



NFWF

Electronic Monitoring and Reporting 2018 Grant Slate

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FUNDING PARTNERS



ABOUT NFWF

The National Fish and Wildlife Foundation (NFWF) protects and restores our nation's fish and wildlife and their habitats. Created by Congress in 1984, NFWF directs public conservation dollars to the most pressing environmental needs and matches those investments with private funds. Learn more at www.nfwf.org

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Cameras on a fishing vessel | Credit: Ayla Fox

OVERVIEW

The National Fish and Wildlife Foundation (NFWF), the National Oceanic and Atmospheric Administration (NOAA) and Kingfisher Foundation announced a 2018 round of funding for Electronic Monitoring and Reporting projects. Fifteen new fisheries conservation grants totaling \$3.78 million were awarded, leveraging \$5.05 million in match from the grantees and generating a total conservation impact of more than \$8.83 million.

The Electronic Monitoring and Reporting Grant Program helps to integrate technology into U.S. fisheries data collection to improve fisheries management. This year's projects will implement electronic technologies strategies and modernize data management systems.

The following fifteen projects address two key strategies to advance electronic technology implementation in U.S. fisheries: 1) e-technology in fishery data collection and 2) modernize data management systems.

Full Implementation of Electronic Monitoring in Alaska's Pot Cod Fishery

Grantee: Saltwater

Grant Amount: \$95,512

Matching Funds: \$215,000

Total Amount:.....\$310,512

Advance full implementation of electronic monitoring in the Alaska pot cod fishery by installing electronic monitoring gear on five new vessels. Project will achieve the goal of 45 boats in the electronic monitoring pool that was set by the North Pacific Fishery Management Council.

(continued)



Electronic Monitoring and Reporting Program 2018 Grant Slate

Implementing Electronic Monitoring for Pollock Trawl Catcher Vessels (AK)

Grantee: United Catcher Boats
 Grant Amount: \$353,400
 Matching Funds: \$402,400
Total Amount:..... \$755,800

Examine the feasibility of electronic monitoring systems for compliance on pollock mid-water trawl catcher vessels delivering to shoreside processing facilities in the Bering Sea and Gulf of Alaska. Project will evaluate electronic monitoring for improved data quality and consistency, detection and quantification of groundfish discard events, and costs of collection and review of fisheries data.

Developing an Integrated Electronic Vessel Trip Reporting and Sector Management Tool (MA, ME, NH, RI)

Grantee: Legit Fish
 Grant Amount: \$471,558
 Matching Funds: \$487,962
Total Amount:..... \$959,520

Expand on a logistics and traceability system by developing an integrated electronic vessel trip reporting application and sector management system that will be integrated with dealer reporting. Project will increase the speed of data and decision-making capabilities for management in New England.

Integrating Electronic Technology Tools in the Gulf of Mexico Highly Migratory Species Fishery (AL, FL, LA)

Grantee: Saltwater
 Grant Amount: \$240,000
 Matching Funds: \$462,000
Total Amount:..... \$702,000

Develop and pilot electronic monitoring and reporting hardware and software solutions for the Gulf of Mexico Highly Migratory Species vessels using alternative gear, which will reduce the reporting burden on vessel operators and promote sustainability. Project will address challenges in data quality, accountability and timeliness.

Piloting Electronic Monitoring in the Northern Gulf of Maine Scallop Fleet (MA, ME, NH)

Grantee: Maine Coast Fishermen’s Association
 Grant Amount: \$108,009
 Matching Funds: \$108,575
Total Amount:..... \$216,584

Develop and pilot an electronic monitoring program for the northern Gulf of Maine scallop fleet. Project will test the feasibility of electronic monitoring on small scallop vessels, which will demonstrate the amount and value of data that it can provide and test the use of video recognition software for video review.

Scaling Electronic Monitoring in New England’s Groundfish Fishery (MA, ME, NH, RI)

Grantee: Cape Cod Commercial Fishermen’s Alliance
 Grant Amount: \$568,161
 Matching Funds: \$568,161
Total Amount:..... \$1,136,322

Expand participation of electronic monitoring to 35 vessels for the New England groundfish fishery. Project will finalize innovations in technology and audit model protocols, scale up the implementation of electronic monitoring that improve accountability, strengthen partnerships among fishermen and the federal government, and lay the foundation for long-term industry investment in accountability.

Implementing Electronic Monitoring in the Western Gulf of Alaska Trawl Catcher Boat Fleet

Grantee: Aleutians East Borough
 Grant Amount: \$433,773
 Matching Funds: \$765,500
Total Amount:..... \$119,273

Engage stakeholders, create an implementation plan and install electronic monitoring in the Western Gulf of Alaska pollock trawl fishery. Project will increase monitoring, provide bycatch reporting, and increase efficiency of the data review process to support fisheries conservation and management.

