



## New England Fishery Management Council

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# Scallop Fishery Management Plan

## Long-Term Strategic Plan

### Overview

The New England Fishery Management Council’s (Council) Long-Term Strategic Plan for the Atlantic sea scallop fishery outlines the Council’s goals and objectives for managing the scallop resource over the next 3–5 years. It also identifies potential strategies and actions to help achieve those goals.

In response to ongoing discussions about future challenges and opportunities for the fishery and resource, the Council launched development of a long-term Strategic Plan in 2024 as a multi-year priority. The Scallop Plan Development Team (PDT) began work in July 2024.

This Strategic Plan is grounded in a collective vision shaped by the voices and ideas of industry members, researchers, managers, and other partners. Input gathered through meetings of the PDT, Scallop Advisory Panel (AP), Scallop Committee (Committee), and public comment has informed the objectives and strategies presented here. The Strategic Plan reflects the Council’s commitment to proactive, collaborative management that supports a sustainable and economically viable scallop fishery. It is intended to articulate a shared vision for the fishery’s direction over the next 3–5 years and to guide how the Council, NOAA Fisheries, and industry members can work together to achieve that vision.

### Defining a vision for the fishery

The PDT compiled information from recent projects, priorities, discussions, and correspondence to identify focus areas for the Strategic Plan. The challenges and recommendations were used to inform discussions at four public visioning sessions held in Spring 2025. The visioning sessions were held in Rockport, Maine; New Bedford, Massachusetts; Philadelphia, Pennsylvania; and by webinar, and included over 200 participants made up of the scallop industry, environmental groups, public officials, scientists, and managers. The range of issues and potential measures was reviewed and accepted by the Council in April 2025.

### Implementation of the Strategic Plan

This document serves as an action plan for the Scallop Fishery Management Plan (FMP) to guide recommendations for annual work priorities. The objectives outlined below operationalize the broader goals articulated in the FMP, and included in Appendix I: Goals & Objectives of the Scallop FMP and Subsequent Actions. The objectives reflect the stated overarching needs of the scallop fishery based on public input from the visioning sessions, while strategies describe specific suggestions from the PDT, AP, Committee, and the public, to meet those needs. For each strategy, supporting information has been considered to help inform annual priority recommendation decisions.

While annual priorities will not be limited to the strategies listed in this document, the objectives are intended to provide a foundation for developing, evaluating, and advancing future management actions. Strategies may be added or removed by the Committee as new information becomes available. The PDT will update supporting materials annually, and the AP and Committee will review the Strategic Plan ahead of each year’s priority-setting process.

In reviewing the Plan, the AP and Committee should consider the time and resources required for each strategy and seek opportunities to address multiple objectives through coordinated efforts. Where additional research or resources are needed, these needs should be flagged early to help identify appropriate mechanisms—such as the Scallop RSA priority-setting process—to address them.

After 3–5 years, the Council may choose to update or comprehensively revise the Strategic Plan to ensure continued alignment with the evolving needs of the scallop fishery.

### **Evaluation of Progress**

Annually, the AP and Committee will have the opportunity to review the Strategic Plan and relevant, recent or ongoing work and evaluate the Council’s progress towards each of the objectives using pre-defined criteria and progress milestones. Evaluation criteria for each objective are included in an Appendix II: Evaluation Criteria and Ongoing Work. Periodic evaluation of progress towards the Strategic Plan objectives will allow the AP and Committee to refine or modify their approach and respond to changing conditions of the fishery.

### **Objectives of the Strategic Plan**

To better achieve the overall objective and sub-objectives outlined in the Scallop Fishery Management Plan, the following objectives have been identified. Under each objective are one or more strategies that have been identified as a potential direction for the Council to take to achieve the objective, with possible measures and other action items described within each strategy. Each suite of strategies, measures, and other possible analyses are to be considered independent of one another.

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**Table 1 – Strengths, weaknesses, opportunities, and threats (SWOT) analyses developed by the Scallop PDT**

