Atlantic Sea Scallop Fishery Management Plan
Framework Adjustment 37

Northeast Multispecies Fishery Management Plan
Framework Adjustment 67

Skate Complex Fishery Management Plan
Framework Adjustment 11

Atlantic Herring Fishery Management Plan
Framework Adjustment 11

Monkfish Fishery Management Plan
Framework Adjustment 16

Including an Environmental Assessment,
Regulatory Flexibility Analysis, and
Stock Assessment and Fishery Evaluation

DRAFT
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Responsible Agencies: New England Fishery Management Council
50 Water Street, Mill #2
Newburyport, MA  01950

National Marine Fisheries Service
National Oceanic and Atmospheric Administration
U.S. Department of Commerce
Washington, D.C. 20235

For Further Information: Thomas A. Nies, Executive Director
New England Fishery Management Council
50 Water Street, Mill #2
Newburyport, Massachusetts 01950
Phone: (978) 465-0492
Fax: (978) 465-3116

Abstract: The New England Fishery Management Council, in consultation with NOAA’s National Marine Fisheries Service, has prepared Framework Adjustment to the Atlantic Sea Scallop, Northeast Multispecies, Skate Complex, Atlantic Herring, and Monkfish Fishery Management Plans, which includes a final environmental assessment that presents the range of alternatives to achieve the goals and objectives of the action. The proposed action focuses on ????. The document describes the affected environment and valued ecosystem components and analyzes the impacts of the alternatives on both. It addresses the requirements of the Magnuson Stevens Fishery Conservation and Management Act, the National Environmental Policy Act, the Regulatory Flexibility Act, and other applicable laws.
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3.0 ALTERNATIVES UNDER CONSIDERATION

3.1 ACTION 1 – HABITAT PROTECTION MEASURES

Action 1 develops spatial approaches to manage fishing activity on the Northern Edge of Georges Bank, within and outside the Closed Area II Habitat Closure Area. Alternatives include areas for habitat protection and scallop fishery access. There may be parts of the Closed Area II Habitat Closure that are not in Habitat Protection Zones or Scallop Rotational Areas.

3.1.1 Alternative 1 - No Action

Under Alternative 1 (No Action), there would be no specific portions of the Closed Area II Habitat Closure set aside where scallop access would be prohibited, beyond the mobile bottom-tending gear restrictions already in place. Also, a specific rotational interval would not be established. Access areas, if established under Action 2, would be opened periodically in relation to scallop biomass and length frequency data, in keeping with the overall rotational access program for the fishery.

Access to rotational areas and annual allocations are based on survey biomass estimates (abundance of small and harvestable scallops, recruitment events, etc.) and what an access area can support in terms of number of trips and possession limits. For context, in Closed Area I (CAI), vessels were not provided access area allocations in 2015 – 2017, were provided annual allocations in 2018-2020, however, due to the lower survey biomass estimates, no allocations were provided to the limited access vessels in 2021 (only the General Category IFQ fishery received an allocation). In CAII, vessels did not receive annual access area allocations in 2015-2016, were allowed to make one trip to the area in 2017, did not receive any allocation in 2018-2019, and were permitted 1-1.5 trips in 2020 and 2021, respectively. Examples of other rotational intervals can be found in Table 5 of the “Evaluation of the Atlantic Sea Scallop Rotational Management Program” white paper (2022).

3.1.2 Alternative 2 – Habitat Protection Zone(s)

Under Alternative 2, portions of the Closed Area II Habitat Closure would be set aside as habitat protection zones where no rotational access areas would be defined and no scallop access fishing could occur. These areas are expected to be highly vulnerable to the impacts of dredging. Setting a buffer around these vulnerable habitat types would further minimize the impacts of scallop dredging on habitats in the protection areas. This distance would reflect both habitat impact/recovery and enforcement considerations to help ensure fishing does not occur within the Habitat Protection Zones and that impacts to habitat are minimized.

