

8.0 GLOSSARY

Annual fishing mortality target – a rate of removals that when applied over a fishing year is consistent with the objectives of the FMP.

Annual potential increase – the percent increase in total or relative biomass that would occur during a one-year interval if no fishing occurs (i.e. zero fishing mortality). Projection models take into account the size frequency distribution of the population, the expected growth of individuals at each size class, and natural mortality.

Area based management – in contrast to resource wide allocations of TAC or days, vessels would receive authorization to fish in specific areas, consistent with that area's status, productivity, and environmental characteristics. Area based management does not have to rotate closures to be effective.

Area rotation – a management system that selectively closes areas to fishing for short to medium durations to protect small scallops from capture by commercial fishing until the scallops reach a more optimum size. Closed areas would later re-open under special management rules until the resource in that area is similar to other open fishing areas. Area rotation is a special subset of area based management that relies on an area closure strategy to achieve the desired results when there are sufficient differences in the status of the management areas.

B_{max} – a theoretical value when the scallop stock with median recruitment is fished at F_{max}. For a stock without a stock-recruitment relationship, like sea scallops, this stock biomass produces MSY when fished at F_{max}.

Biological Opinion – an ESA document prepared by either the NMFS or USFWS describing the impacts of a specific Federal action, including an FMP, on endangered or threatened species. The Biological Opinion concludes whether or not the NMFS/USFWS believe that the actions are likely to jeopardize the continued existence of any of the protected species, and provides recommendations for avoiding those adverse impacts.

Closed rotation area – an area that is temporarily closed to postpone mortality on abundant, small scallops.

Consumer surplus - The net benefit consumers gain from consuming fish based on the price they would be willing to pay for them. Consumer surplus will increase when fish prices decline and/or landings go up.

Contagious recruitment – similar amounts of scallop settlement in related areas. When scallop settlement is above average in one area, it tends to be above average in neighboring areas.

Controlled access – a program that allows fishing in a specified area under rules that differ from the normal fishery management rules that apply to normal, open fishing areas. Often controlled access areas have a scallop TAC, a scallop possession limit, and area-specific trip and DAS allocations. Other regulations may apply to achieve certain conservation objectives.

Critical habitat – an area that has been specifically designated under the ESA as an area within the overall geographical region occupied by an endangered or threatened species on which are found the physical or biological features essential to conservation of the species.

Day-at-sea (DAS) – is each 24-hour period that a vessel is on a scallop trip (i.e. not declared out of the day-at-sea program) while seaward of the Colregs line.

Day-at-sea tradeoff – the number of days automatically charged for fishing for scallops in designated areas, regardless of the time actually fished.

Day-at-sea use – the amount of time that a vessel spends seaward of the Colregs line on a scallop trip.

Days-at-sea accumulated – days charged against a vessel's annual day-at-sea allocations, including day-at-sea tradeoffs. Trips in controlled access areas are often charged a pre-established amount of DAS, regardless of the actual duration of the trip.

Endangered species – a species that is in danger of extinction throughout all or a significant portion of its range.

ESA - Endangered Species Act of 1973 as amended.

Exploitable biomass - the total meat weight of scallops that are selected by fishing, accounting for gear and cull size, at the beginning of the fishing year⁶⁶.

F_{max} – a fishing mortality rate that under equilibrium conditions produces maximum yield-per-recruit. This parameter serves as a proxy for F_{msy} for stocks that do not exhibit a stock-recruitment relationship, i.e. recruitment levels are driven mostly by environmental conditions.

Fixed costs - These costs include expenses that are generally independent of the level of fishing activity, i.e., DAS-used, such as insurance, license, half of repairs, office expenses, professional fees, dues, utility, interest, dock expenses, bank, rent, store, auto, travel, and employee benefits.

Fixed duration closure – a rotational closure that would be closed for a pre-determined length of time.

Fixed rotational management area boundaries – pre-defined specifications of areas to be used to manage area rotation.

FMP – Fishery Management Plan.

Heterogeneity – spatial differences in the scallop resource, life history, or the marine environment.

Incidental Take Statement – a section of a Biological Opinion that allows the take of a specific number of endangered species without threat of prosecution under the ESA. For the Scallop FMP, an incidental take statement has been issued for a limited number of sea turtles to be taken by permitted scallop vessels.

⁶⁶ The **average exploitable biomass** is different and is defined as the total meat weight of scallops that are selected by fishing averaged over the fishing year, accounting growth, natural mortality, fishing mortality, and gear and cull size.

IWC – International Whaling Commission; an international group that sets international quotas and/or establishes moratoria on harvesting of whales.

