# Monkfish Fishery Management Plan Framework Adjustment 6

Incorporating
Environmental Assessment and
Regulatory Impact Review

Prepared by New England Fishery Management Council and Mid-Atlantic Fishery Management Council

in consultation with NOAA Fisheries Service

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# **TABLE OF ACRONYMS**

Α	Adult life stage
A13	Amendment 13 to the Multispecies FMP
ALWTRP	Atlantic Large Whale Take Reduction Plan
APA	Administrative Procedures Act
ASMFC	Atlantic States Marine Fisheries Commission
CAI	Closed Area I under the Multispecies FMP
CA II	Closed Area II under the Multispecies FMP
DAM	Dynamic Area Management
DAS	days-at-sea
DMF	Division of Marine Fisheries (Massachusetts)
DMR	Department of Marine Resources (Maine)
DPWG	Northeast Data Poor Stocks Working Group (Assessment)
DSEIS	Draft Supplemental Environmental Impact Statement
E	Egg life stage
EA	Environmental Assessment
EEZ	exclusive economic zone
EFH	essential fish habitat
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FMP	fishery management plan
FVTR	Fishing vessel trip report
FW	Framework
FW 13	Framework 13 to the Scallop FMP
FY	fishing year
GB	Georges Bank
GOM	Gulf of Maine
GRT	gross registered tons/tonnage
HAPC	habitat area of particular concern
HCA	Habitat Closed Area
HPTRP	Harbor Porpoise Take Reduction Plan
IFQ	individual fishing quota
IWC	International Whaling Commission
J	Juvenile life stage
LOA	letter of authorization
MA	Mid-Atlantic
MAFMC	Mid-Atlantic Fishery Management Council
MMC	Monkfish Monitoring Committee
MMPA	Marine Mammal Protection Act
MPA	marine protected area
MSFCMA	Magnuson-Stevens Fishery Conservation and Management Act
MSMC	Multispecies Monitoring Committee
MSY	maximum sustainable yield
NAAA	Northwest Atlantic Analysis Area

NEFMC	New England Fishery Management Council
NEFSC	Northeast Fisheries Science Center
NEPA	National Environmental Policy Act
NERO	Northeast Regional Office
NFMA	Northern Fishery Management Area
NLCA	Nantucket Lightship Closed Area
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
OY	optimum yield
PBR	Potential Biological Removal
PRA	Paperwork Reduction Act
PREE	Preliminary Regulatory Economic Evaluation
RFA	Regulatory Flexibility Act
RMA	Regulated Mesh Area
RPA	Reasonable and Prudent Alternatives
SAFE	Stock Assessment and Fishery Evaluation
SARC	Stock Assessment Review Committee
SAW	Stock Assessment Workshop
SBNMS	Stellwagen Bank National Marine Sanctuary
SEIS	Supplemental Environmental Impact Statement
SFA	Sustainable Fisheries Act
SFMA	Southern Fishery Management Area
SIA	Social Impact Assessment
SMAST	U. Mass. Dartmouth School of Marine Science and Technology
SNE	southern New England
SNE/MA	southern New England-Mid-Atlantic
SSB	spawning stock biomass
TTAC	target total allowable catch
TED	turtle excluder device
USCG	United States Coast Guard
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VMS	vessel monitoring system
VPA	virtual population analysis
VTR	vessel trip report
YPR	yield per recruit

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#### 1.0 Introduction

### 1.1 Executive Summary

The monkfish fishery is jointly managed by the New England Fishery Management Council (NEFMC) and the Mid-Atlantic Fishery Management Council (MAFMC), with the NEFMC having the administrative lead. The fishery extends from Maine to North Carolina out to the continental margin. The Councils manage the fishery as two stocks, with the Northern Fishery Management Area (NFMA) covering the Gulf of Maine and northern part of Georges Bank, and the Southern Fishery Management Area (SFMA) extending from the southern flank of Georges Bank through the Mid-Atlantic Bight to North Carolina (see Figure 1).

The Councils initiated a rebuilding plan for monkfish in 1999 with the adoption of the Monkfish Fishery Management Plan (FMP). The original FMP was modified and amended to include an annual measure of the status of the stocks and adjustment to management measures as needed to maintain a 10-year rebuilding schedule, principally with the implementation of Framework Adjustment 2 in 2003. Following several years of increases in the biomass index for both stocks, by the fall of 2006, the indices had returned to levels below the minimum biomass threshold and approximately 50% below their annual biomass index targets (i.e., both stocks were "overfished"). As a result, the Councils proposed, in Framework 4 to revise the management program so that the goals of the rebuilding plan could be met within the 10-year rebuilding schedule, by 2009.

Framework 4 included, among other measures, a "backstop" provision that would adjust, and potentially close, the directed monkfish fishery in 2009 if the landings in Fishing Year (FY) 2007 exceeded the target total allowable catch (TTAC). The National Marine Fisheries Service (NMFS) deferred implementing Framework 4 and called for a stock assessment for July 2007. The Northeast Data Poor Stocks Working Group (DPWG) completed and accepted the new assessment which recommended revising the biological reference points. Under the revised reference points, both monkfish stocks would be considered "rebuilt" and "overfishing is not occurring". The assessment report emphasizes, however, that in addition to the fact that this assessment was the first to use a new analytical model, there is a high degree of uncertainty in the analyses due to the dependence on assumptions about natural mortality, growth rates and other model inputs. Nevertheless, the change in stock status, from overfished to rebuilt, obviated the need to impose further restrictions on the industry to meet rebuilding objectives. The Councils have submitted Framework 5 to NMFS to adopt the revised reference points recommended by the DPWG, and to implement other measures that will reduce the likelihood of TTAC overages in FY2008 and beyond.

This framework adjustment, if adopted, would eliminate the backstop provision adopted in Framework 4. Given the most recent information on the status of the monkfish stocks, and the expected minimal biological impact of a 30% TTAC overage on stock status, the backstop provision is no longer necessary, and would result in some negative economic and social impacts. The Environmental Assessment (EA) in this document presents the analysis of impacts of the proposed adjustment to the monkfish fishery management measures proposed compared to taking no action.

In terms of compliance with other applicable laws, the proposed action in this framework is consistent with the National Standards and other required provisions of the Sustainable Fisheries Act, and are deemed to be not significant under the National Environmental Policy Act and Executive Order 12866 (Regulatory Impact Review), based on the respective evaluation criteria. The proposed action is consistent with the Marine Mammal Protection Act, and does not alter existing protections for marine mammals inhabiting the management area of the monkfish fishery. The Councils have concluded that the proposed action is not likely to result in jeopardy to any Endangered Species Act (ESA) listed species under NOAA Fisheries Service jurisdiction, or alter or modify any critical habitat. The Councils are seeking concurrence from affected states that the proposed action is consistent with the coastal zone management programs of coastal states from Maine to North Carolina, in compliance with the Coastal Zone Management Act. A complete discussion of the consistency of the proposed action with all applicable laws and executive orders is provided in Section 5.6

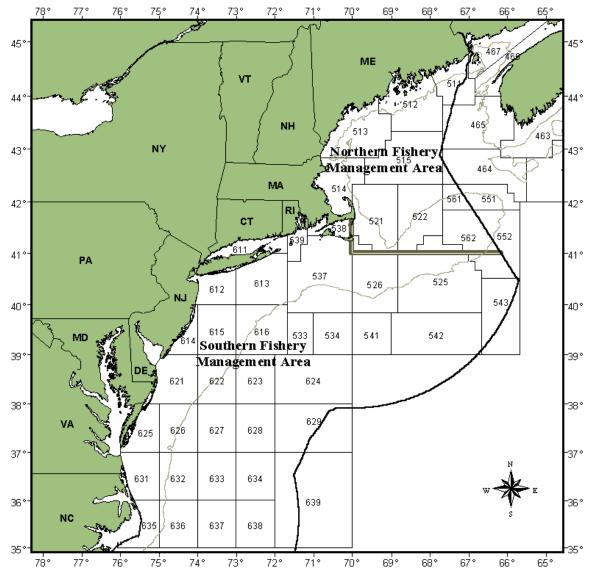


Figure 1 Monkfish management areas and three-digit statistical areas

### 1.2 Background

#### 1.2.1 Actions under the Monkfish FMP

The following section summarizes previous regulatory action under the Monkfish FMP that pertain to the measure being considered in this framework adjustment, namely, Frameworks 4 and 5. Other actions under the Monkfish FMP are discussed in previous framework documents and plan amendments, through Amendment 2, and are available on the NEFMC website, <a href="https://www.nefmc.org">www.nefmc.org</a>, with the most recent being Framework 5, February, 2008. To the extent these actions have a cumulative effect on the environment, they are also discussed in the Cumulative Effects section of this document (Section **Error! Reference source not found.**).

#### 1.2.1.1 Monkfish Framework 4

The fishing year 2006 was Year 7 of the 10-year rebuilding plan implemented under the original FMP in 1999. The goal of the rebuilding plan was to achieve the biomass target reference points in 2009, as measured by the NEFSC autumn trawl survey three-year average biomass indices. Following several years of increases in the biomass indices for both stocks, the indices lagged behind the rebuilding schedule, and in 2006 were both below the minimum biomass threshold and approximately 50% below their biomass index targets. As a result, the Councils revised the management program so that the goals of the 10-year rebuilding program can be met in 2009 with Framework 4, which they submitted to NMFS in February 2007.

In Framework 4, TTACs were set at 5,000 mt and 5,100 mt for the NFMA and SFMA, respectively. These TTACs are the basis for calculating the monkfish trip limits and days-at-sea (DAS) allocations for vessels targeting monkfish. Framework 4 also established the requirement for vessels fishing in the NFMA on a multispecies DAS, and exceeding the monkfish incidental catch limit, to call in a monkfish DAS, which could be done by Vessel Monitoring Systems (VMS) any time prior to returning to port. Vessels in the SFMA were already required to call in a monkfish DAS when exceeding the incidental limit. Framework 4 also reduced the monkfish incidental limit in the NFMA from 400 lbs. per DAS (tail wt.) or 50% of the weight of fish on board, whichever is less, to 300 lbs. per DAS or 25% of the total weight of fish on board, whichever is less. The Councils had increased the incidental limit under Framework 2, when the northern stock appeared to be nearly rebuilt, but restored the original incidental limit because the stock status had returned to being overfished in 2006.

Framework 4 retained the 550 lbs. and 450 lbs. SFMA monkfish trip limit (tail wt. per DAS) for permit categories ACG and BDH, respectively. Vessels were allocated 31 monkfish DAS, but vessels were limited to an allowance of 23 DAS in the SFMA out of the total allocation. In the NFMA, trip limits were set at 1,250 lbs. and 470 lbs. (tail wt. per DAS) for permit category AC and BD, respectively. Framework 4 established that the DAS allocations will remain in effect through 2009 unless the TTAC is exceeded in an area during the 2007 fishing year. In that case, the proposed TTAC overage backstop provision would take effect and could result in a recalculation of the DAS allocations that are expected to keep landings below the TTAC based on catch and effort data from the 2007 fishing year. The backstop provision would make no adjustment if the TTAC overage was 10% or less, and would close the directed fishery in a

management area if the overage exceeded 30%, resulting in zero DAS and the application of monkfish incidental limits to all vessels.

Other measures adopted under Framework 4 include a change in the northern boundary of the Category H fishery from 38°20'N Lat to 38°40'N Lat, and a change to the monkfish incidental limit on limited access scallop vessels fishing in the closed area access programs.

On April 27, 2007, NMFS published a temporary rule implementing interim measures, while deferring a decision on Framework 4 pending the results of a stock assessment scheduled for July (72 Federal Register 20952, April 27, 2007). The interim rule implemented the TTACs and most measures proposed in Framework 4, except the 23 DAS allowance for SFMA vessels (retaining the 12 DAS from the prior year), and prohibited the use of carryover DAS. The DPWG completed an assessment of monkfish which included estimates of absolute biomass and recommended revisions to existing biomass reference points from a survey index basis to an absolute biomass basis. Based on that assessment, both stocks are above the recommended biomass targets, and are, therefore, "rebuilt". The assessment report also emphasized the uncertainty in the model and results, and contained a number cautionary statements.

As a result of the assessment, NMFS approved Framework 4 and published an interim final rule with an effectiveness date of October 22 (72 *Federal Register* 53942, September 21, 2007).

#### 1.2.1.2 Monkfish Framework 5

As a result of the aforementioned DPWG assessment in 2007, the Councils initiated Framework 5 primarily to adopt the recommended biomass reference points, as well as to address the concerns of the Regional Administrator about the effect of carryover DAS on the management program's ability to constrain landings to the TTAC. In addition, the Councils used the opportunity of this adjustment to implement revisions to some other measures to ensure that the management program succeeds in keeping landings within the TTAC levels. Framework 5, which is currently in the proposed rule phase (73 Federal Register 11606, March 4, 2008), would reduce the number of unused DAS that could be carried over to the next fishing year from 10 to 4; would revise the DAS accounting method for gillnet vessels such that all trips less than 15 hours would be counted as 15 hours, eliminating the provision that trips less than 3 hours would be counted as time used; and, would revise the monkfish incidental catch allowance applicable to vessels in the Southern New England Regulated Mesh Area (SNE RMA) fishing with large mesh but not on a monkfish, scallop or multispecies DAS, from 5% of the total weight of fish on board (with no landings cap) to 5% of total weight of fish on board not to exceed 50 lbs. per day, up to 150 lbs. maximum, and also applied this revision to all vessels fishing under a Skate Bait Letter of Authorization (LOA) east of 74°00'W. In addition, Framework 5 will modify the Monkfish LOA requirement for vessels fishing under the less restrictive measures for the NFMA such that vessels using a VMS would no longer be required to obtain the LOA, but could make the declaration via the VMS. The proposed rule comment period ended March 25, and the final rule is expected to be published prior to the start of FY2008 on May 1.

In the context of this framework adjustment (Framework 6) which proposes to eliminate the TTAC overage backstop provision, the Councils anticipate that Framework 5 will reduce the likelihood of TTAC overages that are occurring in the current fishing year, at least in the SFMA

as of this writing, in future years. If successful, Framework 5, in combination with the revised stock status, further obviates the need for the backstop provision.

### 1.2.2 Other actions affecting the monkfish fishery

#### **1.2.2.1** Other FMP actions

Both Northeast (NE) Multispecies and Sea Scallop fisheries have undergone a series of major actions since 1994 to reduce fishing effort and rebuild overfished stocks. NE Multispecies Amendment 13, and Frameworks 40A, 40B, 41 and 42 resulted in substantial reductions in overall multispecies effort, including effort on those multispecies vessels targeting monkfish. As noted in the discussion of other actions under the Monkfish FMP discussed in the previous section, these actions, to the extent they pertain the management of the monkfish fishery, are discussed in earlier Monkfish FMP framework and amendment documents, and are discussed in the Cumulative Effects section of this document (Section 5.6).

### 1.2.2.2 Actions to Minimize Interactions with Protected Species

Many of the factors that serve to mitigate the impacts of the monkfish fishery on protected species are currently being implemented in the Northeast Region under either the Atlantic Large Whale Take Reduction Plan (ALWTRP) or the Harbor Porpoise Take Reduction Plan (HPTRP). In addition, the Monkfish FMP has undergone repeated consultations pursuant to Section 7 of the Endangered Species Act (ESA), with the most recent Biological Opinion dated April 14, 2003. The conclusion in that Opinion states that the monkfish fishery is not likely to jeopardize the continued existence of Northern right whales, provided that the fishery is complying with the ALWTRP. A previous Biological Opinion for the Monkfish FMP, dated June 14, 2001, concluded that the continued implementation of the monkfish fishery was likely to jeopardize the continued existence of Northern right whales as a result of mortality from entanglements in gillnet gear. NMFS implemented a set of Reasonable and Prudent Alternatives (RPAs) to remedy the jeopardy finding. These RPAs were implemented as revisions to the ALWTRP. As described below, the regulatory measures of the ALWTRP and the HPTRP must be adhered to by any vessel fishing for monkfish with gillnet gear.

### 1.2.2.2.1 Harbor Porpoise Take Reduction Plan

NMFS published the rule implementing the Harbor Porpoise Take Reduction Plan on December 1, 1998. The HPTRP includes measures for gear modifications and area closures, based on area, time of year, and gillnet mesh size. In general, the Gulf of Maine component of the HPTRP includes time and area closures, some of which are complete closures; others are closures to gillnet fishing unless pingers (acoustic deterrent devices) are used in the prescribed manner. The Mid-Atlantic component includes time and area closures in which gillnet fishing is prohibited regardless of the gear specifications. Based on an increase in harbor porpoise takes in the overall sink gillnet fishery in recent years, the Harbor Porpoise Take Reduction Team is developing options to reduce takes.

### 1.2.2.2.2 Atlantic Large Whale Take Reduction Plan

The ALWTRP contains a series of regulatory measures designed to reduce the likelihood of fishing gear entanglements of right, humpback, fin, and minke whales in the North Atlantic. The main tools of the plan include a combination of broad gear modifications and time/area closures

(which are being supplemented by progressive gear research), expanded disentanglement efforts, extensive outreach efforts in key areas, and an expanded right whale surveillance program to supplement the Mandatory Ship Reporting System.

Key regulatory changes implemented in 2002 included: 1) new gear modifications; 2) implementation of a Dynamic Area Management system (DAM) of short-term closures to protect unexpected concentrations of right whales in the Gulf of Maine; and 3) establishment of a Seasonal Area Management system (SAM) of additional gear modifications to protect known seasonal concentrations of right whales in the southern Gulf of Maine and Georges Bank.

On June 21, 2005, NMFS published a proposed rule (70 Federal Register 35894) for changes to the ALWTRP, and published a final rule on October 5, 2007 (72 Federal Register 57104). The new ALWTRP measures expand the gear mitigation measures by: (a) including additional trap/pot and net fisheries (*i.e.*, gillnet, driftnet) to those already regulated by the ALWTRP, (b) redefining the areas and seasons within which the measures would apply, (c) changing the buoy line requirements, (d) expanding and modifying the weak link requirements for trap/pot and net gear, and (e) requiring (within a specified timeframe) the use of sinking and/or neutrally buoyant groundline in place of floating line for all fisheries regulated by the ALWTRP on a year-round or seasonal basis.

#### 1.2.2.2.3 Atlantic Trawl Gear Take Reduction Team

The first meeting of the Atlantic Trawl Gear Take Reduction Team (ATGTRT) was held in September 2006. The ATGTRT was convened by NMFS as part of a settlement agreement between the Center for Biological Diversity and NMFS to address the incidental mortality and serious injury of long-finned pilot whales, short-finned pilot whales, common dolphins, and white-sided dolphins in several trawl gear fisheries operating in the Atlantic Ocean. Incidental takes of pilot whales, common dolphins and white-sided dolphins have occurred in fisheries operating under the Atlantic Mackerel, Squid, and Butterfish FMP, as well as in mid-water and bottom trawl fisheries in the Northeast.

The Western North Atlantic stocks of pilot whales, common dolphins, and white-sided dolphins were designated as non-strategic in the 2005 Marine Mammal Stock Assessment Report. Therefore, the charge to the ATGTRT is to develop a take reduction plan within 11 months that, once implemented, will achieve the long-term goal of the Marine Mammal Protection Act of reducing serious injury and mortality of affected stocks to a level approaching a zero mortality rate goal (ZMRG) (which is 10% of the Potential Biological Removal (PBR) of each stock).