	<i>The Resource</i>	<i>The Fishery</i>	<i>The Habitat</i>
<b>Definition</b>	The Atlantic Sea scallops within U.S. federal waters.	<ul style="list-style-type: none"> <li>The entities involved in the harvest of the scallop resource or in related shoreside businesses.</li> </ul>	<ul style="list-style-type: none"> <li>The environment where Atlantic Sea scallops feed, grow, and reproduce.</li> </ul>
<b>Strengths</b>	<ul style="list-style-type: none"> <li>Scallops are highly fecund (a high reproductive output)</li> <li>Multiple, independent, annual resource surveys that produce high-quality biological estimates</li> </ul>	<ul style="list-style-type: none"> <li>Mature management approaches</li> <li>Large quantity and quality of fishery dependent data (i.e. high-resolution VMS data used to describe fishing activity)</li> <li>Highly engaged fishing industry that supports scallop science and management.</li> <li>Fishery is distributed across many ports from Maine to North Carolina.</li> <li>Industry typically sees high net profit margins</li> <li>Cultural significant seafood product for the region</li> </ul>	<ul style="list-style-type: none"> <li>Wide, geographic range of suitable habitat</li> <li>Suitable habitat on Georges Bank appears more resilient to rising ocean temperatures</li> </ul>
<b>Weaknesses</b>	<ul style="list-style-type: none"> <li>Vulnerable to growth-overfishing (being caught before they reach their full size, leading to lower yields)</li> <li>Biologically vulnerable to both warming temperatures and acidification, but more research is needed to understand future impact</li> <li>Sedentary species, and highly limited by settlement location (high growth when larvae settle in suitable habitat, low/no growth if larvae settle in unsuitable habitat)</li> </ul>	<ul style="list-style-type: none"> <li>Recent application of rotational management may have led to negative outcomes for the fishery in access areas</li> <li>Some fishing practices, such as high-grading, lead to increased mortality of small scallops</li> <li>Dependent on strong recruitment events</li> <li>Dependent on substantial proportion of total biomass in areas that are closed to fishing</li> <li>Bycatch of other Council-managed species</li> </ul>	<ul style="list-style-type: none"> <li>Suitable habitat is patchy in distribution</li> <li>Knowledge gap around the relationship between environment and recruitment dynamics</li> </ul>
<b>Opportunities</b>	<ul style="list-style-type: none"> <li>Scallop resource enhancement could be used to supplement natural recruitment</li> </ul>	<ul style="list-style-type: none"> <li>Scallop Research Set-Aside program has the capacity to support research needs</li> <li>Electronic monitoring</li> </ul>	<ul style="list-style-type: none"> <li>Emerging technologies for predator control</li> <li>Gear innovations to reduce incidental mortality and bycatch</li> </ul>
<b>Threats</b>	<ul style="list-style-type: none"> <li>Predators</li> <li>Parasites (<i>Nematodes/Sulcascaris sulcata</i>)</li> <li>Disease (Grey meats/<i>apicomplexan</i> sp./mycobacteria)</li> <li>Bycatch and mortality (discard/incidental) of small scallops</li> </ul>	<ul style="list-style-type: none"> <li>Irregular recruitment, periods of low and below average recruitment</li> </ul>	<ul style="list-style-type: none"> <li>Warming bottom sea temperatures, and a contraction of thermally suitable habitat in the southern and inshore areas of the Mid-Atlantic</li> <li>Changing oceanographic patterns and general uncertainty</li> <li>Increasing prevalence of <i>Astropectin</i> sea stars, a predator of scallop spat, moving into shallower waters of Mid-Atlantic</li> </ul>



# 1 OBJECTIVE: IMPROVE MANAGEMENT CAPACITY, FLEXIBILITY, AND RESPONSIVENESS IN A CHANGING ENVIRONMENT

**Strategy 1.1 - Increase the capacity for and use of real-time data collection and monitoring in management, including industry-collected data, VTRs, auction data, LPUE, and other data sources.**

Possible management measures	None expected
Management action required	None expected
Type of NEPA analysis expected (CE/SIR/EA/EIS)	None expected
Possible analyses	Support independent efforts to create a uniform, efficient reporting platform for industry-collected data
	Continue support for current industry-based data collection, including the Pilot Research Fleet and ScalApp projects
	Develop QA/QC standards for industry-collected data for use in management decision-making
	Create a decision-support tool to communicate data more effectively
Data or research needs	None
Work led by	Scallop PDT and RSA
Expected duration of work	Long-term
Potential challenges	Potential data sharing challenges that could require data-use agreements
Ongoing work	Scallop PDT use of auction data and real-time LPUE information in decision making.
	Commercial Fisheries Research Foundation (CFRF) ongoing RSA-funded project is expanding image-based research fleet for LAGC and LA scallop vessels to collect fishery-dependent biological data.
Other notes	None

**Strategy 1.2 - Develop a Management Strategy Evaluation model based on an understanding of scallop population dynamics, biological and oceanographic conditions, and fishery behaviors to inform Best Management Practices, including addressing ocean use conflict (e.g., offshore wind farms) changing resource distribution (e.g., related to climate change), and allocation scenarios (e.g., consolidated fishing fleets).**

<b>Possible management measures</b>	None expected
<b>Management action required</b>	None expected
<b>Type of NEPA analysis expected (CE/SIR/EA/EIS)</b>	None expected
<b>Possible analyses</b>	Define scope of the MSE model
	Review existing MSE models used in other regions
<b>Data or research needs</b>	Social science data (conceptual modeling) to understand fishery behavior, scallop species distribution model, oceanographic model.
<b>Work led by</b>	Outside contractor and reviewed by Scallop PDT and SSC, conceptual modeling would involve industry engagement.
<b>Expected duration of work</b>	Unknown
<b>Potential challenges</b>	Unknown
<b>Ongoing work</b>	None
<b>Other notes</b>	None

**Strategy 1.3 - Separate management of the Mid-Atlantic and Georges Bank resources, with individual OFL/ABCs and DAS separately allocated.**

