Saltonstall Kennedy Grant Program

Summaries of Recommended FY2014/2015 SK projects
Greater Atlantic Region, National Marine Fisheries Service

Overview: The Greater Atlantic Region Fisheries Office received **99** proposals for funding under the FY2014/2015 Saltonstall-Kennedy (SK) grant program. This represents **35**% of the **279** proposals received from all over the United States. Of the **88** projects selected nationally, **33** projects were from the Greater Atlantic Region, requesting approximately **$8.8** million in federal funding. These **33** projects represent **38**% of the projects selected nationally and **35**% of the $**25.1** million in funds available nationwide. With regard to the priority areas/funding themes listed in the request for proposals published in the Federal Funding Opportunity announcement, the breakdown of new projects by theme follows:

Maximize Fishing Opportunities and Jobs: **21**
Improve the Cost-Effectiveness and Capacity for Observations: **4**
Increase the Supply, Quality, and Diversification of Domestic Seafood: **8**
Improve the Quality and Quantity of Fishery Information from the U.S. Territories: N/A

An abbreviated summary for each of these Regional projects follows:

Maximize Fishing Opportunities and Jobs:

15GAR010
Bigelow Laboratory for Ocean Sciences, **"Forecasting Protozoan Parasites in the Gulf of Maine and the Risk of Bioaccumulation of Human Waterborne Pathogens in Oysters,"** The Principal Investigator is Jose Frenandez-Robledo.

To determine the range of strains that infect bivalves in the Gulf of Maine. These parameters together with the oceanographic conditions, degrees of urbanization and nutrient input, social-economic demographics, and the extent and locations of oyster aquaculture development will be integrated into a risk prediction model for the Gulf of Maine.

15GAR014
Coonamessett Farm Foundation, Inc., **"Improving an Ecosystem Friendly Scallop Dredge,"** The Principal Investigator is Ronald Smolowitz.

To continue optimizing the Coonamessett Farm Low Profile Dredge (CFLPD). The CFLPD was designed as a modification of the Cfarm Turtle Deflector Dredge (CFTDD) to reduce the bycatch of flatfish species. Researchers will futher refine the dredge with a focus on decreasing bycatch of fish, sea turtles and benthos; improve scallop size selectivity; and, has improved energy efficiency through structural and hydrodynamic design.

15GAR018
Coonamessett Farm Foundation, Inc., **"Investigating Offshore Essential Fish Habitat of Southern New England Winter Flounder,"** The co-Principal Investigators are Carl Huntsberger, Dr. Liese Siemann, Dr. Samir Patel, Ronald Smolowitz, and Anna Malek.

To improve the understanding of the seasonal movements, biological characteristics, and spawning activity of winter flounder in Southern New England. The primary objective of the study is to identify non-estuarine spawning locations of winter flounder in Southern New England so that they can be protected during spawning seasons as an aid in rebuilding the stock. The second objective is focused on bycatch reduction, to minimize winter flounder bycatch in the sea scallop fishery via gear modification.

15GAR020
Virginia Institute of Marine Science, "**Characterizing the Behavior and Preferences of Anglers in the Recreational Fishery for Atlantic Bluefin Tuna (*Thunnus thynnus*) along the U.S. east coast,"** The Principal Investigators are Dr. Andrew Scheld and Dr. William Goldsmith.

15GAR027
Commercial Fisheries Research Foundation, "**Supporting Management of the Emerging Jonah Crab Fishery and the Iconic Lobster Fishery in the Northeast USA: A Collaborative Fishing Vessel Research Fleet Approach,"** The Principal Investigator is Margaret Petruny-Parker.

To implement a cost-effective method to collect critically needed biological data, especially from under-sampled offshore areas, in support of stock assessments for two commercially important species, the Jonah crab *(Cancer borealis*) and the American lobster (*Homarus americanus*).

