

New England Fishery Management Council

50 Water St., The Tannery – Mill 2, Newburyport, MA 01950

Tel (978) 465-0492 • Fax (978) 465-3116

**FINAL SUPPLEMENTAL ENVIRONMENTAL IMPACT
STATEMENT**

and

PRELIMINARY REGULATORY ECONOMIC EVALUATION

for

FRAMEWORK ADJUSTMENT 14

to the

ATLANTIC SEA SCALLOP FISHERY MANAGEMENT PLAN

To adjust the annual day-at-sea allocation for 2001 and 2002

and to

re-open portions the Hudson Canyon and VA/NC Areas
for scallop fishing

Prepared in consultation with the National Marine Fisheries Service and the Mid-Atlantic Fishery Management Council

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2.0 INTRODUCTION AND BACKGROUND

Framework Adjustment 14 proposes an annual adjustment to management measures that includes changing the day-at-sea allocation schedule for 2001 and 2002 to achieve Amendment 7 objectives and to achieve optimum yield. It also proposes a controlled access program to wisely manage the scallop resource that has increased in abundance and size within the Hudson Canyon and VA/NC Areas, while using the opportunity to reduce fishing mortality elsewhere through a day-at-sea tradeoff, similar to the successful program in Framework Adjustments 11 and 13. A third major proposed management adjustment is to change the possession limit for scallop shell stock to 50 U.S. bushels. The day-at-sea adjustment and controlled access program are proposed for a two-year period, through February 28, 2003.

This document describes the proposed management alternatives (Section 0) and analyzes their probable effects (Section 5.2.4), for the following four actions:

- An adjustment to the annual day-at-sea allocations for full-time, part-time, and occasional limited access scallop vessels (Section 4.1.1)
- A controlled access program to manage the fishery in the Hudson Canyon and VA/NC Areas, which would otherwise re-open under the general scallop management rules on March 1, 2001 (Section 4.1.3). This action would supercede the action to postpone the automatic sunset on these closed areas, an action contemplated by an Interim Action requested by the Council.
- Establishing a possession limit for scallop shellstock (in-shell scallops) (Section 4.1.4).

On October 11, 2000, NMFS published in the Federal Register (65 FR 60396), a Notice of Intent (NOI) to prepare a Supplemental Environmental Impact Statement (SEIS) for Framework Adjustment 14. The comment period on the NOI extended from October 11, 2000 to November 13, 2000. Three written comments were received by the Council before the deadline and are included in Section 9.1.

The Council published a Draft Supplemental Environmental Impact Statement on November 21, 2000 and initiated a 45-day public comment period, ending on January 24, 2001. During this period, the Council received 269 written comments. Two-hundred and sixty of these were faxed as form letters with similar or exact content. The comments were considered by the Council at the final framework meeting on January 25, 2001 when the Council selected the proposed action. These comments were furthermore addressed in the Response to Comments (Section 1.1). Sections 4.3, 5.2.3.1.3, 5.2.4.2, 5.2.4.2.2, and 5.2.4.2.5 were significantly changed, expanded, or added to address the issues raised through the NEPA public comment process.

Since 1982, the Atlantic Sea Scallop FMP has regulated the fishery for scallops (Placopecten magellanicus) throughout the range on the Atlantic coast of the U.S. Initially the major regulations required scallop vessels to land scallops that averaged less than 35 to 40 count (meats per pound) or if landed in-shell, have a minimum shell height of 3 to 3½ -inches. Fishing effort increased to unsustainable levels in the late 1980s and 1990s, prompting the Council to develop Amendment 4 that became effective in 1994.

Amendment 4 radically changed the management of the sea scallop fishery and resource to achieve a maximum fishing mortality threshold equal to $F_{5\%}$. This reference point was calculated to protect recruitment by attempting to keep spawning stock biomass above five-percent of virgin conditions, a level thought to be sufficient to prevent a recruitment-caused stock collapse for a fecund

species like sea scallops. Implemented with this management change were limited access permits, annual day-at-sea allocations, dredge ring-size minimums, restrictions on gear configuration to improve escapement of small scallops, a minimum twine top mesh to improve finfish escapement, and a nine-man maximum crew limit. All were intended to reduce fishing mortality and/or reduce the capture and landing of small sea scallops. Both effects would allow biomass to increase and over the long term improve total yield to the fishery.

Initially the day-at-sea allocations began at 204 for full-time limited access vessels, 91 for part-time limited access vessels, and 18 for occasional limited access vessels. These annual allocations were reduced by Amendments 4 and 7, according to the schedule in the table below. Framework Adjustments 11 and 12 kept the day-at-sea allocations constant in 1999 and 2000 because the anticipated day-at-sea reductions in Amendment 7 were not needed to achieve its annual fishing mortality targets.

Table 1. Annual day-at-sea allocations and reported day-at-sea use by limited access scallop vessels.

	1992	1993	1994 ¹	1995	1996	1997	1998	1999	2000	2001 ²	2002 ³
Full-time			204	182	182	164	142	120	120	120	120
Part-time			91	82	82	66	57	48	48	48	48
Occasional			18	16	16	14	12	10	10	10	10
Day-at-sea use	44,934	40,490	36,747	33,490	34,404	30,832	27,208	24,772	21,474	21,189	20,650

In 1994, Amendment 4 also prohibited the use of chafing gear, cookies, and triple links between rings. Vessels were required to use twine top mesh no less than 5½ inches to improve the escapement of finfish. Framework Adjustment 11 increased this regulation to an 8-inch minimum mesh to reduce finfish bycatch more and help to mitigate the potential increases of finfish bycatch in Closed Area II, re-opened to scallop fishing in 1999. This measure was successful and did not significantly affect the catches of larger scallops then becoming more abundant, so the Council has kept the 8-inch twine top mesh regulation in place. In the re-opened closed areas, where scallops were even larger and the finfish were thought to be more abundant, Framework Adjustment 11 and 13 required scallop vessels to use a 10-inch twine top mesh. It was thought that the vessels would not see a significant loss of these large scallops with the larger twine top mesh.

The crew limit was initially nine men to prevent vessels from targeting small scallops when and where they were abundant, by using more men to shuck the smaller scallops. It takes more time to shuck and equal weight of small scallops compared to larger scallops, so the crew limit helped replace the effectiveness of the meat count regulation that Amendment 7 discontinued. Framework Adjustment 1 reduced the crew limit to seven men in response to higher abundances of small scallops in the Mid-Atlantic in 1994.

Amendment 5 to the Northeast Multispecies FMP in 1994 closed Closed Area I, Closed Area II, and the Nantucket Lightship Area to scallop fishing, because of concerns over finfish bycatch and

¹ Initial day-at-sea allocation under Amendment 4

² Proposed day-at-sea allocations and estimated day-at-sea use for the 2001 fishing year, assuming that there will be an automatic 10 day-at-sea charge for trips in the Hudson Canyon and VA/NC Areas with a 15,000 pound scallop possession limit. With a 17,000 pound scallop possession limit, the expected day-at-sea use would increase by about 700-900 days.

³ Proposed day-at-sea allocations and estimated day-at-sea use for the 2002 fishing year, assuming that there will be an automatic 10 day-at-sea charge for trips in the Hudson Canyon and VA/NC Areas with a 15,000 pound scallop possession limit. With a 17,000 pound scallop possession limit, the expected day-at-sea use would increase by about 800-1,000 days.

disruption of spawning aggregations. Except for the limited access program in Framework Adjustment 11 and 13 during 1999 and 2000, these areas remain closed to scallop fishing. Amendment 7 to the Sea Scallop FMP continued the closure of the Hudson Canyon and VA/NC Areas, initially closed by Emergency Action in 1998. The Council closed these areas in response to above average recruitment and high abundance of small scallops. A sunset date for the closures was March 1, 2001 and would have allowed these areas to re-open without additional restrictions, if not for a Council-requested Interim Action to postpone the sunset date, until this framework adjustment becomes effective.

In summary, the sea scallop fishery is governed primarily by day-at-sea allocations, crew limits, gear restrictions, and ad hoc area closures to achieve annual fishing mortality targets and promote increases in scallop biomass. These efforts have been very successful, reducing fishing mortality and allowing biomass to recover nearly to the long-term targets well ahead of schedule. During the last seven years, the amount of fishing effort has declined from 45,000 days in 1992-1993 to 23,000 days in 2000-2001. At the same time, the number of limited access permits has declined from around 450 in 1994 to 340 in 2000. Only 276 of the 340 limited access permits used allocated days-at-sea in the 2000 fishing year. At the same time, age 2 and 3 scallops have become less vulnerable to the fishery because of gear restrictions, crew limits, and the Hudson Canyon and VA/NC Area closures. Overall fishing mortality on the Georges Bank stock has declined from 1.51 in 1991 to 0.15 in 1999 (NMFS 2001a), while biomass has increased from 1.30 kg/tow in the 1991 survey to 9.08 kg/tow in the 2000 survey (Table 1). For the Mid-Atlantic stock, fishing mortality has declined from 1.31 in 1991 to 0.43 in 1999 (NMFS 2001a), while biomass also increased from 0.99 kg/tow in the 1991 survey to 3.78 kg/tow in the 2000 survey (Table 2).

Table 2. Trends in landings, biomass, and fishing mortality for the Georges Bank scallop stock (NMFS 2001a and NMFS 2001b).

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Landings (mt)	9,311	8,238	3,655	1,137	982	2,045	2,326	2,016	5,155	8,572 ⁴
Biomass (kg/tow)	1.30	1.65	0.53	0.46	0.80	1.51	1.81	5.00	4.48	9.08
Fishing mortality	1.51	1.11	1.28	0.34	0.23	0.19	0.16	0.05	0.14	

Table 3. Trends in landings, biomass, and fishing mortality for the Mid-Atlantic scallop stock (NMFS 2001a and NMFS 2001b).

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Landings (mt)	7,011	4,955	2,778	5,872	6,318	4,999	2,910	2,948	4,653	6,579 ⁵
Biomass (kg/tow)	0.99	0.56	0.76	1.03	1.51	0.78	0.53	1.04	2.17	3.78
Fishing mortality	1.31	1.54	1.12	1.20	0.95	1.12	0.92	0.69	0.43	

More information about the fishery, the fishing industry, scallop biology, economics, social factors, and other measures are described in the 2000 Scallop SAFE Report (NEFMC 2000a), the SAW Report (NMFS 2001a), and in the SARC Summary of Consensus (NMFS 2001b).

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⁴ Preliminary estimate.

⁵ Preliminary estimate.

3.0 MANAGEMENT ALTERNATIVES AND QUALITATIVE IMPACTS

3.1 *Proposed Action*

3.1.1 Annual Day-at-sea Allocations for Limited access Scallop Vessels

The framework adjustment would set the annual day-at-sea allocations for the 2001 and 2002 fishing years. A two-year, rather than one-year adjustment, is proposed because of several years of above average recruitment, the conservation effects of area closures, better science, and because it will reduce administrative costs for the 2002 fishing year. A two-year adjustment would enable the Council to devote more time and resources to developing and approving Amendment 10 during 2001, including proposed alternatives using area rotation to manage sea scallops. If the Council can complete Amendment 10, it could go into effect during the 2002 fishing year. The Council always has the option of initiating a framework action for March 2002, if compelled to do so to achieve the Amendment 7 mortality and/or biomass targets, but such a need is not expected at this time.

3.1.1.1 120 Full-time, 48 Part-time, and 10 Occasional Day-at-Sea Allocations during the 2001 and 2002 Fishing Years (Preferred)

The framework adjustment proposes to adjust the day-at-sea allocations in the 2001 and 2002 fishing years to be consistent with Amendment 7 fishing mortality targets. The following sections describe the preferred alternative to adjust the annual day-at-sea allocations for limited access scallop vessels. If the preferred alternative is approved and implemented, full-time scallop vessels would receive 120 days-at-sea to fish for scallops during March 1, 2001 to February 28, 2002. Part-time vessels would receive 48 days-at-sea and occasional vessels would receive 10 days-at-sea. These allocations would continue in the 2002 fishing year, for limited access scallop vessels to fish during March 1, 2002 to February 28, 2003. Up to 10 unused days-at-sea from 2000 may be carried over by some limited access vessels into the 2001 fishing year. The 10 day-at-sea carry over provision would also apply in 2002 for unused days in 2001.

Rationale: Allocating days-at-sea at the 2000 levels to vessels with limited access scallop permits would generate 24,696 to 25,592 days of fishing effort, as measured by the vessel monitoring or call-in systems. With the three areas closed to scallop fishing on Georges Bank and the area access program for the Hudson Canyon and VA/NC Areas (for example, with a 15,000 pound – 10 day-at-sea tradeoff) this alternative is estimated to have more than a 50-percent probability of achieving the Amendment 7 mortality schedule. The 2000 Scallop SAFE Report indicates that the rebuilding schedule will not be jeopardized by this day-at-sea adjustment. In fact, several years of above average recruitment and scallop growth in closed areas have been more favorable than anticipated, improving prospects for rebuilding much quicker than the schedule anticipated by Amendment 7.

The analysis of this option is given in Section 5.2.4.1.1. Higher day-at-sea allocations were rejected because rebuilding would proceed more slowly, there is less certainty that Amendment 7 biomass objectives would be achieved, and that the higher day-at-sea allocation could produce a sustainable, optimum yield. The following factors were considered in the Plan Development Team's recommendation to increase the full-time day-at-sea allocation to no more than 120 days. These factors are more fully described in the 2000 SAFE Report (NEFMC 2000).

- Uncertainty in the stock status
- Uncertainty in the fishing mortality reference points
- Uncertainty in the biomass reference points
- Uncertainty in the DAS/F relationship
- The potential for instability in management regulations
- Consistency with secondary FMP objectives
- More stable production over the long term
- Fewer community impacts.

The preferred alternative would therefore have a better chance to achieve the fishing mortality target than greater day-at-sea allocations and it would better account for the uncertainty in the model assumptions and closed area access policies. Net benefits would increase by \$67 to \$212 million (Section 5.2.4.4.2). Producer surplus would increase by \$23 to \$80 million and consumer surplus would increase by \$22 to \$132 million.

3.1.2 Area Closures to protect small scallops

3.1.2.1 Option 3 – No New Area Closures (Status Quo)

New closures would not take effect in 2001 or 2002, unless the Council took future action. Limited access scallop vessels would be able to retain and land an unrestricted (subject to the day-at-sea allocations, crew limits, gear restrictions and other regulations that apply to limited access scallop vessels) amount of sea scallops everywhere but in the Hudson Canyon and VA/NC Areas and the groundfish closed areas on Georges Bank. The fishery will be able to land a limited amount of sea scallops from the Hudson Canyon and VA/NC Areas during 2001 and 2002 under special restrictions (Section 4.1.3). According to these special rules, limited access scallop vessels could fish in the Hudson Canyon and VA/NC Areas during a day-at-sea, but either area would temporarily close once the landings met the annual TACs (Section 4.2.3.3.2.1). On March 1, 2003, the FMP would allow the Hudson Canyon and VA/NC Areas to revert to a fully-open status, unless the Council takes other action via amendment or framework adjustment.

Rationale: The access program for the Hudson Canyon and VA/NC Areas would remove at least 42 percent of total fishing effort from the areas that are now open for scallop fishing, if limited access scallop vessels fish for five trips charged a minimum of 10 days-at-sea. This should result in a significant reduction in fishing mortality and allow small scallops elsewhere to survive longer to large size without added area closures. This option allows the industry greater flexibility to fish where it is most economic and doesn't force vessels to fish in remote scallop areas.

The status quo was chosen over other alternatives because of public comment that there would be insufficient areas for the fishery to operate, especially if the Hudson Canyon and VA/NC Areas close because scallop landings meet the TACs. A second controversial issue was that the proposed new area closures may be difficult to re-open, especially without a formal area rotation plan that would identify when these areas would re-open, possibly without future actions by the Council and approval of subsequent framework adjustments.

This alternative was analyzed in association with the Low F alternative for the Hudson Canyon and VA/NC Areas access program (Sections 5.2.4.1, 5.2.4.2, and 5.2.4.4). Biomass in these rebuilt areas is expected to remain near the 2001 levels, providing a continuing source of scallops for the fishery in 2003. With this low harvest level for the Hudson Canyon and VA/NC Areas, there is less risk in allowing

other scallop areas to remain open. Although most of the biomass will continue to be concentrated in the Georges Bank closed areas and in the Hudson Canyon and VA/NC Areas, this alternative, coupled with the Low F alternative below, has the greatest net benefits (\$212 million) through 2003 and achieves about 95 percent of the expected biomass increase compared to the status quo. Other alternatives which included new area closures were expected to allow slightly greater increases in exploitable scallop biomass (none exceeded the status quo), but the short-term net economic benefits were significantly less (\$67 to \$149 million). Sections 5.2.4.1 and 5.2.4.4 estimate and describe the biological and economic effects.

3.1.3 Controlled access program for the Hudson Canyon and VA/NC Areas

This section proposes a program to restrict fishing effort in the Hudson Canyon and VA/NC Areas, which have seen considerable increases in scallop biomass due to closures that followed favorable recruitment in 1997. It substitutes for the automatic sunset of the area closures that was anticipated on March 1, 2001. The program uses the above average biomass in the Hudson Canyon and VA/NC Areas as leverage to reduce total fishing effort through a day-at-sea tradeoff mechanism, following the highly successful program in Framework Adjustments 11 and 13 for Closed Area I, Closed Area II, and the Nantucket Lightship Area. Unless the Council takes other action, the Hudson Canyon and VA/NC Areas will revert to a fully-open status on March 1, 2003, when the proposed access program expires.

3.1.3.1 Boundaries and Seasons

3.1.3.1.1 Boundaries of area access program

Scallop vessels eligible to access and fish for sea scallops will be able to fish in either or both of the areas known as the "Hudson Canyon South Closed Area" within the boundaries described in Table 4 and the "Virginia Beach Closed Area" within the boundaries described in Table 5. These boundaries are identical to the boundaries of the original closure, implemented by Interim Action on April 3, 1998 and made extended to March 1, 2001 by Amendment 7. For brevity, these areas are heretofore labeled "Hudson Canyon Area" and "VA/NC Area", respectively in this document.

No portions of these areas will remain closed during the 2001 and 2002 fishing years, in the seasons specified in Section 4.1.3.1.2. No buffer zones⁶ surrounding the areas will exist. Eligible vessels will be able to fish one or more trips in either or both of these areas until the end of the season specified in Section 4.1.3.1.2 or until the Regional Administrator closes an area because the scallop landings are expected to exceed the TAC for that area. Vessels may not take any more trips in an area than it is authorized to take in both areas. For example, a vessel would be authorized to take three trips during the 2001 fishing season in total and no more than one of those before May 31, 2001. Before May 31, the vessel may fish one trip in either area described here. After May 31, the vessel could take split its trips between areas or take all the trips in one area until it closes because scallop landings exceed the TAC.

⁶ A buffer zone would designate an area where scallop fishing was prohibited or different regulations apply compared to other areas where scallop fishing can occur as governed by normal Scallop FMP regulations.

Table 4. Boundaries of the “Hudson Canyon South Closed Area”.

Point label	Latitude	Longitude
H1	39°30’N	73°10’W
H2	39°30’N	72°30’W
H3	38°30’N	73°30’W
H4	38°40’N	73°50’W
H1	39°30’N	73°10’W

Table 5. Boundaries of the “Virginia Beach Closed Area”.

Point label	Latitude	Longitude
V1	37°00’N	74°55’W
V2	37°00’N	74°35’W
V3	36°25’N	74°45’W
V4	36°25’N	74°55’W
V1	37°00’N	74°55’W

Rationale: The boundaries of the Hudson Canyon and VA/NC Areas were chosen to protect small scallops in areas observed by the 1997 R/V Albatross scallop survey. The distribution of large scallops within these areas during the 2000 survey is however heterogeneous, especially in the Hudson Canyon Area. Large scallops tend to be concentrated in the shallower survey strata while the scallops in deeper strata appear to be smaller and would benefit from a longer closure. The PDT examine this issue in the 2000 SAFE Report (NEFMC 2000) and found that the differences were too small to recommend a smaller area to allow scallop fishing within the Hudson Canyon and VA/NC Areas. It therefore recommended that the Council consider re-opening the entire portion of both of the Hudson Canyon and VA/NC Areas, partly because it would be more beneficial to reduce fishing effort in other areas rather to protect the smaller scallops within the boundaries of the Hudson Canyon and VA/NC Areas. Section 5.2.4.1.2 gives biomass and size estimates for depth strata within the Hudson Canyon and VA/NC Areas.

Access to these closed areas is desirable at this time because of the high biomass that has appeared from prohibiting scallop fishing within them. This access would maintain or increase the current landings, while removing fishing effort from other areas and promoting scallop biomass increases elsewhere. Although there are smaller scallops in the deeper portions of the Hudson Canyon Area, it will be more profitable for vessels to fish in shallower portions within it where larger scallops occur. There are no known differences in finfish bycatch or habitat within these areas that would indicate a longer closure in portions of these closed areas to minimize bycatch or protect habitat. Buffer zones are not thought to improve enforceability, based on the experience with Framework Adjustment 11, which allowed access to Closed Area II, surrounded by a buffer zone. It could have positive effects on scallop conservation, but area closures elsewhere would be more productive.

3.1.3.1.2 Season

Both of the areas described above will re-open to scallop fishing for vessels with limited access scallop permits on April 1, 2001 or as soon as possible thereafter. Limited access vessels will be able to take authorized trips that begin on this date. The areas will remain open for all limited access and authorized vessels with General Category scallop permits until one of the following three events occurs:

1. The fishing year ends on February 28, 2002
2. The scallop landings from an area exceed its TAC and the Regional Administrator closes the fishery by authorizing no more trips and reducing the scallop possession limit to zero.
3. The vessel has taken its authorized trips to fish for scallops within the Hudson Canyon and VA/NC Areas.

Limited access scallop vessels must initiate one trip in the Hudson Canyon and VA/NC Areas by declaring that it is taking a Hudson Canyon Area or VA/NC Area trip and recording a VMS position on a scallop day-at-sea to continue fishing on authorized trips within these areas after August 31. After August 31, limited access vessels that have met this requirement may take any remaining trips from the initial allocation (Section 4.2.3.3.1.2) and any additional trips that are re-allocated by the Regional Administrator on or after October 1, 2001 (Section 4.1.3.1.3). If a vessel fails to meet this requirement, it sacrifices its initial allocation, rights to fish in the Hudson Canyon and VA/NC Areas during the current fishing year, and the opportunity to qualify for any additional trips authorized by the Regional Administrator.

If an area remains open for fishing by limited access scallop vessels through February 28, 2002, that area will remain open after March 1, 2002 with a new allocation of trips for the limited access vessels in 2002 (Section 4.1.3.1.3). If an area closes before the end of the fishing year, it will re-open on April 1, 2002 for the sequence of trips authorized in the 2002 fishing year. The in-season adjustment in 2002 will follow the same principal, methods, and timing as the one in 2001.

Rationale: Postponing the season until April 1 would delay the opening of the season until finfish bycatch was less than in the early spring. Typically, the most intense fishing effort occurs when areas first open and the catch per unit effort is highest. Delaying the season for too long would have other undesirable effects including: reducing the flexibility for the fleet to fish when scallop prices are high, minimizing the market impacts from oversupply during a restricted season, habitat and water quality impacts associated with intensive discarding of shells and viscera after removing the scallop meat, safety and enforcement concerns arising from a shorter fishing season or crowding, and the availability of qualified observers. If the 2001 season for the Hudson Canyon and VA/NC Areas runs through the end of the fishing year a similar increase in intensity is not expected in March 2002 because fishing would have been continuous.

3.1.3.1.3 In-season adjustment procedure

In addition to the ability to change the scallop possession limit during the course of the season the Regional Administrator may also re-allocate unused trips on or after October 1, 2001 based on the participation through August 31, 2001. In determining if qualifying vessels are able to have more trips after October 1, the Regional Administrator should assume that all vessels that take one or more trips in the Hudson Canyon and VA/NC Areas before September 1, 2001 will use all of its initial allocation. Thus the in-season adjustment would re-distribute trips that were forfeited by vessels not taking trips in the Hudson Canyon and VA/NC Areas plus any adjustments that might be possible from landings that are less than the scallop possession limit.

After October 1, qualifying vessels would be able to take any of their remaining trips from the initial allocation plus any additional trips that the Regional Administrator may authorize. In the 2002 fishing year, the same schedule will apply and all limited access scallop vessels will receive a new allocation of trips. Vessels may not carry over unused trips from one year to the next.

Rationale: The in-season adjustment is needed to respond to the uncertainty about how many vessels will fish in the Hudson Canyon and VA/NC Areas. It increases the likelihood that the fleet will take the TACs and achieve optimum yield, reducing fishing mortality in the areas that are now open. This procedure will make the adjustment more rational and orderly, by reducing the Regional Administrator's uncertainty about how many of the initial allocation of trips would be taken in the second period, after October 1 and sets a baseline for decision making on August 31. There is a prohibition on carrying forward unused trips into subsequent fishing years because it is better for vessels to fish this year rather than next in the Hudson Canyon and VA/NC Areas, reducing effort in the now open areas as soon as possible.

The Council choose August 31 as the appropriate time to determine eligibility for making additional trips as a compromise. On one hand, the August 31 date provides sufficient time and flexibility for vessels to make at least one trip to the Hudson Canyon and VA/NC Areas and be eligible to continue fishing there in the fall. On the other hand, the August 31 date also gives the Regional Administrator sufficient time to determine how many trips to re-allocate to eligible vessels and gives them sufficient time to take those trips before the end of the fishing year without concentrating the trips into January and February, when summer flounder bycatch could be above average.

3.1.3.2 Effort and Catch Limits

The access program for the Hudson Canyon and VA/NC Areas will follow the highly-successful program developed in Framework Adjustments 11 and 13 for the Georges Bank closed areas, except that higher scallop possession limits are proposed to make it more attractive to fish within the Mid-Atlantic areas. As catches elsewhere increase with increasing biomass, it no longer is profitable for vessels to fish in the area access program when they can catch more scallops per charged day-at-sea. Projections indicate that catches elsewhere will average about 1,500 pounds per day over the season. In some cases, the catches could be even higher. A scallop possession limit of 10,000 pounds would be insufficient to promote fishing in the Hudson Canyon and VA/NC Areas when vessels are charged no less than 10 days-at-sea for each trip. The Council therefore choose a 17,000 to 18,000 pound scallop possession limit for a 10 day-at-sea trip to encourage more fishing effort (up to the optimum levels) in the Hudson Canyon and VA/NC Areas, so the program achieves its conservation benefits as estimated by the SEIS. If insufficient effort is attracted to the Hudson Canyon and VA/NC Areas, then fishing mortality in other areas with smaller scallops will be higher than the optimum level.

The Council choose the Low F option, described below, because it would slow the reduction in biomass expected under the High F option for setting the Hudson Canyon and VA/NC Area TACs. This policy is projected to keep biomass near current levels through the beginning of the 2003 fishing year, allowing these areas to be more productive than other areas even after the proposed restricted access program. With the non-preferred High F option, the projections indicated that scallop biomass would decline toward more average levels and other proposed closures would offer better opportunities to fish after the 2002 fishing year. Since there were other factors that overcame this benefit and the Council choose to close no new areas, the Low F option was a risk averse choice.

3.1.3.2.1 "Low F Option" - Total Allowable Catch (TAC), trip allocations, and TAC set-aside

When the Regional Administrator determines that the scallop landings from either one of the areas exceed its TAC, the Regional Administrator will prohibit vessels from fishing for sea scallops in the area by prohibiting the possession of sea scallops within it, subject to the regulations concerning transiting. The TAC has a direct bearing on the initial and re-allocated number of trips that eligible

vessels may take within these areas as discussed below. TAC set asides would fund research, fund observers, and account for landings by vessels without limited access scallop permits that might target sea scallops or catch sea scallops as a bycatch.

Rationale: The purpose of the TAC is to ensure that the fleet does not exceed the fishing mortality targets for the areas and that biomass in these areas can continue to support the fishery for several years while the remainder of the resource rebuilds. It is also used as the basis to determine the initial number of trips to be allocated to eligible vessels and to estimate how many trips that the Regional Administrator may authorize for an in-season adjustment.

3.1.3.2.1.1 Total Allowable Catch (TAC) for the Low F option

The TAC for the Hudson Canyon Area would be 6,331 mt (13.96 million lbs.) for 2001, based on a fishing mortality target equal to 0.20 (16 percent exploitation rate). The TAC for the VA/NC Area would be 283 mt (0.62 million lbs.). In 2002, the TACs would be 6,415 mt (14.14 million lbs.) and 273 mt (0.60 million lbs.), respectively.

Rationale: These TACs would allow landings of sea scallops that are consistent with the fishing mortality target ($F = 0.20$) in the overfishing definition. This would produce lower landings in 2001 than the High F option described above, but the biomass in the areas would not decline as rapidly and there would be a higher yield in future years if the proposed action had to extend beyond 2002. A longer rebuilding period for areas now fished may be needed if future recruitment is less than anticipated or if total fishing effort increases. Total fishing effort could increase through more efficient use of a day-at-sea, re-activation of a significant number of Confirmation of Permit Histories, or a higher day-at-sea utilization rate by active limited access scallop vessels.

At the TAC, the average biomass in the Hudson Canyon Area is expected to increase by 51 percent between the end of 2000 and the end of 2001, after accounting for the removal of the TAC. In 2002, the biomass is expected to increase by nine percent compared to the end of 2001, after accounting for the removal of the TAC in 2002. For the VA/NC Area, the total biomass is expected to increase by 30 and one percent, respectively. The proposed TACs are in the long-term unsustainable, but biomass is expected to continue increasing in these areas until 2002 because of favorable recruitment. Beyond 2002, the biomass in both areas is expected to decline slowly if fishing mortality continues at 0.2 (16%), especially when recruitment declines to average levels.

Under this option with no closures, the total biomass for the Mid-Atlantic is expected to increase by 57 percent to 5.6 kg/tow (44 percent above the B_{MSY} proxy for Mid-Atlantic scallops). For Georges Bank scallops, the projections estimate that biomass would increase by 123 percent to 18.7 kg/tow in 2002 (129 percent above the B_{MSY} proxy for Georges Bank scallops). Projections for this option are given in Section 5.2.4.1.1 and the TAC estimates are presented in Section 5.2.4.1.2.

3.1.3.2.1.2 Trip allocations

With the Low F TAC option, the Regional Administrator would allocate 828 trips to the fleet, or 3 trips for each eligible limited access scallop vessel, taking into account the number of full-time, part-time, and occasional limited access scallop permits (see calculations in the tables below). Limited access vessels would be authorized to take these allocated trips in either area during the season, as long as the scallop catches do not equal or exceed the TAC for each area and the area closes (Section 4.1.3.2). After one area closes because scallop landings exceed its TAC, vessels may take their remaining trips in the other area until it too closes.

The preferred trip allocation alternative for this option with a 17,000 pound scallop possession limit in 2001 and an 18,000 pound scallop possession limit in 2002 is therefore three trips in 2001 (Table 28) and three trips in 2002 (Table 29), respectively. The analysis includes a scallop possession limit ranging from 8,000 to 25,000 pounds of scallop meats..

Table 6. Allocations of trips for the Mid-Atlantic area access program in 2001 and the estimated number of trips for each area that can be taken if all vessels participate, assuming full participation in the Hudson Canyon Area and 50 percent participation in the VA/NC Area. The preferred alternative is indicated by the light shading (yellow if printed in color) associated with a 17,000 pound scallop possession limit. The trip allocations are combined for both areas and are shown in the last column. Estimates exclude a one percent set-aside to fund research and another one-percent set-aside to fund the observer program.

Low F Scenario	Hudson Canyon	VA/NC Area		
Expected vessel participation				
Full-time	222	111		
Part-time	30	15		
Occasional	24	12		
Total estimated participation	276	138		
TAC per vessel	50,571	4,520		55,091
Trips limit (lbs. meat weight)				
Total number of trips to allocate				
8000	1,585	71	-	1,656
10000	1,321	59	-	1,380
12000	1,057	47	-	1,104
17000	793	35	-	828
25000	528	24	-	552
Trips limit (lbs. meat weight)				
Number of trips per vessel to allocate				
8000	6	0		6
10000	5	0		5
12000	4	0		4
17000	3	0		3
25000	2	0		2

Table 7. Allocations of trips for the Mid-Atlantic area access program in 2002 and the estimated number of trips for each area that can be taken if all vessels participate, assuming full participation in the Hudson Canyon Area and 50 percent participation in the VA/NC Area. The preferred alternative is indicated by the light shading (yellow if printed in color) associated with a 18,000 pound scallop possession limit. The trip allocations are combined for both areas and are shown in the last column. Estimates exclude a one percent set-aside to fund research and another one-percent set-aside to fund the observer program.

