Monkfish Fishery Management Plan
Framework Adjustment 4

Incorporating
Stock Assessment and Fishery Evaluation (SAFE) Report
for the 2005 Fishing Year
and the
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

1/11/07

TABLE OF ACRONYMS

A	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
CA I	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)
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
TAC	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). Both stocks will be entering the final three years of a rebuilding plan with the start of the 2007 fishing year, and the actions being considered in this framework adjustment are intended to achieve the rebuilding objectives consistent with the goals of the original fishery management plan (FMP).

The Councils adopted a rebuilding plan for monkfish in 1999 with the adoption of the Monkfish FMP. The original FMP was subsequently 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, the indices have lagged behind the rebuilding schedule and are now both below the minimum biomass threshold and approximately 50% below their annual biomass index targets. As a result, the Councils propose to revise the management program so that the goals of the 10-year rebuilding program can be met in 2009. The Environmental Assessment (EA) in this document presents the analysis of impacts of the adjustments to the monkfish fishery management measures under the stock-rebuilding program for the 2007 fishing year (FY) (May 1, 2006, through April 30, 2007), and beyond if the Councils do not take regulatory action to modify the FMP prior to that time.

Under the proposed action, target total allowable catch levels (TACs) will be set at 5,000 mt and 5,100 mt for the NFMA and SFMA, respectively. These TACs are the basis for calculating the monkfish trip limits and days-at-sea (DAS) allocations for vessels targeting monkfish. The Councils are proposing to require vessels fishing in the NFMA on a multispecies DAS, and exceeding the monkfish incidental catch limit, to call in a monkfish DAS. If such vessels are equipped with a vessel monitoring system, they may make the declaration of a monkfish DAS any time prior to returning to port. Vessels in the SFMA are already required to call in a monkfish DAS when exceeding the incidental limit. The Councils are also proposing to reduce 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, and are now restoring the incidental limit to the level that was adopted under the original FMP.

The proposed action would retain the current 550 lbs. and 450 lbs.SFMA monkfish trip limit (tail wt. per DAS) for permit categories ACG and BDH, respectively. Vessels would have 23 DAS to target monkfish in the SFMA. In the NFMA, vessels will have 31 DAS and trip limits of 1,250 lbs. and 470 lbs. (tail wt. per DAS) for permit category AC and BD, respectively. These

allocations will remain in effect through 2009 unless the target TAC is exceeded in an area during the 2007 fishing year. In that case, the proposed TAC overage backstop provision would take effect and could result in a recalculation of the trip limits and DAS allocations that are expected to keep landings below the target TAC based on catch and effort data from the 2007 fishing year. The backstop provision would make no adjustment if the TAC 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 being adopted under this framework adjustment 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. The Councils propose the boundary change to enable affected vessels to fish their allocation of monkfish DAS while reducing the potential interaction with sea turtles. Those vessels are currently limited on the south by the closures to protect sea turtles, and on the north by the fishery boundary, resulting in an area only 20 nautical miles wide. The northern restriction does not provide sufficient area for these vessels to continue fishing if sea turtles migrate into the southern part of the zone. The change to the incidental limit on scallop vessels is actually a restoration of the 300 lbs. per day incidental limit, which was reduced to 50 lbs. per day, 150 lbs. maximum, when the rules governing the closed area access program were change, eliminating the use of DAS. The lower limit is what applies on vessels fishing with a dredge and not on a DAS, while the higher limit is what applies on dredge vessels fishing on a DAS. Since vessels that are in the closed area access program are not on a DAS, the limit will be applied on a per-day basis and only for the time the vessels are in the closed area (that is, not including steaming time).

As a consequence of the scientific uncertainties and technical difficulties with projecting the biological impact of specific management strategies for monkfish, the efficacy of the proposed action in achieving the rebuilding goals can only be qualitatively assessed. The target TAC represents the best estimate of a target catch that could facilitate rebuilding and maintain a limited directed fishery, consistent with the Councils' objectives for this framework adjustment. An important observation supporting this conclusion is that during the first four years of the FMP, both stocks achieved significant rebuilding, with the biomass indices doubling in the SFMA and increasing nearly threefold in the NFMA, during a period when landings were substantially higher than the proposed target TACs. While such a result depends largely on the contribution of new recruits to the stocks, it is clearly well within a range of reasonable possibilities under the conservative level of exploitation proposed in this framework.

