



New England Fishery Management Council

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**MEMORANDUM**

**DATE:** June 1, 2016  
**TO:** Scallop Advisors and Scallop Committee  
**FROM:** Staff  
**SUBJECT:** **Background on 2017/2018 Scallop RSA Program**

The Scallop Plan Development Team (PDT) and Advisory Panel (AP) met on May 4, 2016 in Boston, MA to discuss 2017/2018 Scallop RSA priorities. The Scallop PDT met by webinar on May 25, 2016 to make recommendations for the 2017/2018 Scallop RSA priorities. The Council is scheduled to approve RSA priorities for 2017 and 2018 at the June 2016 Council meeting in Portland, ME. These priorities are then forwarded to NMFS by letter and used in the federal funding opportunity (FFO) announcement that is expected to be published in summer 2016. The Council will also be discussing its current Scallop RSA Program Policy, and may consider modifying the policy to reflect recent changes in the technical review process.

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**1.0 PDT’s Recommended Changes to the Scallop RSA Priorities for 2017/2018**

***Background:*** *The following text is also included in the May 25, 2016 PDT meeting summary.* The PDT reviewed RSA research priorities described in the 2016/2017 FFO, and made a host of recommendations. The discussion built on recommendations made by a group of scallop advisors and PDT members at the May 4<sup>th</sup>, 2016 joint PDT/AP meeting. The PDT worked from a track changes version of the 2016/2017 FFO that incorporated input from the joint PDT/AP RSA discussion. The PDT has provided additional recommended edits in track changes in a new document. A description of the PDT recommendations and discussion are described below in more detail:

1. *#1 – Survey Related Research* - Several members of the PDT stressed the importance of including information about survey projects which received two years of funding through the 2016/2017 RSA award, and recommended including details about the kind of survey (dredge vs. optical), and the areas being covered.
2. *#1a – Intensive industry-based survey (IBS) of relevant scallop access areas (AAs)* – The PDT recommends that the priority areas for *#1a* should be as follows (in priority order):
  - 1) Elephant Trunk (ET)
  - 2) Closed Area II (CA2) south and extension.
3. *#1a* – The PDT recommended striking text referencing priority areas for 2018, noting that these areas are subject to change based on the results of the 2016 surveys and/or feedback from the scallop fishing industry.
4. *#1b – IBS survey of areas that may be candidate access areas in the future* – The PDT recommended adding a footnote to this section to clarify that a two-year survey of the Northern Edge of Georges Bank was funded in 2016. The PDT discussed trimming the “example area” list from the 2016 FFO, and recommended that just the “sliver” north of the current CA1 access area be prioritized in 2017. In general, the PDT felt that the text in the priority should focus on candidate areas only. The PDT recommends cutting back the text.
5. *#1b* – The PDT liked the idea of seasonal monitoring that is listed under *#1b*, and recommended moving this concept out of this section and including it in to priority *#3* (scallop meat quality). There was some discussion of ongoing EFP requests for access to survey the northern portion of CA2 of Georges Bank.
6. *#1c – Resource wide industry-based survey of scallops within Georges Bank and/or Mid-Atlantic resource areas* – The PDT felt that it is important to clarify that “additional” means in addition to the federal survey, and language was added. The PDT also recommended removing “broad” from the description of the resource wide survey given the above clarification.
7. The PDT recommended revising the overall priority order as follows:
  - 1) Leave all survey related priorities equal (1a, 1b, 1c) as highest (HIGHEST).
  - 2) HIGH (priorities 2 and 3 equal).
  - 3) MEDIUM (priorities 4 and 5 – but *#4* higher than *#5*).
  - 4) OTHER (priorities 6 through the rest – all equal priority).
8. *#2 – Bycatch Research* – The PDT recommended not breaking out bycatch research into sub-categories (small scallops and non-target species). Several PDT members noted that gear modifications can address both bycatch issues in this priority.
9. *#2* – The PDT recommended removing references to specific species in favor of the phrase “key bycatch species,” noting that bycatch species may change at any time and the researcher should make the case for which species are important to focus on. Also, the PDT noted that yellowtail discard mortality rate has been funded, studied, and incorporated in the assessment, and could be removed. The PDT recommended clarifying that non-target bycatch work should provide results to address AMs (non-target species only – not small scallops).
10. *#3* - Change title of *#3* from scallop area management to – *#3 scallop meat quality*. This section now focuses solely on scallop meat quality and the factors which may impact it. The PDT agreed with PDT/AP edits made at the May 4<sup>th</sup> meeting that