Localized overfishing – a pattern of fishing that locally exceeds the optimum rate, considering the age structure of the population, recruitment, growth, and natural mortality. This effect may cause mortality that is higher than appropriate on small scallops while under-fishing other areas with large scallops (assuming that the overall amount of effort achieves the mortality target for the entire stock). The combined effect is to reduce the yield from the fishery through the loss of fast-growing small scallops and the loss of biomass from natural mortality on very large scallops.

Long-term closure area – an area closed to scallop fishing for reasons other than achieving area rotation objectives. These areas may be closed to minimize habitat impacts, avoid bycatch, or for other reasons.

LPUE – Similar to catch per unit effort (CPUE), commonly used terminology in fisheries, LPUE in the Scallop FMP refers to the amount of landings per DAS a vessel achieves. This value is dependent on the scallop abundance and catch rate, but also depends on the shucking capacity of the crew and vessel, since most of the scallop catch must be shucked at sea. Since discard mortality for sea scallops is low, discards are not included as a measure of catch in the calculation of LPUE.

Magnuson Act – Magnuson Stevens Act of 1976 as amended.

Meat yield – the weight of a scallop meat in proportion to the total weight or size of a scallop. Scallops of similar size often have different meat yields due to energy going into spawning activity or due to the availability of food.

MMPA - Marine Mammal Protection Act of 1972 as amended.

NAAA - The Northwest Atlantic Analysis Area was a geographic area used in the habitat metric analysis. Its boundary to the North is the Hague line, the NC/SC border to the South, the coastline to the West, and the 500 fathom depth contour to the East.

NEPA – National Environmental Policy Act of 1972 as amended.

Net economic benefits - Total economic benefits measure the benefits both to the consumers and producers and are estimated by summing consumer and producer surpluses. Net economic benefits show, however, the change in total economic benefits net of no action.

NMFS – National Marine Fisheries Service.

Nominal versus real economic values - The nominal value of fishing revenues, prices, costs and economic benefits are simply their current monetary values unadjusted for inflation. Real values are obtained, however, by correcting the current values for the inflation.

Open area – a scallop fishing area that is open to regular scallop fishing rules. The target fishing mortality rate is the resource-wide target.

Operating expenses or variable costs - The operating costs measures the expenses that vary with the level of the fishing activity including food, ice, water, fuel, gear, supplies and half of the annual repairs.

Opportunity cost - The cost of forgoing the next best opportunity. For example, if a fisher's next best income alternative is to work in construction, the wage he would receive from construction work is his opportunity cost.

PDT – Scallop plan Development Team; a committee of experts that contributed to and developed the technical analysis and evaluation of alternatives.

Potential biomass increase - the annual change in the total biomass of scallop meats if no fishing occurs.

Producer surplus -Producer surplus for a particular fishery shows the net benefits to harvesters, including vessel owners and the crew, and is measured by the difference between total revenue and operating costs.

Recently re-opened area– an area that has recently re-opened to scallop fishing following a period of closure that postponed mortality on small scallops. The annual TAC and target fishing mortality rate is defined by time-averaged fishing mortality that allows the area-specific target to deviate from the norm. Special rules (i.e. day-at-sea allocations or trips with possession limits and day-at-sea tradeoffs) may apply.

Recruitment – a new year class of scallops measured by the resource survey. Scallop larvae are pelagic and settle to the bottom after 30-45 days after spawning. The resource survey, using a lined dredge, is able to capture scallops between 20 – 40 mm, but more reliably at between 40 and 60 mm. Recruitment in this document refers to a new year class that is observable in the survey, at around two years after the eggs had been fertilized and spawned.

Recruitment overfishing – a high level of fishing mortality that causes spawning stock biomass to decline to levels that significantly depresses recruitment. Because sea scallops are very productive, this mortality rate is substantially higher than F_{max} and the biomass where recruitment is threatened is much lower than the present biomass target.

SAFE Report – A Stock Assessment and Fishery Evaluation Report, required by the Sustainable Fisheries Act. This report describes the present condition of the resource and managed fisheries, and in New England it is prepared by the Council through its Plan Development Teams (PDT) or Monitoring Committees (MC). The Scallop PDT is the MC for the Atlantic Sea Scallop FMP and prepares this report.

Scallop productivity – the maximum average amount of biomass that can be taken from a defined area.

Shucking – a manual process of cutting scallop meats from the shell and viscera.