15GAR029
Cape Ann Seafood Exchange, Inc., **"Supporting Infrastructure and Innovation," The** Principal Investigators are Kristen Kristiansen and Gerald McCarthy.

To provide improved shoreside support services and infrastructure support to the New England fishing industry and Gloucester waterfront.

15GAR034
Virginia Institute of Marine Science, **"Post-Release Mortality in the Atlantic Recreational Billfish Fishery: Quantifying the Effects of Air Exposure,"** The Principal Investigator is Dr. John Graves.

To assess post release mortality of white marlin caught on circle hooks under typical recreational fishing conditions and then subjected to various durations of air exposure.

15GAR036
Virginia Institute of Marine Science, **"Assessing the Effects of *Hematodinium perezi* on Recruitment of the Blue Crab (*Callinectes sapidus*),"** The Principal Investigator is Dr. Jeffrey Shields.

15GAR041
Rhode Island Natural History Survey**, "Creation of a Climate Change Adaptation Blueprint for Rhode Island Commercial Fisheries Through Industry-Led Collective Visioning,"** The Principal Investigator is Sarah Schumann.

To conduct a series of interviews, information sharing sessions, and workshops to increase awareness among Rhode Island's fishing community of the potential impacts of climate change and ocean acidification on fisheries. An Adaptation Blueprint document will be developed for use by stakeholders and policy makers in confronting challenges and taking advantage of opportunities associated with ecological change into the future.

15GAR043
The Research Foundation for the State University of New York**, "Restoring Long Island's Winter Flounder Inshore Fisheries - Approaches to Avoid Extirpation,"** The Principal Investigator is Dr. Michael Frisk

To develop a robust and scientifically derived approach for rebuilding winter flounder stocks in coastal New York waters. Researchers will estimate local stock structure, evaluate the health of YOY winter flounder across the south shore of Long Island and determine the potential for protecting post-settlement winter flounder from predation, to incrementally increase the number of spawners in selected locations

15GAR052
Virginia Institute of Marine Science, "Impacts of Epizootic Shell Disease and Environmental Change on Sustainability of the New England Lobster Stocks, with Implications for Managing the Fisheries," The Principal Investigator is Dr. John Hoenig.

To conduct a comprehensive program for assessing the current and likely future impacts of the epizootic shell disease outbreak in the American lobster *(Homarus americanus)* populations in New England.

15GAR057
University of Massachusetts Dartmouth, **"A Modified Sort-X Grid to Reduce the Catch of Juvenile Haddock and Cod in the Georges Bank Haddock Fishery,"** The Principal Investigator is Dr. Pingguo He.

The proposed project will develop a size-sorting grid system for haddock trawls to reduce bycatch and discards of undersized haddock, and to release juveniles while the trawl is still on the seabed to improve the survivability of fish discarded or intentionally released during fishing operations.

15GAR058
University of Massachusetts Dartmouth, **"Reducing Yellowtail and Windowpane Flounder Bycatch: Application of a Modified European Grid System in the Georges Bank Haddock Fishery,"** The Principal Investigator is Dr. Pingguo He.

To design and test a new species selective device to the Georges Bank haddock fishery to reduce the catch of yellowtail and windowpane flounder while retaining the catch of legal size haddock.

15GAR061
University of Massachusetts Dartmouth, "**Combining Fishermen's Knowledge to Locate, Evaluate, and Predict Gray Meat Outbreaks,"** The Principal Investigator is Dr. Daniel Georgiana.

To determine the spatial and temporal range of gray meat outbreaks, the transmission mode of the parasite that causes gray meat disease, the environmental stressors that contribute to the virulence of the infection, and its effect on optimum rotational management strategies.

15GAR063
Gulf of Maine Research Institute**, Developing an Ultra-Low-Opening Groundfish Trawl to Avoid Cod and Ensure a Prosperous Inshore Fishing Fleet,"** The Principal Investigator is Steve Eayrs.

