Electronic Monitoring and Reporting Program

OVERVIEW
The National Fish and Wildlife Foundation (NFWF) and National Oceanic and Atmospheric Administration, with the Shell Oil Company announce the 2022 slate of projects for the Electronic Monitoring and Reporting Grant Program. Twelve (12) new grants totaling $3,701,000 were awarded. The 12 awards announced generated $6,721,000 in matching contributions from the grantees, providing a total conservation impact of $10,422,100.

The Electronic Monitoring and Reporting Grant Program drives innovation and electronic technologies implementation in U.S. fisheries data collection and works to systematically modernize data management systems for improved fisheries management. This year’s grant slate funds projects to develop artificial intelligence tools and expand electronic technologies to new recreational and commercial fisheries.

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.

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GRANTS

Improving Data Quality through ET Implementation in the Western Gulf of Alaska
Grantee: Aleutians East Borough
Grant Amount: ......................................... $474,700
Matching Funds: ................................. $680,000
Total Project: ...................................... $1,154,700
Aleutians East Borough will develop tools to enhance electronic monitoring data review, test solutions for data transfer in remote fishing communities, automate salmon bycatch record keeping, and explore the use of electronic monitoring in processing plants. This project will advance the adoption of electronic monitoring in Alaskan fisheries and demonstrate the potential of this technology to other fisheries.

Testing Electronic Monitoring on Trawl Catcher Vessels Participating in the Central Gulf of Alaska (CGOA) Rockfish Program
Grantee: Alaska Groundfish Data Bank
Grant Amount: ........................................ $80,600
Matching Funds: .................................... $136,700
Total Project Amount: ................................ $217,300
Alaska Groundfish Data Bank will evaluate electronic monitoring for its ability to improve data quality, consistency, and reduce data collection costs in Alaska’s rockfish trawl fishery. This project will utilize existing onboard electronic monitoring systems to develop monitoring protocols in the fishery to verify salmon retention and to quantify halibut and groundfish discards for effective management.

Artificial Intelligence Supported Management: Optimized Retention in the Gulf of Mexico (FL, TX)
Grantee: Mote Marine Laboratory
Grant Amount: ........................................ $475,100
Matching Funds: ..................................... $475,200
Total Project Amount: ............................ $950,300
Mote Marine Laboratory will reduce red grouper discard rates in the Gulf of Mexico reef fish fishery by applying existing electronic monitoring protocols and new artificial intelligence algorithms to facilitate an optimized retention fishery. This project will validate a feasible compliance monitoring strategy that addresses industry needs to incentivize sustainable fishing.

Real Time Electronic Logbook Data Collection and Reporting in Halibut and Groundfish Fisheries (AK)
Grantee: Real Time Data North America
Grant Amount: ........................................ $137,400
Matching Funds: ..................................... $290,500
Total Project Amount: ............................ $427,900
Real Time Data North American will collect real time, fine scale spatial and temporal fisheries data useful for catch accounting and stock assessment through a commercial fisheries electronic logbook pilot in the Alaska halibut and sablefish fishery. The project will evaluate the ability of fishermen in Alaska to collect this data during their fishing operations and explore the potential for the data collection approach to scale up in the future.

Developing a Streamlined Highly Migratory Species Data Collection, Reporting, and Billfish Tagging Program in US East Coast, Gulf of Mexico, and Caribbean HMS Fisheries
Grantee: Bluefin Data
Grant Amount: ........................................ $339,500
Matching Funds: ..................................... $345,400
Total Project Amount: ......................... $684,900
Bluefin Data will develop a streamlined electronic reporting tool that meets the reporting requirements of the Highly Migratory Species recreational fishery in the Atlantic East Coast and Gulf of Mexico. The project will enhance data collection, support regionally led programs, and minimize angler’s reporting burden in addition to integrating existing citizen science fish tagging data collection efforts.