Size selection – in the scallop fishery, size selection occurs at two points: when the fishing gear captures the scallop and when the crew culls the catch before shucking. At the first point, size selection depends on escapement through the dredge rings, twine top, or trawl meshes. At the second point, size selection depends on the size of the catch and marketability. Small scallops are less valuable and more time consuming to shuck a pound of meats. These factors influence whether the crew retains scallops at a smaller or larger size. Size selection by the fishery is the combined effect of mortality from landed scallops, from discard mortality, and from non-catch mortality from the fishing gear. Except under certain rare conditions, most of the mortality has been associated with the landed portion of the catch.

TAC – Total allowable catch is an estimate of the weight of scallops that may be captured by fishing at a target fishing mortality rate. The TAC could apply to specific areas under area based management rules.

Take – a term under the MMPA and ESA that means to harass, harm , pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct with respect to either a marine mammal or endangered species.

Ten-minute square – an approximate rectangle with the dimensions of 10-minutes of longitude and 10-minutes of latitude.

Threatened species – any species that is likely to become endangered within the foreseeable future throughout all or a significant portion of its range.

USFWS – US Fish and Wildlife Service

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11.0 COMMENTS AND RESPONSES

11.1 Response to Comments

During the development of the proposed action, the Council received five written comments from three fishing organizations and the NMFS Regional Office on the framework adjustment and the alternatives under consideration. A representative of Oceana, some fishermen, and industry advisors also made oral comments during the Council meetings where Framework 16/39 was under discussion.

- 1. Framework Adjustment 16/39 should include an option to allow groundfish vessels that participate in the Closed Area II special access program to retain the 400 lb. possession limit currently allowed for open access scallop permit holders.***

The Council determined that such an alternative was unnecessary, because the proposed action in Amendment 10 would allow this to occur. Framework adjustments or amendments that would enable a Special Access Program under the Multispecies FMP would need to evaluate the effect of the fishery on scallop bycatch and on the scallop resource.

- 2. The most important issue to be addressed is approval of rotational access in 2004 to the New England Nantucket Lightship and Closed Area I, as envisioned in the discussion and development of Amendment 10. If this is not accomplished there will be significant negative impacts of the scallop industry.***

The Council agrees and this framework adjustment would allow access to parts of the groundfish closed areas during the 2004 fishing year. Updated data and analysis indicates that better yield would be achieved by changing the order of rotation, however, opening Closed Area II in 2004 and Closed Area I in 2005, rather than in the original order as predicted by the Amendment 10 analysis using 2002 survey data.

- 3. Framework 16 should allow the discussion of general category vessels being required to have VMS to give the Council the opportunity to decide at the second meeting whether this should be a requirement for general category scallop vessels based upon their final actions taken on Amendment 13.***

The Council agreed and the proposed action includes a requirement that all vessels (including general category vessels) must operate VMS when they are authorized to take trips into the access areas. Most vessels with general category scallop permits will not fish in the access areas, however, and it is unnecessary and costly to require the entire 2200 vessels with general category permits to operate VMS.

- 4. Part-time and occasional limited access scallop vessels should be allocated DAS that are equivalent to the percent of a full-time scallop allocation that is made in open fishing areas.***

The Council agreed and the proposed action includes an adjustment so that the total controlled access DAS allocations and total potential scallop catches are 40% and 1/12th of a full-time allocation, respectively. The Hudson Canyon Area DAS allocations could not be adjusted mid-season in 2004, but the framework adjustment will apply to the Hudson Canyon Area DAS allocations in future fishing years.

- 5. Framework 16 should allow the NEFMC to consider new information from the PDT to calculate closed area trips for New England and reevaluation of closed area trips in the Mid-Atlantic region.***

The focus of the framework adjustment is on access to parts of the Georges Bank closed areas. New data from the SMAST and R/V Albatross resource surveys in 2003 were used to re-estimate trip and DAS allocations for 2004-2007. Compared to the Amendment 10 analysis using 2002 data, these data increased the potential allocation in the Nantucket Lightship Area by one trip and decreased the potential allocation in Closed Area II. Framework 16, however, reduces the annual fishing mortality target in the Nantucket Lightship Area to be consistent with the revised rotation schedule. As a result, the TACs with a $F=0.2$ fishing mortality target provide for a maximum of one Nantucket Lightship Area trip and two Closed Area II trips per limited access scallop vessel (see Table 15 in the Framework 16 document). With the original $F=0.2$ fishing mortality target, the TAC would have been sufficient to allocate three trips in the Nantucket Lightship Area and one trip in Closed Area I during 2004 (see

Table 42 in the Framework 16 document).

- 6. *If Framework 16 does not require vessels with general category permits to use VMS when fishing for 400 lbs. per trip, then the framework adjustment should reverse the Amendment 10 proposed action to prohibit limited access vessels from fishing under general category rules.***

The proposed action in this framework adjustment would require vessels with general category permits to operate VMS while the vessel is authorized to take a trip targeting scallops in the Georges Bank access areas. Other actions that govern whether a vessel can fish in a limited access and an open access fishery at the same time to target a species does not meet the purpose and need for this framework adjustment.

