2018/2019 RSA Priorities

PDT – Please make any suggested changes to this document in track changes.

2018 and 2019 Scallop RSA Research Priorities (listed in order of importance from HIGHEST to OTHER)

HIGHEST

1. Survey Related Research (a, b, and c have equal priority, d has lower priority).

1a. 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) that will provide estimates of total and exploitable biomass to be used for setting fishery catch limits under the rotational area management program. To support these area management decisions, survey data and biomass estimates must be available by early August of the year in which the survey is conducted (e.g. survey results that would inform 2019 fishing area decisions must be available by August 2018). Areas scheduled to be open in the following fishing year generally have a higher priority than other areas. For 2018 the priority areas to survey are likely to be: Mid-Atlantic Access Area (Elephant Trunk, Hudson Canyon, Delmarva), Nantucket Lightship, the access area in the southern part of Closed Area II as well as the extension south of Closed Area II.

1b. an intensive industry-based survey of areas of importance (i.e., open areas with high scallop recruitment or closed areas that may open to fishing). For 2018, the priority areas are the closed portion of the Nantucket Lightship, the "sliver" north of the current access area in Closed Area I, and the HAPC in Closed Area II. Each of these areas is currently part of an Essential Fish Habitat (EFH) closed area. Priority areas also include portions of the Northern Gulf of Maine Management Area that have recently been or are likely to be fished: Stellwagen Bank, southern Jeffreys Ledge, Ipswich Bay, and Platts Bank.

1c. a resource wide industry-based survey of scallops within Georges Bank and/or Mid-Atlantic resource areas. The survey or surveys do not need to be carried out by a single grant recipient. The primary objective of these surveys would be to provide an additional broad scale biomass index in addition to the federal survey to improve the overall precision of the scallop biomass estimate produced by the Scallop Plan Development Team. Survey results must be available by early August of the year in which the survey is conducted (e.g., survey results that would inform 2019 fishing effort decisions must be available by early August 2018). (A broad, resource wide industry-based dredge survey of the Mid-Atlantic resource area, including Delmarva, Elephant Trunk, and Hudson Canyon, was funded for 2018 through the 2017/2018 Scallop RSA process.)

1d. a resource wide industry-based survey of scallops within the Gulf of Maine. The survey or surveys do not need to be carried out by a single grant recipient. These surveys would provide biomass estimates of scallop resource in the Gulf of Maine. Survey results must be available by early August of the year in which the survey is conducted (e.g., survey results

that would inform 2019 fishing effort decisions must be available by early August 2018).

HIGH (in order of importance)

2. Scallop meat quality research: Research aimed at describing the occurrence of disease and parasites, as well as understanding the mechanisms and processes (including the life cycle, distribution and transmission, and relationship to sea turtles) that affect scallop product quality; research aimed at evaluating the impact of density dependence and the potential impacts of area rotation on scallop product quality, marketability, meat weights, and seasonal monitoring would be particularly useful. This priority also includes research on natural mortality, such as scallop predation (e.g., starfish, crab, snails, and dogfish).

3. Bycatch research: Identification and evaluation of methods to reduce the impacts of the scallop fishery with respect to bycatch of small scallops and non-target species. This would include projects that reduce impacts on small scallops through gear modifications, determine seasonal bycatch rates of non-target species, characterize spatial and temporal distribution patterns, gear modifications to reduce non-target bycatch and avoid fishery conflicts, collect and analyze catch and bycatch data on a near-real time basis, as well as the associated discard mortality rates of key bycatch species. Research efforts focusing on non-target bycatch should provide results that would help the scallop industry avoid pending or potential implementation of accountability measures. Projects should consider the enforceability and feasibility of gear modification regulations in the commercial fishery.

MEDIUM (listed in order of importance):

4. Research to support the investigation of turtle behavior and its potential impact the scallop fishery in the Mid-Atlantic and Georges Bank (via satellite tagging or other means). This could include research to understand their seasonal movements, vertical habitat utilization, how and where interactions with scallop dredge gear are occurring, and the status of the population. This includes monitoring of scallop dredge and scallop 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 reductions in scallop catch.

5. Research on other scallop biology projects, including studies aimed at understanding recruitment processes (reproduction, timing of spawning, larval and early post-settlement stages), and seasonal growth patterns of scallop shell height and meat and gonad weight, as well as research to evaluate the potential impacts of scallop spat and seeding projects.

OTHER (of equal importance)

6. Investigation of variability in dredging efficiency across habitats, times, areas, and gear designs to improve dredge survey estimates.

7. Habitat characterization research including (but not limited to): Before-After-Control-Impact (BACI) dredge studies; identification of nursery and over-wintering habitats of species that are vulnerable to habitat alteration by scallop fishing; evaluation of long-term or

chronic effects of scallop fishing on the ecosystem; and habitat recovery potential from fine scale fishing effort. In particular, projects that would evaluate present and candidate EFH closures to assess whether these areas are accomplishing their stated purposes and to better define the complex ecosystem processes that occur in these areas.

8. Research projects designed to either 1) examine whether chemicals, water quality, and other environmental stressors affect reproduction and growth of scallops (e.g., jet fuel, pesticides, ocean acidification, etc.); or 2) research to actively manage spat collection and seeding of sea scallops.

9. Research related to identifying the major sources of management uncertainty and measuring their potential effects on future projected landings. Specifically, research that investigates factors affecting fishing power and estimates of how they relate to projections of landings per unit of effort (LPUE) and days-at-sea (DAS) allocations.

10. Other resource surveys to expand and/or enhance survey coverage in areas that have the potential to be important resource areas, but which currently lack comprehensive survey coverage (e.g., inshore areas east of the current NOAA Fisheries survey strata or deeper than the surveyed area~~, Northern Gulf of Maine resource~~, etc.).

11. Evaluate the social and economic impacts and consequences of the area rotation program of the scallop fishery, including evaluation of potential distributional effects as well as impacts on other fisheries.

12. Research to support the investigation of non-harvest mortality of scallops. This includes research on incidental mortality (i.e., scallop mortality of uncaptured scallops that interact with gear but are not captured), and discard mortality (e.g., shucked scallops that are discarded due to meat quality, tearing, or size preference).