- added in examining density dependence and area rotation. The PDT recommended moving research on spat collection and seeding of sea scallops from this section to OTHER priorities. It was placed within #7.
11. #3 – The PDT recommended adding in the phrase “(including the life cycle and disease processes)” to number three as a way of potentially linking disease/parasite work with turtle research. In general, the PDT felt that understanding the potential linkage between turtles and scallop quality is a HIGH research priority.
  12. #4 – *Investigation of non-harvest mortality of scallops* – The PDT supported modifications of #4 made at the PDT/AP meeting – the sentiment was that the new text is much clearer, and that research on these topics could help to inform the next scallop benchmark assessment (currently planned for the spring of 2018). PDT does not think mitigation of predators should be included in this bullet – and recommended that mitigation projects be listed separately under “other” priorities. The PDT felt that this priority should be on impacts of predation and how they relate to natural mortality. The removal of predators is a different topic, and the PDT does not agree it should be a medium priority, or equal to research focused on understanding the impacts of predation.
  13. #5 – *Turtle Research* – The PDT recommended taking part of #5 and moving it under #3 to give it higher priority (deeper understanding of life cycle processes of nematode, see 11. above). The PDT believes that understanding the life cycle processes of nematodes has higher priority to the scallop fishery than other elements of this item. The PDT did not reach consensus on the specific ranking of turtle research – some members felt that it should be a MEDIUM priority, while others felt that it should be grouped with OTHER priorities. In the end, the PDT recommended leaving it as MEDIUM, but ranking it below #4 - *Non-harvest mortality of scallops*. The PDT also discussed adding emphasis on research that can contribute to future assessments of turtle populations. Finally, the group discussed the concept of turtle vaccinations, and suggested that if this concept is pursued that it should be done as a separate OTHER priority.
  14. #6 – *Habitat Characterization Research* – The PDT noted that a BACI study of the Northern Edge area of Georges Bank was funded for two years through the 2016 RSA awards, and recommended adding a footnote to the RSA FFO. The PDT recommended leaving this research track under OTHER.
  15. Discard mortality and incidental mortality (#8 and #9 in the 2016 FFO) have been folded into #3 – Non-harvest mortality and elevated to HIGH priority.
  16. #9 – *Research to evaluate LPUE* – This is a new priority for 2017 (also part of the Council’s 5-year research priorities). The PDT had some discussion to add more text around specific research projects – but in the end left as is.
  17. #10 – *Other Resource Surveys* – Under the topic of other resource surveys, the PDT discussed surveys of the NGOM. There was not PDT consensus on where this item should be on the list – some felt the area should be surveyed more often (higher priority) and some did not (leave it where it is). The PDT noted that 2012 was the last time the area was surveyed (scheduled to be surveyed in 2016). Some felt that a survey every three/four years may not be frequent enough, and that we miss entire year classes by surveying at this frequency. The PDT noted that fishing has increased in the NGOM, and that the Council added an FMP priority in response to this, so

there is a need to know more about fishing and the resource. Several members of the PDT suggested that the most immediate survey by ME DMR will hopefully help to solve issues at hand now – such as the TAC for 2017.