Compounding the scientific and technical problems with managing monkfish is the retirement of the R/V Albatross IV before the end of the rebuilding program in 2009. There is a very real risk that the calibration of surveys with the replacement vessel, the R/V Bigelow, will not be sufficiently reliable to allow for a transposing of the F/V Albatross time series to the new vessel series. As a consequence, the management reference points and stock status determination criteria, which are required under the Magnuson-Stevens Act to be measurable, will no longer be valid. For this reason, the Councils propose setting the management program to remain in place for the final three years of the rebuilding plan and beyond, in the event they are unable to adopt

new reference points and status determination criteria, as well as appropriate management measures prior to the end of the 2009 fishing year.

Based on several years of success at setting management measures, trip limits and DAS allocations, to achieve target TACs in the SFMA, the Councils are confident that those measures will continue to keep landings at the levels prescribed by the target TAC. In recognition of the interrelatedness of the monkfish and multispecies fishery in the NFMA, where the monkfish catch is primarily a component of the multispecies catch, up to now limited access vessels fishing on a multispecies DAS had no monkfish trip limits. As a consequence, those vessels did not use monkfish DAS to target monkfish, and there is no monkfish DAS data on which to base a DAS allocation tied to the TAC. Therefore, there is less certainty about the efficacy of the proposed DAS allocations and trip limits in limiting catch to the target TAC. Nevertheless, the proposed action represents a substantial reduction in potential effort targeting monkfish, and is reinforced by the proposed backstop adjustment provision. Furthermore, the provision that vessels fishing on a multispecies DAS can declare a monkfish DAS any time prior to returning to port will minimize bycatch on those multispecies trips where the monkfish catch exceeds the incidental limit.

The actions proposed in this framework will have different economic impacts in the two areas, with short-term positive effects in the SFMA and negative effects in the NFMA, since DAS will be increased from 2006 in the south and DAS and trip limits will be imposed for the first time in the north. In the north, however, landings have declined nearly 40% in the past four years as the biomass has declined, and, therefore, taking no action would also likely result in negative effects if the trend continued. The social impacts of the proposed action on monkfish communities mirrors the economic impact. Some proposals are expected to have positive social impacts, however, such as the NFMA at-sea DAS declaration provision, which promotes safety and minimizes bycatch, and the increased incidental catch limit on scallop vessels in the closed area access program, which also minimizes bycatch. Generally, fishermen view discarding as wasteful and undesirable.

In terms of compliance with other applicable laws, the proposed actions in this framework are 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 actions are consistent with the Marine Mammal Protection Act, and do 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 actions are 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 6.0

