

## 2021 Fixed Gear EM Vessel Monitoring Plan Description

### Introduction

A Vessel Monitoring Plan (VMP) describes how fishing operations on the vessel are conducted, including how gear is set, how catch is brought on board, and where catch is retained and discarded. It also describes how the EM system and associated equipment is configured to meet the data collection objectives and purpose of the EM program, including camera locations to cover all fishing activities, any sensors to detect fishing activities, and any special catch handling requirements to ensure the data collection objectives can be met. The VMP also includes methods to troubleshoot the EM system and instructions for ensuring the EM system is functioning properly.

Vessel operators will meet with the EM service provider to develop this VMP using a **VMP template that is available on the NMFS Website:** <https://www.fisheries.noaa.gov/alaska/resources-fishing/electronic-monitoring-north-pacific>.

Here we provide an excerpt of the VMP so that vessel operators can preview the sections that describe vessel operator responsibilities and troubleshooting instructions.

Each VMP must be approved annually by NMFS. Once the VMP is complete and the vessel operator agrees to comply with the components of the VMP, the vessel operator must sign and submit the VMP to NMFS for approval. If changes are needed to the VMP after approval, vessel operators should work with EM service provider to make those changes and sign and submit those changes to NMFS. Once submitted the vessel operators may begin a fishing trip.

If a vessel operator has repeat problems with EM system reliability or video quality or have failed to comply with the requirements in this VMP, NMFS may disapprove a VMP for the following calendar year and the vessel may be removed from the EM pool the following calendar year.

### Excerpt from VMP template

#### Operator Responsibilities

**When selected for coverage, you must comply with operator responsibilities listed below and in Appendix B – Guide for Vessel Operators.**

#### Prior to Trip

- ✓ **Complete Function Test:** Prior to leaving port, you must turn the system on and conduct a system function test following the instructions provided in *Appendix B – Guide for Vessel Operator*. If the function test identifies a malfunction, you must follow the guidance in the malfunction matrix and the troubleshooting guidelines listed in *Appendix B – Guide for Vessel Operator*.
- ✓ **Confirm Hard Drive Storage Space:** Ensure that the system has enough storage to record the entire trip.

#### Each Trip

- ✓ **Power:** Maintain uninterrupted power to the EM unit while the vessel is underway.

- ✓ **Maintain Equipment:** Make certain that EM system components are not tampered with, disabled, destroyed, or operated or maintained improperly unless directed to make changes by NMFS, the EM service provider, or as directed in the troubleshooting guide of the VMP.

### Each Day

- ✓ **Logbook:** You must complete **one** of the following:
  - If you are required to complete a NMFS or IPHC logbook then you can use that logbook **and add in the comments section:**
    - the ODDS trip number
    - whether the vessel fished at night during the trip
    - any EM malfunctions encountered during the trip
    - each set that marine mammals were observed feeding on the catch as it was brought aboard.
  - If you **are not** required to complete a NMFS or IPHC logbook then you must complete the EM Effort Logbook found in either *Appendix D – 2021 Longline EM Effort Logbook* or *Appendix E – 2021 Pot EM Effort Logbook*.

### Prior to Each Haul or Set

- ✓ **Verify System Is Running Correctly**
  - Verify that all cameras are recording and all sensors and other required EM system components are functioning as instructed in *Appendix B – Guide for Vessel Operator*.
  - Check the monitor and verify that the camera views are consistent with the images provided in *Appendix A - Vessel Installation Details*.
- ✓ **Clear Camera Views:** Clean cameras to maintain video quality and make sure camera views are not blocked.

### Catch Handling Requirements for LONGLINERS:

- ✓ Deployment of pot and hook/line gear in the same set is prohibited.
- ✓ All catch must be handled within view of the cameras as defined in the camera descriptions and deck diagram in *Appendix A - Vessel Installation Details*.
- ✓ All catch processing from the previous set must be complete prior to hauling the next set.
- ✓ **Seabirds:** Hold seabirds up to the camera for 3 seconds and show certain key parts of the animal, such as the beak, to the hauler view camera. When showing a seabird to the camera:
  - Grasp by the outermost bend in wing, with wings out-stretched and show the bird to the hauler camera showing the front and back sides;
  - For albatross, show a profile of the bill by holding the bird by the neck against the side of the boat. Ensure that the view is not obstructed; and
  - If possible, hold the bird beak near a scaled reference item (e.g., measurement board with large grid) to assist with identification.