- 7. *The framework adjustment analysis should utilize new habitat related data, collected by the SMAST video survey.***

These data were very preliminary and not yet ready for a full-blown analysis. Nonetheless the EA includes a qualitative analysis of these data, focusing on the distribution of the bottom substrate characteristics in the newly opened portion of Closed Area I, derived from these preliminary samples.

- 8. *The potential actions delaying implementation of Amendment 13 to the Northeast Multispecies FMP may impact the Council's planned action to establish an area access program for the sea scallop fishery in the multispecies closed areas. The framework analyses and measures must be consistent with the baseline analysis in Amendment 13.***

The Council relied on the Amendment 13 analysis and chose alternatives for the proposed action, acting as if Amendment 13 will be approved. Therefore the proposed Framework 16/39 action is consistent with the mortality goals and rebuilding estimates in Amendment 13, and the measures in the Framework 16 proposed action would be consistent with the proposed multispecies regulations under Amendment 13. At this time, the proposed action in Amendment 13 has been approved by the Secretary of Commerce. Implementation of Amendment 13 regulations is expected by the beginning of the groundfish fishing year, pending Presidential approval of a bill that would lift a Congressional ban on expenditures to implement Amendment 13.

- 9. *The release of additional DAS on August 15, 2004 according to Amendment 10 would complicate and potentially preclude implementation of a closed area fishery for the 2004 sea scallop fishing year, unless the Joint Framework establishes measures to compensate for the added fishing effort in open areas.***

Considering this problem, the Council's comments on the proposed rule for Amendment 10 recommended delaying the default Amendment 10 (no access) DAS allocation deadline. More importantly, the proposed action for this framework adjustment (see Section 4.1.10.1.2) would allocate the additional 2004 controlled access allocations only to vessels that fished less than the initial Amendment 10 DAS allocations for 2004 (42 full-time DAS, for example). Vessels that used the default open area DAS allocations (more than 42 full-time DAS in 2004) would be ineligible for controlled access allocations for the Georges Bank areas in 2004.

10. A hard bycatch TAC would promote a derby fishery in the access areas, presenting safety issues and compromises of overall economic yield

Although the Council adopted a hard TAC approach, the proposed action includes measures that are expected to reduce the potential for a derby style fishery. These measures include revising the mechanical rotation schedule and fishing mortality targets, an access season that avoids fishing during peak groundfish spawning times, a provision to adjust the yellowtail flounder TACs if by December 1 it is apparent that the US groundfish fishery and the 10% TAC will not exceed the overall TAC for the US fishery, and a transfer provision whereby vessels that cannot take controlled access trips before the yellowtail flounder catches reach the TAC may use a portion of them to fish in open scallop fishing areas.

11. There is no reasonable justification for restricting the access programs on the basis of bycatch concerns.

Several types of restrictions were adopted to minimize the effect of the proposed action on bycatch and on overfished groundfish species. These actions furthermore reduce impacts on the groundfish resources and the fisheries that depend on them, by limiting the potential for increases in groundfish bycatch during the access program. This includes a hard TAC for yellowtail flounder, a species that were most frequently observed in the 2000 scallop fishery bycatch in the access areas. By proxy, this will also cap the catches of other regulated groundfish and overfished species. The Council adopted a 10% TAC allocation for this program to ensure that the groundfish fishing mortality does not increase above the uncertainty in the Amendment 13 groundfish rebuilding estimates.

12. Substantial uncertainty exists about what the actual level of yellowtail flounder bycatch will be in 2004 and future years. The access program should be given the opportunity to run, collecting data from trips both within the access and open areas, and to evaluate that information for future management decisions.

It was because of this uncertainty that the Council was reluctant to expand the season beyond the range of time that the 2000 access fishery operated. It is also the reason that the proposed action requires a 10% TAC limit for yellowtail flounder bycatch to prevent the catches to exceed acceptable amounts. Both actions are consistent with the risk adverse management strategy espoused by the National Standard 1 guidelines. Nonetheless, the proposed action allows access to occur simultaneously in all re-opened areas, which is an expansion of the time that area access was allowed in the 2000 scallop fishery. The Council agrees that more data will improve our ability to make better management decisions in the future. Enhanced sea sampling, funded by the TAC and DAS set-aside programs that will apply to the controlled access trips and to open area trips (pending approval of Amendment 10), will provide more data that might enable a re-evaluation of the access seasons in future allocation adjustments.