Low F Scenario	Hudson Canyon	VA/NC Area	All
Expected vessel participation			
Full-time	222	111	
Part-time	30	15	
Occasional	24	12	
Total estimated participation	276	138	
TAC per vessel	51,242	4,359	55,601
Trips limit (lbs. meat weight) Total number of trips to allocate			
9000	1,588	68	1,656
11000	1,324	56	1,380
14000	1,059	45	1,104
18000	794	34	828
27000	529	23	552
Trips limit (lbs. meat weight) Number of trips per vessel to allocate			
9000	6	0	6
11000	5	0	5
14000	3	0	4
18000	2	0	3
27000	1	0	2

The Regional Administrator would give out or authorize the initial trip allocation for limited access in a sequential, step-wise program (Table 30). Vessels will be authorized to take no more than one trip before April 30 in each fishing year. A second trip may start no earlier than May 1 and no more than two trips may be taken by May 31. A third trip may start no earlier than June 1 and no more than three trips may be taken by July 15. After July 15, a vessel may begin a trip up to the total allocation that vessels are authorized to take within the Hudson Canyon and VA/NC Areas. If the allocation is fewer than three trips, the schedule would remain the same, but more than three trips could only be taken after October 1, if authorized by the Regional Administrator.

To be eligible to take a Hudson Canyon or VA/NC Area trip, a limited access scallop vessel will have to land at least one trip before September 1. A vessel intending to preserve its eligibility for more trips need only to declare a Hudson Canyon and VA/NC Areas trip and report one VMS position ocean ward from the VMS monitoring line. A limited access scallop vessel would lose 10 days-at-sea for this purpose, but it would have a negligible impact on vessels that do not use all of its days-at-sea during a fishing year.

Table 8. Trip allocation schedule for limited access vessels

Inclusive dates	Maximum number of authorized trips to the Hudson Canyon and VA/NC Areas, combined
April 1 to April 30	1 trip
May 1 to May 31	2 trips
June 1 to July 15	3 trips
July 16 until end of season	3 trips or greater amounts if authorized by in-season adjustment; Vessels that did not land a trip before September 1 would be unable to take any trips after August 31

Since this framework adjustment proposes that part-time vessels will have a maximum allocation of 58 days-at-sea in the 2001 fishing year⁷, part-time vessels can take a maximum of five area access trips in any combination. A part-time vessel would therefore be eligible for two additional trips (see below) from an in-season adjustment. An occasional scallop vessel will have a maximum allocation of 19 days in the 2001 fishing year⁸ and would therefore be eligible to take only one trip in any one area, regardless of additional allocations through a possible in-season adjustment via the provision described below.

The number of trips that can be allocated depends on the scallop possession limit and the number of vessels that are eligible to participate. The analysis assumes that all vessels that have a limited access scallop permit, excluding the Confirmation of Permit Histories, will take all trips to the Hudson Canyon and VA/NC Areas allocated to them. Vessel owners that re-activate a Confirmation of Permit History will be eligible for a full compliment of trips, subject to the restrictions that govern use by other vessels with a limited access scallop permit.

Rationale: The purpose and expected impacts of the trip allocations are identical to those described in Section 4.2.3.3.1.2. The analysis indicates that an initial allocation of three trips can be authorized to limited access scallop vessels without exceeding the TAC. As for Frameworks 11 and 13, participation has been less than expected and an in-season adjustment was made in 1999 and is likely in 2000. Lower than expected participation for authorized Hudson Canyon and VA/NC Area trips would indicate that an allocation of additional trips on or after October 1 would be needed to harvest optimum yield.

3.1.3.2.1.3 TAC set-asides to fund research, to fund observers, and for access by General Category scallop vessels

With the Low F option, the TAC set asides would be identical to those described in Section 4.2.3.3.1.3, but the amounts would differ. The estimates of TACs and set asides with the Low F option are given in the table below.

⁷ A part-time scallop vessel will have a 48 day-at-sea allocation in the 2001 fishing year plus up to 10 unused days-at-sea carried forward from the 2000 fishing year.

⁸ An occasional scallop vessel will have a 10 day-at-sea allocation in the 2000 fishing year plus up to nine unused days-at-sea carried forward from the 2000 fishing year (it must have used at least one day-at-sea to be eligible to carry forward unused days).

Table 9. Summary of TACs and possession limits for limited access scallop vessels fishing in the Hudson Canyon and VA/NC Areas during the 2001 fishing year.

2001 Maximum Allocations		Hudson Canyon Area	VA/NC Area
Scallops	Total TAC	13.96 million lbs. (6,331 mt)	0.62 million lbs. (283 mt)
	TAC for limited access vessels	13.68 million lbs. (6,204 mt)	0.61 million lbs. (277mt)
	Two percent TAC for observers	279,151 lbs. (127 mt)	12,475 lbs. (6 mt)
	One percent TAC to fund scallop research	139,575 lbs. (63 mt)	6,238 lbs. (3 mt)
Initial trip allocation for limited access vessels⁹		Three trips, combined with the VA/NC Area trips	Three trips, combined with the Hudson Canyon Area trips
Scallop possession limit		17,000 lbs. per trip	17,000 lbs. per trip
Regulated multispecies possession limit		300 lbs. per trip	300 lbs. per trip

Table 10. Summary of TACs and possession limits for limited access scallop vessels fishing in the Hudson Canyon and VA/NC Areas during the 2002 fishing year.

2002 Maximum Allocations		Hudson Canyon Area	VA/NC Area
Scallops	Total TAC	14.14 million lbs. (6,415 mt)	0.60 million lbs. (273 mt)
	TAC for limited access vessels	13.86 million lbs. (6,287 mt)	0.59 million lbs. (268 mt)
	Two percent TAC for observers	282,857 lbs. (128 mt)	12,030 lbs. (5 mt)
	One percent TAC to fund scallop research	141,428 lbs. (64 mt)	6,015 lbs. (3 mt)
Initial trip allocation for limited access vessels		Three trips, combined with the VA/NC Area trips	Three trips, combined with the Hudson Canyon Area trips
Scallop possession limit		18,000 lbs. per trip	18,000 lbs. per trip
Regulated multispecies possession limit		300 lbs. per trip	300 lbs. per trip

3.1.3.2.2 Triggered Area Closure

If at any time, information or data indicate that the total scallop landings will meet the TAC for either area, the Regional Administrator will suspend the re-opening of the area to scallop vessels via publication of a Federal Register notice.

Rationale: This prevents the catches from exceeding the fishing mortality target and also allows flexibility for vessels to choose which area to fish. Since the area is smaller, the VA/NC Area is more likely to close due to this provision, depending on the number of trips that vessels make there.

3.1.3.2.3 Day-at-sea restrictions and tradeoffs

⁹ The initial allocation of three trips is a combined three trip allocation to fish in either or both areas, provided that each area's landings are below its TAC and the area remains open.

Vessels that declare into and begin a trip (Section 4.1.3.6.1) into either of the Hudson Canyon and VA/NC Areas on a scallop day-at-sea will automatically be charged 10 days-at-sea or the actual time at sea, whichever is more.

Rationale: An accumulation of days-at-sea for trips in the Hudson Canyon and VA/NC Areas must be greater than the actual trip length to compensate for the increased scallop mortality caused by fishing in areas with more abundant scallops. For vessels that would otherwise use most or all of their day-at-sea allocations, the effect of the added tradeoff is to reduce the available fishing time elsewhere. This in turn reduces fishing mortality in those areas to compensate for the added mortality in the Hudson Canyon and VA/NC Areas for 24 hours of fishing time. For the stock as a whole, the intent is to prevent mortality from increasing from the closed area access program, i.e. the program is conservation neutral relative to the goals of the FMP.

Accounting for the differences in scallop yield inside and outside of the Hudson Canyon and VA/NC Areas, a 10 day-at-sea accumulation would decrease mortality (i.e. the number of scallops removed from the stock) by about one percent for the Low F option with no closures, six percent for the High F option with four closures, and have a negligible effect with the High F option with two closures (Table 12).

Higher day-at-sea accumulation amounts for each area access program trip would decrease mortality and vice versa. Higher scallop possession limits would be less conservative and vice versa. In fact, the analysis shows that an 18,000 scallop possession limit provides very little benefit from the day-at-sea tradeoff (Section 5.2.4.1.4). If additional trips are authorized, fishing mortality would decline relative to the analysis from the added day-at-sea tradeoffs. This occurs because at that point, there would be fewer unused days for vessels to use in the re-opened areas and the added trips would be catching larger scallops in the Hudson Canyon and VA/NC Areas than would an equivalent trips elsewhere.

3.1.3.2.4 Maximum trip length

There is no maximum trip length for vessels that fish in the Hudson Canyon and VA/NC Areas. Vessels on authorized trips in these areas would accrue 10 days-at-sea or the actual time at sea, whichever is greater.

Rationale: A maximum trip length would prevent vessels from fishing longer than 10 days if catch rates substantially decline. A limit on the trip length appears unnecessary, however because either the catch would have to exceed the TAC for this to occur or the catch rates would probably be below the point where it is more favorable to fish in the open areas rather than in the groundfish closed areas.

3.1.3.3 Eligibility

3.1.3.3.1 Limited access scallop vessels

All vessels with scallop limited access permit and days-at-sea allocations will be eligible to fish under the program to access the closed areas. In addition to active vessels with a limited access scallop permit, this would include vessels that did not fish during 1999 or 2000 and vessels re-activating history permits. Inactive vessels or history permits are eligible to fish in the re-opened areas to ensure equitable access for all legal scallop vessels.

Permit-holders with "Confirmation of Permit Histories" (CPH) may not fish with two permits on one vessel in any given year. In other words, if a person owns Vessel A and also possesses a CPH for

Vessel B (a vessel no longer owned), the owner of Vessel A may not fish both Vessel A's scallop days-at-sea and Vessel B's scallop day-at-sea history on Vessel A during the same year. This policy is consistent with the rules that prevent owners of multiple vessels from stacking permits onto one vessel and preventing the use of more than one vessel's days-at-sea on a single vessel.

Inactive vessels with limited access scallop permits could be fishing for other species in New England or other regions and would not therefore be using scallop days. History permits, on the other hand, could be transferred to a replacement vessel to fish for scallops.

There are 276 vessels that have limited access scallop permits and these vessels will be allocated 30,133 days-at-sea for the 2001 fishing year beginning March 1 (NEFMC 2000). In addition, there are 64 confirmation of permit histories that could be reactivated during the year by applying for a replacement vessel permit. Depending on the option chosen, there could be 367 to 685 potential trips to the two areas combined. Assuming a 10-day trip, the total number of potential trips by the fleet is 3,550, but this effort is restricted by the trip allocations (Section 4.1.3.2.1.2) and the TACs (Section 4.1.3.2.1.1), which require the Regional Administrator to re-close the areas when the landings meet this amount.

Table 11. Number of eligible vessels with full-time, part-time, and occasional scallop limited access permits as of February 11, 1999.

Category	Vessel Permits	Confirmation of Permit Histories	Total Eligible Vessels	2001-2002 Day-at-sea allocation with carry over	Maximum 10-day trips
Full time	222	56	278	120 to 130	12
Part time	30	8	38	48 to 58	5
Occasional	24	0	24	10 to 20	1
Total	276	64	340	30,133	2,838 to 3,550

Rationale: Limited access scallop vessels have permits to target scallops and use days-at-sea. There is no justification or objective that would exclude any class of limited access permit from fishing in the closed areas. Exclusion of a class of limited access scallop vessels would not be fair and equitable.

3.1.3.3.2 Eligibility to receive more Hudson Canyon and VA/NC Areas trips from an in-season adjustment

Vessels that fish on a scallop day-at-sea in either of the Hudson Canyon and VA/NC Areas will be eligible for additional trips if authorized by the Regional Office on or after October 1. The timing of the in-season adjustment and when vessels may fish is described in Section 4.1.3.1.3. Vessels that meet this eligibility criterion may continue to fish in either or both of the Hudson Canyon and VA/NC Areas, provided that the Regional Office has not closed them because landings from the area have met its TAC.

Vessels will have qualified for additional trips and have begun that trip for the purposes of eligibility for additional trips (Section 4.1.3.1.3) by declaring that it will make a Hudson Canyon Area or VA/NC Area trip and beginning a trip¹⁰.

Rationale: Enforcement must know when a vessel is or is not authorized to fish in the Hudson Canyon and VA/NC Areas. The activity code would enable law enforcement to quickly check if the vessel is authorized to be fishing in the areas. Without the activation code or some other means of authorization, it

¹⁰ This is normally interpreted to mean that the vessel has begun a scallop day-at-sea by call-in or by reporting one or more VMS positions ocean ward of the VMS monitoring line.

would be impossible to distinguish between a vessel that had already taken its allocated trips and one that had not and is therefore authorized to fish in the Hudson Canyon and VA/NC Areas. This specification also has implications for determining when a vessel is eligible for additional trips, if the Regional Administrator authorizes more trips on or after October 1, and for adjusting the automatic day-at-sea charge for Hudson Canyon or VA/NC Area trips on broken trips.

Under the status quo option, a vessel would be eligible for additional trips by simply declaring a trip and reporting one or more VMS positions ocean ward of the VMS monitoring line before August 31. This would be costly for vessels that utilize all of its annual day-at-sea allocations, because it would be automatically charged 10 days-at-sea. For 229 of 276 limited access vessels that do not use all of their days and the 35 vessels that in 1999 used no days, doing this would have no cost to the vessel yet it would prevent the management plan from achieving optimum yield. In addition, a vessel on a Hudson Canyon and VA/NC Areas trip would be charged at least two days-at-sea even if it never reached the Hudson Canyon or VA/NC Area and had to return to port with no landings.

Under the preferred option, a limited access vessel would be eligible for additional trips by declaring a trip and reporting one or more VMS positions within the boundary of the Hudson Canyon or VA/NC Area before August 31. Presumably, this vessel would actually have participated in the program and fished for sea scallops if it made an effort to steam to these areas. This option increases the efficiency of the additional allocations on or after October 1, by authorizing more trips to vessels that are most likely to use them. It also has a beneficial effect on vessels taking a Hudson Canyon or VA/NC Area trip and hampered by weather or breakdown before arriving to the Hudson Canyon or VA/NC Area. In this case, a vessel that never reaches the Hudson Canyon or VA/NC Area would be charged day-at-sea based on actual time, rather than the minimum of two days-at-sea.

3.1.3.4 Gear restrictions

3.1.3.4.1 Dredges and trawls

Except for the twine top adjustment in Section 4.1.3.4.2, limited access scallop vessels that fish in the Hudson Canyon and VA/NC Areas must use a scallop dredge that conforms to §648.51 (Gear and Crew Restrictions) and §648.2 (definition of “dredge or dredge gear”), including ring size, configuration and linkage, and maximum width. According to this regulation, the combined dredge width shall not exceed 31 feet (9.4 m). Vessels that are authorized by §648.51 (f) to use trawls on a scallop day-at-sea may continue to use trawls on a scallop day-at-sea in the Hudson Canyon and VA/NC Areas, provided that the fishing gear complies with all applicable regulations.

Rationale: Limited access vessels would be required to comply with the existing regulations that apply to any other scallop area when the vessel is in the day-at-sea program. This option is preferred because prohibiting vessels from using trawls in the Hudson Canyon and VA/NC Areas would be inequitable, unless there were significant conservation benefits from prohibiting the gear. Vessels that are authorized to use trawls based on their fishing history tend to be more prevalent in Mid-Atlantic ports than in New England (NEFMC 2000). Some vessels may be incapable of using dredges without significant and costly retrofitting.

Vessels using trawls to catch sea scallops have poorer size selectivity, higher finfish bycatch, and higher discard mortality than vessels using dredges (Dr. W. DuPaul, VIMS, pers. comm.). While these are all undesirable characteristics, the difference in size selectivity between trawls and dredges may be less of a factor in the Hudson Canyon and VA/NC Areas where scallops are predominately larger. Overall, it could be more beneficial to encourage vessels that use trawls to fish in the Hudson Canyon and

VA/NC Areas, postponing mortality on small scallops that they would otherwise catch in areas now open to fishing. Similarly, the higher catches in the Hudson Canyon and VA/NC Areas could significantly shorten tow duration, reducing total fishing time for vessels using trawls than is expected for dredge vessels. This could reduce finfish bycatch, depending on the distribution of finfish caught by scallop trawls.

3.1.3.4.2 Twine tops

Any vessel with a limited access scallop permit that fishes in the Hudson Canyon and VA/NC Areas must use a scallop dredge with a twine top having diamond mesh no smaller than 10-inches (25.40 cm). This mesh may be hung on the square or the diamond within the area of the dredge occupied by the twine top. The mesh will be measured using the same methods for the current 8-inch twine top, as described in §648.51(a)(2)(iii).

Rationale: The purpose of this measure is to reduce groundfish and other finfish bycatch and take advantage of recent research that shows a significant reduction of bycatch, especially for flatfish, with insignificant reductions of scallop catch when scallops are large. Framework Adjustment 11 also included a measure to increase the twine top mesh to 8-inches diamond in all other areas, to mitigate the groundfish bycatch while fishing in the closed areas. This permanent increase to an 8-inch twine top became effective on December 9, 1999, six months after the implementation of the Framework Adjustment 11 measures. The larger twine top inside and outside of the groundfish closed areas will ensure that the access program will be conservation-neutral for many species.

The larger twine top mesh is expected to produce significant reductions for many species, especially flatfish like yellowtail flounder, winter flounder, and windowpane flounder. On the other hand, a larger twine top is not expected to significantly reduce monkfish and adult roundfish catches. Catches of summer flounder and possibly skates could be reduced as well, benefiting those species and reducing the opportunity of plugging the dredge bag. Dredge bags that are clean and not plugged with fish have been reported to release more small scallops through and between the rings, improving size selection of the dredge.

Although the standard is now 8-inch mesh twine tops, the Closed Area II scallop fishery access program (NEFMC 1999a) required scallop vessels to use 10-inch mesh twine tops. About 180 vessels participated in the fishery and now have these twine tops on hand. Interest in Framework Adjustment 13 has been high and many fishermen and suppliers are aware of this pending requirement, allowing them time to order new stock before the closed area access begins.

3.1.3.5 Possession limits

3.1.3.5.1 Scallop possession limit for limited access vessels

Vessels on a scallop day-at-sea may possess no more than 17,000 pounds of scallop meats on trips that had fished in the Hudson Canyon and VA/NC Areas in 2001. This limit is derived from the total number of allocated trips divided into the combined TACs (see

Table 9), rounded down to the nearest 1,000 pounds. In 2002, vessels on a scallop day-at-sea may possess no more than 18,000 pounds of scallop meats on trips that had fished in the Hudson Canyon and VA/NC Areas. This follows procedure described above (Table 10), but the result is rounded up to the nearest 1,000 pounds. The Regional Administrator may make one or more in-season adjustments to the scallop possession limit at any time during the either season or after October 1, assuming that each future trip will catch the scallop possession limit.

Rationale: The scallop possession limit will ensure that the scallop fishery does not exceed the scallop TAC for the Hudson Canyon and VA/NC Areas. According to the analysis (Section 5.2.4.1.2), the scallop possession limit, coupled with the trip allocation for each area, is expected to allow the fleet to harvest 97 percent of the Hudson Canyon and VA/NC Area TACs in 2001 and 101 percent of the combined TACs in 2002.

A non-uniform scallop possession limit (i.e different possession limit by area) would allow Framework 14 to define a program that would more closely achieve the TACs, but a different possession limit for each area would be much more complicated and difficult to enforce. In place of such a complicated system, the Council and the Enforcement Committee preferred a uniform scallop possession limit for all areas, with an in-season adjustment procedure for trip allocations and/or the scallop possession limit to enable the fishery to catch the TACs. One option that would increase the proportion of the TAC that would be available is to increase the scallop possession limit to the maximum amount that does not exceed the combined TACs with the same number of trips that could be allocated with a 15,000 lbs. scallop possession limit. Under this strategy, the scallop possession limit could be as high as 17,500 lbs. with four trips and a High F TAC option, or 16,400 lbs. with three trips and a Low F TAC option.

The analysis assumes that 50 percent of eligible vessels will take one trip in the VA/NC Area and 100 percent of eligible vessels will take the remaining trips in the Hudson Canyon Area. The Council does not expect all eligible vessels to fish and the actual catch by participating vessels will be considerably lower than the TAC. The in-season adjustment, on or after October 1 will allow vessels to utilize trips that are not taken by eligible vessels before August 31. The estimated total fishing effort, scallop catch, and bycatch are reported in Section 5.2.4.1.

A wide range of trip allocations (three to nine trips) and trip limits (approximately 8,000 to 25,000 pounds) were analyzed and evaluated. The choices are shown in Table 26,

Table 27, Table 31, and

Table 32 and the estimated impacts are given in Section 5.2.4.1.2.

Section 5.2.4.4.9 suggests that a possession limit less than 15,000 pounds will be insufficient to attract fishing effort into the Hudson Canyon and VA/NC Areas, because of the net revenue per day-at-sea expected in the areas that are now open to fishing. On the other hand, Section 5.2.4.1.4 suggests that it will take six to eight days-at-sea in the Hudson Canyon and VA/NC Areas to catch a 15,000 pound of sea scallops (including steam time to and from port), so higher amounts would be less conservative (Table 12 and Table 13), especially in light of possible increases of effort from higher day-at-sea utilization or from new vessels with converted Confirmation of Permit Histories.

Although lower trip limits (with more allocated trips) were estimated to be more profitable than fishing in the existing open areas, the Council opted for the highest scallop trip limit that would be conservation neutral. This approach gave the greatest assurance that eligible vessels would fish in the Hudson Canyon and VA/NC Areas and reduce their fishing effort in the open areas, where smaller scallops predominate. With a 15,000 pound scallop possession limit, the conservation benefits of the day-at-sea tradeoff are expected to be one percent for the Low F option with no closures, six percent for the High F option with four closures, and have a negligible effect with the High F option with two closures (Table 12). In 2002, when biomass is expected to be higher, the effect of the day-at-sea tradeoff increases to three, three, and five percent, respectively, because it takes less time for the vessels to catch the scallop possession limit in the Hudson Canyon and VA/NC Areas and effort is distributed differently in response to relative changes in biomass (Table 13).

At 18,000 pounds, the DSEIS (Section 5.2.4.1.4) estimates that there would be negligible conservation benefit arising from the day-at-sea tradeoff (Section 4.1.3.2.3). This occurs because there are limits to the amount of scallops that can be processed with a seven-man crew. While the day-at-sea tradeoff itself imparts little conservation benefit with higher trip limits, there would still be a significant reduction in actual fishing time when vessels stopped fishing to allow the crew's shucking process catch up with the catches. In 2001, the Council chose to round the trip limit down to err on the side of caution. In 2002, less caution is needed because the areas could re-open without restrictions at the end of the fishing year. A second factor in this recommendation as a preferred alternative is that re-activation of latent or unused permits would be more likely in 2001 than in 2002 as catches continue increasing. In this case, the product of the allocated trips and the scallop possession limit would slightly exceed the TACs, but it would be less likely to generate a derby-style fishery managed by a TAC alone.

Table 12. Net conservation effect of the day-at-sea tradeoff in 2001 on the estimated number of scallops caught compared to the number of scallops caught without a day-at-sea tradeoff (Section 5.2.4.1.4).

Day-at-sea tradeoff option	Alternative		
	Low F with no closures	High F with two closures	High F with four closures
Number caught, adjusted 10/8,000	-22.6%	-65.7%	-71.7%
Number caught, adjusted 10/10,000	-13.4%	-59.3%	-65.2%
Number caught, adjusted 10/12,000	-7.3%	-29.9%	-35.6%
Number caught, adjusted 10/15,000	-1.2%	-0.6%	-6.1%
Number caught, adjusted 10/18,000	0.0%	0.0%	0.0%

Table 13. Net conservation effect of the day-at-sea tradeoff in 2002 on the estimated number of scallops caught compared to the number of scallops caught without a day-at-sea tradeoff.

Day-at-sea tradeoff option	Alternative		
	Low F with no closures	High F with two closures	High F with four closures
Number caught, adjusted 10/8,000	-25.8%	-73.6%	-79.7%
Number caught, adjusted 10/10,000	-15.9%	-57.9%	-63.1%
Number caught, adjusted 10/12,000	-9.3%	-30.4%	-33.9%
Number caught, adjusted 10/15,000	-2.7%	-2.8%	-4.8%
Number caught, adjusted 10/18,000	0.0%	0.0%	0.0%

There are significant impediments for Confirmation of Permit Histories (CPH) to be reactivated. The profits from four trips and the day-at-sea adjustment (about \$114 to \$181 thousand) may not be enough to justify the cost of reactivating the permit on a new or replacement vessel. Other factors, including the expected increase in open area catches during the 2001 fishing year (included in the estimated profit above) are more likely to induce owners to reactivate vessels with Confirmation of Permit Histories. Any reactivation of a CPH is likely to be more than offset by non-participation of the 35 vessels that did not fish for scallops during the 1999 fishing year.

Since the price differential is small between large and small scallops and discard mortality is generally low, highgrading (i.e. discarding less valuable scallops) is not likely to occur or be a significant problem, since discard survival is usually high. On the other hand, if the price for large scallops is significantly higher than that for smaller scallops, vessels may begin to high-grade to get the highest possible price for the trip's 15,000 pounds of scallops. Some of this behavior was reported in the groundfish closed area fisheries when the price for U10 scallops exceeded that for 10-20 count scallops by over \$1.00 per pound. Since the largest scallops were just under the U10 classification, a few small scallops could make the catch fall into the next lower meat count, with a significant effect on price to the boat, unless the boat graded the catch before landing.

3.1.3.5.2 Vessels with General Category scallop permits

The scallop possession limit for vessels fishing with a General Category scallop permit in the Hudson Canyon and VA/NC Areas will be raised to 100 pounds of scallop meats. These vessels may not retain and possess in-shell scallops. Vessels with limited access scallop permits, but not on a scallop day-at-sea while fishing inside of the Hudson Canyon and VA/NC Areas will have the same possession limit that applies to vessels with a General Category scallop permit.

The scallop possession limit will remain in effect to accommodate scallop bycatch in the Hudson Canyon and VA/NC Areas throughout the year, even if an area closes for limited access scallop vessels. On March 1, 2003, the scallop possession limit for General Category vessels fishing in the Hudson Canyon and VA/NC Areas will change to the level that applies to these vessels while fishing in other open scallop areas.

Rationale: The preferred alternative allows vessels with a General Category scallop permit to retain a reasonable amount of scallop bycatch, reducing regulatory discards. It is not anticipated that a low, 100-pound limit would be a significant threat to enforcing the scallop possession limit for limited access vessels nor would it create an incentive for vessels without a limited access permit to target sea scallops in the restricted Hudson Canyon and VA/NC Areas. A higher scallop possession limit could open up a directed open-access scallop fishery in a restricted scallop fishery management area. The prohibition on

possessing in-shell scallops is needed to prevent a broad-scale, open access shell stock fishery from developing and reduce the opportunity for illegal transfers of shell stock at sea.

3.1.3.5.3 Shellstock – 50 US Bushels

Any vessel with a limited access scallop permit on an authorized scallop trip in the Hudson Canyon and VA/NC Areas will be prohibited from possessing more than 50 US bushels of shell stock when it is no longer in these areas. For purposes of enforcing the scallop trip limit, 50 US bushels of shell stock shall be counted as 400 pounds of scallop meat.

Rationale: The purpose of this measure is to prevent vessels from catching more than the scallop trip limit allows and discarding the excess scallops in port. It will also ease the enforcement burden caused by the potential for partial offloadings as scallops are shucked in port. On the other hand, it is necessary to allow some landings of shell stock to satisfy a market for large, live scallops.

3.1.3.6 Enforcement Provisions

3.1.3.6.1 Trip Declaration and Notification

An activity code will be incorporated into the VMS programming to indicate when a scallop vessel is on a closed area trip. A vessel may set an activation code for a closed area trip no more than the number of trips authorized for fishing within the Hudson Canyon and VA/NC Areas (Section 4.1.3.1.1). NMFS may trigger a closed area trip when either the vessel's VMS reports its first position within one of the areas or when notified by the existing VMS email capabilities that the vessel will be taking an access area trip. To simplify administration and enhance monitoring, NMFS may require email notification of a closed area trip before leaving the dock. No additional notification is required at the end of a trip, before landing.

3.1.3.6.2 Vessel operation and landing

Vessels on an area access trip (Section 4.1.3.1.1) may not fish for any species except within the Hudson Canyon and VA/NC Areas. Vessels fishing for scallops during a scallop day-at-sea or Letter of Authorization in one of these areas may not enter or re-enter the other area. Partial unloadings of the catch at more than one dealer is also prohibited.

Rationale: Circumvention of the scallop possession limit will significantly undermine the conservation goals of the proposed action. Allowing scallop fishing on area access trips elsewhere would provide greater opportunity to transfer scallops at sea, thereby avoiding the scallop possession limit. The allocation of trips and the scallop possession limit are the primary management measures for controlling scallop catch and are intended to prevent the fishery from exceeding the scallop TAC.

Partial unloadings could also reduce the effectiveness of the scallop possession limit to keep landings below the TAC. Allowing landings of scallops at more than one dock or port would make it harder to track and monitor the landings from closed area trips.

3.1.3.6.3 Penalties for Closed Area Fishery Violations

Since many of the measures in the proposed action ensure that the FMPs meet their conservation goals for scallops, yellowtail flounder, and other groundfish, the Council considers violations of the

closed area fishery management measures to be a very serious offense, particularly for intentional and willful violations. These type of violations include significant overages of the possession limits, transfers at sea, exceeding the crew limits, fishing with non-conforming gear, and fishing on more than the number of authorized trips. Penalties should therefore be commensurate with the seriousness of the violation, possibly including barring future access to areas that had been closed to rebuild scallops or other species

Rationale: There will be great economic incentives to break the rules for fishing in the closed areas, largely due to the differences in the resource condition in the closed area compared to the existing open areas. This provision establishes the Council's intent about intentional and willful violations of the proposed action. NMFS should take this intent into account when determining appropriate penalties for serious violations.

3.1.3.7 Reporting requirements

The reporting requirements would extend and expand to the Hudson Canyon and VA/NC Areas the existing requirements for vessels fishing for scallops in the groundfish closed areas during 2000.

3.1.3.7.1 Vessel monitoring systems (VMS)

All limited access scallop vessels that fish in the Hudson Canyon and VA/NC Areas will be required to have a functional VMS onboard. In addition to the current VMS-based reporting requirements, the Regional Administrator may require vessels that fish for scallops in these areas to make daily reports on the hail weight of scallops, yellowtail flounder, summer flounder, skates, and monkfish; the total number of tows since the last daily report; and the area fished. This daily report must be made via the e-mail messaging capability built into the VMS units.

Rationale: The additional reporting requirements are necessary for NMFS to monitor the fishery and make in-season adjustments to the trip allocations or discontinue the area access program because the scallop landings exceed the TACs. Currently all full and part-time vessels are required to have a VMS onboard. It is anticipated that very few occasional vessels will want to fish in the re-opened closed areas due to the day-at-sea cost and due to the smaller size of most vessels with occasional limited access scallop permits. During 2001, occasional scallop vessel will receive 10 to 19 days-at-sea for the year. One trip to the Hudson Canyon or VA/NC Areas would therefore cost them most of their annual day-at-sea allocation.

3.1.3.7.2 More frequent polling of VMS equipment

NMFS will increase the polling frequency for all limited access scallop vessels with VMS systems (regardless of whether the vessel fishes in the Hudson Canyon and VA/NC Areas) to an average of twice per hour, from the current rate of one polling per hour. This enhanced polling frequency would begin on April 1, 2001, or whenever limited access scallop vessels are authorized to make trips within the Hudson Canyon and VA/NC Areas and terminate when both areas are no longer open for scallop fishing. The added costs associated with the increased messaging and associated administrative costs are to be borne by the scallop vessels with VMS systems.

Rationale: The increased polling frequency will enhance the monitoring capability to catch violators when fishing in the area access program. Since the average would be a polling every 30 minutes, there would be a 50% chance of detection for entries into the Hudson Canyon and VA/NC Areas of more than 15 minutes and a 100 percent chance of detection for entries into the closed areas for longer than 30 minutes. The Council believes this will be sufficient to catch violators that could be transferring scallops at sea to circumvent the scallop possession limit or attempting to take a tow within the Hudson Canyon and VA/NC Areas while not on an area access trip.

The original intent of the scallop VMS program was to determine when a vessel was at sea or at the dock, to be able to deduct the correct number of days-at-sea from a vessel's annual allocation. For this new purpose, more frequent polling is needed. It is also necessary to increase the polling frequency for scallop vessels that are not on a Hudson Canyon or VA/NC Area trip, since the purpose of the provision is to prevent transfers at sea to other scallop vessels. It is not necessary to monitor non-scallop vessels, because it would be highly unusual for a vessel to be unloading large amounts of scallops without scallop fishing gear onboard.

