

## **6.0 ENVIRONMENTAL CONSEQUENCES (IMPACTS) OF THE PROPOSED ACTION AND ALTERNATIVES**

### **6.1 Introduction to Analysis of impacts**

This section contains the analysis of impacts of the proposed action and alternatives, including no action, which are also summarized in Appendix I. Section 6.6 contains a discussion of the cumulative effects of the proposed action, compared to taking no action, and other past, present and reasonably foreseeable future actions, including other fishery and non-fishery actions that geographically overlap the monkfish fishery.

### **6.2 Biological Impacts**

Appendix I contains a summary table of the alternatives that were under consideration by the Councils, including a synopsis of the main elements of each alternative and the issues and impacts associated with each decision. Appendix I also contains a second table, showing which alternatives were recommended by the Monkfish Committee, the Industry Advisory Panel, and proposed by the Councils in this submission. The following sections (Sections 6.2.1- 6.2.3) contain a discussion of the biological impacts of the alternatives on monkfish, other managed fisheries, and protected species, respectively.

#### **6.2.1 Biological Impacts of the proposed action**

This section describes the impact of proposed action items in comparison to taking no action.

##### **6.2.1.1 Trip/possession limits for incidental catch**

The Councils propose three changes to the allowable retention of monkfish incidental catch by vessels in various fisheries (see Section 4.1.1).

###### **6.2.1.1.1 Incidental catch – 50 lbs. (tails) per day/150 lbs. maximum**

Under the proposed action, vessels fishing with small mesh would be allowed to retain up to 50 lbs. (tail weight) for each 24-hour day, or partial day, to a maximum of 150 lbs.. Vessels fishing under this trip limit are by definition not fishing on a DAS, so the day is counted from time of departure as entered in the vessel logbook or VMS.

The proposed action will not have a biological impact on either monkfish or other species since there will not likely be any redirection of effort. The measure does not increase the incidental catch allowed on a one-day trip compared to the no action alternative, and, therefore, does not provide any incentive for vessels to target monkfish. Only certain small-mesh fisheries, namely squid and whiting, have vessels that engage in multi-day trips. These are high volume fisheries, and the allowance of 50 lbs. per day of monkfish is not a sufficient incentive for these vessels to target monkfish, but will simply allow for the conversion of discards to landings (minimize bycatch). By allowing vessels to land the incidentally caught monkfish, catch data will improve, allowing for better stock assessment and management. Furthermore, the incidental catch from all vessels not on a monkfish DAS is accounted for in the annual calculation of the trip limits and DAS allocated to the directed fishery.

#### **6.2.1.1.2 Incidental catch -General Category scallop dredge and clam dredge**

The Councils propose applying the monkfish incidental catch limit applicable to small mesh vessels (50 lbs. tail weight/day, 150 lbs. maximum, see previous section) on General Category scallop dredge vessels and clam dredge vessels.

For the same reasons given in the previous proposal, the Councils do not expect that the proposed action will have a biological impact on either monkfish or other species. The Councils do not expect that the allowed level of retention will result in any new effort on monkfish, but only that it will allow for the conversion of discards to landings.

#### **6.2.1.1.3 Incidental catch - summer flounder vessels west of 72°30'W**

The Councils propose to restore the monkfish incidental catch limit on vessels fishing for summer flounder (fluke) west of 72°30'W to five percent of the total weight of fish on board, but not to exceed a possession limit of 450 lbs. (tail wt.). Under this proposal, the boundary line between the two areas would be returned to its location prior to the groundfish interim rule, or 72°30'W, and around the eastern end of Long Island.

While there is limited evidence about discards of monkfish in this area during the past year when the current rule was in effect (the no action alternative), the proposed action restores the incidental limit that was in place under the original FMP. As a result, the Councils do not expect this action to have an impact on monkfish or other species in the area, except that it will allow for the conversion of some monkfish discards to landings in the fluke fishery. As with the previous two proposals, any incidental catch in this fishery will be accounted for in the annual calculation of trip limits and DAS allocated to the directed fishery, therefore no overall increase in effort is anticipated.

#### **6.2.1.2 Minimum fish size**

The Councils propose setting the minimum size to 11 inches (tail), 17 inches (whole) in both areas (status quo for the NFMA, reduction from 14 inches (tail) in the SFMA, Section 4.1.2).

If the proposed action results in some vessels targeting smaller monkfish than under the no action alternative, the yield-per-recruit of monkfish could decline to a minor degree. The Councils do not expect that this 3-inch reduction in the tail size will cause such a redirection of effort. If, on the other hand, this change simply allows vessels to land monkfish that they otherwise were required to discard under the previous minimum size, then there would be no effect on yield per recruit. Allowing those vessels to land monkfish that otherwise would have to be discarded will also improve the catch data used in the stock assessment and management process.

#### **6.2.1.3 Closed season or time out of the fishery**

The Councils propose to eliminate the requirement for limited access monkfish vessels to take a 20-day block out of the fishery. It would not affect any similar requirement on vessels with permits in other fisheries where those requirements exist, such as multispecies (see Section 4.1.3).

The PDT and Industry Advisors commented that the no action alternative has no biological benefit because requiring vessels to take 20 days out of the fishery during a 90-day period, when vessels only have 40 DAS allocated is completely ineffective (they can still take their entire allocation during the same 90-day period), particularly when vessels not on a monkfish DAS can retain their incidental catch of monkfish. Therefore, eliminating the seasonal closure will not have an impact on monkfish or on other species.

#### **6.2.1.4 Offshore SFMA Fishery**

The Councils are proposing establishment of an annual enrollment program for vessels wanting to fish offshore in southern New England. Vessels electing to enroll would be subject to season, area, VMS, and gear restrictions, and a 1,600 lbs. trip limits with pro-rated DAS allocations (see Section 4.1.4).

The proposed action may cause a shift in effort from inshore areas to offshore, but with a reduction in overall effort resulting from the pro-rating of DAS compared to taking no action. If vessels enroll in the program that are not already active in the monkfish fishery, there could be some overall increase in fishing effort compared to no action, but the amount of new effort cannot be predicted. Overall, however, the Councils do not expect this to be a significant source of new effort, since the number of vessels that can participate in the fishery is limited by technical and logistical factors (for example, depth and distance from shore). Furthermore, any increases in overall effort resulting from the proposed action will be mitigated in subsequent years by automatic adjustments to the trip limits and DAS allocations under the stock rebuilding plan.

To the extent that vessels shift from inshore to offshore areas, the proposed action could have a positive effect on other fisheries, particularly multispecies. The catch of multispecies in the offshore fishery is insignificant, which is further minimized by the large-mesh requirement on vessels enrolled in this program. In addition, participating vessels with Category C and D permits who also hold multispecies permits will be using multispecies DAS when fishing in this offshore area, and, therefore, will have fewer multispecies DAS available to target groundfish in other areas. Since the level of participation by such vessels in this proposed program is unknown, the magnitude of this impact cannot be predicted.

#### **6.2.1.5 Modification of permit qualification for south of 38°N**

The Councils propose to qualify vessels for a special limited access permit if they meet the qualification criteria described in Section 4.1.5. Vessels that qualify for a permit under this proposal would operate under the same regulations applicable to other limited access vessels, except that they would be limited to fishing for monkfish (on a monkfish DAS) south of 38°20'N.

The analysis of this proposal indicates that five vessels would qualify for a permit under this proposal. These vessels fished for monkfish in the EEZ prior to 1999 when the FMP took effect. Subsequently, these vessels fished for monkfish either in state waters or in the EEZ under an experimental fishery permit. The experimental fishery was discontinued, and sea turtle closures further limited the ability of these vessels to fish for monkfish in the past two years. The proposed action, therefore, may result in some shift

in effort from state waters to the EEZ, to the extent this activity is not constrained by the sea turtle closures. Furthermore, the proposed action could result in a modest increase in overall monkfish effort if these vessels are currently not active in the fishery. Overall, however, the biological impact on monkfish and other species is expected to be minimal due to the small number of affected vessels, the seasonal availability of monkfish in the area, the area restrictions of the proposed action (south of 38°20'N) and the sea turtle closures. Any increase in monkfish effort as a result of this proposal, however, would be mitigated in subsequent years by the automatic adjustment of trip limits and DAS allocations as needed by the stock rebuilding program.

#### **6.2.1.6 Modifications to the framework adjustment procedure**

The Councils propose three additions to the list of actions that can be taken under the framework abbreviated rulemaking procedure (see Section 4.1.6). They are implementation of: 1) transferable monkfish only DAS (sale or lease); 2) measures to minimize fishery impact on protected species, including sea turtles; and 3) bycatch reduction devices.

Since the proposed action is strictly administrative at this point (enabling future regulatory action through the framework adjustment procedure) there are no direct biological impacts of the following three measures. If, and when the Councils propose to take action under the framework procedure, the impacts of specific measures would be analyzed and discussed in the accompanying environmental impact documents.

#### **6.2.1.7 NAFO Regulated Area exemption program**

Under this proposal, a vessel issued a valid High Seas Fishing Compliance permit under 50 CFR part 300 is exempt from monkfish permit, mesh size, effort-control, and possession limit restrictions while transiting the EEZ with monkfish on board the vessel, or landing monkfish in U.S. ports that were caught while fishing in the NAFO Regulatory Area, provided the vessel complies with certain administrative and gear stowage requirements (see Section 4.1.7).

The proposed action will have no direct impact on domestic monkfish stocks, or other species, since it merely defines process for vessels to fish outside the EEZ while exempting them from domestic monkfish regulations. Although a similar exemption provision exists in the Multispecies FMP, and about 40 High Seas Compliance Permits have been issued, no vessel has undertaken to fish in the NAFO Regulated Area. It is unlikely in the reasonably foreseeable future that any monkfish vessels will make the trip. For that reason, the proposed action is not likely to have any biological impact.

#### **6.2.1.8 Measures to minimize fishery impact on EFH**

The Councils propose two actions specifically intended to minimize the impact of the monkfish fishery on EFH (see Section 4.1.8).