#### 1.2.2.2.4 Final Rule to minimize monkfish gillnet interaction with sea turtles

On December 3, 2002, the agency published a final rule (67 Federal Register 71895) establishing seasonally adjusted gear restrictions by closing portions of the mid-Atlantic EEZ waters to fishing with large-mesh (>8") to protect migrating sea turtles, following an interim final rule published March 21 that year. The basis of this rule was that sea turtles migrate northward as water temperatures warmed. At the time the interim and final rules were published, there was no evidence that the primary fishery involved – monkfish – was being prosecuted in state waters. In 2002, when most monkfish fishermen were not permitted under the FMP to fish in the EEZ and the rest were faced with the sea turtle closures, the proportion of North Carolina

monkfish landings from state waters increased five-fold to 92%, posing an unforeseen risk to migrating sea turtles since they were not protected in state waters. In response, NMFS published a final rule on April 26, 2006 (71 Federal Register 24776) that included modifications to the large-mesh gillnet restrictions. Specifically, the new final rule revises the gillnet restrictions to apply to gillnets having 7-inch stretched mesh or greater, versus the 8-inch stretched mesh defined in the 2002 final rule, but did not apply this new rule in state waters as considered in the proposed rule. State waters, and Federal waters north of Chincoteague, VA remain unaffected by the large-mesh gillnet restrictions.

#### 2.0 Purpose and Need

#### 2.1 Need to take action

This action is needed to address whether the backstop provision adopted in Framework 4 is necessary in light of the recent, and positive, change in monkfish stock status resulting from the 2007 DPWG assessment. The 10-year stock rebuilding plan adopted in the original FMP in 1999 was approaching the final years in 2006, with the distinct possibility that it would not meet its objectives. As a result, the Councils adopted, in Framework 4, a backstop provision that would close the directed fishery (allocate zero monkfish DAS) in FY2009 if the landings in a management area exceeded its TTAC in FY2007 by more than 30%. If landings exceeded the TTAC by 10%-30% in FY2007, the Framework 4 measure called for a recalculation of available DAS for FY2009 based on updated catch and effort data from FY2007. There would be no change in DAS if the overage was 10% or less. After the Councils submitted Framework 4, the DPWG assessment found that monkfish was rebuilt (above the recommended biomass target). In addition, the DPWG estimated current fishing mortality, and projected future fishing mortality under the TTACs contained in Framework 4, to be well below the overfishing threshold. Based upon this recent information, the Councils are reconsidering the need to adjust DAS in FY2009, including closure of the directed fishery, even if landings exceed the TTAC. Furthermore, under the mandate of the reauthorized MSA, the Councils are obligated to adopt accountability measures by 2011, which it is planning to do through an amendment to the Monkfish FMP when NMFS' guidelines for such accountability measures have been issued.

#### 2.2 Purpose of Action

The purpose of this action, therefore, is to consider the elimination of the backstop provision adopted in Framework 4.

#### 3.0 Alternatives including no-action

The following describes the alternatives under consideration by the Councils, including taking no action.

#### 3.1 Eliminate the TTAC overage backstop measure (proposed action)

This alternative would remove from the FMP and associated regulations the mechanism for adjusting monkfish DAS allocations in FY2009 based on any FY2007 overages in landings compared to the FY2007 TTACs. If the existing backstop provision is not removed and FY2007 landings exceeded the TTAC by 10% to 30%, DAS would be adjusted based on catch and effort information from FY2007 using the same (unadjusted) TTAC. If landings exceed the TTAC by more than 30%, the existing backstop provision would require that DAS available in the

respective management area be reduced to zero (no directed fishery). The Monkfish Plan Development Team recommends this alternative. The MAFMC voted on April 9, and the NEFMC voted on April 16 to recommend this alternative.

### 3.2 Retain the TTAC overage backstop measure (no action)

This alternative would retain the existing mechanism for adjusting monkfish DAS allocations in FY2009 based on any FY2007 overages in landings compared to the FY2007 TTACs.

#### **4.0** Affected Environment

A map showing the area covered by the monkfish FMP, including the NFMA and SFMA boundary and three-digit statistical areas is provided in Figure 1 for reference. The Council prepares annually a Stock Assessment and Fishery Evaluation (SAFE) Report that contains updated information on the resource status and human environment. The most recent SAFE Report was prepared for Framework 5, in February, 2008, and the following only contains updated information that is pertinent to the analysis of impacts of the proposed action, specifically landings data, and summary information on affected protected species and habitat. FY2007 ended on April 20, 2008, and the data for the SAFE Report is not yet available.

#### 4.1 Biological Environment

This section supplements and updates the biological environment described in the FSEIS for Amendment 2.

#### 4.1.1 Monkfish stock status

### 4.1.1.1 Stock Assessment (SAW 40)

The Northeast Fisheries Science Center (NEFSC) held a monkfish stock assessment in the fall of 2004 (SAW 40). The data used in the 2004 assessment included NEFSC research survey data, data from the 2001 and 2004 Cooperative Monkfish Surveys, commercial fishery data from vessel trip reports, dealer landings records, and observer data. In summary, the Stock Assessment Review Committee concluded:

Based on existing reference points, the resource is not overfished in either stock management area (north or south). Fishing mortality rates (F) estimated from NEFSC and Cooperative survey data are currently not sufficiently reliable for evaluation of F with respect to the reference points.

With respect to recruitment, the report noted evidence of increased recruitment in the NFMA during the 1990s, particularly for the 1999 year class. Conversely, the SAW 40 report noted that in the SFMA, recruitment appears to have fluctuated without trend during the 1990s. However, there are some indications that the 2002 year class in the SFMA may be above average.

### 4.1.1.2 Northeast Data Poor Stocks Working Group Assessment 2007

In July, 2007, the Northeast Data Poor Stocks Working Group (DPWG) completed an assessment of monkfish. The Summary Assessment Report is attached as Appendix I. The DPWG concluded that based on existing biomass reference points, the resource would be considered overfished in both northern and southern areas. The DPWG developed and

recommended new biomass reference points based on a revised yield-per-recruit analysis (using a revised value of natural mortality, M), and results of a length-tuned model that incorporates multiple survey indices and catch data. Based on these new reference points and estimates of current biomass, monkfish in both management areas are above the biomass target (i.e., are "rebuilt"), Table 1. In addition, estimates of current fishing mortality indicate that overfishing is not occurring ( $F_{2006}$ =0.09 and0.12, in the NFMA and SFMA, respectively, compared to  $F_{threshold}$ = $F_{max}$ =0.31 and 0.40, north and south).

	B <sub>2006</sub> (mt)	B <sub>target</sub> (mt)	B <sub>threshold</sub> (mt)
NFMA	118,700	92,200	65,200
SFMA	135,500	122,500	96,400
B <sub>target</sub> = average of total biomass 1980 – 2006			
<b>B</b> <sub>threshold</sub> = lowest value of total biomass 1980 – 2006			

Table 1 DPWG estimates of 2006 biomass and recommended biomass reference points

The assessment report cautions, however, that while the development of a new analytic model is a significant advance, there is substantial uncertainty in the assessment, and the results need to be viewed with caution. Reservations stem from: (a) input uncertainties, including unknown or under-reported catch data, particularly early in the period, and incomplete understanding of key biological parameters such as age and growth, longevity, natural mortality and stock structure; (b) the shorter assessment time frame, starting in 1980 rather than 1963, as in prior assessments; and (c) the relatively recent development of the assessment model. A complete report on the DPWG 2007 assessment is provided in Appendix I of Framework 5 (available on the <a href="https://www.nefmc.org">www.nefmc.org</a> website).

#### **4.1.2** Marine Mammals and Protected Species

The following protected species are found in the environment utilized by the monkfish fishery. A number of them are listed under the Endangered Species Act of 1973 (ESA) as endangered or threatened, while others are identified as protected under the Marine Mammal Protection Act of 1972 (MMPA). Two right whale critical habitat designations are located in the area in which the monkfish fishery is prosecuted. The information provided here is summary of the full descriptions provided in the Amendment 2 FSEIS. Actions taken to minimize the interaction of the fishery with protected species are described in Section 1.2.2.2 of this document.

Cetaceans	Status
Northern right whale (Eubalaena glacialis)	Endangered
Humpback whale (Megaptera novaeangliae)	Endangered
Fin whale (Balaenoptera physalus)	Endangered
Blue whale (Balaenoptera musculus)	Endangered
Sei whale (Balaenoptera borealis)	Endangered
Sperm whale ( <i>Physeter macrocephalus</i> )	Endangered
Minke whale (Balaenoptera acutorostrata)	Protected
Pilot whale (Globicephala spp.)	Protected
Spotted dolphin (Stenella frontalis)	Protected

Risso's dolphin (Grampus griseus)	Protected
White-sided dolphin (Lagenorhynchus acutus)	Protected
Common dolphin (Delphinus delphis)	Protected
Bottlenose dolphin: coastal stocks (Tursiops truncatus)	Protected
Harbor porpoise (Phocoena phocoena)	Protected

#### Seals

Harbor seal ( <i>Phoca vitulina</i> )	Protected
Gray seal (Halichoerus grypus)	Protected
Harp seal ( <i>Phoca groenlandica</i> )	Protected
Hooded seal (Crystophora cristata)	Protected

#### Sea Turtles

Leatherback sea turtle ( <i>Dermochelys coriacea</i> )	Endangered
Kemp's ridley sea turtle ( <i>Lepidochelys kempii</i> )	Endangered
Green sea turtle ( <i>Chelonia mydas</i> )	Endangered*
Loggerhead sea turtle (Caretta caretta)	Threatened

#### Fish

Shortnose sturgeon ( <i>Acipenser brevirostrum</i> )	Endangered
Atlantic salmon (Salmo salar)	Endangered

### Critical Habitat Designations

Right whale Cape Cod Bay Great South Channel

Although salmon belonging to the Gulf of Maine distinct population segment (DPS) of Atlantic salmon occur within the general geographical area covered by the Monkfish FMP, they are unlikely to occur in the area where the fishery is prosecuted given their numbers and distribution. Therefore, the DPS is not likely to be affected by the monkfish fishery. Similarly, there is no evidence to suggest that operation of the monkfish fishery has any adverse effects on the habitat features (e.g., copepod abundance) in the specific areas designated as right whale critical habitat. Therefore, operation of the monkfish fishery is not expected to have effects on critical habitat for right whales that has been designated for Cape Cod Bay and the Great South Channel.

It is expected that all of the remaining species identified have the potential to be affected by the operation of the monkfish fishery. However, given differences in abundance, distribution and migratory patterns, it is likely that any effects that may occur, as well as the magnitude of effects when they do occur, will vary among the species. Summary information is provided here that describes the general distribution of cetaceans, pinnipeds, and sea turtles within the management area for the Monkfish FMP as well as the known interactions of gear used in the monkfish fishery with these protected species. Additional background information on the range-wide status of marine mammal and sea turtle species that occur in the area can be found in a number

<sup>\*</sup>Green turtles in U.S. waters are listed as threatened except for the Florida breeding population which is listed as endangered.

of published documents. These include sea turtle status reviews and biological reports (NMFS and USFWS 2007; Hirth 1997; USFWS 1997; Marine Turtle Expert Working Group (TEWG) 1998 & 2000), recovery plans for Endangered Species Act-listed sea turtles and marine mammals (NMFS 1991; NMFS and USFWS 1991a; NMFS and USFWS 1991b; NMFS and USFWS 1992; NMFS 1998; USFWS and NMFS 1992; NMFS 2005), the marine mammal stock assessment reports (*e.g.*, Waring *et al.* 2006), and other publications (*e.g.*, Clapham *et al.* 1999; Perry *et al.* 1999; Wynne and Schwartz 1999; Best *et al.* 2001; Perrin *et al.* 2002). Additionally, the Center for Biological Diversity and the Turtle Island Restoration Network has recently filed a petition to reclassify loggerhead turtles in the North Pacific Ocean as a distinct population segment (DPS) with endangered status and designate critical habitat under the ESA (72 *Federal Register* 64585; November 16, 2007). While this petition is geared toward the North Pacific, the possibility exists that it could affect status in other areas. NMFS has found that the petition presents substantial scientific information that the petition action may be warranted, and has published a notice and request for comments, available at: http://www.nmfs.noaa.gov/pr/pdfs/fr/fr72-64585.pdf.

#### **Sea Turtles**

Loggerhead, leatherback, Kemp's ridley, and green sea turtles occur seasonally in southern New England and Mid-Atlantic continental shelf waters north of Cape Hatteras. In general, turtles move up the coast from southern wintering areas as water temperatures warm in the spring (James *et al.* 2005; Morreale and Standora 2005; Braun-McNeill and Epperly 2004; Morreale and Standora 1998; Musick and Limpus 1997; Shoop and Kenney 1992; Keinath *et al.* 1987). The trend is reversed in the fall as water temperatures cool. By December, turtles have passed Cape Hatteras, returning to more southern waters for the winter (James *et al.* 2005; Morreale and Standora 2005; Braun-McNeill and Epperly 2004; Morreale and Standora 1998; Musick and Limpus 1997; Shoop and Kenney 1992; Keinath *et al.* 1987). Hard-shelled species are typically observed as far north as Cape Cod whereas the more cold-tolerant leatherbacks are observed in more northern Gulf of Maine waters in the summer and fall (Shoop and Kenney 1992; STSSN database).

Sea turtles are known to be captured in gillnet and trawl gear; gear types that are used in the monkfish fishery. The following table, Table 2, provides the most recent information on observed turtle interactions with the monkfish fishery for the period  $2003 - \text{Nov.}\ 2007$ . The data have not been analyzed with respect to trends or impact of effort controls and/or sea turtle closures relative to monkfish fishery. Gillnet gear is the most prevalent gear used in the SFMA monkfish fishery.

Year	Month	Species	Statistical Area	Gear Type
2003	August	Unknown	537	Sink gillnet
2003	August	Unknown	537	Sink gillnet
2003	August	Unknown	537	Sink gillnet
2004	May	Loggerhead	621	Sink gillnet
2004	June	Loggerhead	612	Sink gillnet
2004	October	Leatherback	615	Sink gillnet
2004	November	Leatherback	613	Sink gillnet
2006	December	Leatherback	537	Sink gillnet

Table 2 Turtle Interactions in Gillnet Gear Targeting Monkfish, 2003-Nov. 2007.

Source: NEFSC Observer Data

Framework 6

### **Large Cetaceans (Baleen Whales and Sperm Whale)**

The western North Atlantic baleen whale species (Northern right, humpback, fin, sei, and minke) follow a general annual pattern of migration from high latitude summer foraging grounds, including the Gulf of Maine and Georges Bank, and low latitude winter calving grounds (Perry *et al.* 1999; Kenney 2002). However, this is an oversimplification of species movements, and the complete winter distribution of most species is unclear (Perry et al. 1999; Waring et al. 2006). Studies of some of the large baleen whales (right, humpback, and fin) have demonstrated the presence of each species in higher latitude waters even in the winter (Swingle *et al.* 1993; Wiley *et al.* 1995; Perry *et al.* 1999; Brown *et al.* 2002).

In comparison to the baleen whales, sperm whale distribution occurs more on the continental shelf edge, over the continental slope, and into mid-ocean regions (Waring *et al.* 2005). However, sperm whales distribution in U.S. EEZ waters also occurs in a distinct seasonal cycle (Waring *et al.* 2006). Typically, sperm whale distribution is concentrated east-northeast of Cape Hatteras in winter and shifts northward in spring when whales are found throughout the Mid-Atlantic Bight (Waring *et al.* 2005). 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).

Gillnet gear is known to pose a risk of entanglement causing injury and death to large cetaceans. Right whale, humpback whale, and minke whale entanglements in gillnet gear have been documented (Johnson *et al.* 2005; Waring *et al.* 2006). However, it is often not possible to attribute the gear to a specific fishery.

#### Small Cetaceans (Dolphins, Harbor Porpoise and Pilot Whale)

Numerous small cetacean species (dolphins, pilot whales, harbor porpoise) occur within the area from Cape Hatteras through the Gulf of Maine. Seasonal abundance and distribution of each species in Mid-Atlantic, Georges Bank, and/or Gulf of Maine waters varies with respect to life history characteristics. Some species primarily occupy continental shelf waters (e.g., white sided dolphins, harbor porpoise), while others are found primarily in continental shelf edge and slope waters (e.g., Risso's dolphin), and still others occupy all three habitats (e.g., common dolphin, spotted dolphins). Information on the western North Atlantic stocks of each species is summarized in Waring *et al.* (2006). Small cetaceans are known be captured in gillnet and trawl gear (Waring *et al.* 2006).

With respect to harbor porpoise specifically, the most recent Stock Assessment Reports show that the number of harbor porpoise takes is increasing, moving closer to the Potential Biological Removal level calculated for this species (610 animals/year from 2001-2005) rather than declining toward the long-term Zero Mortality Rate Goal (ZMRG), which is 10 percent of PBR (approximately 75 animals). Observer information collected from January 2005 to June 2006 has indicated an increase in porpoise bycatch throughout the geographic area covered by the Harbor Porpoise Take Reduction Plan (HPTRP) in both the Gulf of Maine and Mid-Atlantic regions and in monkfish gear specifically (NMFS, Discussion Paper on Planned Amendments to the Harbor Porpoise TRP 2007). The Harbor Porpoise Take Reduction Team is currently developing options to reduce takes.

## **Pinnipeds**

Of the four species of seals expected to occur in the area, harbor seals have the most extensive distribution with sightings occurring as far south as 30° N (Katona *et al.* 1993). Grey seals are the second most common seal species in U.S. EEZ waters, occurring primarily in New England (Katona *et al.* 1993; Waring *et al.* 2006). Pupping colonies for both species are also present in New England, although the majority of pupping occurs in Canada. Harp and hooded seals are less commonly observed in U.S. EEZ waters. Both species form aggregations for pupping and breeding off of eastern Canada in the late winter/early spring, and then travel to more northern latitudes for molting and summer feeding (Waring *et al.* 2006). However, individuals of both species are also known to travel south into U.S. EEZ waters and sightings as well as strandings of each species have been recorded for both New England and Mid-Atlantic waters (Waring *et al.* 2006). All four species of seals are known to be captured in gillnet and/or trawl gear (Waring *et al.* 2006).

#### 4.1.3 Status of bycatch species

Information about the absolute level of bycatch species in the directed monkfish fishery is not available, according to the EIS for Amendment 2. Nevertheless, Amendment 2 stated that winter skates and dogfish are the predominant species discarded in the NFMA monkfish fisheries, while winter and thorny skates, as well as dogfish are discarded in the SFMA. The status of these three species is summarized below:

- Winter skate –overfished, overfishing is not occurring
- Thorny skate overfished, overfishing is not occurring,
- **Spiny dogfish** no biomass target adopted in the FMP. but there is an approved minimum biomass threshold under which the stock would be considered not overfished, and overfishing is not occurring.

### 4.2 Physical Environment

The following sections summarize the physical environment of the monkfish fishery. A full description of the physical environment is provided in Section 5.2 of the FSEIS prepared for Amendment 2 to the FMP. The NFMA comprises the Gulf of Maine and most of Georges Bank, while the SFMA extends from the southern edge of Georges Bank through the Mid-Atlantic Bight (see Figure 1). As noted in the following discussion, the NFMA has a diverse physical geography consisting of shoal areas on Georges Bank and numerous rocky banks and basins of the Gulf of Maine, reflecting the influence of glaciation and post-glacial rise of sea level. The SFMA is characterized by the predominantly sandy continental shelf, and 12 deep-water canyons along the edge of the shelf.

#### 4.2.1 Gulf of Maine

The Gulf of Maine (GOM) is characterized by a system of deep basins, moraines and rocky protrusions with limited access to the open ocean. The GOM is topographically unlike any other part of the continental border along the U.S. Atlantic coast. The GOM's geologic features, when coupled with the vertical variation in water properties, result in a great diversity of habitat types. It contains twenty-one distinct basins separated by ridges, banks, and swells.