<b>Possible management measures</b>	Allocate Limited Access DAS in the Mid-Atlantic separately from Georges Bank, with or without trading of DAS.
	Revise Scallop ABC control rule to allow for separate OFL and ABC for Georges Bank and Mid-Atlantic for setting annual specifications.
<b>Management action required</b>	Framework or Amendment
<b>Type of NEPA analysis expected (CE/SIR/EA/EIS)</b>	EA or EIS
<b>Possible analyses</b>	Evaluate ability to set catch based on Mid-Atlantic and Georges Bank references points separately within current regulations
	Develop method to track DAS separately between the Mid-Atlantic and Georges Bank
<b>Data or research needs</b>	Unknown
<b>Work led by</b>	Scallop PDT and reviewed by SSC
<b>Expected duration of work</b>	1-2 years
<b>Potential challenges</b>	Increased monitoring and enforcement challenges, decreased flexibility for industry to focus on high-CPUE areas
<b>Other notes</b>	Regional biological reference points for Georges Bank and Mid-Atlantic stocks was a recommendation made by the Peer-Review Panel of the 2025 Research Track Assessment.

**Strategy 1.4 - Streamline the annual specifications setting process to increase capacity for addressing other fishery management challenges.**

<b>Possible management measures</b>	Unknown
<b>Management action required</b>	Unknown
<b>Type of NEPA analysis expected (CE/SIR/EA/EIS)</b>	Unknown
<b>Possible analyses</b>	Evaluate available tools within the Scallop FMP, including setting 2-year specifications with 3 <sup>rd</sup> year default, and using a Supplemental Information Report (SIR) for annual specifications actions
	Review Amendment 19 guidance on approved methods to update annual scallop specifications in a streamlined manner
	Hold a Scallop PDT meeting each year after final action of the annual specifications that is focused on improving August PDT data meeting and products produced. This could include evaluating how the PDT has addressed certain issues such as discrepancies in the survey estimates and localized high density areas. Final products could include a document of past Scallop PDT data treatment decisions and performance, an evaluation of the perceived impact of the decision, and recommendations for future scenarios.
<b>Data or research needs</b>	None
<b>Work led by</b>	Council staff
<b>Expected duration of work</b>	< 1 year
<b>Potential challenges</b>	Streamlining or reducing the frequency of specifications could increase uncertainty and hinder performance of annual harvest allocations.
<b>Ongoing work</b>	Omnibus Management Flexibility Action includes alternatives that would increase the maximum specification frequency to up to 5 years.
<b>Other notes</b>	The Scallop FMP currently allows the Council to set scallop fishery specifications under a specifications process and does not require development of a framework adjustment action.



## Strategy 1.5 - Develop tools within the Scallop FMP to allow for in-season management

Possible management measures	Allow for closures of access areas based on a pre-defined trigger, such as LPUE.
Management action required	Framework or Amendment
Type of NEPA analysis expected (CE/SIR/EA/EIS)	EA
Possible analyses	Review in-season management tools used in other FMPs, such as Atlantic Herring
	Evaluate measures that would improve management outcomes by being implemented quickly in-season, such as closures of access areas or opening of rotational closures
	Evaluate monitoring tools that can be used in-season or other data sources that could provide additional data to support in-season management decisions
Data or research needs	Real-time fishery dependent and independent data to validate and inform application of an in-season adjustment trigger
Work led by	Scallop PDT
Expected duration of work	1 year
Potential challenges	Limited resources to develop fast-moving, short-term data collection processes to inform in-season management decisions.
Ongoing work	Omnibus Management Flexibility Action includes an alternative that would provide in-season adjustment authority to NMFS for all the Council's FMPs. Various options under this alternative would allow in-season adjustments to ACLs/sub-ACLs and other specifications, or expand the provision to also allow adjustments to measures identified under specifications by each FMP.
Other notes	Consider alongside Strategy 1.1 - Increase the capacity for and use of real-time data collection and monitoring in management, including industry-collected data, VTRs, auction data, LPUE, and other data sources.

**Strategy 1.6 - Revise the Limited Access DAS carryover provision to reduce uncertainty in open-bottom harvest.**

<b>Possible management measures</b>	Reduce carryover provision from 10 DAS to 5 DAS.
	Set carryover DAS to a proportion of the annual DAS allocation.
<b>Management action required</b>	Framework
<b>Type of NEPA analysis expected (CE/SIR/EA/EIS)</b>	EA
<b>Possible analyses</b>	Evaluate DAS carried over in recent years and the resulting amount of catch relative to annual projections of open-bottom landings.
<b>Data or research needs</b>	Time series of total DAS used, carried over, and forfeited
<b>Work led by</b>	Scallop PDT
<b>Expected duration of work</b>	Could be completed within annual Framework action
<b>Potential challenges</b>	None
<b>Ongoing work</b>	None
<b>Other notes</b>	None

**Strategy 1.6 – Disperse fishing effort in high-density areas to reduce incidental mortality and vessel crowding.**

<b>Possible management measures</b>	Consider a trip limit on directed scallop trips fishing on a DAS
<b>Management action required</b>	Framework
<b>Type of NEPA analysis expected (CE/SIR/EA/EIS)</b>	EA
<b>Possible analyses</b>	Evaluate the effect of an open-bottom trip limit on fishing practices, such as high-grading
	Develop an appropriate open-bottom trip limit
<b>Data or research needs</b>	Evaluation of management of high-density areas of other shellfish stocks
<b>Work led by</b>	Scallop PDT
<b>Expected duration of work</b>	1 year
<b>Potential challenges</b>	None
<b>Ongoing work</b>	None
<b>Other notes</b>	None

