, all determinable causes were anthropogenic (with the exception of one perinatal mortality), with 13 due to vessel strikes and 23 due to entanglements in fishing gear.[11] The true M/SI toll is considerably higher. A recent scientific paper co-authored by the Northeast Fisheries Sciences Center's leading right whale population biologist concluded that from 2010 to 2017, only 29 percent of right whale mortalities were detected, and that "cryptic [i.e., unobserved] deaths due to entanglements significantly outnumbers cryptic deaths from vessel collisions or other causes."[12] All known deaths to right whales (with the exception of one perinatal death) are the result of entanglement in fishing gear or vessel strikes,[13] and entanglement in commercial fixed fishing gear is the greatest threat to the species.[14] If mitigation efforts are not implemented, human activities will cause an "inhumane and certain extinction of this species in the all-too near future."[15]

In addition to these lethal impacts, sub-lethal impacts to right whales caused by entanglement in fishing gear are also contributing to population decline and the right whale's trajectory towards extinction. Scientists estimate that at least 85 percent of North Atlantic right whales have scars showing they have been entangled at least once,[16] 59 percent have been entangled more than once,[17] and many have been entangled three or more times.[18] Chronic and systematic entanglements that don't lead to immediate or even protracted mortality can still have sub-lethal impacts on the health of individual right whales, reducing their ability to eat, breed, and produce young.[19] These sub-lethal impacts from entanglement contribute to poor body condition and shorter and smaller whales, leading to lower birth rates and higher risk of subsequent lethal entanglements.[20] Poor overall health of right whales is reducing survival rate, undermining reproduction, reducing calving intervals, and ultimately plays a crucial role in the population

[9] NMFS October 26, 2020. Statement on preliminary January 2019 North Atlantic right whale population estimates.
[10] NOAA Fisheries, 2017-2022 North Atlantic right whale unusual mortality event.
[11] NOAA Fisheries, 2017-2022 North Atlantic right whale unusual mortality event.
[12] Id.
[13] Sharp, et. al. (2019); NOAA Fisheries, 2017-2022 North Atlantic right whale unusual mortality event. (A single perinatal mortality was noted in 2020).
[14] NOAA Fisheries, 2017-2022 North Atlantic right whale unusual mortality event.
[15] Id.
[16] NOAA. Species directory. North Atlantic right whale.
[17] 2012. Knowlton, et. al. Monitoring North Atlantic right whale *Eubalaena glacialis* entanglement rates: a 30 yr retrospective. P. 293.
[18] 2012. Knowlton, et. al. Monitoring North Atlantic right whale *Eubalaena glacialis* entanglement rates: a 30 yr retrospective. P. 297.
[19] Anderson Cabot Center for Ocean Life. New England Aquarium. Right Whale Facts. If whales are successfully disentangled, does the entanglement still have negative effects?
[20] Id.

decline.[21] Since 2010, calving rates have dropped by nearly 40 percent,[22] and between 2008 and 2018 female right whales expanded their average breeding interval from 4 years to 10 years between calves.[23] It is now clear that entanglements are not simply preventing the species from recovering, they are actively causing extinction of the North Atlantic right whale.

B. Why electronic vessel tracking matters to North Atlantic right whale protection:

There are two main reasons why electronic vessel tracking in the lobster fishery is essential to implementing effective protections for right whales. First, the ability to a determine how, when, and where to implement management measures to reduce risk of entanglement to North Atlantic right whales in trap/pot gear depends entirely on the quality and accuracy of the data and models that demonstrate and predict co-occurrence of right whales and trap/pot gear.[24] Second, enforcement of measures aimed to protect right whales will be greatly enhanced by electronic vessel tracking.[25]

1. Electronic vessel tracking would significantly improve scientific models used to determine co-occurrence of vertical lines associated with trap/pot gear in the American lobster and Jonah crab fisheries and North Atlantic right whales:

NMFS recently published regulations that amend the Atlantic Large Whale Take Reduction Plan (ALWTRP) and aim to reduce risk of entanglements leading to mortality of and serious injury to North Atlantic right whales in lobster trap/pot gear, in accordance with the requirements of the MMPA and the ESA. The American lobster and Jonah crab fisheries are responsible for 95 percent of vertical buoy lines regulated by the ALWTRP along the Atlantic coast.[26] The latest round of regulations claim to reduce entanglement risk by 67 percent, in part by limiting interactions between right whales and vertical lines in the lobster fishery.[27] The management measures and their ability to reduce interactions and reduce risk, are based on a Risk Reduction Tool (also known as Decision Support Tool) that attempts to quantify co-occurrence of American lobster and Jonah crab trap/pot gear and right whales. The co-occurrence models are generated using right whale sightings and acoustic data and the American lobster and Jonah crab

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[21] 2020. Christiansen, et. al. Population comparison of right whale body condition reveals poor state of the North Atlantic right whale. Mar. Ecol. Prog. Ser. Vol. 640: 1–16

[22] 2016. Kraus, et al. Recent Scientific Publications cast doubt on North Atlantic right whale future. *Front. Mar. Sci*. 3:137.

[23] 2018 Pettis., et. al. North Atlantic right whale Report Card. p. 5.

[24] April 20, 2019, TRT Meeting Risk Reduction Tool PPT, and ASMFC, December 2021. Draft Addendum XXIX to Amendment 3 to the American Lobster Fishery Management Plan and Addendum IV to the Jonah Crab Fishery Management Plan. P. 4-5.

[25] ASMFC, December 2021. Draft Addendum XXIX to Amendment 3 to the American Lobster Fishery Management Plan and Addendum IV to the Jonah Crab Fishery Management Plan. P. 5.

[26] Taking of Marine Mammals Incidental to Commercial Fishing Operations; Atlantic Large Whale Take Reduction Plan Regulations; Atlantic Coastal Fisheries Cooperative Management Act Provisions; American Lobster Fishery, Proposed Rule. 85 Fed. Reg. 86,878 (December 31, 2020).