##### **6.2.1.8.1 Southern Area trawl disc restriction**

The Councils propose restricting the trawl roller gear diameter to six inches maximum on vessels fishing on a monkfish DAS (monkfish-only or combined) in the SFMA.

This action has no immediate biological impact compared to taking no action, since vessels targeting monkfish in the SFMA already use gear that meets this requirement. The proposal will, however, limit monkfish vessels from expanding their effort into areas of complex bottom habitat, particularly offshore areas, and as a result has an indirect positive biological impact on monkfish and other managed species found in the SFMA. The magnitude of this impact cannot be determined, however, since it is primarily preventative and the amount of future potential effort that is affected is unknown.

#### **6.2.1.8.2 Closure of Oceanographer and Lydonia Canyons to monkfish vessels**

The Councils propose closing Oceanographer and Lydonia Canyons to vessels on a monkfish DAS to minimize the impacts of the directed monkfish fishery on deepwater corals and their habitat.

As with the previous measure, this action has no immediate biological impact compared to taking no action, since vessels currently targeting monkfish in the SFMA are not fishing in the canyon areas that would be protected under this action. The proposal will, however, protect those areas that are known to have deep sea corals and sponges, among other species, from expanding monkfish fishing effort, particularly under the proposed offshore fishery program. Thus, the biological impact on monkfish and other managed species found in the canyons is preventative and, therefore, positive, but its magnitude cannot be determined, since the amount of future potential effort that is affected is unknown.

#### **6.2.1.9 Cooperative research programs funding**

The Councils propose two alternatives for facilitating and streamlining cooperative research programs under the FMP, one based on a DAS set-aside and the other on providing a limited exemption from DAS for vessels engaged in research, and adopted both. Up to 500 DAS could be distributed to vessels to engage in cooperative research projects under one of the two programs outlined in Section 4.1.9.

The proposed cooperative research programs will not have a direct biological impact on monkfish or other species, since they are principally administrative in function. The pool of DAS is taken from existing allocations, and, therefore, does not result in a net increase in overall effort. Indirectly, the programs could have a positive biological impact, to the extent that the research undertaken under these programs results in reduced bycatch, minimizing fishery impacts on protected species or EFH, or improves the scientific understanding of monkfish biology and population dynamics.

#### **6.2.1.10 Clarification of vessel baseline history**

The Councils propose to eliminate the dual vessel-upgrading baseline (length, tonnage and horsepower) that applies on any vessel that was modified or replaced between the time it received its multispecies or scallop limited entry permit and its monkfish limited entry permit (see Section 4.1.10). Under this proposal, the vessel's baseline would be that which applied when the vessel received its original federal permit (in any FMP where upgrading restrictions were implemented).

This action is an administrative change that does not result in any increase in fishing effort or direct change to the fishery, and, therefore, has no biological impact.

### **6.2.1.11 Biological impact of no action alternatives**

The Councils propose taking no action on four measures proposed in the DSEIS. These are: the proposal to de-couple DAS usage requirements (see Section 4.2.2.1); alternatives to modify the trawl minimum mesh size (see Section 4.2.2.3); establishment of a trawl experimental fishery in the Gulf of Maine (see Section 4.2.2.12); and, alternatives to change the fishing year (see Section 4.2.2.13).

#### **6.2.1.11.1 Impact of DAS usage no action alternative**

This alternative would continue the existing effort control program in the monkfish fishery. Category C and D permits also hold either a multispecies or scallop limited access permit, and when on a monkfish DAS must also use a multispecies or scallop DAS. Each vessel must weigh the opportunity cost of using a monkfish DAS to target monkfish against the value of using a scallop or multispecies DAS to target one of those fisheries. According to the data in Table 38, Category C and D vessels used less than 50 percent of the allocated monkfish DAS, and no scallop/monkfish DAS were used. Due to the linkage with those other FMPs, those effort control programs, which are as restrictive, or more restrictive than in the recent past, are likely to continue contributing to the monkfish rebuilding program in both management areas.

#### **6.2.1.11.2 Impact of trawl minimum mesh size no action alternative**

The current minimum trawl mesh size for vessels fishing on a monkfish-only or monkfish/scallop DAS is 10-inch square or 12-inch diamond codend mesh. This minimum mesh size, which is the largest mesh size required in all northeast fisheries, minimizes the bycatch of sublegal monkfish and non-target species. Since this mesh is only required on monkfish-only DAS, or monkfish/scallop DAS, and since nearly all monkfish trawl effort is on monkfish/multispecies DAS, the impact of no action is likely to be insignificant. If the Councils had decided to separate DAS usage requirements, this alternative would have had a greater impact, since more vessels would likely have operated under monkfish-only DAS.

#### **6.2.1.11.3 Impact of the experimental fishery no action alternative**

Under current regulations, vessels may conduct monkfish research under an Experimental Fishery Permit, as long as the vessels comply with the research and exempted fishing provisions of the Magnuson-Stevens Act. In fact, vessels are already conducting the specified research without formal establishment of an experimental fishery by the FMP. The no action alternative does not modify this ability, and, therefore, does not have a biological impact.

#### **6.2.1.11.4 Impact of fishing year no action alternative**

The alternatives under consideration to change the fishing year, including the no action alternative, are administrative and do not result in any biological impact.

### **6.2.2 Biological Impact of non-preferred alternatives**

This section describes the impacts of alternatives considered by the Councils and presented to the public in the DSEIS, but not adopted as proposed action. Since the impact of proposed measures is discussed in comparison to taking no action in the

previous section, only those alternatives that contained measures other than the no action alternative are discussed in this section.

#### **6.2.2.1 Monkfish DAS usage by limited access permit holders in scallops and multispecies fisheries**

The Councils considered an alternative for modifying the requirement that Category C and D vessels (vessels with a multispecies or scallop limited access permit that qualified for a monkfish limited access permit) must use either a scallop or multispecies DAS when fishing on a monkfish DAS. Under the alternative, Category C and D vessels would have had the option to use Monkfish-only DAS or combined Monkfish/Multispecies or Scallop DAS. All monkfish limited access permit holders would initially be allocated 40 monkfish DAS but DAS could be reduced to meet rebuilding objectives.

The Councils considered two approaches (Decision 1a, Appendix I): separation of DAS by area, SFMA only (Alternative 1a), and separation of DAS by annual declaration, either area (Alternative 1b). The Councils also considered two monkfish DAS options under the proposal to separate monkfish DAS, one based on uniform (“fleet”) allocations of DAS and one based on individual vessel monkfish DAS allocations using historical vessel performance in the directed fishery (Decision 1b in Appendix I). If the Councils had decided to adopt the de-coupled DAS program, they were also considering implementing transferable DAS either as a part of the Amendment 2 rule, or deferred to a future action under the framework adjustment process (Decision 1c, Appendix I). They were considering DAS transfer programs modeled after those in Multispecies Amendment 13, by lease or sale (Decision 1d, Appendix I).

In the DSEIS, the analysis of this alternative concluded that separating DAS usage requirements would provide for more control over the directed monkfish fishery, and that the associated trawl gear proposals (for vessels on a monkfish DAS) would reduce bycatch and discards, and increase yield-per-recruit, and minimize impacts on EFH. These effects could indirectly, and in a positive way, enhance the stock-rebuilding program. At the same time, the DSEIS noted that separating DAS usage requirements for Category C and D permits could result in increased directed fishing effort, compared to taking no action, as a result of monkfish DAS being “freed up”. In other words, as the opportunity cost of using a monkfish DAS declines (that is, would not cost a vessel a multispecies or scallop DAS), vessels may elect to use more of their monkfish DAS than in the past. Simultaneously, multispecies Category C and D vessels, and to a far lesser extent scallop C and D vessels, could direct more of their effort on multispecies or scallops stocks, since they would have monkfish only DAS to target monkfish, and their “freed up” multispecies (or scallop) DAS to target multispecies (or scallops).

The degree to which individual vessels would actually avail themselves of this opportunity cannot be predicted, but if additional monkfish DAS are used, the DSEIS analysis suggested that the program established in Framework 2 provides for annual adjustment of trip limits to ensure that target catch levels designed to achieve annual biomass rebuilding goals are not exceeded. Under that program, the TAC for the directed fishery is calculated by subtracting the expected incidental catch from the overall TAC. The residual amount is then distributed among the DAS vessels under a formula that calculates the expected catch per DAS and DAS usage (by permit category) using the

most recent full year for which landings data is available (that is, the previous fishing year). Thus, if either the catch per DAS or total DAS usage rates were to change significantly in any year (such as in response to the separation of DAS usage requirements), the current management program has an immediate and automatic response mechanism built in. This program functions as a backstop that protects the stock rebuilding program from sudden increases in monkfish effort. During the public comment period, however, the Councils recognized that effort levels could be unacceptably high during the two-year lag time in implementing these reactive adjustments (using previous year data to set following year TACs).

Also during the public comment period, the Framework 40a to the Multispecies FMP was implemented (see Section 2.9.2). This action created, among other things, a one-year Pilot Program for using B Regular DAS that potentially has an impact on the monkfish fishing effort. If the pilot program is successful, it will be a model for a future B Regular DAS management program that will enable multispecies vessels to target monkfish and healthy groundfish stocks, provided the quarterly TACs for the multispecies stocks of concern are not caught. Even though the total number of DAS on which multispecies vessels could target monkfish is less under this program, overall monkfish effort could increase under this program since vessels that did not direct on monkfish in past years could choose now choose to do so, since it is one of only a few stocks that would be available for targeting under a B DAS. The Councils, in response to public comment, were concerned that this program, combined with the potential effort increase under decoupled DAS usage requirements, could result in monkfish effort rising to unacceptable and unsustainable levels, jeopardizing the stock-rebuilding program.

Thus, while some biological benefits could have been realized with the adoption of separated DAS usage under this alternative, the overall negative impact of increased effort on monkfish stocks, as well as other managed stocks (multispecies and skates, in particular) outweighs any positive impact (see Skate Baseline Review, following below).