13. The regulations for the Nantucket Lightship Area access program should include a twine top configuration specification to ensure reduced flounder bycatch.

The Council rejected this alternative because analyses were insufficient to show its effectiveness for reducing bycatch.

14. If it appears that the fleet is getting near the bycatch TAC, a certain number of the DAS allocations should be re-assigned to the open area fishery.

A method for allowing this was included in the proposed action, up to the limit on open area DAS allocations for individual vessels proposed in Amendment 10 with no access.

15. Less than a 15% yellowtail flounder TAC allocation is unjustified because the restrictive 15% allowance in Framework 13 was due to the overfished status of the Georges Bank yellowtail flounder at that time. It under reflects the scallop fleet's historical allocation.

Analysis shows that the yellowtail flounder landings by the scallop fleet over the last decade or so have rarely been more than 10% of the total yellowtail flounder landings. The basis for the 10% allocation in the proposed action was much different than that applied to the Framework 13 decision. In this case, the TAC decision was made in the context of the more stringent fishing mortality objectives in Amendment 13 to the Multispecies FMP. Two new concerns were also the effect of potentially higher yellowtail flounder catches in the scallop fishery on the hard TAC imposed by the US/CA sharing agreement, the effect on special groundfish access programs currently in development, and the seriously overfished status of SNE/MA yellowtail flounder stock.

16. Voluntary provisions to minimize bycatch for both access areas should be included in the framework adjustment.

These suggestions were included in the proposed action and relevant data to show bycatch hotspots will be circulated to industry when it is available. This is an issue that the industry could help by circulating informational bulletins to its members on ways that fishermen have identified to minimize bycatch, thereby extending the area access season as long as possible subject to the constraints on yellowtail flounder catches.

17. Prompt implementation of Framework Adjustment 16/39 is needed due to the following concerns: 1) impending bad weather [in the fall], 2) the deteriorating condition of scallops during the late summer through fall spawning period, and 3) the potential for crowding of the fleet into the access areas.

Although it is a very complex action that had lots of concerns and issues, the Council worked to finish the framework adjustment as expeditiously as possible, without compromising the analysis and evaluation of potential effects. Although implementation before the August 15 deadline in Amendment 10 is improbable, access to the areas should begin with sufficient time to allow fishing in the 2004 fishing year. In fact, the proposed access program is an expansion of the time that fishing was allowed in the 2000 fishing year, because both areas will be open at the same time. In contrast, the Nantucket Lightship Area was open for only six weeks, from August 15, 2000 to September 30, 2002, and Closed Area II was only open for eight weeks from June 15 to August 14, 2000. The trip allocations in the proposed action are no more than those allocated during the 2000 fishing year, but the access areas would be open to fishing for potentially 4½ to 5 months in the 2004 fishing year.

18. The framework adjustment should reconcile the habitat closure areas in the Sea Scallop and Multispecies FMPS.

This recommendation was considered and approved in the proposed action to improve protection of EFH and increase the practicability of using closures to protect EFH.

19. *The implications of such a dual closure [the combined effects of the existing EFH closed areas in each plan] have never been analyzed, and they have not been subject of any practicability determination.*

The combined effect of the dual EFH closures was estimated in the analysis of the status quo alternative for this framework adjustment. In the short-term (2004-2007), there would be marginal effects of the dual closure in the Nantucket Lightship Area and in Closed Area II, because scallops occur mainly in the areas that were open for access in the 2000 fishing year, which were unaffected by the EFH closures in the Multispecies FMP. The TACs for the access possible with the dual closures was about 2/3rds less than the preferred alternative, which had a substantial economic cost.

20. *The imposition of dual closures on the scallopers alone would undermine its own sole logical foundation [that EFH closed areas need to apply to all bottom-tending mobile fishing gear to be effective].*

The additional EFH closed areas in the Scallop FMP as revised by Amendment 10 would include areas that would be potentially open to other types of mobile fishing gear, although these areas are presently in areas that are closed to groundfish fishing. The analysis did not conclude that there would be no benefit of these additional closures, but that the practicability of the EFH closures would be enhanced with only a small or no decrease in EFH conservation.

21. *Access boundary Alternative 4 should be approved because it expands access to the EFH boundaries in the Multispecies FMP, maximizing access while minimizing potential for groundfish bycatch in areas where scallops are presently in low abundance.*

The Council agreed and included this alternative in the proposed action.

22. *The ten-mile "buffer" zone around the HAPC for cod was not considered with adequate technical advice or public notice. The area furthermore overlaps a very significant scallop fishing area.*

The Council rejected this alternative because it does not meet the purpose and need for this action.