[27] 86 Fed. Reg, 51970, 51988, 51996.

harvester reporting data.[28] Thus the effectiveness of these management measures at reducing interactions between right whales and trap/pot gear is directly related to the accuracy and comprehensiveness of the data on which they are based.

Efforts to quantify where and when whales congregate is difficult to acquire and varies with climatic changes and right whale prey distribution shifts. Despite those challenges, a commitment to understanding North Atlantic right whale's range and distribution has resulted in the data both increasing in quantity and improving in quality. The counterpart to this information is a quantification of when and where the American lobster fishery is using trap/pot gear, and a clear understanding of the vertical line footprint of the fishery. To date, resistance in the fishery, particularly in Maine where the majority of the lobster fishery is located, has prevented a clear picture of where and when trap/pot fishing and vertical lines occur. Daily or weekly vessel trip reports are required in nearly all federal fisheries except the lobster fishery to help ensure effective monitoring and sustainable management of fisheries and protected resources.[29] Current spatial information of effort in the lobster fishery is incredibly coarse as it is limited to NOAA statistical areas and state management areas, giving NMFS (and ASMFC) minimal information about when and where effort is occurring in the lobster fishery.[30] Addendum XXIX/IV would require that 100 percent of federally-permitted commercial American lobster and Jonah crab boats be equipped with electronic tracking devices that produce date at a rate of one ping per minute. This level of fine-scale spatial data will substantially improve the co-occurrence models used by managers to reduce interactions between right whales and vertical lines associated with trap/pot gear in these fisheries.

2. Electronic vessel tracking for federally permitted vessels would greatly improve enforcement in the rapidly growing offshore fleet:

Electronic vessel tracking for federally permitted lobster vessels is critically important for enforcing the management measures that protect right whales. Not only do limited data make it difficult to accurately determine *how* to reduce risk to right whales, but data limitations reduce the ability to ensure *if* risk reduction measures are even effective. Requiring electronic vessel tracking would ensure that federally permitted lobster and crab vessels are not fishing in times and areas that are closed to vertical lines. In addition, the information captured from the minute-ping rate would improve enforcement's ability to determine each vessel's fishing activity (including soak time), transit activity, and estimate trap numbers and trawl lengths to ensure compliance with right whale regulations. This information is vital in ensuring that the recent ALWTRP changes will reduce risk to right whales at the level required by the ESA and MMPA.

[28] April 20, 2019, TRT Meeting Risk Reduction Tool PPT.
[29] Sept. 2021. Greater Atlantic Regional Fisheries Office (GARFO). Fishing Vessel Trip Report (VTR) Reporting Instructions. P.6.
[30] ASMFC, December 2021. Draft Addendum XXIX to Amendment 3 to the American Lobster Fishery Management Plan and Addendum IV to the Jonah Crab Fishery Management Plan. P. 1-2.

3. **Improve harvest reporting, and an electronic vessel monitoring program, for state-permitted vessels that fish with trap/pot gear:**

Electronic vessel tracking for federally permitted vessels is the first step in quantifying entanglement risk to right whales. The offshore fishery is growing rapidly[31] and potentially poses the greatest risk to right whales. Offshore trap trawls are longer, and the rope is thicker and heavier than inshore gear. Therefore, potential entanglements are more likely to result in right whale mortality or serious injury. However, the ASMFC should also improve harvest reporting in state waters, both to better manage the risks that this gear poses to right whales and to improve management of lobster and crab stocks. A trailing addendum should review options for electronic vessel tracking in state waters.

4. **Conclusion**

We appreciate the Commission's efforts to significantly improve information about where and when federally permitted fishing effort occurs in the American lobster and Jonah crab fisheries through electronic vessel tracking. A nuanced understanding of the footprint of these fisheries is necessary to ensure management measures reduce risk of entanglement interactions that cause mortality of and serious injury to North Atlantic right whales. Electronic vessel tracking in the federal lobster and crab fishery with also ensure that the offshore fishery is compliant with the new regulations to protect right whales. In addition, the data from this program will improve the ASMFC's ability to manage the American lobster and Jonah crab stocks and will improve enforcement of lobster and crab regulations intended to sustainably harvest these species in federal waters.

We look forward to contributing further as the ASMFC works to enhance data and spatial analysis in the American lobster and Jonah crab fishery.

Sincerely,

Peter Baker
Director, U.S. Oceans, Northeast
The Pew Charitable Trusts

K. Purcie Bennett-Nickerson
Executive Director and Staff Attorney
Bennett Nickerson Environmental Consulting

[31] ASMFC, December 2021. Draft Addendum XXIX to Amendment 3 to the American Lobster Fishery Management Plan and Addendum IV to the Jonah Crab Fishery Management Plan. P. 5.

W. William Anderson
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January 22, 2022

Caitlin Starks, FMP Coordinator
Atlantic States Marine Fisheries Commission
1050 N. Highland St., Suite 200 A-N
Arlington, VA 22201

Dear Caitlin:

I read in the Ellsworth American that you were seeking public comment on Lobster Draft Addendum XXIX, which would create an electronic tracking system for lobster boats in federal waters.

I would like to support this proposal. There is a lot you do not know about what these boats are doing. This would improve the information about where they are fishing, when they are fishing, etc. With the proposed Whale Closed areas the gulf of Maine is getting smaller and this could present new problems. Having tracking on these lobster boats would allow you to see these problems immediately, if they should arise. I have thought that you should have required tracking on these lobster vessels some time ago. I understand it is not widely supported by the industry. There is a VMS tracker on my lobster boat and has been for many years now. I also hold a scallop Permit.

I do not want to be required to have one tracking system for lobster and a different tracking system for the other fisheries I might peruse on one boat. Then have to declare something for one fishery and declare something else on the other system before I could even leave the dock. What ever you do one tracker on a vessel is all we need.