## 2 Objective: IMPROVE THE RELIABILITY OF ANNUAL PROJECTIONS OF SCALLOP BIOMASS AND ABUNDANCE

**Strategy 2.1 - Evaluate Scallop Area Management Simulator (SAMS) model performance and associated uncertainty.**

Possible management measures	None expected
Management action required	None expected
Type of NEPA analysis expected (CE/SIR/EA/EIS)	None expected
Possible analyses	Review projection model performance (e.g. realized fishing mortality vs. projected fishing mortality by SAMS area) using historical survey data and up-to-date CASA model parameters to evaluate degree to which recent CASA model parameters improve SAMS model performance
	Evaluate ways to reduce the uncertainty around the projections of access area biomass and abundance in the first and final years of rotational access.
	Review realized fishing mortality relative to projected fishing mortality for each SAMS area
Data or research needs	None
Work led by	Scallop PDT
Expected duration of work	< 6 months
Potential challenges	None
Ongoing work	Scallop PDT annually prepares plot of projection performance by region for the SSC.
Other notes	

**Strategy 2.2 - Continue development of next generation, GeoSAMS projection model to allow for more flexible and precise projections.**

<b>Possible management measures</b>	None expected
<b>Management action required</b>	None expected
<b>Type of NEPA analysis expected (CE/SIR/EA/EIS)</b>	None expected
<b>Possible analyses</b>	None
<b>Data or research needs</b>	None
<b>Work led by</b>	NEFSC, outside contractor and reviewed by Scallop PDT and SSC
<b>Expected duration of work</b>	Unknown, dependent on NEFSC and/or outside contractor resources.
<b>Potential challenges</b>	Limited funding for outside contractor
<b>Ongoing work</b>	GeoSAMS development halted in early 2025. The status of the model is nearly operational.
<b>Other notes</b>	Funding and project manager (NEFSC or NEFMC) will need to be identified for GeoSAMS external contract

**Strategy 2.3 - Establish a small-scale survey of access areas each year to provide additional data on the resource prior to the start of the fishing year on April 1.**

<b>Possible management measures</b>	None expected
<b>Management action required</b>	None expected
<b>Type of NEPA analysis expected (CE/SIR/EA/EIS)</b>	None expected
<b>Possible analyses</b>	Identify potential funding sources for these surveys
	Evaluate capacity for novel monitoring tools to complete pre-season data-collection, such as the NEFSC AUV.
	Evaluate how data would be used (e.g. inform potential in-season adjustment if biomass declined below pre-determined threshold).
	Evaluate ability to collect additional oceanographic information, such as bottom water temperature.
<b>Data or research needs</b>	None
<b>Work led by</b>	NEFSC or RSA-funded surveys
<b>Expected duration of work</b>	Unknown, dependent on NEFSC or RSA-funded expertise and resources
<b>Potential challenges</b>	Limited resources (funding, staff time), and difficulty timing survey field work and analysis with sufficient time to make necessary changes before the start of the fishing year.
<b>Ongoing work</b>	None
<b>Other notes</b>	Consider alongside Strategy 2.4 - Increase the capacity for and use of real-time data collection and monitoring in management, including industry-collected data, VTRs, auction data, LPUE, and other data sources. Use of dredge survey would allow for additional observations of shell height/meat weight and meat quality.

**Strategy 2.4 - Increase survey effort at the end of an area's rotational cycle to reduce projection uncertainty.**

<b>Possible management measures</b>	Modify language of the RSA priority on surveys to explicitly encourage increased survey effort in access areas that the Scallop PDT considers likely to close in the upcoming year.
<b>Management action required</b>	None expected
<b>Type of NEPA analysis expected (CE/SIR/EA/EIS)</b>	None expected
<b>Possible analyses</b>	Retrospective assessment of projection uncertainty and divergence of projection and survey estimates in the terminal year of an access area's rotational cycle.
<b>Data or research needs</b>	Survey time series, SAMS projections
<b>Work led by</b>	Scallop PDT, NEFSC and RSA-funded surveys
<b>Expected duration of work</b>	Short term change made during 2-year RSA priority setting process
<b>Potential challenges</b>	None
<b>Ongoing work</b>	None
<b>Other notes</b>	Consider alongside Strategy 2.3 - Establish a small-scale survey of access areas each year to provide additional data on the resource prior to the start of the fishing year on April 1.