#### **6.2.2.2 Skate Baseline Review**

The Skate FMP identified and characterized a baseline of management measures in other fisheries that control the mortality of species in the Northeast skate complex. If the Council initiates an action in another FMP that changes one or more of the baseline measures such that the change is likely to have an effect on the overall mortality (discard and fishing mortality) for a species of skate in a formal rebuilding program, then the Skate FMP requires a baseline review.

A baseline review process is initiated if one or more of seven categories of management measures are changed which have been identified as providing beneficial protections for skates. The seven categories of management measures identified in the Skate FMP are: (i) NE Multispecies year-round closed areas, (ii) NE Multispecies DAS restrictions, (iii) Gillnet gear restrictions, (iv) Lobster restricted gear areas, (v) Gear restrictions for small mesh fisheries, (vi) Monkfish DAS restrictions for monkfish only permit holders, and (vii) Scallop DAS restrictions (See Section 4.1.6 of the Skate FMP for more details). Since Amendment 2 is considering decoupling Monkfish-Only DAS from Multispecies and Scallop DAS, overall allocated Monkfish-Only DAS may increase, although it is very difficult to predict whether actual effort will increase, decrease, or stay the same.

Since overall effort levels may increase, the Skate PDT must evaluate the potential impacts of this change over and above that which has been accounted for in the baseline before the Councils make final decisions on management measures for Amendment 2. In general, this section will evaluate whether decoupling DAS will have a greater impact on overall skate mortality as compared to the baseline and additional potential benefits may be afforded to skates from the other measures implemented by this action, as well as recently implemented actions under the Multispecies and Scallop FMPs (Amendment 13 to the Multispecies FMP and Amendment 10 to the Scallop FMP).

A skate baseline review is only required for skate species that are currently in a formal rebuilding program. Of the seven skate species managed under the Northeast Skate Complex FMP, only two species are in a formal rebuilding program: thorny and barndoor. Therefore, this baseline review will evaluate the impacts of this Amendment on the mortality rates of these two species. Furthermore, the Skate FMP is very specific in identifying only seven categories of management measures that would trigger a baseline review. Therefore, while there may be other measures in this Amendment that could indirectly increase or decrease skate mortality, the baseline review is only required to assess whether the proposed action would implement a change to one or more of the seven identified measures.

DAS is one of the primary mechanisms used for controlling effort and reducing fishing mortality in the monkfish fishery. Monitoring monkfish effort is complicated because the program currently has four permit categories (A, B, C and D) and two of those categories, C and D, are linked to DAS allocations in other fisheries. All four vessel categories have been awarded 40 “Monkfish-Only” DAS, but Category C and D monkfish vessels are charged a Multispecies or Scallop DAS each day that vessel targets monkfish. Therefore, if a Category C or D vessel decides to target monkfish, they are charged one Monkfish-Only DAS and one Multispecies or Scallop DAS for every day that vessel is at sea. On the other hand, Category A and B monkfish vessels are vessels that qualified for a monkfish limited access permit, but did not have a multispecies or scallop permit; therefore, they have been allocated 40 Monkfish-Only DAS. The only difference between Category A and B is that one category has a higher possession limit.

If DAS are decoupled, then vessels with Category C or D permits may direct on monkfish without being charged a Multispecies or Scallop DAS. This may result in an increased use of allocated Monkfish-Only DAS. The overall impact to skate mortality is difficult to evaluate when you consider the alterations to DAS programs under recent amendments to the Multispecies and Scallop FMPs. Both Amendment 13 to the Multispecies FMP and Amendment 10 to the Scallop FMP have altered the total allocated DAS, and in both cases, DAS usage is more restrictive. For example, the conditions of DAS use in exchange for participation in special area access programs. These changes to DAS programs took place after implementation of the Skate FMP and baseline assessment of DAS. Therefore, it is appropriate to consider whether these changes in DAS use effectuate positive controls on skate mortality in light of the alternative under consideration in Amendment 2 that would decouple DAS.

### ***Multispecies DAS***

The Skate FMP's baseline of management measures with respect to groundfish DAS was established according to the effort level prescribed in the interim action (about 62,000 DAS available to the entire fleet). Amendment 13 to the Multispecies FMP categorized DAS into A, B (regular and reserve), and C DAS. This change in designating DAS into several different categories is an important shift in management, especially when you consider the restrictions on their use. For example, Amendment 13 allocated about 43,000 Category A DAS, which are DAS that can be fished anywhere in open areas. Amendment 13 also allocated a specific number of Category B DAS that can only be used to target healthy stocks through programs like special access programs (SAPs). Amendment 13 allocated about 14,500 Category B regular and about 14,500 Category B reserve DAS. Amendment 13 also allocated Category C DAS, which do not represent actual effort because these DAS were established according to the level of latent effort that existed during the qualifying time frame; therefore, they are unavailable for use at this time.

The Council recently approved Framework 40a to the Multispecies FMP, which implements several Special Access Programs (SAPs), and allows for the use of category B DAS in these SAPs. A skate baseline assessment was completed for that action in Section 8.1.3 of Framework 40a and the Skate PDT concluded that there will not be overall negative impacts on skate mortality as a result of the SAPs proposed in this action. Even though effort may increase as compared to Amendment 13 allocations, and portions of the mortality closed areas will be opened to limited fishing effort, the overall DAS allocated to the fleet is still significantly lower than allocated DAS evaluated in the Skate FMP baseline. Overall, the impacts of Framework 40a on skate mortality are expected to be minimal.

### ***Scallop DAS***

The baseline of scallop effort described in the Skate FMP is 34,000 DAS, and is based on the total number of allocated DAS from the fishing years 1999-2002. Since implementation of the Skate FMP, scallop management has evolved to a rotational area management scheme. In particular, Amendment 10 recently (June 2004) implemented a rotational area management strategy, which allocates a certain number of DAS to vessels for use inside specific rotational access areas, and a separate number of DAS that can be used outside identified access areas. Prior to Amendment 10, allocated DAS could be used in any area- fishermen were not given the opportunity to use days in certain areas in exchange for a DAS tradeoff (i.e., some portion of the used DAS is credited back to them). Furthermore, Amendment 10 implements additional restrictions associated with DAS use in the scallop access areas, such as gear requirements (e.g., minimum twine top mesh size), scallop possession limits, broken trip provisions, and trip allocations/DAS tradeoffs, which further limit harvest levels and may reduce the levels of skate bycatch that would normally be encountered in the scallop fishery.

On the heels of Amendment 10, the Council approved a joint Multispecies/Scallop framework action (Framework 16/39). Although it has not yet been implemented, it would provide controlled access into portions of the groundfish closed areas. A complete skate baseline review was prepared for that action (See Section 7.1.4 of Framework 16/39 for details). Framework 16/39 proposes that full-time limited access vessels receive 42

DAS to fish anywhere in open areas, 48 DAS for fishing exclusively in the Hudson Canyon Area, and 36 DAS for access to designated areas within the groundfish mortality closed areas during the 2004 fishing year. These three DAS allocations for full-time vessels totals 126 DAS, six more days than the 120 DAS assessed in the Skate FMP baseline. However, if they choose not to participate in one or more of the access areas, then they forfeit that entire amount of DAS, which would not be available to use in other areas, as would have been the case under previous scallop actions.

When you break down the DAS allocations according to permit category and compare these to the baseline in the Skate FMP, the FY2004 allocations are slightly higher for two of the three limited access vessel categories: 6 more DAS for full time vessels, 2 more DAS for part time, and the same DAS allocation for occasional vessels. After FY2004, the DAS allocations are reduced to levels significantly below the Skate FMP baseline (i.e., 34,000 DAS available for use by all limited access permit categories). In FY2005, the DAS allocated to the limited access fleet would be 100 DAS for each full-time vessel (20 DAS less per vessel than the Skate FMP baseline), 40 DAS for each part-time vessel (10 DAS less per vessel than the Skate FMP baseline), and 8 DAS for each occasional vessel (2 DAS less per vessel than the Skate FMP baseline).

After implementation of Amendment 10 and Framework 16/39, total allocated DAS are expected to increase to approximately 35,800 DAS in 2004; however, in the long term total allocated DAS is expected to be around 27,000 DAS under rotational area management. The projected amount of DAS used remains significantly below the level used in the baseline 2002 fishing year (about 30,065 DAS). Therefore, while total allocated Scallop DAS is expected to increase slightly above the baseline in 2004, allocated DAS will decrease after the first year of the program. In addition, due to the new stipulations on DAS in Amendment 10 and Framework 16/39, DAS use is more restricted compared with the scallop effort that was attributed to controlling skate mortality under the Skate FMP baseline.

### ***Monkfish Only DAS***

There is overlap between the monkfish and skate fisheries, and monkfish vessels often land some skates that they catch incidentally while monkfish fishing (mostly skate wings as opposed to skate sold for bait). The Skate FMP baseline related to monkfish effort is 4,500 Monkfish-Only DAS (including permit categories C and D). This value is based on the approximate 4,240 Monkfish-Only DAS that were allocated in 2002. Approximately 2,100 of those DAS were from Category A and B vessels, and the remaining DAS were additional Monkfish-Only DAS that were awarded to multispecies vessels under the groundfish interim action implemented as a result of CLF v. Daley (Framework 33 lawsuit). That ruling allowed groundfish vessels that were allocated fewer than 40 Multispecies DAS to fish the remainder as Monkfish-Only DAS. As a result, approximately 2,200 DAS were shifted from coupled Multispecies/Monkfish DAS to Monkfish-Only DAS.