I have had a VMS tracking system on one of my lobster boats since 2005. I started with Skymate but as I had difficulties getting Windows updates and Skymate updates by 2007 I was forced to move to Boatracs. This was an expensive experience by lost fishing time and the purchase of a second machine. Boatracs worked well but towards the end I had some problems with this company too. I was paying for an extended warrantee in my monthly fee. If my machine went down they would just send me another machine and I returned the old one to them. This worked well for years. Eventusily I lost some fishing days with Boatracs and there was no need of it. Just people playing games. I was paying for that extended warrantee. Parts were eventually shipped. I could say more. In the spring of 2020 Boatracs services ended. I had to pick a new service and purchase a new machine. Skymate had changed completely and was using a tablet that comes with the machine. I have started having problems again not receiving a update. Today I could not complete my preland so I could not send it. He tried to update my tablet this weekend but my Internet connection was to slow as it is for many things. So tomorrow I need to go find somewhere to get a good Internet connection. I will say that the person at Skymate this time is very helpfil and the Tablet program is easy to use.

You have some comments about the costs associated with tracking systems. I know all about the costs, frustrations and lost fishing day these systems can bring but I still support the concept. I could say a lot more sbout why.

You mention that the cellar systems and how you loose contact with boat when they are out of range. With satellite systems you can contact a boat anywhere. So if a boats enters a closed area or Canadian waters. You can notify him soon after he does. There is also a safety feature of the satalite systems for boats to send out destress messages. Lost or missing boats have also been located using VMS information.

Sincerely,

Bill

W. William Anderson

Caitlin Starks

From: Glenace Breton <glenace@breton.us>
Sent: Friday, January 21, 2022 4:41 PM
To: Comments
Subject: [External] Objection to Lobster Draft Addendum XXIX

To Whom It May Concern:

Let's imagine that every person the USA is required by law to wear a tracking device to show where they go so that their habits, routines, preferences, and where they work can be tracked. Wait, that's ILLEGAL. Oh, an INVASION of PRIVACY. And an INFRINGEMENT on personal LIBERTY. Not to mention it's UNCONSTITUTIONAL!

This is exactly the kind of thing that the United States Marine Fisheries Commission is proposing for lobstermen and women up and down the coast through the Lobster Draft Addendum XXIX. Our lobstermen and women will be forced to place tracking devices on their boats and have their EVERY MOVE tracked, whether fishing or taking a family Sunday picnic or a weekend trip. It's BIG BROTHER on the ocean! Wait, this sounds ALOT like what is done to CONVICTED CRIMINALS- they get ankle monitors so the justice system knows exactly where they are at ALL times. So, now our hard-working fishermen are to be treated like CRIMINALS??!! Though they have done nothing wrong, they are to have their RIGHTS VIOLATED, being tracked at every move??!! Seems to me the government is sending the message loud and clear that it doesn't trust the men and women who are self- motivated to do the work that they need to make an honest living. It's an INJUSTICE to fishermen and a TERRIBLE idea, no matter what the intent is of the monitoring system. This proposal to force these hard-working people of an environmentally sustainable industry who are already unfairly threatened with extinction by having the scales stacked against them through impossible, unattainably expensive, looming whale regulations just strips them of whatever dignity that remains to them. How could the USMFC propose such an INVASIVE thing be done to these people?? Not to mention it would add more burden to the financial cost of fishing, which is already heavily burdened with financial legal requirements. Why is the government trying to grind fishermen into the dust, all the while happily collecting their taxes and numerous fees?! If fishermen go extinct, there won't be any taxes and fees to collect. In it's place will be economic depression and desperation up and down the coast, combined with poverty and devastation. Expect lobster prices to skyrocket - only the rich will be buying. And this proposal contributes to their extinction.

I would look into the LEGALITY of this proposal, if I were you, and back off our fishermen! I smell a ripe lawsuit waiting to happen. The USMFC is going too far with this proposal. Does anyone there have a heart AT ALL, have any of you spent time with fishermen or their families and seen what they have to go through just to SURVIVE today? If things do not change, they will NOT survive.

My husband and I stand FIRMLY with the lobster and Jonah crab fishermen AGAINST this ILL-CONCEIVED proposal. It's time our fisheries had a BREAK!

Glenace Breton (native of Beals Island, Maine) Jeffrey Breton Brunswick, Maine

Caitlin Starks

From: tomi plummer <plummer.tomi@yahoo.com>
Sent: Tuesday, January 18, 2022 1:47 PM
To: Comments
Subject: [External] Lobster addendum xxix

Hello my name's Adam colson as a federal permit holder and fishermen who fish year round outside 3 mile lines I have no problem with you putting a tracking system on my boat. However if I go aboard to haul and the device isn't working I'll call to have it fixed when I get in. I have a family to feed and cannot miss good days. I rely solely on fishing proceeds to survive I don't have another job. Also, how are these funded. I have enough to pay for there needs to be some way fishermen get these without paying. This isn't something we need in order for a.boat to fish.
Nor, is it helping this whale program this is only helping you find out how much room you need for your offshore wind which I'm not in favor of.

Sent from Yahoo Mail on Android

Here is my public comment on Addendum XXIX to Amendment 3 to the American Lobster Fishery Management Plan and Draft Addendum IV to the Jonah Crab Fishery Management Plan

My name is Timothy Field, and I own a lobster boat based out of Westport, MA. I have a Federal Area 2 permit, have owned my own vessel since 2006 and started lobstering way before that. I was unable to attend the virtual meeting regarding this Addendum.

I support "Option A: Status Quo", for several reasons.

The lobster fishery is mostly made up of small owner operated vessels. In the last several years there have been significant increases in cost of fuel, bait, traps, and the vessels themselves. While the average lobster/crab price per lb has increased, it has not increased in comparison to expenses. There is also a substantial labor shortage, even in good times it is not easy to find a deckhand. This past year my own vessel has had to delay trips because of crew shortages. The percentage that deckhand's are paid has increased, but it doesn't solve the problem. While purchasing a electronic tracking device and subscription costs are not a large percentage of a year's gross, it is still another small increase that small vessels will have to bear, without being able to pass on these operating costs to the customers. There's no guarantee that consumers will be willing to pay more for lobsters/crabs, because of these increased operating costs. Additionally many new regulations will take effect May 1, 2022 which will increase operating costs, not to mention the three month long South Islands Closure area.