Bedrock is the predominant substrate along the western edge of the GOM north of Cape Cod in a narrow band out to a depth of about 60 m. Rocky areas become less common with increasing depth, but some rock outcrops poke through the mud covering the deeper sea floor. Mud is the second most common substrate on the inner continental shelf. Mud predominates in coastal valleys and basins that often abruptly border rocky substrates. Many of these basins extend without interruption into deeper water. Gravel, often mixed with shell, is common adjacent to bedrock outcrops and in fractures in the rock. Large expanses of gravel are not common, but do occur near reworked glacial moraines and in areas where the seabed has been scoured by bottom currents. Gravel is most abundant at depths of 20 - 40 m, except in eastern Maine where a gravel-covered plain exists to depths of at least 100 m. Bottom currents are stronger in eastern Maine where the mean tidal range exceeds 5 m. Sandy areas are relatively rare along the inner shelf of the western GOM, but are more common south of Casco Bay, especially offshore of sandy beaches.

An intense seasonal cycle of winter cooling and turnover, springtime freshwater runoff, and summer warming influences oceanographic and biologic processes in the GOM. The Gulf has a general counterclockwise nontidal surface current that flows around its coastal margin that is primarily driven by fresh, cold Scotian Shelf water that enters over the Scotian Shelf and through the Northeast Channel, and freshwater river runoff, which is particularly important in the spring. GOM circulation and water properties can vary significantly from year to year. Notable episodic events include shelf-slope interactions such as the entrainment of shelf water by Gulf Stream rings and strong winds that can create currents as high as 1.1 m/s over Georges Bank. Warm core Gulf Stream rings can also influence upwelling and nutrient exchange on the Scotian shelf, and affect the water masses entering the GOM.

### 4.2.2 Georges Bank

Georges Bank is a shallow (3 - 150 m depth), elongate (161 km wide by 322 km long) extension of the continental shelf that is characterized by a steep slope on its northern edge and a broad, flat, gently sloping southern flank. The Great South Channel lies to the west. Bottom topography on eastern Georges Bank is characterized by linear ridges in the western shoal areas; a relatively smooth, gently dipping sea floor on the deeper, easternmost part; a highly energetic peak in the north with sand ridges up to 30 m high and extensive gravel pavement; and steeper and smoother topography incised by submarine canyons on the southeastern margin. The central region of the Bank is shallow, and the bottom is characterized by shoals and troughs, with sand dunes superimposed upon them. The area west of the Great South Channel, known as Nantucket Shoals, is similar in nature to the central region of the Bank. The Great South Channel separates the main part of Georges Bank from Nantucket Shoals. Sediments in this region include gravel pavement and mounds, some scattered boulders, sand with storm generated ripples, and scattered shell and mussel beds.

Oceanographic frontal systems separate water masses of the GOM and Georges Bank from oceanic waters south of the Bank. These water masses differ in temperature, salinity, nutrient concentration, and planktonic communities, which influence productivity and may influence fish abundance and distribution. Currents on Georges Bank include a weak, persistent clockwise gyre around the Bank, a strong semidiurnal tidal flow predominantly northwest and southeast, and very strong, intermittent storm induced currents, which all can occur simultaneously. Tidal

currents over the shallow top of Georges Bank can be very strong, and keep the waters over the Bank well mixed vertically.

### 4.2.3 Mid-Atlantic Bight

The Mid-Atlantic Bight includes the shelf and slope waters from Georges Bank south to Cape Hatteras, and east to the Gulf Stream. In this region, the shelf slopes gently from shore out to between 100 and 200 km offshore where it transforms to the slope (100 - 200 m water depth) at the shelf break. In both the Mid-Atlantic and on Georges Bank, numerous canyons incise the slope, and some cut up onto the shelf itself. The primary morphological features of the shelf include shelf valleys and channels, shoal massifs, scarps, and sand ridges and swales. The sediment type covering most of the shelf in the Mid-Atlantic Bight is sand, with some relatively small, localized areas of sand-shell and sand-gravel. On the slope, silty sand, silt, and clay predominate.

Sediments are uniformly distributed over the shelf in this region. A sheet of sand and gravel varying in thickness from 0 - 10 m covers most of the shelf. The sands are mostly medium to coarse grains, with finer sand in the Hudson Shelf Valley and on the outer shelf. Mud is rare over most of the shelf, but is common in the Hudson Shelf Valley. Occasionally relic estuarine mud deposits are re-exposed in the swales between sand ridges. Fine sediment content increases rapidly at the shelf break, which is sometimes called the "mud line," and sediments are 70 - 100% fines on the slope.

The northern portion of the Mid-Atlantic Bight is sometimes referred to as southern New England. Most of this area was discussed under Georges Bank; however, one other formation of this region deserves note. The mud patch is located just southwest of Nantucket Shoals and southeast of Long Island and Rhode Island. Tidal currents in this area slow significantly, which allows silts and clays to settle out. The mud is mixed with sand, and is occasionally resuspended by large storms. This habitat is an anomaly of the outer continental shelf.

Shelf and slope waters of the Mid-Atlantic Bight have a slow southwestward flow that is occasionally interrupted by warm core rings or meanders from the Gulf Stream. On average, shelf water moves parallel to bathymetry isobars at speeds of 5 - 10 cm/s at the surface and 2 cm/s or less at the bottom. Storm events can cause much more energetic variations in flow. Tidal currents on the inner shelf have a higher flow rate of 20 cm/s that increases to 100 cm/s near inlets.

Slope water tends to be warmer than shelf water because of its proximity to the Gulf Stream, and tends to be more saline. The abrupt gradient where these two water masses meet is called the shelf-slope front. The position of the front is highly variable, and can be influenced by many physical factors. Vertical structure of temperature and salinity within the front can develop complex patterns because of the interleaving of shelf and slope waters; e.g., cold shelf waters can protrude offshore, or warmer slope water can intrude up onto the shelf.

The seasonal effects of warming and cooling increase in shallower, nearshore waters. Stratification of the water column occurs over the shelf and the top layer of slope water during the spring-summer and is usually established by early June. Fall mixing results in homogenous

shelf and upper slope waters by October in most years. A permanent thermocline exists in slope waters from 200 - 600 m deep where temperatures decrease at the rate of about 0.02°C per meter and remain relatively constant except for occasional incursions of Gulf stream eddies or meanders. A warm, mixed layer approximately 40 m thick resides above the permanent thermocline.

#### 4.3 Habitat Requirements and Gear Effects Evaluation

### 4.3.1 Monkfish Habitat Requirements and Essential Fish Habitat

Section 5.1 of the FSEIS to Amendment 2 described benthic habitats that exist within the range of the monkfish fishery biological characteristics of regional systems, and assemblages of fish and benthic organisms. It also included a description of canyon habitats on the edge of the continental shelf. The EFH text descriptions and map designations for the various life stages of monkfish were defined in the Habitat Omnibus Amendment (1998). The following paragraphs and maps, excerpted from the Habitat Omnibus Amendment, describe the environmental needs and natural distribution of Monkfish. For more information on Monkfish EFH refer the Habitat Omnibus Amendment (1998). Note that figures 4.1 and 4.2 (EFH for eggs and larvae) referenced in the following excerpt are not shown, and an additional figure is added, showing combined adult and juvenile monkfish EFH designations. Figure 2 shows the areas designated as EFH for juvenile monkfish (corresponding to Figure 4.3 in the excerpt), Figure 3 shows EFH designated for adult monkfish (Figure 4.4 in the excerpt), and Figure 4 shows the combined areas designated as monkfish EFH.

# Essential Fish Habitat Description Monkfish (Lophius americanus)

In its Report to Congress: Status of the Fisheries of the United States (September 1997), NMFS determined monkfish is currently overfished. This determination is based on an assessment of stock size. Essential Fish Habitat for monkfish is described as those areas of the coastal and offshore waters (out to the offshore U.S. boundary of the exclusive economic zone) that are designated on Figures 4.1 - 4.4 and meet the following conditions:

Eggs: Surface waters of the Gulf of Maine, Georges Bank, southern New England, and the middle Atlantic south to Cape Hatteras, North Carolina as depicted in Figure 4.1. Generally, the following conditions exist where monkfish egg veils are found: sea surface temperatures below 18° C and water depths from 15 - 1000 meters. Monkfish egg veils are most often observed during the months from March to September.

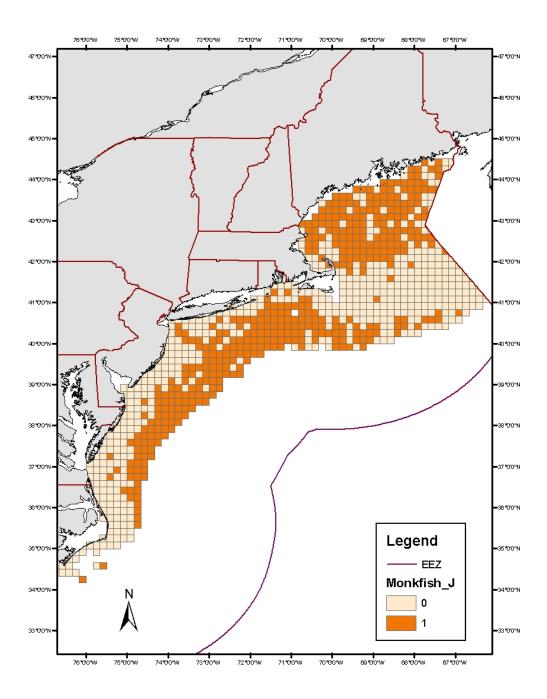
Larvae: Pelagic waters of the Gulf of Maine, Georges Bank, southern New England and the middle Atlantic south to Cape Hatteras, North Carolina as depicted in Figure 4.2. Generally, the following conditions exist where monkfish larvae are found: water temperatures 15° C and water depths from 25 - 1000 meters. Monkfish larvae are most often observed during the months from March to September.

**Juveniles:** Bottom habitats with substrates of a sand-shell mix, algae covered rocks, hard sand, pebbly gravel, or mud along the outer continental shelf in the middle Atlantic, the midshelf off southern New England, and all areas of the Gulf of Maine as depicted in Figure 4.3. Generally, the following conditions exist where monkfish juveniles are found: water temperatures below 13° C, depths from 25 - 200 meters, and a salinity range from 29.9 - 36.7‰.

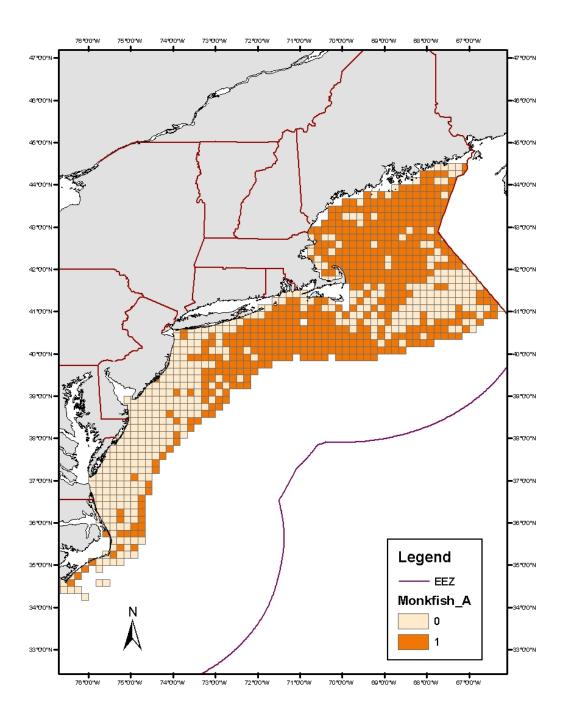
**Adults:** Bottom habitats with substrates of a sand-shell mix, algae covered rocks, hard sand, pebbly gravel, or mud along the outer continental shelf in the middle Atlantic, the mid-shelf off southern New England, along the outer perimeter of Georges Bank and all areas of the Gulf of Maine as depicted in Figure 4.4. Generally, the following conditions exist where monkfish adults are found: water temperatures below 15° C, depths from 25 - 200 meters, and a salinity range from 29.9 - 36.7‰.

**Spawning Adults:** Bottom habitats with substrates of a sand-shell mix, algae covered rocks, hard sand, pebbly gravel, or mud along the outer continental shelf in the middle Atlantic, the mid-shelf off southern New England, along the outer perimeter of Georges Bank and all areas of the Gulf of Maine as depicted in Figure 4.4. Generally, the following conditions exist where spawning monkfish adults are found: water temperatures below 13° C, depths from 25 - 200 meters, and a salinity range from 29.9 - 36.7‰. Monkfish are observed spawning most often during the months from February to August.

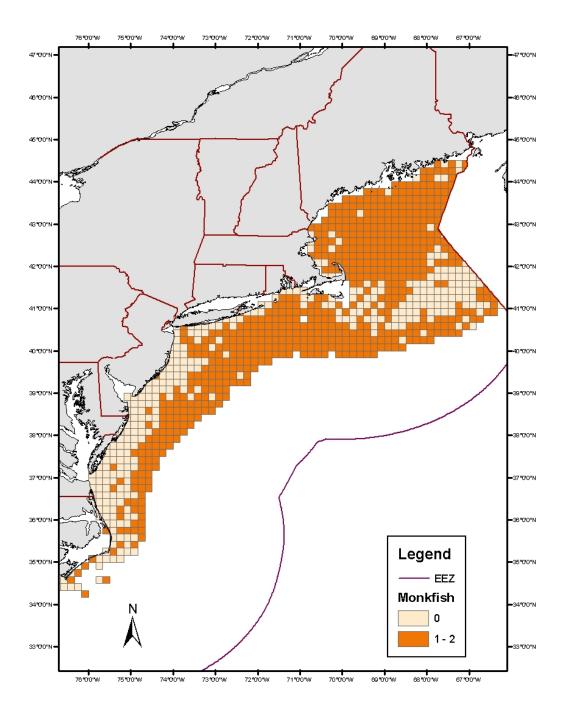
The Council acknowledges potential seasonal and spatial variability of the conditions generally associated with this species.



 $Figure\ 2-EFH\ Designation\ for\ Juvenile\ Monkfish\ is\ highlighted\ in\ the\ shaded\ ten-minute\ squares$ 



 $Figure \ 3-EFH\ Designations\ for\ Adult\ Monkfish\ is\ highlighted\ in\ the\ shaded\ ten-minute\ squares$ 



 $Figure\ 4-EFH\ Designation\ for\ both\ Juvenile\ and\ Adult\ Monkfish\ combined\ is\ highlighted\ in\ the\ shaded\ ten-minute\ squares$ 

#### 4.3.2 Effects of fishing gear on monkfish Essential Fish Habitat (EFH)

Section 5.4 of the FSEIS to Amendment 2 evaluated the potential adverse effects of gears used in the directed monkfish fishery on EFH for monkfish and other federally-managed species and the effects of fishing activities regulated under other federal FMPs on monkfish EFH. The evaluation considered the effects of each activity on each type of habitat found within EFH. The two gears used in the directed monkfish fishery are bottom trawls and bottom gill nets which are described in detail in Section 1.2.1 of Appendix 2 to Amendment 2 to the Monkfish FMP. Generally, otter trawls are towed at speeds of 2-3 knots over the bottom and the trawl doors and footrope contact the benthic environment. Conversely, while sink gill nets are deployed on the ocean bottom, they are stationary or static, anchored at each end and left in place for varying periods of time.

Monkfish EFH has been determined to only be minimally vulnerable to bottom-tending mobile gear (bottom trawls and dredges) and bottom gillnets (see Appendix II of Amendment 2 FSEIS). Therefore, the effects of the monkfish fishery and other fisheries on monkfish EFH do not require any management action. However, the monkfish trawl fishery does have more than a minimal and temporary impact on EFH for a number of other demersal species in the region. Adverse impacts that were more than minimal and not temporary in nature were identified for the following species and life stages, based on an evaluation of species life history and habitat requirements and the spatial distributions and impacts of bottom otter trawls in the region (Stevenson *et al.*, 2004):

Species and life stages with EFH more than minimally vulnerable to otter trawl gear (42): American plaice (Juvenile (J), Adult (A)), Atlantic cod (J, A), Atlantic halibut (J, A), haddock (J, A), pollock (A), ocean pout (E, J, A), red hake (J, A), redfish (J, A), white hake (J), silver hake (J), winter flounder (A), witch flounder (J, A), yellowtail flounder (J, A), black sea bass (J, A), scup (J), tilefish (J, A), barndoor skate (J, A), clearnose skate (J, A), little skate (J, A), rosette skate (J, A), smooth skate (J, A), thorny skate (J, A), and winter skate (J, A).

There are no species or life stages for which EFH is more than minimally vulnerable to bottom gill nets (Stevenson *et al.*, 2004).

In Amendment 13 to the Multispecies FMP and Amendment 10 to the Scallop FMP, the New England Council implemented a range of measures to minimize the impacts of bottom trawling in the Gulf of Maine, George's Bank and Southern New England. In addition to the significant reductions in DAS and some gear modifications, in Amendment 13 the Council closed 2,811 square nautical miles to bottom-tending mobile fishing gear (known as Habitat Closed Areas). Because the monkfish fishery overlaps significantly with the groundfish fishery in the NFMA and the habitat closed areas extend into the SFMA, measures to protect habitat in Amendment 10 and Amendment 13 assist in minimizing the effect of fishing on EFH in the monkfish fishery.

The alternatives implemented in Amendment 2 focus on those areas (offshore/shelf slope/canyons) and gears modifications (trawl mesh) where the monkfish fishery operations do not overlap (spatially or gear use) with the groundfish or scallop fishery. The Councils closed Oceanographer and Lydonia Canyons deeper than 200 meters, a total closure of 116 square nautical miles, to vessels on a monkfish DAS to minimize the impacts of the directed monkfish

fishery on deepwater canyon, hard bottom communities. These two canyon areas are outside the range of the multispecies and scallop fisheries, but could be areas in which, or adjacent to where deep-water monkfish fisheries occur.

### 4.4 Human Environment, Vessels, Ports and Communities

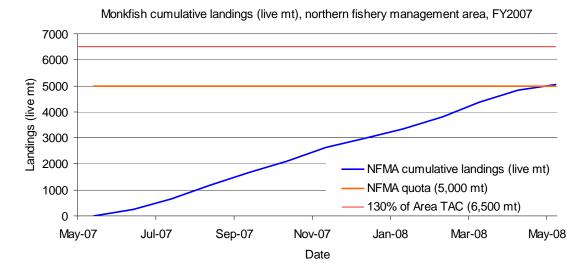
This section updates landings information contained in the annual SAFE Report for the Monkfish FMP which was provided in Section 4.4 of Framework 5 for FY2006, the most recent complete fishing year. The other information presented in the SAFE Report is unchanged and is not repeated here.

### 4.4.1 Landings

In response to concerns of industry and Council members regarding the backstop provision being addressed in this framework adjustment, NMFS initiated a program in the fall of 2007 to monitor monkfish landings on a more near-real-time basis than previously. Prior to this program, landings data were available following the auditing and pro-rating of data (using Vessel Trip Reports (VTRs) to assign dealer-reported landings to the appropriate management area), which resulted in a two-month lag, more or less. Under the new procedure, landings have been allocated to the northern and southern fishery management areas using the proportion of monkfish landed by month and area from VTRs for the current year, when available, and using the prior two years' distribution when not. For the months of May-January, proportions from FY2007 have been used. Due to the reporting requirements associated with VTRs, proportions to allocate landings to fishery management areas for February-April have been calculated using VTRs from the appropriate months in FY2005 and FY2006. As a result, landings by management area are subject to change due to updates in dealer reports and/or annual changes in landings patterns. The FY2007 TTACs are 5,000 mt for the NFMA, and 5,100 mt for the SFMA. Total landings shown in Table 3 and Figure 5 show coastwide dealer-reported landings through **April 19, 2008**.

