

Potential 2020 Scallop Work Priorities

(Priorities listed on page 4)

Scallop AP & Committee

October 23 & 24

New Bedford, MA

October 17, 2019

1.0 RECENT AND UP COMING SCALLOP RELATED MEETINGS

1.1 Recent Scallop Meetings

- July 24, 2019 – In-person PDT meeting at Mariners House (Boston, MA)
- August 27 & 28, 2019 – In-person PDT meeting at National Academies (Falmouth, MA)
- September 4, 2019 – In-person PDT meeting at Fairfield Inn (New Bedford, MA)
- September 12, 2019 – Scallop PDT conference call
- September 18 & 19, 2019 – AP and Committee at Courtyard Marriott (Boston, MA)
- September 25 – 27 – Full Council meeting at Beauport Hotel (Gloucester, MA)
- September 28, 2019 – In-person Scallop PDT meeting (Plymouth, MA)
- October 1, 2019 – In-person Scallop PDT meeting (Braintree, MA)
- October 17, 2019 – SSC meeting to review 2020 & 2021 OFL and ABC estimates (Boston, MA)

1.2 Upcoming Scallop Meetings

Please note that additional meetings will be added as the year progresses.

- October 23 & 24, 2019 – PDT/AP and Committee (New Bedford, MA)
- November 19 & 20, 2019 – AP and Committee (Providence, RI)
- December 3 – 5, 2019 – Full Council Meeting at Hotel Viking (Newport, RI)

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2.0 POTENTIAL PRIORITIES FOR 2020

The Council will set 2020 work priorities in December 2019. This is the final meeting to provide input to the Council and Executive Committee on 2019 priorities. Please review correspondence for this meeting as the Council received several documents related to 2020 priorities since the AP and Committee last met.

2.1 For Discussion: Potential Priorities (from September Council)

List of potential 2020 Priorities (as discussed at the September 2019 Council meeting)

Regulatory Requirements	
2021 Specs: Prepare a specifications package to set FY 2021 (2022 default) specifications (i.e. setting DAS, access area trips, Northern GOM TAC, limited access general category IFQ allocations, etc.).	
RSA: Support annual scallop RSA process, including priority setting, and technical and management reviews.	
NMFS and PDT have annual responsibilities related to estimating scallop, yellowtail, and windowpane catch during the year (i.e. LA AM exception, re-evaluation of YT sub-ACL based on updated information).	
Items for AP and Committee Ranking	RANK (out of 9)
Amendment 21: Complete Amendment 21: NGOM management, LAGC trip limits, state waters fishing by LAGC vessels (ongoing)	
Northern Edge Access: Support action for access to Northern Edge HMA (see Habitat)	
Review and implement recommendations from 2015 scallop survey review panel	
Modify RSA program as recommended by RSA Program Review	
Performance report for the LA component	
Evaluate rotational management program	
Evaluate options for harvesting slow growing scallops in Nantucket Light Ship-South Deep	
Develop limited access vessel DAS and access area trip leasing pilot project suggested by East Coast Scallop Harvester's Association	
Adjustments to scallop industry funded observer program (IFO coverage vs. required SBRM coverage, etc.)	

3.0 OUTLOOK FOR COMPLETION OF SCALLOP WORK ITEMS

The following table is intended to describe progress on each priority, relative to the next five Council meetings (December 2019 – September 2020). The following list tracks regulatory requirements and ongoing work, as well as other issues that Council staff and/or the scallop PDT may work on. 2020 priorities will be added to this outlook following the Council’s vote in December. The Scallop AP and Committee may wish to use this as a guide when thinking about completing work in 2020 and beyond.