- ✓ **Marine Mammal Depredation:** Note in the logbook each set where marine mammals were feeding on the catch.

#### Catch Handling Requirements for POT Gear (includes SLINKY POTS):

- ✓ Deployment of pot and hook/line gear in the same set is prohibited.
- ✓ All catch must be handled within view of the cameras as defined in the camera descriptions and deck diagram in *Appendix A - Vessel Installation Details*.
- ✓ On retrieval of a pot, ALL catch must be emptied from the pot onto the sorting table. Any catch left in the pot or that land on the deck must be placed on the sorting table.
- ✓ Process all retained catch and leave discards on the sorting table until after the retained catch are placed in the fish hold.
- ✓ If there is no sorting table, all catch must be sorted in view of the cameras and discards left on deck in view of camera after retained fish are placed in the fish hold.
- ✓ Completely clear all catch, especially Pacific cod, off the table and deck before the next pot is dumped (so that catch from 2 pots is not mixed).
  - If the entire table is covered with catch, then Pacific cod should be cleared from the table a few at a time (to allow EM reviewer to count the retained catch).
  - If all of the snails and sea urchins cannot be cleared off the table or deck before the next pot is dumped, they should be cleared by the next pot or as soon as feasible.

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*Owners of pot vessels may propose alternatives to these procedures by submitting plans to NMFS for approval. This alternative may not be used until approved by NMFS.*

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#### Trip End

- ✓ **Mail hard drive and logbook**
  - Mail hard drives and a copy of the trip's **logbook** (IPHC or NMFS logbook or EM effort logbook, as appropriate) and the ODDS trip number **within 2 business days** after the EM selected trip to the contact provided in *Appendix B – Guide for Vessel Operator*.
  - **EM selected trips ending in ports with limited postal service:** Notify NMFS using the contacts on first page of the VMP to inform of the expected delay.
- ✓ **Close fishing trip in ODDS:** Prior to logging another trip or within 2 weeks of the end of the fishing trip selected for EM coverage, you must close the fishing trip in ODDS.
- ✓ **EM selected trips ending at a tender:**
  - You must manually turn on the EM system and trigger recording during the offload to allow the EM reviewer to verify the end of the trip
  - Record the location of the offload in your logbook.

- Mail hard drives and a copy of the trip's **logbook** (IPHC or NMFS logbook or EM effort logbook, as appropriate) and the ODDS trip number **within 2 business days** after the tender's arrival in a port with regular postal service.

### *Vessels Using the Exemption at § 679.7(f)(4) to Fishing IFQ in Multiple Areas*

**You must still meet all the requirements for use of an EM system on every trip when fishing using the exemption at § 679.7(f)(4) to fishing IFQ in multiple areas.**

- ✓ The EM system must be powered continuously during the fishing trip. If the EM system is powered down during periods of non-fishing, you must describe alternate methods, such as VMS, to make sure the vessel's location information is available for the entire trip in *Appendix A - Vessel Installation Details*.
- ✓ If an EM system malfunction identified as "high" priority in the malfunction matrix occurs during a fishing trip, **you must cease fishing immediately**; follow the troubleshooting guidelines listed in *Appendix B – Guide for Vessel Operator*, and contact NOAA OLE immediately.
  - If a "high" priority malfunction occurs, every effort should be made to contact OLE while at sea, but if you are unable to contact OLE while at sea, you are not required to abandon fishing gear. You should also contact the EM service provider to facilitate the repair.
  - You may contact OLE using a cell phone or satellite phone, or you may contact the U.S. Coast Guard via VHF or single side band radio to request the Coast Guard contact OLE.
  - You **must not set additional gear** once a "high" priority malfunction is detected and must return to port immediately if unable to contact OLE at sea.
- ✓ You may purchase additional equipment, such as cameras or control centers, at your own expense to reduce lost fishing time. This additional equipment and its purpose must be described in *Appendix A - Vessel Installation Details*.

## Equipment Malfunctions

### Equipment Malfunction Discovered During Pre-Departure EM System Function Test

If the function test identifies a malfunction, follow the troubleshooting guidelines listed in *Appendix B – Guide for Vessel Operators*.