The Council’s Enforcement Policy (2023) states that enforceable regulations are simple and easy to understand, as few as possible, accountable and traceable fish throughout the wholesale process, and supported by appropriate penalties. For closed areas, the policy recommends using exact latitude/longitude and straight lines; using regular shaped areas (e.g., square or rectangle shaped); designating large closed areas vs small closed areas with open areas in between, however, given new scallop fishing grounds would be newly opened under this alternative, there may be less incentive to violate any closed areas; avoiding temporary, short-term closures; and prohibiting transiting fishing vessels where practical or require gear stowage and continuous transiting. The Enforcement Committee will be consulted to specifically understand minimum boundaries around Habitat Protection Zones that could be enforced.

Rationale: Habitats within the Closed Area II Habitat Closure Area are heterogeneous and the biological and geological features of those habitats are not uniformly vulnerable to fishing. This alternative clearly
delineates these more vulnerable areas and sets them aside to minimize impacts to EFH. Scallop rotational areas can then be identified out of the remaining portions of the Closed Area II Habitat Closure, focusing on considerations including relative scallop abundance and the size of areas required for safe and effective fishing operations.

Maintaining a boundary around complex epifaunal habitat of at least several 100 meters would help protect complex habitat vulnerable to dredge impacts within the Habitat Protection Zones while allowing for limited scallop fishing to occur in lower complex areas outside of the Habitat Protection Zones. More specifically, sedimentation from scallop dredging or removal of complex habitat structure directly adjacent to the Habitat Protection Zones could create impacts within the protection zone. A buffer around the Habitat Protection Zone could promote faster recovery.

Setting aside these areas from development as rotational access areas, in combination with the minimum rotational interval described in Alternative 3 will continue to minimize the effects of fishing on EFH on the Northern Edge of Georges Bank. Appropriate fishing mortality targets (Action 3) and seasonal and gear restrictions (Action 5) will also contribute to minimizing the impacts of the rotational fishing program on the environment, including on EFH.

**Objective #2: Review current boundaries for the Closed Area II Habitat Closure Area (HMA) and consider whether modifications might be considered in a future action**

**Objective #5: Develop management area boundaries that are enforceable. This may include developing additional monitoring requirements specific to this area.**

**Conceptual example of Habitat Protection Zone (red box)**
Information relevant to defining the zones (to be summarized and included in the rationale above):

Cruise results (also look at related published literature)

Three Northeast Fisheries Science Center cruises focused on benthic habitat mapping on the Northern Edge of Georges Bank: HB08-05 (Leg 2) and HB08-06 in November 2008, and DE09-08 in September 2009. Prior video/photo and dredge surveys of the area had been conducted since 2002 in collaboration with URI and USGS. The objectives of the 2008-2009 cruises included:

- Characterize habitats of northeastern Georges Bank including habitats important to cod, haddock, and sea scallops, and where the invasive tunicate species *Didemnum vexillum* might be present. A particular survey target was a “pristine” area of habitat first identified in 2007. (HB08-05 Leg 2, HB08-06)
  - HB08-05 was a preliminary survey; detailed sampling during HB08-06 included video/photo transects, fish sampling and trophic analysis, epifaunal sampling, hydrographic profiling, and water sampling. DE09-08 included additional hydrographic transects and further exploration of fish-habitat associations in complex cod-haddock habitat.
- Test whether an Automatic Underwater Vehicle (AUV) could be successfully deployed to collect acoustic and visual data that would enable reliable detection of the tunicate. (HB08-05 Leg 2)
- Determine distribution of *Didemnum vexillum* on northeastern Georges Bank. Examine relationship between *Didemnum vexillum* abundance and abundance / species composition of benthic fauna, fish, and shellfish (HB08-06).
- Compare similar habitats inside and outside Closed Area II on either side of the EEZ (HB08-06)

Results of these cruises included the following:

- Acoustic mapping
  - HB08-05 Leg 2
    - Detailed bottom topography from single beam sonar, which revealed sand waves on the bank crest and rough terrain along the northern rim
    - Map Area A is dominated by two large sand hills, heights ~8 m and wavelength 3.6 km; straight lines are uncorrected tidal artifacts
    - Map Area C includes part of the crest and northern slope of the bank that has exceptionally dense epifauna and rough topography relative to smoother surfaces on adjoining bank crest and slope. On the vertical, roughness is too fine scale to be viewed on standard charts. On the horizontal, roughness is at a scale of tens to hundreds of meters. Videos documented cobble, large boulders, and moderate numbers of adult cod. This habitat type may extend westward of the limit shown in Figure 2.
  - HB-0-06: Additional acoustic mapping in an extension of Area C
- Note: Accurate tidal correction is essential to bathymetric charting and requires appropriate equipment calibration, which was not possible during HB08-05 Leg 2. However, backscatter data from this cruise, which measure signal return intensity and are used to infer bottom characteristics, remain trustworthy.
- Habitat characterization (HB08-06)
  - At site 16, based on 41 video transects 0.25-0.5 nm long: Pebble, cobble, and scattered boulder deposits with loose sand between. Cobbles/boulders completely covered with attached epifauna including bryozoa, hydrozoa, sponges, *Filograna implexa* tube
worms, horse mussels, and solitary tunicates. Bryozoan *Eucratea loricata* is the
dominant species. Epifauna cover 50% or more of the seabed.

- Site 16W was characterized as a mussel bed. Indigenous tunicate *Didemnum albidum*
present. *Eucratea loricata* dominant, with large and small horse mussels *Modiolus modiolus*,
and tube building polychaete worm *Thelepus cincinnatus*, and solitary tunicates *Boltenia*
and *Mogula*.

- HB08-05 documented colder bottom temperatures in Map Area C (5-9° C) vs. Map
Area A (11-14° C). Temperature data collected during HB08-06 suggests that Area C
is subject to substantial temperature fluctuations at hourly or daily timescales.

- Digital photographs of *Didemnum vexillum* tunicate colonies from HB08-05 Leg 2
indicated they were not as abundant as anticipated based on past cruises. During
HB08-06 the species was found at Area 18 and Area 19, at lower coverage and colony
thickness vs. 2007. Hypothesized that low temperature prevents other areas from being
colonized.

- **Fish community**
  - Winter flounder at site 16W found to consume both native and invasive colonial
tunicates.
  - HB08-06 trawl catches were dominated by winter flounder and skate. Within Area C,
cod, haddock, and some scallops occurred.
  - Stomach contents of haddock, winter flounder, and longhorn sculpin *included...*
3.1.3 Alternative 3 – Minimum Rotational Interval for Habitat Recovery

Alternative 3 would specify the rotational interval, in years, under which scallop dredging could occur within the access areas identified under Action 1. The purpose of this rotational interval is to allow for habitat recovery to occur. These rotational intervals should be understood as minimum requirements. Future specifications actions could open the rotational areas at longer intervals, for example if a longer...
closure period was more appropriate to achieve higher scallop yields from the year classes occupying the area. This issue is discussed further under Action 2 (Scallop Rotational Areas).

Rationale: Habitat recovery could be determined by the return of certain species, biodiversity, recovery of a certain percentage cover, and other community measures. The interactions between dredge impacts, removing scallops, and the community dynamics and interactions between taxa should be considered given it may allow for species to grow back without competing for space. If the initial impacts at a site are lower with only partial removal of epifauna, then the recovery trajectory may be different.

Setting this minimum rotational interval, combined with setting aside areas from development as rotational access areas under Alternative 2, will continue to minimize the effects of fishing on EFH on the Northern Edge of Georges Bank. Appropriate fishing mortality targets (Action 3) and seasonal and gear restrictions (Action 5) will also contribute to minimizing the impacts of the rotational fishing program on the environment, including on EFH.

Objective #3: Develop a scallop rotational harvests program including the geographic extent, duration, and frequency of scallop dredge activity relative to habitat and recovery time on the Northern Edge

Information relevant to setting the minimum rotational interval:

In the Gallager, et al. study, recovery is determined by comparing control-impact biodiversity and species richness indices before and after disturbance, thus, recovery does not necessarily mean community structure (species composition and abundance) completely returned to its original, pre-impact state.