The ability to "improve stock assessment" is frequently stated as a reason for needing electronic tracking. I don't see how this is true. How would being able to specifically identify where gear is set, improve the stock assessment? All landings are reported and fishing effort based on the number of traps set is also reported. It seems to me that the problem with the stock assessment is that, the stock areas do not coincide with the Lobster Management Areas. Many years ago the Management Area idea was adopted, creating LMA 1-6 and LMA OC. We should continue to stick with that, or do away with Lobster Management Areas completely, which I see as unlikely. We already have the data to be able to see landings and fishing effort by Lobster Management Area. Electronic tracking would be redundant to area management and further complicate everything. With more specific data, would different management areas be created? Would more regulations be placed within some management areas, while not being applied to the entire management area? Or will regulations continue to be applied to the entire lobster management area, when perhaps they are only meant to address a specific area within the lobster management area?

It is claimed that there is a need to "identify important transit routes and fishing grounds". To me it seems as if we are closing the barn door after the horse has left on

this one. BOEM (Bureau of Ocean Energy Management) has already designated lease areas for offshore wind with no input from the fishing community. The only input from the fishing community came after the areas had already been leased! I fish primarily within such wind lease areas and I doubt that any decision about offshore wind leasing would have been different if BOEM or anyone else knew specifically where I did fish. The same goes for the ALWTRP (Atlantic Large Whale Take Reduction Plan), areas that have already been defined for closure, without having this "high resolution spatial and temporal effort data". Once again I doubt any changes would have been made if managers knew specifically where I fish. I also happen to primarily fish within the newly created "South Islands Closure Area" If prior to the leasing of offshore wind areas and the new ALWTRP, electronic tracking was proposed in order to gain this specific data so that the lobster fishery could continue without being severely impacted, that would have made more sense! Even then I doubt the management decisions would have been different.

I personally feel, and I can tell you that a lot of other fisherman feel the same as I do, that frequently the priorities of fisherman are not considered when new regulations are made. It seems like we always take a backseat to whatever the particular "goal" is for any given regulation. In this country we frequently take our food supply for granted. It is the norm to be able to obtain whatever food we want, whenever we want and it being reasonably affordable. That is not the case throughout the entire world. I believe more priority should be given to this nation's food supply and those that produce it.

The enforcement issue is also something I see as problematic. Lobster gear is NOT hard to find. Our fishing locations ARE already available to state and federal enforcement. I also ask how hauling and inspection of gear would be handled. It is one thing to haul and small string of pots, in shallow water and set them back without disturbing the contents. Longer trawls, deeper water, and more congested fishing areas are a different story. I sometimes primarily fish for Jonah crabs even in the warmer months. My vessel is equipped with a refrigerated sea water system, which is necessary to keep the crabs alive. I ask how would a coast guard vessel haul and inspect a 30 pot trawl of mine and keep the lobsters and crabs alive during the summer months. There is quite a difference between the water temperature at the bottom and surface temperature, not to mention the air temperature. Lobsters and crabs do not survive well, if at all in air temperatures of 80 or 90 degrees. Would the crabs be sitting on the deck on the vessel exposed to the sun and 80 or even 90 degree temperatures for time it takes to haul, inspect and re-set the trawl? It takes someone with experience to efficiently haul and set gear, not to mention being able to reset gear EXACTLY where it was. Knowledge of tides and wind is crucial to be able to reset gear EXACTLY to where it was set. Another potential problem is how the gear is set back out. Ask any lobsterman and they will tell you that traps set upside down do not catch lobsters or crabs. Everyone has a method of setting to ensure this doesn't happen (speed at which traps are set, whether they are set from the stern or over

the rail, and this differs from boat to boat, person to person). I frequently fish around mobile gear fisherman. To avoid gear interactions there has been an age old agreement between the two groups on where to fish. An inaccurate set, could mean gear loss. Who will be responsible for such issues? The best way to inspect gear for compliance, is with a USCG boarding team onboard the vessel while they are hauling and setting gear. There is no other reasonable way to do this.

I hope that my concerns will be addressed, even though I am just one voice against many others.

Sincerely,

Timothy Field
F/V Green Dragon
252 American Legion Hwy
Westport, MA 02790
508-264-3838
tfield@protonmail.com

From: G2W
To: Caitlin Starks
Cc: Comments
Subject: FW: [External]
Date: Thursday, January 20, 2022 11:06:08 AM

To night meeting , sorry I got off track but I don't believe the state needs to no every thing we do . I believe it will hurt us more then help . Thank you Walter Willey
-----Original Message-----
From: Walter Willey [mailto:mistymorning4@yahoo.com]
Sent: Tuesday, January 18, 2022 7:34 PM
To: G2W <G2W@asmfc.org>
Subject: [External] To night meeting , sorry I got of track but I don't believe the state needs to no every thing we do . I believe it will hurt us more then help . Thank you Walter Willey

Sent from my iPhone

From:	G2W
To:	Caitlin Starks; Comments
Subject:	FW: [External] We support tracking
Date:	Thursday, January 20, 2022 11:05:37 AM

Sending to comments in-box

From: Barbara Skapa [mailto:saverightwhales360@gmail.com]
Sent: Wednesday, January 19, 2022 11:20 AM
To: G2W <G2W@asmfc.org>
Subject: [External] We support tracking

Anything that creates more data equals facts equals science. All for it.
B. Skapa
Executive Director

--

Caitlin Starks

From: mlhodges56@verizon.net
Sent: Sunday, January 30, 2022 2:46 PM
To: Comments
Subject: [External] Lobster

My name is Mark Hodges, I am a Seabass Trap Fisherman out of Virginia Beach, VA. I have an A5W Lobster permit, one of the 2 licenses in VA. I strongly disagree with the ASMFC proposed requirement for electronic vessel tracking for my vessel. Below are several reasons for my disagreement:

1. I objected to giving anyone the access to my multiple secret fishing locations.

2. It will not yield any additional information other than my reported locations. The information collected will not show exactly where I might have caught one lobster for that day.

