EM Established Provider Manual (Draft-Nov 2022)

Background

The Pacific Coast Groundfish Fishery's Trawl Catch Share Program (Trawl Rationalization Program) consists of an Individual Fishing Quota (IFQ) Program for the shorebased trawl fleet and cooperative programs for the at-sea mothership and catcher/processor (MS/CV) trawl fleets.

One characteristic of the catch shares program is individual accountability, which includes 100-percent at-sea monitoring of all fishing trips. Observers were originally the only approved method to satisfy the at-sea monitoring requirement. Beginning in 2024, electronic monitoring (EM) may be used as an alternative to meet the at-sea monitoring requirement.

EM may be deployed on vessels participating in the IFQ program, including whiting and non-whiting groundfish trawl and non-trawl vessels; and MS/CV participating in the at-sea whiting fishery.

To collect the biological samples and other data that cannot be obtained from using EM systems alone, scientific/ non-catch share observers provided by the West Coast Groundfish Observer Program (WCGOP) will be deployed to bottom trawl and fixed gear vessels participating in EM for a percentage of trips. Catch monitors are required to verify retained species at offloading.

EM Program Overview

Under the established provider/PSMFC EM program, vessels contract with certified EM field and technical support service providers at their own expense to install and operate EM technology and develop individual vessel monitoring plans (VMPs), which document installation of EM systems, including specific plans and procedures for system operation, maintenance, and catch handling. The VMPs are submitted to NMFS for review as part of a vessel's application for authorization to use EM. Vessel operators record logbook data, including discards, during fishing trips and transmit logbooks to the established provider/PSMFC. Vessel operators also transmit EM data (e.g., harddrives) to the established provider/PSMFC for review to validate logbook data. PSMFC first transmits logbook data and will also send final validated EM data to the NMFS vessel account system to update vessel accounts.

Basic EM Trip Timeline:

- At least 48 hours before entering the fishery, the vessel operator of an EM-authorized vessel makes the proper declarations to the Office of Law Enforcement (OLE)

- Before each trip, the vessel operator must contact the West Coast Groundfish Observer Program (WCGOP) to determine if vessel is selected for scientific observation for that trip

- Following the trip, the vessel operator submits copies of their discard and retained logbooks (if applicable) to established provider/PSMFC electronically and submits the hard drive/EM data to established provider/PSMFC for review

- Established provider/PSMFC enters the logbook data and submits it to NMFS-Vessel Account system (within seven business days) from receipt of the logbook data from the vessel. NMFS Vessel Account system uses the logbook data to debit at-sea discards

- Established provider/PSMFC will also conduct review of EM data, store EM data, and provide IFQ species or species group discard data summary data to Vessel Account System to update debit at-sea discards if necessary

- Established provider/PSMFC is expected to submit EM summary data to NMFS within 90 days from the date of hard drive receipt

Vessel Owners and Operators

To participate in the EM program, vessel owners and operators must comply with all requirements for participating in the trawl catch share program. In addition, vessels must:

- Obtain an EM Authorization from NMFS
- Contract with a certified EM field and technical support service provider for a camera system
- Obtain EM system approval from NMFS after EM system installation
- Maintain and follow a NMFS accepted Vessel Monitoring Plan (VMP)

Permits and Monitoring Branch

Staff in the Permits and Monitoring Branch of the West Coast Region manage permits associated with the catch shares program, including authorizations and permits related to the use of EM. They coordinate with vessel owners and operators, co-op managers, EM service providers, WCGOP, OLE, and others to ensure the program meets the regulatory requirements.

Permits and monitoring staff are responsible for:
- Processing EM service provider permit applications and issuing service provider permits
- Assisting in the creation of VMPs, and reviewing and approving final plans
- Reviewing EM service provider feedback
- Serving as the initial point of contact for reports of potential harassment, conflicts of interest, system tampering, and other compliance issues

WCGOP

The West Coast Groundfish Observer Program (WCGOP) is responsible for employing scientific observers to selected EM trips.

Shorebased Plants and Catch Monitors

For shoreside deliveries, all vessels must deliver retained catch to a licensed first receiver. There, all catch is offloaded, sorted, identified, and weighed. The catch monitor verifies the first receiver information and is responsible for the shorebased component of 100% IFQ monitoring. For EM vessels the EM system must be operational and recording until the offload begins. The catch monitor will take over monitoring duties at that time.