23. *The alternative mechanical rotation strategy should be approved because scallops in the Nantucket Lightship Area are becoming a depreciating asset with meat quality and weight falling as the scallops age, because it better balances fishing effort across the access areas, because it addresses concerns about the scallop resource in Closed Area II, and because it provides an appropriate level of access to the scallops in the Nantucket Lightship Area and Closed Area I.*

The Council adopted this alternative for the proposed action for these reasons and because it had a lower probability for yellowtail flounder catches to exceed the TACs in each year of the proposed access program.

24. *An $F=0.2$ fishing mortality target is preferable to the $F=0.4$ target for the Nantucket Lightship Area and Closed Area I, as proposed by Amendment 10, due to the severe implications that would be associated with very high short-term levels of fishing effort. Such a low rate may not be justifiable in the longer term, however.*

The Council adopted a lower fishing mortality target for the Nantucket Lightship Area and Closed Area I because the areas would be open to scallop fishing for two of every three years, rather than one of every four, consistent with the time-averaged rotation area management policy that the Council adopted in Amendment 10. This action would produce a time-average fishing mortality target of 0.133, rather than the expected 0.1 according to the Amendment 10 schedule. In fact, this alternative raises the overall mortality target, but spreads the effort in each area out over two years rather than one. The Council will continue to evaluate the fishing mortality target to achieve optimum yield, but a target that is less than F_{\max} may be justified even in the long term to manage the effects of the fishery on the environment.

25. *The proposed mechanism for reducing the inequities in the allocation of access trips to part-time and occasional vessels should be approved and incorporated into the Mid-Atlantic area access management in 2005. Better mechanisms can be developed through a later framework adjustment, as part of access management in 2006 and 2007.*

This alternative was approved for the proposed action for this reason and because it would be clear what the scallop possession limit is according to permit category. Future framework actions may consider this allocation strategy in the context of scallop rotation area management under Amendment 10.

26. *Framework 16 needs to make sure that the deadline for the 2004 fishing year is three months after implementation of Framework Adjustment 16/39.*

This measure was included in the preferred alternative in Amendment 10 and addressed by the Council comments on the Amendment 10 proposed rule. The intent of the Amendment 10 alternative was to allow one-to-one exchanges for three months after their allocation to limited access vessels. This alternative was therefore unnecessary in Framework Adjustment 16.

27. *Framework Adjustment 16/39 should continue the research and observer set-aside program*

This alternative was approved in the proposed action.

28. *Limiting the access program in time pits actual negative impacts on scallop productivity, scallopers and scallop fishery managers against what is essentially a theoretical concern about the potential for increased bycatch in the spring. Should spring bycatch ratios prove to be high, perhaps because of yellowtail flounder aggregating on the scallop grounds, this issue could be promptly revisited [in the next biennial framework adjustment].*

The Council carefully considered these concerns against the problems that might occur by allowing fishing during peak groundfish spawning activity and the uncertainty in the bycatch projections outside the temporal range of observed scallop trips. In the final analysis, the Council preferred a more risk adverse approach that has less risk of increasing environmental effects and shutting down scallop fishing early in the year due to high groundfish bycatch. Although the effects on scallop yield and mortality are recognized, the costs did not outweigh the benefits of groundfish conservation at this early stage of rebuilding cod and SNE/MA yellowtail flounder through the Amendment 13 mortality controls. Later when stocks rebuild or the fleet demonstrates low bycatch in the expanded season under Framework Adjustment 16/39, future actions may consider expanding the season if the bycatch effects are acceptable.

29. *All access areas should be opened simultaneously in a particular year.*

The Council agreed that the sequential access that was applied in the 2000 fishing year is now unnecessary, due to the greater availability of sea samplers and better monitoring in the fishery.

30. Framework Adjustment 16/39 should not allow the use of scallop nets in the access areas, because it would drive yellowtail flounder bycatch to unacceptable levels, likely closing the access areas before other scallopers have made their allocated trips and hence promoting derby fishing. The scallop net fleet should have the option of using dredges within these access areas, without future penalties when returning to net fishing elsewhere. The Council should ensure that its management of the bycatch issue does not discourage trading, giving trawl vessels that cannot use dredges another option.

The Council agreed and analysis agrees with these recommendations and the proposed action would prevent scallop vessels from using trawls in the Georges Bank access areas. Vessels that customarily use scallop trawls may switch to dredges without penalty, or exchange trips to fish in the Hudson Canyon Area where scallop trawling is allowed. The proposed action furthermore includes alternatives (season limits, rotation schedule and mortality targets, adjustment procedure for the yellowtail flounder TAC, etc.) that reduce the risk of early closure due to yellowtail flounder bycatch and thereby increases the opportunity for vessels that exchange trips with trawl vessels to use them during the access season.