3.1.3.7.3 Vessel trip reports (VTR)

In addition to the information that NMFS currently requires scallop vessels to submit on Vessel Trip Reports (VTR), the Regional Administrator is encouraged to require vessels on area access program trips to report the following detailed information:

- Start and end time of each tow
- Duration of tow
- Latitude and longitude coordinates of each tow
- Depth of tow
- A description of the gear used
- The number of crew members aboard the vessel
- Subjective description of the habitat they are dredging
- An estimated amount and size of scallops caught on each tow
- Characterization (amount, size, and condition) of all bycatch for each species.

Rationale: More detailed information is needed to evaluate future area rotation strategies and the effects they will have on scallops, bycatch species, and habitat. There is very little information to assess how a full-scale commercial fishery will operate under a condition that is representative of a rebuilt scallop resource. Since conditions in the groundfish closed areas are more in line with a rebuilt resource, this information is crucial for developing a rotational area management strategy, contemplated for Amendment 10. The model developed for this framework adjustment makes some very basic assumptions about fishing operations and the distribution of fishing effort relative to the resource (Section 8.1.4.1 in Framework Adjustment 11; NEFMC 1999a). On average, the model assumptions are acceptable for estimating overall impacts, but changes in fishing strategies and non-uniform fishing effort could cause different results. The above list of variables, collected for each closed area trip, would allow the Council to refine and modify this model to improve its predictive capabilities.

3.1.3.8 Observer requirements

3.1.3.8.1 Vessels must carry observers on 10 percent of Hudson Canyon Area trips and 20 percent of VA/NC Area trips

Two-percent of the scallop TAC will be allocated (Section 4.2.3.3.1.3) to authorize additional landings on trips carrying a NMFS-approved observer. NMFS will determine and authorize additional landings on observed trips to defray the observer costs. Any scallop landings on observed trips that exceed the scallop possession limit will be counted against the TAC set aside for observers, rather than the scallop TAC (Section 4.2.3.3.1.1).

As a goal, the minimum observer coverage should be 10 percent of the scallop trips for each gear and permit category in the Hudson Canyon and VA/NC Areas and 20 percent of the scallop trips for each gear used by limited access scallop vessels in the VA/NC Area. The gear/permit categories include limited access scallop vessels using dredges and limited access scallop vessels using trawls. Sea

sampling by observers on General Category scallop vessels fishing in the Hudson Canyon and VA/NC Areas would not be required to meet this sampling frequency goal.

Sampling frequency would therefore be equivalent for limited access vessels using trawls, limited access vessels using dredges. The Regional Administrator should take whatever steps are necessary to achieve these observer coverage goals, including training of new observers, contracting with third parties, seeking other funding sources, authorizing fewer closed area trips, or even delaying the closed area scallop fishery.

NMFS may require any vessel fishing on a scallop day-at-sea within the Hudson Canyon and VA/NC Areas (Section 4.1.3.1.1) to carry a NMFS-approved observer. The cost of carrying the observer will be borne by the vessel, unless otherwise authorized by the Regional Administrator. The Regional Administrator shall authorize such vessel, carrying an observer, to land an amount of scallops above the scallop possession limit to help defray the cost of carrying an observer. The observer will be paid through and by a means established by the Regional Administrator for paying observers for the closed area scallop fishery. The vessel is obligated to pay the observer costs regardless of whether the vessel lands or sells any scallops on the observed trip.

In addition to the customary data that sea samplers collect, NMFS should also take steps to also collect the following information:

- Detailed written and photographic records of all bycatch associated with scallop fishing in the closed areas
- The characterization of bycatch should include a classification of sediment information and associated macro-invertebrates
- Finfish discard and discard mortality data.

Rationale: A high level of observer coverage is needed because of the concerns over important impacts from scallop fishing and the uncertainty about how a full-scale commercial fishery will operate under conditions characteristic of a rebuilt resource. These concerns include bycatch and bycatch avoidance, discarding, damage and recovery of habitat, and detailed scallop fishery behavior.

The observer data is not as crucial for administering a TAC, as it was for the groundfish closed areas in 2000. Twenty-five percent observer coverage is therefore unnecessary and for most other sub-sampling programs 100 trips for each provides an adequate number of observations for precision at a moderate level of detail. The smaller the sample stratification within the areas, the greater number of trips is required to achieve the same level of precision. If future analysis requires stratification in four zones, for example, this sampling intensity would provide for an average of 25 samples in each zone, but in proportion to the effort in that zone. More stratification would provide fewer samples. The 100 trips is therefore a rough estimate of the amount of samples needed for analysis of future management analysis. It is impossible to accurately specify a minimum amount for the each area in total, because the amount of detail needed by future management actions cannot be anticipated. Ten percent of trips in each gear and permit category for the Hudson Canyon Area and a higher sampling frequency, 20 percent, is needed in the VA/NC Area because of its small size, low TAC, and low total number of trips (see Section 5.2.4.1.3).

A compelling reason to closely monitor the closed area scallop fishery with a high level of observer coverage is to quantify how a full-scale commercial fishery would operate under conditions that are characteristic of a rebuilt resource. Observers collect more detailed information, often on a tow-by-tow basis, than is possible via VTRs, VMS or dealer reports. These alternative sources of information also tell little about discarding¹¹. This detailed information is crucial for identifying where and how the

¹¹ Vessel operators report the hail weight, but not the size distribution, of discards on each day of fishing. These hail-weights are thought to be unreliable, however, and are not used without a source of data to validate the results. Observer data serves to validate discard information on VTRs.

fishery operates within the re-opened closed area, so that the information can be applied to future openings of closed areas as part of a rotational area management strategy, contemplated by Amendment 10. Unlike the model used to estimate fishing time and catch from the proposed closed area fishery, scallop fishing will not have uniform effort across the closed area since it will be affected by scallop density, bycatch, vessel crowding, and other factors. The sea sampling data, coupled with VTRs, will be used to fine tune the model developed to estimate impacts of the closed area scallop fishery.

A second reason for the observer sampling is to better understand the important differences in fishing efficiency and behavior of different types of vessels in rebuild areas. One significant unknown is how vessels using trawls will operate in the re-opened areas. It may be that the fishing behavior and dynamic changes differently for vessels using trawls and vessels using dredges. These differences affect the impacts of the day-at-sea tradeoff, discarding, and where the vessels choose to fish within the re-opened areas. At sea data collection will provide important information to answer this type of questions (see Section 5.2.4.1.3).

Collection of information about the unrecorded catch (including invertebrates, scallop shells, and rocks) via photographic records would be cost-efficient compared to counting or estimating these variables in addition to the data now collected. This data would be quantitative in nature, but has a very good potential to identify trends that would be used in future scallop management actions. Sediment samples would allow the collection of data related to habitat in scallop resource areas. This information is of critical value to managers, but as of yet, there are no broad-scale programs to collect this data. Lastly, the collection of discard and discard mortality information would address the Sustainable Fisheries Act mandate associated with National Standard 9. Additional training would be required for observers to evaluate discards and the potential for discard mortality, but it would be a big improvement over scientific “assumptions” and fishermen’s “anecdotal” reports that often disagree.

It is necessary to fund this intense data collection activity through a TAC set aside, because no other funding is available. Most funding for observers comes from a Sea Sampling Observer Program to identify and enumerate marine mammal encounters. Since scallop dredges have few encounters with marine mammals, sea sampling scallop trips has a relatively low priority. Additional observer coverage is sometimes funded to take biological samples and record discards, but these scarce funds are used for other equally important fisheries like groundfish.

To enable some of the scallop landings to fund observers, the Regional Administrator may establish a mechanism for these proceeds to pay for observers and help defray the costs of carrying an observer. At five dollars per pound, the additional landings associated with a two-percent TAC set aside and the High F TAC option could provide between \$1.9 and \$2.1 million to fund this activity. Since the Council anticipates that 828 to 1,380 trips could be taken by active limited access scallop vessels and between 900 and 2,600 trips by General Category scallop vessels, this fund could allow from \$4,800 to \$12,100 (or about 2,500 lbs.) per observed trip at a 10 percent sampling frequency, more than enough to provide funds for the proposed sampling intensity (Table 14). In the worst case, i.e. the lowest scallop possession limit associated with the greatest number of trips, the estimated costs would be between 53 and 59 percent of available funds, assuming the \$700 per observer-day cost. As such, the one-percent supplemental TAC set-aside would provide a sufficient buffer against unanticipated costs.

Table 14. Low F option: Gross value of 2001 TAC set aside (assuming an average price of \$5.00 per pound) and observer costs (assuming that the daily observer cost is \$700 and the average trip duration is six days for limited access vessels).

Observers	Cost of trips to be sampled			
	10%		20%	
Sampling intensity				
Value of TAC set aside	\$	1,395,755	\$	62,374
Scallop possession limit				\$ 1,458,129
8200	\$	665,769	\$	59,505
9800	\$	554,812	\$	49,588
12300	\$	443,868	\$	39,672
16400	\$	332,976	\$	29,760
24600	\$	221,953	\$	19,838
General Category possession limit				
400	\$	122,129	\$	10,916
600	\$	81,419	\$	7,277
800	\$	61,064	\$	5,458
1000	\$	48,851	\$	4,366

It is inadvisable for the vessel to pay the observer directly, due to a potential conflict of interest. A fund for such purpose could be established, on the other hand, into which a fixed fee per observed day, paid through authorized, additional scallop landings could be deposited to defray the observer costs or pay for observers through a third-party contract.

3.1.4 Possession of Scallop Shell Stock

3.1.4.1 Restrict Possession of Shell Stock Inshore of the Day-At-Sea Monitoring Line

If a vessel with a limited access or general category scallop permit fishes or transits any are south of 42°20' N latitude during any portion of a trip, it will be prohibited from possessing more than 50 US bushels when inshore of the day-at-sea monitoring line and from landing more than 50 US bushels from a fishing trip. Scallop shell stock must be compliant with the 3½-inch minimum size shell height standards (§648.50).

Any vessel fishing in the state waters exemption program (§648.54) would also be exempt from the scallop shell stock limit. NMFS would monitor trips through the VMS program for vessels that are required to have or voluntarily participate in the VMS day-at-sea monitoring program. A trip will be presumed to occur south of 42°20' N latitude and the shell stock limit will apply unless no VMS signals on the trip come from south of 42°20' N latitude. Scallop vessels that do not have VMS and have not declared into the state waters exemption will need to notify NMFS via call-in to be exempt from the shell stock possession limit.

Rationale: The FMP relies on day-at-sea restrictions and crew limits to achieve its mortality targets and prevent overfishing. As catch rates rise, it becomes more attractive for vessels to deckload sea scallops and shuck them inside of the day-at-sea monitoring line, thereby circumventing the regulation's intent. Another adverse effect is that the discarded scallop shells and viscera may also cover important habitats and foul inshore waters, especially where temperatures are high and currents are slow. This measure will prevent scallop vessels from possessing excessive amounts of shell stock inshore of the day-at-sea monitoring line, eliminating the incentive to deckload and shuck scallops "off the clock". The 50 US bushel limit will enable the vessels to bring a moderate amount of shell stock in to avoid poor weather and/or to land some shell stock for a small market for whole scallops or scallop parts.

3.2 Non-preferred Alternatives

The following alternatives were not approved by the Council for inclusion in the proposed action (Section 4.1) for the framework adjustment. These non-preferred alternatives were analyzed, alone or combined with other proposed alternatives in Section 1.1 and included in the Draft Supplemental Environmental Impact Statement. They were not chosen for the proposed action because of undesirable results and/or public comment.

3.2.1 Annual Day-at-sea Allocations for Limited access Scallop Vessels

3.2.1.1 49 Full-time, 19 Part-time, And 4 Occasional Day-at-Sea Allocations during the 2001 Fishing Year; 46 Full-time, 18 Part-time, and 4 Occasional Day-at-Sea Allocations During the 2002 Fishing Year (Status quo; Non-preferred)

According to the Amendment 7 schedule, vessels issued a full-time limited access scallop permits in 2000 would receive 49 days to fish for scallops from March 1, 2000 to February 28, 2001 with dredges or trawls (if authorized). Vessels with part-time permits would receive 19 days and vessels with occasional permits would receive 4 days to fish for scallops during March 1, 2001 to February 28, 2002. During March 1, 2002 to February 28, 2003, the limited access scallop vessels would receive an annual allocation of 46, 18, and 4 days-at-sea, respectively.

Rationale: The Amendment 7 day-at-sea allocations were intended to achieve specific fishing mortality objectives and promote rebuilding of scallop biomass within the timeframe specified by the amendment. The day-at-sea allocation schedule was estimated based on an assumption of average recruitment and the practicality that all areas were considered potentially open to fishing. In practicality, a significant portion of the scallop resource has remained closed to fishing (despite the effects of Framework Adjustments 11 and 13) and scallop biomass has rebuilt more quickly than anticipated. The area closures and crew limit has therefore proved more conservative than anticipated and the very restrictive day-at-sea allocations predicted in Amendment 7 have proven to be unnecessary under current conditions. In fact, scallop biomass has rebuilt much more quickly than anticipated and new projections show that the average scallop biomass for both stock areas could exceed the targets in 2001, much earlier than anticipated by Amendment 7. One problem however will be that a significant fraction of that biomass will be in areas that are temporarily or possibly permanently closed to sea scallop fishing.

The status quo day-at-sea allocation would be necessary to meet the mortality targets if all areas were open to fishing and average recruitment occurred (NEFMC 1999b). This prediction is consistent with the analysis and assumptions for Amendment 7. According to the new analysis, which accounts for the protection afforded by closed areas, there would be close to 100 percent probability of achieving the Amendment 7 fishing mortality objective for the 2001 and 2002 fishing years. This is a highly conservative allocation given current conditions and would produce significant reductions in net benefits (Section 5.2.4.4.7). The status quo day-at-sea allocations are therefore unnecessary.

3.2.2 Area Closures to protect small scallops

3.2.2.1 Option 1 – Two Areas for the Mid-Atlantic Stock and Two Areas for the Georges Bank Stock

The possession of sea scallops would be prohibited within the four areas described below, beginning on the date that limited access scallop vessels are authorized to fish on a scallop day-at-sea within the Hudson Canyon and VA/NC Areas. The areas described below would remain closed to fishing for sea scallops until March 1, 2003, unless the Council takes other actions to postpone or modify the area boundaries or re-opening date.

The description and rationale for these closures are given below and the boundaries are shown in Map 1

1. **Southeast Part and Closed Area II South (SEP-clo):** Eastern Georges Bank: Between 40°30' and 41°30' N latitude and between 67°20' W longitude and the Canadian/US boundary. This area includes the southern portion of Closed Area II, which is opened to fishing in the 2000 fishing year from June 15 to August 14. The 2000 scallop survey found significant amounts of small scallops in stratum 621, both inside and outside of Closed Area II. This boundary would extend the closure along the western edge of Closed Area II until it meets with the 100-fathom contour and thence east to the jurisdictional boundary with Canada.
2. **South Channel (SC-cl):** Between 41°15' and 41°45' N latitude and between 69°15' and 69°45' W longitude. This boundary includes parts of strata 49-51, where small scallops were present, overlapping the NW corner of Closed Area I.
3. **New York Bight 1 (NYB):** Between 39°30' N and 40°30' N latitude and between 72° and 73°45' W longitude. This boundary includes strata 10, 11, and the southern part of strata 14 and 15, where small scallops were observed during the 2000 scallop survey.
4. **DelMarVa (Del-Cl):** Between 37° and 38° N latitude and east of 75° W longitude. This boundary includes nearly all of survey strata 26 and 27 and where a significant amount of small scallops were observed during the 2000 scallop survey.

Table 15. Boundaries of the “Southeast Part and Closed Area II South (SEP-clo)”.

Point label	Latitude	Longitude
CII 1	41°00'N	67°20'W
SEP 1	40°30'N	67°20'W
SEP 2	40°30'N	65°44.4'W (the U.S. Canada Maritime Boundary)
SEP 3	41°30'N	66°34.2'W (the U.S. Canada Maritime Boundary)
SEP 4	41°30'N	67°20'W
CII 1	41°00'N	67°20'W

Table 16. Boundaries of the “South Channel (SC-cl)”.

Point label	Latitude	Longitude
SC 1	41°15'N	69°45'W
SC 2	41°15'N	69°15'W
SC 3	41°45'N	69°15'W
SC 4	41°45'N	69°45'W
SC 1	41°15'N	69°45'W

Table 17. Boundaries of the “New York Bight 1 (NYB)”.

Point label	Latitude	Longitude
NYB 1	39°30'N	73°45'W
NYB 2	39°30'N	72°00'W
NYB 3	40°30'N	72°00'W
NYB 4	40°30'N	73°45'W
NYB 1	39°30'N	73°45'W

Table 18. Boundaries of the “DelMarVa (Del-Council)”.

Point label	Latitude	Longitude
DMV 1	37°00'N	75°00'W
DMV 2	37°00'N	200-mile limit
DMV 3	38°00'N	200-mile limit
DMV 4	38°00'N	75°00'W
DMV 1	37°00'N	75°00'W

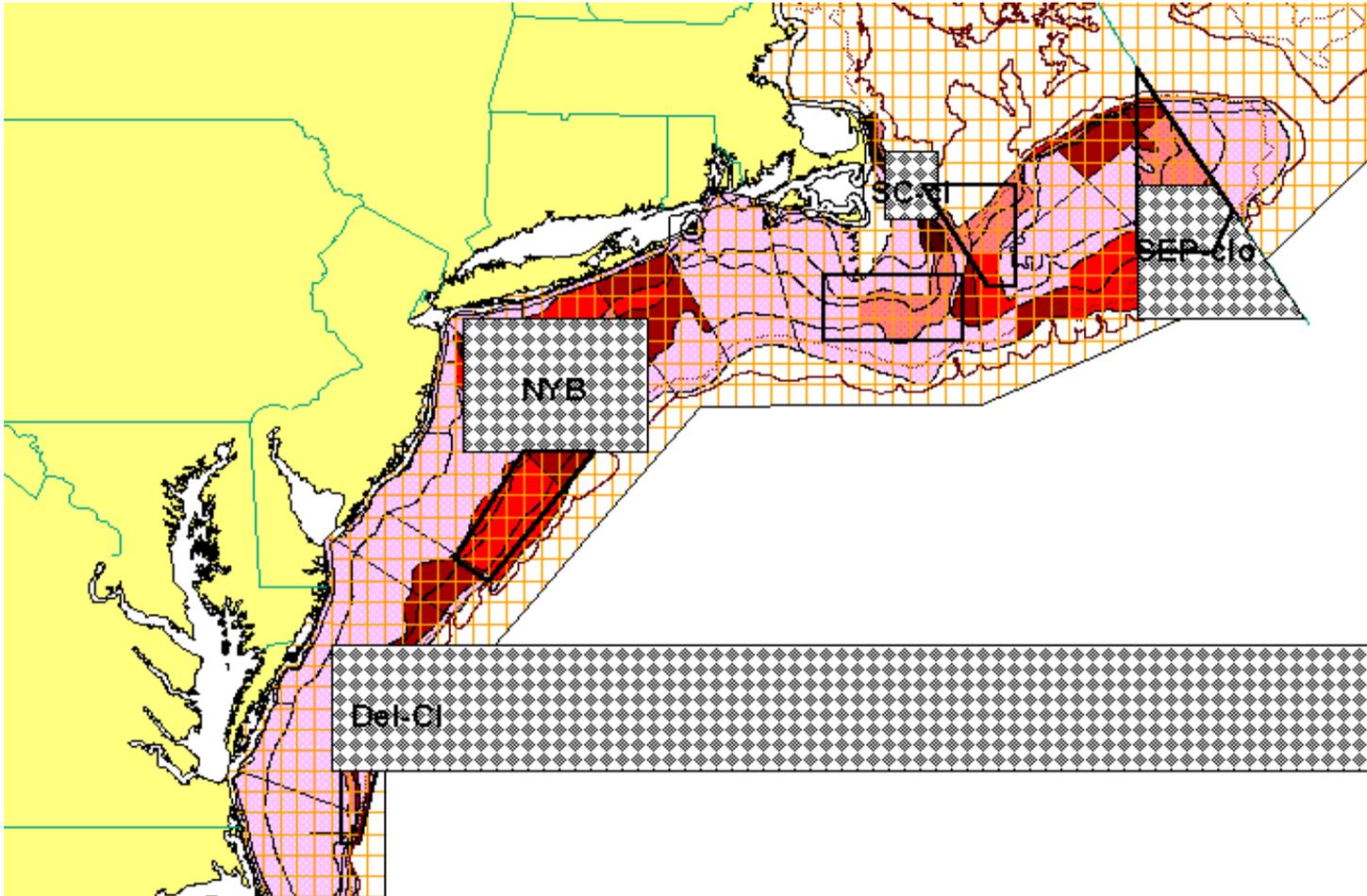
Rationale: These areas were recommended for closure by the PDT in the 2000 SAFE report to protect small sea scallops. The areas have significant potential for biomass growth and will provide a substantial yield in the future when they re-open to fishing. The effect would postpone fishing mortality on young, fast-growing scallops, increasing yield-per-recruit and landings in a few years. In the 2000 SAFE Report (NEFMC 2000), the Council’s Plan Development Team recommended a three-year closure (Table 20), but the greatest amount of growth will occur in the first two years of closure (Table 19) and the Council wanted to re-evaluate the closures in two years because of uncertainty. Compared to the status quo, the preferred alternative would allow the total biomass to increase nearly as much as the status quo, but the catches in 2001 – 2002 would be 38 percent higher (Table 19).

Table 19. Projected change in 2001-2002 total biomass and catch relative to status quo for the proposed alternatives, including zero, two, and four closure options.

		Alternative			
		Status quo (49 full-time DAS)	Low F, no closures	High F, two closures	High F, four closures
Change in biomass, 2000 - 2002	Georges Bank	132%	124%	127%	128%
	Mid-Atlantic	60%	57%	49%	51%
Change in 2001-2002 catch relative to status quo		0%	78%	62%	38%

Table 20. Projected change in 2001-2004 total biomass and catch relative to status quo for the proposed alternatives, including zero, two, and four closure options.

		Alternative			
		Status quo (49 full-time DAS)	Low F, no closures	High F, two closures	High F, four closures
Change in biomass, 2000 - 2004	Georges Bank	226%	204%	214%	222%
	Mid-Atlantic	101%	67%	49%	61%
Change in 2001-2003 catch relative to status quo		0%	81%	65%	36%



Map 1. PDT area closure recommendations – Figure 47 SAFE Report (page 212).

3.2.2.2 Option 2 – One Area for the Mid-Atlantic Stock and One Area for the Georges Bank Stock

The possession of sea scallops would be prohibited within the two areas described below, beginning on the date that limited access scallop vessels are authorized to fish on a scallop day-at-sea within the Hudson Canyon and VA/NC Areas. The areas described below would remain closed to fishing for sea scallops until March 1, 2003, unless the Council takes other actions to postpone or modify the area boundaries or re-opening date.

The description and rationale for these closures are given below and the boundaries are shown in Map 2:

1. **Southeast Part and Closed Area II South (SEP-clo):** Eastern Georges Bank: Between 40°30' and 41°30' N latitude and between 67°20' W longitude and the Canadian/US boundary. This area includes the southern portion of Closed Area II, which is opened to fishing in the 2000 fishing year from June 15 to August 14. The 1999 scallop survey found significant amounts of small scallops in stratum 621, both inside and outside of Closed Area II. This boundary would extend the closure along the western edge of Closed Area II until it meets with the 100-fathom contour and thence east to the jurisdictional boundary with Canada.
2. **New York Bight 2 (NYB-2):** Between 72° and 73°10' W longitude and north of 39°30' N latitude to the intersection with the three-mile limit, south of the Long Island, NY shoreline. This boundary includes strata 31, and parts of strata 26 and 27, where small scallops were observed during the 2000 scallop survey. Other parts of strata 29, 30, and 32 would be included, although the survey indicates that these areas contain fewer small scallops.

Table 21. Boundaries of the “Southeast Part and Closed Area II South (SEP-clo)”.

Point label	Latitude	Longitude
CII 1	41°00'N	67°20'W
SEP 1	40°30'N	67°20'W
SEP 2	40°30'N	65°44.4'W
		(the U.S. Canada Maritime Boundary)
SEP 3	41°30'N	66°34.2'W
		(the U.S. Canada Maritime Boundary)
SEP 4	41°30'N	67°20'W
CII 1	41°00'N	67°20'W

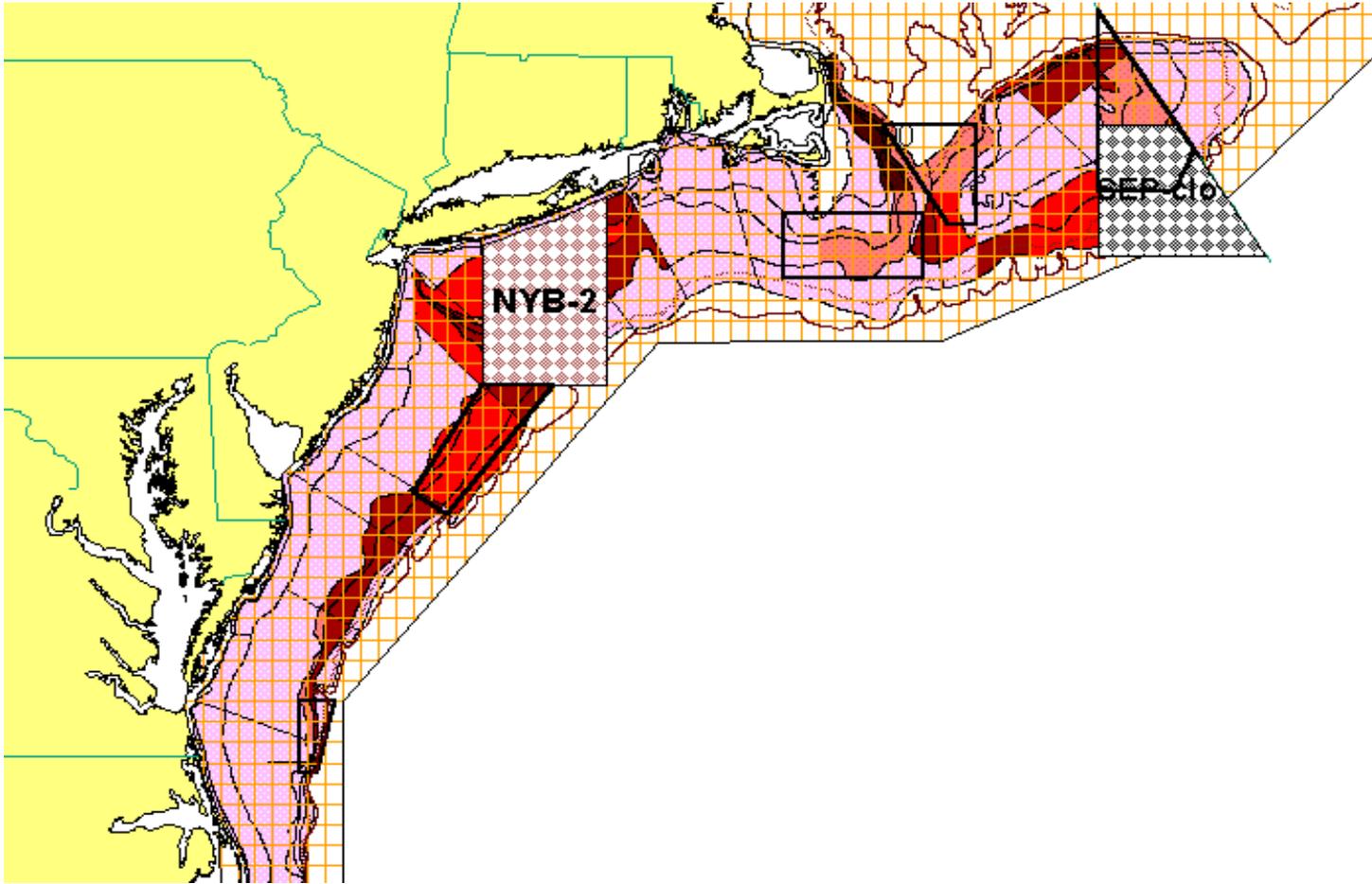
Table 22. Boundaries of the “New York Bight 2 (NYB-2)”.

Point label	Latitude	Longitude
NYB 1	39°30'N	73°10'W
NYB 2	39°30'N	72°00'W
NYB 3	Three-mile limit	72°00'W
NYB 4	Three-mile limit	73°10'W
NYB 1	39°30'N	73°10'W

Rationale: These areas were recommended for closure by the Advisory Committee at the initial framework meeting to protect small sea scallops. The areas also have significant potential for biomass growth and will provide a substantial yield in the future when they re-open to fishing. The effect would postpone fishing mortality on young, fast-growing scallops, increasing yield-per-recruit and landings in a few years. Compared to the status quo, this option would allow the total biomass to increase nearly as much as the status quo, but the catches in 2001 – 2002 would be 62 percent higher (Table 19). The projected biomass increases are slightly less than the preferred alternative (Table 19 and Table 20).

The Advisory Committee recommended a two-year closure, because the greatest amount of growth will occur in the first two years of closure and the advisors wanted to re-evaluate the closures in two years because of uncertainty. The advisors recommended closure of two, rather than four areas, because it would provide more flexibility for vessels to fish, especially if access to the Hudson Canyon and VA/NC Areas was restricted more than anticipated, it was not profitable to fish in the Hudson Canyon and VA/NC Areas because the possession limit was too low, or access to the Hudson Canyon and VA/NC Areas was not approved. Advisors also expressed uncertainty that new area closures might become permanent and the scallop industry would be denied future access to productive scallop beds. Industry advisors reported that they saw very small scallops mostly in the NY Bight area around the wreck of the Texas Towers and on the Southern edge of eastern Georges Bank.

The Advisory Committee recommended a different configuration of the NY Bight area to avoid closing off productive scallop beds near the NJ coastline, often fished by small vessels that might not have the ability to fish elsewhere. Inshore areas south of Long Island, NY are not as productive and few small vessels fish there.



Map 2. Advisory Committee area closure recommendations.

3.2.3 Controlled access program for the Hudson Canyon and VA/NC Areas

3.2.3.1 Status quo alternative

The status quo alternative (taking no action) would allow vessels with federal scallop permits to fish without additional restrictions in the Hudson Canyon and VA/NC areas. The Hudson Canyon and VA/NC areas, closed under Amendment 7, would automatically re-open to scallop fishing according to the general provisions of the Atlantic Sea Scallop FMP on March 1, 2001.

Sections 4.1.3.1 through 4.1.3.8 include a range of alternatives including a status quo alternative for general category vessels operating in the Hudson Canyon and VA/NC Areas. There are no status quo alternatives for provisions of the area access program described in Section 4.3.1. because measures such as TACs, possession limits, gear restrictions and increased monitoring and reporting requirements are necessary for the program's success. Status quo, or no action alternatives would result in the elimination of these necessary measures. TACs and area restrictions could not be implemented without increased monitoring and reporting. As a result, the Council did not think the program would be viable without these types of measures.

Rationale: Although the type of management for sea scallop fishing in the Georges Bank closed areas has been successful, a greater degree of control for rebuilt areas was not anticipated in Amendment 7, because Amendment 7 did not anticipate the negative effects of concentrating the day-at-sea allocations into the open areas, while other areas were closed to fishing.

Combined with the status quo day-at-sea allocations, nearly all of the scallop fishing effort is anticipated to occur within the Hudson Canyon and VA/NC Areas, thereby maximizing fishing mortality reduction elsewhere. It may be necessary to have less restrictive controls for the Hudson Canyon and VA/NC Areas if the day-at-sea allocations cannot increase above the status quo. This is the status quo alternative that is analyzed by the DSEIS (see Section 5.2.4.1 for a description).

With a higher allocation of days, fishing effort would be high in the Hudson Canyon and VA/NC Areas, but more effort would occur in areas now open, areas that have lower scallop biomass. This combination of measures would keep biomass lower in the areas that are now open and quickly remove the rebuilt biomass from the Hudson Canyon and VA/NC Areas.

3.2.3.2 Boundaries of area access program

Seasons for allowing vessels with General Category scallop permits to fish in the Hudson Canyon and VA/NC Areas are a non-preferred alternative. The proposed program to allow these vessels to fish in the Hudson Canyon and VA/NC Areas, while an improvement over the program proposed for Closed Area I and the Nantucket Lightship Area during 2000, was viewed as too complex and inappropriate for a directed scallop fishery that had not existed prior to the Hudson Canyon and VA/NC Area closures. In making this decision, the Council agreed to reconsider this type of regulated program for General Category scallop vessels when it would be more appropriate where there was a historic fishery by small, seasonal vessels.