To test an innovative, ultra-low-opening trawl that is designed to target flounder, including yellowtail flounder, winter flounder, witch flounder, and American plaice, while greatly reducing the incidental catch of cod.

15GAR066
University of Maine, "**Post-Release Mortality of Yellowfin Tuna in the U.S. Rod and Reel Recreational Fishery,"** The Principal Investigator is Dr. Walter Golet.

To assess the post-release mortality of yellowfin tuna captured in the recreational rod and reel fishery off the east coast of the U.S. by examining the physical and environmental factors that affect post-release condition.

15GAR072
Center for Coastal Studies**, "TickleDredge: Bycatch Reduction for the Sea Scallop Fishery,"** The Principal Investigator is Owen Nichols.

To construct, test, and evaluate performance of a novel bycatch-reducing scallop dredge design.

15GAR076
University of Maryland Center for Environmental Science, **"Disease and Discard Mortality in the Blue Crab Fishery: Using New Information About an Old Virus to Improve Management of the Resource,"** The Principal Investigator is Dr.Eric Schott.

To assess the contribution of a lethal virus of the blue crab, *Callinectes sapidus*, to discard mortality in both hard crab and soft crab fisheries, and use extension activities to encourage voluntary measures to reduce transmission of the virus.

15GAR084
New England Aquarium, **"Estimating the Discard Mortality Rate and Deriving Best Catch-and-Release Guidelines for Haddock (*Melanogrammus aeglefinus*) Discarded in Gulf of Maine Recreational Fisheries,"** The Principal Investigator is Dr. John Mandelman.

To utilize field observations and acoustic telemetry to estimate the post-release mortality rate of haddock discarded following rod-and-reel capture in the Gulf of Maine recreational fishery.

15GAR103
New England Aquarium, "Field Testing an Electric Decoy for Reducing Elasmobranch Bycatch in Longline Fisheries,' The Principal Investigator is Timothy Werner

To test an innovative electric bait decoy for reducing the bycatch of sharks in longline fishing gear.

15GAR104
New England Aquarium, **"Evaluation of Methods to Reverse the Acute Effects of Barotraumas and Increase the Post-Release Survival of Cusk (*Brosme brosme*) Discarded in the Gulf of Maine Recreational Fishery,"** The Principal Investigator is Dr. John Mandelman.

To estimate post-release mortality and determine best practices for recreational anglers to increase survival of cusk discarded in the Gulf of Maine recreational fishery. Two different release devices will be tested for their practicality and success in returning decompressed cusk to the benthos, and ultimately reducing mortality.

Improve the Cost-Effectiveness and Capacity for Observations:

15GAR023
University of Massachusetts Dartmouth, **"Using Archival Tagging Data to Develop Geolocation Methodologies for North Atlantic Groundfish: Application to Atlantic Cod, Yellowtail Flounder, and Monkfish,"** The Principal Investigator is Dr. Geoffrey Cowles

To develop geolocation methodologies for Northwest Atlantic groundfish based on the Hidden Markov Model (HMM), with direct application to Atlantic cod, yellowtail flounder, and monkfish. HMM-based geolocation methods will be developed for North Atlantic groundfish by using existing data storage tag datasets from recaptures of three groundfish species, acquired from previous studies on each of the example species, which all have their own characteristic behaviors and were tagged in different areas of the Gulf of Maine/Georges Bank region. .

15GAR039

National Fisheries Institute, **"A Hook and Line Survey to Assess Spatial Population Dynamics of Black Sea Bass,"** The Principal Investigator is Dr. Olaf Jensen.

To conduct a standardized hook and line survey using for-hire vessels as platforms to determine the abundance of a black sea bass and to develop and implement a spatially explicit model of black sea bass population dynamics.

15GAR062

Gulf of Maine Research Institute, **"Do Closed Areas Promote Healthy Age Structures in New England Groundfish?,"** The Principal Investigators are Dr. Graham Sherwood and Dr. Lisa Kerr.