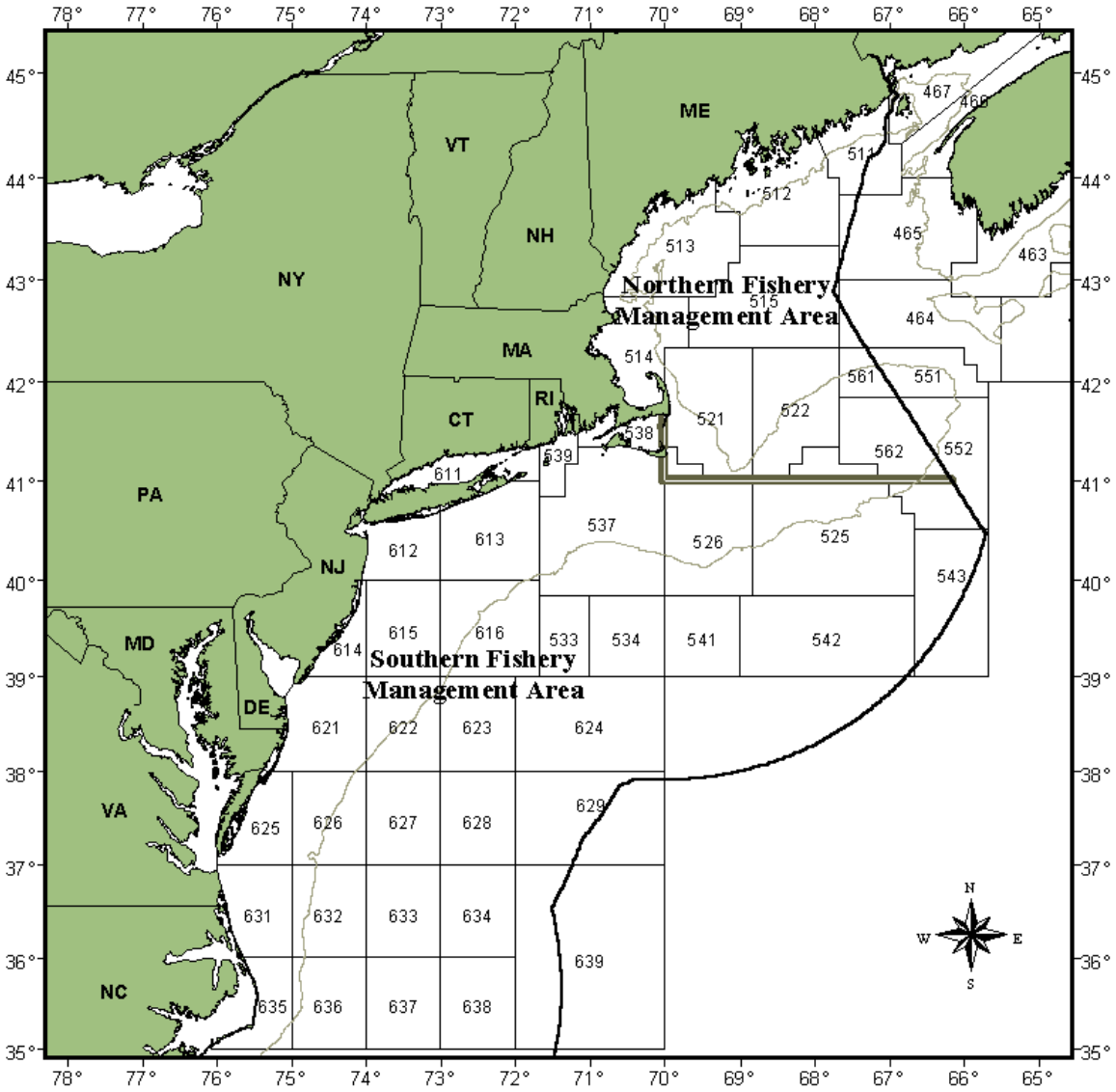

Figure 1 Monkfish management areas and three-digit statistical areas

1.2 Background

1.2.1 Actions under the Monkfish FMP

1.2.1.1 Framework 2 – annual adjustment procedure

Framework 2, which became effective on May 1, 2003 (68 FR 22325, April 28, 2003), implemented a target total allowable catch (TAC) setting method that is based upon the relationship between the 3-year running average of the National Marine Fisheries Service's (NOAA Fisheries) fall trawl survey biomass index (3-year average biomass index) and established annual biomass index targets (annual index target). The annual index targets are based on 10 equal increments between the 1999 biomass index (the start of the rebuilding program) and the biomass target (B_{target}), which is to be achieved by 2009 according the rebuilding plan established in the FMP. According to this target TAC setting method, annual target TACs are set based on the ratio of the observed biomass index to the annual index target applied to the monkfish landings for the previous fishing year.

Framework 2 also adopted a simulation method for calculating SFMA trip limits and DAS restrictions based on the target TAC and the observed monkfish catch by vessels fishing in that area. To estimate landings in the SFMA by permit categories AC and BD, the distribution of reported landings from fishing vessel trip reports (FVTR's) in the previous year in the SFMA is modified under a series of proposed daily landing limits. Total landings are recalculated based upon each new distribution. To estimate the landings under a given daily limit, all trips with a daily average below the simulated limit are assumed to have remained static, while all trips with a daily landings average greater than the simulated new limit have their average daily landings scaled down to the proposed limit. For example, to estimate the landings under a 700 lb. tail weight per DAS limit, all trips with a daily average for a given trip below 700 lbs. are assumed unchanged, while all trips with a daily average greater than 700 lbs. have that average scaled down to 700 lbs.

Framework 2 removed the original FMP provisions that would have resulted in default measures for Year 4 of the rebuilding program eliminating the directed fishery. The original FMP called for ending the directed monkfish fishery in Year 4 of the rebuilding plan, that is, no monkfish DAS would be allocated, and all vessels would be operating under an incidental catch limit. That provision was replaced in Framework 2 by measures that would allow for annual adjustment to DAS and trip limits in the SFMA, and continuation of the directed fishery with no trip limit while on a multispecies DAS in the NFMA. The framework replaced that provision with a set of rules stating that if the SFMA TAC needed to be reduced below 8,000 mt, the trip limits on directed monkfish trips would be fixed at 550 and 450 lbs. (tail weight) per monkfish DAS, and any further effort reductions would be taken from the DAS available to vessels for fishing in the SFMA.

