



# NOAA FISHERIES

National Marine Fisheries Service

Northeast Fisheries Science Center

Greater Atlantic Regional Fisheries Office

# Electronic Monitoring for Sectors

## What You Need to Know

Beginning May 1, 2021, you may choose electronic monitoring (EM) instead of human at-sea monitors if EM is part of your sector's approved operations plan. NOAA Fisheries will provide guidance to sectors on how to include EM in their 2021 operations plans.

## How EM Works

Instead of human at-sea monitors, cameras and sensors are placed on your vessel to monitor catch and discards, and collect catch information. There are two different kinds of EM sectors may use: Audit and Maximized Retention.

In both programs, cameras record 100% of the trips. In a maximized retention program, all trips are met at the dock by a dockside monitor who samples the catch during the offload. You must submit electronic vessel trip reports (eVTR), and continue to notify us of trips through the pre-trip notification system (PTNS) to be assigned government observers for scientific sampling.

## EM Timeline

- May 2010**  
Sectors began developing monitoring programs to track sector allocation usage.
- 2010-2014**  
NOAA completed a pilot EM program for groundfish.
- June 2016-Present**  
Audit model piloted with industry and other stakeholders.
- August 2018-Present**  
Maximized retention model piloted with industry and other stakeholders.
- November 1, 2020**  
Deadline to submit draft EM program for 2021 sector operations plans.
- May 1, 2021**  
Sectors may start using approved EM programs.

## Audit

EM validates captain's reported groundfish discards.

Measure groundfish discards within camera view.

Record all catch using eVTR.

Use sub-sampling protocols for faster processing of high volumes of groundfish.

Submit the video footage from the trip to your EM service provider.

Reviews video from randomly selected trips and provides NOAA Fisheries with a summary report documenting the groundfish discards.

Compares your eVTR report to the EM provider's summary report for quota accounting.

Provides feedback to you explaining whether the eVTR and EM summary report matched to help you improve your reporting and groundfish discard estimates.

Reviews a subset of trips to monitor the EM provider's performance.



Goal



Changes to How You Fish



What Your EM Provider Does



What NOAA Fisheries Does

## Maximized Retention

EM confirms vessel retained all allocated groundfish for dockside monitor to observe.

Retain and land all allocated groundfish, regardless of size, for sampling by a dockside monitor.

Record all catch using eVTR.

Meet dockside monitor upon landing to observe offload. All landed fish may be sold.

Submit the video footage from the trip to your EM service provider.

Reviews the video from trips and provides NOAA Fisheries with a summary report verifying discard compliance.

No allocated groundfish discards are attributed to the trip, but all landed groundfish counts against the sector's quota.

Reviews EM provider's summary report to ensure compliance with retention requirements.

Uses catch data collected by the dockside monitor for science.

Reviews a subset of trips to monitor the EM provider's performance.



Crew member measuring fish for camera  
Photo © AylaFox for The Nature Conservancy

## Amendment 23 Timeline

### September 2016

Council began work on Amendment 23 to improve sector monitoring.

### January 2020

Council approved the Amendment 23 draft environmental impact statement (DEIS) for public comment.

### March-August 2020

Comment period on Amendment 23 DEIS.

### September 2020

Council makes final decision on Amendment 23.

### Winter/Spring 2021

Public comment period on Final Amendment 23 Environmental Impact Statement and proposed rule.

### 2021

NOAA Fisheries publishes Amendment 23 final rule.

## EM as a Monitoring Tool

Electronic monitoring systems are successfully used in a wide variety of fisheries, including in Alaska, the West Coast, and the Atlantic pelagic longline fishery (bluefin tuna bycatch monitoring). Some fishermen find EM to be less expensive and less intrusive than human at-sea monitors.

We have been working on developing electronic monitoring for the groundfish fishery since 2010. The New England Fishery Management Council is developing Amendment 23 to improve the accuracy and reliability of catch accounting, and is proposing to include these two EM options in the amendment.

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EM gillnetter-Photo © The Nature Conservancy