### **Decoupling DAS under Amendment 2**

If DAS are decoupled in this Amendment, overall available Monkfish-Only DAS may increase and use of these DAS will be dependent on how profitable (catch per unit effort) it will be to fish for monkfish exclusively. Due to the nuances between the various

permit categories and how monkfish effort is coupled with other management plans, in order to assess the overall impact of decoupling DAS on skate mortality, the changes in Multispecies, Scallop and Monkfish DAS must be considered. Table 92 compares the allocated DAS in each fishery used in the skate baseline versus the maximum allocated DAS under present management programs if Monkfish DAS are decoupled from Scallop and Multispecies DAS. The Skate FMP identifies the baseline of Multispecies DAS to be 62,000 DAS. After implementation of Amendment 13 the total Category A DAS available to the multispecies fleet is approximately 43,000, with another approximately 14,500 B-regular DAS and 14,500 B-reserve DAS (for a total of 72,000 DAS) available to the fleet. Category C DAS are not considered because these DAS allocations are not based on actual effort and cannot be used at this time. Multispecies A and B DAS are not the same and should not be combined to evaluate the total amount of allocated effort because B DAS are more restrictive in terms of how and where they can be used.

The Monkfish Amendment 2 skate baseline evaluation simply recognizes that if DAS are decoupled, there would be more Multispecies and Scallop DAS available to vessels with C and D monkfish permits, because there would no longer be a need to use a Scallop or Multispecies DAS when targeting monkfish under a Monkfish-Only DAS. However, it should be noted that if DAS are decoupled in this Amendment, vessels will still have the option to keep their DAS coupled on a trip-by-trip basis. It should also be noted that according to Table 38, all of the Monkfish Category C and D vessels that used a Monkfish-Only DAS to target monkfish, were called in by multispecies permit owners, not scallop permit owners. However, only about 40-50% of the total DAS for Multispecies vessels with monkfish Category C or D permits were used in FY2001 and FY2002.

The Skate FMP baseline related to scallop fishing effort is 34,000 DAS available for use by all limited access permit categories. After implementation of Amendment 10 and in the future, Framework 16/39, the total DAS available to the scallop fleet is projected to be approximately 35,000 DAS, a net increase above the baseline described in the Skate FMP. Similar to Multispecies DAS, a Scallop DAS is more restrictive after implementation of Amendment 10 than a DAS assessed under the skate baseline. The limited access scallop fleet will now be charged a minimum amount of DAS to enter into scallop access areas, with various other restrictions, including possession limits and gear requirements. Therefore, the DAS are not completely comparable pre- and post-Amendment 10, for purposes of evaluating changes to the Skate FMP baseline. Furthermore, the total Scallop DAS allocations are expected to decrease to a level around 27,000 DAS a year after implementing the rotational area management program, which is about 6,000 total DAS lower than the Skate FMP baseline.

The Skate FMP identifies the baseline of Monkfish-Only DAS to be 4,500 DAS (about 2,200 DAS for Category A and B vessels, and the rest for multispecies vessels that did not receive 40 DAS in 2001). Under the preferred alternative, this Amendment proposes to decouple Monkfish DAS from Multispecies/Scallop DAS, and to allocate 40 DAS to all limited access monkfish vessels. Under this scenario, the total maximum DAS that would be available today to direct on monkfish for Category A and B vessels is 2,200 (based on 15 Category A vessels and 40 Category B vessels). In addition, approximately 26,520 additional Monkfish-Only DAS would potentially be available for Category C and

D vessels (based on 328 Category C vessels and 335 Category D vessels). It is not likely that all Multispecies and Scallop vessels that are allocated Monkfish-Only DAS will choose to target monkfish. In fact, according to Table 92, no scallop vessels with Category C or D permits landed monkfish on a Monkfish-Only DAS in 2002, and about 40-50% of the Monkfish-Only DAS allocated to multispecies vessels were used. Whether or not these trends would continue under the preferred Amendment 2 decoupling alternative, depends on the areas where vessels would chose to fish, if they had the option to do so, and if it would be cost effective to target monkfish under the applicable trip limits. However, if DAS are decoupled, Category A, B, C, and D monkfish vessels are expected to be allocated approximately 28,720 Monkfish-Only DAS (600 DAS for Category A vessels, 1,600 for Category B vessels, 13,120 for Category C vessels, and 13,400 for Category D vessels).

### **Conclusion**

Although the potential impacts of decoupling DAS according to the preferred alternative in this amendment appears to increase effort beyond that considered in the Skate FMP baseline, vessels will still have the option to keep their DAS coupled on a trip-by-trip basis. While the number of DAS available seems to be very high as compared to the DAS assessed under the Skate FMP baseline, these estimates are maximum values, and there are many unknowns that make this evaluation uncertain. For example, it is impossible to predict how many allocated Monkfish-Only DAS under the preferred decoupling alternative will be used to target monkfish exclusively. Furthermore, it is unknown where this effort will be used. While in fact, some non-preferred alternatives describe an area-based decoupling scheme; it is unclear whether or not this would translate into more or less impacts on skate mortality. If more effort shifts to the south, then impacts on thorny and barndoor skate mortality would be reduced, but if effort shifts to the north, it is possible that there would be greater impacts on thorny and barndoor skate mortality.

In addition to the overall preferred alternative to decouple DAS in this action, there are several alternatives under consideration that would implement decoupling DAS differently, for example, by area, transferability, and leasing of DAS. Depending on which alternatives are selected, the various options could have different impacts on skate mortality. For example, DAS Alternative 1A would only allow decoupled DAS to be used in the southern fishery management area. If effort increased as a result of decoupling DAS, it would only impact skate species that are found in the south. Of the two species included in the skate baseline assessment only part of the barndoor distribution is found in the SFMA. Thorny skates are primarily found in the Gulf of Maine, thus a potential increase of effort in the SFMA would not impact thorny skate mortality. On the other hand, DAS Alternative 1b would allow decoupled DAS to be used in both areas; therefore if effort increases in the north as a result of decoupling DAS, then both species could be impacted. In terms of transferability, Transferable DAS Alternative 2 and 3 could result in the activation of latent effort. While there is potential for effort to increase as a result of activation of latent effort, direct impacts on skate mortality are uncertain.

If DAS are decoupled, and the Councils require specific gear to be used on directed monkfish trips, preliminary research shows that the proposed monkfish trawl gear may be

effective at reducing skate bycatch. This gear requirement could be considered a mitigating measure to offset the potential increase in skate mortality as a result of the increase in allocated DAS available to target monkfish. (In order to fully evaluate the effectiveness of this gear for avoiding skate bycatch the research results from this experiment would need to be peer reviewed and fostered through the management process, e.g., Research Steering Committee). Overall, this measure is expected to have fairly low impacts to skate mortality as compared to that which was assessed under the Skate FMP baseline, particularly because of the gear selectivity measure. Furthermore, both the Multispecies and Scallop fisheries have made adjustments to their DAS programs, and the added restrictions on DAS use are expected to result in fewer impacts on skate mortality overall, especially when you consider these changes in DAS use relative to the effort controlling measures in effect at the time the Skate FMP implemented its baseline.

	<b>Under Skate Baseline</b>	<b>2004</b>	<b>2005</b>	<b>2006 and beyond</b>
<b>Multispecies DAS</b>	62,000	A DAS 43,000	A DAS 43,000	A DAS 39,600
		B DAS 29,000	B DAS 29,000	B DAS 32,400
		Total 72,000	Total 72,000	Total 72,000
<b>Scallop DAS</b>	34,000	35,000	27,800	25,300
<b>Monkfish-Only DAS</b>	4,500	IF DAS ARE DECOUPLED Assuming 718 total Monkfish Permits (A, B, C, and D)		
		29,000 (718 X 40 DAS)	29,000	29,000
<b>Total DAS Available</b>	100,500	136,000	128,800	126,300

**Table 92 – Allocated Multispecies, Scallop and Monkfish-Only DAS under the Skate FMP baseline as compared to maximum allocated DAS under present management programs if Monkfish-Only DAS are decoupled.**

Note: These DAS are allocated DAS, not necessarily the expected usage. For the scallop and multispecies fisheries usage is affected by the conditions of participation in area access programs.

### **6.2.2.3 Alternatives to the 50 lbs./trip incidental catch limit**

The Councils considered three alternatives for the 50 lbs./trip incidental catch limit, including the no action alternative, and adopted Alternative 2, 50 lbs./day up to 150 lbs. maximum possession. Under non-preferred Alternative 3, vessels would be allowed to retain 50 lbs./day up to 500 lbs. maximum possession up to 50 lbs.

The DSEIS analysis concluded that the proposed adjustments to the incidental catch limit, including this non-preferred alternative, will not affect fishing effort on monkfish and the stock-rebuilding program. One of the fundamental elements of the management plan is that the directed fishery TAC is calculated after accounting for the incidental catch of monkfish in other fisheries. Thus, if monkfish catches increase as a result of any

adjustment to the incidental catch limit, the amount of the overall TAC available to the directed fishery will be reduced proportionally. Nevertheless, the proposed adjustments are not expected to result in increased catches of monkfish in those non-directed fisheries affected by the proposed changes. Those increases will convert some discards to landings, especially as monkfish stocks increase, resulting in better catch data, but they are not large enough to create a directed fishery under a nominal incidental catch fishery. Thus, this alternative would not likely have a significant biological impact compared to no action.

#### **6.2.2.4 Minimum trawl mesh size on directed MF DAS**

The Councils presented three alternatives for minimum trawl mesh size while a vessel is on a monkfish DAS, and adopted Alternative 1, the no action alternative. Under the action alternatives, Category A and B trawl vessels on a monkfish DAS would have to use the larger mesh, as would limited access scallop vessels while on a monkfish DAS (since they are prohibited from using a dredge on a monkfish DAS). That would be 12-inch square mesh in the codend, and 12-inch diamond mesh in the belly and wings of the net under Alternative 2, and 12-inch square mesh in the codend under Alternative 3. If monkfish DAS were separated from multispecies DAS, then the selected alternative would also have applied on multispecies vessels fishing on a monkfish only DAS. When on a combined monkfish/multispecies DAS, if DAS were separated, the Councils considered requiring either multispecies regulated mesh (no action alternative), or one of the other alternatives described in this section.

For mesh sizes larger than 10 inches, the Councils proposed using the nearest metric equivalent for specification in the regulations. Large mesh sizes are manufactured in Europe under a metric system and measured between the knots, while U.S. mesh-size regulations are expressed in inches between the knots.