The number of days at sea spent on a trip was calculated by subtracting the date sailed from the date landed on the FVTR and rounding any fractional days up to the next integer. In FY2004 the DAS allocation was 28 DAS plus any carryover. In this analysis, landings were assumed to be at

a constant rate per day. The landings at any DAS level for each vessel were calculated by either including all landings if the vessel used fewer days than the proposed DAS level, or reducing the landings by an amount proportionate to the days exceeding the DAS level. For example, if a vessel landed 1,000 in 30 days of fishing, the calculated landings for 15 days would be 500 pounds. The resulting range of estimated landings was fit with a loglinear function. This empirical function was then used to solve for the target DAS limit that would result in the desired target TAC. The analysis is reported in greater detail in Appendix I.

1.2.1.2 Amendment 2 to the Monkfish FMP

The Councils adopted Amendment 2 to the Monkfish FMP in 2005 (70 *Federal Register* 21927, April 28, 2005). Amendment 2 contained a number of measures that the Councils developed to address essential fish habitat (EFH) and bycatch issues, as well as several issues raised during the public scoping process. Amendment 2 did not modify the stock rebuilding program adopted in Framework 2, nor did it modify the effort control program except for the effect of the Research DAS set-aside program. This program reduced each permitted vessel's DAS allocation by 0.7 DAS to create a pool of 500 DAS that can be used to help defray the costs of cooperative monkfish research projects. Therefore, the actual number of baseline DAS (unless modified by the annual adjustment procedure) is 39.3 DAS, rather than the 40 DAS established by the FMP.

Amendment 2 also created three new permit categories. Category F permits are issued in any year a vessel enrolls in the Offshore Fishery Program. Such vessels are allocated monkfish DAS based on the number of DAS available to limited access monkfish vessels fishing in the SFMA multiplied by the ratio of the applicable trip limit over 1,600 lb. (tail weight) per DAS. Category G and H permits are issued for vessels that qualified under Amendment 2 for a limited access permit allowing such vessels to fish only south of 38°20'. Categories G and H vessels are given the same trip limits and DAS as Category A and B vessels, respectively.

1.2.2 Monkfish Framework 3/Multispecies Framework 42

In response to updated multispecies stock assessment information, the NEFMC developed Framework 42 primarily to substantially reduce fishing mortality on several species in the multispecies rebuilding plan adopted through Multispecies Amendment 13, including modifications to the Multispecies B-regular DAS program (adopted as a pilot program in Amendment 13). One of the changes to the B-regular DAS program adopted in Framework 42 was the removal of the ability to use a monkfish DAS under the B-regular DAS Program, and the application of the monkfish incidental catch limit on Monkfish Permit Category C and D vessels fishing under this program, hence, the joint Multispecies Framework 42/Monkfish Framework 3. The purpose of this action was to reduce fishing effort on monkfish, and to prevent an increase in effort directed on monkfish as other multispecies fishing opportunities were being curtailed by prohibiting the targeting of monkfish under the B-regular DAS Program.

The NEFMC submitted Framework 42 on April 21, 2006. The NEFMC had announced in November 2005 that it would not be able to submit the framework in time for the measures to be implemented for the start of the fishing year on May 1, 2006. The National Marine Fisheries Service (NMFS), therefore, implemented the measures proposed in Framework 42 under the emergency action authority provided in the Magnuson-Stevens Act. In accordance with that authority, the emergency rules are effective for 180 days, renewable for an additional 180 days if

warranted. Since Framework 42/3 was not implemented by then end of the initial 180-day period, NMFS announced on October 6, 2006 that the emergency rules would be extended for an additional period, or until Framework 42/3 is approved and implemented. On October 23, NMFS published the Final Rule implementing Framework 42/3 (71 *Federal Register* 62156) with an effectiveness date of November 22, 2006, superseding the emergency rules.

1.2.3 Other actions affecting the monkfish fishery

1.2.3.1 Other FMP actions

Both Multispecies and Sea Scallop fisheries have undergone a series of major actions since 1994 to reduce fishing effort and rebuild overfished stocks. Multispecies Amendment 13, and Frameworks 40A, 40B, and 41 produced in substantial reductions in overall multispecies effort, including effort on those multispecies vessels targeting monkfish. While some multispecies stocks, such as haddock, redfish and witch flounder have responded positively, other stocks, particularly cod and yellowtail flounder remain species of concern, in need of additional conservation restrictions.