18. #11 – The PDT recommended removing the bullet focusing on data-collection and monitoring, and folding aspects of this priority into higher ranking priorities. Specifically, the PDT recommended moving real-time bycatch to bycatch bullet #2, and moving real-time meat weight data to #3. In general, from a PDT only perspective, the monitoring items are not a high priority. The PDT discussed how it can be difficult to connect and scale projects under this priority into fleet wide benefits. Some members of the PDT noted that the RSA program has funded these kinds of projects in the past, and felt that they have not yielded the expected results.
19. The PDT discussed clarifying text in the FFO about open access of journal articles. The PDT agrees that sharing research results should be emphasized in the RSA FFO, and recommended adding text to reflect this, but not under evaluation criteria.
20. The PDT discussed reporting vessels that get compensation, and felt that more input from AP about their specific rationale is needed so text can be clarified. Currently, a list of vessels that were *eligible* for compensation fishing can be shared.
21. The PDT recommended adding the common scallop price estimate used in the previous year as a footnote.
22. The PDT recommended adding language to further clarify both the technical and management review processes in the FFO.

**Table 1 – Summary of recent Scallop RSA Priorities (2015/2016 & 2016/2017), and Scallop PDT recommendations for 2017/2018 RSA**

Priority	2015/2016 Scallop RSA Priorities	Priority	2016/2017 Scallop RSA Priorities	Priority	2017/2018 PDT RECOMMENDATIONS
HIGHEST	Survey related research (1a,1b,1c) have equal priority	HIGHEST	Survey related research (1a,1b,1c) have equal priority	HIGHEST	Survey related research (1a,1b,1c) have equal priority
	1a Intensive IBS survey of each relevant AA 1b Intensive IBS of candidate AA 1c broad, resource wide IBS of scallop w/in GB and/or MA 2 bycatch research (seasonal, gear mods, spatial/temporal, discard mortality) 3 Area management research (scallop predation, scallop quality, spat collection/seeding)		1a Intensive IBS survey of each relevant AA 1b Intensive IBS of candidate AA 1c broad, resource wide IBS of scallop w/in GB and/or MA 2 bycatch research (seasonal, gear mods, spatial/temporal, discard mortality) 3 Area management research (disease/parasites, scallop quality, spat collection/seeding)		1a Intensive IBS survey of each relevant AA 1b Intensive IBS of candidate AA 1c broad, resource wide IBS of scallop w/in GB and/or MA
				HIGH	(of equal importance)
					2 bycatch research (small scallops and non-target species) 3 Scallop meat quality research (disease/parasites, density dependence, area rotation)
MEDIUM	Not listed in order or importance	MEDIUM	Not listed in order or importance		
	4 Loggerhead turtle behavior in Mid-Atlantic 5 Research on processes that impact quality and marketability (disease/parasites) 6 Habitat Characterization Research 7 Seasonally monitor large recruitment event in NLAA and 4Q curve to HC		4 Scallop predation, and ways to mitigate (e.g. starfish, crab, dogfish) 5 Loggerhead turtle behavior in Mid-Atlantic	MEDIUM	Listed in order or importance 4 Non-harvest mortality of scallops (e.g. incidental, discard, natural mortality) 5 Loggerhead turtle behavior in Mid-Atlantic
OTHER	Not listed in order or importance	OTHER	Not listed in order or importance	OTHER	Not listed in order or importance
	8 Environmental Stressors 9 Studies addressing research priorities of SAW50 9a Discard mortality of scallops 9b Seasonal growth of scallops 9c Incidental mortality of scallops 9d Continue analysis of scallop annual growth data 9e Seasonality in weight of meats and gonads, timing of spawning 10 Other resource surveys to expand and/or enhance survey coverage 11 Electronic data collection, scallop "study fleet"		6 Habitat Characterization Research 7 Environmental Stressors 8 Discard mortality of scallops 9 Incidental mortality of scallops 10 Other resource surveys to expand and/or enhance survey coverage 11 Electronic data collection, scallop "study fleet"		6 Habitat Characterization Research 7 Environmental Stressors (incl. seeding/spat) Research on relationship btw fishing power and LPUE 8 projections Other resource surveys to expand and/or enhance survey coverage 9 coverage

## 2.0 2016/2017 RSA Awards

**Background:** The 2016/2017 Scallop RSA funded 15 projects. Six projects were funded for 2 years (Table 2). The PDT has taken these two year projects into consideration when listing the specific areas that should be given preference for survey coverage in 2017.

