C. To re-evaluate the Essential Fish Habitat (EFH) components of the Atlantic Sea Scallop FMP and minimize adverse effects on EFH

In compliance with a recent court order, the Council is considering new alternatives to minimize adverse effects on essential fish habitat (EFH). New evaluations of how scallop EFH is defined is being considered separately from Amendment 10.

4.2 Objectives of Amendment 10

The Council also identified 12 management problems that should be addressed, either directly or indirectly by measures proposed in the amendment. These scallop management problems were:

1. The scallop yield is below its maximum potential. Reasons for this include small scallops being vulnerable to fishing and non-catch mortality, large scallops being inaccessible to the fishery, and scallops being harvested during less favorable times of year.
2. Full-time scallop vessels are underutilized because they are limited to fishing 120 out of 365 days per year. Although this is presently sufficient for most vessels to be profitable, it potentially raises problems for retaining qualified crew, efficient use of capital, and effects on other fisheries from scallop vessels fishing for scallops and other species while not on a day-at-sea.
3. Unused fishing effort that is allocated to permit-holders is a potential threat to scallop management and other fishery resources
4. Scallop vessels using trawls target and catch smaller scallops than vessels using dredges.
5. Vessels with general category scallop permits have been prevented from fishing within closed areas that re-open to scallop fishing and may not benefit from area closures or other management that improves yield.
6. Finfish bycatch can be too high, relative to the objectives for other FMPs, preventing the scallop fishery from achieving optimum yield.
7. Sensitive habitat in some areas is adversely affected by scallop fishing
8. The fishing year and the management process is out of sync with annual surveys that produce data for stock assessment
9. Present scallop management is complicated by the mixture of scallop sizes in previously closed areas and the variability of the resource. Other factors need to be considered anew for each framework, increasing the complexity and effort needed to alter fishery regulations.
   The current framework adjustment process is time-consuming and prevents the Council from making progress on amendments
10. The impacts of scallop fishing and methods to reduce these impacts on Essential Fish Habitat need more consideration and analysis
11. Obtaining an Experimental Fishing Permits for scallop research is complicated and should be streamlined.
12. Data collection and research is inadequate to monitor the effects of management actions on the fishery and the resource. Sea sampling on scallop vessels in unrestricted areas is too spotty to provide adequate statistics.

4.2.1 Primary objectives

Focusing on the amendment goals and the above problems, the Council identified nine primary objectives in January 2001. These primary objectives were intended to be addressed directly by one or more sets of management alternatives which would be identified in the draft amendment (see Section

5.3). Some of the alternatives might also address one or more of the primary objectives through secondary effects, spelled out in the amendment.

1. Improve yield and rebuilding potential by reducing mortality on small scallops

Fishing mortality on smaller scallops prevents the fishery from obtaining optimum yield, because too many scallops are caught before reaching optimum size. While Amendments 4 and 7 successfully improved size selection by the fishery and improved yield, more gains are possible through area rotation and possibly other management measures. During the early 1990's, the fishery focused on 3 year old scallops and few 4 year old scallops were found in the population. Now the fishery is targeting 4 and 5 year old scallops, and few 3 year old scallops are retained and landed. Area rotation promises to postpone mortality for about 3 years for areas with abundant year classes to allow the scallops to reach an optimum size for maximizing yield, at about 7 to 8 years old.

2. Reduce reliance on day-at-sea allocations to control fishing mortality, either by area-based management, by output controls, and/or gear restrictions. Improve the ability of the FMP to meet mortality targets and achieve optimum yield by increasing the proportion of scallop fishing that falls within controlled access programs.

Day-at-sea allocations, crew limits, and gear restrictions have effectively lowered fishing mortality, but during times of low productivity, it becomes increasingly difficult to reduce day-at-sea allocations below current levels. In addition, day-at-sea allocations can sometimes be an imprecise way of controlling fishing mortality, due to uncertainties in the number of vessels that will fish, the number of days they actually use, and the amount of fishing time expended per day. Other limits on fishing could reduce the risk associated with this uncertainty.

Also, during the 1990's, the amount of landings from scallop vessels not on a day-at-sea was negligible. As the limited access day-at-sea allocations were lowered and the resource rebuilt, there were more concerns over this source of fishing mortality with few regulations. The uncertainty associated with this lightly regulated source of mortality could be lowered by accounting for this source of mortality before making limited access day-at-sea allocations or by increasing the day-at-sea regulations to encompass more vessels that target sea scallops.

3. Modify the framework adjustment process and change the fishing year to shorten the time between the availability of data (surveys) and annual adjustments via the framework procedure

Presently, the Council begins preparing the Scallop SAFE Report in June and presents it to the Council in late August or early September. This report includes information from the previous fishing year and most recent survey, initiating the annual framework adjustment process. Due to the timing of the fishing year, the survey information in the report is over a year old, when delivered to the Council as the basis for initiating the annual framework adjustment.

Between the initial and final framework meetings, the Council begins analyzing alternatives for adjusting the plan's management measures. Late during this period, the preliminary annual survey results become available from the annual resource survey in August, making proper analysis difficult under very

short time constraints. Final, audited survey results often do not become available until after the Council makes decisions at the final framework meeting in November, assuming that a proposed rule can be bypassed by the framework adjustment process. Publication of a propose rule and a 30-day comment period advances the framework schedule even earlier, making it even more difficult and unlikely that the prior year's survey information can be incorporated into the analysis for the next year's management regulations.