<b>Malfunction Type</b>	<b>High/Low Priority</b>	<b>Potential Solution</b>	<b>Action if Malfunction Not Resolved</b>
<b>Monitor</b>	<b>High</b>	Connect a different monitor	Must remain in port up to 72 hours to allow for repairs. After 72 hours, may depart on trip and the next trip is selected for EM coverage. Repair must occur prior to departing on the next trip.
<b>GPS</b>	<b>High</b>	Restart system	Must remain in port up to 72 hours to allow for repairs. After 72 hours, may depart on trip and the next trip for EM coverage. Repair must occur prior to departing on the next trip.
<b>Insufficient Storage</b>	<b>High</b>	Replace with spare data drive <sup>1</sup>	Must remain in port up to 72 hours to allow for repairs. After 72 hours, may depart on trip and the next trip is selected for EM coverage. Repair must occur prior to departing on the next trip.
<b>Control Center</b>	<b>High</b>	Restart system	Must remain in port up to 72 hours to allow for repairs. After 72 hours, may depart on trip and the next trip is selected for EM coverage. Repair must occur prior to departing on the next trip.
<b>Insufficient Lighting</b>	<b>High</b>	Replace lights	May fish but cannot retrieve gear at night.
<b>Hauling Camera(s)</b>	<b>High</b>	Restart system; replace with spare camera <sup>1</sup>	Must remain in port up to 72 hours to allow for repairs. After 72 hours, may depart on trip and the next trip is selected for EM coverage. Repair must occur prior to departing on the next trip.
<b>Discard Camera(s)</b>	<b>High</b>	Restart system; replace with spare camera <sup>1</sup>	Must remain in port up to 72 hours to allow for repairs. After 72 hours, may depart on trip and the next trip is selected for EM coverage. Repair must occur prior to departing on the next trip.
<b>Streamer line Camera</b>	Low	Restart system; replace with spare camera <sup>1</sup>	May depart on trip. Before departing on another trip selected for EM coverage, must contact EM service provider to schedule repair.

<sup>1</sup> Vessels may choose to purchase additional spare parts, such as cameras or sensors but these items will not be provided by NMFS

<b>Malfunction Type</b>	<b>High/Low Priority</b>	<b>Potential Solution</b>	<b>Action if Malfunction Not Resolved</b>
<b>Rotation Sensor</b>	Low	Carry spare rotation equipment <sup>1</sup>	May depart on trip, but must trigger video manually. Before departing on another trip selected for EM coverage, must contact EM service provider to schedule repair.
<b>Hydraulic Sensor</b>	Low	Restart system	May depart on trip, but must trigger video manually. Before departing on another trip selected for EM coverage, must contact EM service provider to schedule repair.
<b>Keyboard/Mouse</b>	Low	Replace with another keyboard/mouse <sup>1</sup>	May continue fishing provided that the sensors are properly triggering automatic recording. Before departing on another trip selected for EM coverage, must contact EM service provider to schedule repair.

#### **Equipment Malfunction at Sea**

- If the system passed the function test, and remains continuously powered during the trip, you are NOT required to return to port in the event of a breakdown. Follow the instructions provided in *Appendix B – Guide for Vessel Operators*.
- If the malfunction cannot be resolved following the troubleshooting guide and/or with remote support, continue to run the system with all functional parts, and contact the service provider immediately (from sea if possible) to assist with scheduling service at the time of landing.

<b>Malfunction Type</b>	<b>High/Low Priority</b>	<b>Potential Solution</b>	<b>Action if Malfunction Not Resolved</b>
<b>Monitor</b>	<b>High</b>	Connect a different monitor	Attempt to repair prior to retrieving gear. If cannot repair must contact EM service provider at end of trip. Repair must occur prior to departing on the next EM selected trip.
<b>GPS</b>	<b>High</b>	Restart system	Attempt to troubleshoot issue prior to retrieving gear. If cannot repair must contact EM service provider at end of trip. Repair must occur prior to departing on the next EM selected trip.
<b>Insufficient Storage</b>	<b>High</b>	Replace with spare data drive	Perform a data retrieval and swap data drive with a new blank data drive. If cannot repair must contact EM service provider at end of trip. Repair must occur prior to departing on the next EM selected trip.