3.2.3.2.1 Option 1 – Season for fishing by vessels with General Category scallop permits

During the 2001 and 2002 scallop fishing years, vessels with General Category scallop permits, an operating VMS, and a letter of authorization may take any authorized trips after May 1 until:

1. September 30th,
2. The scallop landings by vessels with Letters of Authorization equal or exceed the TAC set-asides (Section 4.2.3.3.1.3), **or**
3. The Hudson Canyon and VA/NC Areas close to scallop fishing by limited access scallop vessels (applies individually to each area)

No trips by General Category vessels will be authorized after September 30, 2001 until the following season in the 2002 fishing year.

3.2.3.2.2 Option 2 – Season for fishing by vessels with General Category scallop permits

During the 2001 and 2002 scallop fishing years, vessels with General Category scallop permits, an operating VMS, and a letter of authorization may take any authorized trips after May 1 until:

1. September 30th, **or**
2. The scallop landings by vessels with Letters of Authorization equal or exceed the TAC set-asides (Section 4.2.3.3.1.3).

No trips by General Category vessels will be authorized after September 30, 2001 until the following season in the 2002 fishing year.

Rationale: The season opening should be delayed to minimize the potential for finfish bycatch in the late winter and early spring. It will also allow scallops to grow to a larger size during the season, improving yield. If access remains open until February 28, 2002, it would be unnecessary to close the area during March 2003 because finfish bycatch is above average from January to April, inclusive. If the areas remain open through February 28, 2002, then there would a small benefit from a one-month closure compared to the bycatch reduction that would occur from a closure that lasted from January to March. Although seasonal data on bycatch for the sea scallop fishery is sketchy, the industry advisors warned that finfish bycatch in the Hudson Canyon and VA/NC Areas would be higher in January and February than in March, but that if additional trips were authorized on or after October 1, the fishery might need access in January and February to complete the authorized trips.

A shorter season for access by vessels with General Category permits would minimize bycatch for a small, restricted fishery. The TAC set-aside will be a small percentage of the overall TAC and not as much time is needed to harvest this amount of sea scallops, even though the amount of day trips is considerable.

3.2.3.3 Effort and Catch Limits

The access program for the Hudson Canyon and VA/NC Areas will follow the highly-successful program developed in Framework Adjustments 11 and 13 for the Georges Bank closed areas, except that higher scallop possession limits are proposed to make it more attractive to fish within the Mid-Atlantic areas. As catches elsewhere increase with increasing biomass, it no longer is profitable for vessels to fish

in the area access program when they can catch more scallops per charged day-at-sea. Projections indicate that catches elsewhere will average about 1,500 pounds per day over the season. In some cases, the catches could be even higher. A scallop possession limit of 10,000 pounds would be insufficient to promote fishing in the Hudson Canyon and VA/NC Areas when vessels are charged no less than 10 days-at-sea for each trip.

Although the Council choose the Low F option as a preferred alternative, both the High F and Low F options are described below. The Low F option is expanded below to include non-preferred choices that the Council considered in the Draft Framework Adjustment and DSEIS. It includes, for example, a TAC set-aside for access by vessels with General Category scallop permits and the full range of scallop possession limits that were under consideration.

3.2.3.3.1 "High F Option" - Total Allowable Catch (TAC), trip allocations, and TAC set-asides

When the Regional Administrator determines that the scallop landings from either one of the areas exceed its TAC, the Regional Administrator will prohibit vessels from fishing for sea scallops in the area by prohibiting the possession of sea scallops within it, subject to the regulations concerning transiting. The TAC has a direct bearing on the initial and re-allocated number of trips that eligible vessels may take within these areas. Details of the two fishing mortality options are discussed below. TAC set asides would fund research, fund observers, and account for landings by vessels without limited access scallop permits that might target sea scallops or catch sea scallops as a bycatch.

Rationale: The purpose of the TAC is to ensure that the fleet does not exceed the fishing mortality targets for the areas and that biomass in these areas can continue to support the fishery for several years while the remainder of the resource rebuilds. It is also used as the basis to determine the initial number of trips to be allocated to eligible vessels and to estimate how many trips that the Regional Administrator may authorize for an in-season adjustment.

3.2.3.3.1.1 Total Allowable Catch (TAC) for the High F option

The TAC for the Hudson Canyon Area would be 9,045 mt (19.94 million lbs.) for 2001, based on a fishing mortality target equal to 0.30 (23 percent exploitation rate). The TAC for the VA/NC Area would be 403 mt (0.89 million lbs.). In 2002, the TACs would be 8,238 mt (18.16 million lbs.) and 345 mt (0.76 million lbs.), respectively.

Rationale: A higher fishing mortality rate and associated TACs are preferred because it would promote more fishing in the Hudson Canyon and VA/NC Areas, reducing fishing effort elsewhere and promoting rebuilding overall more than the Low F option described below.

This option would produce higher landings from the Hudson Canyon and VA/NC Areas in 2001 and 2002 than the Low F option described below, but the biomass in the areas would decline more rapidly and there could be a lower yield in future years if the proposed action had to be extended beyond 2002 to allow biomass elsewhere to rebuild if future recruitment is less than anticipated or if total fishing effort increases. Total fishing effort could increase through more efficient use of a day-at-sea, re-activation of a significant number of Confirmation of Permit Histories, or a higher day-at-sea utilization rate by active limited access scallop vessels. This strategy may require other, new area closures to ensure that biomass elsewhere rebuilds before the yield in the Hudson Canyon and VA/NC Areas declines from an unsustainable catch rate.

The higher than average catch rate is justified because it would be most effective in taking fishing effort from elsewhere and allowing more rapid rebuilding in overfished portions of the resource. It is also justified because biomass in the Hudson Canyon and VA/NC Areas is very high, possibly higher than a level that would over the long term produce MSY.

At the TAC, the average biomass in the Hudson Canyon Area is expected to increase by 50 between the end of 2000 and the end of 2001, after accounting for the removal of the TAC. In 2002, the biomass is expected to decline by two percent compared to the end of 2001, after accounting for the removal of the TAC in 2002. For the VA/NC Area, the total biomass is expected to increase by 29 and decline by 10 percent, respectively. Beyond 2002, the biomass in both areas is expected to decline in both areas if fishing mortality continues at 0.3 (24%), especially after recruitment declines to average levels. The proposed TACs are therefore unsustainable¹² within the Hudson Canyon and VA/NC Areas, but this is consistent with a biomass level that is above the target and scallops are large.

Under this option with four closures, the total biomass for the Mid-Atlantic is expected to increase by 51 percent to 5.5 kg/tow (41 percent above the B_{MSY} proxy for Mid-Atlantic scallops). For Georges Bank scallops, the projections estimate that biomass would increase by 127 percent to 19.0 kg/tow in 2002 (132 percent above the B_{MSY} proxy for Georges Bank scallops). With two closures, the biomass for the Mid-Atlantic and for Georges Bank sea scallops is estimated to increase by 49 and 127 percent, respectively. Projections for this option are given in Section 5.2.4.1.1 and the TAC estimates are presented in Section 5.2.4.1.2.

3.2.3.3.1.2 Trip allocations

With the High F TAC option, the Regional Administrator would allocate between 828 to 1,932 trips to the fleet, or between 3 and 7 trips for each eligible limited access scallop vessel, taking into account the number of full-time, part-time, and occasional limited access scallop permits. Limited access vessels would be authorized to take these authorized trips in either area during the season, as long as the scallop catches do not equal or exceed the TAC for each area and the area closes (Section 4.1.3.2). After one area closes because scallop landings exceed its TAC, vessels may take their remaining trips in the other area until it closes.

The preferred option associated with a 15,000 pound scallop possession limit is therefore four trips (Table 23). The analysis includes a scallop possession limit ranging from 10,000 to 23,400 pounds of scallop meats, included the preferred alternative of 15,000 pounds. With four trips, the scallop possession limit could be no more than 17,500 pounds without expecting the fishery to exceed the TACs, causing the areas to close. Alternatively, five trips could be allocated with a scallop possession limit no more than 14,000 pounds. These allocations exclude a one-percent set aside to fund research, a two percent set-aside to fund observers, and a five percent set-aside for General Category vessel access.

In 2002, the average biomass is expected to decline a little, allowing an allocation of four trips per vessel with a scallop possession limit no more than 15,900 pounds (Table 24). A lower possession limit in 2002, however, may attract less fishing effort to the Hudson Canyon and VA/NC Areas because catches elsewhere are predicted to increase. Like the Framework Adjustment 13 management measures, vessels might be able to make more money by fishing outside of the Hudson Canyon and VA/NC Areas if the catches rise in other areas. With a three-trip allocation, the scallop possession limit could be as much as 21,300 pounds.

¹² Over the short term, even the High F TAC can be sustained through at least 2003, but biomass declines. Over a longer period, management would have to adjust the fishing mortality to achieve a balance with the productivity of the resource within the Hudson Canyon and VA/NC Areas.

Table 23. Allocations of trips for the Mid-Atlantic area access program in 2001 and the estimated number of trips for each area that can be taken if all vessels participate, assuming full participation in the Hudson Canyon Area and 50 percent participation in the VA/NC Area. The trip allocations are combined for both areas and are shown in the last column. Estimates exclude a five percent set-aside for General Category vessel access, one percent set-aside to fund research, and one-percent to fund the observer program.

High F Scenario	Hudson Canyon	VA/NC Area		All
Expected vessel participation				
Full-time	222	111		
Part-time	30	15		
Occasional	24	12		
Total estimated participation	276	138		
TAC per vessel	72,249	6,430		78,680
Trips limit (lbs. meat weight)				
	Total number of trips to allocate			
10000	1,850	82	-	1,932
11700	1,585	71	-	1,656
14000	1,321	59	-	1,380
17500	1,057	47	-	1,104
23400	793	35	-	828
Trips limit (lbs. meat weight)				
	Number of trips per vessel to allocate			
10000	7	0		7
11700	6	0		6
14000	5	0		5
17500	4	0		4
23400	3	0		3

Table 24. Allocations of trips for the Mid-Atlantic area access program in 2002 and the estimated number of trips for each area that can be taken if all vessels participate, assuming full participation in the Hudson Canyon Area and 50 percent participation in the VA/NC Area. The trip allocations are combined for both areas and are shown in the last column. Estimates exclude a five percent set-aside for General Category vessel access, one percent set-aside to fund research, and one-percent to fund the observer program.

High F Scenario	Hudson Canyon	VA/NC Area	All
Expected vessel participation			
Full-time	222	111	
Part-time	30	15	
Occasional	24	12	
Total estimated participation	276	138	
TAC per vessel	65,805	5,511	71,316

Trips limit (lbs. meat weight)	Total number of trips to allocate		
9100	1,854	78	1,932
10600	1,589	67	1,656
12800	1,325	55	1,380
15900	1,060	44	1,104
21300	795	33	828

Trips limit (lbs. meat weight)	Number of trips per vessel to allocate		
9100	7	0	7
10600	6	0	6
12800	5	0	5
15900	4	0	4
21300	3	0	3

The Regional Administrator would authorize limited access vessels to take the initial trip allocation in a sequential, step-wise program (

Table 25). Vessels will be authorized to take no more than one trip before April 30 in each fishing year. A second trip may start no earlier than May 1 and no more than two trips may be taken by May 31. A third trip may start no earlier than June 1 and no more than three trips may be taken by July 15. A fourth trip may start no earlier than July 16 and no more than four trips may be taken by August 31. After August 31, a vessel may begin a trip up to the total allocation that vessels are authorized to take within the Hudson Canyon and VA/NC Areas.

To be eligible to take a Hudson Canyon or VA/NC Area trip, a limited access scallop vessel will have to begin at least one trip before September 1. See Section 4.1.3.6.1 for a description of when a trip has begun for this purpose. If the status quo (Section 4.1.3.3.2) is chosen, a vessel intending to preserve its eligibility for more trips need only to declare a Hudson Canyon and VA/NC Areas trip and report one VMS position ocean ward from the VMS monitoring line. A limited access scallop vessel would lose 10 days-at-sea for this purpose, but it would have a negligible impact on vessels that do not use all of its days-at-sea during a fishing year. If the preferred alternative (Section 4.2.3.7.1) is chosen, the vessel must report one VMS position within the boundaries of the Hudson Canyon and VA/NC Areas before August 31.

Table 25. Trip allocation schedule for limited access vessels

Inclusive dates	Maximum number of authorized trips to the Hudson Canyon and VA/NC Areas, combined
April 1 to April 30	1 trip
May 1 to May 31	2 trips
June 1 to July 15	3 trips
July 16 to August 31	4 trips
September 1 until end of season	4 trips or greater amounts if authorized by in-season adjustment; Vessels that did not land a trip before September 1 would be unable to take any trips after August 31

Since this framework adjustment proposes that part-time vessels will have a maximum allocation of 58 days-at-sea in the 2001 fishing year¹³, part-time vessels can take a maximum of five area access trips in any combination. A part-time vessel would therefore not be eligible for additional allocations (see below) from an in-season adjustment. An occasional scallop vessel will have a maximum allocation of 20 days in the 2001 fishing year¹⁴ and is therefore eligible to take a trip in any one area, regardless of additional allocations through a possible in-season adjustment via the provision described below. According to the analysis prepared for the 2000 SAFE Report (NEFMC 2000), 229 of the 276 vessels¹⁵ with limited access scallop permits that used days-at-sea in 1999 are expected to carry over unused days into the 2001 fishing year.

The number of trips that can be allocated depends on the scallop possession limit and the number of vessels that are eligible to participate. The analysis assumes that all vessels that have a limited access scallop permit, excluding the Confirmation of Permit Histories, will take all trips to the Hudson Canyon and VA/NC Areas allocated to them. Vessel owners that re-activate a Confirmation of Permit History will be eligible for a full compliment of trips, subject to the restrictions that govern use by other vessels with a limited access scallop permit.

Rationale: The purpose of a trip allocation is to prevent a derby-style fishery that is based solely on a TAC, without allocating individual quotas to the limited access scallop vessels. With only a TAC, the vessels would fish as quickly as possible before the landings exceeded the TAC, having adverse effects on prices, product quality, cost, flexibility, safety, bycatch, and possibly habitat impacts. Individual quotas would require significantly more catch reporting, monitoring, and auditing than is currently possible. An allocation of trips is therefore the least costly form of management control for an FMP that relies mainly on day-at-sea allocations and crew limits to control fishing mortality.

The analysis indicates that an initial allocation of four trips in 2001 and four trips in 2002 can be authorized to limited access scallop vessels without exceeding the TAC. With a 15,000 pound scallop possession limit, the analysis estimates that the TACs would be exceeded if 50 percent of active vessels fished more than one trip in the VA/NC Area and more than four trips in the Hudson Canyon Area if all 276 active vessels¹⁶ fish all authorized trips. As in Frameworks 11 and 13, participation has been less than expected and an in-season adjustment was made in 1999 and is likely in 2000. Lower than expected

¹³ A part-time scallop vessel will have a 48 day-at-sea allocation in the 2001 fishing year plus up to 10 unused days-at-sea carried forward from the 2000 fishing year.

¹⁴ An occasional scallop vessel will have a 10 day-at-sea allocation in the 2000 fishing year plus up to ten unused days-at-sea carried forward from the 2000 fishing year.

¹⁵ 184 of 222 full-time vessels; 22 of 30 part-time vessels; and 23 of 24 occasional vessels.

¹⁶ An active vessel is defined as a vessel that had an active permit in the 2000 fishing year, whether or not it actually was charged days while fishing for sea scallops.

participation for authorized Hudson Canyon and VA/NC Areas trips would indicate that an allocation of additional trips on or after October 1 would be needed to harvest optimum yield.

Vessels would be allowed to use the authorized trips in either area. If the vessels fish mainly in the VA/NC Area, it will obviously close early from scallop landings exceeding the TAC. This is entirely consistent with the current and projected resource condition that scallops in this area are near or larger than optimum harvesting size, while the scallops in the Hudson Canyon Area are a bit below optimum size. A combined allocation of trips would therefore ensure that the TAC for the VA/NC Area was taken by the fishery and minimize (within the objectives of this framework adjustment) the fishing effort in the Hudson Canyon Area where scallops are smaller, on average, but not as small as scallops in areas that are now open to fishing.

The sequential (delayed) trip allocation is needed to prevent vessels from taking the trips all at one time, having an adverse impact on scallop prices, product quality, costs, flexibility, finfish bycatch, and possibly habitat impacts. The finfish bycatch issue is most important during the spring in the VA/NC Area, where summer flounder are more abundant. This sequential trip allocation would prevent vessels from taking more than one or two trips in the expectation that the scallop landings will quickly exceed the TACs.

3.2.3.3.1.3 TAC set-asides to fund research, to fund observers, and for access by General Category scallop vessels

One-percent set-aside for research

One percent of the scallop TAC for each of the Hudson Canyon and VA/NC Areas would be set-aside for harvest under a special program described in Section 5.1.13 of Framework Adjustment 13 (NEFMC 1999b). Framework Adjustment 13 specifies that the Council would delegate to its Research Steering Committee responsibility for soliciting research proposals in the form of a Request for Proposals, establishing research priorities, developing review criteria, evaluating proposals and making recommendations to the Regional Administrator on specific research projects. Framework Adjustment 14 provides that, with the concurrence of the Council, NMFS may convene an evaluation team for the purpose of reviewing proposals in the event that a closed meeting is necessary for the review and evaluation of research proposals.

NMFS will monitor the landings from limited access scallop vessels that fish in the closed area and close the fishery when the landings exceed or are projected to exceed the overall scallop TAC, reduced by this and other set-asides. Accounting for all three set-asides described in this section, the TAC that will apply to landings from limited access scallop vessels would be 93 percent of the total. The research set aside would total 208,000 lbs. (94 mt) in 2001 (Table 26) and 189,000 lbs. (112 mt) in 2002 (

Table 27).

Rationale: A set aside is necessary to fund and enable important scallop research in the Hudson Canyon and VA/NC Areas and elsewhere. This information about the scallop resource, ways to reduce bycatch, habitat, and other information will be crucial as the Council evaluates area based management and Amendment 10.

Table 26. Summary of TACs and limits for scallop access in the Hudson Canyon and VA/NC Areas during the 2001 fishing year, with a five percent TAC set aside for General Category scallop vessels. A ten percent set-aside for General Category vessels would double the set aside and reduce the TAC for limited access scallop vessels by 997,000 and 44,000 pounds for the Hudson Canyon and VA/NC Areas, respectively.

2001 Maximum Allocations		Hudson Canyon Area	VA/NC Area
Scallops	Total TAC	19.94 million lbs. (9,045 mt)	0.89 million lbs. (403 mt)
	TAC for limited access vessels	18.54 million lbs. (8,411 mt)	0.83 million lbs. (375 mt)
	Two percent TAC for observers ¹⁷	399,817 lbs. (181 mt)	17,748 lbs. (8 mt)
	One percent TAC to fund scallop research	199,409 lbs. (90 mt)	8,874 lbs. (4 mt)
	Five percent TAC for general category vessels	997,042 lbs. (452 mt)	44,370 lbs. (20 mt)
Initial trip allocation for limited access vessels		Up to 4, combined with the VA/NC Area trips	Up to 4, combined with the Hudson Canyon Area trips
Scallop possession limit	Limited access vessels	Up to 17,500 lbs. per trip	Up to 17,500 lbs. per trip
	General category vessels	400 to 1,000 lbs. per trip	400 to 1,000 lbs. per trip
Regulated multispecies possession limit	Limited access vessels	300 lbs. per trip	300 lbs. per trip
	General category vessels	Zero possession	Zero possession

¹⁷ The two percent TAC for funding observers includes one percent deducted from the overall TAC and a one percent supplement.

Table 27. Summary of TACs and limits for scallop access in the Hudson Canyon and VA/NC Areas during the 2002 fishing year, with a five percent TAC set aside for General Category scallop vessels. A ten percent set-aside for General Category vessels would double the set aside and reduce the TAC for limited access scallop vessels by 997,000 and 44,000 pounds for the Hudson Canyon and VA/NC Areas, respectively.

2002 Maximum Allocations		Hudson Canyon Area	VA/NC Area
Scallops	Total TAC	18.16 million lbs. (8,238 mt)	0.76 million lbs. (345 mt)
	TAC for limited access vessels	16.89 million lbs. (7,661 mt)	0.71 million lbs. (321 mt)
	Two percent TAC for observers ¹⁸	363,246 lbs. (165 mt)	15,210 lbs. (7 mt)
	One percent TAC to fund scallop research	181,623 lbs. (82 mt)	7,605 lbs. (3 mt)
	Five percent TAC for general category vessels	908,114 lbs. (412 mt)	38,025 lbs. (17 mt)
Initial trip allocation for limited access vessels		Up to 4, combined with the VA/NC Area trips	Up to 4, combined with the Hudson Canyon Area trips
Scallop possession limit	Limited access vessels	Up to 15,900 lbs. per trip	Up to 15,900 lbs. per trip
	General category vessels	400 to 1,000 lbs. per trip	400 to 1,000 lbs. per trip
Regulated multispecies possession limit	Limited access vessels	300 lbs. per trip	300 lbs. per trip
	General category vessels	Zero possession	Zero possession

One-percent set-aside and one-percent supplement for funding observers

One percent of the scallop TAC for both of the Hudson Canyon and VA/NC Areas would be set-aside to pay for observers as described in Section 4.1.3.8. One-percent of the TAC will be added on to the total TAC, also for this purpose. The purpose of the TAC set aside is to pay for the daily cost of observers (including fixed and variable costs for salary, administration, training, etc.), data entry, auditing, and analysis. NMFS may authorize vessels that carry observers to land more than the scallop possession limit with the additional revenue used to pay for the observer at a rate determined by the NMFS. NMFS will monitor the landings from limited access scallop vessels that fish in the closed area and close the fishery when the landings exceed or are projected to exceed the overall scallop TAC, reduced by this and other set-asides.

Accounting for all three set-asides, the TAC that will apply to landings from limited access scallop vessels would be 93 percent of the total (Table 26). The set aside to pay for observers would total 208,000 lbs. (94 mt) in 2001 (Table 26) and 189,000 lbs. (112 mt) in 2002 (

¹⁸ The two percent TAC for funding observers includes one percent deducted from the overall TAC and a one percent supplement.

Table 27). An equal amount would be added to the TAC set-aside to fund observers as a supplement.

Rationale: In the Closed Area II fishery in 1999, the one-percent TAC was insufficient to account for the additional authorized landings to fund the observer program at a 25 percent sampling intensity. Precise monitoring of bycatch for administration of a TAC is not needed for the Hudson Canyon and VA/NC Areas and a lower sampling intensity would provide adequate statistics for research and analysis of finfish catches, discarding, and fishing behavior. Section 4.1.3.8 requires that at least 10 percent of the trips by vessels in each category (Limited access vessel using dredges, limited access vessel using trawls, and General Category scallop vessels using dredges) are observed for the Hudson Canyon Area and 20 percent of the trips by vessels in each category for the VA/NC Area. Since the sampling intensity is 40 percent of the amount required by Framework Adjustment 13 with a two-percent TAC set aside, a two-percent set aside will be sufficient for the expected sea sampling program in the Hudson Canyon and VA/NC Areas (Section 5.2.4.1.3).

TAC set aside for an access program for General Category vessels to target sea scallops in the Hudson Canyon and VA/NC Areas

Up to ten percent of the total scallop TAC for the Hudson Canyon and VA/NC Areas will be set-aside to account for landings by vessels with general category scallop permits and a Letter of Authorization (Section 4.2.3.4.2). When the landings from these vessels exceeds or are projected to exceed the general category TAC, NMFS will terminate the Letters of Authorization and notify these vessels that they may no longer retain and land more than the possession limit that applies to General Category vessels without a Letter of Authorization.

With a five-percent TAC set aside, General Category scallop vessels with a Letter of Authorization will be able to retain and land 1.04 million lbs. (472 mt) in 2001 (Table 26) and 0.95 million lbs. (429 mt) 2002 (

Table 27). Accounting for all three set-asides, the TAC that will apply to landings from limited access scallop vessels would be 93 percent of the total.

Rationale: The TAC set aside ensures that the fishing mortality targets are not exceeded by an open access fishery that otherwise has fewer regulations while targeting sea scallops or catching a sea scallop bycatch. The TAC determines amount of Letters of Authorization that the Regional Administrator may issue, depending on the scallop possession limit that applies when fishing for sea scallops in the Hudson Canyon and VA/NC Areas.

3.2.3.3.2 “Low F Option” - Total Allowable Catch (TAC), trip allocations, and TAC set-asides (Non-preferred)

When the Regional Administrator determines that the scallop landings from either one of the areas exceed its TAC, the Regional Administrator will prohibit vessels from fishing for sea scallops in the area by prohibiting the possession of sea scallops within it, subject to the regulations concerning transiting. The TAC has a direct bearing on the initial and re-allocated number of trips that eligible vessels may take within these areas. Details of the two fishing mortality options are discussed below. TAC set asides would fund research, fund observers, and account for landings by vessels without limited access scallop permits that might target sea scallops or catch sea scallops as a bycatch.

Rationale: The purpose of the TAC is to ensure that the fleet does not exceed the fishing mortality targets for the areas and that biomass in these areas can continue to support the fishery for several years while the remainder of the resource rebuilds. It is also used as the basis to determine the initial number of trips to be allocated to eligible vessels and to estimate how many trips that the Regional Administrator may authorize for an in-season adjustment.

3.2.3.3.2.1 Total Allowable Catch (TAC) for the Low F option

The TAC for the Hudson Canyon Area would be 6,331 mt (13.96 million lbs.) for 2001, based on a fishing mortality target equal to 0.20 (16 percent exploitation rate). The TAC for the VA/NC Area would be 283 mt (0.62 million lbs.). In 2002, the TACs would be 6,415 mt (14.14 million lbs.) and 273 mt (0.60 million lbs.), respectively.

Rationale: These TACs would allow landings of sea scallops that are consistent with the fishing mortality target ($F = 0.20$) in the overfishing definition. This would produce lower landings in 2001 than the High F option described above, but the biomass in the areas would not decline as rapidly and there would be a higher yield in future years if the proposed action had to extend beyond 2002. A longer rebuilding period for areas now fished may be needed if future recruitment is less than anticipated or if total fishing effort increases. Total fishing effort could increase through more efficient use of a day-at-sea, re-activation of a significant number of Confirmation of Permit Histories, or a higher day-at-sea utilization rate by active limited access scallop vessels.

At the TAC, the average biomass in the Hudson Canyon Area is expected to increase by 51 percent between the end of 2000 and the end of 2001, after accounting for the removal of the TAC. In 2002, the biomass is expected to increase by nine percent compared to the end of 2001, after accounting for the removal of the TAC in 2002. For the VA/NC Area, the total biomass is expected to increase by 30 and one percent, respectively. The proposed TACs are in the long-term unsustainable, but biomass is expected to continue increasing in these areas until 2002 because of favorable recruitment. Beyond 2002, the biomass in both areas is expected to decline slowly if fishing mortality continues at 0.2 (16%), especially after recruitment declines to average levels.

Under this option with no closures, the total biomass for the Mid-Atlantic is expected to increase by 57 percent to 5.6 kg/tow (44 percent above the B_{MSY} proxy for Mid-Atlantic scallops). For Georges Bank scallops, the projections estimate that biomass would increase by 123 percent to 18.7 kg/tow in 2002 (129 percent above the B_{MSY} proxy for Georges Bank scallops). Projections for this option are given in Section 5.2.4.1.1 and the TAC estimates are presented in Section 5.2.4.1.2.

3.2.3.3.2.2 Trip allocations

With the Low F TAC option, the Regional Administrator would allocate between 552 and 1,656 trips to the fleet, or between 2 and 6 trips for each eligible limited access scallop vessel, taking into account the number of full-time, part-time, and occasional limited access scallop permits. Limited access vessels would be authorized to take these authorized trips in either area during the season, as long as the scallop catches do not equal or exceed the TAC for each area and the area closes (Section 4.1.3.2). After one area closes because scallop landings exceed its TAC, vessels may take their remaining trips in the other area until it closes.

The preferred trip allocation alternative for this option with a 15,000 pound scallop possession limit is therefore three trips in 2001 (Table 28) and three trips in 2002 (Table 29). The analysis includes a scallop possession limit ranging from 8,200 to 24,600 pounds of scallop meats, included the preferred alternative of 15,000 pounds.

Table 28. Allocations of trips for the Mid-Atlantic area access program in 2001 and the estimated number of trips for each area that can be taken if all vessels participate, assuming full participation in the Hudson Canyon Area and 50 percent participation in the VA/NC Area. The trip allocations are combined for both areas and are shown in the last column. Estimates exclude a five percent set-aside for General Category vessel access, one percent set-aside to fund research, and one-percent to fund the observer program.

Low F Scenario	Hudson Canyon	VA/NC Area	All	
Expected vessel participation				
Full-time	222	111		
Part-time	30	15		
Occasional	24	12		
Total estimated participation	276	138		
TAC per vessel	50,571	4,520		55,091

Trips limit (lbs. meat weight)	Total number of trips to allocate			
8200	1,585	71	-	1,656
9800	1,321	59	-	1,380
12300	1,057	47	-	1,104
16400	793	35	-	828
24600	528	24	-	552

Trips limit (lbs. meat weight)	Number of trips per vessel to allocate			
8200	6	0		6
9800	5	0		5
12300	4	0		4
16400	3	0		3
24600	2	0		2

Table 29. Allocations of trips for the Mid-Atlantic area access program in 2002 and the estimated number of trips for each area that can be taken if all vessels participate, assuming full participation in the Hudson Canyon Area and 50 percent participation in the VA/NC Area. The trip allocations are combined for both areas

and are shown in the last column. Estimates exclude a five percent set-aside for General Category vessel access, one percent set-aside to fund research, and one-percent to fund the observer program.

Low F Scenario	Hudson Canyon	VA/NC Area	All
Expected vessel participation			
Full-time	222	111	
Part-time	30	15	
Occasional	24	12	
Total estimated participation	276	138	
TAC per vessel	51,242	4,359	55,601

Trips limit (lbs. meat weight)	Total number of trips to allocate		
8300	1,588	68	1,656
9900	1,324	56	1,380
12400	1,059	45	1,104
16600	794	34	828
24800	530	23	552

Trips limit (lbs. meat weight)	Number of trips per vessel to allocate		
8300	6	0	6
9900	5	0	5
12400	4	0	4
16600	3	0	3
24800	2	0	2

The Regional Administrator would give out or authorize the initial trip allocation for limited access in a sequential, step-wise program (Table 30). Vessels will be authorized to take no more than one trip before April 30 in each fishing year. A second trip may start no earlier than May 1 and no more than two trips may be taken by May 31. A third trip may start no earlier than June 1 and no more than three trips may be taken by July 15. After July 15, a vessel may begin a trip up to the total allocation that vessels are authorized to take within the Hudson Canyon and VA/NC Areas. If the allocation is fewer than three trips, the schedule would remain the same, but more than three trips could only be taken after October 1, if authorized by the Regional Administrator.

To be eligible to take a Hudson Canyon or VA/NC Area trip, a limited access scallop vessel will have to land at least one trip before September 1. If the status quo (Section 4.1.3.3.2) is chosen, a vessel intending to preserve its eligibility for more trips need only to declare a Hudson Canyon and VA/NC Areas trip and report one VMS position ocean ward from the VMS monitoring line. A limited access scallop vessel would lose 10 days-at-sea for this purpose, but it would have a negligible impact on vessels that do not use all of its days-at-sea during a fishing year. If the preferred alternative (Section 4.2.3.7.1) is chosen, the vessel must report one VMS position within the boundaries of the Hudson Canyon and VA/NC Areas before August 31.

Table 30. Trip allocation schedule for limited access vessels

Inclusive dates	Maximum number of authorized trips to the Hudson Canyon and VA/NC Areas, combined
April 1 to April 30	1 trip
May 1 to May 31	2 trips
June 1 to July 15	3 trips
July 16 until end of season	3 trips or greater amounts if authorized by in-season adjustment; Vessels that did not land a trip before September 1 would be unable to take any trips after August 31

Since this framework adjustment proposes that part-time vessels will have a maximum allocation of 58 days-at-sea in the 2001 fishing year¹⁹, part-time vessels can take a maximum of five area access trips in any combination. A part-time vessel would therefore be eligible for one additional trip (see below) from an in-season adjustment. If three trips are initially allocated to part-time vessels, they could be eligible for two additional trips from the in-season adjustment after October 1. An occasional scallop vessel will have a maximum allocation of 19 days in the 2001 fishing year²⁰ and would therefore be eligible to take only one trip in any one area, regardless of additional allocations through a possible in-season adjustment via the provision described below.

The number of trips that can be allocated depends on the scallop possession limit and the number of vessels that are eligible to participate. The analysis assumes that all vessels that have a limited access scallop permit, excluding the Confirmation of Permit Histories, will take all trips to the Hudson Canyon and VA/NC Areas allocated to them. Vessel owners that re-activate a Confirmation of Permit History will be eligible for a full compliment of trips, subject to the restrictions that govern use by other vessels with a limited access scallop permit.