### 3 OBJECTIVE: EXPAND OPPORTUNITIES IN THE NORTHERN GULF OF MAINE (NGOM) FISHERY WHILE MAINTAINING CONSERVATIVE MANAGEMENT APPROACHES

#### Strategy 3.1 - Extend the length of the NGOM season.

Possible management measures	Limit LAGC A/C to LAGC B transfers to reduce additional participation, including implementation of a catch history qualification for permit transfers.
	Limit the NGOM fishery to 1 trip per day (currently 1 landing per day).
Management action required	Framework or Amendment
Type of NEPA analysis expected (CE/SIR/EA/EIS)	EA or EIS
Possible analyses	Evaluate appropriate fishing mortality rates considering the size of the area fishing is expected to occur.
	Discuss measures to improve fishing practices and overall enforcement of the NGOM.
	Review current LAGC A/C to B transfer patterns and evaluate the rate of new entrants via transfers.
	Review growing proportion of NGOM set-aside harvested by IFQ permit holders or LA vessels with multiple permits
Data or research needs	Social science data (fishery conceptual model)
Work led by	Scallop PDT
Expected duration of work	6 months
Potential challenges	Difficulty in expanding opportunities while maintaining/extending length of the season.
Ongoing work	None
Other notes	Consider alongside Strategy 3.2 (Encourage greater dispersion of scallop fishing effort within the NGOM management area to areas other than Stellwagen Bank) and Strategy 10.1 (Reduce Bycatch and Habitat Impacts).



**Strategy 3.2 - Encourage greater dispersion of scallop fishing effort within the NGOM management area to areas other than Stellwagen Bank.**

<b>Possible management measures</b>	Partition the NGOM area into two or more sub-units with separate TALs and set-asides
<b>Management action required</b>	Framework or Amendment
<b>Type of NEPA analysis expected (CE/SIR/EA/EIS)</b>	EA or EIS
<b>Possible analyses</b>	Evaluate historical VMS and survey data, including ME/NH Inshore Trawl Survey data
	Identify potential boundaries to use for partitioning
	Evaluate any biological difference between sub-units that may require different management techniques
	Consider enforcement challenges in managing new sub-units
<b>Data or research needs</b>	NGOM fishery enforcement, safety, and compliance data.
<b>Work led by</b>	Scallop PDT
<b>Expected duration of work</b>	1 year
<b>Potential challenges</b>	Partitioning the NGOM area may reduce flexibility of vessels to target highest densities of large scallops and force effort into less productive areas with lower catch rates, increasing area swept.
<b>Ongoing work</b>	None
<b>Other notes</b>	Consider including regulations to ensure shell stock cannot be moved outside of a given management area.

**Strategy 3.3 – Maintain opportunities for NGOM-permitted vessels while allowing orderly access to the NGOM scallop resource by the LAGC and LA components**

<b>Possible management measures</b>	Implement owner-operator requirement for NGOM-permitted vessels
	Implement a 200-pound possession limit for all directed-scallop trips in the NGOM management unit, excluding vessels fishing exclusively in state waters
<b>Management action required</b>	Framework
<b>Type of NEPA analysis expected (CE/SIR/EA/EIS)</b>	EA
<b>Possible analyses</b>	Unknown
<b>Data or research needs</b>	None
<b>Work led by</b>	Scallop PDT. Work should involve communication with NOAA OLE.
<b>Expected duration of work</b>	< 1 year
<b>Potential challenges</b>	Current trigger for NGOM TAL-sharing (800,000 lb) may only allow for infrequent access to Limited Access-permitted vessels.
<b>Ongoing work</b>	None
<b>Other notes</b>	Orderly access to the scallop resource in the NGOM by both LAGC and LA vessels is a specified objective of Amendment 21. Prioritizing enforcement of dredge width restrictions and daily limits would benefit orderly access to the NGOM resource. Strategy 3.2 (Encourage greater dispersion of scallop fishing effort within the NGOM management area to areas other than Stellwagen Bank.) would likely reduce crowding of vessels on Stellwagen Bank.

## 4 OBJECTIVE: IMPROVE ROTATIONAL MANAGEMENT PERFORMANCE AND ACCESS AREA FISHING OPPORTUNITIES

### Strategy 4.1 - Improve stability of harvest from access areas.

Possible management measures	Create a number of small, spatially dispersed spawning closures to maintain adequate recruitment throughout the resource.
	Maintain rotational closures for a minimum of 3 years to ensure sufficient growth and reproduction.
	Consider frequency of area rotation and/or implement a maximum number of years that an access area can be allocated.
	Implement a maximum time limit on access area trips.
	Implement a maximum number of vessels in an access area at one time and/or lower trip possession limits to improve scallop quality, price, and vessel safety.
	Implement a one-year closure for any access area that, after being allocated to the fishery, no longer meets the criteria for rotational harvest.
Management action required	Framework or Amendment
Type of NEPA analysis expected (CE/SIR/EA/EIS)	EA
Possible analyses	Identify how closed areas would be assessed for re-opening at the end of their one-year closure
	Identify optimal size, scallop density, and location for spawning closures to maximize recruitment
	Analyze the effect of access area trip time limits on fishing practices and trip costs.
	Evaluate rotational management practices under low scallop biomass conditions
	Identify management scenarios that have led to over/under allocation and consider mitigating strategies.
	Analyze risk of safety concerns from access area time limits
Data or research needs	Survey time series, annual SAMS model projections, annual allocation decisions, fishery performance, social science data
Work led by	Scallop PDT