The scallop resource has responded positively to management measures adopted over the past decade. In particular, Amendment 10 to the Scallop FMP introduced rotational area management and adopted several measures to minimize impacts of the fishery on EFH. Subsequent framework adjustments (Framework 16 implemented in November 2004 and Framework 18 implemented in June 2006) have modified the management program to improve administration, increase yield-per-recruit, promote safety and minimize bycatch, as well as set the rotational management program measures through the 2007 fishing year. In large part due to the success of the scallop FMP and the profitability of the fishery, scallop vessels that also have monkfish limited access permits (and would be required to use a scallop DAS to target monkfish) elect to use their allocated effort to target scallops rather than monkfish. As a result, a substantial portion of the allocated monkfish effort is not used. Cumulatively, these actions, in both multispecies and scallop fisheries have likely had a positive effect on reducing effort in the monkfish fishery.

As of Framework 18, rather than allocating a specific number of DAS that will be charged per access area trip, vessels are awarded a specific number of trips per area, and are not charged a DAS equivalent nor are they on a scallop DAS. That modification has changed the way NMFS interprets the monkfish possession limit for access areas because incidental limits are based on pounds per DAS. On August 1, 2006, a small entity compliance letter was sent to all scallop permit owners explaining that vessels are only allowed to land up to 50 lbs. tail weight of monkfish per day and up to 150 lbs. tail weight per access area trip, rather than 300 lbs. tail weight per day that was allowed prior to implementation of Framework 18. The Monkfish Committee is considering this interpretation and reviewing preliminary monkfish bycatch information from observer data.

The Council will begin developing Framework 19 this fall, which will set scallop management measures for FY2008 and FY2009. Effort allocated in open area DAS and number of trips in access areas is not expected to be above levels allocated in the last biennial adjustment. While scallop catch per unit of effort may be lower in the near future and overall allocations may be

less, scallop prices are still above historic levels so effort is not expected to shift to directed monkfish effort.

1.2.3.2 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.

1.2.3.2.1 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.

1.2.3.2.2 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. The new ALWTRP measures proposed to be implemented would 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. A final rule for this action has not yet been published.

1.2.3.2.3 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 NOAA Fisheries Service 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).

1.2.3.2.4 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 stretched mesh that is 7 inches or greater and extends the prohibition on the use of such gear to North Carolina and Virginia state waters. Federal and state waters north of Chincoteague, VA remain unaffected by the large-mesh gillnet restrictions.

2.0 Purpose and Need

2.1 Need to take action

A number of issues and circumstances have contributed to the need for the Councils to take action at this time to revise the management program for the monkfish fishery. Most importantly, the rebuilding of monkfish stocks is behind schedule, and both stock indices must more than double in the remaining three years of the 10-year rebuilding program adopted in the original FMP in 1999 (see Section 4.1.1). While both stock indices had moved above the minimum biomass threshold in the intervening years, they both declined to below that level in 2005.

Complicating this situation is the upcoming retirement of the survey vessel, R/V Albatross IV, and its replacement by the R/V Bigelow which is a different platform and will be using a different net to conduct the surveys. At this time, only two years of overlapping surveys by the two vessels are scheduled to facilitate calibration of the survey results, but the reliability of any conversion factor is unknown. The implication of this is that the biological reference points which are based on the R/V Albatross IV time series of survey data will no longer be valid. Furthermore, the current method of adjusting management measures and setting target TACs relies on a comparison of the a 3-year average of survey indices to an annual target value. With the retirement of the R/V Albatross IV, that annual evaluation will not be possible. Thus, there is a need to set management targets for at least the next three years, and remove the program from reliance on the annual survey indices.

Another issue raised by members of the monkfish industry, particularly in the SFMA, is the wide swings in allowable effort (DAS and trip limits) from year to year as a result of how the measures are set. As noted in Section 1.2.1.1, the method relies on previous year's landings and the relationship of the survey index to the annual index target. In addition to the inherent variability of the survey index, which is smoothed somewhat by the use of a three-year average, the fact that the first year of the program involved a reduction from relatively high landings, means that the TAC will swing between a high level and a low level each year. This constantly changing set of measures, and the fact that vessel owners do not know until a few months before the start of the fishing year what their allotment of DAS and trip limits will be, is disruptive to their businesses and make planning a fishing strategy more difficult.

Another consequence of the way that the target TACs is currently calculated is that the target TAC can increase, even if the stock is behind schedule (below its annual target) if the landings in the previous year were relatively high. Such was the case in FY2005. After setting the FY2005 targets, and in response to concerns expressed by the Director of the Northeast Fisheries Science Center, the NMFS Regional Administrator formally requested that the Councils address this situation in a correspondence to the NEMFC Chairman on May 9, 2005.