3. I sold $1058.00 of lobster in 2021. The cost for the equipment and service will most definitely cost more to me than the market value of the lobster I may catch for the year.

4. It will be an undue cost for our vessel without gaining any additional information on lobster research than my reported VTR's.

5. Typical government overreach for the very few lobsters that I catch in a year.

Thank you,
Mark

-----Original Message-----
From: Somers Smott <somers.smott@mrc.virginia.gov>
Cc: Shanna Madsen <shanna.madsen@mrc.virginia.gov>; Patrick Geer <Pat.Geer@mrc.virginia.gov>
Sent: Fri, Jan 14, 2022 8:48 am
Subject: RE: ASMFC American Lobster Board Releases American Lobster Draft Addendum XXIX/Jonah Crab Draft Addendum IV for Public Comment: Public Hearings and Webinars Scheduled for January 2022

Hi Lobster and Jonah Crab Waterman –

The meeting went well, but not many watermen participated from Virginia. There were several watermen from Delaware that had lots of questions and provided good comments – mostly about how the cost of the equipment would not be worth it as lobster isn't plentiful here and doesn't provide much income. I've attached a screenshot I took from the presentation. These prices are not the most up to date, and we were told it's possible we could get some updated numbers soon. Either way, I wanted to include it for you to see.

We also discussed in the meeting exactly which permits would require a tracker. The permits included in the current document are trap gear permits – A1, A2, A3, A4, A5, AOC, and A5W. Any other federal lobster permits would not be required to install a tracker. There were discussions about watermen that have the A5W permit, which is primarily used for black sea bass. It was the understanding of ASMFC that even though the watermen were not targeting lobster, if they used trap gear under this permit, they would need a tracker.

We appreciate those of you that have already sent in public comments to ASMFC regarding the proposed addendum (found here: http://www.asmfc.org/files/PublicInput/LobsterDraftAdd_XXIX_JonahCrabDraftAdd_IV_PublicComment_Dec2021.pdf).

Caitlin Starks

From: Cindy Johnson <johnsonemploy@aol.com>
Sent: Wednesday, January 12, 2022 4:22 PM
To: Comments
Subject: [External] American Lobster Draft Addendum XXIX/Jonah Crab Draft Addendum IV for Public Comment

Am I understanding this straight? You want to track "vessels" aka lobster boats to understand crustaceans better? Shouldn't you track the crustaceans and not the people then? It appear the main goal then is to track people-why??

Respectfully,
Cindy Johnson
Turner. Me

Caitlin Starks

From: Jim Kimbrell <jimthepotter002@yahoo.com>
Sent: Wednesday, January 26, 2022 10:50 AM
To: Comments
Subject: [External] Comments

Hello
Just a comment about tracking lobster boats.
For one thing, it seems expensive, for the individual boat and for the overall project. Even if you did know where a boat is . You don't know how many lobsters are getting caught by that boat. It could be half the traps did good and half did poorly.
Shore side catch reporting has gone on for years. We know they catch a lot of lobsters.

Have you ever seen the following?
https://www.marinetraffic.com

Jim Kimbrell

Sent from my iPad

Caitlin Starks

From: Brenda Pennell <bpennell@comcast.net>
Sent: Monday, January 31, 2022 10:06 AM
To: Comments
Subject: [External] Tracking vessel

This a waste of time and money and unnecessary just a hassle for lobsterman about 75 present of lobsterman only lobster outside the three mile line 4to 6 weeks out of a year why track them all the time for a few weeks of lobstering what could they possibly gain from it is they a big crime going on no one knows about or people just need something to do Stupid idea leave things alone thank you

Sent from my iPad

January 31, 2022

Atlantic States Marine Fisheries Commission
Draft Addendum XXIX and IV

Subject: Electronic Vessel Tracking for Federal Permit Holders

Please consider the following comments on the Draft Addendum XXIX to Amendment 3 to the American Lobster Fishery Plan and Draft Addendum IV to the Jonah Crab Fishery Management Plan. I would prefer Option A Status Quo and not require electronic vessel tracking devices for federal permit holders.

1. Requiring boat owners to buy and install tracking devices, as well as pay yearly costs for the service, is a significant burden without funding assistance that is not currently available.

2. Powering of the devices could cause issues for boat owners. If something were to malfunction, it may cause the batteries to drain. Without power, boat could risk sinking from the failure of bilge pumps or miss a trip when the boat is unable to start. Also, there is nothing currently in place to address if the device malfunctions that would allow the boat to still make the trip. Losing days at sea through no fault of their own would be a heavy blow to fishermen.

3. I have serious concerns about the use of the data. ASMFC has stated that the data can be used to help protect important fishing grounds from offshore development. It may be the case that the data will help, however it may hurt fishermen through unintended consequences. All of the landings and stock data used in the offshore wind development process so far have done little, if anything; in regards to protecting vital bottom. Also, although I do not have a specific scenario, I know from my experience as a former engineer that people can come up with creative ways to use and present data to favor their goals. To be frank, I don't believe that offshore wind developers want to coexist with fishermen as it would be easier and cheaper to do these projects with us out of the way. It would be a shame to provide more data to developers to help them push their way in while they push us out.

Thank you for your consideration regarding the electronic vessel tracking. Should you have any questions, please do not hesitate to contact me.

Liam Sullivan
Commercial Fisherman
liam.sullivan754@gmail.com
(401) 418-2100

Caitlin Starks

From: jimtitone@aol.com
Sent: Sunday, January 30, 2022 12:04 PM
To: Comments
Subject: [External] Draft Addendum XXIX

Ladies and Gentlemen:
Thank you for the opportunity to comment on the draft addendum.

I am voting against this addendum for the electronic vessel tracking for federal permit holders. It appears the real goal of this addendum is not for lobster/jonah crab stock assessment, but to collect data that would promote the closing of vast areas of fishing grounds due to any perceived threat to whales, and to clear the way for the industrialization of the ocean for development of offshore wind (OSW). Basically, NOAA and ASMFC are capitulating to various NGO's and OSW developers. This addendum would have the fishing industry, **AT ITS OWN EXPENSE**, collect data that would only benefit deep pocketed, well financed foreign and domestic interests outside of the fishing industry.