Month	Total landings (live lbs)	NFMA landings (Prorated estimate of live lbs)	SFMA landings (Prorated estimate of live lbs)	NFMA landings (Prorated estimate of mt)	SFMA landings (Prorated estimate of mt)	
May-07	3,140,434	513,041	2,627,393	233	1,192	
June-07	2,750,038	921,240	1,828,798	418	830	
July-07	2,065,688	1,174,607	891,081	533	404	
August-07	1,734,674	1,051,521	683,153	477	310	
September-07	1,533,434	1,014,935	518,499	460	235	
October-07	2,059,517	1,111,345	948,172	504	430	
November-07	2,623,394	762,431	1,860,963	346	844	
December-07	2,905,131	856,272	2,048,859	388	929	
January-08	2,430,349	996,264	1,434,085	452	650	
February-08	1,988,566	1,213,530	775,036	550	352	
March-08	1,627,745	1,013,107	614,638	460	279	
April-08	1,287,292	488,838	798,454	222	362	
Totals (prorated estimate)	26,146,262	11,117,131	15,029,131	5,043	6,817	
Area	a TAL	11,023,115	11,243,577	5,000	5,100	
Percent of quota		101%	134%	101%	134%	

Table 3 Monkfish landings, by area, FY2007 through April 19, 2008



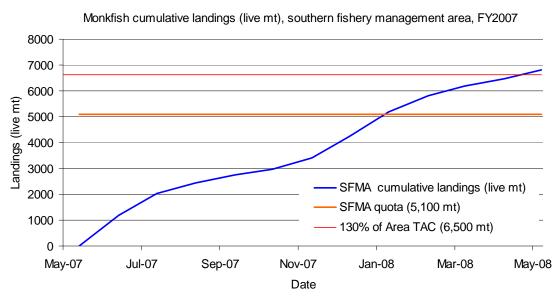


Figure 5 Cumulative monkfish landings by area, FY2007 through April 19, 2008, showing TTAC and 130% of TTAC (where the Framework 4 backstop provision would call for a closure in FY2009).

For comparison, Table 4 shows landings by gear, area and month for FY 2007 through January 2008. These data have been converted to live weight. Unlike the data shown above, which goes through April 19, the data below do not use FY2005 and FY2006 distributions (proportions) to allocate dealer data to management area, but show actual FY2007 VTR-reported area of catch.

												2007*		2000	6*	Fishing
	MAY - 2007	JUN - 2007	JUL - 2007	AUG - 2007	SEP - 2007	OCT - 2007	NOV - 2007	DEC - 2007	JAN - 2008	MAY 07- JA	NUARY 08	Mayu7- Jan08 as a		May06-Jan07 as		Year*
												% of Target	TAC	a % of Target TAC	TAC	Landings
	Metric Tons									Metric Tons		TAC	Metric Tons		Metric Tons	Metric Tons
NORTHERN	231	404	522	471	460	504	338	387	446	3,763	40%	75%	5,000	67%	7,737	ļ
OTTER TRAWL	217	263	239	227	247	365	233	288	432	2,513	26%	50%		44%		ł
GILLNET	12		264	186	166	97	79	94		,	11%			22%		1
ноок	0		0	0		0	0	0		0	0%			0%		1
OTHER GEARS	1	1	18	58	46	42	25	5	1	198	2%	4%		2%		
SOUTHERN	1,183	802	396	306	235	430	825	926	642	5,743	60%	113%	5,100	134%	3,667	
SOUTHERN	1,103	002	390	300	233	430	020	920	042	5,743	60%	113%	3,100	134%	3,007	1
OTTER TRAWL	133	111	123	133	99	144	82	84	94	1,002	11%	20%		39%		1
GILLNET	908		195	63	16		599	734		3,710	39%	73%		78%		1
НООК	0	0	0	0	0	0	0	0	0	0	0%	0%		0%		
OTHER GEARS	142	115	77	109	120	149	144	107	67	1,030	11%	20%		17%		
ALL AREAS	1,413	1,206	917	776	695	934	1,163	1,314	1,088	9,506	100%					
OTTER TRAWL	350	374	363	360	346	509	315	373	526	3,515	37%					
GILLNET	920	716	460	249	182	234	678	829	494	4,762	50%	1				
НООК	0		0	0	0	0	0	0	0	0	0%					
OTHER GEARS	143	116	95	168	167	191	169	112	68	1,228	13%					
LANDINGS - ALL AREAS																
Fishing Year 2007	1,413	1,206	917	776	695	934	1,163	1,314	1,088	9,506						40.500
Fishing Year 2006	1,314	1,490	1,181	909	880	1,104	1,140	1,130	967	10,116						12,586
Fishing Year 2005 Fishing Year 2004	2,040 1.806	3,040 1,979	1,862 1,581	1,487 1,380	1,343 1,304	1,100 1,243	1,616 1,803	1,413 1,681	1,523 1,264	15,424 14,041						19,189 17,927
Fishing Year 2004 Fishing Year 2003	2,681	3,199	1,913	1,746	1,304	2,253	2,823	1,907	1,204	19,917						26,273
Fishing Year 2002		2.093	1,489	1,740	1,420	1.643	1.937	2.203	2,015	15,861						21,807
riching real 2002	.,577	_,555	.,⊣05	.,502	.,524	.,540	.,501	_,_00	_,510	.0,001						21,00

<sup>1.</sup> The three digit statistical areas defined below are for statistical and management purposes and may not be consistent with stock area delineation used for biological assessment (see the attached statistical chart).

Monkfish Stock Areas: Northern: 464-465, 467, 511-515, 521-522, 561-562 Southern: 525-526, 533-534, 537-539, 541-543, 611-639

Table 4 Monkfish landings by gear, area and month for FY2007 through January, 2008 (converted to live weight)

<sup>2.</sup> Landings in live weight.

<sup>3.</sup> Gear data are based on vessel trip reports.

<sup>4.</sup> Monkfish quotas for FY2007 were revised to be 5,000 mt for Northern Area and 5,100 mt for Southern Area as of October 22, 2007.

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#### 5.0 Environmental Consequences of Proposed Action

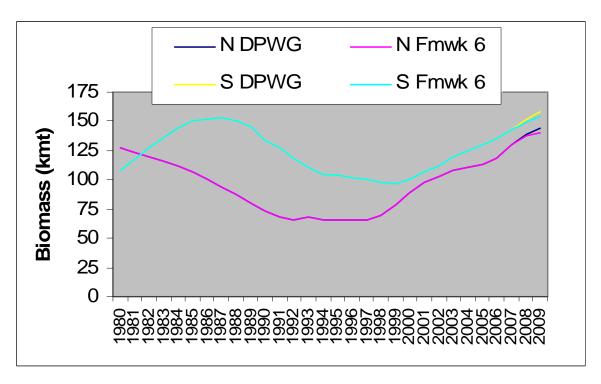
## **5.1** Biological Impacts

## 5.1.1 Impact on monkfish and non-target species

To evaluate the impact of the proposed action, compared to no action, the PDT used the same model that was used by the DPWG to evaluate the effect of landings for 2007-2009 being equivalent to the proposed TTACs on stock growth, but applied a higher level of catch. The PDT applied the SCALE model adopted by the DPWG (NEFSC 2007) to estimate for 2007-2009 the influence of an assumed catch of 7.236 mt (6,500 mt landings, 485mt discards, 251mt foreign) in the NFMA and 8,529mt (6,630 landings, 1899mt discards) in the SFMA. These levels represent a 30% overage of the annual TTAC in each area (TTAC=5,000mt NFMA, 5,100mt SFMA). The PDT believes this is a reasonable estimate of full year SFMA FY2007 landings, given that fishing year landings (year starting May 1, 2007) for the area estimated by NMFS through April 19 are approximately 6,817 mt, and that April traditionally accounts for 5-7% of the annual total. The assumed catch for the NFMA is likely a high estimate, given that landings through April 19 are estimated to be about 5,043 mt. Thus, the projection for the NFMA would represent a "worst case" scenario. The discards for 2007-2009 were estimated using average discard to kept ratios for each area for 2004-2006 and the foreign landings for 2007-2009 were estimated as the average of the most recent 3 years (2001-2003). It should be noted that the analysis was performed using the higher catch for all three years, and that measures were adopted in Framework 5 to take effect in FY2008 that are intended to ensure that the landings do not exceed the TTAC.

As shown in Figure 6, total biomass continues to increase under these catch levels, though at a slower rate than projected if TTACs were met (NEFSC 2007). In the north, the total biomass increases approximately 18% from 2006 to 2009, compared to 21% if TTACS were met. The 18% increase in biomass is 15% less than the 21% increase that would occur if the TTACs were met. In other words the rate of increase is 15% lower when the assumed 30% overage is applied. In the south, the total biomass increases approximately 14% from 2006 to 2009, compared to 17% if TTACS were met. This represents a ~19% decline in the rate of increase. In both regions, the projected total biomass remains above target biomass levels (Figure 7).

In terms of biological impacts on non-target species, compared to the no action alternative, the proposed action is not expected to have significant impacts, and may have slightly positive impacts since it would defer any potential redirection of effort to other fisheries that otherwise would occur if the backstop restrictions, including a possible closure of the directed fishery, were imposed. Earlier analyses of incidental catch of other non-target species in the monkfish fishery, suggests that bycatch is relatively low due to the large mesh used, particularly in the gillnet component in the SFMA. Thus, maintaining the directed fishery in FY2009 (under the proposed action) will not likely cause any increase in incidental catch of non-target species over levels already anticipated and discussed in Framework 4 and other prior analyses.



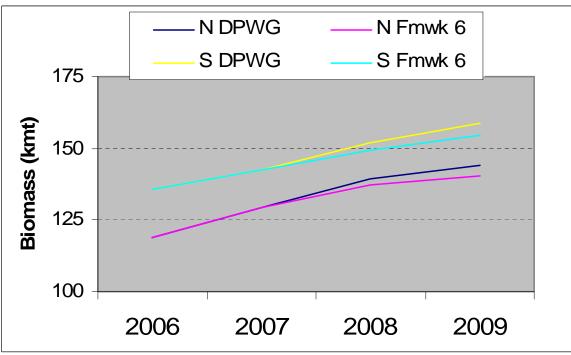
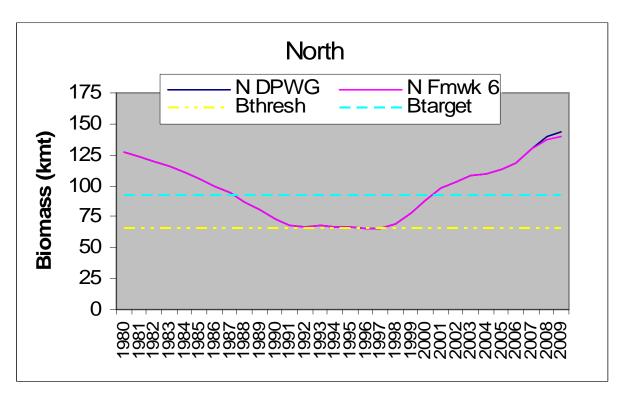


Figure 6 Monkfish trends in total biomass projected to 2009 under TTACs (DPWG) and under 30% overages to the TTACS (Fmwk 6). N=northern management area, S=southern management area.



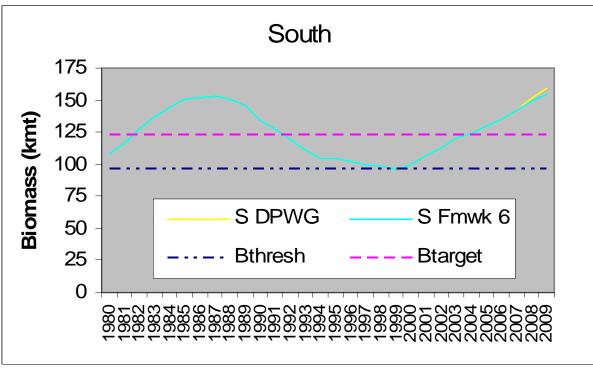


Figure 7 Monkfish trends in total biomass projected to 2009 under TTACs (DPWG) and under 30% overages to the TTACS (Fmwk 6) compared to biomass reference levels for NFMA and SFMA. N=northern management area, S=southern management area.

# **5.1.2 Impact on Protected Species**

NMFS previously considered the effects of implementation of Framework 2 on ESA-listed cetaceans, sea turtles, shortnose sturgeon, and Atlantic salmon during Section 7 consultation on the fishery, which was completed on April 14, 2003. The Biological Opinion for that consultation concluded that the proposed action was not likely to result in jeopardy to any ESA-listed species inhabiting the management unit. A revised Incidental Take Statement was provided for the anticipated taking of loggerhead, leatherback, green, and Kemp's ridley sea turtles in the fishery. Reasonable and prudent measures to reduce the likelihood of takes were also provided to address the possible entanglement of sea turtles in the fishery.

## **5.1.2.1** Impact of proposed action

The proposed action, to eliminate the backstop provision that would likely result in a one-year closure of the directed monkfish fishery in the SFMA in FY2009, will not change the overall effect of the fishery on protected species because it would not change the effort that was already analyzed and discussed in Framework 4. Furthermore, measures implemented under Framework 5 may reduce effort marginally as part of the program to ensure that landings do not exceed the TTAC, specifically eliminating the 3-hour rule and reducing carryover DAS.

## 5.1.2.2 Impact of no action

The no action alternative will likely result in a one-year closure of the directed fishery in the SFMA in FY2009 based on landings to date. Despite the fact that the predominant gear that would be affected by the closure is sink gillnet gear, vessels that are displaced by the closure are not prevented from deploying gillnets in other fisheries, and, from an economic point of view, have a motivation to do so to maintain a revenue stream over the course of the year. Furthermore, since this is only a one-year closure, any benefit to protected species that might result, would be short-term.

#### **5.2** Habitat Impacts

In general, the activity described by this proposed action, fishing for monkfish, occurs off the New England and Mid-Atlantic coasts within the U.S. EEZ. Thus, the range of this activity occurs across the designated EFH of all Council-managed species. Information on EFH in the northeast region can be found at <a href="www.nero.noaa.gov/hcd/index.html#efh">www.nero.noaa.gov/hcd/index.html#efh</a>. EFH designated for species managed under the Secretarial Highly Migratory Species FMPs are not affected by this action, nor is any EFH designated for species managed by the South Atlantic Council as all of the relevant species are pelagic and not directly affected by benthic habitat impacts.

#### **5.2.1** Impact of the proposed action

The alternative under consideration in this action will not increase monkfish effort in either management area over the baseline level already discussed and analyzed in Framework 4, which set the DAS allocations for FY2007-2009. Specifically, the alternative under consideration would eliminate the backstop provision that would reduce or eliminate monkfish DAS in either management area in FY2009 if the TTAC in FY2007 is exceeded. The overall effect of the fishery on EFH was discussed and mitigated for in Amendment 2, and in NE Multispecies Amendment 13. There have been no significant changes in the fishery that would adversely impact EFH since 2004 when the habitat effects of this fishery were evaluated. The fishery must continue to respect the 2,811 square nautical miles of habitat closed areas established by NE

Multispecies Amendment 13 as well as the Oceanographer and Lydonia Canyon closures adopted in Monkfish Amendment 2. Monkfish fishing effort will continue to occur in areas that are already open to bottom tending mobile gears or by gears that have been determined to not adversely impact EFH in a manner that is more than minimal and not temporary in nature (i.e., gillnet gear). Therefore, the alternatives under consideration will not have an adverse impact on EFH.

## 5.2.2 Impact of no action

The no action alternative would retain the TTAC backstop provision implemented in Framework 4. Based on landings data to date, the backstop provision will not likely be invoked in the NFMA, and will likely result in a closure of the directed fishery in the SFMA in FY2009. Given that the predominant gear used in the SFMA is gillnets, and that the closure would only be in effect for one year, the proposed action is not likely to have any effect of EFH of monkfish or other managed species. This is because there are no species or life stages for which EFH is more than minimally vulnerable to bottom gillnets (Stevenson *et al.*, 2004).

In summary, for the reasons stated above, the action proposed in this framework adjustment would not have an adverse impact on EFH for any federally managed species in the region. Because the EFH Final Rule (50 CFR 600.920 (e)(1-5)) states that "federal agencies are not required to provide NMFS with assessments regarding actions that they have determined would not adversely affect EFH", no EFH Assessment is provided for this action.

# **5.3** Economic Impacts of the Alternatives

The proposed management change is a single measure that could have a short-term positive impact, relative to the status quo, on limited access vessels participating in the monkfish fishery in FY2009. The following section provides a discussion of potential impacts from this measure; where possible a quantitative analysis is provide with an estimate of the number of affected vessels, however some of the discussion remains qualitative due to data and model limitations.

The overall framework for economic analysis is change in benefits and costs, and ultimately net national benefits. While an alternative may result in immediate costs or benefits to a particular group of vessels, this must be compared to the future net benefits to the nation of a well-functioning plan. The anticipation is that should the plan achieve its objectives, future net benefits would be at higher sustained levels. Actions that delay the achievement of plan objectives reduce net national benefits by delaying the achievement of higher future benefits. Actions that have an immediate cost or benefit without delaying the expected net benefits from the plan can be considered from a short-term perspective. Biological modeling indicates that the longer-term trajectory of the stock would not be affected by harvest levels anticipated under the proposed measure, and thus, the proposed action is not anticipated to have an impact on longer-term net benefits anticipated from the overall plan.

# 5.3.1 Removal of FW4 Backstop Measure

The proposed measure would remove the TTAC overage backstop measure created under Framework 4. The backstop measure defines effort reduction measures for FY2009 based on the level of TTAC overage in FY2007. Specifically, if FY2007 landings in an area (NFMA or SFMA) exceed the TTAC by 10% or less, no action is necessary. If FY2007 landings for an area

exceeded the TTAC by more than 10% and up to 30% of the TTAC, the FY2009 DAS allocation for that area would be recalculated using FY2007 data to bring landings within the TTAC. If FY2007 landings for an area were more than 30% above the TTAC, the directed fishery for that area would close for FY2009 only. The proposed measure would remove the backstop provision so that no matter the level by which the fishery exceeds the TTAC in FY2007 there would be no repercussions in FY2009. This measure is proposed under the premise that monkfish is not overfished and overfishing is not occurring as indicated by the DPWG assessment in August 2007, and as defined by the Biological Reference Points (BRP) adopted in Framework 5.

#### **5.3.1.1** Methods and Assumptions

For the proposed measure, the near-term impacts are measured as costs avoided which can be considered benefits relative to the status quo. Under the status quo (backstop) there would be costs to fishers from a reduction in effort in FY2009, should FY2007 landings trigger the backstop provision. Given that FY2007 is not yet complete, it is uncertain which backstop actions would be most appropriate to model the status quo. However, we can determine which are most likely, given monkfish landings to date. Based on data to April 19, 2008 landings from the NFMA were 101% of the FY2007 TTAC while landings from the SFMA were 134% of the TTAC. Historically, approximately 5-7% of the monkfish landings have occurred in the last month of the fishing year (April). Therefore, it is unlikely that the backstop would be triggered in the NFMA, while it certainly would in the SFMA, and would result in a closure of the directed fishery Based on the above information, the status quo for FY2009 is defined as no action for the NFMA, and a closure of the directed fishery in the SFMA in FY2009. Under a closure in the directed fishery, DAS and trip limits are set to zero, with only incidental landings allowed.