Test Machine Learning Software for Dockside Monitoring, Seafood Monitoring, and Research (MA, ME, RI)

Grantee: Gulf of Maine Research Institute
 Grant Amount: \$170,112
 Matching Funds: \$170,112
Total Amount:..... \$340,224

Test electronic monitoring and machine-learning applications in dockside monitoring, explore uses of the data collected from electronic monitoring, and educate stakeholders about machine analysis. Project will improve efficiency of the dockside monitoring program by developing algorithms to verify fish weights and counts, facilitate the use of electronic monitoring data by two new groups, and publish a report about transitioning from human to machine analysis of data.

Scaling Electronic Monitoring in the Fixed Gear Fishery (AK)

Grantee: Alaska Longline Fishermen’s Association
 Grant Amount: \$206,280
 Matching Funds: \$457,000
Total Amount:..... \$663,280

Support stakeholder engagement to optimize electronic monitoring (EM) integration into the North Pacific Observer program and resolve implementation challenges as the program is transitioned to industry fees in 2020. Project will provide EM hardware and field service support for

15 additional vessels in the Alaska fixed gear EM program which primarily target halibut, sablefish and pacific cod.

Validating For-Hire Vessel Trip Reports with Electronic Monitoring in New England (NH, RI)

Grantee: The Nature Conservancy
 Grant Amount: \$79,712
 Matching Funds: \$79,712
Total Amount:..... \$159,424

Evaluate the feasibility of electronic monitoring systems for validating the catch information reported on New England for-hire vessel trip reports to improve the accuracy and timeliness of information used for science and management of the fishery. Project will install electronic monitoring systems on up to two for-hire vessels.

Optimizing Machine Learning for Streamlining Reporting for the New England Groundfish Fishery (MA, ME, NH, RI)

Grantee: Integrated Monitoring
 Grant Amount: \$193,616
 Matching Funds: \$193,826
Total Amount:..... \$387,442

Continue to develop activity recognition and species recognition algorithms and combine them into an activity and species recognition algorithm, develop new machine learning algorithms to train smart cameras to improve image quality, and develop a web application version of electronic vessel trip reports for the New England groundfish fishery. Project will optimize machine learning and video recognition algorithms to improve and streamline reporting.

Improving the iSnapper Mobile Application to Improve Recreational Red Snapper Fishery Reporting (TX)

Project State: Texas
 Grantee: Texas A&M University - Corpus Christi
 Grant Amount: \$272,378
 Matching Funds: \$272,773
Total Amount:..... \$545,151

Continue to develop and implement iSnapper, an electronic monitoring and reporting smart device application designed for private and for-hire recreational anglers to log catch and effort data in real-time, to improve the timeliness and quality of catch data in the red snapper fishery. Project will increase usage of the mobile application to 75 vessels and will monitor up to 218 trips.

Utilizing Blockchain Technology to Improve Data Management and Analysis (MA)

Grantee: New Bedford Port Authority
 Grant Amount: \$256,180
 Matching Funds: \$507,260
Total Amount:..... \$763,440

Advance data management by engaging fishermen, sector



Camera captures from a New England groundfish vessel
 Credit: Gulf of Maine Research Institute

leaders, conservationists, economists, scientists and regulatory officials to use a central Marine Data Bank where stakeholders can verify, manage, share and trade data with partners in New Bedford. Project will create a comprehensive understanding for stakeholders to advance sustainability and business planning, which will entitize additional stakeholders in the fishing industry to input and access data.

Implementing Electronic Monitoring on Small Fishing Vessels (PR)

Grantee: The Ocean Foundation
 Grant Amount: \$62,832
 Matching Funds: \$62,832
Total Amount:..... \$125,664

Test the feasibility of electronic monitoring by installing equipment on up to five small artisanal fisheries' vessels in Puerto Rico. Project will monitor up to 100 trips on small vessels and provide a potential opportunity to expand electronic monitoring on small scale fisheries in the Caribbean.

Piloting Electronic Monitoring in the Hawaii Longline Fisheries

Grantee: Lynker Technologies
 Grant Amount: \$270,000
 Matching Funds: \$300,000
Total Amount:..... \$570,000

Implement new, advanced electronic monitoring and reporting technology on up to five Hawaiian longline fisheries vessels to maximize the quantity, quality and utility of fishing activity data collected in the Pacific Islands Region. Project will monitor up to 220 trips to validate the utility of electronic technology as a viable approach to the pelagic longline fisheries dependent data collection.