For EM trips, the catch monitor will sample retained salmon, biological data is captured by WCGOP scientific observers deployed on vessels and sampled by port samplers when available during offloads.

EM Field and Technical Support Service Provider Responsibilities

EM Field and Technical Support Service Provider is generally responsible for:
- Installing and certifying a vessel's onboard EM system
- Providing information for the vessel owner/operator to complete the VMP
- Providing technical (remote and field) services for the EM system

- Providing hard drives (or other approved media) for transferring data from the vessel to the established provider/PSMFC
- Submitting to NMFS requests for technical assistance from vessels, including when the call or visit was made, the nature of the issue, and how it was resolved within 24 hours of the request for technical assistance.

Established Provider /EM Video Review

Under the established provider model, the established provider/PSMFC is responsible for reviewing EM video for compliance to validate the self-reported logbook discards submitted by the vessel operator using a logbook audit process (see below). Vessel operators are expected to accurately report catch and discards with estimated weights and correct species identification. Established provider/PSMFC is also responsible for storing vessels' EM data.

The process is generally as follows:

- After an EM trip, the vessel operator submits the retained and discard logbook (if applicable) and EM data (e.g., hard drive) to Established Provider/PSMFC.

- Established provider/PSMFC conducts review to validate the self-reported logbook discards.

- Established provider/PSMFC enters the logbook data and submits it to NMFS-Vessel Account system (within seven business days) from receipt of the logbook data from the vessel.

- NMFS Vessel Account system uses the logbook data to debit at-sea discards.

- Established provider/PSMFC submits EM summary feedback report to NMFS and vessel owner and operator within 90 days from the date of hard drive receipt.

- NMFS Vessel Account system uses the EM data to update debit at-sea discards if necessary.

- Established provider/PSMFC submits EM summary feedback (drive report) to NMFS and vessel owner and operator within 90 days from the date of hard drive receipt.

EM Review using logbook audit process:

- Upon receipt of EM data (e.g., hard drive), established provider/PSMFC confirms trip-level EM data matches the logbook. This includes verifying that the number of hauls reported on the logbook matches the number of hauls reported by the EM system and working with the vessel operator to resolve discrepancies.

- Established provider/PSMFC conducts the video review for a sample of the hauls for each trip, which includes:
  - Review of all raw sensor and image data to determine completeness.
  - Review of sensor data to annotate haul start and end times and locations, and to identify the total number of hauls in a trip.
  - Annotate discard events.

- Established provider/PSMFC uses hauls as the sampling unit to review EM data, specifically:
  - <u>Shorebased whiting</u> – 100% of hauls reviewed
  - <u>MS/CV</u> – 100% of hauls reviewed
  - <u>Non-whiting midwater trawl</u>
    - Maximized retention trips – 100% of hauls reviewed
    - Optimized retention trips – random selection of 10% of hauls per trip (minimum one per trip) reviewed
  - <u>Bottom trawl</u> – random selection of 10% of hauls per trip (minimum one per trip) reviewed
  - <u>Fixed gear</u> – random selection of 10% of hauls per trip (minimum one per trip) reviewed

- Higher estimate from logbooks or EM data will be used as final discard number.

- Allowable discard species are approved by NMFS and listed in the VMP. If review indicates species other than the allowable discards listed in the VMP are discarded, it will trigger additional review for that trip and will be noted in the feedback report. In these cases, EM data (rather than logbook data) will be used to debit the vessel account for discards.

- Established provider/PSMFC will also be required to notify NMFS of any EM system malfunctions or other requests for technical assistance if they affected a trip. Note, per the VMP vessels are also required to note malfunctions in the logbook.

- Following review, established provider/PSMFC will submit a feedback report (drive report) which captures feedback from the review for the vessel owner, operator, and NMFS. These reports to be submitted 3 business days after review is completed.

Discard Logbook Data Processing

Vessel operators are responsible for documenting EM trips and discards in their logbook. The type of discard logbook depends on the fishery and gear type used. Bottom trawl, fixed gear, and midwater trawl vessels each have different logbook reporting requirements. All are required to report IFQ or unsorted discards with estimated weight and reason.