Rationale: The purpose and expected impacts of the trip allocations are identical to those described in Section 4.2.3.3.1.2. The analysis indicates that an initial allocation of three trips can be authorized to limited access scallop vessels without exceeding the TAC. With a 15,000 pound scallop possession limit, the analysis estimates that the TACs would be exceeded if 50 percent of active vessels fished one trip in the VA/NC Area and more than three trips in the Hudson Canyon Area if all 276 active vessels²¹ fish all authorized trips. As for Frameworks 11 and 13, participation has been less than expected and an in-season adjustment was made in 1999 and is likely in 2000. Lower than expected participation for authorized Hudson Canyon and VA/NC Areas trips would indicate that an allocation of additional trips on or after October 1 would be needed to harvest optimum yield.

3.2.3.3.2.3 TAC set-asides to fund research, to fund observers, and for access by General Category scallop vessels

With the Low F alternative, the TAC set asides would be identical to those described in Section 4.2.3.3.1.3, but the amounts would differ. In addition, with a five percent TAC set aside for General Category vessels, the initial allocation of trips for limited access scallop vessels would decline from four to three. The estimates of TACs and set asides with the Low F option are given in the table below.

Table 31. Summary of TACs and limits for scallop access in the Hudson Canyon and VA/NC Areas during the 2001 fishing year, with a five percent TAC set aside for General Category scallop vessels. A ten percent set-aside for General Category vessels would double the set aside and reduce the TAC for limited access scallop vessels by 997,000 and 44,000 pounds for the Hudson Canyon and VA/NC Areas, respectively.

2001 Maximum Allocations		Hudson Canyon Area	VA/NC Area
Scallops	Total TAC	13.96 million lbs. (6,331 mt)	0.62 million lbs. (283 mt)

¹⁹ A part-time scallop vessel will have a 48 day-at-sea allocation in the 2001 fishing year plus up to 10 unused days-at-sea carried forward from the 2000 fishing year.

²⁰ An occasional scallop vessel will have a 10 day-at-sea allocation in the 2000 fishing year plus up to nine unused days-at-sea carried forward from the 2000 fishing year (it must have used at least one day-at-sea to be eligible to carry forward unused days).

²¹ An active vessel is defined as a vessel that had an active permit in the 2000 fishing year, whether or not it actually was charged days while fishing for sea scallops.

2001 Maximum Allocations		Hudson Canyon Area	VA/NC Area
	TAC for limited access vessels	12.98 million lbs. (5,888 mt)	0.58 million lbs. (263 mt)
	Two percent TAC for observers	279,151 lbs. (127 mt)	12,475 lbs. (6 mt)
	One percent TAC to fund scallop research	139,575 lbs. (63 mt)	6,238 lbs. (3 mt)
	Five percent TAC for general category vessels	697,877 lbs. (317 mt)	31,187 lbs. (14 mt)
Initial trip allocation for limited access vessels		Up to 3, combined with the VA/NC Area trips	Up to 3, combined with the Hudson Canyon Area trips
Scallop possession limit	Limited access vessels	Up to 16,400 lbs. per trip	Up to 16,400 lbs. per trip
	General category vessels	400 to 1,000 lbs. per trip	400 to 1,000 lbs. per trip
Regulated multispecies possession limit	Limited access vessels	300 lbs. per trip	300 lbs. per trip
	General category vessels	Zero possession	Zero possession

Table 32. Summary of TACs and limits for scallop access in the Hudson Canyon and VA/NC Areas during the 2002 fishing year, with a five percent TAC set aside for General Category scallop vessels. A ten percent set-aside for General Category vessels would double the set aside and reduce the TAC for limited access scallop vessels by 997,000 and 44,000 pounds for the Hudson Canyon and VA/NC Areas, respectively.

2002 Maximum Allocations		Hudson Canyon Area	VA/NC Area
Scallops	Total TAC	14.14 million lbs. (6,415 mt)	0.60 million lbs. (273 mt)
	TAC for limited access vessels	13.15 million lbs. (5,966 mt)	0.56 million lbs. (254 mt)
	Two percent TAC for observers	282,857 lbs. (128 mt)	12,030 lbs. (5 mt)
	One percent TAC to fund scallop research	141,428 lbs. (64 mt)	6,015 lbs. (3 mt)
	Five percent TAC for general category vessels	707,141 lbs. (321 mt)	30,075 lbs. (14 mt)
Initial trip allocation for limited access vessels		Up to 3, combined with the VA/NC Area trips	Up to 3, combined with the Hudson Canyon Area trips
Scallop possession limit	Limited access vessels	Up to 16,600 lbs. per trip	Up to 16,600 lbs. per trip
	General category vessels	400 to 1,000 lbs. per trip	400 to 1,000 lbs. per trip
Regulated multispecies possession limit	Limited access vessels	300 lbs. per trip	300 lbs. per trip
	General category vessels	Zero possession	Zero possession

3.2.3.3.3 Adjustments for Broken Trips

If a trip is terminated early and the Captain meets the requirements identified below, the vessel will be charged two days-at-sea plus a day-at-sea for each 10 percent of the scallop possession limit (e.g. 1,500 pounds of the hailed scallop landings if the scallop possession limit is 15,000 pounds) or portions thereof. Actual time will be charged against a vessel's annual day-at-sea allocation for trips that are longer than these amounts, unless a special exemption is granted by the Regional Administrator. The schedule for the day-at-sea charge for early terminations is given in the table below.

Vessels may terminate a trip early for an emergency, poor weather, or any other reason deemed appropriate by the Captain and have fewer than 10 days-at-sea charged against the vessel's annual allocation. To terminate a trip and have a reduced day-at-sea charge of a Hudson Canyon or VA/NC Area trip, the Captain must notify NMFS of his intent to terminate the trip before landing; and report the reason for the termination, the hail weight of the scallop catch onboard the vessel, and the intended time and location of offloading and landing.

Table 33. Schedule of day-at-sea charges for trips terminated early by limited access scallop vessels for trips in the Hudson Canyon and VA/NC Areas. This is an example day-at-sea charge schedule if the scallop possession limit is 15,000 pounds.

<i>Proportion of scallop landings to the scallop possession limit</i>	<i>Example hail weight of sea scallops (meat weight, pounds)</i>	<i>Minimum day-at-sea charge²²</i>
0 PERCENT	Zero	2 days-at-sea
More than 0 to 10 percent	1 to 1,500	3 days-at-sea
More than 10 percent to 20 percent	1,501 to 3,000	4 days-at-sea
More than 20 percent to 30 percent	3,001 to 4,500	5 days-at-sea
More than 30 percent to 40 percent	4,501 to 6,000	6 days-at-sea
More than 40 percent to 50 percent	6,001 to 7,500	7 days-at-sea
More than 50 percent to 60 percent	7,501 to 9,000	8 days-at-sea
More than 60 percent to 70 percent	9,001 to 10,500	9 days-at-sea
More than 70 percent	Over 10,500	10 days-at-sea

Rationale: An adjustment to the day-at-sea tradeoff (Section 4.1.3.2.3) for broken trips is needed to reduce the business risk of fishing in the Hudson Canyon and VA/NC Areas. This risk, i.e. losing 10 days-at-sea from a vessel's annual allocation without landings a significant fraction of the possession limit, inhibits fishermen from participating in the program. Since the day-at-sea tradeoff reduces fishing effort and mortality in the remaining open areas, it is beneficial to the resource to reduce this risk and encourage scallop fishing in the Hudson Canyon and VA/NC Areas. Encouraging more participation by scallop vessels decreases the need and/or size of an in-season adjustment to re-allocate unused trips, which would discourage fishing effort from being concentrated in the less desirable fall season and ensure that the fishery achieves optimum yield. A third effect would be to improve safety. In some cases, fishermen would be less inclined to keep fishing in the face of bad weather if they knew that they wouldn't lose the full 10 day-at-sea charge if they came home early. At present, fishermen are unsure of whether they would be granted an adjustment and could be less prudent in bad weather because of this risk of not landing sufficient scallops to make a 10 day-at-sea charge a profitable swap.

In the final analysis, the day-at-sea adjustment for broken trip became a non-preferred alternative because of law enforcement concerns. Although vessels would be required to hail the catch and report the intended time of landing, law enforcement interests thought that this program could create opportunities for abuse. A second factor in the decision was that NMFS believes that an existing program performed satisfactorily and reduced the risk vessels face when fishing in the Hudson Canyon and VA/NC Areas. Under the existing program, vessels can apply for an adjustment to the day-at-sea charge for broken trips. NMFS has granted or denied adjustments on a case-by-case basis for vessels that claim a medical emergency, equipment failure, bad weather, or other legitimate reason to return early to port.

This provision furthermore establishes no guidelines for determining emergency situations or granting day-at-sea adjustments and leaves the provision open for abuse. Due to the opportunity and potential for this abuse, NMFS and the Office of Law Enforcement could not ensure the integrity of the day-at-sea adjustment program. However, NMFS's current policy regarding adjusting day-at-sea charges for trips in the groundfish closed areas is fair, efficient, and effective. Under the present system, vessels that mistakenly selected a closed area access trip, or that believe that a portion of the day-at-sea charge should be credited for a particular trip, should request a credit based on evidence that the charge was

²² Actual time at sea will be charged against the vessel's annual day-at-sea allocation for trips longer than these amounts, unless a special exemption is granted by the Regional Administrator.

made in error. NMFS reviews each case individually and a determination is made based on a policy enacted by the Regional Administrator. Several vessels have successfully been able to take advantage of this policy due to weather conditions, gear problems and breakdowns that cut trips short or prevented the vessel from entering a closed area despite that they had indicated that they were beginning a closed area access trip.

3.2.3.4 Eligibility

According to the preferred alternative, only limited access scallop vessels would be eligible to fish for scallops in the Hudson Canyon and VA/NC Areas during the 2001 and 2002 fishing years. Allowing vessels with a General Category scallop permit to target sea scallops in the Hudson Canyon and VA/NC Areas became a non-preferred alternative. Although the proposed program was an improvement over the disapproved measure in Framework Adjustment 13 (which would have allowed a General Category scallop vessel to fish in Closed Area I and the Nantucket Lightship Area), the Council believed that the program would be an inappropriate application where no historical fishery of this type existed prior to the Hudson Canyon and VA/NC Area closures. The Council agreed to re-consider such a program in future actions where a small boat, seasonal fishery had a history.

Sections 4.2.3.4 and 4.2.3.5 describe the eligibility and rules that the Council considered to allow vessels with a General Category scallop permit to fish for scallops in the Hudson Canyon and VA/NC Areas. None of these options were selected as a preferred alternative. Instead, the Council lowered the General Category scallop possession limit (see Section 4.1.3.5), which generally applies to General Category scallop vessels fishing elsewhere. The intended effect was to reduce regulatory discarding of scallops by vessels holding a General Category scallop permit, but prevent an open access fishery targeting sea scallops from developing in the rebuilt areas.

3.2.3.4.1 Restricted access by vessels with General Category permits and a Letter of Authorization to fish for scallops in the Hudson Canyon and VA/NC Areas with a separate scallop TAC

Vessels with a General Category scallop permit may apply for and be eligible for a Letter of Authorization that would allow them to fish for sea scallops in the Hudson Canyon and VA/NC Areas. A portion of the TAC for each area would be set-aside for this purpose to ensure that the total scallop landings did not exceed the management targets. Vessels with limited access scallop permits would be ineligible for this program.

Two options are presented below. Option 1 describes an administrative procedure that would authorize applicants with a General Category scallop permit to fish a set number of trips in the Hudson Canyon or VA/NC Areas while the areas remain open. Option 2 describes a simpler administrative procedure to authorize applicants with a General Category scallop permit to fish until the scallop landings for these vessels exceed a TAC set-aside, specified for each area. To be authorized, the vessels would have to comply with certain reporting requirements, install an operational VMS, and have a Letter of Authorization issued by the Regional Administrator.

With option 1, the applicants would be able to predict how many trips the vessel could take and whether it would be profitable to participate, before the applicant installed the necessary equipment and fishing gear. Option 2 is a simplified version of option 1 and would be easier to administer because the vessels trips would not have to be monitored, except to verify landings and to determine the performance

of the observer program. With option 2, applicants would receive a Letter of Authorization like option 1, but would not be able to predict how many trips their vessel could take before installing costly monitoring equipment and fishing gear. The ability to take trips and the vessel's scallop landings would be determined by how quickly it takes trips before the area closes because landings from the General Category exceed the TAC set aside.

Vessels with general category scallop permits will be required to report landings and submit vessel trip reports, will be required to carry observers when requested, and operate a VMS of a type that is approved for use by limited access scallop vessels. The VMS system must remain operational and would be double-polled, like a limited access scallop vessel, while the Letter of Authorization is in effect.

General Category vessels that have received an Letter of Authorization and that elect through their VMS unit to fish in the reopened Mid-Atlantic areas for scallops prior to the start of a fishing trip would be required to use one legal scallop dredge, not greater than 10'6" in width, with the same twine top requirements that apply to limited access vessels fishing in the Hudson Canyon and VA/NC Areas areas (Section 4.1.3.4.2). No other gear may be onboard the vessel while fishing with the Hudson Canyon and VA/NC Areas or while fishing on a trip that had fished within these areas.

3.2.3.4.1.1 Option 1 – General Category vessels apply for a Letter of Authorization that authorizes the vessel to take an authorized number of trips

General category vessels will be able to fish for scallops in the Hudson Canyon and VA/NC Areas when they are open for scallop fishing by General Category scallop vessels and land up to ten percent of the total scallop TAC (Section 4.2.3.3.1.3). The Regional Administrator will issue applications to vessels with General Category permits and allow permit holders to apply within two weeks from the date that the Regional Administrator mails the applications. After the deadline, the Regional Administrator will notify the applicants of their approval and the number of trips that vessels would be authorized to take in the Hudson Canyon and VA/NC Areas, contingent on the vessel complying with the regulations including the procurement, installation, and activation of a VMS unit. The number of trips will be determined by dividing the number of valid applications by the total number of trips available to the fleet, a procedure described in Section 4.2.3.5. Successful applicants could receive, but are not guaranteed, a Letter of Authorization to fish in Hudson Canyon and VA/NC Areas during the 2002 fishing year and the number of trips in the 2002 fishing year will depend on the number of applications for that season.

After interested General Category permit holders receive word from NMFS of the number of trips that they would be allowed to take, the vessel owner or operator can decide whether the number of trips would be profitable enough to justify the cost of complying with the VMS monitoring requirements. If the General Category vessel still feels that it would like to participate in the access program, the owner would need to submit a copy of a vendor installation receipt from a NMFS-approved VMS vendor prior to receiving an Letter of Authorization to fish in these areas for scallops. No adjustments will be made to allocate more trips to participating vessels to adjust for trips allocated to vessels that later choose not to obtain VMS equipment and fish for scallops.

This authorization will be issued to a vessel that has a general category scallop permit, but does not have a limited access scallop permit, for the duration of the season (at the applicant's discretion). Vessels may take an authorized trip from May 1 to September 30 or until the scallop landings by vessels with a Letter of Authorization exceed the TAC set aside. Depending on the Council's choice for the final framework adjustment, a vessel with a Letter of Authorization may be able to fish only as long as the area open for vessels with a limited access scallop permit (see Section 4.2.3.2.2). Authorized general category vessels may retain no more than the possession limit specified in the Letter of Authorization, but may

retain regulated multispecies and monkfish up to the amounts specified in the Northeast Multispecies and Monkfish FMPs.

3.2.3.4.1.2 Option 2 – General Category vessels apply for a Letter of Authorization to fish until the landings by General Category vessels exceed the TAC set-aside

General category vessels will be able to fish for scallops in the Hudson Canyon and VA/NC Areas when they are open for scallop fishing by General Category scallop vessels and land up to ten percent of the total scallop TAC (Section 4.2.3.3.1.3). The Regional Administrator will issue applications to vessels with General Category permits as soon as practicable after the approval of Framework Adjustment 14. Applications may be submitted at any time before the opening of the Hudson Canyon and VA/NC Areas and until the time when both areas are closed to fishing by vessels with General Category scallop permits. Applicants must demonstrate that the vessel is capable of meeting the monitoring requirements, including submitting a receipt for the installation of an operational VMS aboard the vessel.

Once a satisfactory application is received, the Regional Administrator will issue a Letter of Authorization that authorizes the vessel to exceed the General Category scallop possession limit and fish for sea scallops within the Hudson Canyon and VA/NC Areas. This Letter of Authorization will terminate when both of the Hudson Canyon and VA/NC Areas close to fishing by vessels with General Category scallop permits (Section 4.1.3.1.2). Total sea scallop landings and total trips will not be limited, except for the ability of the vessel to fish before the areas close. Authorized general category vessels may retain no more than the possession limit specified in the Letter of Authorization, but may retain no regulated multispecies and monkfish up to the amounts specified in the Northeast Multispecies and Monkfish FMPs.

Rationale: This alternative (option 1 or 2) would allow access to vessel with general category scallop permits, consistent with the history of some vessels that target scallops during favorable seasons and conditions. All vessels with general category permits are already required to report all landings and submit vessel trip reports under other FMPs²³.

A Letter of Authorization is needed to improve administration, to inform operators and enforcement that the vessel is authorized to fish with dredges in the Hudson Canyon and VA/NC Areas and retain more than the General Category scallop possession limit, and to inform the vessel operator of any reporting requirements or other regulations. The Letters of Authorization would also identify vessels that intended to fish in the Hudson Canyon and VA/NC Areas so that NMFS can plan and assign observers. The Letter of Authorization also identifies which vessels must report landings that would count against the TAC set aside.

Other types of administration could either create a derby-style fishery or be inequitable. A limit on the number of trips (option 1) a vessel may take avoids a condition where the vessels must fish as quickly as possible before the scallop landings exceed the TAC set aside. On the other hand, no cap on the number of Letters of Authorization and a requirement that vessels must have a VMS onboard before applying for authorization (option 2) to fish does not guarantee that the number of trips would justify the cost of compliance. Since the compliance costs are lower for vessels that already own and operate VMS

²³ Landings reports and vessel trip reports are now required by regulations implementing the Northeast Multispecies, the Monkfish, the Summer Flounder, and other FMPs that govern fisheries in the northeast region. See the SAFE report (NEFMC 1999) for a cross reference of vessels with general category scallop and other permits.

units, this system could be inequitable and favors some vessels in the multispecies fishery that already have VMS equipment installed.

3.2.3.4.2 Access by any General Category vessel to retain and land sea scallops in the Hudson Canyon and VA/NC Areas with a separate scallop TAC

General Category scallop vessels without a limited access scallop permit would be allowed to fish for sea scallops or other species within the Hudson Canyon and VA/NC Areas, but the vessels trips and landings would not be monitored except by regulations that already apply to them. General Category vessels could land and retain up to 400 pounds of scallop meats or 50 US bushels on a trip that fishes within or transits through the Hudson Canyon and VA/NC Areas.

Rationale: This non-preferred option would restore the General Category scallop possession limit for the Hudson Canyon and VA/NC Areas. It would enable the General Category vessels to retain and land sea scallops as a bycatch both inside and outside of the Hudson Canyon and VA/NC Areas with a consistent possession limit, thus minimizing regulatory discards. Enforcement of the limited access scallop fishery possession limit could be compromised by this option, however, and it could also allow General Category vessels to target sea scallops in an unregulated fishery in the Hudson Canyon and VA/NC Areas.

3.2.3.4.3 Prohibit General Category vessels and others from possessing sea scallops within the Hudson Canyon and VA/NC Areas

Vessels without a Letter of Authorization or not on a scallop day-at-sea would be prohibited from retaining sea scallops within the Hudson Canyon and VA/NC Areas.

Rationale: This alternative that General Category scallop vessels would be ineligible to fish in the Hudson Canyon and VA/NC Areas would continue the status quo. Any vessel that is fishing or transiting through the Hudson Canyon and VA/NC Areas is not currently allowed to possess sea scallops. This maximizes the enforceability of closed areas and enforcement. Enforcement is improved because the only vessels that could possess sea scallops are vessels on an authorized trip, either allocated to limited access vessels or authorized by a letter from the Regional Administrator. Both of the latter exceptions to the possession limit prohibition have a scallop possession limit and strict reporting requirements.

3.2.3.5 Area Access Program for Vessels with General Category Scallop Permits

An option to allow a controlled number of General Category vessels (see Section 4.2.3.4.1 for a description of eligibility) to participate in the Hudson Canyon and VA/NC Area scallop fishery would allow a vessel holding a General Category scallop permit to be eligible for an exemption from the scallop possession limit by Letter of Authorization. Vessels with limited access scallop permits would be ineligible for a Letter of Authorization.

The Letter of Authorization would allow the vessels to retain and land more than 400 pounds of scallop meats or 50 US bushels of shellstock on trips that operate entirely or in part within the Hudson Canyon and VA/NC Areas. It would also require these vessels to comply with all reporting, monitoring, and observer requirements that apply to limited access scallop vessels on a Hudson Canyon or VA/NC Area trip.

The Regional Administrator would issue Letters of Authorization and under option 1 (Section 4.2.3.4.1.1), the total number of trips a vessel may take will depend on the number of applicants, the

scallop possession limit for vessels with General Category permits and Letters of Authorization, and the TAC set-aside. Under option 2 (Section 4.2.3.4.1.2), vessels could take as many trips and land as much scallops as possible (subject to the scallop possession limit) until the areas close when scallop landings exceed the TAC set asides. The Letters of Authorization would be effective whenever an area was open to General Category scallop vessels and would terminate when both areas closed to scallop fishing or the landings by vessels with Letters of Authorization exceeded the TAC set-aside, whichever comes first. There will be no guarantee or right to a Letter of Authorization in 2002 or future years for vessels with General Category permits that obtained a Letter of Authorization during the 2001 or 2002 fishing years.

If option 1 (Section 4.2.3.5.2.1) to raise the General Category scallop possession limit is not chosen, option 2 (Section 4.2.3.5.2.2) would allow General Category vessels to retain and land up to 400 pounds of scallop meats or 50 US bushels of shell stock, either by targeting sea scallops or as a bycatch while fishing for other species. A TAC set-aside would be needed in this case to reduce the likelihood that the fishery would not exceed the fishing mortality targets. Landings by General Category vessels without a Letter of Authorization would be monitored through existing reporting provisions that apply to these vessels, but would not effect a closure or prohibit scallop retention. Retention of sea scallops would again be prohibited within the areas when the Hudson Canyon and VA/NC Areas again close for scallop fishing.

Rationale: A Letter of Authorization would be needed to prevent the fishery from developing derby characteristics associated with a fishery controlled mainly by a TAC. It would also improve business planning by vessels contemplating participating in the area access program. Although not assured, a vessel contemplating participation would have a reasonable expectation that its authorized trips, justifying its monitoring and administrative costs. Without this limit on Letters of Authorization, a vessel would spend money to comply with the monitoring and administration, but might only be able to take few trips because of a high participation and catches that quickly exceed the TAC set aside. A controlled number of Letters of Authorization would also prevent a derby-style fishery that could have the effects to be avoided by and described in Section 4.2.3.3.1.2 for limited access vessels.

3.2.3.5.1 Total Allowable Catch

Up to ten percent of the total TAC in each area would be set-aside to account for landings by vessels with General Category permits. The amount of scallops that could be landed by General Category scallop vessels is shown in Table 26,

Table 27, Table 31, and

Table 32. All scallop landings by vessels with a Letter of Authorization (whether or not caught in the Hudson Canyon and VA/NC Areas) would be monitored and the exemption would discontinue when the Regional Administrator determined that the TAC set-aside was landed or about to be landed. If the Council chooses option 2 (Section 4.2.3.5.2.2; with or without option 1) landings by General Category vessels without a Letter of Authorization would not be monitored. If scallop possession limit option 3 alone is chosen, there would be no TAC set-aside for General Category scallop vessels, either to account for a directed fishery or for scallop bycatch.

Rationale: A TAC for General Category vessels is needed to ensure or reduce the probability that fishing mortality targets for the Hudson Canyon and VA/NC Areas are not exceeded. Monitoring landings of a reasonably low number of General Category vessels is possible, if they comply with regulations that apply to limited access scallop vessels fishing for sea scallops in the Hudson Canyon and VA/NC Areas. Even if there are no exemptions to the General Category possession limit and the scallop bycatch cannot be monitored, the TAC set-aside would reduce the likelihood that the framework's fishing mortality targets are exceeded.

3.2.3.5.2 General Category restrictions for vessels operating within the Hudson Canyon and VA/NC Areas

Three options are possible to allow or prohibit retention and landing of sea scallops by vessels with General Category scallop permits when all or any portion of the trip occurs within the Hudson Canyon and VA/NC Areas. If option 1 (Section 4.2.3.5.2.1) is chosen, either option 2 (Section 4.2.3.5.2.2) or 3 (Section 4.2.3.5.2.3) must be chosen to allow or prohibit the retention of bycatch for vessels without Letter of Authorization. Either option 2 or 3 may be chosen without option 1. Option 2 alone would continue the status quo that applies in areas open to scallop fishing and would allow vessels not on a scallop day-at-sea to retain and land up to 400 pounds of scallop meats or 50 US bushels as a bycatch or from directed fishing effort. Option 3 alone would continue the present regulations that apply while the areas are closed to scallop fishing, preventing vessels without a limited access scallop permit from fishing for sea scallops in the Hudson Canyon and VA/NC Areas. It also would prevent vessels from retaining and landing sea scallops as a bycatch on trips that fish in or transit through the Hudson Canyon and VA/NC Areas.

3.2.3.5.2.1 Option 1 – Raise the scallop possession limit for vessels with a General category permit and a Letter of Authorization

Vessels with a General Category scallop permit and a Letter of Authorization from the Regional Administrator would be able to retain and land more than 400 pounds of scallop meats or 50 US bushels of shell stock on trips that operate within the Hudson Canyon or VA/NC Area. The Letter of Authorization would allow the vessel to retain and land between 400 and 1000 pounds of sea scallop meats or 50 US bushels of shell stock on a limited number of trips during a season specified below. The total amount of sea scallops that could catch on trips to the Hudson Canyon and VA/NC Areas depend on the scallop possession limit and the number of trips a vessel is authorized to take (Table 34).

Table 34. Maximum total landings of scallops that General Category vessels may catch with a Letter of Authorization to land more than the standard scallop possession limit that applies to other General Category vessels.

Possession limit	Number of day-trips per vessel			
	10	25	50	100
400	4,000	10,000	20,000	40,000
600	6,000	15,000	30,000	60,000
800	8,000	20,000	40,000	80,000
1000	10,000	25,000	50,000	100,000

Rationale: Raising the scallop possession limit for vessels with a Letter of Authorization would allow a limited number of vessels to participate in the directed scallop fishery within the Hudson Canyon and VA/NC Areas. The Letter of Authorization would enable the Regional Administrator to require the vessels to comply with the same reporting, monitoring, and observer requirements that apply to limited access scallop vessels that target sea scallops. The higher possession limit would also make it cost-effective for vessels to participate in the directed sea scallop fishery with the additional monitoring and reporting requirements.

Option 1 - Authorized trips

Vessels with a General Category scallop permit and a Letter of Authorization to exceed the General Category scallop possession limit will be authorized to take a limited number of trips while fishing in the Hudson Canyon and VA/NC Areas. Any VMS report within the area and subsequent reports until a VMS report that is outside of either the Hudson Canyon and VA/NC Areas will constitute a trip. Vessels may not take a single trip that fishes within both areas. The number of trips that a vessel may take will depend on the amount of the TAC set-aside, the scallop possession limit, and the number of Letters of Authorization that the Regional Administrator may allot (Table 35 and Table 36).

Table 35. Five-percent TAC set aside, High F option: Maximum number of Letters of Authorization that may be allotted by the Regional Administrator with a five percent TAC set aside and a scallop possession limit ranging from 400 to 1000 pounds of scallop meats. With this set-aside for catch by vessels with General Category scallop permits, vessels with full-time limited access scallop permits would be allocated five trips. If vessels are authorized to take up to 50 trips with a 600-pound scallop possession limit, for example, the Regional Administrator could issue 35 Letters of Authorization.

TAC set aside		Full-time trips @ 15,000 lbs.		
Percent	Pounds			
5%	1,041,412	4		

Possession limit	Number of day-trips per vessel			
	10	25	50	100
400	260	104	52	26
600	174	69	35	17
800	130	52	26	13
1000	104	42	21	10

Table 36. Ten-percent TAC set aside, High F option: Maximum number of Letters of Authorization that may be allotted by the Regional Administrator with a ten percent TAC set aside and a scallop possession limit ranging from 400 to 1000 pounds of scallop meats. With this set-aside for catch by vessels with General

Category scallop permits, vessels with full-time limited access scallop permits would be allocated four trips. If vessels are authorized to take up to 25 trips with an 800-pound scallop possession limit, for example, the Regional Administrator could issue 52 Letters of Authorization.

TAC set aside		Full-time trips @	
Percent	Pounds	15,000 lbs.	
10%	2,082,825	4	

Possession limit	Number of day-trips per vessel			
	10	25	50	100
400	521	208	104	52
600	347	139	69	35
800	260	104	52	26
1000	208	83	42	21

Rationale: A limit on the number of trips a vessel may take is needed to ensure that a fishery with General Category scallop vessels does not develop into a derby-style fishery, controlled solely by a TAC set aside and closure. Otherwise, a vessel with a Letter of Authorization would have an incentive to take as many trips as early as possible before landings exceeded the TAC set aside and the Letters of Authorization terminated. It could increase flexibility by allowing vessels with Letters of Authorization to choose when to fish within the May to September season and have a reasonable certainty that the investment to comply with the monitoring and reporting requirements can be recovered.

Option 2 – Authorized trips

Until the scallop landings by General Category vessels with Letters of Authorization equal or exceed the TAC set-asides (Sections 4.2.3.3.1.3 and 4.2.3.3.2.3), authorized vessels may take any number of trips into the Hudson Canyon and VA/NC Areas after declaring their intent to take a trip, while the areas remain open for fishing by General Category scallop vessels.

Rationale: This option would be less burdensome and easier to monitor. The number of trips by vessel would not have to be monitored to ensure that an individual vessel did not take more trips than authorized. Only landings by vessels with Letters of Authorization would have to be monitored. Although this option caps the total scallop catches by this category of vessels, there is an incentive for individual vessels to fish as soon as possible to get the most trips in before the landings exceed the TAC set-aside for each of the Hudson Canyon and VA/NC Areas. Vessels that delay are not assured of taking enough trips to pay the added expense of participation in this program.

Season

The Letter of Authorization would become effective on May 1, 2001 and would terminate on September 30, 2001 (Section 4.1.3.1.2), or when both of the Hudson Canyon and VA/NC Areas closed to scallop fishing (Section 4.2.3.2.1), or when the landings by vessels with Letters of Authorization met or exceeded the TAC set-aside (Section 4.2.3.3.1.3), whichever comes first. New Letters of Authorization would become effective on May 1, 2002 and would terminate on September 30, 2002 (Section 4.1.3.1.2), or when both of the Hudson Canyon and VA/NC Areas closed to scallop fishing (Section 4.2.3.2.1), or when the landings by vessels with Letters of Authorization met or exceeded the TAC set-aside (Section 4.2.3.3.1.3), whichever comes first.

Rationale: The season is expected to be sufficient for General Category vessels to take authorized trips and minimize bycatch during the spring and fall when finfish tend to migrate offshore. The season would also improve safety by avoiding times when storms are more frequent.

Gear restrictions

Vessels with a General Category scallop permit and a Letter of Authorization to retain and land more than the scallop possession limit for vessels without a Letter of Authorization will be required to use no more than one legal scallop dredge (§648.51), no more than 10.5 feet in width while fishing within the Hudson Canyon and VA/NC Areas. Twine top mesh must be no less than 10-inches, the same as applies to limited access scallop vessels that fish within the Hudson Canyon and VA/NC Areas. No other gear may be aboard the vessel while on a trip into the Hudson Canyon and VA/NC Areas under a Letter of Authorization.

Rationale: Scallop dredges are more size selective and are believed to have less finfish bycatch than other gear that catches commercial quantities of sea scallops. As such, this measure would prohibit vessels with General Category scallop permits from using less selective gear while targeting sea scallops under a Letter of Authorization and a higher scallop possession limit. Requiring these vessels to use a small dredge is consistent with the Council intent to provide for a small-vessel, artisanal fishery with access to formerly closed scallop fishing areas.

Vessel monitoring systems

Vessels with General Category scallop permits and a Letter of Authorization to retain higher amounts of sea scallops would have to acquire, maintain, and operate a compliant VMS system at the vessel's cost, either by purchase, lease, or rent while the Letter of Authorization was in effect. The vessel would be subject to the same monitoring requirements and costs as a limited access scallop vessel that takes trips into the Hudson Canyon and VA/NC Areas, including double polling while the Letter of Authorization was in effect.