Other factors that add to the need to take action to modify the management plan include the lack of direct control on monkfish fishing effort in the NFMA, and the potential impact of changes in multispecies regulations on monkfish fishing effort. The current management system relies solely on the allocation of multispecies DAS to control monkfish effort in the NFMA, since

monkfish limited access vessels fishing on a multispecies DAS have no monkfish trip limit. With other opportunities in the multispecies fishery being continually constrained, the risk that effort will shift to the relatively high value monkfish fishery poses a threat to the achievement of the rebuilding goals. Since the monkfish stock status in the NFMA has declined in the past three years, from being nearly rebuilt to being overfished, there is an obvious need to implement more effective effort controls on that fishery.

2.2 Purpose of Action

The purpose of this action is to address the aforementioned needs through management measures designed to achieve the specific objectives for Framework 4 adopted by the Councils, and recommended by the Monkfish Committee and Advisory Panel. In adopting the following objectives, the Councils noted that these are and in support of the original goals of the FMP adopted in 1999. The objectives of Framework 4 are:

1. Adopt a set of management measures that have a reasonable expectation of achieving the monkfish stock rebuilding goals (Bmsy) by 2009, the end of the 10-year rebuilding program.
2. Include measures that, to the extent possible, mitigate the socioeconomic effects of the measures intended to rebuild the stock while not compromising their effectiveness.
3. Develop a program that provides contingencies for anticipated changes in the basis for evaluating stock status with respect to the reference points, specifically the transition to a new trawl survey vessel and the continuation of the triennial cooperative survey.

The original FMP goals adopted in 1999 are:

1. To end and prevent overfishing; rebuild and maintain a healthy spawning stock
2. To optimize yield and maximize economic benefits to the various fishing sectors
3. To prevent increased fishing on immature fish
4. To allow the traditional incidental catch of monkfish to occur.

3.0 Alternatives including no-action

The following describes the alternatives considered by the Councils, including taking no action, and the recommendations for final measures submitted to NMFS.

3.1 TAC Alternatives

The Councils considered two alternatives for setting target TACs, including the no action alternative, and several options within each alternative for incidental catch limits, trip limits and DAS. The no action alternative uses the method adopted in Framework 2, and would produce a TAC each year based on the annual NMFS autumn bottom trawl survey and the previous year's monkfish landings. The other alternative, the action being proposed by the Councils (Alternative 1), would fix the TAC for the final three years of the rebuilding plan (2007, 2008 and 2009). The no action alternative, however, is unfeasible primarily because it relies on the trawl survey index generated by the R/V Albatross IV, which is retiring after the 2007 survey cruise. There is no certainty that calibration studies between the new vessel (R/V Bigelow) will allow for a reliable continuation of the fall survey index time series. The Monkfish Committee had proposed a third alternative method for calculating the TACs (TAC Alternative 2) at its June 29th meeting, but on review of the analysis and recommendations of the PDT, subsequently voted, on September 18th, to remove the alternative from further consideration and analysis.

3.1.1 TAC Alternative 1 (proposed action)

The Councils' recommendation, TAC Alternative 1 is based on the method recommended by the PDT for setting target TACs for each management area. As described in detail in APPENDIX I, the PDT derived its recommendation on the analysis of nine different methods for setting the target TAC. The results indicate target TACs of 5,000 mt and 5,100 mt for the NFMA and SFMA, respectively. These TACs would remain in effect for 3 years, contingent upon the target TAC not being exceeded (see TAC backstop alternatives, Section 3.5). This alternative was recommended by the PDT, the AP and the Oversight Committee.

3.1.2 TAC Alternative 2 (rejected from further analysis)

At the June 29, 2006 meeting, the Monkfish Oversight Committee put forward target TAC Alternative 2, which is based on the current target TAC-setting method, using the FY2005 landings and an assumption that the survey index in 2006 will be the same as that in 2005 for the purpose of determining a 3-yr. average index value. Like Alternative 1, these target TACs would remain in effect for 3 years, contingent upon the target TAC not being exceeded (see TAC backstop alternatives, Section 3.5). The PDT determined that the target TAC associated with this approach would be 4,299 mt and 5,138 mt for the NFMA and SFMA, respectively. At the September 18th meeting, the Committee agreed to not consider this alternative further. The rationale for this decision was that the alternative was based on only one method for calculating the TAC, and was, therefore, less reliable, or less defensible than the alternative recommended by the PDT. Furthermore, the TACs calculated under this method were not significantly different than under the recommended method for the SFMA, 38 mt (less than 1%) higher, and 700 mt (about 14%) lower for the NFMA.