According to the analysis in the DSEIS, supported by public comment, in the case of monkfish, the selectivity characteristics of 10-inch or larger trawl and gillnet mesh are not well understood, but generally the fishery already uses (by both fishermen's choice and regulation) the largest meshes of any fishery in the region. Alternatives that increase minimum mesh size are likely to result in some increase in yield-per-recruit for monkfish, but these effects cannot be quantified. Also, qualitatively speaking, larger mesh sizes also reduce the incidental catch of other species, but the actual difference between no action (10-inch square mesh on trawl vessels) and the non-preferred alternatives (12-inch square mesh) is not likely to be significant since most of the incidental catch is already released under the current mesh size, according to public comment.

#### **6.2.2.5 Minimum fish size**

The Councils considered four alternatives for minimum fish size, including the no action alternative (Alternative 1), uniform 10-inch minimum tail size (Alternative 2, Option 2), and eliminating the minimum size (Alternative 3). One of the alternatives, Alternative 4, was contingent upon the adoption of a monkfish-only DAS program, and would apply a different minimum size when a vessel is on a monkfish-only DAS. None of these alternatives would change the catch targets or DAS/trip limit allocations, but would have the effect of converting some monkfish discards to landings, thereby minimizing bycatch.

The DSEIS noted that decreasing or eliminating the minimum fish size could have a negative effect on yield-per-recruit, but would not likely have a significant effect on the monkfish stock rebuilding program which is based on trip limits and DAS. The DSEIS pointed out, however, that alternatives that reduce or eliminate the minimum fish size do not necessarily translate into reduced yield-per-recruit if those fish that could be landed under the new rule were simply fish that otherwise would be caught and discarded. According to the analysis of bycatch in that document, the primary reason given to observers for monkfish discards in directed fisheries is “too small” either due to regulation or market cull, and, therefore, those measures are not likely to have a significant effect on reducing yield per recruit since they would likely simply convert discards to landings. If directed effort shifts to targeting smaller fish in response to the reduced or eliminated minimum size, however, there could be negative impacts on stock rebuilding (more numbers of fish killed for a given TAC).

#### **6.2.2.6 Closed season or time out of the fishery**

The Councils considered three alternatives for closed seasons (spawning closures, or blocks of time out of the fishery) including no action, and propose Alternative 2, eliminating the closed season requirement. Under Alternative 3, the current 20-day block requirement would be extended to 40 days, although the days could be taken in two 20-day blocks within the months specified under the current regulations. The Councils also considered, if DAS were decoupled, requiring all limited access permit vessels, including Category C and D permits with scallop limited access permits, would be required to take the block of time out of the monkfish fishery under either Alternative 1 (no action, 20-day block) or Alternative 3 (2 20-day blocks).

The Councils considered PDT comments in the DSEIS that a 20-day block over a 90-day period, when vessels are only allocated 40 DAS, is totally ineffective. Furthermore, even if the period were extended to 40 days, the benefits to spawning, which are the basis for the closed season, are unknown, and the effectiveness of the longer closed season is reduced by the fact that vessels in other fisheries could still land monkfish under the various incidental catch limits during the period when vessels are not active in the directed fishery.

#### **6.2.2.7 Offshore SFMA Fishery**

The Councils are proposing establishment of an enrollment program for vessels wanting to fish offshore in southern New England, Alternative 2. Within Alternative 2, however, the Councils considered, but rejected options for the area covered under this program (Area Option 2), and for the applicable trip limits and associated DAS (DAS/Trip Limits Option 1).

Area Option 2 differs from the proposed action by restricting the offshore fishery program from fishing along the southern flank of Georges Bank. This alternative, however, has no significant biological impact compared to proposed action, since vessels not enrolled in the program can target monkfish in that zone. In fact, since those vessels could fish with multispecies regulated mesh when on a multispecies/monkfish DAS, Option 2 could have a greater impact on regulated species and small monkfish than the proposed Option 1, under which those vessels would be required to use 10-inch mesh in that area if they are enrolled in the offshore program.

Since both DAS/Trip Limits options represent different methods for calculating the trip limits and DAS allocated to participating vessels, based on the same overall annual allocation, the two options are equivalent from a biological perspective.

**6.2.2.8 Modification of permit qualification for south of 38°00’N**

The Councils took to public hearings four alternatives that would revise the limited entry qualification periods for certain vessels that did not qualify for a permit under the original FMP, plus no action. The Councils are proposing Alternative 3 in this amendment. Under the no action alternative, no additional vessels would qualify for a monkfish limited entry permit, since the permit appeals period has ended. The landings qualification criterion would remain the same as in the original FMP, that is 50,000 lbs. (tail wt.) for a Category A or C permit, and 7,500 lbs. (tail wt.) for a Category B or D permit, except that landings must have occurred south of 38°00’N.

	<b>Qualification period – four years prior to:</b>	
<b>Alternative 1</b>	June 15, 1998	(full year)
<b>Alternative 2</b>	June 15, 1997	(full year)
<b>Alternative 3</b>	June 15, 1998	(March 15 – June 15)
<b>Alternative 4</b>	June 15, 1997	(March 15 – June 15)
<b>Alternative 5 (no action)</b>	February 27, 1995	

**Table 93 Four alternative limited access permit qualification periods for vessels fishing south of 38°N, plus no action. The Councils are proposing Alternative 3.**

The biological impact of the non-preferred Alternatives 1, 2 and 4 are not significantly different than Alternative 3, compared to no action. The basis for this conclusion is that the number of affected vessels ranges from 3 to 7, with 5 expected to qualify under the proposed action, Alternative 3. As noted in the discussion of impacts of Alternative 3, the proposed action may result in some shift in effort from state waters to the EEZ, to the extent this activity is not constrained by the sea turtle closures. Furthermore, the proposed action could result in a modest increase in overall monkfish effort if these vessels are currently not active in the fishery. Overall, however, the biological impact on monkfish and other species is expected to be minimal due to the small number of affected vessels, the seasonal availability of monkfish in the area, the area restrictions of the proposed action (south of 38°20’N) and the sea turtle closures. Any increase in monkfish effort as a result of this proposal, however, would be mitigated in subsequent years by the automatic adjustment of trip limits and DAS allocations as needed by the stock rebuilding program.

**6.2.2.9 EFH Alternative 4 Option 2 (Monkfish trawl configuration)**

The Councils considered an alternative trawl configuration specifically designed to minimize the impact of the monkfish fishery on EFH for other groundfish species if DAS usage requirements were separated. The Councils considered adopting individual elements from the following options, and sought public comment on the specific components. The intent of this alternative was to increase efficiency of bottom trawls for catching monkfish on muddy bottom and reduce the likelihood that they will be used in hard bottom areas that provide EFH for other groundfish species.

The Councils considered this alternative trawl configuration as a means to minimizing the impact of the directed monkfish fishery on EFH of other species, particularly groundfish, and to reducing incidental catch of small monkfish, multispecies and skates. However, the gear is unproven, and based on public comment, may not be any more effective in keeping effort off complex bottom areas than the 10-inch minimum mesh size and the 6-inch roller restriction in the southern area, since groundfish catches are likely to be minimal. The impact of this gear, while potentially beneficial to monkfish and other managed species, is highly uncertain, and may be no more effective than the no action alternative (10-inch square mesh) if DAS are not separated, since the number of vessels that would be required to use it (i.e. trawl vessels on a monkfish only DAS) is minimal.

#### **6.2.2.10 EFH Alternative 5C (up to 12 large, steep-walled canyons closures)**

The Councils considered two closure options to minimize the impacts of the directed monkfish fishery on deepwater corals and adopted Alternative 5AB. Non-preferred Alternative 5C proposed to close waters above up to 12 large canyons from Norfolk Canyon to the Hague Line.

As with proposed action (EFH Alternative 5AB, closure of Oceanographer and Lydonia Canyons), this alternative has no immediate biological impact compared to taking no action, since vessels currently targeting monkfish in the SFMA are not fishing in the canyon areas that would be protected under this action. This alternative would, however, protect those areas that are known to have deep sea corals and sponges, among other species, from expanding monkfish fishing effort, particularly under the proposed offshore fishery program. Thus, the biological impact on monkfish and other managed species found in the canyons is preventative and, therefore, positive, but cannot be quantified, since the amount of future potential effort that is affected, as well as the number and distribution of affected species (fish as well as corals and sponges) in these areas is unknown.

#### **6.2.2.11 NFMA Monkfish trawl experimental fishery**

The Councils considered a two-year monkfish trawl experimental fishery for the purpose of establishing a trawl exempted fishery in the NFMA to streamline the process of determining where, when and under what gear restrictions trawl vessels could target monkfish while on a monkfish, but not a multispecies DAS.

The proposed experimental fishery would not have a direct biological impact on either monkfish or other managed species, compared to no action, since vessels can conduct such experimental fisheries without the Councils adopting this alternative, and, in fact, such an experiment is currently being done. The DSEIS noted, however, that indirectly the trawl experimental fishery could reduce the monkfish fishery's impact on the multispecies fishery, if successful and followed-up with establishment of a trawl exempted fishery. The goal of the experiment is to determine if and under what circumstances a monkfish trawl exempted fishery can be established that meets the maximum bycatch tolerance of the multispecies regulations. If successful, the fishery will provide an alternative fishery for multispecies vessels facing increasing restrictions under Amendment 13, with minimal incidental catch of groundfish. Since an experimental

fishery is already being conducted, these benefits could be realized without the Councils taking further action.

#### **6.2.2.12 Change fishing year**

The NEFMC considered changing the multispecies fishing year in Amendment 13 to the Multispecies FMP. The Councils (NEFMC and MAFMC) considered but rejected three alternatives for changing the monkfish fishing year in this amendment to be consistent with any changes under Multispecies Amendment 13. Under Alternatives 2, 3 and 4, the fishing year would be changed to calendar year, October – September, or July – June, respectively. Alternative 1 is the no action alternative.