subject to change	Expected progress on priorities relative to upcoming Council meetings					
	Council Meeting:	Dec-19	Jan-20	Apr-20	Jun-20	Sep-20
Regulatory Requirements						
Specifications	Final Action; Send FW32 Decision Draft to NMFS	Preliminary submission: FW32	Final submission (March) New specs in place April 1	2020 Survey cruises on the water; review surveys	Review survey data, preliminary OFL/ABC projections	Final Action; Send FW33 Decision Draft to NMFS
Support Scallop RSA Program	Proposals Due, Reviews begin	Proposals in evaluation	RSA Share day; NMFS announce 20/21 awards;	Council votes on 2021/22 Priorities (PDT, AP, CTE input)	FFO for Scallop RSA Published	Proposals Due, Reviews begin
In-season catch accounting & GF issues	Estimates for GF FW, FW32	Evaluate YT transfer to GF		Prepare GBYT memo to GF PDT		Estimates for GF FW, FW33
Ongoing Work						
Amendment 21	<i>Council may be asked to consider a control rule.</i> Draft Alternatives	Draft Alternatives; Prepare background data and analyses	Approve Range of Alternatives in Amendment 21; work on DEIS	Review/ approve DEIS for public hearings, select preferred alternatives	NMFS Publishes DEIS, start comment period and scoping	

4.0 2019 SCALLOP PRIORITIES

Link: 2019 priorities for all FMPs:

https://s3.amazonaws.com/nefmc.org/190620_2019_Priorities_Ver3.pdf

Table 1 – Council’s 2019 scallop work priorities

Regulatory Requirements	Other 2019 Work Priorities
<ul style="list-style-type: none"> • Specifications for FY2020 and FY2021 (default) • Support annual Scallop RSA process • Estimate flatfish bycatch (ongoing) 	<ul style="list-style-type: none"> • NGOM Scallop Management & LAGC IFQ trip limits and one-way quota transfers (Amendment 21) • Harvest of slow-growing scallops in the NLS-S-deep • Mitigate impacts on YT flounder • Evaluate rotational management program

5.0 SUMMARY DESCRIPTIONS FOR EACH 2019 WORK ITEM

5.1 Set specifications (allocations) for FY 2020/2021 (FW32)

- Specifications are currently included as part of Framework 32.

5.2 In-season catch accounting

- Scallop PDT will continue to track bycatch of yellowtail and windowpane.
 - The Scallop PDT will communicate scallop bycatch estimates to groundfish PDT as part of specifications process.
 - The scallop PDT annually assembles a memo to the GF PDT re: scallop fishery interactions with Georges Bank yellowtail flounder to support US/Canada TRAC/TMGC and the Council’s SSC process.

5.3 Annual support of Scallop RSA

- The Council made recommendations for 2020/2021 RSA research priorities at their June meeting. The federal funding opportunity notice published this summer and has closed.
- Management and technical reviews typically occur in November and December.
- Council staff organized a “RSA Share Day” in 2019. Several RSA projects were presented to the PDT and AP. The PDT and AP reviewed the results of the RSA program review and provided feedback at that meeting.

5.4 Harvest of slow-growing scallops in the NLS-S-deep

- The Council added this priority at its June 2019 meeting.
- This priority is being addressed in Framework 32. The Committee has recommended that these scallops be harvested as part of an access area trip.

5.5 Mitigate impacts on Georges Bank yellowtail flounder

- This priority is being addressed in Framework 32. The Scallop Committee plans to evaluate the bycatch estimates for GBYT relative to the scallop sub-ACL for GBYT.
- New spatial management configuration under consideration on eastern Georges Bank would close part of the current Closed Area II access area, and the Closed Area II extension. These year round closures are expected to help mitigate impacts on GBYT.
- The scallop PDT has evaluated time/area closures, and received a presentation from the Coonamessett Farm Foundation on conservation engineering work aimed at reducing flatfish bycatch.

5.6 Evaluate Rotational Management Program (Removed from List)

- The Scallop PDT discussed this issue in January 2019.
- The Council removed this item from the 2019 priority list at its June meeting when it added the harvest of slow growing scallops in the NLS-S-deep.

