

Page 1 - Redline Scallop RSA Priorities with initial PDT edits/comments

Page 5 - Clean version of initial PDT input

Page 8 - Preferred OHA2 alternatives

Page 9 - RSA Share Day Priorities Discussion (May 4, 2017)

Redline version for 2018/2019 recommendations

Goal: Develop recommendations for the 2018/2019 RSA Priorities.

We will be editing this document on our call line by line. The comments and edits below reflect input from the PDT at the RSA Share day and through subsequent correspondence. Please review them and come prepared to suggested changes if you have any.

FULL ANNOUNCEMENT TEXT

I. Funding Opportunity Description

A. Program Objective

The Scallop RSA Program was established through the Scallop Fishery Management Plan (FMP) to address scallop research priorities identified by the Council. NMFS, in coordination with the Council, is soliciting proposals for scallop research to be conducted under the 2017/2018 Atlantic Sea Scallop RSA Program. Set-aside quota will be awarded to successful applicants.

B. Program Priorities

Projects funded under the Scallop RSA Program must enhance the understanding of the scallop resource or contribute to scallop fishery management decisions. Priority is given to funding research proposals addressing the below list of 2017 and 2018 Scallop Research Priorities.

Applicants are encouraged to consider previously funded scallop research projects when developing proposals. Applicants responding to scallop survey priorities are encouraged to review and consider the findings of the Scallop Survey Methodologies Peer Review, which was convened by the Northeast Fisheries Science Center in March 2015. This includes efforts to increase the level of coordination between scallop survey efforts. Reports and additional information for this peer review are posted at: www.nefsc.noaa.gov/saw/scallop-2015.

2017 and 2018 Scallop RSA Research Priorities

HIGHEST (listed in order of importance)

1. Survey Related Research (a, b, and c have equal 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

Commented [JP1]: PDT: Need to consider the ranking of each priority.

Commented [JP2]: Northern Gulf of Maine recommended to move up a higher priority (i.e. not other). Some considerations:

1. NGOM is a management area, not AA. Where does it fit in relative to other survey bins (if recommended as highest).
2. Should recommendation be for GOM vs. NGOM management area?
3. Are there areas of higher importance to survey within the overall NGOM area/GOM? Stellwagen Bank, Jeffreys, Platts?

survey is conducted (e.g. survey results that would inform 2019⁸ fishing area decisions must be available by August 2018⁷). Areas scheduled to be open in the following fishing year generally have a higher priority than other areas. For 2018⁷ the priority areas to survey in order of importance are likely to be: Elephant Trunk, Nantucket Lightship, the access area in the southern part of Closed Area II as well as the extension south of Closed Area II. ~~(An intensive industry-based dredge survey of the Nantucket Lightship and surrounds was funded for two years (2016/2017) through the 2016 Scallop RSA process.)~~

Commented [JP3]: PDT: Need input on areas for intensive surveys.

1b. 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). For 2018⁷, the priority areas areis, 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 with known concentrations of scallops, which is currently part of an Essential Fish Habitat (EFH) closed area. ~~(An intensive optical survey of the Northern Edge and surrounding areas was funded for two years (2016/2017) through the 2016 Scallop RSA Program.)~~

Commented [cok4]: Possibly add NGOM (or portion of NGOM) and closed portion of NLCA for 2018/19 to this priority.

Commented [JP5]: Focus on openings post OHA2 rule? Northern Edge? CA I? Open areas that show promise?

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 2018 fishing effort decisions must be available by early August 2017). (A broad, resource wide industry-based dredge survey of the Mid-Atlantic resource area, including Delmarva, Elephant Trunk, and Hudson Canyon, was funded for two years (2016/2017/2018) through the 2017/2018⁶ Scallop RSA process.)

Commented [JP6]: Info on the transects, tow stations of the NEFSC survey (HabCam and dredge) could help determine the scope of what is needed in resource wide survey.

HIGH (of equal importance)

2. **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.