In the Harris, et al. 2014 study, dredge impact and closed area sites within the Northern Edge area were surveyed and sediment types, organism density, presence/absence, and areal coverage were determined. Gravel was found in most of the dredge impact and closed sites with dredge impact sites having significantly more sand. Overall, species richness and diversity were similar across impact and closed area sites. Habitat impact was not consistently greater within the dredge impact sites relative to the closed sites, however, there were some patterns in the Northern Edge area:

- The closed area sites had a similar or lower probability of presence of epifauna compared to the dredge impact sites. Exceptions of this pattern include sea urchins and mussels.
- Organisms in the closed area sites were primarily attached to gravel substrate (especially hydrozoa) versus organisms like finger sponges and tunicates were attached to both gravel and sand substrates in the dredge impact sites.
- Regarding areal coverage, the closed area sites had a higher percent coverage of macroalgae and mussels and the dredge impact sites had a higher percent coverage of sponges, bryozoans, and actinarian anemones.

Recent literature on fishing gear effects is summarized in Section 3.3 of the Habitat Management Considerations for the Northern Edge of Georges Bank (2020) white paper.

Other studies??

3.1.3.1 Option A – Minimum of ten years

Option A would set a minimum rotational interval of ten years for scallop dredging in the Northern Edge scallop rotational access area from the time of last dredge impact. For example, if scallop fishing on the Northern Edge access area occurred in May 2025, then this would mean the next time scallop fishing
would be permitted in this area would be May 2035. This longer time frame would allow for recovery of more sensitive taxa to occur in habitat protection zone(s) identified in Action 1 and would also allow for further contribution of habitat function and value to the region. Sensitive habitats include epifauna, namely sponges, mussels, bryozoa, hydrozoa, and anemone stalked tunicate, and infauna, particularly *Myxicola*. See BACI study results and other literature.

**Rationale:** Based on Gallager, et al. 2022 BACI study, all impacted areas returned to or exceeded pre-impact habitat complexity condition five years eight months after initial dredge impact. The additional time beyond the 68 months post-impact allows the sensitive habitat to further contribute to the function, habitat quality, and value for other species and sediments before allowing scallop dredge impact to sensitive habitats again. Good habitat quality would be restored and maintained over a longer period of time compared to the shorter rotational harvest intervals.

### 3.1.3.2 Option B – Minimum of five to six years

Option B would set a minimum rotational interval of five to six years for scallop dredging in the Northern Edge scallop rotational access area from the time of last dredge impact. For example, if scallop fishing on the Northern Edge access area occurred in May 2025, then this would mean the next time scallop fishing would be permitted in this area would be May 2030 – 2031. This longer time frame would allow for recovery of more sensitive taxa to occur in habitat protection zone(s) identified in Action 1. Sensitive habitats include epifauna, namely sponges, mussels, bryozoa, hydrozoa, and anemone stalked tunicate, and infauna, particularly *Myxicola*. See BACI study results and other literature.

**Rationale:** Based on Gallager, et al. 2022 BACI study, all impacted areas returned to or exceeded pre-impact habitat complexity condition five years eight months after initial dredge impact. The additional time beyond the 68 months post-impact allows the sensitive habitat to further contribute to the function, habitat quality, and value for other species and sediments before allowing scallop dredge impact to sensitive habitats again. Good habitat quality would be restored and maintained over a longer period of time compared to the shorter rotational harvest intervals.

### 3.1.3.3 Option C – Minimum of three to four years

Option C would set a minimum rotational interval of three to four years for scallop dredging in the Northern Edge scallop rotational access area from the time of last dredge impact. For example, if scallop fishing on the Northern Edge access area occurred in May 2025, then this would mean the next time scallop fishing would be permitted in this area would be May 2028 – 2029. This shorter time frame would allow for recovery of many taxa that are less sensitive to impact. These habitats include those with sand, gravel, and shell hash. See BACI study results and other literature.

