

4.0 MANAGEMENT ALTERNATIVES AND QUALITATIVE IMPACTS

4.1 Proposed Action

4.1.1 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.

4.1.1.1 120 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.

4.1.2 Area Closures to protect small scallops

4.1.2.1 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.

4.1.3 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.

4.1.3.1 Boundaries and Seasons

4.1.3.1.1 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.

4.1.3.1.2 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.

4.1.3.1.3 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.

4.1.3.2 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.

4.1.3.2.1 "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.

4.1.3.2.1.1 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.

4.1.3.2.1.2 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	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			
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 complement 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.

4.1.3.2.1.3 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

4.1.3.2.2 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.

4.1.3.2.3 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.

4.1.3.2.4 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.

4.1.3.3 Eligibility

4.1.3.3.1 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.

4.1.3.3.2 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.

4.1.3.4 Gear restrictions

4.1.3.4.1 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.

4.1.3.4.2 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.

4.1.3.5 Possession limits

4.1.3.5.1 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.

4.1.3.5.2 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.

4.1.3.5.3 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.

4.1.3.6 Enforcement Provisions

4.1.3.6.1 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.

4.1.3.6.2 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.

4.1.3.6.3 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.

4.1.3.7 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.

4.1.3.7.1 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 haul 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.

4.1.3.7.2 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.

4.1.3.7.3 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.

4.1.3.8 Observer requirements

4.1.3.8.1 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.

4.1.4 Possession of Scallop Shell Stock

4.1.4.1 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.

4.2 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.

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

4.2.1.1 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.

4.2.2 Area Closures to protect small scallops

4.2.2.1 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. **DeIMarVa (DeI-CI):** 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 (DeI-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

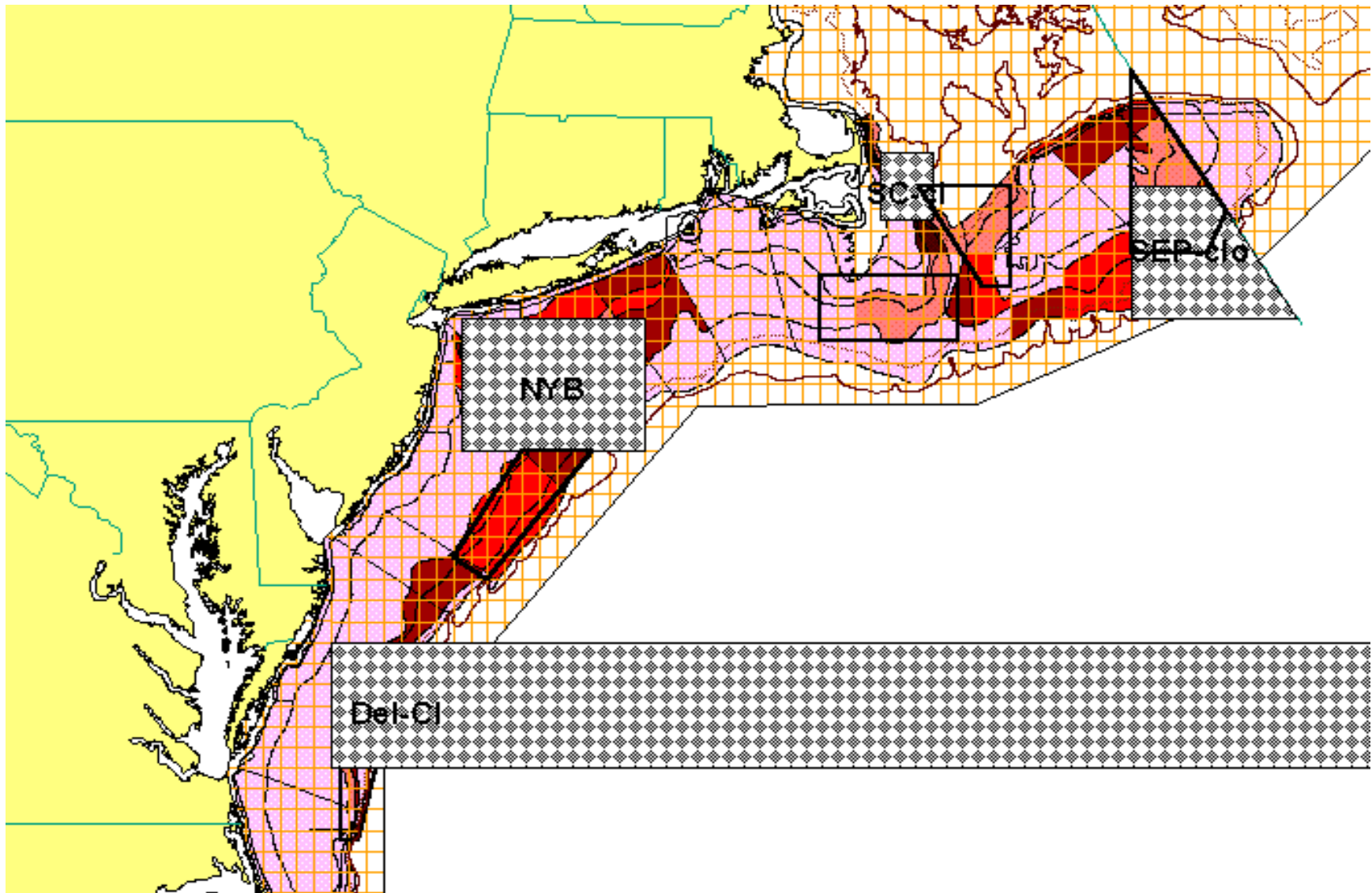
Rationale: These areas were recommended for closure by the PDT in the 2000 SAFE report to protect small sea scallops. The areas have significant potential for biomass growth and will provide a substantial yield in the future when they re-open to fishing. The effect would postpone fishing mortality on 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).