3. **Scallop meat quality research:** Research aimed at describing the occurrence, as well as understanding the mechanisms and processes (including the life cycle and disease processes) that affect scallop product quality (i.e., scallops with grey meats or evidence of disease/parasites); research aimed at evaluating the impact of density dependence and the potential impacts of area rotation on scallop product quality, marketability, and meat weights would be particularly useful, including seasonal monitoring.

Commented [JP7]: Related to turtle priority - #6 in notes from May 4. Input on tracking the spread of disease/parasites to know if they are moving north/east. Should research on movement be described here, or with turtles given that linkage?

Current language seems to get at comments #4 and #5 from Share Day discussion.

Commented [JP8]: AP input at Share Day in support of looking at density dependence. Re-phrase?

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MEDIUM (listed in order of importance):

4. Research to support the investigation of non-harvest mortality of scallops. This includes research on natural mortality, such as scallop predation (e.g., starfish, crab, and dogfish), 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). ~~The assumed non-harvest (natural, incidental, discard) mortality rate used in the assessment is very uncertain; research that would improve the understandings of non-harvest mortality and refine the assumed rate would be useful. Any research that is going to potentially inform the next benchmark assessment for scallops should be available by December 2017 so that results can potentially be considered in the assessment.~~

Commented [JP9]: See comment #7 in RSA share day notes. "Under-served" topic. PDT input through correspondence in support of studying and potentially quantifying predation vs. trying to control predation.

5. Research to support the investigation of loggerhead, green, and Kemp's Ridley turtle behavior in the Mid-Atlantic and Georges Bank (via satellite tagging or other means) 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.

Commented [cok10]: Possibly remove this from the 2018/19 FFO, but leave the priority until we know what can be updated in the assessment.

Commented [JP11]: Suggestion to consider expanding this list based on data Samir presented at Share Day. Ongoing NMFS research or support of turtle research?

Commented [cok12]: Can we add text to specifically relate this to the spread of parasites?

6. Research to evaluate the potential impacts of scallop spat and seeding projects.

Commented [JP13]: SBRM suggests there have been no recent observed interactions with dredge gear. Does this language need to be modified to reflect current NEFOP observations of turtle interactions.

OTHER (of equal importance)

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. Finally, 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. ~~(A before after control impact study and optical survey of the Northern Edge area was funded for two years (2016/2017) through the 2016 Scallop RSA Program.)~~

Commented [JP14]: Staff follow-up: habitat has been on the list for a long time, priority rank changed depending on the issues at hand. Input from PDT member to keep on at Share Day.

Commented [cok15]: Possibly modify to focus on dredge efficiency in high density areas; maybe remove from this bullet and make separate priority.

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.); 2) research 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; or 3) research to actively manage spat collection and seeding of sea scallops.

Commented [cok16]: Maybe elevate this priority due to the historic high recruitment in recent years; lots of things that we don't understand about those very high density areas.

Commented [cok17]: Possibly broaden this priority to include the Council priority of "Research related to identifying the major sources of management uncertainty and measuring their potential effects on future fishery allocations. 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."

9. Research that investigates factors affecting fishing power and estimates of how they relate to projections of landings per unit of effort (LPUE).

Commented [JP18R17]: Swap "future fishery allocations" with "future projected landings"?

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.).

Commented [JP19]: See above comments – recommendation to move to a higher priority.

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.

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Commented [cok20]: This is from the Council priorities.

C. Program Authority

Statutory authority for this program is provided under sections 303(b)(11), 402(e), and 404(c) of the Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. 1853(b)(11), 16 U.S.C. 1881a(e), and 16 U.S.C. 1881c(c), respectively. The Scallop RSA Program is established through the Scallop FMP (69 FR 35193, June 23, 2004) and implementing regulations at 50 CFR 648.56.