Since the annual survey must be conducted about the same time of the year to ensure the integrity of the time series and logistics prevent scheduling the survey at another time of year, moving the fishing year by a few months would alleviate this problem and allow the annual adjustments to rely on more current survey information.

4. Reduce and/or minimize bycatch mortality and habitat impacts

The Sustainable Fisheries Act requires the Council to consider alternatives for minimizing bycatch mortality and habitat impacts. Since these impacts are recognized as problems that result from scallop fishing, Amendment 10 should re-evaluate the effect of current regulations to minimize these impacts and consider practical ways for reducing them.

5. Re-evaluate and balance the mortality associated with equal effort allocations to fishing sectors using different gears

Beginning with Amendment 4 in 1993, the Council recognized that trawls and dredges have different size selection characteristics, arising from the way the gear operates and from the way it is used in the fishery. These selectivity characteristics contribute to varying amounts of scallop mortality per day-at-sea, one of the major controls on fishing mortality. Research has been conducted to identify methods to improve the size selection of scallop trawls, but no workable methods have been found. Therefore, to reduce the uncertainty in controlling fishing mortality allocations and improve yield from the fishery, the Council should evaluate alternatives to discourage fishing with methods or gears having poorer size selection characteristics.

6. Develop a program for vessels with general category scallop permits that occasionally target sea scallops to continue this practice with restrictions on participation or the amount of scallops that these vessels may harvest.

Scallop fishing by vessels under general category rules have become more prevalent and at least temporarily began comprising a greater proportion of total sea scallop fishing mortality. Any fishing vessel may obtain a general category scallop permit and there are over 2,200 permits already issued. Although most vessels with general category permits use them to allow landings of normal scallop bycatch, any of them may begin targeting sea scallops if landing 400 lbs. of scallop meats is more profitable than using the time to fish for other species. As opportunities in other fisheries decline and/or scallop biomass in accessible areas improves, there is a potential for the amount of scallop mortality from this lightly regulated fishery to increase. Furthermore, the amount of monitoring on this component of the fishery is less than for landings by vessels with limited access scallop permits. Under these rules, limited access scallop vessels may also target sea scallops while not on a day-at-sea, thus also contributing to the uncertainty for the day-at-sea allocations to achieve the plan's mortality targets.

7. **To continue controlled access to groundfish closed areas, consistent with groundfish rebuilding and habitat protection objectives in the context of area rotation management.**

Presently, nearly 80% of the biomass for scallops on Georges Bank (50% for both Georges Bank and Mid-Atlantic scallops) is found within the Georges Bank groundfish closed areas. The scallops in most of these areas are furthermore older than optimal age for maximizing yield and represent a significant loss in benefits if they cannot be fished. Allowing scallop fishing in these areas could reduce the effects of scallop fishing elsewhere and significantly improve yield per recruit. Without access to these scallops, it also makes it much more difficult to initiate area rotation with closures without substantial financial hardship on the fishing industry. The amendment should consider alternatives that identify acceptable ways of fishing the scallops in the groundfish closed areas, without causing unacceptable bycatch mortality and habitat impacts.

8. **Develop a streamlined program to allow researchers to obtain an Experimental Fishery Permit to collect scallop fishery and resource data.**

Obtaining an Experimental Fishery Permit to conduct scallop and scallop-related research is very cumbersome and time-consuming, sometimes requiring the preparation of an Environmental Assessment or Environmental Impact Statement (EIS) by the research applicant. Sometimes the research has no more effects than commercial fishing for scallops, but the research (potentially identifying ways to fish with fewer impacts) is often inhibited by this cumbersome process. The amendment should consider alternatives for allowing certain types of scallop and scallop-related research, conducted under the analysis provided in the plan's EIS.

9. **Improve data collection and research on the scallop resource and fishery through a set-aside program to provide funding through industry participation.**

The TAC set-aside program for funding scallop trip sea sampling and for conducting scallop research has been successful, but limited to the controlled access areas in Framework Adjustments 11, 13, 14, and 15. The amendment should consider alternatives for extending these programs for scallop fishing throughout the resource, increasing the benefits from these successful programs.

4.2.2 Secondary objectives

The Council also identified 10 additional secondary objectives that it would like to address through incidental effects of the management alternatives in the draft amendment. These may be achieved through a combination of effects or in the first case below, are necessary procedures to achieve the primary objectives described above. Many of these objectives also address issues identified in the 10 National Standards in the Magnuson-Stevens Act.

1. **Re-evaluate and possibly modify the overfishing definition reference points (targets and thresholds for fishing mortality and stock biomass) to be consistent with new management policies (i.e. area rotation and/or gear modifications)**

2. **Improve scallop spawning potential, considering sources of variation such as oceanographic factors and man-made effects**
3. **Improve total productivity for all related species in the fishery**
4. **Maximize the social and economic benefits to the industry and the nation**
5. **Minimize adverse impacts on the industry while rebuilding the resource**
6. **Maximize industry flexibility to adjust to resource variation**
7. **Minimize regulatory complexity and cost to reduce administrative costs and improve enforcement**
8. **Reduce and minimize uncertainty about future regulations**
9. **Minimize adverse impacts on communities, ensuring fair and equitable access to the scallop fishery**
10. **Improve safety at sea**