**Table 2 - 2016/2017 Scallop RSA Awards by number of years funded.**

Project Category	Title	Organization	Funding
<b>Projects funded for 2016 (1 year)</b>			
Biology	Drivers of Dispersal and Retention in Recently Seeded Sea Scallops	CFF	\$1,080,128
Biology	Scallop Mark-Recapture to Estimate Density Dependent Natural Mortality and Growth	VIMS	\$594,284
Bycatch	Optimizing the Georges Bank Scallop Fishery by Maximizing Meat Yield and Minimizing Bycatch	CFF	\$1,994,292
Bycatch	Development of Ecosystem Friendly Scallop Dredge Bags: Tools for Long-Term Sustainability	CFF	\$1,576,200
Bycatch	A modified flounder sweep for flatfish bycatch reduction in the LAGC scallop fishery	CFF	\$369,520
Bycatch	Scallop Fishery Bycatch Avoidance System 2016	SMAST	\$312,500
Survey	Optical Survey of the Scallop Resource in the Elephant Trunk Scallop Access Area (Optical)	Arnie's Fisheries	\$586,540
Survey	An Assessment of Sea Scallop Abundance and Distribution in Georges Bank Closed Area II and Surrounds (Dredge)	VIMS	\$448,215
Turtle	Understanding Impacts of the Sea Scallop Fishery on Loggerhead Sea Turtles Through Satellite Tagging	CFF	\$892,058
<b>Projects funded for 2016 and 2017 (2 years)</b>			
Biology	Age Structure and Growth Rate in the Sea Scallop (2 years)	VIMS	\$613,673
Parasite/ Infection	Transmission of Apicomplexan Infection and Development of Gray Meat in Atlantic Sea Scallops (2 years)	SMAST	\$639,786
Parasite/ Infection	An Investigation into the scallop parasite outbreak on the Mid-Atlantic shelf: Transmission Pathways, Spatio-Temporal variation of infection, and consequences of marketability (2 years)	VIMS	\$945,422
Survey	A Cooperative High Precision Dredge Survey to Assess the Mid-Atlantic Sea Scallop Resource Area (Dredge)	VIMS	\$1,979,346
Survey	An Assessment of Sea Scallop Abundance and Distribution in the Nantucket Lightship Closed Area and Surrounds (Dredge)	VIMS	\$891,945
Survey/ Habitat	Impact of Disturbance on Habitat Recovery in Habitat Management Areas on Georges Bank (Optical)	WHOI	\$2,665,944

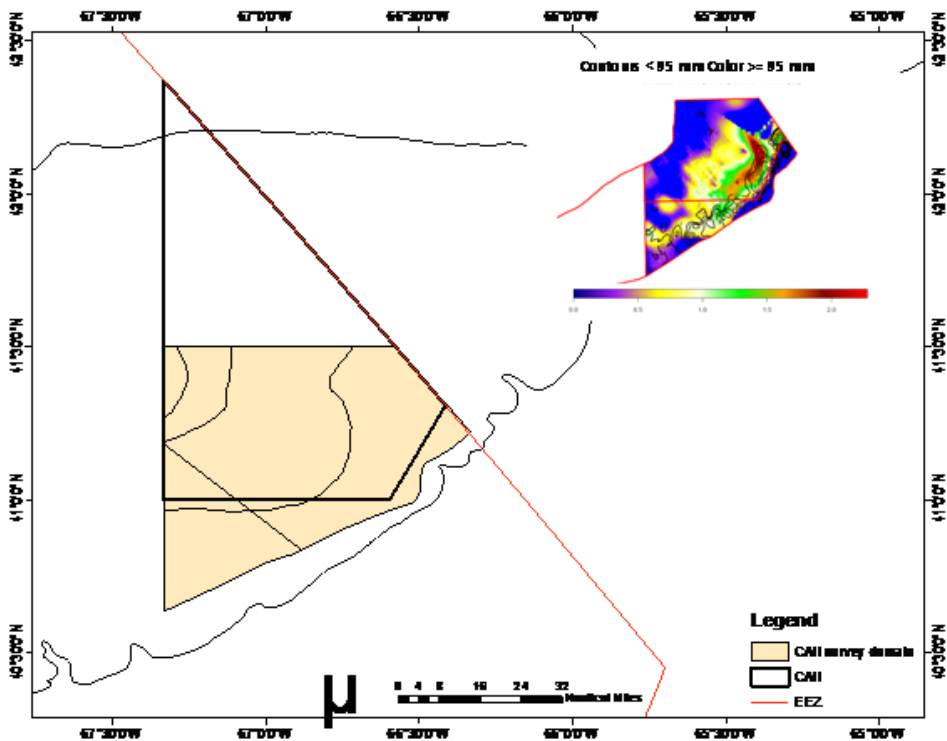
### 3.0 Surveys funded through the 2016/2017 RSA award