This is an administrative action and, therefore, these alternatives do not have any biological impact compared to taking no action.

#### **6.2.2.13 DAS prorating alternatives if the fishing year is changed**

Since DAS are allocated on a fishing year basis, if the Councils had decided to change the fishing year in this amendment, they would have had to adopt a procedure to allocate DAS for the partial years during the transition period. The Councils considered two alternatives are based on the prorating alternatives under consideration in Multispecies Amendment 13, adapted to the different implementation schedule of this amendment. Since the Councils took no action to change the fishing year, these administrative alternatives are irrelevant.

### **6.2.3 Impacts on Marine Mammals and Protected Species**

#### **6.2.3.1 General Considerations**

Background information on the fishery relative to interactions with threatened and endangered species is included below to lend context to the discussion on impacts of the management alternatives under consideration in Section 6.2.3.2. It is excerpted from the Biological Opinion dated April 14, 2003 and prepared by NOAA Fisheries, Northeast Region. While a number of the species discussed have no known takes in the directed monkfish fishery, many have either had documented takes in multispecies sink gillnet gear which is used in the monkfish fishery or their distribution is known to overlap with the fishery. For example, in the case of sei whales, takes in fishing gear have not been documented and their distribution is generally offshore, but Waring et al. (2002) reports that reduced prey availability in certain years has resulted in more inshore movements of this species in locations such as Great South Channel and Stellwagen Bank. The following discussion, therefore, is based on potential risks based on the overlap of the monkfish fishery and the distribution of the species, or takes in gear that is consistent with that used in the directed monkfish fishery.

*The location of the monkfish fishery in relation to the distribution of ESA-listed species is a factor influencing the likelihood that a gear entanglement will occur. All of the species considered in this Opinion occur in the action area where monkfish gillnet gear is set. Overlap of monkfish gillnet gear with right and humpback whales occurs during the fall and spring when right and humpback whales travel between northern foraging grounds and southern calving areas as well as when these species are on the foraging grounds in the Gulf of Maine.*

*Overlap of the fishery with humpback whales can also occur in the winter off of Virginia where juvenile humpback whales have been observed feeding.*

*Fin whales are more ubiquitous in their distribution, and less is known about their winter distribution than for right and humpback whales. In the North Atlantic, the single most important area for this species appears to be from Great South Channel, along the 50m isobath past Cape Cod, over Stellwagen Bank, and past Cape Ann to Jeffrey's Ledge (Hain et al. 1992).*

*Within the action area, the sei whale is most common on Georges Bank and into the Gulf of Maine/Bay of Fundy region during spring and summer, primarily in deeper waters. Individuals may range as far south as North Carolina. Blue whales are still considered to occur more regularly in Canadian waters as compared to U.S. waters, but blue whales have been observed in the Gulf of Maine including three sightings in the summer and early fall 2002. In the U.S. EEZ, sperm whales are distributed in a distinct seasonal cycle; concentrated east-northeast of Cape Hatteras in winter and shifting northward in spring when whales are found throughout the Mid-Atlantic Bight. Distribution extends further northward to areas north of Georges Bank and the Northeast Channel region in summer and then south of New England in fall, back to the Mid-Atlantic Bight (Waring et al. 1999). Given the distribution of these species, all occur in areas where monkfish gillnet gear is set, although blue whales and sperm whales are expected to have the least extent of overlap with monkfish gillnet gear given the depths at which these species typically occur.*

*Sea turtles also occur through all or most of the area in which monkfish gillnet gear is set. Of the turtle species considered, loggerheads are the most abundant in the action area. Loggerhead turtle abundance is relatively high from Cape Hatteras to Long Island throughout continental shelf waters (NOAA Fisheries 1994). Loggerhead, green and Kemp's ridley turtles are also sighted in inshore waters of the Mid-Atlantic area (NOAA Fisheries 1994).*

*While leatherbacks are most often sighted offshore, they may follow jellyfish into nearshore waters (NOAA Fisheries 1994). Turtles occurring in the inshore waters of Virginia tend to stay from May through November, and turtles generally occur in New York inshore waters from June until October (NOAA Fisheries 1994). Coincidentally, peak monkfish landings by gillnet gear occur in the SFMA in May-June and November-December (Monkfish SAFE Report 2001). Of particular concern is the early spring monkfish gillnet fishery that occurs off of North Carolina and Virginia in March through May. It has been previously shown that the narrowness of the continental shelf and the influence of the Gulf Stream on nearshore regions serves to concentrate sea turtles emigrating from nearshore waters in the Mid-Atlantic Bight and Pamlico and Core Sounds in the late fall and early winter (Epperly et al. 1995b). As water temperatures warm in the spring, these turtles begin to move north and disperse to summer foraging grounds. Although monkfish fishing effort in EEZ waters off of North Carolina and Virginia is far less than elsewhere in the action area, the high concentration*

*of turtles in the area means there is a risk of a high level of interaction with the fishery.*

*As described above, monkfish trawl gear is used more often in New England waters and in deeper waters throughout the action area where sea turtles are less likely to occur. Therefore, the risk of entanglement for sea turtles in this gear type is expected to be less than for gillnet gear. However, based on take of sea turtles in trawl gear used in other fisheries, sea turtle takes in monkfish gear are possible when the distribution of sea turtles and operation of this gear in the monkfish fishery overlap.*

*Another factor influencing the likelihood that a gear entanglement will occur is the configuration of the fishing gear. Baleen whales, including right, humpback, fin, sei and blue whales, skim and gulp for prey and filter vast quantities of water through rows of baleen plates suspended from the upper jaw on the inside of their large mouths. Line suspended in the water column such as from buoy lines may become caught in the baleen if the whale incidentally encounters the line when feeding. Whales may also be more likely to become incidentally entangled in gillnets when distracted by feeding or social behavior.*

*Leatherback sea turtles may actually be attracted to buoys used on trawl and gillnet gear which could appear to be jellyfish, or they may be attracted to the organisms which colonize ropes and buoys. Tie-downs used on monkfish gillnet gear in the Mid-Atlantic may also contribute to sea turtle entanglements in such gear. While tie-downs reduce the vertical profile of the net which can help to reduce interactions with harbor porpoise, the tie-down also creates a pocket of netting which can increase the likelihood of entanglement for species that occur at or near the bottom. Using tie-downs is a common practice in portions of the monkfish fishery in order to increase the catch rate of monkfish (a bottom dwelling fish species). Given that hard-shelled sea turtles such as loggerheads, greens, and Kemp's ridleys forage at or near the bottom in benthic habitats, the use of tie-downs for gillnets set in the same areas may increase the likelihood that turtles will be caught in the net. The long soak time of monkfish gillnets, particularly in the Mid-Atlantic, also increases the risk of sea turtle entanglements by increasing the length of time (i.e., the opportunity for incidental capture) that the net is in the water. Soak times for monkfish gillnets, in general, are greater than the submergence tolerance of sea turtles. Therefore, sea turtles are almost certainly expected to die as a result of capture in a monkfish gillnet unless the animal is caught in the net close to the surface and has the ability to breathe, or is caught immediately prior to hauling of the net.*

While the implications of potential shifts, as well as increases and decreases in fishing effort, are discussed in detail below, in Section 6.2.3.2, the overall impacts of the amendment remain unclear at this writing. In a number of cases they are dependent on the behavior of fishermen responding to actions proposed for the Northeast multispecies and sea scallop fisheries. It is known, however, that right, fin, humpback, fin and sei whales and loggerhead, green, Kemp's ridley and leatherback turtles become entangled in both trawl and sink gillnet gear that is identical or similar to that used in the monkfish fishery.

Although they could occur, the April 2003 NMFS Biological Opinion prepared for the monkfish fishery notes that there have been no reported or observed incidental takes of sea turtles specifically in the monkfish otter trawl fishery during any time of the year. Similarly, ESA-listed whales are rarely caught in trawl gear.

Sea turtles, however, occur throughout the area in which monkfish gillnet gear is set, but particularly in the SFMA. Takes of turtles that have been attributed to monkfish gear are expected to be reduced by the Large-Mesh Gillnet Final Rule in effect for federal waters off North Carolina and north to Chincoteague by limiting effort to times when sea turtles are not expected to be present in large or significant numbers.

Loggerhead turtles are most affected by potential increases in gillnet effort and benefit from the Large Mesh Final Rule, although green and Kemp's ridley turtles are also found inshore in the Mid-Atlantic area. Right and humpback whales may also experience reduced risks of entanglement as a result of the turtle measures.

Other actions affecting sink gillnet gear include the Harbor Porpoise Take Reduction Plan which prohibits setting gillnets in southern Mid-Atlantic waters for selected time periods. The plan should benefit any cetacean moving from southern nursery areas to northern feeding areas during these periods as well as sea turtles that are present in the areas during the closure period. Rules included in the Atlantic Large Whale Take Reduction Plan require modifications to gillnet gear to reduce the risk of entanglement as well as the severity of entanglements for large whales.

### **6.2.3.2 Impacts of Amendment 2 Measures on Protected and Endangered Species**

This section contains analysis and discussion of proposed measures as well as those considered in the DSEIS but not adopted by the Councils. Proposed and non-preferred alternatives are identified within each subsection.

#### **6.2.3.2.1 Monkfish DAS usage by limited access permit holders in scallops and multispecies fisheries**

The Councils considered two alternatives for modifying the requirement that Category C and D vessels (vessels with a multispecies or scallop limited access permit that qualified for a monkfish limited access permit) must use either a scallop or multispecies DAS when fishing on a monkfish DAS. The Councils did not adopt these alternatives.

Under both alternatives (Alternative 1a and 1b) and under the no action alternative (Alternative 2), all monkfish limited access permit holders would be allocated 40 monkfish DAS. Options are also provided under Alternative 1 that would allocate individual DAS based on past performance in the monkfish fishery. DAS could be reduced, under the management program implemented in Framework 2, if the SFMA TAC is set below 8,000 mt. In that case, the trip limits would remain fixed at 550 lbs. and 450 lbs. (tails/DAS) for Category A and C, and B and D, respectively.