Rationale: This is the most effective, least costly way to monitor and enforce scallop fishing in the Hudson Canyon and VA/NC Areas. It also provides high-quality, detailed information about fishing behavior and fishing effort for future stock assessments.

Observers

Vessels with General Category permits will be required to notify NMFS of its intent to fish within the Hudson Canyon and VA/NC Areas and will be required to carry and pay for an observer, if chosen by the Regional Administrator to do so. The Regional Administrator will attempt to sample at least 10 percent of the trips in the Hudson Canyon Area and 20 percent of the trips in the VA/NC Area aboard General Category vessels, consistent with the observer sampling target for limited access scallop vessels.

Rationale: This information is needed to collect the bycatch and discarding data for vessels using small dredges on day trips. The Council believes that a 10 percent sampling frequency is necessary to adequately characterize the fishery, bycatch, and discarding in the Hudson Canyon Area, but a 20 percent sampling frequency is needed in the VA/NC Area because of the low number of trips that are likely to occur before the landings exceed its TAC.

3.2.3.5.2.2 Option 2 – One to four-hundred pound of scallop meats and zero to 50 US bushel scallop shell stock possession limit for all vessels with a General Category permit (status quo)

Vessels with a General Category scallop permit would be able to retain and land up to 400 pounds of scallop meats or 50 US bushels of shell stock while operating within the Hudson Canyon and VA/NC Areas. The possession limit could also be less than 400 pounds and 50 US bushels to allow vessels to retain and land sea scallop bycatch without encouraging vessels with General Category permits to target sea scallops in the Hudson Canyon and VA/NC Areas.

Rationale: A 400-pound and 50 US bushel scallop possession limit would re-establish the General Category regulations that apply in all other areas subject to scallop fishing. This allows vessels that fish for other species to retain and land its sea scallop bycatch and/or participate in near-shore, low-cost, artisanal fisheries that have occurred at various times and places, primarily around Cape Cod, MA.

The scallop catches could be unlimited, however, because there are nearly 2,000 vessels with a General Category scallop permit. To make matters worse, anyone can obtain a General Category permit and target scallops with a 400-pound scallop possession limit if it becomes profitable. If it becomes profitable for many vessels, unrestricted access by vessels with General Category scallop permits could create an unprecedented opportunity in the Mid-Atlantic, reduce the benefits for limited access scallop vessels that have borne the restrictive management that is rebuilding the resource, and create a derby-style, open access fishery.

Reducing the possession limit for General Category permits, alone or in concert with Option 1 (Section 4.2.3.5.2.1), could reduce the incentive for vessels with General Category scallop permits to target sea scallops within the Hudson Canyon and VA/NC Areas. It might also improve enforcement because the limited access scallop vessels with a 15,000 pound scallop possession limit would not be surrounded by vessels with a 400 pound possession limit, possibly enough to make illegal transfers at sea very attractive.

3.2.3.5.2.3 Option 3 – Continue the present prohibition on the possession of scallops or scallop meats within the Hudson Canyon and VA/NC Areas

Vessels with a General Category scallop permit would be prohibited from retaining and landing scallops or scallop meats for any trip that fished within or transited the Hudson Canyon and VA/NC Areas. This would continue the present regulations during the access program for this framework adjustment.

If the Council chooses option 1 (Section 4.2.3.5.2.1) as a means to allow General Category vessels to fish for scallops in the Hudson Canyon and VA/NC Areas, prohibiting other General Category vessels from possessing sea scallops in the Hudson Canyon and VA/NC Areas is the preferred option.

Rationale: A zero possession limit was needed to prevent vessels from targeting sea scallops in the Hudson Canyon and VA/NC Areas while limited access scallop vessels were prevented from fishing there. This has allowed the scallop biomass grow enough to support the fishery while other areas are given a chance to also rebuild in the next few years. Allowing an unlimited number of vessels to possibly target sea scallops in the Hudson Canyon and VA/NC Areas would jeopardize this strategy if landing 400 pounds per day becomes profitable. It might also reduce the opportunity for transfers at sea from limited access vessels with a 15,000-pound scallop possession limit to a large number of vessels that could have 400 pounds aboard. In this case, the foregone benefits and costs of allowing an unlimited fishery with a 400-pound possession limit could outweigh the costs of forcing vessels that have a scallop bycatch to discard.

3.2.3.6 Gear restrictions

3.2.3.6.1 Dredges only

Limited access scallop vessels that fish in the Hudson Canyon and VA/NC Areas must use a scallop dredge that conforms to §648.51 (Gear and Crew Restrictions) and §648.2 (definition of “dredge or dredge gear”), including ring size, configuration and linkage, and maximum width. According to this regulation, the combined dredge width shall not exceed 31 feet (9.4 m).

Vessels with General Category scallop permits and a Letter of Authorization to fish in the Hudson Canyon and VA/NC Areas under Section 4.2.3.5 must also comply with these regulations, but the total width of the dredge may not exceed 10.5 feet (3.2 m). General category vessels must have no more than one dredge onboard during an authorized trip in the Hudson Canyon and VA/NC Areas.

Rationale: This option would force vessels using less selective trawl gear to target scallops in locations other than the Hudson Canyon and VA/NC Areas, where small scallops are relatively more abundant. The Council preferred to give vessels equipped with trawls the opportunity to fish for the larger scallops in the Hudson Canyon and VA/NC Areas, thereby reducing mortality per day-at-sea for vessels using trawls. Unlike the Georges Bank closed areas, the Hudson Canyon and VA/NC Areas have been open to finfish fishing by vessels using trawls and other gears. Higher than normal finfish bycatch on scallop trawl vessels is therefore not anticipated by fishing in the Hudson Canyon and VA/NC Areas.

3.2.3.7 Enforcement provisions

3.2.3.7.1 Option 2- Eligibility to receive more Hudson Canyon and VA/NC Areas trips from an in-season adjustment

Vessels will have qualified for additional trips and have begun that trip for the purposes of eligibility for additional trips (Section 4.1.3.1.3) or for automatic charges of days-at-sea under the early trip termination provision (Section 4.1.3.2.3) by declaring that it will make a Hudson Canyon Area or VA/NC Area trip and having at least one VMS report within the boundaries of the Hudson Canyon and VA/NC Areas.

Rationale: This option would require a vessel to actually fish (or at least make a VMS report) from within one of the Hudson Canyon and VA/NC Areas to be eligible for additional trips from an in-season adjustment by the Regional Office. It could avert abuse by fishermen who might otherwise simply go outside of the VMS monitoring line for 30 minutes near the inlet to retain his vessel’s eligibility to receive more Hudson Canyon and VA/NC Areas trips. This option was not chosen as a preferred alternative because it would require NMFS to monitor an extra event in the VMS log files, increasing costs.

3.2.4 Possession of Scallop Shell Stock

3.2.4.1 Status quo

Scallop vessels would be allowed to retain and land any amount of in-shell sea scallops while on a scallop day-at-sea or landing a trip that was on a scallop day-at-sea. Landings or possession of scallop shell stock inshore of the day-at-sea monitoring line would be subject to the 3.5 inch shell height standard (§648.50).

Rationale: The present regulations have been sufficient because there has been little need for scallop vessels to avoid shucking scallops at sea, while on the day-at-sea clock. As catch rates rise, the incentives increase to bring in shell stock to either land or process “off the clock”, reducing the effectiveness of the day-at-sea and crew limits. More landings of shell stock might enable whole scallop markets to develop provided PSP testing is manageable and US dealers can penetrate new markets. Interest in the whole scallop markets has been limited to a very small number dealers, however.

3.3 Alternatives Considered But Rejected for the Framework Adjustment

The following alternatives summarize some reasonable approaches for scallop management, but were rejected for this action. The purpose of a framework adjustment is to meet the approved FMP objectives with existing management measures, by either making them more or less restrictive. It is necessary to make these management adjustments to respond to changing resource conditions (e.g. increasing biomass, below or above average recruitment) and other events in the fishery (e.g. technological improvements that change fishing power, changes in effort distribution that may target larger or smaller scallops). The Council is meeting this mandate to account for variations and contingencies, consistent with National Standard 6, by initiating an annual framework adjustment.

The purpose of these framework adjustments is not for changing the FMP objectives or to develop new ways of managing the fisheries. This would lie outside the scope of measures already considered and analyzed by the FMP, and are not suitable for a framework adjustment according to the policy adopted by the Council in Amendment 4 to the Atlantic Sea Scallop FMP. These considerations are more appropriate for a regular plan amendment that develops new objectives or approaches to resource management with full and open participation of the public through scoping hearings and at least one round of public hearings on the draft amendment. Such an effort is presently continuing in association with Amendment 10, which will consider new objectives and better ways of managing the resource and the fishery. One of the new approaches under consideration is a formal area rotation plan to delay catch and non-catch mortality of scallops until they reach larger size, thereby increasing total yield. The amendment may also consider other approaches to achieve the same objective. These new approaches may entirely replace or augment existing measures to achieve approved goals and objectives for sea scallop management. The Council could also consider additional objectives or change existing objectives during the development of Amendment 10.

The discussion in this section describes other possible approaches to scallop management that were proposed during the scoping period for this SEIS, and other reasonable alternatives that might have been pursued. Each sub-section provides a rationale why the Council chose to reject these alternatives, at least for this framework action.

3.3.1 Prohibit scallop dredging in gravel, cobble, and other hard-bottom areas

Identified areas of sensitive habitat could be closed or partially curtailed in these complex areas to promote recovery and preserve habitat. There is ample scientific evidence that these areas provide an important benefit to some species through protection from predation and as a location to feed on small prey items. It has also been demonstrated that scallop dredge fishing alters the bottom, although the long-term implications are less clear.

Rationale: The Council rejected this alternative because more research is needed to understand the long-term impacts of scallop fishing by trawls or dredges. It is furthermore important to understand if the long-term implications are significant to the ecosystem for each type of habitat that could be disturbed by fishing.

On the other hand, it is not clear that additional closures are needed at this time. This framework adjustment leaves significant scallop resources areas on Georges Bank closed to scallop fishing and is believed to have a positive effect on habitat. Even during 1999 and 2000, when the Council allowed scallop fishing in the Georges Bank groundfish closed areas, large parts of them remained closed because of concerns about the impacts on habitat. Only the least sensitive areas, i.e. areas with sandy bottom, were temporarily opened by framework adjustment. For this action, however, even these areas would remain closed in 2001 and 2002. A more thorough review of this policy and the objective to minimize habitat impacts is anticipated during the development of Amendment 10.

Presently, a large proportion of the known and mapped gravel, cobble, and boulder areas of the Gulf of Maine, Georges Bank, and Southern New England Shelf regions are enclosed by the current groundfish closed areas (Closed Area I, Closed Area II, Nantucket Lightship Closed Area, and Western Gulf of Maine Closed Area). Scallop fishing is prohibited in these areas and this prohibition will continue throughout the 2001 fishing year. Framework Adjustment 14 proposes to make no changes to these restrictions. In fishing years 1999 and 2000, portions of Closed Area I, Closed Area II, and the Nantucket Lightship Closed Area were temporarily re-opened for a limited amount of scallop fishing, but the portions of these closed areas known to contain hard-bottom habitats remained closed to scallop fishing.

While there are undoubtedly other areas of the Gulf of Maine, Georges Bank, and Southern New England Shelf that contain hard-bottom sediments such as gravel, cobbles, and boulders, many of these areas may not be mapped and are thus unknown. Even in the areas of known hard-bottom habitat, such as in the portions of the Great South Channel to the west of Closed Area I, if scallop fishing were restricted all other forms of bottom fishing (such as otter trawling) would continue. Any benefits to the habitats of these areas that may be derived from prohibitions on scallop dredging would be minimized as a result of the other fishing activities which would continue. Implementing restrictions on otter trawling and these other fishing activities would be outside the allowable scope of this framework adjustment.

Amendment 10 to the Scallop FMP and Amendment 13 to the Groundfish FMP will consider alternatives to restrict various forms of bottom-tending fishing gear in identified areas of habitat vulnerable to adverse effects from these types of fishing activities. These alternatives may include modifications to the boundaries of the existing groundfish closed areas, establishing new closed areas, and/or establishing scallop management areas that differentiate hard-bottom areas.

3.3.2 Prohibit scallop dredging in areas containing sensitive EFH for overfished species

This alternative would prohibiting scallop fishing or significantly reduce its intensity in area deemed essential habitat for overfished species, including Southern New England yellowtail flounder, monkfish, Georges Bank and Gulf of Maine haddock, Southern Georges Bank/Mid-Atlantic silver hake, ocean pout, Atlantic halibut, spiny dogfish, black sea bass, summer flounder, scup, and Atlantic bluefish. In most cases, this alternative would involve some form of year-around or seasonal closures.

Rationale: The Council rejected this alternative in broad terms because of its excessive impact on the fishery and because of uncertain benefits. Except for Southern New England yellowtail flounder,

monkfish, and summer flounder, many of the above species are not vulnerable to scallop dredges and trawls. Secondary effects that arise from altered habitat or interruption of spawning activity are not well understood and there may be more efficient ways to address the overfished condition for these stocks.

Although incidental catches can be an issue for some stocks (e.g. spiny dogfish, monkfish, and Southern New England yellowtail flounder), total fishing mortality is widely recognized as the major factor that prevents overfished stocks from recovering. The Council has managed overfishing directly under the fishery management plans for these species, utilizing a combination of day-at-sea limits, gear restrictions, area closures, and other measures. Although monkfish catches in the scallop fishery are significant, the Monkfish FMP for example contains possession limits and day-at-sea use regulations that govern scallop vessels when they catch monkfish, either as a targeted catch or catches incidental to scalloping.

Cumulatively, the EFH designations for species managed by the New England Council cover the entire range of the scallop fishery. Prohibiting scallop dredging in areas containing EFH is not a practicable alternative, as it would require that scallop fishing itself be banned throughout its range. There is no legal distinction between EFH and "sensitive" EFH, as all EFH is given equal weight under the definition provided by the Magnuson-Stevens Act. The NMFS' guidelines do offer, as a subset to the overall definition of EFH, the designation of "habitat areas of particular concern" (HAPC's). According to the guidelines, HAPC's should be areas of special importance and/or needing special protection.

Within the areas traditionally fished by the scallop industry, the Council designated an HAPC on the northern edge of Georges Bank. This designation was intended to protect an area of habitat particularly vulnerable to the adverse impacts associated with bottom-tending mobile fishing gear and particularly important for post-settlement juvenile groundfish, especially cod. The area designated as an HAPC has been closed to scallop fishing since 1995 and remains closed. This area was specifically excluded from the re-opened portions of the Georges Bank closed areas during the 1999 and 2000 fishing years. This area will remain closed to scallop fishing during the 2001 fishing year and opening that area was not considered during the development of Framework Adjustment 14.

The above two alternatives are not the only management options which offer conservation benefits to the environment and fish habitat within the geographic range of scallop fishing activity. In the 2001 fishing year, the four groundfish closed areas (Closed Areas I and II, Nantucket Lightship Closed Area, and the Western Gulf of Maine Closed Area) will remain closed to scallop fishing. These closures maintain approximately 30% of Georges Bank and a significant portion of western Gulf of Maine off limits to scallop fishing and thus not subject to any adverse effects that may be associated with bottom-tending mobile fishing gear such as scallop dredges. The proposed DAS allocations, even though they are an increase over the original Amendment 7 DAS schedule, are actually a significant reduction from the pre-Amendment 7 levels.

3.3.3 Create spawning sanctuaries to improve scallop recruitment

Spawning sanctuaries would involve area closures to scallop and other fishing gear to allow important concentrations of spawners to grow and reproduced undisturbed by fishing activity. Other types of marine activity may also have to be curtailed, especially ones that create water-borne sediment that interferes with scallop feeding and growth. Since there are no spawning migrations of sea scallops, these areas would probably remain closed or require activity restrictions in all seasons.

Rationale: The Council rejected this alternative because there is insufficient information to know what areas would be appropriate to close or curtail activity which would protect scallop brood stock. Scallops

are extraordinarily fecund and scallop larvae is found in widely dispersed areas throughout the spring, summer and fall. The distribution of larvae depend on the timing of the spawn, water currents that affect the drift of larvae, and temperature that affects the speed of maturation and growth of water-borne larvae. These characteristics make it difficult to identify specific spawning sanctuaries that would be beneficial to protect.

There is also no evidence that yet suggests that the proximity of sea scallops, a broadcast spawner, is a limiting factor in determining recruitment success. Although recent recruitment has been above average, there is no research that specifically points to the present area closures as enhancing scallop recruitment. The above average recruitment that has been observed could have arisen from the increase of spawning stock biomass, from favorable environmental conditions, or both. Time will tell if the increase in spawning stock biomass improves recruitment for both favorable and unfavorable environmental conditions. New research into the mechanisms that affect spawning and larval drift as well as genetic studies designed to link spawners and progeny will also help improve our knowledge.

3.3.4 Area closures to protect other at-risk species

This alternative would include scallop fishing area closures to protect other species deemed to be “at-risk”. It would specifically use area closures, but have similar characteristics and objectives to other alternatives considered and rejected (See Section 4.3.2). It might have broader applicability, however, to also address incidental catch of marine mammals, threatened species, or endangered species.

Rationale: The Council rejected this alternative because it duplicates the management authority of other plans or laws and regulations. Although no formal definition of an “at-risk” species exists, the FMPs for managed species defines when a stock is overfished, i.e. “at-risk”. The regulations associated with the Marine Mammal Protection Act also define when marine mammals are at-risk from excessive incidental takes in fisheries, specific to gear type, area, and season. For species that are seriously at risk, the Endangered Species Act governs actions by fishery management councils and the plans promulgated under the Magnuson-Stevens Act. These concerns are evaluated throughout this document (see Sections 5.2.4.1.5, 5.2.4.3, 5.4, and 5.5 for example) and the Council does not believe that further action under this framework action is warranted.

3.3.5 Re-open portions of the Georges Bank closed areas for scallop fishing

As in Framework Adjustments 11 and 13 which opened portions of Closed Area I, Closed Area II, and Nantucket Lightship Area for limited scallop fishing, these areas would be re-evaluated and similar areas could again be opened under a program with a season, TACs for scallops and some overfished groundfish species, a scallop possession limit, trip allocations for limited access vessels, and other restrictions.

Rationale: Although these management programs were very effective and there was low bycatch in 1999 and 2000, concerns over the long-term impacts on habitat prevented the Council from seriously considering continuing limited scallop fishing in the groundfish closures at this time. Public comment for the Notice of Intent to prepare in SEIS supported delaying access to the Georges Bank closures until it could be considered as a part of a formal area rotation system, if one is adopted by the Council in Amendment 10. On the other hand, keeping these areas closed in 2001 and 2002 is expected to increase scallop fishing intensity in open areas of Georges Bank and the Mid-Atlantic, where smaller scallops are located.

3.3.6 Require gear modifications to reduce bycatch, bycatch mortality, and/or habitat impacts

This alternative would require scallop fishermen to use larger mesh, larger rings, or other restrictions to reduce bycatch and habitat impacts.

Rationale: The Council rejected this alternative because several significant steps have been taken since Amendment 4 to address these concerns. For example, Amendment 4 required scallop vessels to use gear with larger rings, larger mesh twine tops, use no chafing gear, donuts, or cookies. Framework Adjustment 1 required fewer links between the rings to improve scallop escapement, having a beneficial effect on other species and habitat. Framework Adjustments 11 and 13 required scallop vessels to use 10-inch twine top mesh within the groundfish closed areas, and this action proposes the same action for the Hudson Canyon and VA/NC Areas. Framework Adjustment 11 also required an increase in the twine top mesh from 6 to 8 inches in all other scallop fishing areas, to mitigate the potential increase in finfish bycatch within the groundfish closed areas. This measure has been continued because of its positive benefits for reducing the bycatch of finfish and other species. Although more progress might be made with future research, the Council does not believe that this requires more action within this framework action.

3.3.7 Require gear modifications to improve size selection of sea scallops or to reduce non-catch mortality

Larger rings, larger mesh, or other gear modifications might be possible without significantly reducing the catch of large scallops.

Rationale: As noted above, there have been some significant changes in gear regulations since Amendment 4, which completely replaced the effect of the former meat count regulations and improved scallop size selection. If new gear changes reduce the catch of large scallops, then the measure could have a negative effect on scallops (increasing non-catch mortality), other species, and habitat by increasing the amount of fishing effort required to achieve optimum yield from the scallop resource. Future research, however, could identify new gear configurations that have the desired effect and may be considered in Amendment 10, now in development.

3.3.8 Increase annual day-at-sea allocations above the 2000 allocations for limited access scallop vessels

Higher day-at-sea allocations would be authorized for limited access scallop vessels to fish during the 2001 and 2002 fishing years.

Rationale: Higher day-at-sea limits appear to be unwarranted at this time because of the increased risk of overfishing (see Sections 5.2.3.1.3 and 5.2.4.1.1) and the high fishing mortality rate in open fishing areas, especially in the Mid-Atlantic. Higher fishing effort could reduce long-term benefits and increase uncertainty (NEFMC 2000).

3.3.9 Increase the crew limit for limited access scallop vessels

This alternative would allow limited access scallop vessels to carry eight or nine men to increase the shucking capacity and fishing power of the vessel.

Rationale: Although this could have a positive benefit on safety, the primary purpose of the higher limit would be to increase the fishing power limited access vessels and allow them to land more scallops per day-at-sea. Increases in fishing power also appear to be unwarranted at this time for the reasons given in the section above. There also do not appear to be signs of deteriorating safety from the crew limits or other restrictions on limited access scallop vessels (NEMFC 2000).

3.3.10 Allocate individual quotas to vessels fishing in the Hudson Canyon and VA/NC Areas

Instead of setting a limit on the number of authorized trips taken by limited access scallop vessels in the Hudson Canyon and VA/NC Areas, Framework Adjustment 14 could authorize vessels to land a maximum amount of sea scallops on trips that entered the Hudson Canyon and VA/NC Areas to fish. Instead of allowing three trips with a 17,000 pound scallop possession limit, for example, each limited access vessel would be authorized to land 51,000 pounds of sea scallops on trips where the vessel declared that it would fish in the Hudson Canyon and VA/NC Areas. Vessels would not be able to fish in the Hudson Canyon and VA/NC Areas unless it declared it was intending to fish there prior to starting the trip.

Rationale: Mechanisms are now in place to monitor day-at-sea use and the location of the vessel with minimal added cost. The infrastructure to identify authorized Hudson Canyon and VA/NC Area trips also exists. On these trips, it is relatively easy to determine whether the vessel has significantly exceeded the scallop possession limit, either at sea and/or at the dock. On the other hand, monitoring landings to ensure compliance would require costly systems, possibly certified offloading points, and bag tags. These new monitoring systems could drive the costs above the net revenue derived from fishing in the Hudson Canyon and VA/NC Areas, and the Council therefore rejected this alternative.

3.3.11 Allow consolidation of fishing rights through transferability or stacking of permits or day-at-sea allocations, or through buybacks

This alternative would allow fishermen to combine existing permits, allowing a vessel to be utilized more efficiently to catch scallops. It could involve permit stacking, combining day-at-sea allocations, quotas, or buybacks of active or inactive permits.

Rationale: Several related alternatives have been considered in the last five years to address this issue. Most have not been favored by public comment and were not approved. The Council has therefore rejected this alternative for the framework action, but further consideration may be taken up in future amendments.

3.3.12 Require sea sampling by observers on a minimum proportion of trips for scallop fishing in all areas

This alternative would require NMFS to place more observers on scallop vessels in the day-at-sea program or aboard vessels with a General Category scallop permit.

Rationale: Although the Council supports additional sea sampling on scallop vessels, the Council rejected this alternative because of its high cost and lack of a mechanism to pay for its costs. Under the program for fishing in the Hudson Canyon and VA/NC Areas, Section 4.1.3.8 requires NMFS to place observers on scallop vessels and the vessel pays for the observer and all associated costs. Vessels

carrying observers are given an exemption from the scallop possession limit to land a larger amount of scallops to pay for the extra cost. A portion of the TAC will be set aside for this specific purpose. No similar mechanism is possible for trips in other areas because there is no TAC and there is no scallop possession limit. Funding from other sources within NMFS is also not available.

3.3.13 Require experimental determination of MSY and OY by a date certain

Although not exactly a management alternative, the Council can through its authority to set fishery policy can encourage research in specific areas. One way of doing this is to change the priority of research initiatives when proposals are submitted to the Council's Research Steering Committee.

Rationale: The Council rejected this alternative because the use of a proxy biological reference point for sea scallops was recommended by the Council's Overfishing Definition Review Panel and peer reviewed by qualified scientists on the NMFS' Stock Assessment Review Committee (SARC; NMFS 1999) and on the Council's Scientific and Statistics Committee. All groups have determined that the use of F_{max} and B_{max} were acceptable proxies for F_{MSY} and B_{MSY} under the Amendment 7 management strategy. There was initially considerable doubt by some whether the biomass proxy was achievable, i.e. the reference point was too high. Recent events however have shown that the reference points were not only achievable, they were quickly achievable with the conservation built into the Sea Scallop FMP.

On the other hand, area rotation imposes a completely different set of conditions that affect how overfishing should be defined. SAW 32 (NMFS 2001) recommended that the Council consider using an overfishing definition that relies on methods which average fishing mortality over time, rather than those that average fishing mortality over space. The Council's Plan Development Team has been considering this issue, but the outcome will depend on the type of area rotation that is considered. As such, this alternative is being addressed by the PDT during the development of Amendment 10.

4.0 APPLICABLE LAW

4.1 Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) – Consistency with National Standards and other required provisions

[\\GOLDENEYE\Council Documents\AdministrativeRecord\SCALLOPS\Frameworks\Framework 14\Final\National Standards.doc](#)

4.2 National Environmental Policy Act (NEPA) – Supplemental Environmental Impact Statement (SEIS)

4.2.1 Purpose and Need

The purpose and need for the proposed management action is described in Section 0. This SEIS provides a brief summary and update of the affected environment in Section 5.2.3 and analyzes the impacts of the proposed management alternatives in Section 5.2.4. The management actions in Section 0 are an adjustment to the existing management system, responding to new conditions in the resource that have in part arisen from recent management actions (in particular area closures) and several years of above average recruitment. As such, the analysis in this document pertains to the management adjustments recommended by the industry and by the Council's Plan Development Team for the 2001 and 2002 fishing years that fall within the scope of measures that can be implemented by a framework adjustment to the Atlantic Sea Scallop FMP.

New and different management systems might increase yield with fewer environmental impacts, but may not be implemented as part of an annual framework adjustment. Changes in management targets and approaches require an FMP amendment. During the next fishing year, the Council plans a more comprehensive analysis of alternative types of management systems in Amendment 10 to the Atlantic Sea Scallop FMP.

4.2.2 Description of Management Action

The description of the preferred and non-preferred alternatives is in Section 0.

4.2.3 Affected Environment

4.2.3.1 Biological Environment

4.2.3.1.1 Sea scallop life history, habitat, and the physical environment

A review of the sea scallop life history was given in Amendment 4 (NEMFC 1993) and Amendment 7 (NEFMC 1998). An overview of sea scallop biology is also reported in Shumway 1991.

A comprehensive description of the physical environment in which sea scallops occur and an assessment of the impacts to habitat resulting from a variety of fishing practices are presented in the Council's omnibus Essential Fish Habitat (EFH) Amendment (NEFMC 1998). The EFH Amendment identifies and describes the essential fish habitat for sea scallops as well as seventeen other Council-managed fishery resource species.

4.2.3.1.2 Status of the Resource

Stocks assessments are conducted frequently by the Northeast Fisheries Science Center and reviewed by a Stock Assessment Review Committee. The last assessment was reported in 1999 using 1998 fishery and resource survey data (NEFSC 1999). That assessment concluded:

“The U.S. Georges Bank portion of the sea scallop stock is not overfished but its biomass is below the B_{MSY} target level. The Mid-Atlantic portion of the stock is at or near the $\frac{1}{4} B_{MSY}$ biomass threshold used to indicate that the stock is overfished. . . . The Georges Bank stock is being exploited at or near the F_{MSY} overfishing threshold. Fishing mortality rates on the Mid-Atlantic portion of the stock exceed F_{MSY} and overfishing is occurring.”

Since 1998, there have been two annual scallop resource surveys. The results of the 1999 scallop survey, the area-specific fishing mortalities, and day-at-sea use were updated and reported in the 2000 SAFE Report (NEFMC 2000). The status of the resource is now considerably different than it was in NEFSC 1999. Above average recruitment and the effects of management measures in Framework Adjustment 11²⁴ have allowed biomass to increase relative to the B_{MSY} target and the re-distribution of fishing effort with the day-at-sea tradeoff for trips in Closed Area II have changed fishing mortality (NEFMC 2000).

This type of management program was continued and expanded to include a total of six trips distributed between Closed Area I, Closed Area II, and the Nantucket Lightship Area. Although the results for the 2000 fishing year are incomplete, the analysis in this document estimates the effects in 2000 and uses the 2000 R/V Albatross scallop survey results to estimate biomass in 2001 and the probable effects of the management measures proposed by Framework Adjustment 14.

Unlike the resource condition in 1998 (NEFSC 1999), the stock status is considerably different and the 2000 survey results indicate that biomass is rapidly approaching the Amendment 7 targets, which comply with the Sustainable Fisheries Act. According to this document’s analysis, biomass increases are very likely to continue and will exceed the overfishing definition targets in 2001. One problem, however, will be that much of the exploitable biomass will be in closed areas and that the biomass in the areas now open to fishing will be from small scallops that first appeared in the 1999 and 2000 scallop surveys.

The Northeast Fisheries Science Center performed a new stock assessment that updated the status of the resource using the 1999 and 2000 scallop surveys and estimate area-specific fishing mortality through 1999. The assessment also included new information on dredge efficiency and tow length, two factors that affect our estimates of total stock biomass and fishing mortality. These results are scheduled to be reported to the New England Fishery Management Council in January 2000.

The assessment results (SAW 32; NMFS 2001) were reported to the Council in January 2001 and were considered during the approval of the proposed action, but the biological analysis in the DSEIS and this document used all of the information included in the SAW 32 stock assessment. The biomass and landings estimates are therefore consistent with the updated information and no revisions are needed until new survey information is available or different dredge efficiency estimates are accepted (see below).

One notable difference between the updated assessment and the projections in Section 5.2.4.1.1 are the higher fishing mortality estimates in the Mid-Atlantic stock area. Table 37 compares the old and new fishing mortality estimates from successive scallop assessments.

For the Georges Bank stock area, the updated estimates are near the same values as in SAW 29, but the declining fishing mortality trend is steeper for the updated estimates. Fishing mortality is now estimated to be higher in 1992-1993 and lower in 1996-1998. Fishing mortality in 1999 was estimated to

²⁴ Framework Adjustment 11 allowed limited access scallop vessels to fish within the southern part of Closed Area II, while accumulating a minimum of 10 days-at-sea for a trip with a 10,000 pound scallop possession limit.

increase from 1998, partly due to the increased landings from fishing in Closed Area II. For comparison, the projections in Section 5.2.4.1.1 estimate fishing mortality in 2000 to be around 0.06 to 0.08, taking into account the higher biomass estimates from the 2000 R/V Albatross survey and the TACs expected to be harvested from Closed Area I, Closed Area II, and the Nantucket Lightship Area.

For the Mid-Atlantic stock area, the SAW 32 fishing mortality estimates are consistently higher than those from SAW 29. SAW 32 estimated the 1999 fishing mortality to be 0.43, below the Amendment 7 threshold mortality (0.83) but above the threshold mortality for 2000 (0.34). For comparison, the projections in Section 5.2.4.1.1 estimate fishing mortality in 2000 to be around 0.09 to 0.14, taking into account the higher biomass estimates from the 2000 R/V Albatross survey and the expected catches in 2000.

Even though the 1999 fishing mortality estimate for the Mid-Atlantic is above the Amendment 7 target for 2000, the FMP treats the scallop fishery as one with a single resource made up of two biological components (with individual overfishing definitions). Even if fishing mortality remained at 1999 levels (the day-at-sea allocations remained constant in 2000, but biomass increased substantially suggesting a possible decrease in fishing mortality with existing measures), the average fishing mortality, weighted by exploitable biomass, would be 0.24, below the Amendment 7 targets for 2000 (0.34) and 2001 (0.28).

Table 37. Comparison of updated fishing mortality estimates to the last assessment for 1998 (NMFS 1999 and NMFS 2001).