**Background:** Five surveys were funded for 2016/2017, including three two-year survey projects. In 2016, Arnie’s Fisheries will conduct an optical survey of the Elephant Trunk Access Area using HabCam3, and VIMS is slated to complete a dredge survey of Closed Area II and surrounds. Two year surveys described in Table 3, and the areas of the 2016/2017 surveys are shown in Figure 1- Figure 5.

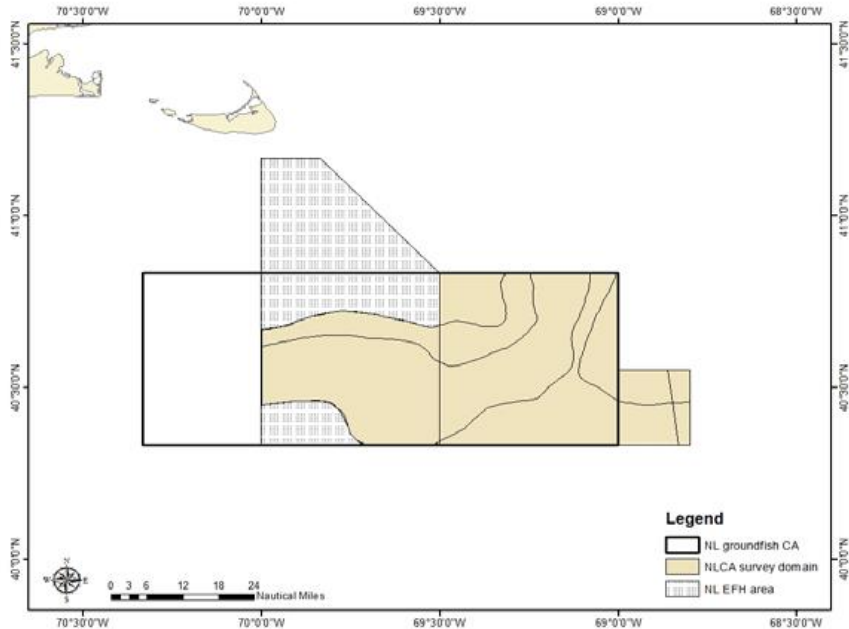
**Table 3 - RSA surveys funded for two years through the 2016/2017 announcement**

Project Title	Lead	Years Funded	Survey Type	2016 RSA Priority
A Cooperative High Precision Dredge Survey to Assess the Mid-Atlantic Sea Scallop Resource Area (2-years)	VIMS	2016/2017	Dredge	1c
An Assessment of Sea Scallop Abundance and Distribution in the Nantucket Lightship Closed Area and Surrounds (2 years)	VIMS	2016/2017	Dredge	1a
Impact of Disturbance on Habitat Recovery in Habitat Management Areas on Georges Bank (2 years)	WHOI	2016/2017	Optical (ROV)	1b