To estimate the impact of the proposed measure, the (economic) trip model was used, which was also used in Framework 4 and previous annual adjustments. Impacts are measured relative to the baseline scenario and are reported as percentage changes rather than as dollar values. The trip model estimates average changes in per-trip vessel returns net of operating costs and crew payments, as well as changes in monkfish revenue. The analysis uses data from observed trips to simulate outcomes under alternative trip limits and DAS allocations. The trip data is compiled from FY 2006 vessel trip reports and dealer weighout slips, with the former providing catch and location data and the latter providing average monthly prices, which are used to calculate revenue estimates.

Impacts based on changes in trip limits and DAS allocations are amenable to analysis when moving from higher to lower limits. In FY 2006 trip limits<sup>2</sup> and DAS are the same or higher than those for FY2009 under either the status quo or proposed action. Therefore, this data can be used to analyze the economic effects of the proposed change. The effect was evaluated based on a comparison of the expected return for alternative trip-taking strategies. A vessel may abandon a trip if the trip limit causes earnings to fall below zero, they may continue to fish while discarding any monkfish above the trip limit, or they may fish up to the trip limit and then return to port.

<sup>2</sup> Trip limits include those for the directed fishery, as well as incidental trip limits.

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<sup>&</sup>lt;sup>1</sup> While the intermediate case of changes in trip limits and DAS allocation unlikely, especially for the SFMA, the lack of FY2007 data makes modeling this scenario infeasible. Under Framework 4, there were significant modifications to DAS and trip limits, which came into effect for FY2007. Fishers' behavioral responses to these changes would be a key component to the trip limit modeling efforts to bring FY2009 landings closer to the TAC.

Assuming that a trip is taken, vessels may choose to continue fishing while discarding monkfish over the trip limit so long as the revenue earned from other species offsets the costs of fishing. Trips where other species make up a relatively small portion of the trip revenue may lead to trips being discontinued when the trip limit is reached, since the cost of continued fishing would exceed the additional revenue.

For the purpose of this analysis, it is assumed that if vessels took trips in both the NFMA and SFMA, these vessels are indifferent between taking a trip in either area. Rather they will choose to take the trip that maximizes net trip revenue. To model this assumption, all trips taken by limited access monkfish permit holders landing monkfish were ordered by descending revenue for each vessel. Each trip is then analyzed as follows. If the total monkfish landed is less than or equal to the incidental trip limit, or the relevant monkfish management area DAS limit has not been reached, then the trip is unchanged. If the DAS limit has been reached, then the monkfish catch is reduced to the relevant incidental catch limit and the appropriate strategy for the vessel (i.e., ending the trip or continuing to fish while discarding any additional monkfish catch) is determined along with the return (in terms of revenue) from the strategy. If the DAS limit has not been reached and the monkfish catch is greater than the incidental limit, then the monkfish catch is reduced to the relevant trip limit and the vessel's revenue maximizing strategy and resulting return is determined. Table 5 illustrates the assumptions regarding incidental landings, trip limits and DAS under the status quo and proposed action alternatives.

	<b>Status Quo</b>	<b>Proposed Action</b>
NFMA		
Incidental limit (per day absent)	300	300
Trip limit AC (tail weight)	1250	1250
Trip limit BD (tail weight)	470	470
DAS	31	31
SFMA		
Incidental limit (per day absent/max per trip)	50/150	50/150
Trip limit ACG (tail weight)	0	550
Trip limit BDH (tail weight)	0	450
DAS	0	23

Table 5 Trip limits and DAS levels used in trip model to estimate impacts.

The relative change in net return to the vessel was estimated by calculating the average per-trip returns to the vessel owner under the two scenarios, based on FY2006 data. These returns take into account operating costs, which were estimated using trip cost data collected on observer logs in FY2006. Trips landing monkfish during FY2006 in the NFMA and SFMA were identified, and the total trip cost was estimated as using a regression of the logarithm of trip cost against the logarithms of days absent, the number of crew, and a dummy variable indicating if the vessel gear type is gillnet. The parameters from this regression were then used to construct estimates of trip cost and cost per day absent for all trips landing monkfish during FY2006. Returns to the vessel were calculated using a standard 60/40 lay system where 40 percent of the gross revenue goes to the vessel and 60 percent is shared among the crew, who pay for the operating expenses for the trip. Therefore, the net to the crew is the difference between the 60 percent share and the operating costs.

A necessary assumption of the trip limit model is that fishing location decisions are unchanged under alternative rules, thus the analysis of the impacts of the proposed measure is conducted separately for vessels fishing only in the NFMA, vessels fishing only in the SFMA, and vessels fishing in both areas. In reality, this is a simplification and a limitation of the model, since vessels could change their fishing location in order to mitigate some of the negative impacts from regulations.

It should also be noted that the results are presented as the single year relative change from the estimated FY2009 baseline. The absence of the proposed measure would result in impacts in a single year (FY2009), thus the cost avoided due to the proposed action would also be for a single year (FY2009). Cumulative impacts from this action would only be applicable if removal of the backstop would result in changes in the biological trajectory of the monkfish stocks. If the proposed action shifts the fishery to overfished, or allows overfishing to occur, then a single year of impacts could have cumulative impacts that differ from the single year impacts.

#### **5.3.1.2** Results

In the status quo scenario, the SFMA would be closed to direct fishing for monkfish in FY2009, while the NFMA would not trigger backstop measures. Under this scenario, the 153 vessels that fish only in the NFMA would not be affected by the backstop, and thus would not be affected by the proposed measure that would remove the backstop (Table 6). However, vessels that fish only in the SFMA or those that fish in both areas would be affected by the backstop actions, and thus would be impacted (positively) by the proposed measure. The changes, in percentage from the status quo, for average vessel returns, payments to crew and monkfish revenues are shown for the different groups of vessels in Table 6.

		Percentage change from status quo:		
		Average		
				Change in
		change in	payment to	monkfish
	Number	vessel return	crew	revenues
Fishing only in NFMA	153	0	0	0
Fishing only in SFMA <sup>1</sup>	228	+9.9	+14.0	+381.4
Fishing in NFMA and SFMA <sup>2</sup>	231	-0.5	-1.4	-0.8

One vessel had insufficient information to be included in the analysis.

Table 6 Estimated change (%) in average vessel returns, payments to crew and monkfish revenues of proposed alternative compared to no action.

For the 231 vessels that fished in both areas, the impact of removing the backstop is small. The negative change suggests that these vessels would generate larger returns with a closure of the directed fishery in the SFMA. This is largely an artifact of the model, and the small value is unlikely significant. The model results suggest that these vessels could largely offset lost opportunities from such a closure and thus for these vessels the impact of the proposed action is generally neutral.

<sup>&</sup>lt;sup>2</sup> Vessels with category F permits are not included in this calculation.

For the 228 vessels that fish only in the SFMA, the proposed measure would result in large, positive impacts relative to a closure of the directed fishery in the SFMA (status quo). The very large impact on monkfish revenues is indicative of increases in landings for monkfish by these vessels, suggesting indirect (positive) impacts of monkfish processors.

# 5.4 Social Impact Assessment for Measures under Consideration

National Standard 8 of the SFA demands that "Conservation and management measures shall, consistent with the conservation requirements of this Act (including the prevention of overfishing and rebuilding of overfished stocks), take into account the importance of fishery resources to fishing communities in order to (A) provide for the sustained participation of such communities, and (B) to the extent practicable, minimize adverse economic impacts on such communities" (16 U.S.C.§1851(2)(8)). The analysis that follows provides a context for understanding possible social impacts to communities resulting from the proposed measures in this framework.

Daily routines, safety, occupational opportunities, and community infrastructure are examples of social impacts that can be affected by changes in management measures. Modifications to daily routines can make long-term planning difficult. New gear requirements such as netting and some equipment must be ordered months in advance resulting in changes to daily routines when these modifications cannot be met in a time and cost efficient manner. Further the cost of making such changes may prove to be a burden for some vessel owners. Changes in management measures that limit access to fishing may increase the likelihood of safety risks. Increased risk can result when fishermen spend longer periods at sea in order to minimize steam time to and from fishing grounds, operate with fewer crew, and fish in poor weather conditions.

Occupational opportunities within the fishing industry in general appear to be largely on the decline with more people leaving the industry than entering it. Management measures that further reduce occupational opportunities may have profound social impacts on the future occupational viability of commercial fishing. The increasing challenge to maintain economically viable fishing operations has resulted in an increasing number of fishermen leaving the fishing industry in search of other occupational pursuits. The tight fit between the unique characteristics of commercial fishing and the personality profile of fishermen has meant that many fishermen transitioning out of the industry have not found similar job satisfaction in replacement career pursuits, resulting in personal and familial stress (Pollnac and Poggie, 1988 and 2006).

While it is the intended objective of fishery management to protect fishery resources and, where practicable, provide for continued participation of communities in fishing over the long term, and minimize negative social impacts (16 U.S.C.§1851(2)(8)), changes in measures which result in long term benefits to stocks can result in short-term negative impacts to fishermen and their families which have longer term consequences (sometimes negative) for the social and cultural fabric of communities. Changes in management measures can affect the size, demographic characteristics, and social structure of communities. Port infrastructure may be also affected by the gradual loss of shore-based services essential to a strong working waterfront. Impacts that decrease occupational opportunities within fishing communities in turn can affect fishing families and community infrastructure.

#### 5.5 Methods

Qualitative and quantitative methods have been used to assess the relative impact of the proposed management measure outlined in this framework. The directional impact of the proposed measure was determined based on methods and analysis conducted in the economic impact section of this document using FY2006 landings data (VTR and commercial landings). In some cases the number of vessels or landings value affected is too small to constitute a reliable evaluation of community level impacts and, therefore, the discussion may focus on vessel level rather than community level impacts. While some management measures, more than others, tend to engender certain types of social impacts it is not always possible to predict social impacts accurately.

## **5.5.1** TTAC Overage Backstop Alternatives

The proposed action in this framework would have positive social impacts in the SFMA as it would avert a one-year disruption to fishing practices, compared to the no action alternative. Under the no action alternative, adopted in Framework 4, and based on reported landings to date, the directed monkfish fishery would close for FY2009. In regard to the closure under the no action alternative, while fishermen may have been able to adapt to such management measures in the past by redirecting their effort to other fisheries, there are now far fewer such opportunities that can compensate for losses that may be incurred by closure of the monkfish fishery, thus, putting into question whether or not fishermen, processing facilities, or shore support would be able to survive even temporary losses.

# **5.5.1.1** Overage Alternative 1 – Proposed Measure

This alternative would remove the TTAC backstop measure implemented through Framework 4 that would go into effect in FY 2009 if the TTAC is exceeded in FY2007. Based on landings to date, it is likely that the backstop would result in a closure of the SFMA directed fishery in FY2009, but would not result in any change in the NFMA. Under the proposed measure, no adjustment to management measures would be made if landings exceed the TTAC in either management area. Compared to the no action alternative, the social impacts in the SFMA would be positive, as there would be no disruption to fishing resulting from the backstop provision. This would allow for continuity in fishing practices and long-term planning. Social impacts would be neutral for vessels fishing both in the NFMA and SFMA and for vessels fishing only in the NFMA, as it is not likely that the backstop will be invoked, based on NFMA landings to date.

#### **5.5.1.2** TTAC Overage Alternative 2 - No Action

This alternative was adopted in Framework 4. The backstop provision is tiered to allow for 3 possible scenarios from no action to closure of the directed monkfish fishery. Should the FY 2007 landings exceed respective TTACs the following actions would be possible: no action would be taken in either management area for landings less than or equal to 10% of TTACs; landings between >10% and 30% above TTACs would result in an adjustment to DAS; and, landings in excess of 30% of the TTAC would result in closure of the directed monkfish fishery.

Landings in the SFMA to date indicate that the TTAC will likely be exceeded by 30% or more, resulting in a closure of the directed fishery in FY2009. Such a closure would cause a one year disruption of fishing practices and long term planning, and lead to a potential loss of market share during the closure that may be difficult to recapture once the fishery is reopened in

FY2010. Further, in a general climate of eroding shore based infrastructure, processing capacity at the local level could be lost during the period of closure and may be difficult to recover. Social impacts would be neutral for vessels fishing in both areas because vessels fishing in both the NFMA and SFMA have the flexibility to offset losses in the SFMA by fishing in the NFMA. Since landings to date indicate that no adjustment to DAS or a closure of the directed fishery will be necessary in the NFMA, the no action alternative is not likely to result in any social impacts in that area.

#### **5.6** Cumulative Effects

#### 5.6.1 Introduction

The purpose of this section is to summarize the incremental impact of the proposed action on the environment when added to other past, present and reasonably foreseeable future actions regardless of what agency or person undertakes them. The National Environmental Policy Act (NEPA) requires that cumulative effects of "past, present, and reasonably foreseeable future actions" (40 CFR § 1508.7) be evaluated along with the direct effects and indirect effects of each proposed alternative. Cumulative impacts result from the combined effect of the proposed action's impacts and the impacts of other past, present, and reasonably foreseeable future actions. These impacts can result from individually minor but collectively significant actions taking place over a period of time. The Council on Environmental Quality (CEQ) directs federal agencies to determine the significance of cumulative effects by comparing likely changes to the environmental baseline. On a more practical note, the CEQ (1997) states that the range of alternatives considered must include the "no-action alternative as a baseline against which to evaluate cumulative effects." Therefore, the analyses referenced in the following cumulative impacts discussion, compare the likely effects of the proposed action to the effects of the no-action alternative.

CEQ Guidelines state that cumulative effects include the effects of all actions taken, no matter who has taken the actions, but that the analysis should focus on those effects that are truly meaningful in terms of the specific resource, ecosystem and human community being affected. Thus, this section will contain a summary of relevant past, present and reasonably foreseeable future actions to which the proposed alternatives may have a cumulative effect. This analysis has taken into account, to the extent possible, the relationship between historical (both pre- and post-FMP) and present condition of the monkfish population and fishery, although significantly less is known about the population and the fishery prior to the implementation of the FMP and other management actions affecting the fishery (particularly Multispecies Amendments 5 and 7 and Sea Scallop Amendment 4).

In terms of past actions for fisheries, habitat and community impacts, the temporal scope for this analysis is primarily focused on the 1990s when more data on the monkfish resource became available, although some historical trawl survey data extending to the 1960's is considered. For endangered and other protected species, the context is largely focused on the 1980's and 1990's, when NMFS began generating stock assessments for marine mammals and sea turtles that inhabit waters of the U.S. EEZ. Detailed information concerning recent actions affecting the monkfish fishery is provided in Section 1.2 of this document. In terms of future actions, the analysis examines fishing and non-fishing actions that are in the development or permitting

stage, or are in some way proposed or under discussion. In addition, all FMPs must come into compliance with the new provisions of the recently reauthorized Magnuson-Stevens Act by 2011. Therefore, this action examines the period between implementation of Framework 6 measures (Summer, 2008) and approximately 3 years into the future, which coincides with the Magnuson-Stevens Act deadline. Predictions beyond this timeframe cannot be made with certainty.

The geographic scope of the analysis of impacts to fish species and habitat for this action is the range of the fisheries in the Western Atlantic Ocean from the Gulf of Maine to North Carolina, as described in the Affected Environment. The distribution of monkfish is described in the Essential Fish Habitat Section of the Affected Environment (Section 4.3.1). For endangered and protected species, the geographic range is the total range of each species as described in Section 4.1.2. The geographic range for community impacts is defined as those fishing communities bordering the range of the monkfish fishery management areas, from the U.S.-Canada border to, and including North Carolina.

The cumulative effects analysis focuses on five Valued Environmental Components (VEC's):

- 1. target species (monkfish)
- 2. non-target species (incidental catch and bycatch)
- 3. protected species
- 4. habitat, and
- 5. communities (includes social and economic mpacts).

The cumulative effects determination on these VEC's is based on the following analyses: (1) the discussion in this section of non-fishing actions occurring outside the scope of this FMP; (2) the analysis of direct and indirect impacts contained in the Environmental Consequences section; and (3) the summary of past, present and future actions affecting the monkfish fishery.

NMFS staff determined that the 5 VECs (target species, non-target species, protected species, habitat and communities) are appropriate for the purpose of evaluating cumulative effects of the proposed action based on the environmental components that have historically been impacted by fishing, and statutory requirements to complete assessments of these factors under the Magnuson-Stevens Act, Endangered Species Act, Marine Mammal Protection Act, Regulatory Flexibility Act, and several Executive Orders. The VECs are intentionally broad (for example, there is one devoted to protected species, rather than just marine mammals, and one on habitat, rather than Essential Fish Habitat) to allow for flexibility in assessing all potential environmental factors that are likely to be impacted by the action. While subsistence fishing would ordinarily fall under the "communities" VEC, no subsistence fishing or Indian treaty fishing take place in the area managed under this FMP.

The vessels participating in the monkfish fishery must comply with all federal air quality (engine emissions) and marine pollution regulations, and, therefore, do not significantly affect air or marine water quality. Consequently, the management measures contained in this adjustment would not likely result in any additional impact to air or marine water quality and thus this issue is not discussed further in the analyses below.

# 5.6.2 Past, Present, and Reasonably Foreseeable Future Actions

# **5.6.2.1** Fishing and Fishery Actions

The current condition of the monkfish fishery (in the context of the five VECs) is the result of the cumulative effect of past fishing effort on the monkfish resource, implementation of the Monkfish FMP in 1999, and regulations under other FMPs in the region that impact vessels catching monkfish as well as measures adopted under other laws, particularly the Endangered Species Act and the Marine Mammal Protection Act. The two FMP's that have had the greatest impact on monkfish fishery VECs, other than the Monkfish FMP, are the Sea Scallop and Northeast Multispecies FMP's because of the spatial overlap of the fisheries, the relatively high level of incidental catch of monkfish in those fisheries, and the fact that more than 90 percent of the monkfish limited access permit holders are also permitted in one or the other of those two fisheries.

A summary of recent Monkfish FMP actions is provided in Section 1.2.1. Beginning with the establishment of a target TAC setting method in Framework 2, these actions have, cumulatively. implemented management measures that have resulted in increasingly effective control over fishing effort in the monkfish fishery, and have reduced fishing effort overall. Framework 3 (2006) was a joint action with the Northeast Multispecies FMP (Framework 42) that established, among other things, a prohibition on the use of Multispecies "B DAS" to target monkfish. Framework 4, which took effect in 2007, set the TTACs for FY2007-2009, set associated trip limits and DAS for both NFMA and SFMA, and implemented the TTAC overage backstop provision that is being addressed in this framework. Framework 5, which is scheduled to take effect on May 1, 2008, adopted the new biomass reference points recommended by the DPWG, and implemented several changes to the management program to ensure that the landings do not exceed the TTAC, while not affecting overall DAS allocations and trip limits for the directed fishery. These changes include: a reduction in allowable carryover DAS from 10 to 4 DAS; elimination of the gillnet 3-hour rule; and capping the allowable monkfish incidental catch on large-mesh vessels not fishing on a monkfish, scallop or multispecies DAS in the SNE RMA, including vessels fishing on a skate bait LOA. Framework 5 also adopted a provision enabling vessels fishing with a VMS to declare electronically that they are fishing in the NFMA, rather than obtain a LOA.

In this framework action, the Councils propose eliminating or modify the TTAC backstop provisions adopted in Framework 4. That provision would adjust DAS in FY2009 if landings in either area exceeded the target TTAC in 2007 by more than 10%. If the landings exceed the TTAC by more than 30% in either area, the directed fishery in that area would be closed for FY2009. That provision was implemented when the stocks were in a 10-year rebuilding program with a terminal year of 2009. Given the revised stock status (not overfished, overfishing not occurring), the Councils have agreed that such an extreme backstop is no longer appropriate or justifiable.