Stock	SAW	1992	1993	1994	1995	1996	1997	1998	1999
Georges Bank	29	0.85	1.22	0.43	0.22	0.24	0.24	0.09	
	32	1.11	1.28	0.34	0.23	0.19	0.16	0.05	0.14
Mid-Atlantic	29	1.14	0.47	0.74	0.50	0.81	0.67	0.30	
	32	1.54	1.12	1.20	0.95	1.12	0.92	0.69	0.43

A second piece of new information in the SAW 32 report is the preliminary research in the Hudson Canyon and VA/NC Areas indicated that dredge efficiency may be higher than assumed in the biomass estimates and projections (Section 5.2.4.1.2). SAW 32 reported that:

“The Patch model with $\gamma=0.75$ and the LD model gave mean efficiencies of 0.59 and 0.58 in the southern Mid-Atlantic Bight stock area compared to 0.27 and 0.30 in the northern Georges Bank stock area.”

These results were not fully adopted by the SARC however, which reported in the SAW 32 Consensus Summary of Assessments (NMFS 2001) that there was unsatisfactory uncertainty arising from the covariance in the estimates of dredge efficiency and scallop density:

“Depletion studies have been pursued for the scallop surveys because the ability to convert biomass estimates from the survey to the population level using estimates of dredge efficiency is important for the assessment of these stocks. While significant progress has been made on estimating the efficiency of the dredge, the analyses of the experiments where both efficiency and density have to be estimated from the same data has been problematic. The SARC considered preliminary results of depletion studies where independent density estimates were provided from photographic surveys in the same general area. This approach was seen to be an improvement in experimental design and the SARC recommended that further studies of this kind be done. In

particular, the design should be such that the depletion studies must be in exactly the same area that the photographic survey was done.

At present, photographic/depletion experiments are only available for Georges Bank. The results of these experiments are preliminary and deficiencies in the design noted above need to be addressed. Therefore, the SARC could not recommend new efficiency factors for Georges Bank. We have no new information on efficiency estimates using this experimental design for the Mid-Atlantic area.”

The projections (Section 5.2.4.1.1) and biomass (Section 5.2.4.1.2) estimates assume a 40% dredge efficiency for the entire resource. If this is incorrect and the preliminary Mid-Atlantic results are accurate, the effect on the analysis in this document would be that the Hudson Canyon and VA/NC Area biomass estimates are too high. In this case, the TACs would allow a higher fishing mortality than planned ($F=0.2$) and biomass in these areas would decline faster than projected. Given the fact that biomass is well above target levels in these areas, a faster reduction in biomass from a possible mis-specification is not significant. If the harvest rate were continued beyond 2003, however, it would be desirable to collect the data needed to improve the dredge efficiency estimate for relevant types of substrates and locations.

4.2.3.1.3 Status and management of the scallop resource in Canada

A description of Canadian scallop management was reported in NEFMC 1998. The effects of Canadian management on the scallop resource are considered in assessments, but because scallops are not very mobile the primary effect is on recruits that were spawned in Canada and settle in the U.S. This mainly affects the scallop resource on the Northern Edge and possibly the South Channel, near Closed Area I (Naidu 1991).

4.2.3.2 Habitat

A description of scallop habitat and analysis of impacts by fishing and other activities was reported in Amendment 9 to the Atlantic Sea Scallop FMP (NEFMC 1998b). This information was updated in the Council's Habitat Annual Review Report (NEFMC 2000b), prepared by the EFH Technical Team. Section 5.2.4.2 evaluates the potential impacts of the proposed management alternatives and updates the status of the affected environment with regard to essential fish habitat.

4.2.3.3 Endangered and protected species

A complete list of potentially affected protected species (marine mammals, sea turtles and shortnose sturgeon), including those that are threatened and endangered, or proposed to be listed as threatened or endangered, was provided in Amendment 4 to the Atlantic Sea Scallop FMP. Species of particular concern in this action are identified separately below. The status of these and other threatened and endangered species, including summary information on their biology, was provided recently in the June 30, 2000 Biological Opinion for the Atlantic Pelagic Fisheries for Swordfish, Tuna, Shark and Billfish in the U.S. Exclusive Economic Zone; Proposed Rule to Implement a Regulatory Amendment to the Highly Migratory Species Fishery Management Plan; Reduction of Bycatch and Incidental Catch in the Atlantic Pelagic Longline Fishery. That information is incorporated herein by reference.

Further details about marine mammal species inhabiting the action area may be found in stock assessment reports prepared by NMFS pursuant to Section 117 of the Marine Mammal Protection Act (MMPA). The fourth and most recent in the series, *U.S. Atlantic and Gulf of Mexico Marine Mammal*

Stock Assessments -- 1999 (Waring *et.al.* 1999), contains updates to 28 of 60 Atlantic and Gulf of Mexico assessments. These include North Atlantic right and humpback whales and Canadian east coast minke whale stocks. Information presented includes stock definition and geographic range, population size and productivity rates, a description of known impacts and estimates of Potential Biological Removal levels, in addition to other relevant information related to species status. Information on sea turtle status is contained in the 1995 and 1997 status reviews of listed turtles prepared jointly by NMFS and the U.S. Fish and Wildlife Service (NMFS and USFWS 1995, USFWS 1997).

4.2.3.4 Human Environment

4.2.3.4.1 Scallop landings and fishing fleet

Scallop landings, day-at-sea use, and a description of the fishing fleet are updated by annual SAFE Reports. The status of the resource and the fishery for the 1999 fishing year is described in Sections 3.1 to 3.3 of the 2000 SAFE Report (NEFMC 2000). The status for the current fishing year and predicted annual results are described in Section 4.0 of the 2000 SAFE Report.

4.2.3.4.2 Economic activity

The economic factors related to the Atlantic sea scallop fishery are described in Section 3.4 of the 2000 SAFE Report (NEFMC 2000).

4.2.3.4.3 Social factors

A thorough update and description of social factors related to the scallop resource and its fishery are reported in Section 3.5 of the 2000 SAFE Report (NEFMC 2000).

4.2.4 Environmental Consequences - Analysis of Impacts

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4.3 Regulatory Impact Review (RIR; Executive Order 12866)

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4.4 Coastal Zone Management Act (CZMA)

Request for determinations of consistency with the Coastal Zone Management Act will be sent to coastal states that border the Atlantic Sea Scallop resource after the Council chooses the proposed action and submits the Final Framework Adjustment 14 document for official review and approval.

4.5 *Paperwork Reduction Act (PRA)*

This section will be prepared and submitted under a different cover.

5.0 GLOSSARY

6.0 LITERATURE CITED

- Almeida, F., L. Arlen, P. Auster, J. Cross, J. Lindholm, J. Link, D. Packer, A. Paulson, R. Reid, and P. Valentine. 2000. The effects of marine protected areas on fish and benthic fauna: the Georges Bank Closed Area II example. NMFS Northeast Fisheries Science Center Poster Presentation.
- Auster, P.J. and R.W. Langton. 1999. The effects of fishing on fish habitat. In L.R. Benaka, editor. Fish Habitat: Essential fish habitat and rehabilitation. American Fisheries Society, Symposium 22, Bethesda, Maryland.
- Bellmund, S.A., J.A. Musick, R.A. Byles, J.A. Kenaith, and D.E. Barnard. 1987. Ecology of sea turtles in Virginia. Special Scientific Report No. 118 to the National Marine Fisheries Service. Contract No. NA80FAC-00004, July 1987.
- Bradshaw, C., L.O. Veale, A.S. Hill, and A.R. Brand. 2000. The effects of scallop dredging on gravelly seabed communities. Pages 83-104 in M.J. Kaiser and S.J. deGroot, eds. The Effects of Fishing on Non-target Species and Habitat: Biological, Conservation and Socio-Economic Issues. Blackwell Science, Oxford, Great Britain.
- Connell, J.H. 1978. Diversity in tropical rainforests and coral reefs. *Science*, 199:1302-1310.
- Council for Environmental Quality (CEQ). 1997. Considering Cumulative Effects Under the National Environmental Policy Act. Executive Office of the President, Washington, D.C.
- Collie, J.S., G.A. Escanaero, and P.C. Valentine. 1997. Effects of bottom fishing on the benthic megafauna of Georges Bank. *Marine Ecology Progress Series* 155:159-172.
- Currie, D.R. and G.D. Parry. 1999. Impacts and efficiency of scallop dredging on different soft substrates. *Canadian Journal of Fisheries and Aquatic Science* 56:539-550.
- DeAlteris, J. 1998. Training Manual: Fisheries Science and Technology, prepared for the NOAA Corps Officer Program.
- DeAlteris, J., L. Skrobe and C. Lipsky. 1999. The significance of seabed disturbance by mobile fishing gear relative to natural processes: a case study in Narragansett Bay, Rhode Island. In L.R. Benaka, editor. Fish Habitat: Essential fish habitat and rehabilitation. American Fisheries Society, Symposium 22, Bethesda, Maryland.
- Epperly, S.P., J. Braun, and A. Veishlow. 1995. Sea turtles in North Carolina waters. *Conserv. Biol.* 9:384-394.
- Gerstner, C.L. 1998. Use of substratum ripples for flow refugia by Atlantic cod, *Gadus morhua*. *Environmental Biology of Fishes*, 51(4).
- Gerstner, C.L. and P.W. Webb. 1998. The station-holding performance of the plaice *Pleuronectes platessa* on artificial substratum ripples. *Canadian Journal of Zoology*, 76(2).

- Hall-Spencer, J.M. and P.G. Moore. 2000. Impact of scallop dredging on maerl grounds. Pages 105-117 in M.J. Kaiser and S.J. deGroot, eds. *The Effects of Fishing on Non-target Species and Habitat: Biological, Conservation and Socio-Economic Issues*. Blackwell Science, Oxford, Great Britain.
- Hill, A.S., L.O. Veale, D. Pennington, S.G. Whyte, A.R. Brand, and R.G. Hartnoll. 1999. Changes in Irish Sea benthos: possible effects of 40 years of dredging. *Estuarine, Coastal and Shelf Science*, 48:739-750.
- ICES. 2000. Report of the Working Group on Fishing Technology and Fish Behavior.
- Kaiser, M.J., S.I. Rogers and J.R. Ellis. 1999. Importance of benthic habitat complexity for demersal fish assemblages. In L.R. Benaka, editor. *Fish Habitat: Essential fish habitat and rehabilitation*. American Fisheries Society, Symposium 22, Bethesda, Maryland.
- Kenaith, J.A. 1993. Movements and behavior of wild and head-started turtles. Ph.D. Diss. College of William and Mary, Gloucester Point, VA. 206 pp.
- Kenaith, J.A., J.A. Musick, and R.A. Byles. 1987. Aspects of the biology of Virginia's sea turtles: 1979-1986. *Virginia Journal of Science*. 38 (4):329-336.
- Lindegarh, M., D. Valentinsson, M. Hansson, and M. Ulmestrand. 2000. Interpreting large-scale experiments on effects of trawling on benthic fauna: an empirical test of the potential effects of spatial confounding in experiments without replicated control and trawled areas. *Journal of Experimental Marine Biology and Ecology*, 245:155-169.
- Lindholm, J. and P.J. Auster. 2000. A comparison of structural elements of sand habitats inside and outside of Closed Area II on Georges Bank. Final Report for NOAA Contract 40EQNF900061, Groton, Connecticut, 19 pp.
- Lutcavage, M., and J.A. Musick. 1985. Aspects of the biology of sea turtles in Virginia. *Copeia*. 1985: 449-456.
- McGoodwin, James R. 1990. *Crisis in the World's Fisheries: People, Problems, and Policies*, Stanford University Press.
- Morreale, S.J., A.B. Meylan, E.A. Standora, and S.S. Sadove. 1992. Annual occurrence and winter mortality of *Lepidochelys kempi* and other marine turtles in New York waters. *J. Herpetology*. 26(3):301-308.
- Musick, J.A. and C.J. Limpus. 1997. Habitat utilization and migration in juvenile sea turtles. In: P.L. Lutz, and J.A. Musick (eds.), *The biology of sea turtles*. CRC Press, Inc., Boca Raton, Florida. pp. 137-163.
- Naidu, K.S. 1991. Sea scallop, *Placopecten magellanicus*. IN: Shumway, Sandra E. *Scallops: Biology, Ecology and Aquaculture*. Elsevier Press. 1095 pp.
- National Marine Fisheries Service and U.S. Fish and Wildlife Service. 1991. Recovery plan for the U.S. population of loggerhead turtle. National Marine Fisheries Service. Washington, D.C.

- National Marine Fisheries Service and U.S. Fish and Wildlife Service. 1995. Status reviews for sea turtles listed under the Endangered Species Act of 1973. National Marine Fisheries Service, Silver Spring, MD. 139 pp.
- National Marine Fisheries Service (NMFS). 1999. 29th Northeast Regional Stock Assessment Workshop (29th SAW), Public Review Workshop. Northeast Fisheries Science Center Ref. Doc. 99-13.
- National Marine Fisheries Service (NMFS). 2000. Endangered Species Act section 7 consultation on the Atlantic pelagic fisheries for swordfish, tuna, shark and billfish in the U.S. exclusive economic zone; Proposed Rule to Implement a Regulatory Amendment to the Highly Migratory Species Fishery Management Plan; Reduction of Bycatch and Incidental Catch in the Atlantic Pelagic Longline Fishery. Biological Opinion. June 30.
- National Marine Fisheries Service (NMFS). 2001a. The 32nd Northeast Regional Stock Assessment Workshop (32nd SAW), Draft Advisory Report on Stock Status. NMFS, Woods Hole, MA. 29 pp.
- National Marine Fisheries Service (NMFS). 2001b. The 32nd Northeast Regional Stock Assessment Workshop (32nd SAW), Draft Consensus Summary of Assessments. NMFS, Woods Hole, MA.
- NEFMC. 1993. Amendment #4 to the Sea Scallop FMP, Supplemental Environmental Impact Statement. Saugus, MA.
- NEFMC. 1998. Amendment #7 to the Sea Scallop FMP, Supplemental Environmental Impact Statement. Saugus, MA.
- NEFMC. 1998b. Omnibus Essential Fish Habitat Amendment (Amendment #11 to the Northeast Multispecies FMP, Amendment #9 to the Sea Scallop FMP, Amendment #1 to the Monkfish FMP, Amendment #1 to the Atlantic Salmon FMP, and Sections of the Atlantic Herring FMP). Saugus, MA.
- NEFMC. 1999. Framework Adjustment 13 to the Atlantic Sea Scallop Fishery Management Plan with options for Framework Adjustment 34 to the Northeast Multispecies Fishery Management Plan. 184 pp.
- NEFMC. 1999b. Stock Assessment and Fishery Evaluation Report for the Scallop Fishery. New England Fishery Management Council. 172 pp.
- NEFMC 2000. Stock Assessment and Fishery Evaluation Report for the Scallop Fishery. New England Fishery Management Council. 289 pp.
- NEFMC 2000b. Habitat Annual Review Report, May 2000. New England Fishery Management Council. 120 pp.
- NOAA. 1999. Cruise results NOAA Ship Albatross IV 99-05 Closed Area II benthic habitat study. Unpublished report.
- Poppe, L.J., J.S. Schlee, B. Butman, and C.M. Lane. 1989. Map showing distribution of surficial sediment, Gulf of Maine and Georges Bank. U.S. Geological Survey Miscellaneous Investigations Series, Map 1-1986-A.

- Rago, Paul, Steve Murawski, Kevin Stokesbury, William DuPaul, and Michael McSherry. 2000. Integrated Management of the Sea Scallop Fishery in the Northeast USA: Research and Commercial Vessel Surveys, Observers, and Vessel Monitoring Systems. ICES: Theme Session on Cooperative Research with the Fishing Industry: Lessons Learned. CM 2000/W:13.
- Sainsbury, J.C. 1996. Commercial Fishing Methods: An introduction to vessels and gears, Third Edition. Fishing News Books, Blackwell Science Ltd. Oxford, GB. 359 pp.
- Sainsbury, K.J., R.A. Campbell, R. Lindholm and A.W. Whitlaw. 1997. Experimental management of an Australian multispecies fishery: examining the possibility of trawl-induced habitat modification. In E.K. Pikitch, D.D. Huppert and M.P. Sissenwine, editors. Global Trends: Fisheries management. American Fisheries Society, Symposium 20, Bethesda, Maryland.
- Shoop, C.R. and R.D. Kenney. 1992. Seasonal distributions and abundance of loggerhead and leatherback sea turtles in the waters of the northeastern United States. Herpetol. Monogr. 6:43-67.
- Shumway, Sandra E. 1991. Scallops: Biology, Ecology and Aquaculture. Elsevier Press. 1095 pp.
- Smolowitz, R. 1998. Bottom tending gear used in New England. in E.L. Dorsey and J. Pederson, eds. Effects of Fishing Gear on the Sea Floor of New England Conservation Law Foundation, Boston, Massachusetts.
- Terwilliger, K. and J.A. Musick (co-chairs), Virginia Sea Turtle and Marine Mammal Conservation Team. 1995. Management plan for sea turtles and marine mammals in Virginia. Final report to the National Oceanic and Atmospheric Administration. 56 pp.
- U.S. Fish and Wildlife Service and National Marine Fisheries Service. 1992. Recovery plan for the Kemp's ridley sea turtle (*Lepidochelys kempii*). NMFS, St. Petersburg, Florida.
- Valentine, P. 1998. Brief notes on habitat geology and clay pipe habitat on Stellwagen Bank. Pages 119-120 in Dorsey, E.M. and J. Pederson, eds. Effects of Fishing Gear on the Sea Floor of New England. Conservation Law Foundation, Boston, Massachusetts.
- Valentine, P.C. and R.G. Lough. 1991. The sea floor environment and the fishery of eastern Georges Bank. U.S. Geological Survey, Open-File Report 91-439.
- Valentine, P.C., T.J. Middleton and J.T. Malczyk. In Preparation. Sun-illuminated seafloor topography and backscatter intensity of the Great South Channel region, western Georges Bank: U.S. Geological Survey Geologic Investigations Series Map I-XXXX, scale 1:40,000 (in preparation).
- Valentine, P.C., E.W. Strom, R.G. Lough, and C.L. Brown. 1993. Maps showing the sedimentary environment of eastern Georges Bank. U.S. Geological Survey Miscellaneous Investigations Series, Map I-2279-B.
- Veale, L.O., A.S. Hill, S.J. Hawkins, and A.R. Brand. 2000. Effects of long-term physical disturbance by commercial scallop fishing on subtidal epifaunal assemblages and habitats. Marine Biology, 137:325-337.
- Waring, G. T., D. L. Palka, P. J. Clapham, S. Swartz, M.C. Rossman, T. V.N. Cole, L. J. Hansen, K. D. Bisack, K.D. Mullin, R.S. Wells, D. K. Odell, and N. B. Barros. 1999. U.S. and Gulf of Mexico marine mammal stock assessments -- 1999. NOAA Tech. Mem. NMFS-NE-153, 196 pp.

Waring, G. T., J.M. Quintal, and S.L. Swartz, editors; with contributions from N. B. Barros, P. J. Clapham, T.V.N. Cole, C.P. Fairfield, L. J. Hansen, K.D. Mullin, D. K. Odell, D. L. Palka, M.C. Rossman, U.S. Fish and Wildlife Service, R.S. Wells, and Cynthia Yeung. Final Draft, November, 2000. U.S. and Gulf of Mexico marine mammal stock assessments -- NOAA Tech. Mem. NMFS-NE-162, 301 pp

White, David R. 1992. Social Impact Assessment for Amendment #4 to the Sea Scallop Fishery Plan, report prepared for the New England Fishery Management Council, Saugus MA.

Witman, J.D. 1998. Natural disturbance and colonization on subtidal hard substrates in the Gulf of Maine. Pages 30-37 *in* E.M. Dorsey and J. Pederson, editors, *Effects of Fishing Gear on the Sea Floor of New England*, Conservation Law Foundation, Boston, Massachusetts.

7.0 ACKNOWLEDGMENTS

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8.0 COMMENTS

8.1 Written comments on the Notice of Intent to Prepare a Supplemental Environmental Impact Statement

The Council received the following comments during the comment period on the Notice of Intent to prepare and SEIS for Framework Adjustment 14. Copies of these letters are provided in this document.

1. November 13, 2000 letter from Mr. Christopher J. Zeman, Fisheries Program Counsel for the American Oceans Campaign.
2. November 13, 2000 letter from Mr. David Frulla, Brand & Frulla representing the Fisheries Survival Fund.
3. November 13, 2000 letter from Mr. Daniel Cohen, Atlantic Capes Fisheries, Inc.

8.2 *Written comments on the Draft Supplemental Environmental Impact Statement During the NEPA Comment Period Ending on January 24, 2001*

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8.3 Response to Written Comments

The Council received the following general comments during the comment period on the Notice of Intent and during the comment period for the DSEIS. Many issues have been addressed in the draft SEIS or in the final SEIS, but are listed here for completeness.

1. Framework Adjustment 14 requires that the Council prepare an SEIS; An SEIS is not required for Framework Adjustment 14

While NEPA allows the NMFS to prepare a less rigorous Environmental Assessment to evaluate the impacts of proposed actions, significant controversy has arisen with regard to the cumulative impact on the environment of several ad hoc actions implementing measures with greater reliance on area closures to achieve the objectives of the FMP. Although the Framework Adjustment modifies measures that exist in the FMP, people expressed concern that the effects could differ significantly from those already analyzed in Amendment 7. The Council and NMFS therefore agree that a more complete analysis in a Supplementary Environmental Impact Statement (SEIS) with a full and frank discussion of the impacts is necessary for this action. This decision has also allowed a greater opportunity for public comment on the proposed measures and the analysis of impacts.

2. Framework Adjustment 14 must be implemented as quick as possible

The preparation of a SEIS with an opportunity for public comment was combined with the Council's framework action process. It required that a final framework meeting be conducted at the Council's January 2001 meeting and delaying implementation of Framework Adjustment 14 until a few months into the 2001 fishing season. This was the quickest course of action to prepare a SEIS for a framework adjustment.

3. Authorizing 120 days-at-sea has significant environmental effects that have not been previously analyzed

Amendment 7 establishes annual fishing mortality goals and a 10-year rebuilding schedule for the management of Atlantic sea scallops. These goals were to be achieved by a combination of annual day-at-sea allocations, limited access, crew limits, gear restrictions, and other measures. At the time, the conservative effect of area closures was under-estimated and Amendment 7 estimated that only 49 day-at-sea could be allocated in the 2001 fishing year and 46 day-at-sea in the 2002 fishing year, to meet fishing mortality goals of 0.28 and 0.24, respectively. The purpose of the annual day-at-sea allocations was to achieve the fishing mortality targets; the day-at-sea allocation schedules were never intended to remain unchanged if the projected mortality reductions were achieved through other means.

The proposed action does not change the goals, even though the sea scallop resource has recovered much more quickly than anticipated. Like Framework Adjustment 12, the proposed action changes the day-at-sea allocation to be consistent with these goals, taking into account a better understanding of the effect of crew limits, gear restrictions, and area closures. In the Council's view, the effects of achieving these goals with the management measures identified in the plan have been analyzed and continue to be analyzed in Framework Adjustment 12 and in this document.

The comment also expressed concern that the area that would be allowed to be fished under Framework 14 would be extremely large and that there would be adverse impacts on that area that were not analyzed. The amount of area swept by scallop fishing gear has been further

analyzed in this Final SEIS (Section 5.2.4.2.2). While the 12,000 square nautical mile figure cited in the comment may seem alarming, it is incorrect (see comment and response 22) and the actual area swept represents a significant reduction in area swept compared to 1) the height of the fishery in terms of vessels and days-at-sea, 2) the beginning of Amendment 4 when the Council implemented limited access and began reducing days, and 3) Amendment 7 when the last SEIS was prepared. An area “greater than the area of Connecticut, Rhode Island, and Massachusetts, combined or half the size of the State of Maine” may not be so alarming when compared to the area under management which includes the entire EEZ from Maine to North Carolina.

A comprehensive analysis of the environmental impacts, including impacts on habitat, of 120 days-at-sea versus Amendment 7 projected day-at-sea allocations is included in the SEIS (Section 5.2.4.2.2). While the Amendment 7 day-at-sea allocations are described as the status quo, in actuality the scallop industry has never realized a day-at-sea decrease to the level projected for 2001 in Amendment 7. Framework Adjustment 14 would continue the current level of fishing for two more years. The impacts of the day-at-sea allocations under Framework Adjustment 14 would therefore be similar to those impacts that occurred in 1999 and 2000.

The Council and this document recognizes that some sensitive habitats may be disturbed by scallop fishing, but there are areas with sensitive habitat that currently are closed to scallop fishing or that scallop fishing does not affect. Significant reductions in fishing effort and the intensity of fishing effort have occurred since Amendment 4 and through more recent framework adjustments. These have had a favorable and long-lasting positive effect on habitat.

4. The extent and intensity of scallop dredging on marine environments is significant and has not been previously analyzed in the Atlantic Sea Scallop FMP

The Council has determined that the extent and intensity of scallop dredging on marine environments is not significant in all cases and on all habitat types. Some habitat types (boulders, cobbles) are more vulnerable to the effects of scallop fishing on the sea floor, but other habitat types (gravelly sand, sand) are much less vulnerable to these effects. Most of the scallop fishing activity that will result from the actions proposed in Framework Adjustment 14 will occur in predominately sandy areas with moderately high-energy environments. The extent and intensity of disturbance to habitat from scallop fishing varies with many factors, as described in Section 5.2.3.2.

The possible effects of scallop dredging on the environment have been identified and described in the Omnibus EFH Amendment (Amendment #9 to the Sea Scallop FMP), and have been expanded upon in Framework Adjustments 11, 12, and 13 to the Sea Scallop FMP, and in Section 5.2.4.2.5 of this Final SEIS. Much of the area where scallop dredging may have the most significant effects remain closed to scallop fishing in the current groundfish closed areas (Closed Areas I and II, Nantucket Lightship Closed Area, and the Western Gulf of Maine Closed Area). Other areas that contain relatively more vulnerable habitat (deep-water canyons containing corals, much of the deep-water portions of the Gulf of Maine, and the inshore embayments and estuaries) are outside the range of the scallop fishery and are therefore not subject to any effects associated with scallop fishing.

5. Framework 14 is precedent setting and highly controversial

The Council agrees that Framework Adjustment 14 continues the FMP’s de facto rotational area management plan for two more years. This type of action was in fact anticipated by Amendment 7 which specifically introduced area closures and openings as a frameworkable measure. On the other hand, the Scallop PDT has advised that a full area rotation system would require access to the Georges Bank

groundfish closed areas and possibly other areas. This is not being proposed in Framework Adjustment 14, but it builds upon the successful management and resource rebuilding that has occurred since 1994.

Nevertheless, the Council believes that a more comprehensive approach to area rotation may have benefits and is developing these procedures in Amendment 10. A more comprehensive approach may be more costly than the ad hoc approach considered so far and could have farther reaching implications and benefits. The Council does not view Framework Adjustment 14 as a substitute or a binding precedent to a formalized area rotation system, but as an interim process that achieves the fishing mortality and biomass goals of the existing FMP while offering an opportunity for transition into a more formalized area rotation system.

6. Framework 14 involves unknown risks and may result in actions that are highly uncertain

This concern is the reason, in part, that an SEIS has been prepared for Framework Adjustment 14. Fishery management involves balancing uncertain risks, costs, and benefits. These risks are managed by their consideration in developing fishing mortality policy to benefit the fishery (including the resource, commercial and recreational fishermen, and the people that depend on them). The Council agrees fully that there is a dearth of information about the long term and broad impacts of fishing on the ecosystem and the environment. The Council encourages more research into the effects of fishing activity on the environment, but at the same time is using the best scientific information available to analyze the impacts. What we know is that there has been a significant reduction in fishing effort which has allowed the recovery of the scallop resource and reduced bycatch. Although impacts in some area may have increased, the Council believes that the effects on habitat have also been beneficial. Framework Adjustment 14 proposes to continue directing effort toward large scallops and away from small ones. This has a tendency to reduce fishing effort per day-at-sea, having a further positive effect.

7. The SEIS must provide a full and frank discussion of the significant environmental impacts and shall inform decision makers and the public of the reasonable alternatives

The Final SEIS fulfills this charge. It describes and estimates the impacts on scallop biology (Section 5.2.4.1), on incidental catch (Section 5.2.4.1.5), on habitat (Section 5.2.4.2), on endangered species and marine mammals (Section 5.2.4.3), on the economy (Section 5.2.4.4), and on social effects (Section 5.2.4.5). It furthermore includes preferred (Section 4.1) and non-preferred alternatives (Section 4.2) that were considered in the annual framework adjustment as well as described other rejected alternatives (Section 4.3).

8. The SEIS must contain a full discussion of reasonable alternatives to measures proposed under Framework 14 that can minimize the environmental effects. Several alternatives were suggested for consideration in the Council's decisions on this action

The recommended alternatives are included in this document (Section Error! Reference source not found.) along with a rationale for why the Council rejected them for this framework action. Council considered a range of alternatives including alternatives suggested in this comment. The Council chose not to accept the alternatives for the reasons identified in Section 4.3.

9. The scallop possession limit should be no less than 15,000 pounds and the Regional Office must have the ability to adjust the possession limit if the program is not attracting fishing effort to the Hudson Canyon and VA/NC Areas

The Council agrees and increased the scallop possession limit within the range of the analysis, without requiring a reduction in the number of authorized trips. This action to increase the scallop

possession limit to 17,000-18,000 pounds reduces the effect and benefit of the day-at-sea tradeoff, but the Council felt that this was necessary given the high landings per day expected in other fishing areas.

10. Returning to 49 days-at-sea would have a disastrous effect on the revenues for the fleet and the livelihood of people connected to the industry

The analysis shows that the day-at-sea allocation estimated to achieve the fishing mortality and biomass goals of the FMP will be unnecessary and overly burdensome on people who rely on the resource. Accordingly the proposed action would keep the day-at-sea allocation at the 1999-2000 level.

11. The General Category access program is inherently complex, presents policy concerns, and may set precedents with implications that the Council, the public, and NMFS may not have had sufficient time to consider

The Council agrees and has deferred development of this program to actions where it would be more appropriate, when a historic fishery existed before an area closure.

12. The proposed shell stock restrictions may be both overly restrictive and complex. Consideration in an FMP amendment would provide the Council with time to completely analyze the impacts of shell stocking practices.

The Council had to take action in this framework adjustment to close a loophole, which could greatly reduce the effectiveness of day-at-sea allocations and crew limits to achieve the fishing mortality objectives. No significant sources of data were forthcoming that would repudiate the qualitative information that shell stocking was rarely practiced. No statistics are collected on landings of shell stock. If and when the cost of PSP testing declines or a market for in-shell scallops becomes more valuable, the Council can reconsider or replace the proposed action. [This measure also addresses concern raised by the EPA concerning discarding of shells and scallop viscera in more sensitive inshore habitats.](#)

13. The season for the area access program is inconsistent with the proposed action and the season should end before bycatch could be problematic

The proposed season maximizes the flexibility for vessels to choose when to fish, possibly improving the economic return from the sea scallop landings. Delaying mortality would also improve yield by allowing scallops to grow during the fishing season. Other measures, like a 10-inch minimum twine top mesh, address bycatch concerns.

14. The in-season adjustment language is unclear regarding eligibility to fish in both areas

This language has been clarified in Section 4.1.3, indicating that vessels who are eligible for re-authorized trips may fish in area even though they may have fished in only one area during the eligibility period.

15. The emergency trip termination is complex and would be difficult to enforce. NMFS believes that the current system of consideration on a case-by-case basis is sufficient.

The Council disagrees that the current system is satisfactory because some vessels choose not to fish in re-opened closed areas because of the business risk associated with being charged 10 days-at-sea while being unable to land the scallop possession limit. Sufficient controversy was raised on this issue,

however, that the Council did not choose this as a preferred alternative, with the assurance that the Regional Office would take steps to improve the current adjustment system.

16. The trip declaration and notification system allows for potential abuse of the program

This measure only applied to the determination of eligibility for re-authorized trips during an in-season adjustment. It would have reduced the opportunity for abuse by requiring that vessels eligible for re-authorized trips to have actually had to participate (i.e. fished) within one of the Hudson Canyon and VA/NC Areas. Nevertheless, the Council did not choose this option as a preferred alternative because of the confusion that arose regarding a monitoring line that differed from the one used to monitor days-at-sea.

17. NMFS may not be able to provide the desired amount of observer coverage that is recommended and the Council should be aware that the closed area access program would end when the observer total allowable catch is harvested

The estimates indicate that two percent of the TAC would provide sufficient funds to cover the costs of observers on the expected number of trips in the Hudson Canyon and VA/NC Areas. The Council is aware, however, that the access program would be discontinued for the fishing year if the observer costs exceed the TAC set-aside and supplement. The Regional Administrator will monitor the observer program to avoid significant imbalances in observer coverage that might lead to cost overruns.