RecFish: User Acquisition, Engagement and Retention
Grantee: College of William and Mary, Virginia Institute of Marine Science
Grant Amount: ........................................ $271,200
Matching Funds: ..................................... $278,000
Total Project Amount: ......................... $549,200
The College of William and Mary will expand participation and awareness of the RecFish mobile application, demonstrate the value of the application to state government partners, and continue refining the application to meet the needs of recreational anglers interested in recording and contributing their data. This project will draw potential users to the application through a social media campaign and grow the user base of this citizen science effort.

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Accelerating New England Groundfish Discard Quantification Using Artificial Intelligence on Electronic Monitoring Vessels
Grantee: Teem Fish Monitoring
Grant Amount: ........................................ $159,600
Matching Funds: ....................................... $164,400
Total Project Amount: .............................. $324,000
Teem Fish Monitoring will evaluate existing artificial intelligence tools for their ability to automate collection of discard information from electronic monitoring video in the New England groundfish fishery. Project will train and validate artificial intelligence models to perform species identification, fish counts, and length measurements for discarded fish, with the intention of reducing video review times and associated costs.

Alaska Trollers Electronic Logbook (Data Collection and Analysis Program)
Grantee: Alaska Trollers Association
Grant Amount: ........................................ $155,900
Matching Funds: ....................................... $750,000
Total Project Amount: .............................. $905,900
Alaska Trollers will reestablish a fisheries data collection and analysis program conducted by Alaska troll fishermen through a voluntary electronic logbook effort. The project will collect a wide range of physical and biological information on the southeastern Alaska marine ecosystem and provide managers and researchers real time access to data from participating fishermen.

A Comprehensive On-Board Edge Artificial Intelligence Electronic Monitoring Data Management System
Grantee: Ai.Fish
Grant Amount: ........................................ $295,400
Matching Funds: ....................................... $797,000
Total Project Amount: .............................. $1,092,400
Ai.Fish will develop and pilot deployment of software for processing electronic monitoring video data that can operate in real-time on board fishing vessels using low-power computing devices to improve automated catch accounting, streamline data collection, and deliver value for fishermen. This project will evaluate the feasibility of on board edge-based artificial intelligence and potentially encourage broader adoption of electronic monitoring.

Scaling Innovations in an Operational Maximized Retention Electronic Monitoring Program in the Northeast Multispecies Fishery
Grantee: Gulf of Maine Research Institute
Grant Amount: ........................................ $356,400
Matching Funds: ....................................... $357,000
Total Project Amount: .............................. $713,400
Gulf of Maine Research Institute will help to transition dockside monitoring, and develop electronic infrastructure to support timely catch accounting. This project will convene industry members, including seafood dealers, to improve dockside monitoring and support continued regional uptake of electronic monitoring.

Final Year of Pre-Implementation of a Regulated EM Program for Compliance Monitoring in the Bering Sea and Gulf of Alaska Pelagic Trawl Pollock Catcher Vessel Fisheries
Grantee: United Catcher Boats
Grant Amount: ........................................ $585,600
Matching Funds: ...................................... $2,075,300
Total Project Amount: .............................. $2,660,900
United Catcher Boats will evaluate the cost efficiency and operation of electronic monitoring systems on Bering Sea and Gulf of Alaska pelagic pollock trawl catcher vessels to monitor compliance with retention regulations. The project will expand on past efforts to seek improved data quality, timeliness, and cost efficiency for salmon bycatch accounting and groundfish discards.

Developing an Electronic Monitoring Program for the Gulf of Mexico Multi-passenger and Headboat Fleet
Grantee: Gulf Fisheries Research Foundation
Grant Amount: ........................................ $369,700
Matching Funds: ....................................... $371,400
Total Project Amount: .............................. $741,100
Gulf Fisheries Research Foundation will test the use of remote electronic monitoring in the Gulf of Mexico multi-passenger charter headboat fishery to determine the cost-effectiveness of data collection and build an artificial intelligence image library for species identification. The project will explore the potential of artificial intelligence to minimize video review costs and contribute better information for science and management.