

Scallop Research Priorities

The research priorities listed below are the ones used in the Scallop RSA federal funding announcement for fishing years 2014 and 2015. The modifications suggested by the Council at the April 2013 meeting are highlighted in red, based on input from the Scallop Committee.

Action Item for the Scallop PDT, AP, and Committee:

Review the current list of research priorities and suggest recommendations for the full Council to consider in June 2014 for the 2015-2016 Scallop RSA announcement.

After the priorities are approved, the Council will send a letter to NMFS and an announcement for available funds would likely be published in the summer of 2014. Final awards will not be granted until the start of the 2015 fishing year.

Major modifications to 2014/2015 announcement included:

1. Clarify that some access areas have a higher priority than others based on schedule for opening;
2. Add mortality from predation as a MEDUIM priority and include specific examples (starfish and dogfish);
3. Add a new priority about scallop product quality and marketability as medium.
4. Add a new bullet under HIGH that would include a broad, resource wide survey of the entire scallop resource.
5. Add a new bulled under MEDIUM that would identify and evaluate the potential impacts of environmental stressors on scallops

2014/2015 Atlantic Sea Scallop Research Priorities

HIGHEST (not listed in order of importance):

1. An intensive industry-based survey of each of the relevant scallop access areas (Closed Area I, Closed Area II, Nantucket Lightship, Delmarva, Elephant Trunk and Hudson Canyon). The primary objective of these surveys would be to estimate total allowable catches (TACs) under the rotational area management program if the data from these surveys are available by August of the prior fishing year. Areas scheduled to be open in the following fishing year generally have a higher priority than other areas.
2. Identification and evaluation of methods to reduce the impact of the scallop fishery with respect to bycatch. This would include projects that determine seasonal bycatch rates, characterize spatial and temporal distribution patterns as well as, the associated discard mortality rates of yellowtail flounder, and other key bycatch species.
3. An intensive industry-based survey of areas that may be candidate access areas in the future (i.e., open areas with high scallop recruitment or closed areas that may open to fishing in the future, such as groundfish mortality closed areas or current habitat closed areas).
4. Broad, resource wide industry-based survey of entire scallop resource area.

MEDIUM (not listed in order of importance):

5. Other resource surveys to expand and/or enhance survey coverage in areas that have the potential to be important resource areas, but which currently have a lack of comprehensive survey coverage.

6. Research to support the investigation of loggerhead turtle behavior in the Mid-Atlantic (via satellite tagging or other means) to understand their seasonal movements, vertical habitat utilization, and how and where interactions with dredge gear are occurring. This priority topic also includes monitoring of scallop dredge and trawl operations, and the development of further gear modifications if monitoring should indicate current designs are not eliminating the threat or harm to sea turtles or are resulting in unacceptable scallop catch loss.

7. Research aimed at describing the occurrence as well as understanding the mechanisms of processes that affect scallop product quality and marketability (i.e., scallops with grey meats or evidence of disease). Research should also include evaluation of the potential magnitude of impacts on scallop mortality from scallops due to quality issues.

8. Research examining whether chemicals, water quality, and other environmental stressors effect reproduction and growth of scallops (i.e., jet fuel, pesticides, ocean acidification, etc.).

9. Studies aimed at evaluation of the mortality of sea scallops from predation (i.e. starfish, dogfish, etc.).

10. Studies aimed at addressing issues that were identified as research priorities in the 2010 50th Stock Assessment Workshop including incidental gear mortality, discard mortality, and seasonal growth of scallops.

10a. Development of a procedure to fit discarded scallops, which have a different length frequency from the rest of the population, into the assessment model.

10b. Evaluation of the effect of the four-inch rings on incidental mortality. Now that a larger fraction of small scallops are traveling through the mesh, examine whether incidental mortality has increased or are the scallops relatively unaffected.

10c. Exploration and evaluation of various methods to express the variation in the Habitat Camera (HabCam) abundance data.

10d. Examination of historical patterns of the “whole stock,” including the manner in which the spatial patterns of scallops and the fishery have changed over time.

10e. Estimate incidental mortality by running HabCam or an Autonomous Underwater Vehicle (AUV) along dredge tracks

10f. Calculation of stock-recruit relationships for various sub-sections of the stock, smaller areas than just Mid-Atlantic Bight (MAB) and George’s Bank (GBK) to look for possible patterns or relationships.

10g. Further refinement of the estimate of the extent of scallop habitat relative to that of the survey.

10h. Age archived scallop shells from the 1980s and 1990s.

10i. Continue to look at patterns of seasonality in weight of the meats and gonads, and timing of spawning.

OTHER PRIORITIES (not listed in order of importance):

11. Other scallop biology projects, including studies aimed at understanding recruitment processes (reproduction, larval and early post-settlement stages), growth, and natural mortality (including predation and disease).

12. Investigation of variability in dredging efficiency across habitats, times, areas, and gear designs to allow for more accurate quantitative estimates of scallop dredge impacts on the seabed and development of practicable methods to minimize or mitigate those impacts.

13. Habitat characterization research including (but not limited to): video and/or photo transects of the bottom within scallop access areas, closed scallop areas, and in comparable fished areas that are both subject and not subject to scallop fishing before and after scallop fishing commences (BACI or before after control impact dredge impact studies); 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 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.

14. 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.

15. Develop methodologies or alternative ways for the scallop fleet to collect and analyze catch and bycatch data on a near real-time basis (i.e., collection of scallop meat weight and quality data, specific bycatch information, etc. Potential ideas include but are not limited to: concepts like a “Study Fleet”, electronic monitoring, dockside monitors, bag tags, etc.).