



Electronic Monitoring and Reporting Program

NFWF CONTACTS

Gray Redding
 Manager,
 Fisheries Conservation
gray.redding@nfwf.org
 202-595-2438

PROGRAM PARTNERS



KINGFISHER
 FOUNDATION

ADDITIONAL FUNDING FROM



ABOUT NFWF

Chartered by Congress in 1984, the National Fish and Wildlife Foundation (NFWF) protects and restores the nation's fish, wildlife, plants and habitats. Working with federal, corporate and individual partners, NFWF has funded more than 5,000 organizations and generated a total conservation impact of \$6.1 billion.

Learn more at www.nfwf.org

NATIONAL HEADQUARTERS

1133 15th Street, NW
 Suite 1000
 Washington, D.C., 20005
 202-857-0166



Commerical fishing boat

OVERVIEW

The National Fish and Wildlife Foundation (NFWF) and National Oceanic and Atmospheric Administration and the Kingfisher Foundation announced a 2021-year round of funding for Electronic Monitoring and Reporting Grant Program projects. Twelve (12) new grants totaling \$3,705,000 were awarded. The twelve awards announced generated \$7,674,000 in match from the grantees, providing a total conservation impact of \$11,379,000.

The Electronic Monitoring and Reporting Grant Program seeks to catalyze the implementation of electronic technologies in U.S. fisheries in order to systematically integrate technology into fisheries data collection and modernized data management systems for improved fisheries management. This year's grant slate funded projects to implement electronic technologies strategies and modernize data management systems including through the development of artificial intelligence tools.

The following 12 projects address two key strategies to advance electronic technology implementation in U.S. fisheries: 1) test and deploy e-technology in fishery data collection and 2) modernize data management systems. In many cases, projects address both strategic priorities.

(continued)

Integrating Artificial Intelligence into Gulf of Mexico Reef Fish Fishery Electronic Monitoring (FL)

Grantee: Mote Marine Laboratory, Inc.

Grant Amount:\$349,000
 Matching Funds:\$491,991
 Total Project:\$840,991

Continue the Center for Fisheries Electronic Monitoring at Mote's efforts to streamline artificial intelligence driven data collection processes by creating a repeatable process for generating data and algorithms. Project will make strides in applying artificial intelligence in the Gulf of Mexico reef fish fishery to serve as a foundation for providing more timely and efficient data for management and industry applications.

Improving Electronic Monitoring Image Quality using Machine Learning Onboard Vessels (AK)

Grantee: Alaska Longline Fishermen's Association

Grant Amount:\$97,966
 Matching Funds:\$111,050
 Total Project Amount:\$209,016

Field test machine learning algorithms that detect common image quality issues seen in fisheries electronic monitoring and provide feedback to the vessel operator in real-time. Project will evaluate the software on operational electronic monitoring systems used in Alaska's fixed gear and trawl programs.

Operationalizing Machine Learning in Alaska's Fixed Gear Electronic Monitoring Program

Grantee: Ai.Fish

Grant Amount:\$250,000
 Matching Funds:\$536,700
 Total Project Amount:\$786,700

Develop and deploy a cloud-based software system for processing electronic monitoring video data using machine learning, incorporate machine learning processing into data review, and conduct a study on the effects of using machine learning to assist review. Project will improve efficiency for data analysis in Alaska and disseminate best practices for implementing machine learning in data review in Alaska and other fisheries.

Building Maximized Retention Electronic Monitoring Capacity in the New England Groundfish Fishery

Grantee: Gulf of Maine Research Institute

Grant Amount:\$333,700
 Matching Funds:\$383,700
 Total Project Amount:\$717,401

Support the implementation of the maximized retention electronic monitoring model in the New England groundfish fishery by piloting a third-party dockside monitoring approach to build regional capacity to support 100 percent monitoring on vessels. Project will facilitate the transition to an industry led effort and support implementation by providing technical assistance to sectors, fishers, and dealers using a maximized retention model to meet their monitoring requirements.

Piloting Electronic Monitoring in the Coastal Commercial



Dungeness crab

Dungeness Crab Fishery - Phase II (WA)

Grantee: Washington Department of Fish and Wildlife

Grant Amount:\$122,901
 Matching Funds:\$247,854
 Total Project Amount:\$370,755

Continue evaluating a lite electronic monitoring system, with limited image collection, as a potential tool to modernize the management of the Washington coastal commercial dungeness crab fishery and address time-sensitive management needs. Project will improve the quality and timely accessibility of fishing effort and location information through increasing electronic monitoring coverage to 12 vessels; testing the flow of program data to partners; and reporting data on a larger scale.