31. Additional gear restrictions for dredge boats in the access areas are unnecessary.

Analyses for these additional gear restrictions were not available to be included in the EA for this action.

32. Framework Adjustment 16/39 should include the special monitoring requirements that were implemented under Framework Adjustment 13. A level of coverage sufficient to achieve a CV=30% on the estimates of yellowtail flounder bycatch in each area is a good balance between precision and cost. It will be important, however, to distribute the costs and share the burden of the higher observer coverage among all access program participants. The Council and NMFS should ensure that all vessels participating in the access program are fit to carry observers and do carry them whenever selected by the observer program.

The proposed action includes the special monitoring requirements and the one percent TAC set-aside appears to be sufficient to achieve a 30% CV on yellowtail flounder bycatch estimates for each area. The target number of trips to be sampled would remain the same, whether an area closed early or not, which would mean that the sampling frequency would be higher than predicted (similar to what occurred in the 2000 access program).

33. The Council and NMFS should ensure that all vessels participating in the access program are fit to carry observers and do carry them whenever selected by the observer program.

The Council or NMFS cannot prohibit permitted scallop vessels from fishing in the access program, simply because the vessel is unfit to carry an observer. At the same time, NMFS cannot require observers to board an unfit vessel, but will do whatever is needed to try to spread out the observer coverage among vessels participating in the access program. If this is a significant problem, it would be an ideal issue to be tackled by the Council's advisory committee for the next framework adjustment.

34. Allowing an extra crewmember [on observed trips] could help shuck the two hundred or more extra pounds of scallops per day that must be landed to support the observer program.

Initial analyses of this potential solution by the industry advisors indicated that it would shorten the trip, but spread the profits out among more crewmembers. Adding an eighth crewmember would

therefore do little to relieve, and could even increase, the burden on the crew from observer costs. On the other hand, this issue is a business concern and could be resolved by industry. Other methods of splitting the scallop revenue or sharing trip costs could be established for observed trips, providing a more equitable split between the vessel owner and crew for the observer cost.

35. The Amendment 10 area access approach should, by itself, significantly reduce the potential for bycatch, by further reducing scallop dredge bottom time.

While the analyses corroborates the expected reduction in dredge bottom time, the actual bycatch results from the combined effect of the location and amount of fishing effort, with respect to the distribution and abundance of non-target species. As such, the Council was concerned about the potential effects on overfished groundfish species that might arise from allowing fishing by small mesh gears in the groundfish mortality closed areas. Based on the analysis and bycatch projections, the Council was concerned about the effects of scallop fishing in the groundfish closed areas, despite the reduction in bottom contact time predicted under area rotation and Amendment 10. Therefore additional measures to ensure that bycatch is below acceptable levels were needed to minimize the impacts on groundfish mortality and rebuilding under Amendment 13.

36. The Council must be careful of penalizing captains willing to work slowly and carefully to optimize scallop harvest while minimizing bycatch.

As indicated above, the proposed action includes several measures to reduce the probability for the access program to close when the yellowtail flounder catches reach the TACs. Primarily, these measures include changing the mechanical rotation strategy to smooth effort and scallop allocations over time, to maintain a season when observed groundfish catches have been low, to allow a procedure to increase the yellowtail flounder TAC if the total catches in all fisheries are unlikely to reach the Amendment 13 targets, and to allow vessels that are unable to take controlled access trips in open areas if the access areas close from high yellowtail flounder catches. Moreover, vessels will be allocated 12 DAS for each trip, but the expected scallop catch rate will enable most vessels to catch scallops in much less time, 6 to 8 days. Therefore, vessel captains should have ample opportunity to work slowly and carefully to optimize scallop harvest while minimizing bycatch.

37. The yellowtail flounder bycatch estimates contained in this year's analysis significantly overstate the potential for SNEX/MA yellowtail flounder bycatch.

The initial draft of the bycatch analysis that the Council reviewed at the January 2004 meeting contained an error which caused six Closed Area II trips to be assigned to the Nantucket Lightship Area. Since yellowtail flounder catches are typically higher in Closed Area II, this inflated the Nantucket Lightship Area bycatch projections. This error was corrected for the final framework meeting in February 2004 and the final analyses are correct.

38. The next best solution [to a soft or no TAC option] is to allocate area access trips (or an equivalent number of DAS) to the open area fishery if an access area closes for bycatch reasons.

Although it can reduce the expected benefits from the access program, this transfer provision has been included in the proposed action (Section 4.1.4.1), but the transfers will be limited to the amount of open area DAS that vessels would be assigned under the status quo alternative, which was analyzed in the Amendment 10 FSEIS.