CLEAN version for 2018/2019 recommendations – 5/17/17 – initial PDT input

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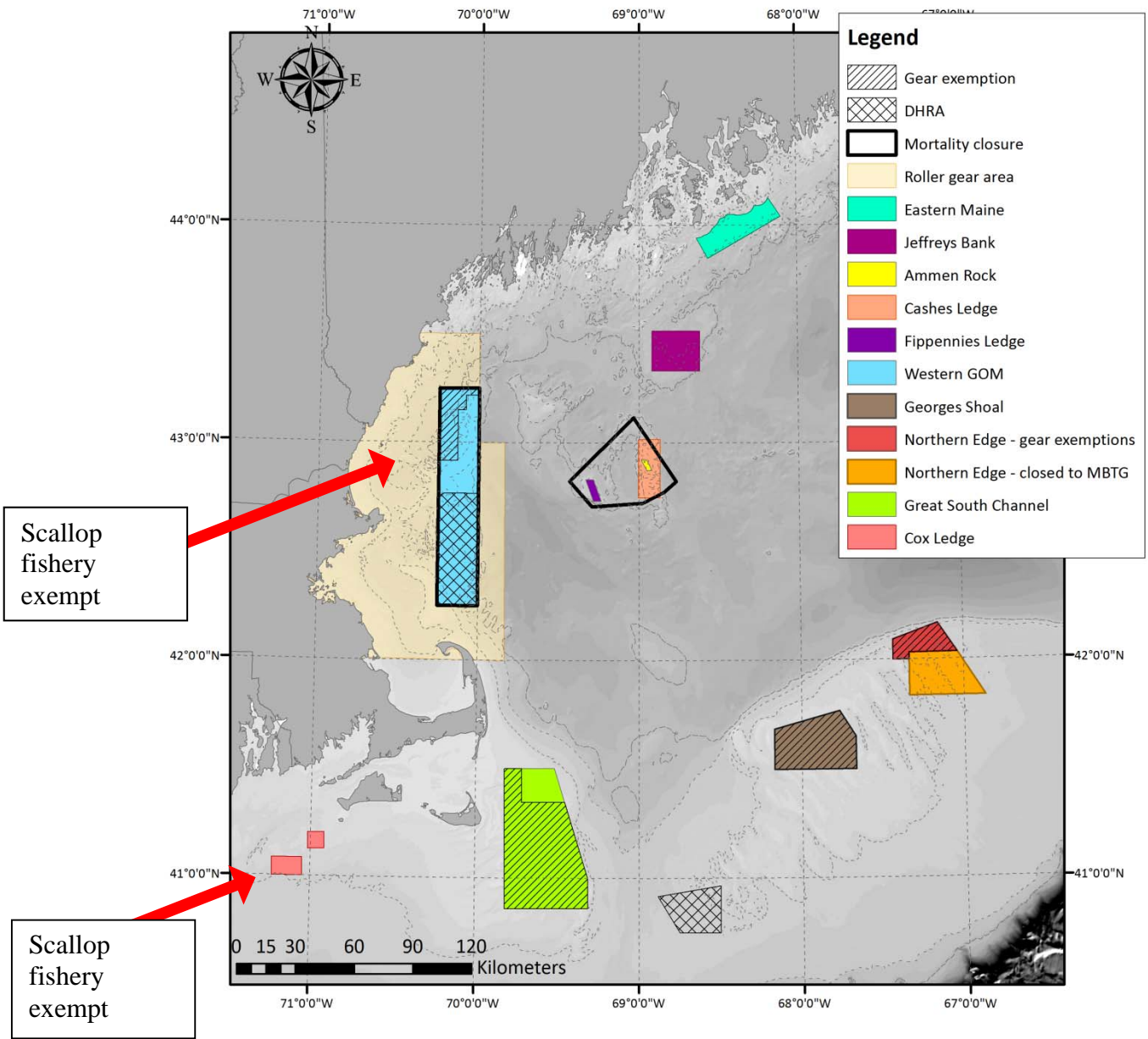
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Figure 1 – Preferred alternative year-round spatial management areas. Seasonal areas not shown.