5.7 Amendment 21 (NGOM Scallop Management, LAGC IFQ trip limits, and one-way quota transfers)

- This year the Council began work on Amendment 21 to the Scallop FMP. The Council has identified three specific issues to address in this action: 1) measures related to the Northern Gulf of Maine (NGOM) Management Area, 2) Limited Access General Category (LAGC) individual fishing quota (IFQ) possession limits, and 3) ability of Limited Access vessels with LAGC IFQ to transfer quota to LAGC IFQ only vessels.
- From late February to early April, the Council completed ten scoping hearings.
- The Council, in coordination with NMFS, published a notice of intent in the FR to prepare an EIS for this action. This does not lock the Council into preparing an EIS, and the Council may still elect to prepare an EA (if appropriate).
- The Scallop Committee is in the process of developing alternatives for Amendment 21, based on Committee tasking.



New England Fishery Management Council

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 John F. Quinn, J.D., Ph.D., *Chairman* | Thomas A. Nies, *Executive Director*

MEMORANDUM

DATE: August 27, 2019
TO: Executive Committee
FROM: Tom Nies, Executive Director
SUBJECT: **Research Set-Aside (RSA) Program Review – Next steps**

In June 2019 the Council reviewed the RSA Program Review final report. A motion passed to support moving all the recommendations forward for further consideration. The Council requested the Executive Committee further discuss a potential implementation plan for these recommendations. Council staff developed a strawman list of recommendations and potential implementation plan for initial work on this subject.

The Executive Committee should discuss this recommendation for Council consideration of 2020 priorities at the September Council meeting. Subject to its approval, this approach would be presented to the Council during the September priorities discussion and added to the list of possible tasks. A final decision would be made at the December Council meeting.

Over 50 specific recommendations were included in the RSA final report. Staff have identified a sub-set of those recommendations the Council could focus on first, as well as a potential implementation plan. A matrix is attached to this memo that identifies the “high” priority items based on staff input as well as input from various PDT, AP and Committee discussion to date. In general, the initial priority topics could focus on:

- Recommendation #2 – Address several of the ten concerns identified about existing RSA programs;
- Recommendation #3 - Clarity the role of RSA;
- Recommendation #4- Improve the efficiency and effectiveness of scallop resource surveys; and
- Recommendation #5 – Evaluate the administrative capacity of the RSA program and identify where shortfalls exist.

In order to complete these tasks, staff recommends three separate approaches:

1. Form a group that will focus on the ten concerns identified in the final report (Recommendation #2). Several items would be addressed first (inadequacies in priority setting process, unique challenges created by awarding RSA fishing opportunities instead of monetary awards, lack of clarity about financial oversight of grants, ability to get results back into the management process, and data availability). The deliverable would

be a discussion paper that the Council could consider for future work priorities, particularly if Council action is needed to modify existing RSA programs.

2. Establish a Scallop Survey Advisory Panel (or some other title). This group would design an overall strategic approach for sea scallop surveys and then explore mechanisms for implementing that design. This group would also consider alternatives to the use of competitive grants for this program.
3. Request that NMFS, in consultation with the Council, evaluate and document RSA program administrative capacity. This would include an evaluation of resources available and/or needed to ensure RSA programs are functioning well.



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Northeast Fisheries Science Center
Woods Hole Laboratory
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16 September 2019

Mr. Thomas Nies
New England Fishery Management Council
50 Water Street, Mill 2
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tnies@nefmc.org

Dear Mr. Nies,

At the last New England Fishery Management Council meeting the Northeast Fisheries Science Center (NEFSC) stated that we would review the [Summary Report of the Review of Sea Scallop Survey Methodologies and Their Integration for Stock Assessment and Fishery Management](#). A Table is included here with the recommendations from the review and the actions taken in response.

This is a NEFSC perspective and we want the Council to be aware that partners in the Scallop Research Set Aside Program have also been responsive to the recommendations. Thus, the attached table is not comprehensive for the region and represents actions taken by the NEFSC or that the NEFSC has been involved in. We would be happy to provide additional detail on any of the actions taken or underway by NEFSC.

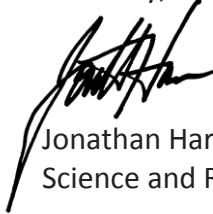
From our perspective, there are three big takeaways.