- 39. Most vessels will have taken a comfortable majority, if not all, of their Georges Bank area access trips before any bycatch TAC is reached (if ever). A bycatch hard TAC closure represents a variant of the no-Georges Bank area access situation analyzed in Amendment 10.**

The analysis agrees with this perception and projects that, for the proposed action, yellowtail flounder bycatch might exceed the 10% TAC limits by a small percentage. Thus if the catches are as expected, most area access trips will have been taken before it would be necessary to close the access program for the year. Nonetheless, a hard TAC is needed to ensure that catches will not exceed an acceptable level if the yellowtail flounder catch rates are higher than expected, based on projections using bycatch data from the 2000 fishery.

- 40. Framework Adjustment 16/39 should include the current 300 lb. aggregate groundfish possession limit for limited access scallopers on area access trips.**

The projected catch rates are expected to exceed this amount and a reasonable increase in the limit would reduce bycatch without causing a change in fishing behavior to catch more groundfish. The proposed action therefore increases the aggregate possession limit to 1000 lbs./trip, in line with the expected catches when targeting scallops on area access trips.

- 41. A zero [cod] possession limit puts the owner (and the trip) at risk if the vessel happens to catch one fish that is consumed onboard, saved by a crewman [for personal use], or simply on deck during a Coast Guard boarding.**

This was a very contentious issue, because of the extraordinary measures that are required by Amendment 13 to rebuild the Georges Bank cod stock. Nonetheless, the Council recognized the problem caused by a zero possession limit and the proposed action allows a vessel to retain cod up to 100 lbs./trip for personal use.

- 42. Framework Adjustment 16/39 should set aside sufficient poundage of scallops to provide every SAP trip with 400 lbs. to be taken out of the general category scallop TAC. The harvest of 400 lbs. of scallops per trip can cause no harm to the scallop resource while it will improve the economic viability of the groundfish operations without increasing stress on their own resources, and will somewhat reduce the discarding of scallops.**

Special Access Programs in other fisheries with a bycatch of scallops was not the focus of the purpose and need for Framework Adjustment 16/39. Moreover, it is not known how much fishing will occur in these SAPs, or where or when fishing would occur. This type of alternative was therefore not considered in the framework adjustment and future SAPs in other fisheries should analyze the effect of such a measure.

Due to the relative price of scallops, targeting 400 lbs. of scallops can be a profitable behavior, especially when it is combined with other target species under a SAP. The Council will need to consider the effects of capping these catches and/or taking it out of an applicable area access TAC for the general category fishery. Unlike other species, discarding of sea scallops has fewer issues, because the discard mortality rate is usually low. Such a measure, if it is considered would not necessarily reduce bycatch (i.e. dead discards) by a significant fraction, especially for scallops captured in trawls.

- 43. Directed scallop fishing on 400 lb. trips is a deep concern, because of its long-term implications for the expansion of capacity in this open-access and largely unregulated sector. There is no recent historical basis for such general category scallop fishing, because it is forbidden in large areas of Georges Bank and elsewhere.**

The analysis in the document corroborates this concern, but vessels with general category permits will face significant costs to fish in the access areas. These include VMS equipment to ensure compliance with the area access regulations, new dredge bags having 4-inch rings, and any vessel modifications to fish in these offshore areas. It remains to be seen how much of an incentive it will be for fishermen to jump into this open access fishery. It is possible that the biggest effect will be to keep limited access DAS vessels offshore, instead of working on more accessible inshore scallop areas that vessels with general category permits frequently target.

Finally, the fact that current regulations forbid scallop fishing by vessels not on a DAS in large areas of Georges Bank is internally inconsistent with the contention that there is no recent historical basis for the fishery. In fact, before Amendment 4 to the Scallop FMP and Amendment 5 to the Multispecies FMP, there were many vessels from the Cape Cod, MA area and coastal Maine that targeted scallops, but failed to qualify for a limited access scallop permit (many apparently for their inability to document landings).

44. A two-percent limit for the general category TAC is a fair and even generous allocation, which should set an upper limit on the number of 400-pound trips that can be taken in each access area.

These measures were included in the proposed action and any vessel with a general category scallop permit that meets the reporting and monitoring requirements will be able to take trips, until either the fleet takes all the trips that have been allocated, or the area closes to scallop fishing due to the bycatch considerations.

11.2 Written Comments

Written comments that the Council received before the first framework meeting in November 2003, at an interim meeting to identify alternatives at the January 2004, and at the final framework meeting in February 2004 are reproduced on the following pages.