**Figure 1 - VIMS CAII and surrounds, 2016 only (tan shaded area)**



**Figure 2 - VIMS Nantucket Lightship and surrounds (dredge), 2016 and 2017 (tan shaded area)**



**Figure 3 - VIMS Mid-Atlantic (dredge), 2016 and 2017 (gray outlined area).**

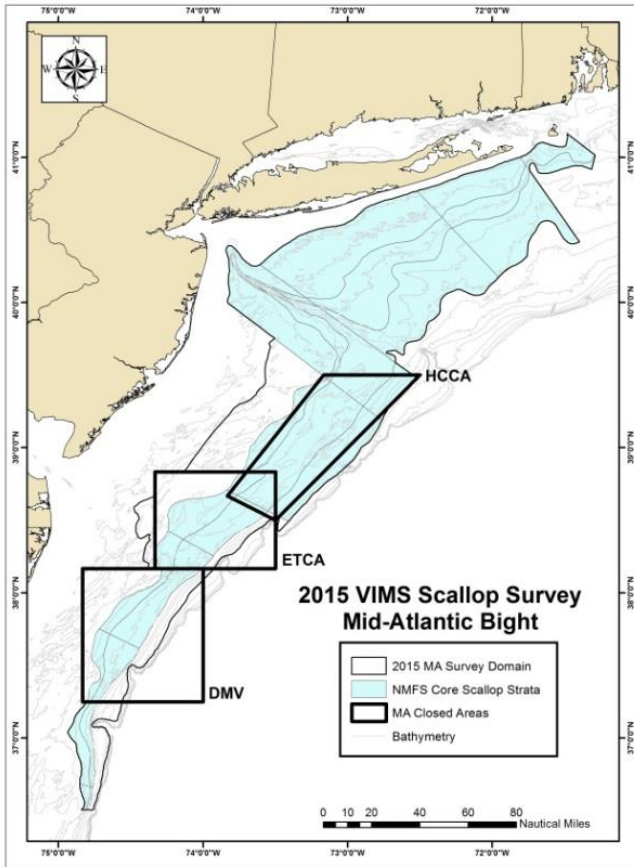




Figure 4 - Arnie's Fisheries Elephant Trunk Access Area (Optical - HabCam), 2016 (yellow transects).

