Electronic Monitoring for Sectors

What You Need to Know
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 provides guidance to sectors on how to include EM in their 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: The audit model and the maximized retention model.

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 allocations.

2010-2014
NOAA completed a pilot EM program for groundfish.

June 2016-2020
Audit model piloted with industry and other stakeholders.

August 2018-2021
Maximized retention model piloted with industry and other stakeholders.

May 1, 2021
Sectors started using approved audit 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.

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.
EM as a Monitoring Tool

EM 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 EM for the groundfish fishery since 2010. The New England Fishery Management Council developed Amendment 23 to improve the accuracy and reliability of catch accounting, and included these two EM options in the amendment. NOAA Fisheries approved Amendment 23 on April 12, 2022.

For more EM information, please contact:
Claire Fitz-Gerald
Fishery Policy Analyst
Greater Atlantic Regional Fisheries Office
claire.fitz-gerald@noaa.gov
(978) 281-9255

Nichole Rossi
Fishery Biologist
Northeast Fisheries Science Center
nichole.rossi@noaa.gov
(508) 642-6001

For more Amendment 23 information, please contact:
Mark Grant
Fishery Policy Analyst
Greater Atlantic Regional Fisheries Office
mark.grant@noaa.gov
(978) 281-9145

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 (EIS) for public comment.

March-August 2020
Comment period on Amendment 23 draft EIS.

September 2020
Council made final decision on Amendment 23.

January-March 2022
Public comment period on Amendment 23 final EIS and proposed rule.

April 2022
NOAA Fisheries approved Amendment 23.

Summer 2022
NOAA Fisheries publishes final rule implementing Amendment 23.