The two alternatives for de-coupling monkfish DAS from multispecies and scallop DAS usage requirements would allow vessels the choice, both annually and on a trip-by-trip basis, to use separated DAS or combined DAS. Whether or not a vessel would fish its

monkfish DAS separately depends on the particular circumstances of the vessel, namely, area and gear fished, number of DAS or opportunities available in other fisheries, and possibly other considerations.

The combined, or cumulative effect of de-coupling DAS usage requirements and the B Day measures adopted in the Multispecies FMP would be a far greater increase in monkfish effort than under the proposed, no action alternative. This would occur to a large degree in the NFMA, where the availability of alternative fisheries to those impacting the groundfish species of concern is more limited. Vessels that could have, but did not target monkfish in the past, would now target monkfish on their B days, as well as on their de-coupled monkfish DAS, had that alternative been adopted.

The requirement to use a specific net (proposed monkfish trawl or large-mesh gillnet) while on a monkfish DAS is an additional factor that each vessel owner would have to consider in making the decision whether to de-couple DAS, had this alternative been adopted. Protected species interactions would likely not change from current levels under this scenario. It should be noted that until a monkfish trawl exempted fishery is established in the NFMA (following experimental fishing shown to minimize bycatch of regulated species to below the 5 percent standard), trawl vessels must be on a multispecies DAS to land more than the incidental catch limit, therefore, in the near term the option to increase effort by separating DAS in the NFMA does not exist for trawl vessels, although effort may increase as a result of the Multispecies B day program.

In the SFMA, where vessels can direct effort on monkfish and multispecies with far less overlap than in the NFMA, Category C and D could increase overall effort under DAS Alternative 1 compared to no action because they would have monkfish DAS *in addition* to their multispecies or scallop DAS, not *in combination with* their other DAS. If effort increases, there could be negative effect on protected species due to the increased possibility of encounter. Under Multispecies Amendment 13, groundfishing effort has been substantially reduced, although the B day program adopted in Framework 40A may result in monkfish fishing effort actually increasing, although the total change in effort due to the combination of DAS alternatives in this amendment and changes in Amendment 13 and Framework Adjustment 40a cannot be quantified at this time.

While the number of vessels that would use the opportunity presented by Alternative 1 cannot be determined, it is most likely that some scallop vessels will increase overall fishing time if DAS are decoupled. Under Alternative 1, those vessels could fish their entire scallop allocation on a full-time basis and then fish their monkfish DAS allocation. Under this alternative the potential for interactions with protected species in the SFMA is likely to increase compared to no action. One limiting factor is that vessels will have to weigh the opportunity costs and the cost of re-rigging to use the monkfish trawl against the expected revenues.

If a significant number of scallop vessels targeted monkfish, overall effort levels would increase (unless, of course, scallop DAS were reduced under scallop management actions). These vessels generally operate in the SFMA, and as a consequence, the impacts to protected species of increased trawl fishing effort will increase accordingly and could potentially affect sea turtles where overlap with the scallop fishery occurs.

Although not adopted in this amendment, except as an action that could be taken under the framework adjustment process, DAS transfer options could result in the activation of latent effort, or unused DAS by monkfish vessels, and the impact of the fishery on protected species could increase even further. Provisions to maintain conservation neutrality would mitigate this effect.

#### **6.2.3.2.2 Trip Limits for Monkfish Incidental Catch**

The Councils considered three alternatives for the 50 lbs./trip incidental catch limit, including the no action alternative, and adopted Alternative 2, 50 lbs./day up to 150 lbs. maximum possession. Under non-preferred Alternative 3, vessels would be allowed to retain 50 lbs./day up to 500 lbs. maximum possession up to 50 lbs. The proposed increase is intended to reduce discards of monkfish by allowing specified vessels, including general category scallop and clam dredge boats (under a proposal adopted in this amendment), to retain rather than discard small amounts monkfish caught incidentally.

Given the very low trip limits proposed, these measures, as well as the No Action alternative, are not likely to have an impact on any protected species in the action area. At such low levels, especially when compared to value of the target species of these vessels, the poundage under consideration is not significant and should not appreciably affect monkfish effort or shifts in effort. Consequently it is not likely to change interactions with protected species beyond what currently exists in the identified fisheries. No action could result in the continued discarding of monkfish by the vessels in these fisheries and would continue the status quo with respect to protected species.

The proposed action to restore the incidental catch limit west of 72°30' to what was in place prior to the Multispecies interim rule in 2001 (See Section 4.1.1.3) will not have a measurable effect on effort. Affected vessels fishing in this area under the monkfish incidental catch limit are targeting summer flounder and did not alter their fishing pattern subsequent to, or as a consequence of the reduced monkfish incidental catch limit. They simply discarded monkfish over the 50 lb. limit, according to reports by fishermen. Therefore, the impact of Alternative 2, the proposed action, on protected species is no different than Alternative 1 (no action).

#### **6.2.3.2.3 Minimum Mesh Size on Directed Monkfish DAS**

The Councils considered three alternatives, including the No Action alternative, for the minimum mesh size on trawl vessels on a monkfish only DAS. The Councils propose taking no action, but under the alternatives not adopted (Alternatives 2 and 3), Category A and B vessels on a monkfish DAS, as well as limited access scallop vessels on a monkfish DAS, would be required to use mesh larger than the current minimum size.

The Councils' intent is to minimize the bycatch of small monkfish and of other species on monkfish trawl vessels. Gillnet vessels currently are required to fish with 10-inch minimum mesh, but do not experience the same finfish bycatch problems as monkfish trawl gear. In fact, many participants in the gillnet fishery claim to already use mesh sizes larger than the current required minimum size. Potentially, the increased mesh size could reduce fishing effort in areas with a bycatch of multispecies, and cause effort to shift to

areas where protected species are either more or less abundant than in the current fishery. As such, the outcome for any of the alternatives is unclear, but the changes in fishing patterns would affect the trawl sector only. As has been mentioned, takes of protected species are known to occur in bottom trawl fisheries, but based on current data, the risk of entanglement is lower than in the gillnet fishery. Since the Councils propose taking no action, no effort shifts can be attributed to this measure and it should not affect monkfish fishery interactions with protected species.

#### **6.2.3.2.4 Minimum Fish Size**

The Councils considered four alternatives for minimum fish size, including the no action alternative (Alternative 1), uniform 10-inch minimum tail size (Alternative 2, Option 2), and eliminating the minimum size (Alternative 3). One of the alternatives, Alternative 4, was contingent upon the adoption of a monkfish-only DAS program, and would apply a different minimum size when a vessel is on a monkfish-only DAS. None of these alternatives would change the catch targets or DAS/trip limit allocations, but would have the effect of converting some monkfish discards to landings, thereby minimizing bycatch. Because none of the alternatives, including no action, would change catch targets or DAS/trip limit allocations, they would have little or no impact on the magnitude or distribution of effort, and, therefore, are expected to have a negligible impact on any protected species. If vessels do not high-grade their catch (discard smaller animals in favor of larger ones that may get a higher price per pound), it is possible they may reach their trip limit more quickly under these scenarios, resulting in trips that are shorter in duration. Gear in the water for shorter periods than under No Action alternative could benefit protected species because of the potential reduced risk of entanglement. Under the proposed action, the reduction in tail minimum size by three inches in only the SFMA is not expected to have an effect on the duration of trips.

#### **6.2.3.2.5 Closed Season or Time Out of the Fishery**

The Councils considered three alternatives for closed seasons (spawning closures, or blocks of time out of the fishery) including no action, and propose Alternative 2, eliminating the closed season requirement. Under Alternative 3, the current 20-day block requirement would be extended to 40 days, although the days could be taken in two 20-day blocks within the months specified under the current regulations. This requirement affects all limited access monkfish vessels, except category C and D vessels with a scallop limited access permit.

In general, gear out of the water equates to fewer impacts to protected species. It could be inferred here that the alternative which doubles the time that gear must be removed from the water would have the most benefit to protected species. To the extent that benefits are realized, species most likely affected by a reduction in gear during the spring (under Alternative 3) period include right and humpback whales traveling from southern calving areas to northern foraging grounds, sperm whales shifting northward to the Mid-Atlantic Bight, sea turtles traveling to the Mid-Atlantic from wintering grounds in the south and harbor seals moving northward within the Gulf of Maine.

Conversely, the proposed action to eliminate of the requirement could be expected to have negative impacts to those protected species. The effects, however, are not so straightforward because individual vessels may elect to take their block out at any point

during the March 1 –May 31 period with ample time left to use their 40 DAS allocation within the 90-day window. Therefore, varying amounts of gear will still be in the water even if the gear removal time were doubled.

#### **6.2.3.2.6 Offshore SFMA Fishery Program**

The Councils are proposing establishment of an annual enrollment program for vessels wanting to fish offshore in southern New England, Alternative 2 (Area Option 1) (see Section 4.1.4). Vessels electing to enroll would be subject to season, area, VMS, and gear restrictions, and a 1,600 lbs. trip limits with pro-rated DAS allocations (DAS/Trip Limits Option 2). Within Alternative 2, however, the Councils considered, but non-preferred options for the area covered under this program (Area Option 2), and for the applicable trip limits and associated DAS (DAS/Trip Limits Option 1).

Area Option 2 differs from the proposed action by restricting the offshore fishery program from operating along the southern flank of Georges Bank. Since both DAS/Trip Limits options represent different methods for calculating the trip limits and DAS allocated to participating vessels, based on the same overall annual allocation, the two options are equivalent from a biological perspective. Under the No Action alternative, fishing would occur in either area under the current rules.

Under the proposed action, the increased trip limits associated with the programs provide vessels with an incentive to shift effort from inshore areas to offshore, but overall effort would be reduced since DAS will be used at a higher rate as a requirement of participation, ensuring that fishing gear will be in the water less, compared to no action. Another mitigating factor for protected species, including sea turtles, is that they are less present in the area during the October through April season of the offshore fishery. Further, vessels must enroll annually in the program and carry a VMS, thereby enhancing monitoring of the portion of the fleet that chooses to participate, and potentially providing more information that could contribute to a better understanding of protected species and their overlap or interactions with the monkfish fleet, to the extent such interactions occur.

