New England Fishery Management Council
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MEMORANDUM

DATE: May 26, 2010

TO: Science and Statistical Committee

FROM: Scallop Oversight Committee

SUBJECT: **Scallop research recommendations**

The Scallop Committee met on May 19, 2010 to approve research priorities for the Scallop Research Set-Aside program for 2011 and 2012. The Committee submits the same research priorities to the SSC so they can be considered when the SSC develops 5-year research priorities in the near future. Research topics have been prioritized into either high, medium, or other. Priorities within the same category have equal priority.

Changes from the 2010 RSA announcement have been underlined. Two priorities were moved from the "Other" priority category to "Medium".

HIGHEST PRIORITIES (not listed in order of importance):

- An intensive industry-based survey of each of the access areas (access areas in Georges Bank including Closed Area I, Closed Area II, and Nantucket Lightship, as well as Elephant Trunk, Delmarva, and Hudson Canyon). These surveys can then be used to estimate total allowable catches (TACs) under the rotational area management program if the data from these surveys are available by August 2010.
- Identification and evaluation of methods to reduce bycatch of all managed species (i.e., gear research).

MEDIUM PRIORITY (not listed in order of importance):

- Identification of sources of sea turtle interactions and/or identification of ways to minimize interactions with sea turtles. Two priority topics identified include evaluation and analysis of factors affecting bycatch rates of sea turtles and development of scallop dredge and trawl operations that would reduce or

eliminate the threat or harm of sea turtle interactions. Other issues related to sea turtle research include, but are not limited to: gear modifications or fishing techniques that may be used to reduce or eliminate the threat of sea turtle interactions without unacceptable reduction in scallop retention, using available and appropriate technology to quantify the extent that chain mats reduce turtle mortalities, comparison and analysis of turtle capture rates of similar gear in other fisheries, and turtle behavior.

- Scallop biology, specifically studies aimed at understanding incidental gear mortality, discard mortality and seasonal growth.
- Other surveys, including areas not surveyed by the annual NMFS survey (i.e., federal waters in the Northern Gulf of Maine management area and Southern New England).

OTHER PRIORITIES (not listed in order of importance):

- Scallop biology, including studies aimed at understanding recruitment processes (reproduction, larval and early post-settlement stages), growth, and natural mortality (including predation and disease).
- Identification and evaluation of methods to reduce habitat impacts, including, but not limited to: broader investigation of variability in dredging efficiency across habitats, times, areas, and gear designs; and research on habitat effects from scallop fishing and development of practicable methods to minimize or mitigate those impacts.
- Habitat characterization research including, but not limited to: video and/or photo transects of the bottom within scallop access areas and within closed scallop areas and in comparable fished areas that are both subject and not subject to scallop fishing before and after scallop fishing commences; development of high resolution sediment mapping of scallop fishing areas using Canadian sea scallop industry mapping efforts as an example process; identification of nursery and over-wintering habitats of species that are vulnerable to habitat alteration by scallop fishing; and other research that relates to habitats affected by scallop fishing, including, but not limited to, long-term or chronic effects of scallop fishing on marine resource productivity, other ecosystem effects, habitat recovery potential, and fine scale fishing effort in relation to fine scale habitat distribution. In particular, projects that directly support evaluation of present and candidate EFH closures and HAPCs to assess whether these areas are accomplishing their stated purposes and to assist better definition of the complex ecosystem processes that occur in these areas.
- Improved information concerning scallop abundance and evaluation of the distribution, size composition, and density of scallops, including but not limited to: efforts to develop a cooperative industry-based resource survey, high resolution surveys that include distribution, biomass of exploitable size scallops, recruitment, mortality, and growth rate information, research that provides more detailed scallop life history information (especially on age and area specific natural mortality and growth) and to identify stock-recruitment relationships, intensive sampling on both sides of access boundaries for fishing year 2007 and in

subsequent years to gauge the short-and long-terms effects of fishing on the resource.

- Scallop and area management research, including but not limited to: evaluation of ways to control predation on scallops; research to actively manage spat collection and seeding of sea scallops; social and economic impacts and consequences of closing areas to enhance productivity and improve yield of sea scallops and other species; and estimation of factors affecting fishing power for each limited access vessel.
- Research projects that would help calibrate the transition of the federal dredge survey, or projects that compare various survey techniques and methods that would assist with the current transition period of the federal scallop dredge survey.