- 1) Most of the review recommendations have been addressed. Some research is ongoing, but in general the recommendations were used to improve scallop surveys. The one exception is the recommendation to *“devise an optimal and integrated statistical survey design”*.
- 2) The Research Set Aside program for Scallops has been critical in addressing elements of the survey program review. This reiterates the RSA Review conclusion that *“Research Set Aside programs [are] performing well, and generally regarded as highly successful, especially the Scallop RSA program.”*
- 3) Both the Survey Program Review and the RSA Program Review called for development of an integrated scallop survey design.

Thus, as we address the RSA Program review, we should also work to address this remaining recommendation from the Scallop Survey Review: *“devise an optimal and integrated statistical survey design”*.

The NEFSC is interested and willing to work with the NEFMC on developing an integrated statistical survey design.

Sincerely,

A handwritten signature in black ink, appearing to read 'Jonathan Hare', written in a cursive style.

Jonathan Hare
Science and Research Director

Summary recommendations taken from both summary report and overview presentation

[Link to Summary Report](#)

Recommendation Number	Location	section	sub-topic	Recommendation	Text	Responses	References		
1	Page 7, Paragraph 2	2	measurement error	Continued development of HABCAM 4.	The review panel considers that the HABCAM 4 imaging processing procedures are more advanced and encourages further research in this area.	NEFSC is continuing to develop its image calibration and processing procedures (see recommendation 2).			
2	Page 7, Paragraph 6	3	Bio Sampling aspects	Further develop automatic image processing.	The review panel encourages further development of automatic image processing capabilities. The review panel concludes that HabCam V4 with side scan sonar system is the only sampling procedure reviewed that could be used to detect the physical impacts of fishing gear and use this to study the effects of fishing at a very fine scale.	NEFSC is actively working on this as part of the NOAA-wide AIASI/VIAME initiative (Chang et al. 2016). Two RSA projects developing automated image analysis were funded as part of the 2019 Scallop RSA awards. A scallop RSA funded study evaluating the effects of dredging on scallop incidental mortality using an AUV was also recently published (Ferraro et al. 2017).	Chang et al 2016	Richards et al. 2019	Ferraro et al. 2017
3	Page 7, Paragraph 8	3	Bio Sampling aspects	Further investigation to reduce the "statistical noise" of optical surveys	While the optical surveys have higher detectability of scallops < 20 mm than the dredge surveys, and therefore provide better information on recruitment, they provide less accurate information on the exploitable (i.e. 40mm+) size composition because the optical sampling and analytical procedures introduce statistical noise.	This is taken into account by modeling the measurement error in the CASA stock assessment model.			
4	Page 7, Paragraph 9	3	Bio Sampling aspects	Develop a statistical design for subsampling meat weights	Subsampling for meat weights is currently done by selecting 5 meats per NEFSC dredge survey station. A statistical sampling design should be developed and applied.	At random dredge stations, the NEFSC now takes meat weights from 0-6 scallops, depending on the number of scallops caught at the station. For example, if catch is 10-25 scallops, 2 meat weights are taken; if catch is 200+ scallops, 6 meat weights are taken. By including "station" as a random effect, we believe our procedures are statistically sound.			
5	Page 8, Paragraph 1	3	Bio Sampling aspects	Recording more of available data.	The review panel recommends that the total number of baskets and fraction sampled be recorded on dredge surveys, and that the between basket variation in scallop counts (for subsamples) be recorded. This could provide useful information on this source of variation.	With the implementation of FSCS 2.0, the NEFSC records how many baskets were caught, how many baskets were subsampled, and how many scallops (with lengths) were in each subsampled basket.			
6	Page 8, Paragraph 7	4	Surv data to estimate abundance	Further investigation to improve procedures for simulating methodology (model or design based)	The review panel concludes that the geostatistical modelling approach seems reasonable but that biomass variance estimates are likely underestimated because degrees of freedom were not adjusted for and model uncertainty is an unaccounted source of variation in the biomass and abundance estimates. The review panel encourages further research to improve these procedures.	A study evaluating a number of different geostatistical methods has been completed (Chang et al. 2017). We are currently working with partners developing Bayesian geostatistical methods which may give more fair variance estimates.	Chang et al. 2017		