If this data is so valuable then why not have the real beneficiaries of this data (NGO's & OSW developers) collect this data on their own and at their own cost? Stock assessment for lobsters and Jonah crabs can be accomplished by requiring all lobster permit holders to submit VTR's for each trip.

It is obvious that the Secretary of Commerce is on a mission to populate the entire U.S. Atlantic Seaboard with offshore wind farms, and will exert pressure on all agencies under her control to vigorously pursue her agenda. The fishing industry presents a roadblock to this misguided agenda. What better way to remove the fishing industry hurdle then by having this industry pay for its own demise.

I think it is time for ASMFC and the American Lobster Management Board to start supporting the fishing industry and to stop being puppet agencies for interests which would be destructive to the fishing industry.

NO for Draft Addendum XXIX.

Thank you.

Jim Titone
Seabrook, NH
603 394-5794

Caitlin Starks

From: Tor Vincent <duckislandmarine@gmail.com>
Sent: Wednesday, January 12, 2022 8:50 PM
To: Comments
Subject: [External] Lobster Draft Addendum XXIX
Attachments: 17-25a-MBES-and-Benthic-Survey-Data (4).pdf

Hello,

To begin I hope there can be a clarification about area 4. It was said all lobsters harvested from federal waters need to be from a tracked vessel. Since area 4 extends into New York harbor does a vessel that works within 3 miles from shore and lands in New York need a tracker ? From the presentation I think not, but only area 6 was mentioned as state waters. I guess the same up the coast for small boats that just work the shoreline.

I have looked at several offshore wind applications and I have seen how the data is mapped to show fishing history. I see how this could help clarify the history of the boats working lobster gear offshore. The whale considerations have weakened the buoy lines and allowed some trawl lengths to be extended. I read some of the configurations for offshore turbines that may be real or just the promotion of an idea for funding.The off-bottom turbines were a configuration of several anchors and had loose cables attached that were going midwater for a distance to reduce chafing from the proposed structures. They showed cartoons and maps of going to the edge of the shelf. Since the trap gear has a history of moving after storms I hope this can be recorded from the data. To say there will be a conflict between the footprint of floating windmills and lobster gear is an understatement. More like terrible tangles.

The buried cables are another matter. To achieve efficiency with cable arrays between the windmills the designers use a lighter cable and consider that if the cable was buried too deep under heavy load it may overheat and have a shortened life. Their solution is to try to keep the cables in the top 1/2 meter of bottom because that is where the greatest circulation in the bottom sediments is and the water flush near the cable is the cooling solution. Who is going to keep an eye on them to bury the cables out of harm's way when the solution to a good lifespan on a thin cable is to keep it up high in the sediment? The sand waves and ripples from benthic studies give evidence the sands are mobile, most likely in storm events. Please don't blame the lobstermen when their grapples get into the shallow cables.

In the New York Plan for offshore wind there is a benthic study. It makes a note of a pockmarked bottom. Shows a sonar image on page 38. The pocks are not explained. At the end the study says it came across no habitat. A 2011 NOAA EIS for the shelf recorded the same sort of "pocks". Same dimensions almost exactly. Except the NOAA study recorded them as lobster burrows which were often occupied by several lobsters..In one sonar track picture of the NYOWMP benthic study I counted over twenty lobster burrows. So how many lobster burrows are really out there? I hope most realize there are few rocky patches offshore long island and the New York Bight. It seems very convenient for the wind farm studies to forget habitat built by lobsters and create invalid studies that show "no sensitive" habitats to harm. I hope those of you involved in this will be considerate of the circumstances and help build valid data for the fishermen to show proper history with rather than corrupt it to benefit the wind farms like the benthic study.

I will add that the study to prove the floating windmills and show their efficiency spaced them out far from each other. In the real world the windward edge of the wind farm is most efficient and the middle and lee end far less. The floating turbine data is obvious cherry picked nonsense. They may never happen .

Regards,
Tor Vincent

Caitlin Starks

From: Denise Wagner <wagnerfishingone@yahoo.com>
Sent: Thursday, January 20, 2022 10:20 AM
To: Comments
Subject: [External] Lobster Draft Addendum XXIX

Caitlin,

I am writing you today as a follow up to the public hearing held on January 13th. As you know I have many concerns about the tracking systems to be put on vessel with a Federal Lobster Permit.

First, is the operation of these devices. I am aware you have this equipment on draggers. Draggers are very different from the setting of gear. Those vessels fish year round. We have smaller vessels, a lot smaller, these vessels have a lay up period. My concern is when a vessel is done fishing for the year the tracking system still has to be on. Batteries will go dead and eventually the system will stop working. In my case, when I dock my vessel at the end of the season, we leave the state so I am not even there to make sure they stay charged. I am sure there are other unique cases so what are fisherman expected to do in this case when vessels are laid up? Also, concerned about other fisherman knowing where my gear is set. I was told by staff they wouldn't and I hope that is the case because that will cause conflict among fisherman.

Secondly, in the case of A5. A5 has a waiver. This waiver was put into place because A5 was recognized for not having a large participation in directed lobster fishing. A5 is mainly seabass fishery with very few lobsters landed as a bycatch. Therefore, A5W should continue to do what it was meant to and exempt fisherman from following the lobster recommendations and laws and if this law passes exclude A5W.

Third, is when a vessel has a lobster permit but does not fish for lobster is the vessel still required to have a tracker? For example we have federal permits but we also conch. If I am not fishing under the federal permits would I be required to have a tracker and if I have a tracker would it have to be on if I am conching? Conch pots Do Not Catch lobster.

Fourth, is the cost of the equipment. When we were our public hearing there was some conversation about cost. I find it hard to believe in today's world that the cost is only 500-700 dollars when an ALS is thousands. My son, knows someone who just had to replace theirs and he told my son it was around 7000. For the little bit of lobster we catch in Area 5 this cost doesn't justify. Is there going to be a monthly or yearly fee? This is a HUGE burden on fisherman. It is my understanding the Federal Government reimbursed the scallop fishery the cost of the equipment therefore, they set precedence, which means because they did it for one industry they have to do it for others. Not to mention the scallop industry is a multi-million dollar industry who received Federal funding and we don't even come close to that kind of income.