Within 72 hours of the vessel's landing, the vessel operator must submit all pages from the logbook for that trip. The vessel operator will submit logbook data directly to the established provider/PSMFC upon trip completion.

Data Tracking and Processing

Vessel operators are responsible for ensuring they have sufficient hard drive storage capacity prior to embarking on an EM trip. Hard drives can be obtained by contacting contracted EM Field and Technical Support Service or PSMFC. After completing the fishing trip(s) the vessel operator must submit the EM data to the established provider/PSMFC (using a shipping method with tracking if a hard drive is mailed).

Once a hard drive (or other acceptable data transmission) is received by the established provider/PSMFC, the original data files must be stored following the minimum retention requirements. Any annotation or further processing of the data must not alter the original files.

Feedback Reports and Feedback Loop

Established provider/PSMFC communicates with vessel operators and NMFS to coordinate data service needs, resolve specific program issues, and provide feedback on program operations. Established provider/PSMFC provides feedback to vessel representatives, field services staff, and NMFS regarding:
- Adjustments to system settings.
- Changes to camera positions.
- Advice to vessel personnel on duty of care responsibilities.

- Advice to vessel personnel on catch handling practices; and,
- Any other information that would improve the quality and effectiveness of data collection on the vessel.

Data Storage and Access

Regulations require that EM raw data, reports, and other records must be stored for 12 months from when data is finalized for a given fishing year. For the groundfish trawl fishery, data for the fishing (calendar) year are typically finalized by April of the following year.
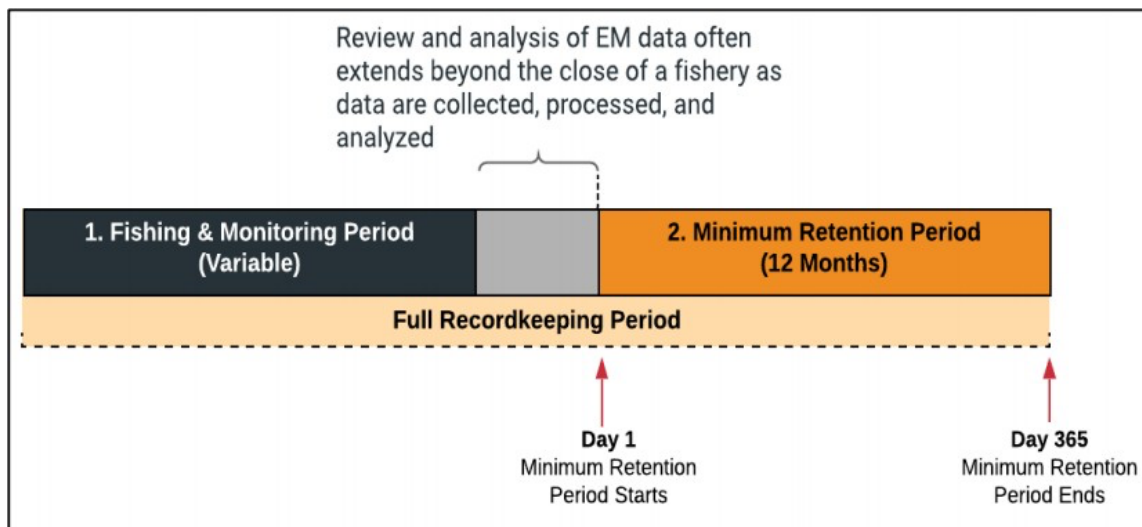

Figure 7. Model of minimum EM data retention requirements. From Third-Party Minimum Data Retention Period in electronic Monitoring Programs for Federally Managed US Fisheries, 2020.

Using Figure (7) as an example, the minimum retention period for 2022 data would start approximately April 15, 2023 and last through April 15, 2024. NMFS publishes a public notice every year to provide notification of when data are finalized and will notify certified EM service providers when this notice publishes. EM data may be stored locally on hard drives, local servers, or using cloud storage services.

NMFS expects most requests for access or submission of EM data and other records associated with a specific EM trip will be made during the year in which that trip was taken (January 1 – December 31) and until data is finalized for that year (on or about March 1 of the following year). EM data files may be transmitted to NMFS via a secure website from which NMFS and authorized officers can download the data files, or by mailing a hard drive, CD, or other medium containing the data files.