Both the Multispecies and Sea Scallop fisheries have undergone a series of major actions since 1994 to reduce fishing effort and rebuild overfished stocks (see Section 1.2.2). These actions reduced overall fishing effort and have imposed other restrictions such as year-round and seasonal closed areas, and gear restrictions that have affected both the directed and incidental

catch monkfish fishery. Most recently, Multispecies Amendment 13, and Frameworks 40A, 40B, 41 and 42 have resulted in substantial reductions in multispecies effort, particularly on stocks of concern. Framework 42 also prohibited the use of multispecies B-regular DAS to target monkfish.

An additional Multispecies action, under RA authority, was initiated in November 2007, to modify the current regulations of the three scallop dredge exemption areas in the Northeast Region. These regulations apply to vessels with a General Category Atlantic sea scallop permit or a limited access Atlantic sea scallop permit while not fishing under a scallop DAS, and fishing with a scallop dredge less than 10.5 feet in width. The action proposes to add an incidental monkfish catch limit of 50 lb tail weight per trip, consistent with the Monkfish FMP, and multispecies regulations. The action is intended to convert a small amount of regulatory discards into landings, consistent with National Standard 9 of the Magnuson-Stevens Act, without increasing incentives for scallop vessels to target monkfish. The proposed rule for this action published on April 29, 2008 (73 FR 23175), and the final rule is currently pending NMFS review.

Atlantic Sea Scallop Amendment 10 and Frameworks 16, 17 and 18 implemented area rotation measures and set scallop DAS levels to achieve mortality targets. In general, these actions have reduced DAS (effort) allocations and dredge contact time with the ocean bottom as a result of increases in yield per recruit. This has contributed to a reduction in overall levels of monkfish incidentally caught in the scallop fishery. Amendment 11 to the Scallop FMP, was approved by the Secretary of Commerce on February 27, 2008, and a final rule published on April 14, 2008 (73 FR 20090) with an effective date of June 1, 2008. This action limits the number of General Category (open access) permit holders, allocates a portion of the scallop resource to the General Category fishery, and establishes an individual fishing quota (IFQ) program, likely resulting in further effort reductions. The NEFMC has also submitted Framework 19 to the Scallop FMP, which would, among other things, reduce allocated DAS and, consequently, the incidental catch of monkfish by scallop vessels. A proposed rule for this action published on March 19, 2008 (73 FR 14748), and a final rule is pending with an anticipated effective date of June 2008. Improvements in the profitability of the scallop fishery have also reduced directed effort on monkfish by scallop vessels that possess monkfish limited access permits, since such vessels do not use their monkfish DAS (which would require also using a scallop DAS).

Cumulatively, these actions have likely had a positive effect on the direct and incidental monkfish fisheries, protected species and habitat, principally as a result of the overall reduction in fishing effort (limited entry and DAS controls), closed areas, and the increased selectivity of gears used in those fisheries. Further, as the relative profitability of some rebuilt stocks, such as scallops, has increased, it has resulted in a redirection of effort away from monkfish. Alternately, recent effort reductions in the multispecies fishery have had a negative economic impact on communities, including those that rely on the monkfish fishery due to the overlap between the two fisheries.

Other FMPs that likely have had an impact on the fishery VECs include those managing other demersal species in the region, such as the Skate FMP (implemented 2003), Spiny Dogfish FMP (implemented 2000), and the Summer Flounder, Scup, Black Sea Bass FMP (1996 and

amendments). To varying degrees, these management plans, as well as others in the region, have directly or indirectly affected the monkfish fishery by causing effort to shift among fisheries and by changes to the levels of incidental catch of monkfish, but it is not possible to analyze the impact of individual actions on the monkfish fishery.

In the next two to four years, the Councils will be adopting FMP amendments to comply with the reauthorized MSA requirements to adopt annual catch limits (ACLs) and accountability measures (AMs). Based on the assessment results that monkfish are not subject to overfishing, the ACL/AM amendment must be implement by 2011. The Councils are awaiting further guidance from NMFS as to what the amendment will include. The NEFMC is developing Multispecies Amendment 16, scheduled for implementation in 2009, which would continue rebuilding programs started under Amendment 13, and could impose additional effort reductions. The Council is also considering the adoption of as many as 17 new sector proposals and modifications to the two existing sector programs. In this light, the Council is moving toward a greater degree of allocation of multispecies resources to various sectors of the fishery than it had in the past. It is also developing in Amendment 16, the provisions that will bring the FMP into compliance with the new MSA requirement to specify ACLs and AMs. Given the degree of overlap between the monkfish and multispecies fisheries, these changes are likely to affect the management strategy in the Monkfish FMP over the next several years.

It is also possible that the NEFMC may consider the development of a new Multispecies Framework action to address several issues that were cut from Framework 42, including those related to special access programs. However, it is unclear when this new action would be initiated and whether it would contribute to the cumulative impacts associated with this environmental assessment.

The Council is also currently engaged in the scoping process for Atlantic Sea Scallop Amendment 15. The NEFMC has initiated work on this amendment to address three primary issues: 1) compliance with the MSRA with regards to ACLs and AMs,; 2) the rationalization of the limited access scallop fishery (to minimize excess capacity, including DAS leasing, permit or DAS transfers, IFQs, or other measures); and , 3) revising the overfishing definition to be more area based. Other issues under consideration are adjustments to various alternatives developed under Amendment 11 (general category limited entry program), consideration of measures if Phase II of the EFH Amendment is delayed, alternatives to improve the research set-aside program, and moving the start of the fishing year to May 1, consistent with Multispecies and Monkfish FMP fishing years.

The NEFMC is undertaking a mandated five-year update of it's Essential Fish Habitat (EFH) designations, which will include an Omnibus Amendment to all NEFMC FMP's. The Amendment will consider new methods for designating EFH for four life stages of all Councilmanaged species. It will also consider new Habitat Areas of Particular Concern (HAPC) designations, and whether or not to change existing regulations designed to practicably minimize the adverse effects of fishing on designated EFH.

Potential changes in the designation of EFH for monkfish and other species encountered by vessels fishing for monkfish are not expected to have a direct impact on the administration of the

monkfish fishery. HAPC designations, in and of themselves, contain no changes to fishery regulations that would impact the monkfish fishery. Considering changes or additions to existing fishery regulations designed to practicably minimize the adverse effects of fishing on designated EFH, however, may involve changes and/or additions to existing regulations governing fishing effort, gear utilization and area closures. These changes and/or additions could affect where and how the monkfish fishery is prosecuted. Final alternatives have not been crafted by the Council, making more definitive analysis impossible at this time.

With respect to protected species, and harbor porpoise specifically, the most recent Stock Assessment Reports show that the number of harbor porpoise takes is increasing, moving closer to the Potential Biological Removal level calculated for this species (610 animals/year from 2001-2005) rather than declining toward the long-term Zero Mortality Rate Goal (ZMRG), which is 10 percent of PBR (approximately 75 animals). Observer information collected from January 2005 to June 2006 has indicated an increase in porpoise bycatch throughout the geographic area covered by the Harbor Porpoise Take Reduction Plan (HPTRP) in both the Gulf of Maine and Mid-Atlantic regions and in monkfish gear specifically (NMFS, Discussion Paper on Planned Amendments to the Harbor Porpoise TRP 2007). The Harbor Porpoise Take Reduction Team is currently developing options to reduce takes. Regarding other protected species, NMFS reinitiated consultation on the continued authorization of the monkfish fishery on April 2, 2008, given information on the estimated annual take of loggerhead sea turtles in bottom otter trawl gear used in the fishery, as well as information on revisions to the ALWTRP affecting the use of gillnet gear in the monkfish fishery. This consultation is currently in process.

In addition to FMPs implemented by the Councils, other actions that have directly and cumulatively affected the monkfish fishery VEC's include three federal court decisions (*Hall v. Evans, AOC v. Daley*, and *CLF v. Evans*, see discussion in Section 2.5.2 of Amendment 2 to the Monkfish FMP), two marine mammal take reduction plans (Harbor Porpoise and Atlantic Large Whale Take Reduction Plans), and an rule implemented by NMFS under authority of the Endangered Species Act to protect sea turtles (Section 1.2.2.2). Cumulatively, these actions have limited areas open to fishing on a seasonal basis, specifically to gillnet gear, and have prescribed gear restrictions, including the mandatory use of acoustic deterrent devices in some areas, net limits, and buoy line specifications.

Other projects that may impact monkfish permitted vessels include a 13.4 million dollar appropriation for Massachusetts groundfish relief and 6.3 million dollars in mitigation funding from the construction of an LNG pipeline southeast of Gloucester, MA. Although it is not yet clear how the groundfish relief funding will be distributed, only vessels from Massachusetts will be eligible to receive the money. Because most monkfish permitted vessels in the Northeast also possess a groundfish permit, it is reasonable to expect that a subset of monkfish permitted vessels will receive some relief, thus likely providing a positive economic impact. Likewise, money provided as mitigation for the LNG pipeline project was for the formation of an organization to buy/lease groundfish fishery permits and DAS for the inshore groundfish fleet in and around Gloucester. Again, because most monkfish permitted vessels in the Northeast also possess a groundfish permit, it is likely that a small subset of the monkfish fleet will receive a positive economic impact from the ability to lease groundfish permits and DAS at a reduced cost.

Although these projects only impact a subset of monkfish permitted vessels, cumulatively these actions should provide a positive economic impact.

# **5.6.2.2** Non-Fishing Actions and Activities

There are several ongoing, non-fishing actions that could potentially impact the monkfish fishery. These activities include: chemical (e.g., pesticides and oil pollution), biological (e.g., invasive species and pathogens), and physical (e.g., dredging and disposal, coastal development) disturbances to riverine, inshore and offshore habitats; power plant operations (thermal pollution and entrainment of larvae); global warming; and energy projects such as liquid natural gas (LNG) facilities and windfarms (only three windfarms have been formally proposed, though others may be proposed in the future). LNG facilities are currently planned or under construction for the following locations: Passamaquoddy, ME (onshore); two projects offshore of Boston, MA (one proposed and one constructed); Fall River, MA (onshore); Long Island Sound, NY (onshore); South Shore of Long Island (onshore); Logan Township, NJ (onshore); and an expansion of an existing facility in Cove Point, MD. The majority of these activities tend to affect inshore areas, and the impacts are often localized. Monkfish are a ubiquitous species that can be found in inshore areas to depths greater than 800 meters. Monkfish are known to migrate seasonally and these migration patterns, although not well understood, are thought to be associated with spawning and food availability. Additionally, monkfish are known to live on various types of substrate from mud to rocky bottom, and can tolerate a wide range of temperatures. Since monkfish are not dependant upon any particular biological, physical, or habitat requirements during any life stage, the impacts to this species of non-fishing activities such as oil pollution, dredging activities, and coastal development are likely localized, and minimal as a whole.

# **5.6.3** Cumulative Effects on the Monkfish Fishery (target species)

The primary purpose of the proposed action is to eliminate the TTAC overage backstop provision adopted in Framework 4. As a result of the DPWG assessment, and subsequent adoption in Framework 5 of revised biomass reference points, the Councils have deemed that the backstop is no longer necessary, and would cause undue economic or social impacts, particularly in the SFMA where it would likely result in a one-year closure of the directed fishery. The analysis of impacts of the proposed action suggests that even if landings for FY2007-2009 exceeded the TTAC by 30% annually, the DPWG's projection of stock growth would continue, albeit at a slower rate. Thus, this action is not expected to have a detrimental cumulative effect on the monkfish resource. The cumulative effect of the management measures proposed in this action, in conjunction with actions taken or proposed in the Multispecies FMP to reduce fishing effort on species of concern, combined with the successful management of the scallop fishery allowing those vessels to operate profitably without the need to target monkfish on a scallop DAS, is positive for the monkfish resource. The cumulative effect of non-fishing activities cited above is not likely to be substantial, given the life history and spatial distribution of monkfish relative to those activities.

# **5.6.4** Cumulative Effects on Non-target Species

Since the proposed action maintains effort levels (DAS) that are below the baseline level established in the FMP, the cumulative effect of the management measures contained in this action on non-target species is expected to be consistent with the neutral or positive cumulative

effects of the rebuilding program as described in the FMP and subsequent analyses (Framework 2, Amendment 2, and Framework 4). However, it should be noted that by updating the biological reference points in the FMP through Framework 5, this need for a rebuilding program is eliminated, so further effort reductions are not anticipated.

The principal non-target species affected by the directed monkfish fishery are skates and dogfish. Those species should benefit from the reduced levels of effort (compared to the FMP baseline) that are maintained under this framework adjustment, and so, the cumulative effect of the proposed action is likely positive or neutral. Of note, since the effort level is within the baseline analyzed in the Skate FMP, the proposed adjustment does not trigger a skate baseline review. The cumulative effect of non-fishing activities on non-target species affected by the proposed action, mainly dogfish and skates, would not be significant primarily because the range of these species is widely distributed, and the effect of most non-fishing activities are concentrated along the coast.

# **5.6.5** Cumulative Effects on Protected Species

The proposed action maintains monkfish fishing effort at reduced levels, as analyzed in Framework 4 (31 and 23 DAS in the NFMA and SFMA, respectively), which are lower than the levels set in Amendment 2 and Framework 2 (40 DAS), and, therefore, the proposed action is not expected to have significant cumulative effects on marine mammals and protected species beyond those analyzed and discussed in the noted documents. Those documents concluded that the cumulative effect of the monkfish management program, combined with measures adopted to protect marine mammals and ESA-listed species, and effort control programs in other fisheries affecting monkfish vessels, could enhance, and at least not undermine the protection of marine mammals and other protected species.

#### **5.6.6** Cumulative Effects on Habitat

The cumulative effect of the proposed action on habitat should be viewed in context of the habitat protection measures adopted in Amendment 2 to the Monkfish FMP, as well as actions taken in Sea Scallop and Multispecies FMPs. Effort reductions and Habitat Closed Areas were adopted in Monkfish Amendment 2, Sea Scallops Amendment 10 and Multispecies Amendment 13 to minimize the adverse impact of mobile, bottom-tending fishing gear (bottom trawls and dredges) on benthic EFH. Since the proposed action maintains effort levels that are at or below the baseline level established in the FMP, the cumulative effect of the management measures contained in this action on habitat is expected to be neutral and consistent with the cumulative effects of the management program as described in previous actions under the FMP.

## **5.6.7** Cumulative Effects on Communities

The proposed action in this framework, that is, to eliminate the TTAC backstop provision, will likely have an overall positive cumulative effect on monkfish fishing communities, particularly those in the SFMA, as a result of averting the disruption that would occur if the directed fishery were closed for one year. Both economic and social factors would be negatively affected over the short term by the closure, with no significant offsetting longer term benefit. The 2007 monkfish stock assessment noted that both stocks would continue to experience growth under the TTACs implemented in Framework 4, and the analysis of the impact of a 30% overage in each year between FY2007 and FY2009 indicates that such growth would continue, albeit at a slower pace.

Continued stock growth will likely lead to higher TTACs, a more stable fishery and increased community benefits in the future. The cumulative effect of the proposed action on fishing communities, in conjunction with other past, present and reasonably foreseeable future actions, including non-fishing activities, will, therefore, likely be positive over both the short term and long term.

# **5.6.8** Summary of Cumulative Effects

There are no significant cumulative impacts of this fishery action on the monkfish resource, nontarget species, social/economic resources, EFH, or protected species. The proposed action will maintain fishing effort below FMP baseline levels. The implementation of measures in Framework 5 that reduce carryover DAS, eliminate the 3-hour gillnet rule, and establish a restrictive incidental catch limit for non-DAS vessels fishing in the SNE RMA east of 72°30'W or under a Skate Bait LOA in the SNE RMA, will increase the likelihood that the target TACs will not be exceeded, resulting in continued growth in stock biomass, with overall positive, long-term cumulative effects on all VECs. The proposed elimination of the backstop provision will not significantly alter the cumulative effect of these actions. The proposed action has been determined to be "not significant" under the National Environmental Policy Act (NEPA) guidelines (see Section 6.2.1). This action is also not considered a "significant regulatory action" under the criteria established in Executive Order 12866 (See Section 6.3, *Regulatory Impact Review and Initial Regulatory Flexibility Analysis* for more details on the economic impacts of the proposed action).

# 6.0 Consistency with Applicable Law

#### 6.1 Magnuson-Stevens Act (MSA)

#### **6.1.1** National Standards

Section 301 of the Magnuson-Stevens Act requires that FMPs contain conservation and management measures that are consistent with the ten National Standards (NS). The following section summarizes, in the context of the National Standards, the analyses and discussion of the proposed action that appear in various sections of this framework adjustment document.

(1) Conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery for the United States fishing industry.

Based on the most recent stock assessment (see Appendix I, Framework 5), overfishing is not occurring in either management area, and both stock components are not overfished. The assessment contains numerous cautionary statements, however, and consequently, the Councils are not proposing to change the TTACs (optimum yield), in spite of the change in stock status as a result of the new assessment. In seeking to balance the cautionary nature of the stock assessment with the revised and improved stock status, the Councils propose in this action to eliminate the potential reduction or elimination of DAS based on the TTAC overages in FY2007. This would enable the fishery to continue to achieve an optimum yield from the fishery in FY2009 while not subjecting the stocks to overfishing, or a reduction in biomass.

(2) Conservation and management measures shall be based upon the best scientific information available.

The scientific information used in the development of the proposed action includes NMFS fishery data available through April 19, 2008 and a stock assessment completed in August 2007. These are the best and most recent scientific information available, and are compliant with the Information Quality Act (see Section 6.8). As noted in the discussion of NS 1 above, the Councils have considered the cautionary and uncertain nature of the stock assessment report in applying that information to the proposed action.

(3) To the extent practicable, an individual stock of fish shall be managed as a unit throughout its range, and interrelated stocks of fish shall be managed as a unit or in close coordination.

The FMP established a two-area management program for monkfish, covering the exploitable range of the species. SARC 34 discussed the basis for assessing goosefish as a single stock, versus two stocks, and concluded that information was insufficient to make a determination on a biological basis. The SARC noted that the choice of number of management units is independent of the number of assessment units, and that the use of two management units may be required because of the characteristically different fisheries that occur in the two areas, in terms of gear, catch composition, seasonality and other parameters. In Amendment 2, the Councils considered a single-stock approach, but rejected it for further analysis and consideration prior to the development of the DSEIS.

(4) Conservation and management measures shall not discriminate between residents of different States. If it becomes necessary to allocate or assign fishing privileges among various United States fishermen, such allocation shall be (A) fair and equitable to all such fishermen; (B) reasonably calculated to promote conservation; and (C) carried out in such manner that no particular individual, corporation, or other entity acquires an excessive share of such privileges.

The proposed action does not discriminate between residents of different states. While the FMP measures developed to achieve the conservation goals of the FMP may have a differential impact on sectors of the industry, that differential impact is not the purpose. The two-area management program is based on differences in the fisheries between the two areas, and not based on allocation of fishing privileges differently among sectors of the industry. In fact, all limited access permit holders, with the exception of Category H permits, may fish in either management area, subject to the rules that apply in each. In Amendment 2, the Councils qualified a group of vessels for a limited access permit (Category H permits), that had not qualified under the original FMP, on the condition that on those vessels would be restricted to fishing only in their historical area, at the southernmost range of the fishery.

(5) Conservation and management measures shall, where practicable, consider efficiency in the utilization of fishery resources; except that no such measure shall have economic allocation as its sole purpose.