<b>Expected duration of work</b>	1-2 years
<b>Potential challenges</b>	3-year rotational closures should consider challenges of elevated natural mortality, particularly in Year 2.
<b>Ongoing work</b>	None
<b>Other notes</b>	Consider Strategy 2.1 (Evaluate SAMS model performance and associated uncertainty)

#### **Strategy 4.2 - Reconsider development of an access area on the Northern Edge**

<b>Possible management measures</b>	Reprioritize and continue work on the development of a Scallop access area in the Closed Area II Habitat Closure Area on the Northern Edge of Georges Bank.
<b>Management action required</b>	Framework
<b>Type of NEPA analysis expected (CE/SIR/EA/EIS)</b>	EA
<b>Possible analyses</b>	Review analysis of the Joint Scallop and Habitat framework that was discontinued by the Council in June 2024 and evaluate next steps
<b>Data or research needs</b>	
<b>Work led by</b>	Scallop PDT
<b>Expected duration of work</b>	1-2 years
<b>Potential challenges</b>	Access to the Northern Edge for directed scallop fishing may require mitigation. Closed Area II Habitat Closure Area is only protected juvenile cod habitat for the Georges Bank Atlantic cod stock.
<b>Ongoing work</b>	None
<b>Other notes</b>	Joint Scallop/Habitat Framework initiated “to establish a scallop rotational harvest program within and/or around the Closed Area II Habitat Closure Area...” was discontinued by the NEFMC in June 2024.

## 5 OBJECTIVE: IMPROVE FISHING PRACTICES TO MINIMIZE INCIDENTAL SCALLOP MORTALITY, BYCATCH, AND IMPACTS ON HABITAT AND PROTECTED RESOURCES

**Strategy 5.1 - Improve scallop industry compliance around best fishing practices through outreach and education efforts.**

Possible management measures	None expected
Management action required	None expected
Type of NEPA analysis expected (CE/SIR/EA/EIS)	None expected
Possible analyses	Develop a plain language outreach document on best fishing practices
	Hold an industry workshop to discuss best fishing practices
Data or research needs	None
Work led by	Scallop PDT/Council staff, with close involvement with Scallop Advisory Panel and industry groups.
Expected duration of work	3 months
Potential challenges	None
Ongoing work	None
Other notes	None

**Strategy 5.2 - Increase size selectivity using gear modifications to reduce catch of juvenile scallops.**

<b>Possible management measures</b>	Increase the minimum ring size (>4") on access area and/or NGOM trips
	Remove gear restrictions to allow use of modified cutting bars or other novel gear modifications informed by RSA-funded projects
<b>Management action required</b>	Framework
<b>Type of NEPA analysis expected (CE/SIR/EA/EIS)</b>	EA
<b>Possible analyses</b>	Identify cost burden of various gear modifications for scallop vessels
	Analyze effect of increased ring size on selectivity, LPUE, and swept area.
	Assess habitat and protected species impacts of proposed gear modifications
<b>Data or research needs</b>	None
<b>Work led by</b>	Scallop PDT
<b>Expected duration of work</b>	6 months
<b>Potential challenges</b>	Limited ability to enforce gear modifications or fishing practices.
<b>Ongoing work</b>	2025 RSA-funded project by CFRF aims to test a 4.25" ring for reducing catch of small scallops and sand dollars in high-density areas.
<b>Other notes</b>	Consider alongside Strategy 5.3 - Increase use of other gear modifications.

### Strategy 5.3 - Increase use of other gear modifications.

Possible management measures	Encourage or require tensiometers on access area trips to allow for more feedback on dredge bag fullness to reduce excessive tow times
Management action required	Framework
Type of NEPA analysis expected (CE/SIR/EA/EIS)	EA
Possible analyses	Review existing data on tensiometer use and its effects on tow time, catch efficiency, and discard rates
	Engage industry participants on various gear modifications to gather feedback and assess feasibility
	Identify cost burden and benefits of various gear modifications for scallop vessels
	If non-voluntary, consider feasibility of implementation, enforcement, and monitoring.
Data or research needs	None
Work led by	Scallop PDT
Expected duration of work	6 months – 1 year
Potential challenges	Limited ability to enforce gear modifications or fishing practices.
Ongoing work	2024 Coonamessett Farm Foundation RSA-funded research project is assessing use of tensiometers and other dredge bag configurations.
Other notes	Consider alongside Strategy 5.2 - Increase size selectivity using gear modifications to reduce catch of juvenile scallops. This strategy may be better suited for industry-led action and/or outreach, rather than an NEFMC management action.