<b>Malfunction Type</b>	<b>High/Low Priority</b>	<b>Potential Solution</b>	<b>Action if Malfunction Not Resolved</b>
<b>Control Center</b>	<b>High</b>	Restart system	Attempt to repair prior to retrieving gear. If cannot repair must contact EM service provider at end of trip. Repair must occur prior to departing on the next EM selected trip.
<b>Insufficient Lighting</b>	<b>High</b>	Replace lights	May fish but cannot retrieve gear at night.
<b>Hauling Camera(s)</b>	<b>High</b>	Restart system; replace with spare camera <sup>1</sup>	Attempt to repair prior to retrieving gear. If cannot repair must contact EM service provider at end of trip. Repair must occur prior to departing on the next EM selected trip.
<b>Deck/Discard Camera(s)</b>	<b>High</b>	Restart system; replace with spare camera <sup>1</sup>	Attempt to repair prior to retrieving gear. If cannot repair must contact EM service provider at end of trip. Repair must occur prior to departing on the next EM selected trip.
<b>Streamer line Camera</b>	Low	Restart system; replace with spare camera <sup>1</sup>	May continue on trip. Before departing on another trip selected for EM coverage, must contact EM service provider to schedule repair.
<b>Rotation Sensor</b>	Low	Carry spare rotation equipment <sup>1</sup>	May continue trip, but must trigger video manually. Before departing on another trip selected for EM coverage, must contact EM service provider to schedule repair.
<b>Keyboard/Mouse</b>	Low	Replace with another keyboard/mouse <sup>1</sup>	May continue fishing provided sensors are triggering automatic recording properly. Before departing on another trip selected for EM coverage, must contact EM service provider to schedule repair.
<b>Hydraulic Sensor</b>	Low	Restart system	May continue trip, but must trigger video manually. Before departing on another trip selected for EM coverage, must contact EM service provider to schedule repair.

**Equipment Malfunctions for Vessels Fishing IFQ in Multiple Areas using the Exemption at §679.7(f)(4)**

For any malfunction identified as “High” priority, the vessel operator must cease fishing immediately, follow the troubleshooting guidelines listed in *Appendix B – Guide for Vessel Operators*, and contact NOAA OLE immediately.

<b>Malfunction Type</b>	<b>High/Low Priority</b>	<b>Potential Solution</b>	<b>Action if Malfunction Not Resolved</b>
<b>Continuous Power to System</b>	<b>High</b>	Check power supply to system	Cease fishing and contact OLE or you may not embark on trip using exemption. If system powered down during non-fishing, VMP must describe alternative methods to record location information

<b>Malfunction Type</b>	<b>High/Low Priority</b>	<b>Potential Solution</b>	<b>Action if Malfunction Not Resolved</b>
<b>Monitor</b>	<b>High</b>	Connect a different monitor <sup>1</sup>	Cease fishing and contact OLE or you may not embark on trip using exemption.
<b>GPS</b>	<b>High</b>	Restart system	Cease fishing and contact OLE or you may not embark on trip using exemption unless vessel has operating VMS and hauling and discard cameras are functioning.
<b>Insufficient Storage</b>	<b>High</b>	Replace with spare data drive	If vessel does not have a spare data drive, cease fishing and contact OLE or you may not embark on trip using exemption.
<b>Control Center</b>	<b>High</b>	Restart system	Cease fishing and contact OLE or you may not embark on trip using exemption.
<b>Insufficient Lighting</b>	<b>High</b>	Replace lights	May fish but cannot retrieve gear at night
<b>Hauling Camera(s)</b>	<b>High</b>	Restart system; replace with spare camera <sup>1</sup>	Cease fishing and contact OLE or you may not embark on trip using exemption.
<b>Deck/Discard Camera(s)</b>	<b>High</b>	Restart system; replace with spare camera <sup>1</sup>	Cease fishing and contact OLE or you may not embark on trip using exemption.
<b>Streamer line Camera</b>	Low	Restart system; replace with spare camera <sup>1</sup>	May depart on trip or continue trip. Before departing on another trip selected for EM coverage, must contact EM service provider to schedule repair.
<b>Rotation Sensor</b>	Low	Restart system. Carry spare sensor <sup>1</sup>	May depart on trip or continue trip, but must trigger video manually. Before departing on another trip selected for EM coverage, must contact EM service provider to schedule repair.
<b>Hydraulic Sensor</b>	Low	Restart system. Carry spare sensor <sup>1</sup>	May depart on trip or continue trip, but must trigger video manually. Must contact EM service provider to schedule repair before departing on another trip where EM is required.
<b>Keyboard/Mouse</b>	Low	Replace with another keyboard/mouse <sup>1</sup>	May continue fishing provided sensors are triggering automatic recording properly. Before departing on another trip selected for EM coverage, must contact EM service provider to schedule repair.