18. The DSEIS format is extremely confusing and difficult to follow

The DSEIS format follows the NMFS guidelines for preparing an EIS and is very similar to ones used by the Council for at least ten years. The document is laid out in an orderly fashion to describe the Purpose and Need (Section 0), the proposed action, non-preferred alternatives, and alternatives considered and rejected (Section 4.0), a description of compliance with National Standards (Section 5.1), a description of the affected environment (Section 5.2.3), and a description and estimate of the expected biological, habitat, economic and social impacts (Section 5.2.4).

It was not possible to analyze the impacts of each measure in isolation, as is suggested. Many of the impacts are interrelated and if analyzed in isolation, they could be misleading and more confusing. To analyze the impacts, the PDT provided analysis of four broad management scenarios, described in Section 5.2.4. In essence, the Council chose the “Low F – no closure” option as its preferred alternative. To help the reader with understanding the impacts of individual measures and how they might relate to other choices, each sub-section in the preferred and non-preferred alternatives gives a rationale for the Council’s choice, often with a summary of the relevant estimates from Section 5.2.4.

19. The DSEIS lacks an interdisciplinary approach required by NEPA

The preparers of the document and the PDT have considerable experience in biology, ecology, economics, sociology, and habitat management. They include employees of the Council, the NMFS, the University of Massachusetts, and the Virginia Institute of Marine Science. Other employees of agencies with jurisdiction and expertise have been contacted to join the PDT and contribute analyses.

20. The DSEIS fails to consider a reasonable range of alternatives to minimize environmental effects of the proposed action and delays conservation

The purpose of a framework adjustment is to change existing measures to meet the objectives of the FMP, not to create new measures or to revise the objectives of the plan. [Previous amendments and](#)

framework adjustments have implemented numerous management measures that reduced the environmental effects of scallop fishing. Framework Adjustment 14 proposes to make three adjustments to achieve these objectives and meet the mortality and rebuilding goals established by Amendment 7. The framework proposes adjustments to the annual day-at-sea allocation, a program to allow scallop vessels to fish in the Hudson Canyon and VA/NC Areas under a conservative program, and an adjustment to the scallop possession limit to ensure that limited access vessels cannot skirt the day-at-sea allocations and crew limits by shucking scallops inshore of the day-at-sea monitoring line.

A fourth initiative to close new scallop areas failed because of the significant impacts of existing closures are having on the scallop fishery and because of the difficult process to re-open areas that were once closed for scallop conservation. Nevertheless, the Council considered alternatives of two and four new closed areas in the range of measures. In addition, although the Framework adjustment could have considered allowing continued access to the Georges Bank closed areas, it did not, in favor of protecting both scallops and habitat in those areas.

Framework Adjustment 14 furthermore does not delay conservation. Scallop rebuilding is well ahead of schedule, yet the annual fishing mortality targets remain as specified in Amendment 7. Framework Adjustment 14 is expected to reduce fishing time by focusing effort in areas where fishing is most efficient in catching large scallops. Ironically, this effect would be enhanced by continuing access to the Closed Area I and the Nantucket Lightship Area, where the largest sea scallops are found. The area access program for the Hudson Canyon and VA/NC Areas therefore has a positive, conservative effect while the day-at-sea allocations are expected to achieve the fishing mortality targets, considering the effects of closed area management, crew limits, gear restrictions, and other factors. This effect is furthermore supported by closing a loophole in current regulations that allow scallop vessels to shuck their catch off of the day-at-sea clock. First established by Amendment 4 and further restricted by Framework Adjustment 1, the crew limit controls fishing mortality by restricting the fishing power of a limited access vessel. As catches rise, it also induces fishermen to target larger scallops to maximize their catch and the crew's productivity, postponing mortality on small scallops and increasing yield. Framework Adjustment 1 provides a thorough analysis of this effect.

Clearly, the Council agrees that it has the ability under the framework adjustment process to comply with the requirements of NEPA and other applicable law, when preparing and implementing Framework Adjustment 14. In the past, it has done so with an Environmental Assessment for less controversial actions. The cumulative and controversial nature of the actions contemplated by Framework Adjustment 14 have led the NMFS and the Council to prepare a Supplementary Environmental Impact Statement instead of an Environmental Assessment.

21. The DSEIS' analysis of habitat/environmental impacts is inadequate and does not comply with NEPA. The DSEIS inappropriately relies on the Omnibus EFH Amendment.

The analysis and discussion in the FSEIS comply with NEPA requirements, given the scope and intent of this action. The Council and NMFS are planning to more completely address Essential Fish Habitat (EFH) issues, as required by a recent court order, in a future amendment to the Sea Scallop FMP. The SEIS incorporates by reference sections of the Omnibus EFH Amendment, where appropriate, that include descriptions of the types of information required in an EIS document (such as a description of the affected environment).

The recent court order, referred to by this comment, did not rule that the information contained in various subsections of the EFH Amendment was incorrect or insufficient to comply with the requirements of the Magnuson-Stevens Act. Framework Adjustment 14 does not pretend to comprehensively address all EFH concerns that were addressed in the Omnibus EFH Amendment and called into question by the

court, but this Final SEIS does however cite valid research and results that were more fully described in the Environmental Assessment for that amendment.

22. The DSEIS fails to analyze the environmental consequences of the preferred alternative and alternatives to the preferred alternative, including impacts to the large area of ocean bottom expected to be affected by scallop fishing.

A new section describing and comparing the extent of area swept by scallop fishing has been added to the DSEIS. The claim that the scallop fleet will significantly disturb over 12,000 miles of seafloor is incorrect and this has been corrected in the document. The estimate by the person making the comment came from an ICES paper by Rago et al. (2000). In this paper, it is reported that 12,083 nm² blocks in 1998 and 11,220 nm² blocks in 1999 had at least one hour of fishing effort somewhere within the block. A vessel with two 15-foot dredges fishing for one hour while averaging 4.5 knots will sweep about two percent of a nm² block. Of course, vessels spend more than one hour in each nm² block, ranging from one to 855 hours, according to Rago et al. (2000). Taking into account the distribution of fishing effort, areas of significant overlapping fishing activity, and the ground covered by one hour of fishing effort, the estimated area swept declines to around 4,300 nm² with a 120 day-at-sea allocation.

If the area swept is laid end to end and side by side (i.e. no overlap), the total area swept for the preferred alternative is 11,339 nm², representing a 22 percent reduction from Amendment 7 when the last SEIS was prepared. Obviously scallop vessels do not fish like this because dredges, like nearly all machines are not 100% efficient and because scallops move small distances. Accounting for the total amount of fishing time within each block in Rago et al. (2000) produces an estimate of 8,528 and 8,819 nm² in 1998 and 1999, respectively. This is approximately half of the total scallop resource area sampled by the R/V Albatross scallop survey. When one takes into account the overlap within the nm² blocks by reducing the area swept in blocks whose totals exceed one nm², an estimate of the total area swept one or more times during scallop fishing decreases to 5,086 and 4,285 nm² for 1998 and 1999, respectively. This is less than 1/3rd of the total scallop resource area.

The section that the person commenting referred to as an analysis of habitat impacts was simply an introduction. The analysis of habitat impacts is in Sections 5.2.4.2.2 and 5.2.4.2.4 of the Final SEIS, not Section 5.2.4.2 as alleged.

23. The scope of habitat analysis is illegally narrow and the analysis is inadequate. The EFH analysis is not expanded beyond the EFH assessment and requirements under the Magnuson-Stevens Act.

There are no areas within the scope and range of scallop fishing that are not designated as EFH for at least one species managed by the New England Council. The descriptions of EFH designated by the Council include, as required under the Magnuson-Stevens Act, descriptions of the biological, physical, and chemical components of the environment that comprise EFH. Consideration of impacts to EFH, therefore, includes all relevant components of the environment.

While it is true that the requirement for an analysis of impacts to the "environment" is significantly broader than the Magnuson-Stevens Act required EFH Assessment, NEPA defines "environment" as the totality of the human environment affected by the proposed action. This "human environment" includes the social, economic, physical, biological, and ecological components. This document describes and estimates the impacts on scallop biology (Section 5.2.4.1), on incidental catch (Section 5.2.4.1.5), on habitat (Section 5.2.4.2), on endangered species and marine mammals (Section 5.2.4.3), on the economy (Section 5.2.4.4), and on social effects (Section 5.2.4.5). The habitat analysis section is but one aspect of the overall human environment identified in NEPA.

Most of the “known” hard-bottom habitats that occur within the historic range of scallop fishing are enclosed by the current groundfish closed areas where scallop fishing is prohibited. The actions proposed in this Framework Adjustment do not include any proposed access to these areas. In fact, in recent actions (Framework Adjustments 11, 12, and 13), the Council specifically excluded those portions of the current groundfish closed areas known to contain hard bottom habitats from all scallop access programs. The SEIS describes the potential adverse effects of scallop fishing on a variety of habitat types, including hard bottom habitats, and identifies the factors that affect whether the effects of a fishing activity on habitat are likely to be adverse and/or significant. Section 5.2.4.2.5 of the Final SEIS provides an analysis of the potential effects of the alternatives for changing the day-at-sea allocations for the 2001 and 2002 fishing years.

This action does not contain a plan for an “automatic” reopening of the southern portion of Closed Area II. This Framework Adjustment is limited in its scope to allocate days-at-sea for the 2001 and 2002 fishing years, establishing a controlled access program for the Hudson Canyon and VA/NC Areas, and an adjustment to the scallop trip limit. Any adjustments to the regulations established for Closed Area II under the Groundfish FMP can only be made through an Amendment or Framework Adjustment to the Groundfish FMP, as was done in Frameworks 31 and 34 to allow some limited access for scallop fishing in specific portions of the groundfish closed areas.

Section 5.2.4.2.2 describes the general expectations and considerations for understanding habitat impacts of scallop fishing. This section also includes a description of the distribution of sediment types that occur throughout the range of scallop fishing and the likely shifts in concentration of fishing effort under the various alternatives considered by the Council.

The SEIS summarizes and applies to its analysis at least five recent scientific papers from peer-reviewed journals, including Bradshaw et al. (2000), Currie and Parry (1999), DeAlteris et al. (1999), Hall-Spencer and Moore (2000) and Veale et al. (2000). The hypotheses and results of the studies described in the papers are discussed in relation to the New England scallop fishery and the specific actions proposed in this Framework Adjustment. Using data derived from the 1998 and 1999 fishing years’ vessel tracking system (VTS), NMFS was able to map the distribution of fishing effort and to estimate changes in these distributions from one year to the next. Several maps generated by NMFS using these data are presented in the SEIS in Section 5.2.4.2.2.

As required under the Magnuson-Stevens Act, this document includes an “EFH Assessment” that provides an assessment of the specific measures being proposed under this Framework Adjustment. Due to the nature of the EFH Assessment, this section was not included in the DSEIS, but has been completed for the SEIS.

24. The DSEIS fails to use available data to analyze bycatch, fails to adequately analyze monkfish bycatch, fails to adequately analyze the environmental effects of bycatch of at-risk species

The Council has considered actions that specifically address [bycatch issues in previous actions](#) specific to [the Sea Scallop FMP, with respect to gear restrictions, area closures and other management measures](#). Framework Adjustment 11, for example, analyzed the effects and increased the minimum twine top mesh from six to eight inches, because the analysis showed that the 8-inch twine top would significantly reduce finfish bycatch (especially flatfish) with minimal reductions in scallop catches.

The effect of the proposed action in Framework Adjustment 14 on finfish bycatch was fully analyzed to the maximum extent possible in Section 5.2.4.1.5 of the DSEIS. The best source of data for

this purpose is the R/V Albatross scallop survey because covers nearly all of the area subject to fishing and uses gear similar to the commercial scallop dredge. Its catch is observed by qualified scientists and measured for number, weight, and size frequency.

Bycatch data from the 1999 and 2000 experimental scallop fishery was not applicable because these data were from Closed Area I, Closed Area II, and the Nantucket Lightship Area, whereas these areas would be closed under the proposed measures for Framework 14. Obviously, the mix and abundance of species in the Hudson Canyon and VA/NC Areas is considerably different from the closed areas on Georges Bank. Similar data were collected in the 2000 experimental fishery in the Hudson Canyon and VA/NC Areas, but these data have not yet been audited and analyzed to prepare detailed distribution maps of the bycatch. These distribution maps, similar to the ones in Framework Adjustments 11 and 13 would furthermore be of limited value because the VIMS data were collected during a short time frame while the proposed fishery would occur from April to February. A qualitative discussion of the uncertainty of the longer commercial season was included in Section 5.2.4.1.5. VIMS scientists reported, however, that the bycatch of other species was low, except for monkfish and skates. The DSEIS provided summaries of these data Table 61.

Using the R/V Albatross survey data, the DSEIS estimated and compared the expected bycatch of monkfish, yellowtail flounder, cod, and haddock. The relative number per tow were summarized in Table 64 and the expected relative catch in number for the four management scenarios that were analyzed were shown in Figures 22 to 26. It was not possible to provide quantitative estimates for barndoor skate and Atlantic halibut, because the catches of these species are rare except for some areas of Georges Bank and the Gulf of Maine. Since Framework Adjustment 14 is expected to cause fishing effort to shift to the Mid-Atlantic, the effect on these northern species is expected to be positive. Further discussion of the effects on barndoor skate and other at-risk species were given in Section 5.2.4.3.2 of the DSEIS.

25. The DSEIS fails to analyze the effects of reduced observer bycatch in the area proposed to be open by Framework 14 and fails to adequately analyze the lack of observer coverage to assess bycatch in the open areas

Framework Adjustment 14 does not open areas; it implements harvesting restrictions on areas that would otherwise have none. The only reason the Hudson Canyon and VA/NC Areas are currently closed is that the Council requested a postponement of the sunset of these closures (planned in Amendment 7) through Secretarial interim action pending the implementation of Framework Adjustment 14. The closures will automatically expire in August 2001 and without this action there would be no added restrictions on scallop fishing in the re-opened Hudson Canyon and VA/NC Areas or requirements for additional sea sampling.

Framework Adjustments 11 and 13 required enhanced observer sampling, with a 25 percent goal, for scallop fishing in Closed Area I, Closed Area II, and the Nantucket Lightship Area to accurately monitor the bycatch of yellowtail flounder, stocks that are in a rebuilding program and in the case of Southern New England yellowtail flounder is significantly at risk. The framework adjustments needed the enhanced sampling to accurately count the yellowtail flounder catch against its TAC, because the low possession limit required by the Multispecies FMP did not allow the scallop fishermen to land their bycatch where it could be accurately measured and reported.

The amount and quality of observer sampling in the Hudson Canyon and VA/NC Areas was estimated and discussed in Section 5.2.4.1.3. Since TACs for bycatch were not necessary in the Hudson Canyon and VA/NC Areas, this high sampling frequency is likewise unnecessary in Framework Adjustment 14. Observing bycatch (and other events) in the Hudson Canyon and VA/NC Areas scallop fishery is nonetheless important. Framework Adjustment 14 will require a 10 percent sampling goal for

the Hudson Canyon Area and, due to the fewer number of expected trips, a 20 percent sampling goal for the VA/NC Area. Although some trawling will occur in the Hudson Canyon Area, most will target scallops in the VA/NC Area because it is closer to the ports where scallop trawlers operate (Hampton Roads, VA and Wanchese, NC). Although difficult to predict how many trawl vessels with fish in each area, the sampling frequency on scallop trawlers may actually be higher than those aboard dredges.

26. The DSEIS fails to analyze the risks of overfishing due to lack of information and the lack of adequate enforcement and effort control restrictions

The status of the stock is assessed by the Stock Assessment Workshop process, administered by the NMFS in Woods Hole. The 2000 SAFE Report summarizes the status of the scallop stock and even provides a preliminary update based on 1999 and 2000 data. The DSEIS used this information to analyze the effects of the proposed alternatives and, unlike previous Environmental Assessments for Framework Adjustments 11 to 13, included an estimated 10 percent non-catch mortality of sea scallops, derived from research reported in the literature. Because dredge efficiency has been estimated to be 40 percent, this means that fishing mortality would be 25 percent of the amount calculated based on landings alone. All management scenarios analyzed in the DSEIS indicated that fishing mortality would be below the annual targets.

The 32nd SAW (NMFS 2001a) updated the status of the scallop stocks at the January 2001 Council meeting. Section 5.2.3.1.2 in the Final SEIS was expanded to discuss how those results differ from what was earlier estimated in the Draft SEIS. The 32nd SAW reported that fishing mortality in the Mid-Atlantic was higher than previously estimated, that preliminary research suggests that dredge efficiency in the Hudson Canyon and VA/NC Areas may be higher than estimated for Georges Bank groundfish closed areas, and that fishing mortality in the open areas was higher than F_{max} , the peer reviewed proxy for F_{MSY} .

The effect of the higher fishing mortality estimate for the Mid-Atlantic is discussed in Section 5.2.3.1.2 of this document. Although Framework Adjustment 14 exacerbates the present imbalance between Georges Bank and Mid-Atlantic fishing mortality, the stocks are effectively managed as a single unit and the biomass-weighted average is less than the Amendment 7 annual targets. Averaged over time, the Mid-Atlantic fishing mortality would be lower than the current projections when productivity (and access to productive scallop areas) increases on Georges Bank compared to the Mid-Atlantic.

The 32nd SAW also reported that preliminary research suggests a higher scallop dredge efficiency in the Hudson Canyon and VA/NC Areas than in the Georges Bank groundfish closed areas, but the SARC did not accept the results because of the covariance between dredge efficiency and scallop density estimates. The SARC recommended an independent and simultaneous sampling to determine scallop density in areas where depletion experiments are conducted to estimate dredge efficiency (NMFS 2001b).

On the last point that fishing mortality in the open areas was higher than management targets, this is a natural outcome of a system that periodically closes areas to achieve fishing mortality objectives. In essence it means that the biological reference point for open area fishing is higher than an appropriate level for the stock as a whole when closed areas exist, assuming that the scallop resource in the closed areas will later re-open. In order to calculate an appropriate value, however, the amount of time that areas will remain closed must be known and this is presently undefined or managed adaptively based on present and projected conditions. Part of the reason that fishing mortality is high in the open areas of the Mid-Atlantic is because the Georges Bank groundfish closed areas prevent a more optimal distribution of fishing effort. Under the Sea Scallop FMP, these areas are considered to be open to fishing and the reference points are consistent with this management strategy. A formal area rotation strategy will require an overhaul of the overfishing reference points to be consistent with whatever strategy emerges from Amendment 10.

Lastly, the enforcement and effort control restrictions for the Sea Scallop FMP are more stringent than most other fishing mortality measures employed in other management plans. Nearly all limited access scallop vessels are required to maintain VMS online 24 hours, 365 days a year. Compared to the alternatives, there aren't many ways to foil this system, whose costs are largely borne by the industry through equipment purchases, monthly fees, and messaging expenses. Other controls on mortality, such as quotas, possession limits, or area closures, require considerably more resource to ensure their integrity. Another primary management measure is the crew limit. Again, this measure is easy to check for compliance and difficult for fishermen to evade. This framework adjustment shores up the enforcement of both measures. On one hand, the framework adjustment proposes to reduce shucking scallops inshore of the day-at-sea monitoring line, which would dilute the effectiveness of day-at-sea allocations and crew limits. On the other hand, the framework adjustment proposes to double the frequency of VMS polling for limited access scallop vessels, enhancing the enforcement of the day-at-sea tradeoff and compliance with the Hudson Canyon and VA/NC Areas program.

27. The Council should increase the day-at-sea allocation to 120 full-time days-at-sea; the resource-wide fishing mortality will be well below 0.1 at the 120 day-at-sea level

The analysis supports this result, although a more recent stock assessment indicates that Mid-Atlantic fishing mortality was higher than previously estimated. Even with this recent result, the resource-wide fishing mortality rate is expected to be below the annual fishing mortality targets established by Amendment 7 (see Section 5.2.3.1.3). Increasing the day-at-sea allocation to the 2000 level is therefore justified under the present status, i.e. with the scallop abundance in the Georges Bank closed areas and with restricted access to the Hudson Canyon and VA/NC Areas.

28. The “Low F, no closure” option provides the greatest overall benefit to the Nation and only compromises slightly the resource rebuilding for Georges Bank scallops

The net benefits estimated by the DSEIS were short term, because the ad hoc area management introduces considerable uncertainty as to how the Council should value higher biomass levels in future years. The “no closure” option will have a significant impact on the biomass in areas that are currently open, although there are only slight differences in the resource-wide biomass in 2003 for the various alternatives analyzed by the SEIS. Since the scallop stock is managed on a resource-wide basis and the FMP considers the Georges Bank closed areas to be potentially open for scallop fishing, the proposed alternative makes sense in this context and the short term impacts of new closures outweigh the potential benefits..

29. The trip allocation and day-at-sea tradeoff must make it economical for scallop vessels to fish in the Hudson Canyon and VA/NC Areas

The Council considered the higher projected landings per day-at-sea in open areas and increased the scallop possession limit to 17,000 – 18,000 pounds for trips in the Hudson Canyon and VA/NC Areas, while maintaining the automatic 10 day-at-sea charge for trips shorter than 10 days. This change will make these trips more attractive compared to fishing in areas that are presently open, but will decrease the effectiveness of the tradeoff for reducing overall fishing mortality. In fact, the SEIS estimates that with an 18,000 pound possession limit the day-at-sea tradeoff will have little effect, unless the daily catches in the Hudson Canyon and VA/NC Areas are higher than projected. On the other hand, the seven-man crew limit will reduce total fishing time per day-at-sea if the catch rates are higher than projected, having a favorable effect on scallop fishing mortality, the amount of bycatch, and habitat impacts.

30. The absence of an historic fishery for vessels with General Category permits targeting sea scallops in the Hudson Canyon and VA/NC Areas does not justify the General Category access program

The Council agrees and has postponed action on this proposal until a more appropriate time and location.

31. Accommodating a in-shell scallop market without compromising the day-at-sea management of the general scallop fishery will require more substantial [management] changes than can be made in a framework adjustment

The Council agrees that ignoring this loophole could significantly compromise the day-at-sea program and crew limits that have successfully controlled the fishery since 1994. The Council developed allowances that will still allow a small market for in-shell scallops landed by limited access vessels and also accommodated the near-shore scallop fishery in the Gulf of Maine which does not affect the fishing mortality rates for the Georges Bank and Mid-Atlantic scallop stocks. Presently, shell stocking or landing in-shell scallops from the Gulf of Maine stock has not jeopardized the management of that stock. It is important to note that there is nothing in the FMP or this Framework Adjustment that prevents vessels from landing roe-on sea scallops, provided all other regulations regarding landing other sea scallop parts are met.

32. The DSEIS makes no clear statement of the status of the two Mid-Atlantic areas following the end of the 2002 fishing year

The Hudson Canyon and VA/NC Areas will revert to a fully-open status on March 1, 2003, unless the Council takes other action. Language in the proposed action has been added to clarify this point. The rate at which scallops in the Hudson Canyon and VA/NC Areas will be harvested after 2002 remains unclear, because potential changes in management could have a significant influence on the future value of the biomass in these areas. As such, the analysis in the Final SEIS only compares the relative amounts of biomass remaining in 2003 and does not attempt to estimate its net present value. Amendment 10 will determine the impacts of the postponed 're-opening of the Hudson Canyon and VA/NC Areas in 2003 and its SEIS will estimate the value of that biomass with alternative management strategies.

33. The Council should move as swiftly as possible on a further framework adjustment that would provide access to the scallops in parts of the Nantucket Lightship Area, Closed Area I, and the northern half of Closed Area II

The Council does not feel that further action via a framework adjustment is justified at this time, without fully considering the effects of a comprehensive area rotation system. Further evaluation is presently underway with the development of Amendment 10, expected to become effective before the start of the 2003 fishing year.

34. The EPA commented that TAC should be more conservative to account for undocumented catches, ecological effects on species that forage for scallops, habitat impacts from scallop dredging, reduced scallop recruitment potential, and scallop diseases and predation on smaller remaining scallop populations. The EPA also commented that the TACs should be established at a level below optimum yield to take into account environmental effects and uncertainty.

A "Low F" TAC is already conservative and takes into account these considerations and risks. In an area that is or has been temporarily closed to build high biomass, a higher TAC would produce

optimum yield. The potential effect of high fishing mortality in presently open areas however has led the Council to choose the Low F alternative for sea scallop fishing in the Hudson Canyon and VA/NC Areas. This policy is expected to allow scallop biomass to remain at the presently high levels in these restricted management areas. Scallop biomass in the Hudson Canyon and VA/NC Areas is the highest on record and biomass for the entire resource is near or exceeds the biomass targets in the FMP. Undocumented commercial and recreational catches are negligible. Although more research is needed, scallop disease appears to be more likely when scallop biomass is high, not low. Some scientists suggest that the shorter distances between adjacent scallops provide a better vector for the transmission of disease. Since scallop biomass is well above any level since 1982, there should be sufficient biomass to support species that prey on sea scallops.

Reducing the TAC below optimum yield would be inconsistent with fishery laws and regulations, because the setting of optimum yield already takes into account environmental effects and uncertainty. Although the proxy biological reference point for F_{MSY} is F_{max} , the Sea Scallop FMP specifies as the optimum yield a stock-wide target fishing mortality rate of 0.2, about 80 percent of the biological reference point. Even though the Council chose to apply this annual mortality rate to the scallop resource in the Hudson Canyon and VA/NC Areas, the optimum yield could be higher for short periods in high-biomass areas that have remained closed for relatively long periods.

According to the Magnuson-Stevens Act that governs fishery management plans, optimum yield means the amount of fish which:

- (A) "Will provide the greatest overall benefit to the Nation, particularly with respect to food production and recreational opportunities, *and taking into account the protection of marine ecosystems*;
- (B) Is prescribed as such on the basis of maximum sustainable yield from the fishery, *as reduced by any relevant economic, social, or ecological factor*; and
- (C) In the case of an overfished fishery, provides for rebuilding to a level consistent with producing the maximum sustainable yield in such fishery." 16 U.S.C. 1802 §3 104-297, emphasis added.

35. The EPA commented that the TAC set-aside should not be set above the overall TAC.

Considering the conservative nature of the proposed TACs and the low probability that the entire TAC set aside would be needed to fund the proposed observer program, the Council believes that establishing a one-percent TAC supplement to augment the one-percent set-aside would not pose an unacceptable risk to the scallop population, while maximizing the economic return to the scallop fishing industry and the nation. Exceeding the TACs by one-percent would cause immeasurable changes in the fishing mortality and stock biomass level. It is less than the variance around the relationship between seasonal fishing effort and scallop meat yield, localized and interannual differences in growth or natural mortality, and the uncertainty in the stock abundance due to sampling error. This proposed action follows the successful procedure implemented under Framework Adjustments 11 and 13. The Council saw no reason to change this successful approach.

36. The EPA commented that cleaning shell-stock in shallow waters raises seasonal water quality issues such as lower DO and higher BOD due to the decay of discarded scallop viscera. Dumping of scallop shells if clean and moderate in volume could be beneficial.

Until 2000, this practice was rare and not a threat to inshore waters. The Council and NMFS agree that shucking in shallow water is a problem that may become bigger. Framework Adjustment 14 proposes to reduce the possession limit to 50 US bushels for limited access scallop vessels inshore of the

day-at-sea monitoring line. Specific problem areas could be addressed through existing health, water quality, and inshore shellfish regulations. The Council prefers that vessels discard scallop viscera and shells offshore where the fishing activity is more diffuse than inshore anchorages. Analyzed in the SEIS for Amendment 4, the discarded shells provide a refuge against predation for small finfish and invertebrates. They also provide a favorable location for scallop spat to settle. Another impact is that the discarded viscera are eaten by predators, cycling the nutrients through the ecosystem and benefiting other species. As long as the discarded products are spread out geographically and temporarily, negative effects on the environment are rare.

The 50 US bushel in-shell scallop possession limit, for limited access vessels inside the day-at-sea monitoring line, is expected to greatly reduce, if not eliminate, the incentive to deck-load scallops and shuck them inshore before landing. The 50 US bushel limit, rather than an outright prohibition, serves two purposes: 1) to allow limited access scallop vessels to bring a moderate amount of sea scallops inshore to safer waters if they get caught by bad weather or other events that would make it more prudent to work inshore, and 2) to supply a very limited market for whole or roe-on sea scallops.

The major reason that vessels around New Bedford deck-loaded sea scallops and shucked them inshore of the day-at-sea line was to increase the productivity of the vessel while on the day-at-sea clock. Shucking the scallops inshore enabled the vessel to land more scallops per day-at-sea. This has the two-fold effect of reducing the effectiveness of the day-at-sea allocations and crew limits as well as causing a potential water quality problem, having impact on inshore shellfish beds and the marine ecosystem. The Council believes that the 50 US bushel limit will greatly reduce the incentive for and the prevalence of this practice. If localized water quality problems remain from some vessels shucking the 50 US bushels, there are existing state and federal regulations that could be applicable and be more effective in addressing this issue.

37. The EPA commented that scallop fishing with dredges and trawls could have a cumulative effect on water quality (turbidity)

Excessive scallop fishing could have this effect, especially in areas with clay or silt substrates. It is interesting to note that excessive suspended sediments affect scallops themselves, as discussed in the SEIS for Amendment 4. The majority of scallop fishing occurs in areas with sandy or small gravel substrates (compare Map 3 through Map 11), which are less susceptible to increases in turbidity, and the amount of scallop fishing has declined throughout the 1990s (Section 5.2.4.2.2 in the Final SEIS for Framework Adjustment 14).

38. The EPA commented that the FSEIS should discuss incomplete participation in the closed area access programs

This is discussed and analyzed in Section 5.2.4.4.9.

39. The EPA commented that scallop fishing gear should have a mouth size no larger than 10.5 feet with a 10-inch diamond mesh size, and that dredges should be used only in open area preferably with sandy rather than muddy bottom areas.

Decreasing the sweep of dredges would require an increase the day-at-sea allocation by a corresponding or greater amount to achieve optimum yield, as required by the Magnuson-Stevens Act. The added fishing time would completely mitigate, and possibly overcompensate for, the reduced dredge

size. Scallops rarely occur on muddy bottom because the smaller suspended particles interfere with filter feeding and scallop fishing in these areas is unusual (see Map 3 through Map 11).

The impacts associated with dredge size and trawl sweep were analyzed and discussed in the SEIS for Amendment 4 (NEFMC 1993). This was the last time that the FMP changed the restrictions on dredge size and trawl sweep. Since the Council rejected alternatives that could have changed this regulation, a supplementary analysis of this alternative was omitted from the Framework Adjustment 14 SEIS. Methods to reduce the intensity of scallop fishing effort in sensitive habitat areas without resorting to permanent closures will probably be included as an alternative in Amendment 10, now under development. The SEIS for Amendment 10 will therefore include a more thorough discussion of this issue.

40. The EPA commented that the vessel trip report (VTR) data should include habitat-related information

The Council supports the collection of more information that fishermen can provide through VTR data. More importantly, Framework Adjustment 14 calls for the collection of a wide variety of information through the observer program that would aide management to assess impacts on bycatch and habitat.

41. The Council and NMFS should not implement Framework 14 until the Council has completed an adequate environmental analysis of the scallop fishery and implemented measures to minimize adverse effect on fish habitat and protect the marine environment.

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The Council and NMFS have prepared a DSEIS and FSEIS that thoroughly analyze the impacts of a range of measures on the human environment within the context of the proposed action. The DSEIS and FSEIS include discussions and analysis of the expected impacts of the range of alternatives on the physical environment including habitat. The preferred alternatives represent a conservative approach to managing the scallop resource and fully take into account the affects on the environment. The Council and NMFS are planning address the EFH issues in a future amendment to the Sea Scallop FMP. However, given the context and scope of Framework 14, the NEPA assessment contained herein is appropriate. To delay Framework 14 would be contrary to the goals of the Scallop FMP and would not necessarily result in overall reductions of impacts to habitat and the environment.

41.42. The Council should recommend that no new closures be implemented and that a low fishing mortality rate be approved in the Mid-Atlantic closed area access program. The comment suggested an alternative of closing two modified areas to reduce industry impacts.

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At its final meeting, the Council decided not to close two additional areas and to recommend the low F alternative for the Mid-Atlantic closed area access program. This decision was based on the expectation that new closure areas would unnecessarily harm the industry. The Council was not able to consider alternatives to closures that had not been analyzed at the time of the meeting because it would unduly delay implementation of the framework.

43. Justification for the April 1 start date of the area access program should be expanded.

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The start date of the area access program is proposed to begin on April 1 to avoid potential bycatch in the areas. Information provided during the development of the framework adjustment and included in Section 5.2.4.1.5 indicate that there may be bycatch concerns that could be alleviated by delaying the start date of the program. Other factors that the Council considered in this decision were allowing flexibility for the fleet to fish when scallop prices are high, minimizing the market impacts from oversupply during a restricted season, habitat and water quality impacts associated with intensive discarding of shells and viscera after removing the scallop meat, safety and enforcement concerns arising from a shorter fishing season or crowding, and the availability of qualified observers.