#### **6.2.3.2.7 Modification of permit qualification for south of 38°00'N**

The Councils propose to qualify vessels for a special limited access permit if they meet the qualification criteria described in Section 4.1.5. Vessels that qualify for a permit under this proposal would operate under the same regulations applicable to other limited access vessels, except that they would be limited to fishing for monkfish (on a monkfish DAS) south of 38°20'N.

The Councils considered four alternatives to revise the limited entry qualification period for vessels that did not qualify for a permit under the original FMP, plus no action. The Councils are proposing Alternative 3 in this amendment. Under the no action alternative, no additional vessels would qualify for a monkfish limited entry permit, since the permit appeals period has ended. The impact on protected species of the non-preferred Alternatives 1, 2 and 4 are not significantly different than Alternative 3, compared to no action, since the number of affected vessels ranges from 3 to 7, with 5 expected to qualify under the proposed action, Alternative 3. These qualifying vessels fished for monkfish with large-mesh gillnets in the EEZ prior to 1999 when the FMP took effect.

Large mesh gillnets are subject to a series of closures in federal waters off North Carolina and north to Chincoteague by the Final Rule for Large Mesh Gillnet Fisheries, except in late winter and very early spring when turtles are less likely to be found. Following FMP implementation, these vessels fished for monkfish either in state waters or in the EEZ under an experimental fishery permit. The experimental fishery was discontinued, and the sea turtle closures further limited the ability of these vessels to fish for monkfish in the past two years. The proposed action, therefore, may result in some shift in effort from state waters to the EEZ, to the extent this activity is not constrained by the sea turtle closures. Furthermore, the proposed action could result in a modest, but not significant increase in overall monkfish effort if these vessels are currently not active in the fishery.

Overall, however, the impact on protected species is expected to be minimal due to the small number of affected vessels, the seasonal availability of monkfish in the area, the area restrictions of the proposed action (south of 38°20'N) and the sea turtle closures.

#### **6.2.3.2.8 Modifications to the framework adjustment procedure**

The Councils propose three additions to the list of actions that can be taken under the framework abbreviated rulemaking procedure (see Section 4.1.6). They are implementation of: 1) transferable monkfish only DAS (sale or lease); 2) measures to minimize fishery impact on protected species, including sea turtles; and 3) bycatch reduction devices.

Since the proposed action is strictly administrative at this point (enabling future regulatory action through the framework adjustment procedure) there are no direct biological impacts of the following three measures. If, and when the Councils propose to take action under the framework procedure, the impacts of specific measures would be analyzed and discussed in the accompanying environmental impact documents. Because this alternative will enable the Councils to take timely action to implement measures to address protected species issues within the context of the FMP through framework adjustment, this measure indirectly benefits the protected species that are likely to interact with monkfish gear in the EEZ. Measures include, but are not limited to gear-specific seasonal/area closures or gear modifications.

#### **6.2.3.2.9 NAFO Regulated Area exemption program**

Under this proposal, a vessel issued a valid High Seas Fishing Compliance permit under 50 CFR part 300 is exempt from monkfish permit, mesh size, effort-control, and possession limit restrictions while transiting the EEZ with monkfish on board the vessel, or landing monkfish in U.S. ports that were caught while fishing in the NAFO Regulatory Area, provided the vessel complies with certain administrative and gear stowage requirements (see Section 4.1.7). Few vessels are able (because of the size required to fish on the Grand Banks) or likely to take advantage of this measure. Encounters with deep water cetacean species such as sperm whales could occur in the area, but impacts are not likely to increase appreciably beyond that now occurring in the multispecies fishery which has had a similar exemption for a number of years. Although no vessels have availed themselves of this opportunity, even if some do, it is likely to be a small number and they will not likely affect the potential for encounters with protected species in an appreciable way.

### **6.2.3.2.10 Measures to Minimize the Fishery Impacts on EFH**

The Councils propose two actions specifically intended to minimize the impact of the monkfish fishery on EFH (see Section 4.1.8). The Councils propose restricting the trawl roller gear diameter to six inches maximum on vessels fishing on a monkfish DAS (monkfish-only or combined) in the SFMA (EFH Alternative 4, Option 3), and propose closing Oceanographer and Lydonia Canyons to vessels on a monkfish DAS to minimize the impacts of the directed monkfish fishery on deepwater corals and their habitat (EFH Alternative 5AB). The Councils considered but rejected an alternative trawl configuration specifically designed to minimize the impact of the monkfish fishery on EFH for groundfish species if DAS usage requirements were separated (EFH Alternative 4, Option 2). The Councils also considered a second closure option to minimize the impacts of the directed monkfish fishery on deepwater corals (EFH Alternative 5C), which proposed to close up to 12 large canyons from Norfolk Canyon to the Hague Line.

EFH Alternative 1, no action, has been assessed with regard to impacts on protected species in the Monkfish FMP and subsequent framework adjustments as well as in the Biological Opinions prepared by NMFS for ESA Section 7 consultations. In the DSEIS, EFH Alternative 2 considered the effect of other Amendment 2 measures in protecting EFH, and is discussed in this document under the respective action items and alternatives. EFH Alternative 3 considered the effect of actions taken under Amendment 13 to the Multispecies Plan and Sea Scallop Amendment 10 on EFH as they affect monkfish vessels, and have been determined to have varying impacts that are not expected to appreciably increase the potential risks to protected species, although impacts vary by species. While adverse effects can and do occur under all of these management programs, none are considered by NMFS to jeopardize the continued existence of ESA-listed species, except for right whales. In that case, a Reasonable and Prudent Alternative has been implemented through the ALWTRP.

The option for a monkfish trawl configuration (Alternative 4, Option 2) considered but not adopted by the Councils may have benefits to protected species, if the ability of the net to “herd” fish is reduced and other effects have the potential to reduce the likelihood of sea turtle interactions. This conclusion, however, is speculative given that actual gear trials have not yet occurred. Further, although bottom trawls have documented takes of sea turtles, there are none documented in monkfish trawl gear. This is possibly an artifact of low observer coverage. More comprehensive monitoring of this component of the fishery should lead to a better evaluation of this potential.

The proposed action, Option 3, setting a 6-inch maximum roller disc diameter on monkfish trawls in the SFMA is not likely to be different than the no action alternative with regards to impacts on protected species, since that is the maximum size currently used by vessels in that area. The roller restriction will, however, serve to prevent those vessels from expanding their effort into complex bottom areas along the continental margin and offshore canyons.

Protection of deepwater corals (EFH Alternatives 5AB and 5C) through area closures could afford some level of protection to sperm whales and possibly other offshore species such as beaked whales, dwarf sperm whales, Risso’s dolphins, pilot whales and common dolphins to the extent that their distribution overlaps with the fishery. The selected option

that includes all vessels on a monkfish DAS will afford greater protection than the non-preferred option that would have applied just to trawl vessels.

#### **6.2.3.2.11 Cooperative Research Program Funding**

The Councils propose two alternatives for facilitating and streamlining cooperative research programs under the FMP. One is based on a DAS set-aside, and the other on providing a limited exemption from DAS for vessels engaged in research. Both are expected to have neutral effects to protected species compared to no action in that they do not, in and of themselves result in any changes in effort. Projects undertaken within either program will be evaluated on a case-by-case basis as to their impacts on protected species, as the Experimental Fishery Program currently operates. The exemption or set-aside alternatives simply obviate the need for individual researchers to apply for DAS exemptions and conduct the required impact analysis with respect to the effects on monkfish fishing mortality.

Since Alternative 1 sets aside DAS from the existing pool of allocated DAS, effort is not likely to increase as a result of adopting this approach. Under Alternative 2, which provides an exemption from DAS, effort is also not likely to increase because the amount of DAS available under the exemption program is limited to the residual of the pool of DAS not distributed to vessels under the set-aside. In other words, the DAS being set aside under Alternative 1 are from the same currently unused portion of allocated DAS that would be used under the exemption program in Alternative 2. In either case, the proportion of DAS available under both alternatives is a small fraction of the total DAS used, and, therefore, likely to be insignificant.

#### **6.2.3.2.12 Clarification of Vessel Baseline History**

The Councils propose to eliminate the dual vessel-upgrading baseline (length, tonnage and horsepower) that applies on any vessel that was modified or replaced between the time it received its multispecies or scallop limited entry permit and its monkfish limited entry permit (see Section 4.1.10). Under this proposal, the vessel's baseline would be that which applied when the vessel received its original federal permit (in any FMP where upgrading restrictions were implemented).

This action is an administrative change that does not result in any increase in fishing effort or direct change to the fishery, and, therefore, will not likely affect the fishery interaction with protected species.

#### **6.2.3.2.13 NFMA Monkfish Trawl Experimental Fishery**

The Councils considered but rejected a two-year monkfish trawl experimental fishery for the purpose of establishing a trawl exempted fishery in the NFMA to streamline the process of determining where, when and under what gear restrictions trawl vessels could target monkfish while on a monkfish, but not a multispecies DAS. The Councils rejected the proposal because vessels can already conduct such an experiment under current regulations, and, in fact, are. A two year trial would not affect protected species except to allow an adequate evaluation of its effects on listed and other protected species. Impacts at this time are unknown.

Taking no action would not affect protected species.

#### **6.2.3.2.14 Change Fishing Year**

The NEFMC considered changing the multispecies fishing year in Amendment 13 to the Multispecies FMP. The Councils (NEFMC and MAFMC) considered but did not adopt three alternatives for changing the monkfish fishing year in this amendment to be consistent with any changes under Multispecies Amendment 13. Under Alternatives 2, 3 and 4, the fishing year would be changed to calendar year, October – September, or July – June, respectively. Alternative 1 is the no action alternative.

This is an administrative action and, therefore, these alternatives do not have any impact on protected species compared to taking no action.