3.1.3 TAC Alternative 3 - No Action

Under the no action alternative, the current method for setting target TACs established in Framework 2 would remain in place. Framework 2, which became effective on May 1, 2003 (68 FR 22325, April 28, 2003), implemented a target total allowable catch (TAC) setting method that is based upon the relationship between the 3-year running average of the NMFS fall trawl survey biomass index (3-year average biomass index) and established annual biomass index targets (annual index target). The annual index targets are based on 10 equal increments between the 1999 biomass index (the start of the rebuilding program) and the biomass target (B_{target}), which is to be achieved by 2009 according the rebuilding plan established in the FMP. According to this target TAC setting method, annual target TACs are set based on the ratio of the observed biomass index to the annual index target applied to the monkfish landings for the previous fishing year.

While previous year's landings are known, the fall survey index will not be available until mid-to-late December, precluding a calculation of the target TACs until that time. The PDT conducted a sensitivity analysis that considers a range of possible values in the biomass index for 2006 that is 50% above and below the 2005 value. The analysis was not extended beyond one year, however, because the range of possible values would become meaninglessly large, and as a result, this alternative would necessitate an annual adjustment each year for the next three years. Further complicating this alternative is the fact that the R/V Albatross IV will be retired after the 2007 survey, and uncertainty exists concerning the comparability of biomass indices with the new vessel. Hence, the time series of data on which the biomass reference point and status determination criterion will end, rendering this method, and this alternative infeasible for the final year of the rebuilding plan.

The results of the PDTs sensitivity analysis for the 2007 fishing year are shown in Table 1 below.

Sensitivity Analysis for FY 2007 TACs (No Action Alternative)

FY 2001-FY2004 Monkfish Landings and 2002-2005 Monkfish Biomass Indices for NFMA

Fishing Year	FY2001 Landings	FY2002 Landings	FY2003 Landings	FY2004 Landings	FY2005 Landings
Landings (mt)	14,853	14,491	14,221	11,704	9,231
Calendar year	**2002**	**2003**	**2004**	**2005**	**3-Year Avg.**
Biomass Index (kg/tow)	2.103	1.925	0.638	1.078	1.214

FY 2001-FY2004 Monkfish Landings and 2002-2005 Monkfish Biomass Indices for SFMA

Fishing Year	FY2001 Landings	FY2002 Landings	FY2003 Landings	FY2004 Landings	FY 2005 Landings
Landings (mt)	11,069	7,478	12,052	6,223	9,702
Calendar year	**2002**	**2003**	**2004**	**2005**	**3-Year Avg.**
Biomass Index (kg/tow)	1.253	0.828	0.742	0.765	0.778

Projected 2006 Monkfish Biomass Indices			**Sensitivity Runs**	**3-Year Avg**
NFMA	**Scenario 1**	1.19	10 % above 2005	0.969
	Scenario 2	0.97	10 % below 2005	0.895
	Scenario 3	1.62	50 % above 2005	1.112
	Scenario 4	0.54	50 % below 2005	0.752
SFMA	**Scenario 1**	0.84	10 % above 2005	0.782
	Scenario 2	0.69	10 % below 2005	0.732
	Scenario 3	1.15	50 % above 2005	0.886
	Scenario 4	0.38	50 % below 2005	0.629

Projected FY 2007 TACs		**2006 Target Index**	**3-Year Avg**	**Projected TACs**
NFMA	**Scenario 1**	2.00	0.969	4,471
	Scenario 2	2.00	0.895	4,132
	Scenario 3	2.00	1.112	5,132
	Scenario 4	2.00	0.752	3,471
SFMA	**Scenario 1**	1.43	0.782	5,308
	Scenario 2	1.43	0.732	4,969
	Scenario 3	1.43	0.886	6,009
	Scenario 4	1.43	0.629	4,268

Table 1 Sensitivity analysis for FY2007 TACs under TAC Alternative 3 (no action)

3.2 NFMA DAS Alternatives

The Councils are proposing requiring monkfish limited access vessels that exceed the monkfish incidental limit to call in a monkfish-only or monkfish/multispecies DAS when fishing in the NFMA, as they are currently required to do in the SFMA. Under the current regulations, monkfish limited access vessels fishing on a multispecies DAS have no monkfish trip limit and, therefore, have no reason or requirement to call in a monkfish DAS. Regardless of whether the monkfish trip limit is adopted in the NFMA (see trip limit/DAS alternatives in Section 3.4.2), the requirement to use a monkfish DAS would still be necessary because the number of DAS allowed with no trip limit would be restricted in order to maintain catches below the target TAC. Furthermore, requiring vessels to call in a monkfish DAS will facilitate the monitoring of directed monkfish effort in the NFMA, which is now only possible by analyzing catch data and making assumptions about whether the effort is incidental or directed.