Develop, Test and Deploy Machine Learning to Reduce Storage for Electronic Monitoring of Fisheries

Grantee: The Nature Conservancy

Grant Amount:\$144,889
 Matching Funds:\$144,889
 Total Project Amount:\$289,778

Develop, widely test and deploy open source computer vision tools which identify and trim video segments to reduce archival video storage costs for fisheries electronic monitoring. Project will employ a two-step process where detection of humans is completed during video review and trimming is done only after video review is completed to reduce risk of eliminating important fishing activity and to facilitate adoption by regulators.

Supporting Communications and Advancing Stakeholder Partnerships Across the Fishtech Community (WA)

Grantee: Fieldwork Communications LLC

Grant Amount:\$127,500

(continued)

Matching Funds:\$176,000
 Total Project Amount:\$303,500
 Support core operations for EM4Fish, an online community of practice that serves fisheries electronic technology practitioners including agency personnel, scientists, commercial fishing organizations, and service providers. Project will develop and publish feature-level articles with industry leaders, as well as provide an outreach channel to the fishtech community through its monthly newsletter, social media, webinars, podcasts, events and workshops.

Integrating an Intelligent Discard Chute into New England Groundfish Electronic Monitoring (MA)

Grantee: A.I.S., Inc.

Grant Amount: \$455,803
 Matching Funds: \$465,888
 Total Project Amount:..... \$921,691

Develop and pilot a solution for electronic monitoring in collaboration with high catch fishing industry partners in the New England groundfish fishery. Project will develop an approach with on vessel artificial intelligence in a discard chute system, wireless video transfer, web-based video review, and integration of broadband vessel monitoring systems and electronic logbooks to incentivize fleet adoption for the high catch New England groundfish trawl vessel fleet.

Enhanced RecFish Mobile Application in Response to Stakeholder Input - Phase II (MD, VA)

Grantee: College of William and Mary, Virginia Institute of Marine Science

Grant Amount: \$315,382
 Matching Funds: \$379,227
 Total Project Amount:..... \$694,609

Enhance the functionality of the RecFish mobile application and database in response to stakeholder input. Project will develop features that allow invasive species alerting and reporting and facilitate more accurate reporting by recreational anglers and charter boat captains to continue effectively engaging recreational fishermen and managers.

Improving Data Quality, Timeliness & Access for Full Scale Electronic Monitoring Implementation (AK)

Grantee: Aleutians East Borough

Grant Amount: \$503,000
 Matching Funds: \$1,560,000
 Total Project Amount: \$2,063,000

Catalyze adoption of implemented electronic monitoring in the Western Gulf of Alaska pollock trawl fishery. Project will increase the level of monitoring, test the ability of installed electronic monitoring systems to work with other gears, improve catch reporting to support fisheries conservation and management, advance automation of salmon bycatch detection and counting, and develop new tools to more efficiently transfer and review data in Alaska.



Fishing boat at sunset

Pre-Implementation of Electronic Monitoring for Compliance in Alaska's Pelagic Trawl Pollock Fishery

Grantee: United Catcher Boats

Grant Amount: \$905,084
 Matching Funds: \$2,789,128
 Total Project Amount:..... \$3,694,212

Evaluate the feasibility and cost efficiency of a fully implemented electronic monitoring approach in the Bering Sea and Gulf of Alaska pelagic pollock trawl fisheries. Project will expand on previous work to improve data quality, timeliness, and cost-efficiency for salmon bycatch accounting and quantifying groundfish discards to monitor compliance with retention regulations.

Test Utility of a Buoyless Gear Location Marking Application for Mobile and Fixed Gear Fishers (RI)

Grantee: Commercial Fisheries Research Foundation

Grant Amount: \$100,000
 Matching Funds: \$131,681
 Total Project Amount:..... \$ 231,681

Test the accuracy and utility of an electronic gear location marking application in both mobile and fixed gear fisheries in New England to help refine the buoyless gear marking application. Project will increase the ability of electronic gear location marking to contribute to the reduction of gear conflicts and the transition to ropeless gear to reduce the number of gear entanglements of North Atlantic Right Whales.