**Strategy 5.4 - Regulate best fishing practices, such as restrictions on high-grading, deck-loading, and excessive tow-times, and monitoring using deck cameras as part of an electronic monitoring (EM) program.**

<b>Possible management measures</b>	Develop regulations or incentives to support a voluntary, industry-led EM program
	Develop an EM program to be managed and supported by the Greater Atlantic Regional Fisheries Office
<b>Management action required</b>	Framework
<b>Type of NEPA analysis expected (CE/SIR/EA/EIS)</b>	EA
<b>Possible analyses</b>	Identify cost burden and indirect behavioral impacts on fishing vessels.
	Identify potential funding sources
	Evaluate capacity of scallop industry or GARFO to administer an EM program
<b>Data or research needs</b>	Consider incentive structures used in other fisheries, such as Bering Sea pollock.
<b>Work led by</b>	Scallop PDT or outside contractor
<b>Expected duration of work</b>	1 year
<b>Potential challenges</b>	Very limited ability to enforce gear modifications, fishing practices. Use of voluntarily collected EM may pose data sharing challenges that could require data-use agreements.
<b>Ongoing work</b>	None
<b>Other notes</b>	Consider alongside Strategy 5.3 – Increase use of other gear modifications.



### Strategy 5.5 - Reduce bycatch and habitat impacts from scallop dredging.

Possible management measures	Develop measures to reduce impacts on sand lance within the Stellwagen Bank National Marine Sanctuary
	Develop and improve upon current scallop fishery accountability measures to reduce catch of flatfish stocks that the scallop fishery has a sub-ACL for.
Management action required	Framework
Type of NEPA analysis expected (CE/SIR/EA/EIS)	EA
Possible analyses	Increase the level of the RSA priorities for 'Bycatch', 'Gear Research', and 'Habitat Characterization and Fishery Impact' to further incentivize research, development, and evaluation of gear and technology to reduce bycatch and habitat impacts
Data or research needs	Any available data for evidence of bycatch of sand lance within the Stellwagen Bank National Marine Sanctuary, in addition to sand lance habitat distribution and timing of seasonal vulnerability based on life history stage.
Work led by	Scallop PDT
Expected duration of work	1 year
Potential challenges	None
Ongoing work	None
Other notes	None

## 6 OBJECTIVE: MAINTAIN THE ECONOMIC VIABILITY OF THE SCALLOP FLEET

**Strategy 6.1 - Develop lower-cost tools, potentially including an EM program, to meet the industry's observer requirement and collect biological and discard data.**

Possible management measures	None expected
Management action required	None expected
Type of NEPA analysis expected (CE/SIR/EA/EIS)	None expected
Possible analyses	Evaluate current status of EM technology to provide an alternative to human observers Analyze the cost of an EM program for the scallop fishery relative to the current Industry-Funded Scallop Observer Program
Data or research needs	None
Work led by	Scallop PDT, RSA-funded research, NEFSC Observer Program
Expected duration of work	1-2 years
Potential challenges	Limited resources to pay for EM technology, NEFSC staffing constraints to staff and oversee program
Ongoing work	None
Other notes	None

## Strategy 6.2 - Allow for consolidation of the Limited Access fleet.

Possible management measures	Allow for two Limited Access permits of the same type to be stacked on a single vessel.
	Initiate a permit buy-back
Management action required	Framework or Amendment
Type of NEPA analysis expected (CE/SIR/EA/EIS)	EA or EIS
Possible analyses	Review and update analyses done in support of permit stacking measures in Amendment 15
	Analyze potential long-term consequences on fishery specialization and loss of smaller fishing operations.
Data or research needs	None
Work led by	Scallop PDT
Expected duration of work	1-2 years
Potential challenges	Mixed scallop industry sentiment for allowing Limited Access fleet to consolidate permits. Limited resources to fund permit buy-back.
Ongoing work	None
Other notes	Development of management measures for Limited Access permit stacking could build on previous analysis in support of Amendment 15. Development of management measures for Limited Access leasing could build on previous analysis in support of the NEFMC scoping for a Limited Access leasing program in 2022.

## 7 OBJECTIVE: MAINTAIN A DYNAMIC SCALLOP RESEARCH SET-ASIDE (RSA) PROGRAM TO FUND SCALLOP RESEARCH AND RESOURCE SURVEYS

**Strategy 7.1 - Expand the RSA set-aside for Gulf of Maine-focused research projects and surveys.**

Possible management measures	Increase the NGOM contribution of the RSA set-aside above 25,000 lb.
Management action required	Framework
Type of NEPA analysis expected (CE/SIR/EA/EIS)	EA
Possible analyses	Evaluate capacity and need for additional Gulf of Maine-focused research and surveys to provide a target RSA set-aside contribution from the NGOM TAL.
Data or research needs	None
Work led by	Scallop PDT
Expected duration of work	< 6 months
Potential challenges	None
Ongoing work	None
Other notes	Consider allowing a percentage of the unharvested TAC roll into RSA quota.

