

Proposal #: 20GAR017-007

Project Title: Enhancing sustainable development of the winter bait fishery for Atlantic Menhaden through the use of industry acoustics

Applicant: University of Maryland Center for Environmental Science

Priority Addressed Priority #2 – Science or Technology that Promotes Sustainable U.S. Seafood Production and Harvesting

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Abstract: Winter bait fishing opportunities for Atlantic Menhaden (*Brevoortia tyrannus*) are currently limited by quota allocations established using landings from 2009-2011 prior to the winter fishery's development in 2014. To determine if higher harvest levels are sustainable, an estimate of the size and age structure of the overwintering stock is needed. We propose to conduct a cooperative acoustic study of the overwintering resident stock of Atlantic Menhaden Proposal 20GAR007 Page 2 located offshore of the New Jersey coast to generate estimates of local stock biomass and structure. Project results would allow scientists to evaluate effects of an expanded fishery and give managers a better sense of the fishery's expansion potential. This project directly addresses S-K Priority #2 by providing the science and technology necessary to support sustainable development of the winter bait fishery for Atlantic Menhaden and maximize fishing opportunities for the Mid-Atlantic midwater trawl fleet. By employing advanced echosounder and sonar equipment used on active fishing vessels, we will evaluate industry-series acoustic technology for use in cooperative research. In addition, field confirmation of overwintering adult menhaden will reduce assessment uncertainty by characterizing spawner biomass not typically encountered in fishery sampling or inshore fishery-independent surveys.

Summary of potential commercial benefits to the fishing community of the research results: Our team of fishing industry members and federal, state, private, and academic scientists will work cooperatively to gather the scientific data needed by fishery managers to sustainably develop the offshore winter bait fishery for Atlantic Menhaden. This collaborative research will promote scientifically informed fisheries management of Atlantic Menhaden that can help maximize fishing opportunities for the Mid-Atlantic midwater trawl fleet. Both fishers and bait processors play critical roles in this cooperative research through the use of industry vessels and acoustic equipment, fisher knowledge, and through dockside weighing of schools encountered.