4.2.2.2 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

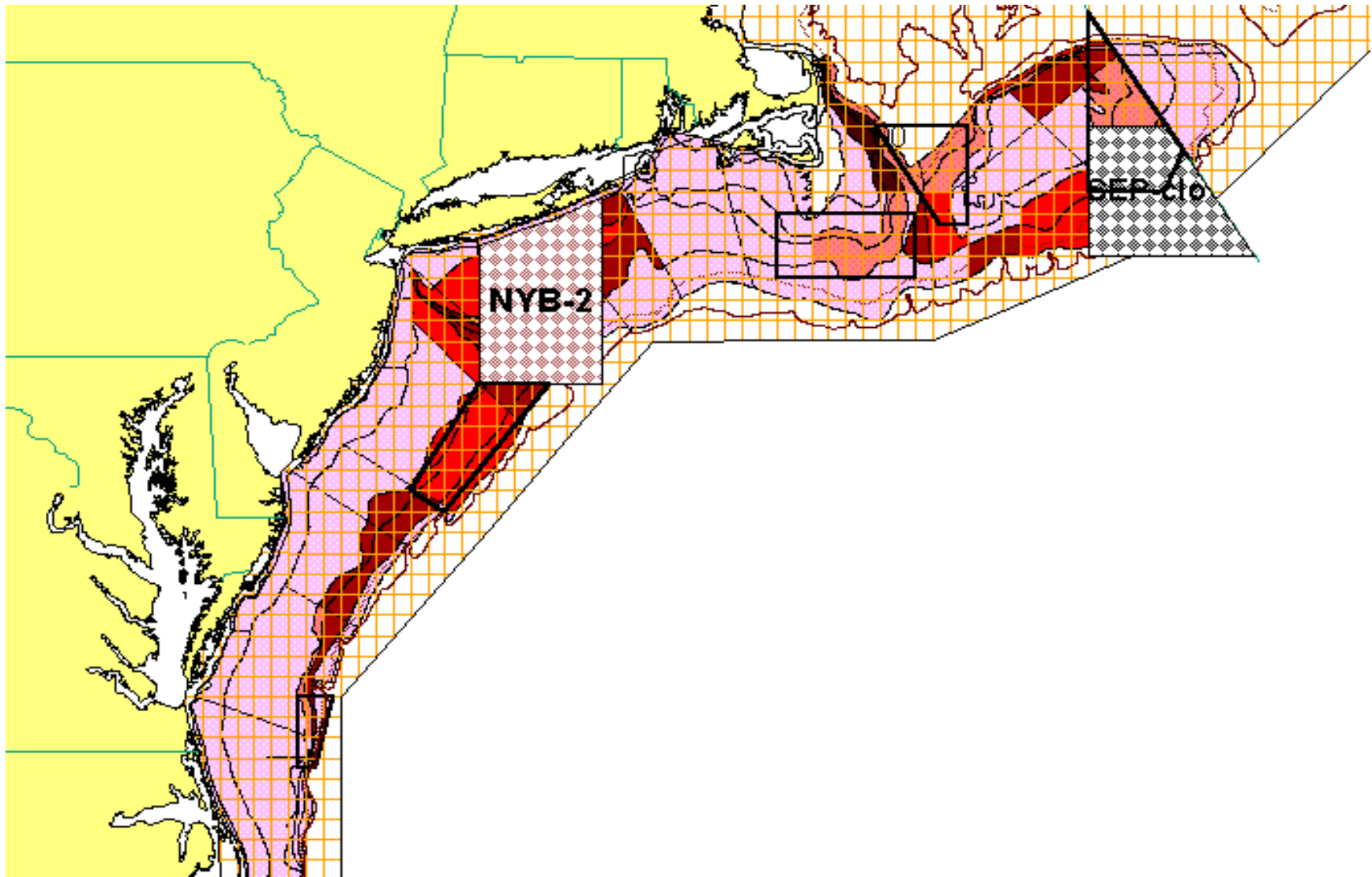
Table 22. Boundaries of the “New York Bight 2 (NYB-2)”.

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.

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

4.2.3.1 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.

4.2.3.2 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.

4.2.3.2.1 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.

4.2.3.2.2 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.

4.2.3.3 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.

4.2.3.3.1 “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.

4.2.3.3.1.1 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.

4.2.3.3.1.2 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.

4.2.3.3.1.3 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.

4.2.3.3.2 “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.

4.2.3.3.2.1 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.

4.2.3.3.2 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 complement 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.

4.2.3.3.2.3 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

4.2.3.3.3 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.

4.2.3.4 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.

4.2.3.4.1 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-pollled, 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.

4.2.3.4.1.1 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.

4.2.3.4.1.2 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.

4.2.3.4.2 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.

4.2.3.4.3 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.

4.2.3.5 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.

4.2.3.5.1 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.

4.2.3.5.2 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.

4.2.3.5.2.1 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 @ 15,000 lbs.
Percent	Pounds	
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, artesianal 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.

4.2.3.5.2.2 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, artesianal 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.

4.2.3.5.2.3 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.

4.2.3.6 Gear restrictions

4.2.3.6.1 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.

4.2.3.7 Enforcement provisions

4.2.3.7.1 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.

4.2.4 Possession of Scallop Shell Stock

4.2.4.1 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.

4.3 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.

4.3.1 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.

4.3.2 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.

4.3.3 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.

4.3.4 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.

4.3.5 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.

4.3.6 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.

4.3.7 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.

4.3.8 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).

4.3.9 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).

4.3.10 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.

4.3.11 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.

4.3.12 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.

4.3.13 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.