- Gear exemption areas hatched. In western Gulf of Maine, shrimp trawls exempt. In Great South Channel and Georges Shoal, clam dredges exempt for one year. On Northern Edge (red area), scallop access fishing exempt, bottom trawling for groundfish exempt west of 67° 20' W.
- Dedicated Habitat Research Areas are cross-hatched. Stellwagen DHRA (north), Georges Bank DHRA (south)
- Mortality closures shown with heavy black outline. Current gear restrictions.
- Largest shaded area is the roller gear restricted area.
- Other shaded/colored areas are mobile bottom-tending gear closures, with gear exemptions as noted above.
- Cox Ledge closed to clam dredges, and trawls cannot use ground cables.
- Ammen Rock closed to all gears except lobster traps.



RSA Share Day Priorities Discussion (May 4, 2017)

Input from entire group

HIGHEST

Survey related Research:

1. Elevating a survey of the Northern Gulf of Maine Management Area from ‘Other’ to a higher priority.
 - a. Are there areas of more importance within this management area? For example, the southern portion of the NGOM on Stellwagen and Jeffreys?
 - b. Historically, there have been fisheries on Fippenies, Jeffreys Cashes Ledge, and Platts. Other areas besides Stellwagen have been productive.
 - c. Given Council’s recent actions, and potential for prioritizing an amendment that could include NGOM measures, this is a high priority in the near term.
 - d. Scallop fishing regularly occurs in the GOM outside of the NGOM management area, should this be a broad focus on entire GOM?
 - e. Comments re: the status of the NGOM, it is not an access area right now.
2. Comment about the implications of setting RSA survey priorities before the results of surveys are known. This can create situations where survey groups are responding to areas identified in the FFO, while other needs may emerge later on in the year that are not specific to the award announcement. Staff followed-up on this point with Deirdre Boelke after the meeting – she indicated that the Council has been explicit and vague about prioritizing specific areas for survey work in the past.

HIGH

Bycatch research and scallop meat quality research:

3. Two AP members felt that scallop meat quality research should stay on the list, and that density dependence should be considered in future work.
4. Question posed to the group – how do you adapt our current management strategy when there are areas where animals are infected.
5. The group briefly discussed whether or not basic research is still needed or should the focus be on how to adapt. One presenter felt that we do not yet fully understand the mechanisms and processes of these diseases/parasites, and that more work is needed. Other comments suggested that research on how to adapt could be useful.
6. Emphasis on tracking the spread of disease/parasites – particularly to know if they are moving north/east (ex: nematodes). AP member commented that there are further implications on the price and marketability of product – if the parasite moves up to GB this could be a big problem for the fishery.

MEDIUM:

Non-harvest mortality, research on loggerhead sea turtles, impacts of scallop spat and seeding projects.

7. Comment that a fair amount of work has been done on incidental mortality, scallop predation is an under-served topic.
8. Given the apparent linkage between turtles and nematodes, language could be added to the FFO to underscore the connection of these two potential priorities.
9. Comment that turtle work has helped addresses issues in oceanographic modeling.
10. Comment that turtles in the NW Atlantic are endangered and threatened, and are a dominant species on the scallop grounds. Feeling that these species should be monitored – the fishery could be severely impacted if the status of these animals in a biological opinion changes. Nematode work with turtles is an important component, but just one of the issues. Comment not to increase funding levels on this work – by to maintain it as insurance policy for scallop fishery.
11. Another comment was around the movement of turtles and the likelihood of an expanded range on Georges Bank, and the need to research to understand these movements.
12. PDT comment as to whether or not research should expand beyond loggerheads to include Green and Kemps Ridley turtles because nematode eggs were found in these species as well (stranded on Cape Cod).

OTHER:

13. Post-meeting follow-up re: habitat characterization studies and OHA2: Habitat research has been on the priority list for a long time, and has been elevated in importance from time to time.
14. PDT member noted that at one time habitat research was a big issue, and suggested that it be left on the list for now.
15. A PDT member suggested that the group consider longer term Council research priorities in upcoming discussion. These priorities will be circulated to the PDT with this document.