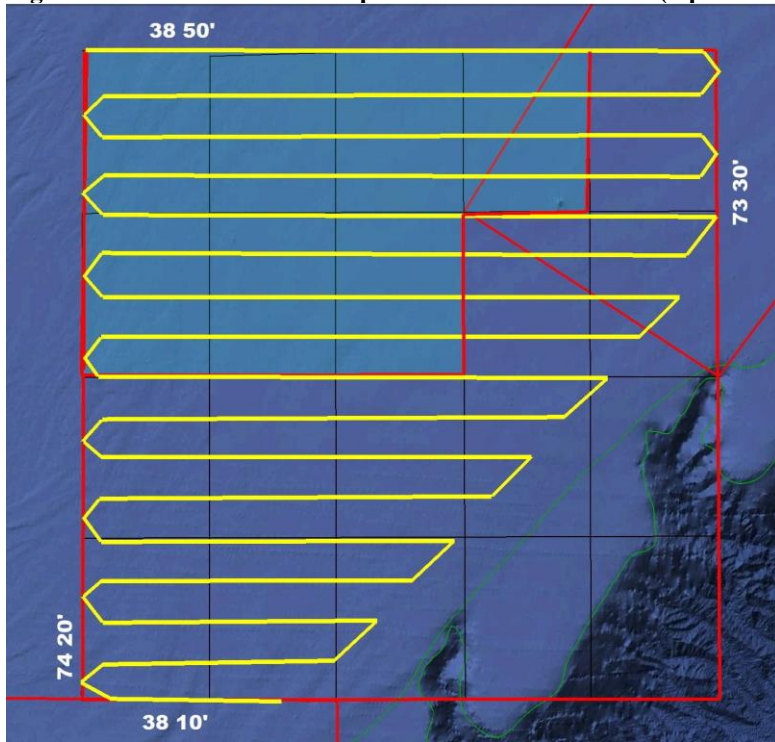
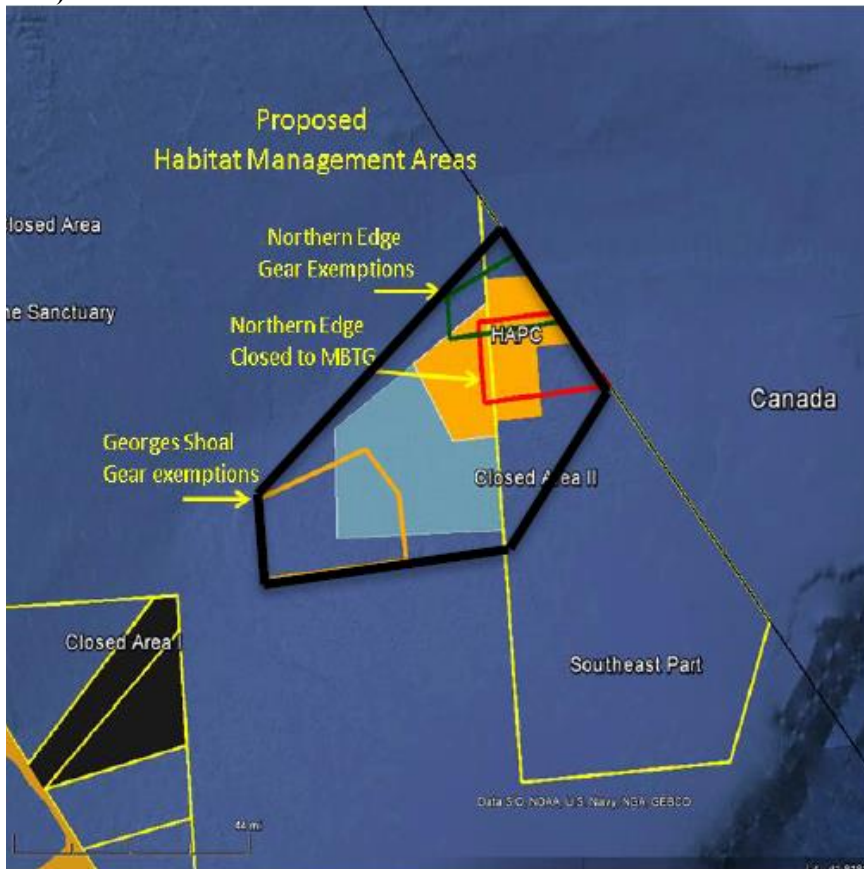


Figure 5 - WHOI Georges Bank Habitat Management Area (Optical - ROV), 2016 and 2017 (black outlined area).



#### **4.0 Council's Scallop Research Set Aside Program Policy**

**Background:** The Scallop RSA review process continues to evolve, and a new approach was used in 2016 to evaluate survey proposals. A technical panel was convened to review the 2016/2017 scallop RSA survey proposals due to high variance between technical reviewers, the difficulty of comparing similar scores, the administrative challenge of findings up to 90 experts to review proposals, and the Council's request that scallop survey peer review results be shared with technical reviewers. Initial feedback from the NEFSC indicated that there was a higher level of technical review, and that scoring was more consistent using the panel approach. The panel did not operate by consensus, and reviewers were required to submit scores and comments individually. The Council may wish consider updating its Scallop RSA program policy to reflect recent changes in the review process. Proposed changes to the policy are shown in track changes below:

### **Scallop Research Set Aside Program Policy**

Text from Council Operations Handbook, February 2016

The Scallop Committee, at the request of the New England Fishery Management Council's Executive Director, developed a policy for how the Council is involved in the review of Scallop research set-aside proposals.

The Scallop Research Set-Aside (RSA) program is a process coordinated by the New England Fishery Management Council (NEFMC) and the Northeast Fisheries Science Center (NEFSC). Four RSA programs were established by the Mid-Atlantic and New England Fishery Management Councils, and are currently unique to the Northeast Region. No Federal funds are provided for the RSA programs. Instead, funding for research is provided by the sale of Set-Aside allocations in quota-managed or Day-at-Sea (DAS) managed fisheries, which are awarded through a competitive grant process.