## Strategy 7.2 - Expand industry participation in RSA research and compensation fishing.

Possible management measures	Implement cap on RSA compensation pounds that can be fished by a single permit.
Management action required	Framework
Type of NEPA analysis expected (CE/SIR/EA/EIS)	EA
Possible analyses	Identify any barriers to industry participation in the RSA program.
	Evaluate if the effect of individual caps on RSA compensation pounds could promote greater industry participation.
	Evaluate the number of vessels that RSA recipients have worked with, as well as their capacity to work with a larger number of vessels (i.e. increased costs of additional contract management).
	Evaluate participation in RSA-funded research and compensation fishing over time.
Data or research needs	Input from RSA recipients and a representative subset of the scallop industry to understand capacity and challenges.
Work led by	Scallop PDT, GARFO Cooperative Research. Work should involve GARFO Grants Office and RSA recipients.
Expected duration of work	< 6 months
Potential challenges	None
Ongoing work	None
Other notes	None

**Strategy 7.3 - Ensure equity between scallop industry partners with access to RSA compensation pounds and those without, while maintaining sufficient support for RSA-funded surveys and research.**

<b>Possible management measures</b>	If/when the standard RSA set-aside (1.275 million lb) reaches a set percentage of the directed fishery allocation, reduce the RSA set-aside to the minimum amount necessary to support annual resource surveys.
	Prohibit RSA compensation fishing in access areas during the first and final years that an access area is available to the directed fishery.
<b>Management action required</b>	Framework
<b>Type of NEPA analysis expected (CE/SIR/EA/EIS)</b>	EA
<b>Possible analyses</b>	Evaluate the minimum set-aside required to sustain annual surveys and research and discuss the minimum survey requirements.
	Analyze trade-offs of limiting RSA compensation fishing in access areas for generating RSA research funding.
<b>Data or research needs</b>	Number of affiliates and vessels participating in RSA-funded research by permit type, number of affiliates and vessels receiving RSA-compensation pounds by permit type.
<b>Work led by</b>	Scallop PDT
<b>Expected duration of work</b>	1 year
<b>Potential challenges</b>	Limiting the RSA set-aside may reduce funding for research with potential benefits to the scallop fishery. Limiting RSA compensation fishing may disincentivize harvesting available pounds, thereby reducing available funding for RSA-funded projects.
<b>Ongoing work</b>	None
<b>Other notes</b>	None

## 8 OBJECTIVE: DEVELOP THE REGULATORY, MANAGEMENT, AND FUNDING INFRASTRUCTURE TO SUPPORT A SCALLOP ENHANCEMENT PROGRAM

**Strategy 8.1 - Form a working group to identify appropriate areas for spat collection and settlement, develop best practices, and identify regulatory hurdles.**

Possible management measures	Designate a management area that would be closed to directed fishing and allow for long-term scallop enhancement work.
	Revise or remove identified regulations that limit or prevent scallop enhancement work in federal waters.
Management action required	None required, but may result in management measures
Type of NEPA analysis expected (CE/SIR/EA/EIS)	If resulting in management measures, an EA may be required
Possible analyses	Develop a white paper identifying suitable areas for spat collection and settlement and defining best practices for scallop enhancement work.
	Identify the regulations to revise or remove that limit or prevent scallop enhancement work in federal waters.
	Evaluate the necessary scale of scallop enhancement to provide a meaningful return to the scallop fishery.
Data or research needs	Develop an ecological-relevant threshold for removal of key scallop predators, including sea stars and Jonah crab
	Assess the utility of predator control methods to reduce juvenile scallop mortality while limiting negative ecological and habitat impacts
Work led by	Scallop PDT
Expected duration of work	1-2 years
Potential challenges	None
Ongoing work	None
Other notes	Consider the Virginia Institute of Marine Science (VIMS) RSA-funded workshop on scallop enhancement ( <a href="#">White Paper</a> )

**Strategy 8.2 - Create a separate set-aside as a long-term source of funding for scallop enhancement projects.**

<b>Possible management measures</b>	Develop a Scallop Enhancement set-aside to fund EFPs for work to enhance the federal scallop resource in accordance with goals and objectives defined by the Council.
<b>Management action required</b>	Framework
<b>Type of NEPA analysis expected (CE/SIR/EA/EIS)</b>	EA
<b>Possible analyses</b>	Evaluate funding needs for a pilot scallop enhancement program
	Evaluate scope of scallop enhancement work to be addressed via pilot program (e.g. funding predator removal efforts).
<b>Data or research needs</b>	None
<b>Work led by</b>	Scallop PDT
<b>Expected duration of work</b>	1 year
<b>Potential challenges</b>	Long-term funding needs for enhancement projects could become burdensome during years with decreased fishery allocations
<b>Ongoing work</b>	None
<b>Other notes</b>	Consider the Virginia Institute of Marine Science (VIMS) RSA-funded workshop on scallop enhancement ( <a href="#">White Paper</a> )



## 9 OBJECTIVE: IMPROVE SCALLOP INDUSTRY ENGAGEMENT AT MEETINGS OF THE COUNCIL'S SCALLOP PLAN DEVELOPMENT TEAM, ADVISORY PANEL, AND COMMITTEE

**Strategy 9.1- Increase outreach to members of the scallop industry that are not represented on or are unaware of the Scallop Advisory Panel.**

Possible management measures	None expected
Management action required	None expected
Type of NEPA analysis expected (CE/SIR/EA/EIS)	None expected
Possible analyses	Develop and distribute a plain-language overview of the Scallop Advisory Panel's role, how it influences management decisions, and how to get involved
	Leverage input of industry members to identify barriers to participation
	Create an outreach list of underrepresented industry members/groups
Data or research needs	Scallop industry input
Work led by	Council staff
Expected duration of work	< 6 months
Potential challenges	None
Ongoing work	None
Other notes	None