7	Page 10, Paragraph 3	5	evaluate methods for using surveys outside of Stock Assessment and	Utilize complimentary survey methods.	Complementary surveys methods provide enhanced capabilities to use data for management purposes, particularly, since no survey method has provided complete coverage of the entire stock area on a regular basis.	Complementary survey methods are supported through the NEFSC and RSA Program, and data from these surveys are combined in the stock assessment.			
8	Page 9, Paragraph 8	6	potential contribution of each survey	Develop more broad scale coverage.	Broad scale coverage is particularly useful when contributing information to ecosystem studies including changes to community composition over time. The review panel encourages further research in these areas.	There is currently an ongoing collaboration between NEFSC and Rutgers examining the effects of changes in bottom temperatures on sea scallops using the long dredge survey time series. Other recently published works of ecosystem effects using scallop survey data are Kaplan et al. (2018) and Shank et al. (2012).	Shank et al. 2012	Kaplan et al 2018	
9	Page 10, Paragraph 6	7	optimal frequency	Complete annual surveys	The review panel agrees that annual surveys are required to support the management process with fishery specification adjusted every year in addition to spatial management procedures. Yearly surveys also make it possible to detect and protect recruitment events, and avoid under- and over-harvesting of stock components.	Annual surveys continue to be supported both through NEFMC Priorities and the RSA Program, as well as by the NEFSC.			
10	Page 10, Paragraph 7	7	optimal frequency	Integrate methods to provide a standard monitoring survey.	The review panel recommends that all available information be used to devise an optimal and integrated statistical survey design (involving the use of complementary survey methods) and estimation procedure for stock size, spatial distribution, and other primary objectives. This may require simulation studies.	An integrated survey design has not been completed. Resources for simulation studies related to survey design should be sought. However, simulation studies to optimize the Habcam towed camera have been performed, and a restratification of the dredge survey is being planned. If an integrated survey design is pursued, the restratification of the NEFSC dredge survey would be consider as part of the regional plan.			
11	Page 10, Paragraph 7	7	optimal frequency	Secure the continuity of survey time-series.	The review panel recommends that survey efforts should be further integrated to provide a standard monitoring survey of the entire stock distribution; however, the optical and dredge surveys are complementary and both should be maintained and integrated. The continuity of time-series should be also be maintained to the fullest extent possible.	Emphasis has been given to continuity of the time series and operation of both the optical and dredge surveys. An integrated survey design across all surveys should be pursued. This was a proposed ToR for the 2018 Benchmark Assessment, but was not included because of concerns over workload.			
12	Page 10, Paragraph 8	7	optimal frequency	Integrate methods to provide a standard monitoring survey.	The review panel recommends that all available information be used to devise an optimal and integrated statistical survey design (involving the use of complementary survey methods) and estimation procedure for stock size, spatial distribution, and other primary objectives.	The current assessment models include data from the dredge, drop camera and habcam surveys. A next-generation spatially-explicit assessment model ("geosams") is being developed that would more closely integrate data from the various surveys.			
13	Page 10, Paragraph 11	8	identify future research	Analysis of all available information	To devise an optimal and integrated statistical survey design and estimation procedure for stock size, spatial distribution, and other primary objectives, the review panel recommends that all available information from all surveys be thoroughly analyzed, including an evaluation of the efficiency of using shorter tow durations.	An RSA-funded study that compared 10 to 15 minute tows was presented at the 2018 benchmark sea scallop assessment, and the results were equivocal. Dredge efficiency studies using paired tow experiments are ongoing (Miller et al. 2019).	Miller et al. 2019		

14	Page 11, Paragraph 2	8	identify future research	A joint integrated survey using two vessels (one for HABCAM and one for dredge) could result in a better survey with improved coverage.	However, statistically-designed dredge sampling that includes a portion of samples that overlap with the HabCam track is still required. The designer of HabCam felt that the best usage of this technology is continuous sampling and the review panel agreed with this. A joint integrated survey using two vessels (one for HABCAM and one for dredge) could result in a better survey with improved coverage.	The NEFSC has maintained the coupled optical / dredge survey.			
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