The Scallop RSA program was formally included in the Atlantic Sea Scallop Fishery Management Plan in 1999. The program has evolved over time, but currently about 2% of the total projected scallop catch is set-aside to fund research projects that support scallop management. At least biennially, the Council recommends the specific research priorities that should be used for the Scallop RSA funding announcement.

The Scallop Plan Development Team (PDT) and Scallop Advisory Panel provide specific input about needed research priorities through the NEFMC Scallop Oversight Committee, and the Committee's recommendations are then considered and approved by the full Council. The Council's decision forms the basis for the federal funding opportunity that is published by National Marine Fisheries Service (NMFS).

NMFS generally solicits proposals through one of the NOAA Grants Management Program's Semi-Annual Omnibus Grants Notice (Omnibus Notice-June and December) call for proposals. NMFS submits draft documents to NOAA Grants, which publishes a Federal Register Notice (FRN) announcing the availability of the opportunity to submit proposals. Additional information is provided on a Federal web site (Grants.gov) that posts a Federal Funding Opportunity (FFO) announcement, which includes detailed information on how to submit proposals, research priorities and deadlines for submissions.

All Federal Grants applications are submitted through an internet based system called GRANTS.GOV (GOL). The administration of NOAA grant competitions and awards are processed through the GOL system. Federal Program Officers (FPOs) access the system to upload documents needed to announce the competition (FFO), manage all competitive grants processes, monitor post award progress and close out grants after final reports and products are received, reviewed and accepted. The Council or Council staff is not involved in this stage of the program at all.

Each proposal is subject to a thorough review process. The process has evolved over time to include input from both technical reviewers and fishery managers. ~~Each proposal is reviewed by three~~ Proposals are evaluated by subject matter experts that score the technical merits of the proposals. A panel of experts may be convened to evaluate proposals. Details about the evaluation process will be described annually by NMFS.

Reviewers consider several aspects of each proposal including importance and/or relevance and applicability of the proposed project, technical/scientific merit, overall qualifications of the project, project costs, and outreach and education. Each technical reviewer provides a final numerical score based on a possible 100 total points. The NEFSC is responsible for assigning the technical reviewers, which include staff from multiple departments within both NEFSC and the Greater Atlantic Regional Fisheries Office (GARFO), as well as other relevant experts from academia, Council staff, state agencies and various researchers. If needed, Council staff assists in finding highly qualified technical reviewers. These reviewers are required to sign a conflict of interest form before participating in the review and must submit written comments and final scores directly through NOAA Grants Online.

Concurrently, Council staff assists the NEFSC in identifying a diverse group of individuals to participate in the management review process of all proposals. A meeting is held with about a dozen individuals to discuss the management relevance of each proposed project. The group of reviewers includes individuals from the NEFMC Scallop Committee, Scallop Advisory Panel, and Scallop PDT members, appropriate NEFSC staff, and other scallop fishery and management experts. Individuals on the RSA Management review panel must also sign a conflict of interest form and are required to examine all proposals prior to the meeting. The management reviewers do not operate by consensus or make recommendations as a group. Following the ~~discussion of each proposal meeting~~, each management reviewer is requested to submit written comments. The management reviewer comments are used by the NEFSC in the selection process to determine management relevance and applicability of a project.

After this phase of the review, individual management reviewers, including Council members and staff, are no longer involved in the selection process. NEFSC staff is responsible for compiling all the information provided from both technical and management reviewers, and the Science Center Director then makes the final decision regarding selection of proposals. The agency is responsible for the final decision because this is a legal requirement of the grants process used to distribute RSA funds. After final projects are selected, NMFS also administers the grant process, including regulatory consultation, any necessary permitting, report review, etc. After final reports are available, the results are forwarded to the Research Steering Committee, for review or directly to the Scallop PDT if project results have already been reviewed.