**Rationale:** Two years after the scallop dredge impact in the Gallager, et al. BACI study, species richness fully recovered in two out of three low epifauna habitat sites. Biodiversity indices based on richness and evenness fully recovered in one low epifauna site with some recovery at the other two low epifauna sites after one year but a subsequent decline during year two. There were no significant differences in the abundance of echinoderms between the control and impact sites two years after dredging. Infauna, specifically *Myxicola* and Northern cerianthid, were not significantly different at the low epifauna sites two years after dredge impact.
3.2 **ACTION 2 – SCALLOP ROTATIONAL AREAS**

3.2.1 **Alternative 1 - No Action**

Under Alternative 1 (No Action), the Closed Area II Habitat Closure Area would remain in place and there would be no exemptions or rotational areas for the scallop fishery.

Closed Area II was designated as a year-round groundfish closed area in 1994 and was designated as a spawning closure between February 1 – April 15 via OHA2. As a habitat closure, the area is closed to mobile, bottom-tending gears to minimize the adverse effects of fishing on EFH. The original goal and intention in setting up the closures in the Northern Edge region were to protect the area as a habitat area of particular concern specifically because of its vulnerability to fishing. Additional information on the history and summary of spatial management in this area and on Georges Bank more broadly can be found in the “Habitat Management Considerations for the Northern Edge of Georges Bank” (2022) white paper.

3.2.2 **Alternative 2 – Designate a Scallop Rotational Area inside and outside CAII and the Habitat Closure**

Alternative 2 would have different spatial configurations that encompass areas inside and outside the Closed Area II Habitat Closure. Areas identified as Habitat Protection Zone(s) identified in Alternative 2 (including buffers, if established) would be excluded from any scallop rotational area. Note that there are no options for rotational areas located solely outside of the habitat closure.

It is important to note that this alternative should be considered in conjunction with the goal to minimize impacts to habitat and any access granted during a given scallop specifications process would be based on the total exploitable biomass projected for the Northern Edge access area, would not exceed the maximum fishing mortality rate OR maximum total swept area, and would account for any seasonal restrictions that could be implemented. The Council may decide whether a timed entry system makes sense based on these factors before allocating scallop to the Northern Edge access area.

For example, based on the 2022 SMAST survey data in the figure below, the majority of scallop biomass is north of and to the west of the high complexity area as shown in Action 1 within CAII Habitat Closure and also to the west of CAII. As a result, any scallop access area would be where the scallop biomass is concentrated, not throughout the entire CAII Habitat Closure.
Objective #1: Establish a scallop access area or areas. These area(s) may be located within and/or outside the existing Closed Area II Habitat Closure Area, including in areas that are currently open to the scallop fishery. Consider both the distribution of scallops and maintaining protection of habitats that are highly vulnerable to dredge fishing impacts and provide functional value for managed fishery resources, taking into account the ecological value of the Northern Edge to juvenile cod and other managed species.

Rationale: …..

3.2.3 Alternative 3 – Designate a Scallop Rotational Area inside CAII, including parts of the Habitat Closure

Alternative 3 would have different spatial configurations that encompass areas inside the Closed Area II and include parts of the Habitat Closure only. Areas identified as Habitat Protection Zone(s) identified in Action 1 (including buffers, if established) would be excluded from any scallop rotational area.

It is important to note that this alternative should be considered in conjunction with the goal to minimize impacts to habitat and any access granted during a given scallop specifications process would be based on the total exploitable biomass projected for the Northern Edge access area and would not exceed the maximum fishing mortality rate OR maximum total swept area. The Council may decide whether a timed entry system makes sense based on these factors before allocating scallop to the Northern Edge access area.

Rationale: …..
3.3 ACTION 3 – FISHING MORTALITY TARGETS AND POSSESSION LIMITS

This action would establish a conceptual framework for how to develop specifications for the northern edge in future scallop actions.

3.3.1 Alternative 1 – No Action

Alternative 1 would set fishing mortality targets based on what is currently done for existing scallop access areas. Amendment 10 to the Scallop FMP established management policies and fishing mortality targets for rotation areas. These include:

- Closed rotation: fishing mortality set to zero.
- Re-opened, controlled access with DAS allocations and trips with possession limits, etc.: fishing mortality set by the Council consistent with time average guidelines, could follow a ramped strategy to achieve optimum scallop yield.
- Open area open to scallop fishing: fishing mortality is set based on achieving an average of 80% Fmax for the entire scallop fishery.