The Councils propose to eliminate the potential reduction or elimination of DAS in FY2009 because that backstop provision was developed when the monkfish stocks were considered to be overfished based upon NMFS fall trawl survey biomass indices. In light of the revised status, the Councils have determined that such action is not necessary and would result in an inefficient

utilization of the resource by preventing the achievement of optimum yield. While the FMP generally, and the proposed action specifically, may have differential impacts on various fishery groups, economic allocation is not one of the goals or objectives, nor does the action proposed in this framework directly allocate the fishery resource.

(6) Conservation and management measures shall take into account and allow for variations among, and contingencies in, fisheries, fishery resources, and catches.

The two-area management approach of the FMP is specifically intended to take into account the differences in fisheries between the two areas. Other measures in the FMP, such as the permit categories and gear- and area-based incidental catch limits are also based on the differences among various fisheries that catch monkfish either as a target or incidental catch species. These considerations are not changed under the proposed action.

(7) Conservation and management measures shall, where practicable, minimize costs and avoid unnecessary duplication.

This FMP does not duplicate measures or regulations implemented under other FMPs, but coordinates with them. By maintaining the same DAS allocation as in the previous two fishing years for FY2009, the costs to fishing businesses as a result of having to change fishing plans for one year, if DAS reduced or fishery closed, would be avoided.

(8) Conservation and management measures shall, consistent with the conservation requirements of this Act (including the prevention of overfishing and rebuilding of overfished stocks), take into account the importance of fishery resources to fishing communities by utilizing economic and social data that meet the requirements of paragraph (2), in order to (A) provide for the sustained participation of such communities, and (B) to the extent practicable, minimize adverse economic impacts on such communities.

The actions proposed in this framework are not expected to have significant adverse effects on fishing communities (see Section 5.4), and are likely to have positive effects by allowing the directed monkfish fishery to continue without negatively affecting the stock status. The recent change in biomass reference points and stock status (Framework 5) will likely have a long-term positive effect on those communities since it obviates the need for additional restrictions to rebuild overfished stocks, or stop overfishing.

(9) Conservation and management measures shall, to the extent practicable, (A) minimize bycatch and (B) to the extent bycatch cannot be avoided, minimize the mortality of such bycatch.

The FMP contains numerous measures to minimize bycatch and bycatch mortality, including large-mesh regulations, incidental catch allowances for all fisheries, and, since Framework 4 was implemented, the ability to declare a monkfish DAS while at sea by VMS if a vessel exceeds the incidental catch limit and is fishing in the NFMA. The proposed action, which would allow a controlled directed fishery in FY2009, may contribute to minimizing the bycatch of monkfish that is caught in excess of the restrictive incidental limits that would otherwise apply if the monkfish fishery in one or both management areas were to close.

(10) Conservation and management measures shall, to the extent practicable, promote the safety of human life at sea.

This framework adjustment does not substantially change the impact of the FMP on safety at sea since this action does not contain any management measures that would affect safety at sea.

## **6.1.2** Required Provisions

Section 303 of the MSFCMA contains fifteen additional required provisions for FMPs, which are discussed below. Any FMP prepared by any Council, or by the Secretary, with respect to any fishery, shall:

(1) contain the conservation and management measures, applicable to foreign fishing and fishing by vessels of the United States, which are-- (A) necessary and appropriate for the conservation and management of the fishery to prevent overfishing and rebuild overfished stocks, and to protect, restore, and promote the long-term health and stability of the fishery; (B) described in this subsection or subsection (b), or both; and (C) consistent with the National Standards, the other provisions of this Act, regulations implementing recommendations by international organizations in which the United States participates (including but not limited to closed areas, quotas, and size limits), and any other applicable law;

The Monkfish FMP comprises conservation and management measures designed to achieve optimum yield from the fishery and prevent overfishing. Based on the results of the most recent stock assessment, and the biomass reference points subsequently adopted in Framework 5, monkfish is not overfished in either management area. The action proposed in this framework would enable the fishery to continue to achieve optimum yield from the fishery while not causing overfishing, and promote stability in the fishery by averting an unnecessary reduction or elimination of DAS for FY2009.

(2) contain a description of the fishery, including, but not limited to, the number of vessels involved, the type and quantity of fishing gear used, the species of fish involved and their location, the cost likely to be incurred in management, actual and potential revenues from the fishery, any recreational interest in the fishery, and the nature and extent of foreign fishing and Indian treaty fishing rights, if any;

The fishery and its components, including biological, social and economic aspects, are described in the Affected Environment section of the EIS for the FMP, as well as in subsequent environmental documents (Amendment 2 and Frameworks 2 - 5), updated in Section 4.0 of this document. There is no foreign fishing for monkfish, and there are no known Indian treaty fishing rights pertaining to monkfish.

(3) assess and specify the present and probable future condition of, and the maximum sustainable yield and optimum yield from, the fishery, and include a summary of the information utilized in making such specification;

The most recent stock assessment (2007 Northeast Data Poor Stocks Working Group) contains the best estimate of the present condition of the monkfish resource, as well as estimates of future stock growth under the TTACs implemented in Framework 4. The projected impact of TAC overages in FY2007 are presented in Section 5.0.

(4) assess and specify-- (A) the capacity and the extent to which fishing vessels of the United States, on an annual basis, will harvest the optimum yield specified under paragraph (3); (B) the portion of such optimum yield which, on an annual basis, will not be harvested by fishing vessels of the United States and can be made available for foreign fishing; and (C) the capacity and extent to which United States fish processors, on an annual basis, will process that portion of such optimum yield that will be harvested by fishing vessels of the United States;

There is sufficient capacity for United States' vessels to harvest the optimum yield from the monkfish resource, as evident by the fact that, even though the fishery is under a limited access program, vessels are restricted in the number of DAS and the amount of monkfish they can land per DAS to stay within the TTACs. Thus, there is no amount of optimum yield available for foreign fishing. Furthermore, sufficient domestic processing capacity exists to utilize all monkfish harvested by United States vessels.

(5) specify the pertinent data which shall be submitted to the Secretary with respect to commercial, recreational, charter fishing, and fish processing in the fishery, including, but not limited to, information regarding the type and quantity of fishing gear used, catch by species in numbers of fish or weight thereof, areas in which fishing was engaged in, time of fishing, number of hauls, economic information necessary to meet the requirements of this Act, and the estimated processing capacity of, and the actual processing capacity utilized by, United States fish processors;

The Monkfish Plan Development Team (PDT) compiles and publishes annually a description of the fishery, including affected communities, as part of the Stock Assessment and Fishery Evaluation (SAFE) Report, most recently in January, 2008 as part of the Framework 5 document. Section 4.4 of this document, Human Environment, updates, to the extent possible, the information contained in Framework 5. There is no significant recreational or charter fishery for monkfish.

(6) consider and provide for temporary adjustments, after consultation with the Coast Guard and persons utilizing the fishery, regarding access to the fishery for vessels otherwise prevented from harvesting because of weather or other ocean conditions affecting the safe conduct of the fishery; except that the adjustment shall not adversely affect conservation efforts in other fisheries or discriminate among participants in the affected fishery;

The framework adjustment mechanism established in the FMP provides the Council with the ability to change regulations to address issues such as vessel safety within the context of the fishery management program on an annual, or as needed basis.

(7) describe and identify essential fish habitat for the fishery based on the guidelines established by the Secretary under section 305(b)(1)(A), minimize to the extent practicable adverse effects on such habitat caused by fishing, and identify other actions to encourage the conservation and enhancement of such habitat;

Section 4.3 contains the description of monkfish essential fish habitat, and Section 5.2 contains the analysis of impacts of the proposed action and alternatives on essential fish habitat.

(8) in the case of a fishery management plan that, after January 1, 1991, is submitted to the Secretary for review under section 304(a) (including any plan for which an amendment is submitted to the Secretary for such review) or is prepared by the Secretary, assess and specify the nature and extent of scientific data which is needed for effective implementation of the plan;

The Council prepares annually a Stock Assessment and Fishery Evaluation (SAFE) Report which is used to monitor the fishery and the progress of the FMP. Section 4.0 of the Framework 5 document contains the information and data for the 2006 fishing year that is usually provided in the SAFE Report. Furthermore, Section 6.8 discusses this FMP's consistency with the Information Quality Act.

(9) include a fishery impact statement for the plan or amendment (in the case of a plan or amendment thereto submitted to or prepared by the Secretary after October 1, 1990) which shall assess, specify, and analyze the likely effects, if any, including the cumulative conservation, economic, and social impacts, of the conservation and management measures on, and possible mitigation measures for—(A) participants in the fisheries and fishing communities affected by the plan or amendment; (B) participants in the fisheries conducted in adjacent areas under the authority of another Council, after consultation with such Council and representatives of those participants; and (C) the safety of human life at sea, including whether and to what extent such measures may affect the safety of participants in the fishery;

The impacts of the proposed action and alternatives, including cumulative impacts, impacts on the physical and human environments are discussed in Section 5.0 of this document.

(10) specify objective and measurable criteria for identifying when the fishery to which the plan applies is overfished (with an analysis of how the criteria were determined and the relationship of the criteria to the reproductive potential of stocks of fish in that fishery) and, in the case of a fishery which the Council or the Secretary has determined is approaching an overfished condition or is overfished, contain conservation and management measures to prevent overfishing or end overfishing and rebuild the fishery;

Based on the recommendations of the most recent stock assessment (see Appendix I, Framework 5), the Councils have revised the reference point used to identify when the resource is overfished. Based on that assessment and the revised reference point, the stock is not overfished in either management area.

(11) establish a standardized reporting methodology to assess the amount and type of bycatch occurring in the fishery, and include conservation and management measures that, to the extent practicable and in the following priority-- (A) minimize bycatch; and (B) minimize the mortality of bycatch which cannot be avoided;

NMFS currently has in place reporting requirements for all vessels participating in the Federal monkfish fishery, including requirements to report all bycatch on the Vessel Trip Reports (VTR), and maintains, to the extent the budget allows, a fishery observer program on board vessels.

Additionally, VMS is mandatory on the majority of limited access monkfish vessels through the requirements of the Atlantic Sea Scallop and Northeast Multispecies FMPs. Since VMS allows the tracking of fishering locations, coordination of this information with observer coverage may allow for more accurate bycatch assessment and projection. Also, the emerging Study Fleet Program can provide another source of bycatch information for the different gear types and areas. The Study Fleet Program is designed to enhance fishery-dependent data necessary for management decisions through the development of electronic reporting technology.

The establishment of a Standardized Bycatch Reporting Methodology (SBRM) is required pursuant to section 303(a)(11) of the Magnuson-Stevens Act. In January 2006, development began on the Northeast Region Omnibus SBRM Amendment. This amendment covers 13 FMPs, 39 managed species, and 14 types of fishing gear. The purpose of the amendment is to: Explain the methods and processes by which bycatch is currently monitored and assessed for Northeast Region fisheries; determine whether these methods and processes need to be modified and/or supplemented; establish standards of precision for bycatch estimation for all Northeast Region fisheries; and document the SBRM established for all fisheries managed through the FMPs of the Northeast Region. The SBRM Amendment was approved on October 22, 2007, and a final rule became effective on February 27. 2008.

For the reasons noted above, and given the fact that NMFS is approaching the bycatch issue on a national level versus on a fishery-by-fishery basis, the Councils determined that is not appropriate or practicable to implement a significantly new or expanded reporting methodology focused just on the monkfish fishery through amendments to the FMP. Therefore, no additional specific bycatch monitoring alternatives are being recommended in this action.

(12) assess the type and amount of fish caught and released alive during recreational fishing under catch and release fishery management programs and the mortality of such fish, and include conservation and management measures that, to the extent practicable, minimize mortality and ensure the extended survival of such fish;

Monkfish catch in recreational fisheries is not significant enough to be recorded in the recreational catch data.

(13) include a description of the commercial, recreational, and charter fishing sectors which participate in the fishery, including its economic impact, and, to the extent practicable, quantify trends in landings of the managed fishery resource by the commercial, recreational, and charter fishing sectors;

Monkfish catch in recreational fisheries is not significant enough to be recorded in the recreational catch and vessel data. Commercial fishery sectors are described in the Affected Environment section of the EIS for the FMP, as well as in subsequent environmental documents (Amendment 2 and Frameworks 2 - 5), updated in Section 4.0 of this document.

(14) to the extent that rebuilding plans or other conservation and management measures which reduce the overall harvest in a fishery are necessary, allocate, taking into consideration the economic impact of the harvest restrictions or recovery benefits on the fishery participants in each sector, any harvest restrictions or recovery benefits fairly and equitably among the commercial, recreational, and charter fishing sectors in the fishery;

As noted under the discussion of National Standard 4 in the previous section, while conservation measures may have a differential impact on different sectors of the industry, that differential impact is not the purpose of the regulations, and is done in a manner that is intended to achieve the conservation and management goals of the FMP. The two-area management program is based on differences in the fisheries between the two areas, and not to allocate fishing privileges differently among sectors of the industry.

(15) establish a mechanism for specifying annual catch limits in the plan (including a multiyear plan), implementing regulations, or annual specifications, at a level such that overfishing does not occur in the fishery, including measures to ensure accountability.

MSA Section 303 note states that this required provision does not take effect until fishing year 2010 for stocks that are subject to overfishing, and 2011 for all other stocks. Based on the most recent assessment (DPWG 2007) overfishing is not occurring in either northern or southern monkfish areas. As a result, the Councils intend to begin development of an amendment to the FMP in 2009 for implementation in 2011 to address these and other new requirements of the Magnuson-Stevens Act.

#### **6.1.3 EFH Assessment**

According to the EFH Final Rule, "federal agencies are not required to provide NMFS with assessments regarding actions that they have determined would not adversely affect EFH." The action proposed under this framework would not have an adverse effect on EFH of federally managed species, and, therefore, no EFH Assessment is required or provided.

# **6.2** National Environmental Policy Act (NEPA)

This section evaluates the proposed action in the context of NEPA, for determining the significance of federal actions, in this case the setting of annual monkfish fishery specifications.

# **6.2.1** Finding of No Significant Impact (FONSI Statement)

NMFS has provided guidance for the determination of significance under NEPA in Section 6.01(b) of NOAA Administrative Order NAO 216-6, May 20, 1999, as well as in NMFS Instruction 3-124-1, July 22, 2005. NOAA Administrative Order 216-6 contains criteria for determining the significance of the impacts of a proposed action. In addition, the Council on Environmental Quality regulations at 40 CFR 1508.27 state that the significance of an action should be analyzed both in terms of "context" and "intensity". The analysis of significance of this action is, therefore, based on both the NAO 216-6 criteria and CEQ's context and intensity criteria. Each criterion listed in the sixteen questions below is relevant in making a finding of no significant impact, and have been considered individually, as well as in combination with the others. The sixteen criteria to be considered are addressed below:

1. Can the proposed action be reasonably expected to jeopardize the sustainability of any target species that may be affected by the action?

Based on the analysis and conclusions of the DPWG assessment, the TTACs established in Framework 4, which are not modified by this framework, would not jeopardize the sustainability of monkfish. The DPWG also concluded that overfishing is not occurring and monkfish is rebuilt in both management areas. In spite of the apparent overage of the TTAC in FY2007, the action

taken in Framework 5 (pending) will reduce the likelihood that such overages will occur in the future, and as discussed in Section 5.1, such overages,, should they continue to occur will not significantly impact monkfish stock status and growth trends. Therefore, the Councils do not expect that the action proposed in the framework, eliminating the TTAC backstop provision, would negatively affect the long-term sustainability of the monkfish fishery.

2. Can the proposed action be reasonably expected to jeopardize the sustainability of any non-target species?

As noted in Section 5.1.1, the proposed action is not expected to jeopardize the sustainability of any non-target species. The level of fishing effort resulting from the proposed action is the same as, or moderately below the levels analyzed in previous management actions, specifically Framework 4 in 2007, as well as Framework 2, Amendment 2 and the original FMP. Although information about bycatch is limited and inconclusive with respect to fishery-wide impacts, the impact of the monkfish fishery on non-target species is not significant, primarily as a result of the large-mesh gear requirements and low level of effort allocated.

3. Can the proposed action be reasonably expected to allow substantial damage to the ocean and coastal habitats and/or EFH as defined under the Magnuson-Stevens Fishery Conservation and Management Act and identified in FMPs?

The action under consideration would not increase monkfish effort in either management area. Even under the no action alternative, which could result in a reduction or termination of the directed fishery for one year, the effect on habitat would be minimal because of the temporary nature of the measure. The overall effect of the fishery on EFH was discussed and mitigated for in Amendment 2, and in Multispecies Amendment 13, and the action under consideration does not change those findings. As discussed in Section 5.2, the action proposed in this framework adjustment would not have an adverse impact on EFH for any federally managed species in the region.

4. Can the proposed action be reasonably expected to have a substantial adverse impact on public health or safety?

None of the actions proposed in this framework adjustment would create a safety or public health concern.

5. Can the proposed action be reasonably expected to adversely affect endangered or threatened species, marine mammals, or critical habitat of these species?

The activities and fishing effort levels conducted under the proposed action are within the scope of those considered in the FMP and do not change the basis for the determinations made in previous consultations on this fishery, as noted in Section 5.1.2.

6. Can the proposed action be expected to have a substantial impact on biodiversity and/or ecosystem function within the affected area (e.g., benthic productivity, predator-prey relationships)?

The proposed action is not expected to have a substantial impact on biodiversity and ecosystem function within the affected area. While the role of monkfish within the ecosystem is not well

understood, the maintenance of this predator and opportunistic feeder at historical and sustainable levels is likely to promote biodiversity and ecosystem function over the long term.

7. Are significant social or economic impacts interrelated with significant natural or physical environmental effects?

There are no significant social or economic impacts, nor are there any significant natural or physical environmental effects expected to result from the proposed action (Section 5.0, Environmental Consequences). Under the no action alternative, some vessels and communities may experience a reduction in revenues from monkfish fishing for the period of one year (the duration of the backstop measure), and, conversely, not be subject to that reduction under the proposed action. Given the relatively short duration of this restriction, however, neither the proposed action nor the no action alternative would have a significant impact on vessels or communities in the context of NEPA.

- 8. Are the effects on the quality of human environment likely to be highly controversial? The effects of the proposed action on the human environment are not expected to be highly controversial, as they are based on the best and most recent scientific information available.
  - 9. Can the proposed action reasonably be expected to result in substantial impacts to unique areas, such as historic or cultural resources, park land, prime farmlands, wetlands, wild and scenic rivers or ecologically critical areas?

Other than the Stellwagen Bank National Marine Sanctuary (SBNMS), the proposed action does not affect areas of historic or cultural resources, park land, farmland, wetlands wild and scenic rivers or ecologically critical areas that are not already under protection (essential fish habitat areas and marine mammal protection zones). The effect on SBNMS is not likely to be substantial since the area is not a major monkfish fishing ground, and since the proposed action does not alter current monkfish effort levels. Fishing vessels intentionally avoid shipwrecks, such as the SS "Portland" which is located within the SBNMS and is listed on the National Register of Historic Places (see question 12).

10. Are the effects on the human environment likely to be highly uncertain or involve unique or unknown risks?

The analysis of the effects on the human environment of the proposed adjustment is consistent with the analyses done for prior adjustments and a broad range of fishery management actions taken by the Councils. While these analyses have some inherent uncertainty because they involve predicting future impacts that depend on a wide range of variables, such as the response of the target species to the management measures and the short-term range of alternative fisheries for affected vessels. Thus, the risks inherent in analyses of the effects on the human environment are due to uncertainty, those risks are not unique or unknown.

11. Is the proposed action related to other actions with individually insignificant, but cumulatively significant impacts?