To examine in greater detail the hypothesis that existing closed areas enhance age structures of cod, haddock and yellowtail flounder.

15GAR077

Gulf of Maine Research Institute, **"Maine Inshore Acoustic Survey for Northern Shrimp,"** The Principal Investigator is Dr. Graham Sherwood.

Investigators will collaborate with industry to conduct a broad scale survey of the distribution and abundance of northern shrimp along the coast of Maine.

Increase the Supply, Quality, and Diversification of Domestic Seafood:

15GAR007

Virginia Institute of Marine Science, **"Assessment of the Genetic Stock Structure of Tautog, *Tautoga onitis*, Along the U.S. Atlantic Coast from Massachusetts to Virginia,"** Principal Investigators: Jan R. McDowell, Hamish J. Small

Investigators will develop and apply a suite of molecular markers that can be used to delineate the number of genetic stocks and identify stock boundaries of tautog.

15GAR028

University of Connecticut **"Development and Field Testing of Novel Antifouling Coatings for the Aquaculture Industry,"** The Principal Investigator is Dr. Sandra Shumway.

To develop a low cost, environmentally benign, water- and bio-based antifouling coating with 6-8 month efficacy and 80-90% reduction in biofouling by weight.

15GAR040

Manomet, Inc., **"Municipal Outreach for Restoring and Growing the Softshell Clam Industry in Maine through Aquaculture,"** The Principal Investigator is Dr. John Hagan

To enhance the softshell clam aquaculture industry in Maine by expanding the industry in five municipalities and to introduce aquacultural methods that can significantly reduce green crab predation.

15GAR053

University of New Hampshire, **"Determining Natal Sources of Adult Winter Flounder in the Gulf of Maine and Southern New England/Mid-Atlantic Stocks: Tracking Fish Using Otolith Chemical Signatures as Natural Tags,"** The Principal Investigator is Dr. Elizabeth Fairchild.

To examine the otolith microchemistry of winter flounder ranging from New Jersey to New Hampshire, and determine how they differ spatially and temporally, and which natal estuaries contribute the greatest number of recruits to the offshore populations.

15GAR056

Virginia Polytechnic Institute and State University, **"Protecting the Chesapeake Bay Aquaculture Industry from a Dynamic Carbonate Chemistry Environment,"** The Principal Iinvestigator is Dr. David Kuhn.

Researchers will analyze the carbonate system data and oceanographic variables relative to biologic metrics to determine proxies for carbonate system thresholds for shellfish production. Tracking critical water chemistry parameters will help oyster and clam hatcheries better understand how carbonate chemistry impacts shellfish production and allows the opportunity for hatchery operators to adaptively manage around poor spawning conditions.

15GAR087

Gulf of Maine Research Institute, **"Establishing High End and Sashimi-Grade Markets for Seafood from the Northeast United States,"** The Principal Investigator is Jen Levine.

To establish, in the Northeast region, a market for sashimi-grade seafood product sourced from local fishermen.

15GAR093

James Odlin, **"Quality Improvement Project to Optimize Utilization of Georges Bank Haddock Resource,"** The Principal Investigator is James Odlin.

To demonstrate a significant increase in the demand and ex-vessel price per lb for haddock harvested and delivered to market, with a fishing vessel retrofitted for use with state of the art fish handling equipment and techniques.

15GAR102

New England Aquarium, **Improving the Management of an Overfished, Data Poor Species: Investigating the Movements and Stock Structure of Thorny Skates Using Novel Fishery-Independent Tagging,"** The Principal Investigator is Dr. John Mandelman.

To conduct a cooperative study with members of the commercial fishing industry to utilize newly-developed Mark-Report Pop-up Archival Tags (mrPATs) to study the movement patterns of the species.

Improve the Quality and Quantity of Fishery Information from the U.S. Territories:

N/A