3.3.2 Alternative 2 – Maximum fishing mortality targets

Alternative 2 would set a ceiling for the fishing mortality (F) rate, or in some way identify that the allocation should be somewhat conservative. This alternative could include options related to fishing on 5 vs. 6-year-old scallops.

It is important to note that the fishing mortality rate will be based on minimizing impacts to habitat such that the total area swept would be minimized. The appropriate fishing rate to minimize impacts to habitat depends on the density, size, and location of the scallop exploitable biomass. Fishing mortality rates are likely to vary based on these factors, thus, total habitat impacted would also vary.

Rationale: …..

Objective #4: Manage harvest from the Northern Edge scallop resource in the short- and long-term by considering the size distribution of scallops, seasonality of fishing with regard to meat yield, spawning and recruitment potential (in this area and other areas of the scallop resource across Georges Bank), and fishing behavior. Rotational fishing should consider how to achieve harvest from a small area in an equitable and sustainable manner.

Objective #3: Develop a scallop rotational harvest program, including the geographic extent, duration, and frequency of scallop dredge activity relative to habitat and recovery time on the Northern Edge.

OR?

3.3.3 Alternative 2 – Maximum total swept area

Alternative 2 would set a ceiling for total swept area that would be allowed to be fished in the scallop access area to ensure impacts to sensitive and complex habitat are minimized. This would be based on the density, size, and location of scallops in the access area in a given year and could be estimated using the SAMS model.

Rationale: …..
3.3.4 Alternative 3 – Possession limits

Alternative 3 would set possession limits based on the access area’s ability to support the level of harvest allocated to it based on recent survey biomass projections and optimal harvest size. It is important to note that this alternative should be considered in conjunction with the goal to minimize impacts to habitat and to remain within the maximum fishing mortality rate OR maximum total swept area.

*The idea here is that these would be maximum trip limits, lower limits could be set for a given access opportunity.*

3.3.4.1 Option A – Maximum 9,000 lb possession limit

Option A would…

*Rationale:* …..

3.3.4.2 Option B – Maximum 12,000 lb possession limit

Option B would…

*Rationale:* …..
3.4 **ACTION 4 – PROGRAM OPERATIONS**

The program elements specified in the Action 4 alternatives below are for rotational access fishing in the Northern Edge region only (i.e., areas designated as scallop rotational areas in Alternative 3 inside and/or outside the CAII Habitat Closure) and would not apply to other scallop access areas previously established, except for the No Action alternative. However, these measures will be developed to achieve consistency with the broader scallop rotational fishing program where possible, and differences between these measures and rotational harvest in other areas are noted.

### 3.4.1 Alternative 1 – No Action

Alternative 1 would:
- Not add a timed entry system given this is not currently part of the rotational access program;
- Retain the current carryover provision where vessels are permitted to carry forward any access area allocation 60 days into the following fishing year, even for areas that were not re-opening the subsequent fishing year. Essentially access area fisheries work as a 14-month fishing year;
- Retain the current VMS polling rate every 30 minutes for scallop rotational access areas. All limited access scallop vessels and general category vessels are required to operate VMS equipment to record the location of the vessel for monitoring compliance with day at sea regulations; and

Alternative 1 would also not alter other program operations that are currently in place including: “flex trips” or “flex allocations” whereby vessels are allowed to fish their allocations in multiple ways by potentially shifting effort out of a rotational area if there is uncertainty in the scallop biomass of an access area and potential inability to support each vessel’s allocation. Vessels are also permitted to terminate trips in an access area and complete the trip later within a given fishing year for reasons such as weather, emergencies, etc. Limited access vessels are also permitted to exchange access area trips amongst other limited access vessels including trading in lower poundage increments for full-time Limited Access vessels.

### 3.4.2 Alternative 2 – Timed entry system

Alternative 2 would create a system where a subset of vessels (permits holders?) are allowed to begin a trip during a given week. Considerations:
- How is the order determined? Random lottery?
- What if vessels share crew?
- What if a vessel is under repair or otherwise unable to fish during their assigned time?
- Are entry times tradeable?
- Should more vessels be allowed during some weeks vs. others, for example varying based on yield or bycatch considerations, or possible weather conditions?