I know I have a lot of questions I hope that they are discussed and answered for me because on the public hearing phone call there seemed to be a lot of confusion and answers seemed very vague.

In close, we would like status quo. However, if this does have enough support we first would like an A5W exemption and not have it go into effect until Federal funding is available to support us because like I said this is not just a couple of hundred dollars we are talking about and we are not a rich fishery by any means. If, this law passes it should only apply to those who directly fish for lobster.

Respectfully submitted,
Denise Wagner
J W Commerial Fishing Inc.
Phone 609- 515-3788

Caitlin Starks

From: EDWARD WIESSMEYER <baitbag@msn.com>
Sent: Sunday, January 23, 2022 3:35 PM
To: Comments
Subject: [External] Lobster Draft Addendum XXIX

After reviewing the lobster draft addendum XXIX I would like to be on record as strongly opposing its implementation. After reading the proposal I am not in agreement that there is a need for this regulation. Starting with the VTR requirement, I feel that this an unnecessary bourdon dumped on the fisherman. The fisherman is going to incur additional costs to purchase, install, and maintain this unit. Lobstermen have been filing monthly catch reports with the state in Massachusetts that detail effort, location and trawl size in Massachusetts waters that have transient populations of whales and this statistical information has satisfied the Division of Marine Fisheries (DMF) without the use of VTRs.

The addendum proposal states the federal waters that are being lobstered in, have a sparse distribution of lobster gear. This equates to reduced fishing effort and less chance of interaction with whales. This fact tells me that there is no need for the use of a VTR. This fact also tells me that there is reduced fishing pressure on stocks and another reason not to require a VTR for stock assessment. In regards to the claim that a VTR is needed for spatial data collection, the use of the same spotter planes that are used to track whales, should be used to collect the spatial data from the air.

There are presently new regulation being implemented regarding the use of new buoy line marking regulations. This already equates to an added expense and labor intensive requirement of the lobsterman in order to comply. The industry does not need anymore new regulations. It is top heavy with restriction and regulations now!!!!!! I hope that this agency will take this feedback seriously and drop their proposal for the VTRs.

Sincerely
Edward Wiessmeyer
F/V Laura Jean II
Permit #149608

Sent from Mail for Windows

From: David Nichols
To: Comments
Subject: [External] Addendum: Lobster 2022.
Date: Wednesday, December 15, 2021 8:30:14 AM

CS: As a past offshore Lobster employee (crew on Two Dukes, Sandwich, Massachusetts, Jim Brady owner); I found my Maritime background (IOMMP Union, Linthicum Heights, MD) somewhat useful.

1. USCG Licensed Chief Mate Unlimited Tonnage
   A. Medical requirement (John Hopkins, MD)
   B. Seamanship
   C. Cooking 101 Wilma Nina Nichols
   D. Maritime Gear to work (required for US Maritime Industry)
2. I didn't have knowledge of:
   A. Lobster reproduction norm
   B. Seawater temperature and how it affected Lobster growth (natural feed)
   C. How to bait a trap (Although I did lobster as a child out of Nahant, MA)
   D. Current Worldwide market of catch

Therefore, it's my believe a Federal Observer should accompany all Commercial boats on a timely basis. This would allow further knowledge of catch, methods, and improvement to keep such a business alive, rather than farming or Aquaculture of species.

Merry Christmas from Boston.

From: Pete Mason
To: Comments
Subject: [External] Electronic tracking for lobster boats
Date: Wednesday, December 15, 2021 9:49:05 AM

RAPTOR REMARK: Alert! Please be careful! This email is from an EXTERNAL sender. Be aware of impersonation and credential theft.

My name is Peter Mason I am a federally permitted lobster fisherman also state permitted in the state of Massachusetts. I am 100% against electronic tracking of any Lobster vessel. All federally permitted lobster boats already submit VTR‘s every trip they make, and all the information that would be gathered from this electronic tracking is already provided to you by us through VTR‘s there’s no reason for us to be treated like criminals and tracked everywhere we go. There is already too much government overreach in the fisheries as it is, why burden us with more? it’s ridiculous and redundant. My son Toby Mason is also a federally permitted Lobster boat and state permitted just like me in the state of Massachusetts. He like me he’s also 100% against electronic tracking of our vessels and more ridiculous government overreach. I would like this to go on record for public comment on this topic.
Sent from my iPhone

From: Glenda Beal
To: Comments
Subject: [External] Lobster Draft addendum xxix
Date: Wednesday, December 15, 2021 8:30:44 AM

To Whom it May Concern:

We are writing in opposition to the proposed requirement for lobster and crab fishermen to install tracking devices on their boats holding federal fishing permits. This is not only a completely overreaching invasion of privacy and individual rights, which will bring us ever closer to the "Big Brother" government structure which we are already slipping steadily towards in our country, but also is a costly proposition which will add more burden to the already much harassed fishermen who are being singled out at every turn. Federally permitted lobstermen who hold other permits are already reporting every trip to NMFS. Why is ok for the government to know every move a fisherman makes in his own personal small fishing boat? The majority of these men and women privately own small day trip lobster boats which are typically less than 45 feet. These boats are not just used commercially. Most in Maine are used for family recreation many times during fishing season. When our children were small we camped in our boat every weekend during summer. Families continue to traditionally use their boats for such overnight recreation as well as day picnics to various islands. These boats are taken to ports along the coastline to either watch or participate in boat races. You are saying with this tracking device that it is ok for the government to know exactly where the families go every time they leave the mooring?? How is that even considered to be legal?? This is an incredibly intrusive, heavy-handed example of government overreach into private lives as well as into private business! With all the whale rules that are ever more threatening to the livelihoods of our families from ridiculously difficult and time consuming rope marking systems and the frighteningly real probability that our fishery will be discontinued due to law suits from environmentalists who have forced unnecessary disproportionate restrictions on lobstermen by NMFS to "save whales" which are not even entangled in Maine waters, we do NOT need further government laws and regulations. Government fishing closures are now a real threat with sweeping large swaths of rich fishing grounds being taken from us. How many more closures are we likely to see in our state? Our own government additionally threatens fishing industries with plans to build harmful floating windmill arrays on the ocean. Our heritage industry is in danger already from all sides, and fishermen feel violated and threatened unfairly! To now decide every permit holder needs to be TRACKED is unbelievable! By a device which is extremely costly and invasive! It is unfathomable that we are now having to try to convince your commission that we shouldn't be restricted and burdened any further! At what point does government decide to stop harassing the hard working men and women who are just trying to do their job, freely and independently? Our rights are being violated at every turn and no one in government seems concerned, though the state and federal government are happy to take our income tax contributions! We buy our licenses and we have had to get government permits just to fish outside of state waters. We maintain our vessels and keep buying and replacing ever more expensive safety equipment like life rafts which then need to be repacked yearly at nearly the cost of a replacement. We can hardly keep up with all the requirements and regulations without hiring a personal secretary to keep it all straight! Requirements grow more limiting, restrictive, invasive, burdensome and costly in both time and money. Does the Atlantic States Marine Fisheries Commission really care about the lobster industry?? If so then the proposed tracking equipment requirement should be thrown out and fishermen should be allowed to make a living for their families without further complications and intrusions. We are under too much burden already. Please do NOT require tracking equipment on our small federally permitted lobster boats.

Sincerely,
Travis and Glenda Beal
213 Bayview Drive
Beals, ME 04611

From:	Katy Ellis
To:	Comments
Cc:	TODD ELLIS; Jon Shafmaster
Subject:	[External] Lobster Draft Addendum XXIX
Date:	Monday, January 31, 2022 12:54:20 PM

To Whom it May Concern:

Shafmaster Fishing is the owner/operator of 14 offshore lobster boats based out of Newington, New Hampshire. We are writing today to provide you with our comments in opposition to Lobster Draft Addendum XXIX, the proposed electronic vessel tracking.

Our boats are currently using a VMS network through CLS, successor to Boatracs, which already tracks the boats continually on a 30-minute frequency basis, i.e., ping position mechanism. However, it can be increased to every five minutes and covers all of Area 3 as well as anywhere on the East Coast of the United States fishing grounds. It provides total coverage in real time because its satellite based, not cellular.

The proposed electronic vessel tracking, as we understand it, is only real-time within cellular range, i.e., 10-20 miles off the shore. We currently fish 10-12 day trips so the data accumulated by this possible system will only be downloaded and available when a boat returns to port. Therefore, the data is not "real-time" and by definition "stale."

In addition, VMS provides us with email communication capabilities, at all times, wherever we are fishing. Again, since there are no cell towers out to sea, the cellular based system will not provide email capability.

Lastly, VMS service provides us with access to 24-hour, up-to-date weather reporting. This is a huge safety feature. We all know the story of the "Perfect Storm." Safety is a critical issue, and the VMS system provides this information.

In conclusion, the electronic vessel tracking absolutely is not applicable for offshore fishermen. Further, IF the information potentially available via the electronic vessel tracking system in Addendum XXIX is deemed essential and requisite, the solution is to make VMS required on all boats.

Shafmaster Fishing Co.
158 Shattuck Way
Newington, NH 03801
603-431-3170

From: Beverly Lynch
To: Comments
Subject: [External] lobster draft addendum XXIX
Date: Wednesday, January 12, 2022 10:59:50 AM

From past experience, so called hearings and comments are just for show. You administrators have made up your minds to impose electronic surveilance on lobstermen and you know you can get away with it under the current administration. No where, did I see mentioned how many offshore lobstermen there were. I suspect very few.
My husband will soon be 65. He has worked as a seabass, lobster pot fisherman since he was 16. Last year you imposed electronic vessel trip reporting on him. He had never used an internet device and struggles with this. It is also expensive. Now you will require him to have electronic monitoring as if he were a criminal. No, criminals are treated better. This will add more to his expenses and very likely will not be reliable. He will lose fishing days when these systems are down.
The costs you cited for these devices and the fees is out dated. With inflation, they will cost more.
My husband fishes off VA and MD, not off New England, in a 35' boat. Do you get that, a 35' boat? He no longer fishes in the offshore canyons, but lands lobsters from his inshore sea bass pots. This is about 20 miles out. I think there are maybe three other sea bass pot fishermen active in this area. But you have to know where their boats are every minute! You have to know where their gear is, although it is reported in their vessel trip reports. Why?
Offshore wind farms have damaged European fisheries. These farms will likely go in my husband's fishing grounds. That's ok with you. But a fisherman with a few hundred pots is another matter.

And this may be off subject, but we have millions of people coming across our border, with no monitoring at all. Some may be terrorists, criminals, who knows, but you think it's important to monitor where lobster boats are every minute. Why? Are your brains so fogged with charts and useless data, you can no longer exercise common sense?

Beverly R. Lynch

Painter, VA

From: Travis Fifield
To: Comments
Subject: [External] Lobster Draft Addendum XXIX
Date: Thursday, December 16, 2021 7:50:51 PM

Hello,

I'd like to submit the following comment on the draft lobster addendum:

It is incredibly that ASMFC is expecting fishermen to shoulder the financial burden of yet another unfunded mandate for newly required equipment and additional cellular data plans— or more likely satellite data plans for the remotest of fishermen. This coming on the heels of the $5000 per ropeless trap it is pushing onto the industry. ASMFC and the federal government should spend as much time working on funding the purchase of this equipment and data plans as it does calculating gaussian mixture models. If ASMFC is requiring this new equipment, then the draft rules should be required to include a section on financing the installation on boats.

I have boats that sell at my wharf that may not be opposed to the trip recording which is what this actually appears to be since it's not in real-time, but they will absolutely get hung up on spending more money on equipment they see as pointless and unnecessary.

Travis Fifield
Fifield Lobster Co.
Stonington, ME