The proposed action is related to other recent management actions beginning with the implementation of the Monkfish FMP in 1999 which put in place most of the management measures that are currently in effect. While the FMP and the associated monkfish rebuilding program resulted in some significant impacts to the human environment, the framework actions and Amendment 2 which followed and which refined the original FMP measures were found to not result in significant impacts. Thus, while the proposed action is related to a recent past action that was found to have significant impacts (the rebuilding plan under the FMP), as discussed and analyzed in the cumulative effects assessment (CEA), this action when combined with other past, present and RFFAs would not result in significant cumulative impacts (see the CEA in Section 5.6).

12. Is the proposed action likely to adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural or historic resources?

The proposed action is not likely to directly or indirectly affect objects listed in the National Register of Historic Places or cause significant impact to scientific, cultural or historical resources due to the spatial remoteness of the regulated activity relative to listed sites. The only object in the management area listed on the National Register of Historic Places is the wreck of the steamship "Portland", within the Stellwagen Bank National Marine Sanctuary. The current regulations allow fishing within the Sanctuary, however, vessels typically avoid fishing near shipwrecks or bottom obstructions in order to avoid tangling and losing expensive fishing gear. Therefore, this action would not result in any adverse affects to the wreck of the "Portland".

13. Can the proposed action reasonably be expected to result in the introduction or spread of a non-indigenous species?

The proposed action does not result in any increased fishing effort that could result in the introduction or spread of a non-indigenous species. In 2002, an invasive colonial sea squirt (*Didemnum sp*) was observed on Georges Bank. The tunicate occurs on pebble gravel habitat, and does not occur on moving sand. NMFS has surveyed the area and is monitoring the growth. At this time, there is no evidence that fishing spreads this species more than it would spread naturally, however, the role of fishing gear in the spread of invasive tunicates should be regularly evaluated and monitored..

14. Is the proposed action likely to establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration?

No, the proposed action is not likely to establish a precedent for future action with significant effects, and it does not represent a decision in principle about future consideration. This action is taken under an existing fishery management program. The future management regime for the monkfish fishery, should changes become necessary, has not been defined, and would depend on the advancements made in the scientific understanding of the species and its population dynamics, or shifts in management philosophy. The impact of any future changes would be analyzed as to their significance in the process of developing and implementing them.

15. Can the proposed action reasonably be expected to threaten a violation of Federal, State, or local law or requirements imposed for the protection of the environment?

No, the proposed action is not reasonably expected to threaten a violation of Federal, State or local laws or requirements imposed for the protection of the environment. This action does not propose any changes that would provide incentives for environmental laws to be broken.

16. Can the proposed action be reasonably expected to result in cumulative adverse effects that could have a substantial effect on the target species or non-target species?

Cumulative effects on target and non-target species related to the proposed action are discussed in Section 5.6 of this document. Based on that discussion, cumulative effects are not expected to be significant, and there is no change from the original analysis of cumulative impacts as assessed in the FMP and in the EIS for Amendment 2.

#### **FONSI Statement**

In view of the analysis presented in this document, the EA/RIR/RFA for the Framework 6 to the Monkfish FMP, as well as in the EIS for the Monkfish Fishery Management Plan (including the Supplemental EIS for Amendment 2), the proposed action will not have a significant effect on the human environment, with specific reference to the criteria contained in Section 6.02 of NOAA Administrative Order NAO 216-6, Environmental Review events for Implementing the National Environmental Policy Act, May 20, 1999. The impacts and alternatives in this document were analyzed with regard to both context and intensity, and are deemed not to be significant. Accordingly, the preparation of a Supplemental Environmental Impact Statement for the proposed action is not necessary.

NMFS. North	neast Regional	Administrator
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**Date** 

# 6.3 Regulatory Impact Review and Initial Regulatory Flexibility Analysis (EO 12866 and IRFA)

# 6.3.1 Determination of significance under E.O. 12866

National Marine Fisheries Service guidelines provide criteria to be used to evaluate whether a proposed action is significant. A "significant regulatory action" means any regulatory action that is likely to result in a rule that may:

1. Have an annual effect on the economy of \$100 million or more, or adversely effect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local or tribal governments or communities.

This action would have neither an annual effect on the economy of \$100 million, nor adversely effect in a material way the economy, a sector of the economy, productivity, competition, the environment, public health or safety, or State, local, tribal governments or communities. During fishing years 1998 through 2005, gross monkfish revenues averaged approximately \$41.6 million per fishing year. Monkfish revenues declined to \$29.5 million in fishing year 2006, with a similar projection for FY2007. In the absence of the proposed measure, monkfish revenues would contract in fishing year 2009 by an unspecified amount due to the effort reductions previously specified. It is estimated that with the proposed measure, monkfish revenues in FY2009 would be similar to FY2007. Thus, the impact on the National economy is expected to be maintenance of monkfish revenues in FY2009.

2. Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency.

The proposed action does not create an inconsistency or otherwise interfere with an action taken or planned by another agency. The activity that would be allowed under this action involves commercial fishing for monkfish in Federal waters of the EEZ, for which NMFS is the sole agency responsible for regulation. Therefore, there is no interference with actions taken by another agency. Furthermore, this action would create no inconsistencies in the management and regulation of commercial fisheries in the Northeast.

3. Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof.

The proposed action is a measure to remove the TTAC overage backstop provision created by Framework 4, which would remove the potential for effort reductions in FY2009. This action is unrelated to any entitlements, grants, user fees, or loan programs, and, therefore, cannot be considered significant under the third criterion specified in E.O. 12866.

4. Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

The proposed action is being taken pursuant to the mandates of the Sustainable Fisheries Act to end overfishing, rebuild the stock to MSY in 10 years, and achieve optimum yield from the fishery using the best scientific information available. Therefore, the proposed action would not be considered significant under the fourth criterion specified in E.O. 12866.

Because none of these criteria applies, NMFS has determined that the proposed action in the monkfish fishery to remove the TTAC overage backstop provision is not significant for the purpose of E.O. 12866.

# **6.3.2** Initial Regulatory Flexibility Analysis (IRFA)

The following sections contain analyses of the effect of the proposed action on small entities in accordance with Section 603(b) of the Regulatory Flexibility Act.

# 6.3.2.1 Reasons for Considering the Action

The reason for this action is to remove an existing measure (TTAC overage backstop provision) that was put into place when there were concerns regarding potential overfishing of monkfish as the FMP neared the end of its rebuilding period. Changes in the BRPs under Framework 5 now show that monkfish is not overfished, and overfishing is not occurring. Biological modeling indicates that even at TTAC overage levels at around 30%, this would not change. Consequently, the existing effort reduction measures for FY2009 would have a negative economic impact on the fishery, without materially aiding in rebuilding of the stock.

# 6.3.2.2 Objectives and legal basis for the action

The regulations implementing the FMP, found at 50 CFR Part 648, authorize the Council to adjust management measures as needed to achieve the FMP goals. The objective of this action is to achieve the goals of the FMP while minimizing adverse economic impacts. Thus, the proposed action is consistent with the goals of the FMP and its implementing regulations.

# 6.3.2.3 Description and number of small entities to which the rule applies

All of the entities (fishing vessels) affected by this action are considered small entities under the SBA size standards for small fishing businesses (\$4.0 million in gross sales). As of March 14, 2008, there were 765 limited access monkfish permit holders and 2,211 vessels holding an open access Category E permit. Based on Vessel Trip Report records in FY2006, 615 limited access permit holders participated in the monkfish fishery. During the same period, 567 incidental permit holders reported landing monkfish. The number of vessels by permit category fishing in each area for FY2006 is shown in Table 7.

This action would affect limited access monkfish permit holders that fished, at some time, in the SFMA. Based on vessel activity reports from FY2006 (the most recent fishing year for which complete information is available) this action could affect 462 limited access monkfish vessels, including 229 vessels that fished only in the SFMA and the 233 vessels that fished in both the NFMA and the SFMA.

Permit	Only NFMA	Only SFMA	NFMA and	Total
Category	Trips	Trips	SFMA Trips	vessels
A	0	10	1	11
В	0	31	1	32
C	51	93	145	289
D	102	89	84	275
Е	153	349	57	567*
F	0	0	2	2
Н	0	6	0	6
Total vessels	306	578	290	1,182

<sup>\*</sup> This includes eight vessels that did not have an area reported on their VTR.

Table 7 Number of vessels fishing in NFMA, SFMA or both areas by permit category in FY2006, based on VTR records.

# 6.3.2.4 Reporting, recordkeeping and other compliance requirements

This action does not introduce any new reporting, recordkeeping, or other compliance requirements.

# 6.3.2.5 Duplication, overlap or conflict with other Federal rules

The proposed rule does not duplicate, overlap or conflict with other Federal rules.

# 6.3.2.6 Economic impacts on small entities resulting from the proposed action

The proposed management change is a single measure that would affect limited access monkfish vessels that would fish in SFMA. In the absence of this measure, it is assumed that the directed monkfish fishery would close in the SFMA in FY2009 due to landings in FY2007 exceeding of the TTAC by 30% or more. This proposed measure would mean that such restrictions on effort would not be required in FY2009, no matter the level by which the FY2007 landings exceeded the TAC. Using a trip model, it was estimated that the proposed measure would result in positive or neutral changes in vessel net revenues, crew payments and monkfish revenues in FY2009 compared to the status quo, as show in Table 8below.

		Percentage change from status quo:  Average		
		Average change in	change in net payment to	Change in monkfish
	Number	vessel return	crew	revenues
Fishing only in NFMA	153	0	0	0
Fishing only in SFMA <sup>1</sup>	228	+9.9	+14.0	+381.4
Fishing in NFMA and SFMA <sup>2</sup>	231	-0.5	-1.4	-0.8

<sup>&</sup>lt;sup>1</sup>One vessel had insufficient information to be included in the analysis.

Table 8 Estimated change (%) in average vessel returns, payments to crew and monkfish revenues of proposed alternative compared to no action.

# **6.4** Endangered Species Act (ESA)

<sup>&</sup>lt;sup>2</sup> Vessels with category F permits are not included in this calculation.

Section 7 of the ESA requires Federal agencies conducting, authorizing, or funding activities that affect threatened or endangered species to ensure that those effects do not jeopardize the continued existence of listed species. The Councils have concluded that the proposed action in Framework 6 is not likely to result in jeopardy to any ESA-listed species under NMFS jurisdiction, or alter or modify any critical habitat, based on the analyses and discussions in this document. For further information on the potential impacts of the fishery and proposed management action, see Section 5.1.2 of this document. When the Councils submit this document to NMFS, it is anticipated that the agency will initiate an informal consultation on this action under Section 7 of the ESA.

#### 6.5 Marine Mammal Protection Act (MMPA)

The Councils have reviewed the impacts of Framework 6 on marine mammals, and concluded that the proposed action is consistent with the provisions of the MMPA, and would not alter existing measures to protect the species likely to inhabit the management unit of the monkfish fishery. For further information on the potential impacts of the fishery and the proposed management action on marine mammals, see Section 5.1.2 of this document.

# 6.6 Paperwork Reduction Act (PRA)

The purpose of the PRA is to control and, to the extent possible, minimize the paperwork burden for individuals, small businesses, nonprofit institutions, and other persons resulting from the collection of information by or for the Federal Government. This action proposes no measures that change the total reporting burden associated with an activity, and does not change the overall burden estimate. Therefore, further action under the PRA is not required.

# **6.7** Coastal Zone Management Act (CZMA)

Section 307(c)(1) of the Federal CZMA of 1972 requires that all Federal activities that directly affect the coastal zone be consistent with approved state coastal zone management programs to the maximum extent practicable. The NEFMC reviewed the approved coastal zone management plans of the following states to determine the consistency of the actions proposed in Framework 6 to the Monkfish FMP with the enforceable policies of the state programs: Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, Pennsylvania, New Jersey, Delaware, Maryland, Virginia, and North Carolina. Under Framework 5 to the Monkfish FMP, NMFS submitted a general consistency determination for the entire Monkfish FMP, including framework adjustments, to these states. NMFS developed this general consistency determination under regulations implementing the CZMA at 15 CFR 930.36(c). This determination was submitted on January 28, 2008, for review by the responsible state agencies under section 307 of the CZMA. Responses indicating concurrence of consistency were received from New Hampshire, Connecticut, Rhode Island, New Jersey, Pennsylvania, Virginia, and North Carolina. No responses were received from the remaining states, so consistency was inferred.

# **6.8** Information Quality Act (IQA)

Pursuant to NMFS guidelines implementing Section 515 of Public Law 106-554 (the Information Quality Act), all information products released to the public must first undergo a Pre-Dissemination Review to ensure and maximize the quality, objectivity, utility, and integrity of information (including statistical information) disseminated by Federal agencies. The following paragraphs address these requirements.

## **Utility**

The information presented in this document is helpful to the intended users (the affected public) by presenting a clear description of the purpose and need of the proposed action, the measures proposed, and the impacts of those measures. A discussion of the reasons for selecting the proposed action is included so that intended users may have a full understanding of the proposed action and its implications. The intended users of the information contained in this document include individuals involved in the monkfish fishery, (e.g., fishing vessels, fish processors, fish processors, fishery managers), and other individuals interested in the management of the monkfish fishery. The information contained in this document will be helpful and beneficial to owners of vessels holding limited access monkfish permits since it will notify these individuals of the elimination of the TTAC backstop provision. This information will enable these individuals to adjust their management practices and make appropriate business decisions based upon this revision to the FMP.

Until a proposed rule is prepared and published, this EA/RIR/IRFA is the principal means by which the information contained herein is available to the public. The information provided in this document is based on the most recent available information from the relevant data sources. The information contained in this document includes detailed, and relatively recent information on the monkfish resource and, therefore, represents an improvement over previously available information. For example, the Affected Human Environment section of the EA updated the information contained in the most recent (FY2006) Stock Assessment and Fishery Evaluation (SAFE Report) for the monkfish fishery (included in the EA for Framework 5). In addition, this document includes applicable information from the most recent monkfish stock assessment (July 2007). This EA/RIR/IRFA will be subject to public comment through proposed rulemaking, as required under the Administrative Procedure Act and, therefore, may be improved based on comments received.

This document is available in several formats, including printed publication, and online through the NEFMC's web page (<a href="www.nefmc.org">www.nefmc.org</a>). The <a href="Federal Register">Federal Register</a> notice that announces the proposed rule and the final rule and implementing regulations will be made available in printed publication, on the website for the Northeast Regional Office (<a href="www.nero.noaa.gov">www.nero.noaa.gov</a>), and through the Regulations.gov website. The <a href="Federal Register">Federal Register</a> documents will provide metric conversions for all measurements.

## **Integrity**

Prior to dissemination, information associated with this action, independent of the specific intended distribution mechanism, is safeguarded from improper access, modification, or destruction, to a degree commensurate with the risk and magnitude of harm that could result from the loss, misuse, or unauthorized access to or modification of such information. All electronic information disseminated by NMFS Service adheres to the standards set out in Appendix III, "Security of Automated Information Resources," of OMB Circular A-130; the Computer Security Act; and the Government Information Security Act. All confidential information (e.g., dealer purchase reports) is safeguarded pursuant to the Privacy Act; Titles 13, 15, and 22 of the U.S. Code (confidentiality of census, business, and financial information); the

Confidentiality of Statistics provisions of the Magnuson-Stevens Act; and NOAA Administrative Order 216-100, Protection of Confidential Fisheries Statistics.

# **Objectivity**

For purposes of the Pre-Dissemination Review, this document is considered to be a "Natural Resource Plan." Accordingly, the document adheres to the published standards of the Magnuson-Stevens Act; the Operational Guidelines, Fishery Management Plan Process; the Essential Fish Habitat Guidelines; the National Standard Guidelines; and NOAA Administrative Order 216-6, Environmental Review Procedures for Implementing the National Environmental Policy Act.

This information product uses information of known quality from sources acceptable to the relevant scientific and technical communities. Several sources of data were used in the development of Framework 6. These data sources included, but were not limited to, historical and current landings data from the Commercial Dealer Weighout database, vessel trip report (VTR) data, effort data collected through the monkfish DAS program, fisheries independent data collected through the NMFS bottom trawl surveys, and the July 2007 monkfish stock assessment. Therefore, the analyses contained in this document were prepared using data from accepted sources. Furthermore, these analyses have been reviewed by members of the Monkfish Plan Development Team.

Despite current data limitations, the conservation and management measures proposed for this action were selected based upon the best scientific information available. The analyses conducted in support of the proposed action were conducted using information from the most recent fishing years through FY2006. Specialists (including professional members of plan development teams, technical teams, committees, and Council staff) who worked with these data are familiar with the most current analytical techniques and with the available data and information relevant to the monkfish fishery. In addition, this action utilizes information from the July 2007 monkfish stock assessment, which is considered the best and most recent scientific information available concerning the status of the monkfish resource.

The policy choices are clearly articulated, in Section 3.0 of this document, as the management alternatives considered in this action. The supporting science and analyses, upon which the policy choices are based, are summarized and described in Section 5.0 of this document. All supporting materials, information, data, and analyses within this document have been, to the maximum extent practicable, properly referenced according to commonly accepted standards for scientific literature to ensure transparency.

The review process used in preparation of this document involves the responsible Council (the NEFMC), the Northeast Fisheries Science Center (Center), the Northeast Regional Office (NERO), and NMFS Service Headquarters. The Center's technical review is conducted by senior level scientists with specialties in population dynamics, stock assessment methods, demersal resources, population biology, and the social sciences. The Council review process involves public meetings at which affected stakeholders have opportunity to provide comments on the document. Review by staff at the Regional Office is conducted by those with expertise in fisheries management and policy, habitat conservation, protected species, and compliance with

the applicable law. Final approval of any proposed regulatory action, including any implementing regulations, is conducted by staff at NMFS Service Headquarters, the Department of Commerce, and the U.S. Office of Management and Budget. In addition, the information contained in this document concerning monkfish stock status (Northeast "Data Poor" Stocks Working Group: Monkfish) was peer reviewed according to standard methodology (Stock Assessment Review Committee; SARC).

#### **6.9 Executive Order 13132 (Federalism)**

This E.O. established nine fundamental federalism principles for Federal agencies to follow when developing and implementing actions with federalism implications. The E.O. also lists a series of policy making criteria to which Federal agencies must adhere when formulating and implementing policies that have federalism implications. However, no federalism issues or implications have been identified relative to the measures proposed in Framework 6. This action does not contain policies with federalism implications sufficient to warrant preparation of an assessment under E.O. 13132. The affected states have been closely involved in the development of the proposed management measures through their representation on the Council (all affected states are represented as voting members of at least one Regional Fishery Management Council). No comments were received from any state officials relative to any federalism implications that may be associated with this action.

#### 6.10 Executive Order 13158 (Marine Protected Areas)

The Executive Order on Marine Protected Areas requires each Federal agency whose actions affect the natural or cultural resources that are protected by an MPA to identify such actions, and, to the extent permitted by law and to the maximum extent practicable, in taking such actions, avoid harm to the natural and cultural resources that are protected by an MPA. The E.O. directs federal agencies to refer to the MPAs identified in a list of MPAs that meet the definition of MPA for the purposes of the Order. The E.O. requires that the Departments of Commerce and the Interior jointly publish and maintain such a list of MPAs. As of the date of submission of this FMP, the list of MPA sites has not been developed by the departments. No further guidance related to this Executive Order is available at this time.

#### **6.11** Administrative Procedure Act (APA)

Section 553 of the APA establishes procedural requirements applicable to informal rulemaking by Federal agencies. The purpose of these requirements is to ensure public access to the Federal rulemaking process, and to give the public adequate notice and opportunity for comment. At this time, the NEFMC is not requesting any abridgement of the rulemaking process for this action.

#### 7.0 References

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