It is important to note that this alternative should be considered in conjunction with the goal to minimize impacts to habitat and be based on the total exploitable biomass projected for the Northern Edge access area, not exceeding the maximum fishing mortality rate OR maximum total swept area, and any seasonal restrictions that could be implemented. The Council may decide whether a timed entry system makes sense based on these factors before allocating scallop to the Northern Edge access area.

**Rationale:** XX
3.4.3 Alternative 3 – Carryover provision

Alternative 3 would prohibit limited access vessels from carrying forward any unused access area allocation into the following fishing year. The Council might also consider changing the carryover provision from 60 days to 30 days or another duration. If there are seasonal restrictions in April and/or May, this carryover provision could be unnecessary.

Note: The Council is specifying if and where it wants to allow carryover in each specifications package. This may make more sense in the section with the seasonal alternatives (Action 5).

**Rationale:** Prohibiting the carryover provision would limit the duration of the fishery opening and would allow habitat recovery to begin sooner.

Scallop-focused rationale TBD.

3.4.4 Alternative 4 – VMS Polling Rates

Alternative 4 would increase VMS polling rate to 5-minutes (or another polling rate?) and establish geofencing to automatically send a message via the existing VMS equipment to notify fishing vessels when they are approaching the Habitat Protection Zones / areas closed to scallop fishing. Vessels within X nm around the scallop access area or the Closed Area II Habitat Closure (whichever extends further west) would trigger this higher polling rate.

**Rationale:** VMS polling data can be used for enforcement purposes to infer fishing locations and help ensure vessels are fishing within scallop rotational area and not within any identified Habitat Protection Zones. An increased rate from 30-minutes to 5 (or X)-minutes is needed for narrow or small access areas near the closed habitat areas.

**Objective #5:** Develop management area boundaries that are enforceable. This may include developing additional monitoring requirements specific to this area.
3.5 **ACTION 5 – SEASONAL AND GEAR RESTRICTIONS**

3.5.1 **Alternative 1 – No Action**

*Describe current approach to seasonal and gear restrictions in access areas.*

3.5.2 **Alternative 2 – Seasonal Restrictions**

These seasonal options can be used to improve scallop yield, minimize bycatch, or reduce conflicts with the lobster fleet and avoid catch of egg bearing lobsters.

*Rationale: *…..

Objective #4: Manage harvest from the Northern Edge scallop resource in the short- and long-term by considering the size distribution of scallops, seasonality of fishing with regard to meat yield, spawning and recruitment potential (in this area and other areas of the scallop resource across Georges Bank), and fishing behavior. Rotational fishing should consider how to achieve harvest from a small area in an equitable and sustainable manner.

Objective #7: To the extent possible, consider gear interactions including between scallop dredges and lobster traps, and the impacts of dredge gear on ovigerous lobsters in the Northern Edge HMA.

3.5.2.1 **Option A – August 15 – November 15**

This is a yellowtail-focused period.

3.5.2.2 **Option B – August 1 – October 30**

Or, other dates as appropriate, TBD.

3.5.3 **Alternative 3 – Gear Restrictions**

These gear restrictions would be required to minimize bycatch. PDTs will analyze data to determine bycatch of stocks in this area. Consider the bycatch reductions of …

*Rationale: *…..

Objective #6: Accurately monitor and minimize bycatch of non-target species.

Objective #7: To the extent possible, consider gear interactions including between scallop dredges and lobster traps, and the impacts of dredge gear on ovigerous lobsters in the Northern Edge HMA.
3.6 **ACTION 6 – SCIENTIFIC MONITORING**

3.6.1 Alternative 1 – No Action

3.6.2 Alternative 2 – Target Observer Coverage
This alternative would establish a minimum target coverage for observed trips to accurately characterize bycatch from this area.

*Rationale:* .....

Objective #5: Develop management area boundaries that are enforceable. This may include developing additional monitoring requirements specific to this area.

Objective #6: Accurately monitor and minimize bycatch of non-target species.