In the SFMA, all vessels exceeding the applicable monkfish incidental limits (which vary depending on gear, DAS program fishery or area) are required to call in a monkfish DAS. The Councils propose no changes to the DAS requirement in the SFMA.

3.2.1 NFMA DAS Alternative 1 (proposed action)

A monkfish limited access vessel intending to, or anticipating the possibility that they will exceed the incidental limit will be required to call in a monkfish-only or monkfish/multispecies DAS when fishing in the NFMA. If a vessel has a VMS and is fishing on a Multispecies DAS in the NFMA, it may declare a Monkfish DAS any time prior to crossing the demarcation line on returning to port or leaving the NFMA if the monkfish catch exceeds the monkfish incidental limit. To fish under a monkfish-only DAS in the NFMA, a vessel would have to fish under the existing Monkfish Gillnet Exempted Fishery in the Gulf of Maine (gillnets only), or any other monkfish exempted fishery that is established in the future. The PDT recommended this alternative. The AP supported Alternative 1 on the condition that the proposal to allow vessels to declare a monkfish DAS by VMS prior to returning to port is retained.

In recommending this alternative, the Monkfish Committee clarified that a vessel must start a trip on a multispecies A DAS to be able to make the at-sea declaration of a monkfish DAS. A vessel that starts a trip on a multispecies B-regular DAS would not be able to "flip" to a multispecies A DAS and then declare a monkfish DAS at sea. The Committee also stated that if a vessel calls in a monkfish DAS prior to starting a trip, then it must adhere to the monkfish gear requirements, but if it starts the trip on a multispecies A DAS, and declares a monkfish DAS while at sea, the multispecies gear requirements apply for the entire trip.

Discussion: In developing the at-sea declaration component of this alternative, the Committee stressed that it will minimize discards of monkfish and promote safety. If a vessel fishing for multispecies exceeds the incidental catch limit of monkfish, this provision provides the ability to retain the monkfish and declare a monkfish DAS. Similarly, if a vessel that is not on a monkfish DAS exceeds the incidental limit, it will not be put into the position of deciding whether to discard the excess monkfish or remain at sea for sufficient time to account for the overage of the per-day incidental limit. The Committee also discussed the rationale for this provision only

applying in the NFMA, and not to vessels fishing in the SFMA. They noted principally that different treatment of monkfish and multispecies vessels in the original FMP was based on a recognition that the two fisheries are distinct in their degree of directivity. In other words, vessels fishing for multispecies in the NFMA have traditionally caught monkfish as a component of their multispecies fishing, and fishermen have stated that monkfish fishing was not *per se* a directed activity.

Vessels fishing in the SFMA, on the other hand, can, and do direct their effort specifically on monkfish with minimal multispecies incidental catch. For that reason, the original FMP applied different gear requirements in the two areas, and placed no restrictions on the monkfish catch on monkfish limited access vessels fishing on a multispecies DAS in the NFMA. The proposal to allow vessels in the NFMA, but not the SFMA, to declare a monkfish DAS while at sea is a recognition that such vessels are far more likely to exceed the monkfish incidental limit while fishing for multispecies on a multispecies DAS in the NFMA than they are in the SFMA.

3.2.2 NMFA DAS Alternative 2 – no action

A monkfish limited access vessel fishing on a multispecies DAS will not be required to call in a monkfish DAS. Such vessels could target monkfish on a multispecies DAS but a monkfish trip limit would be necessary to maintain catches below the target TAC.

3.3 NFMA Incidental Limit Alternatives

The Councils propose reducing the monkfish incidental catch limit in the NFMA to the level that was in place prior to Framework 2, which took effect May 1, 2003. This limit would apply to all permit Category E vessels and, if NFMA DAS Alternative 1 is adopted, to all monkfish limited access vessels not fishing on a monkfish DAS in the NFMA. The Councils propose no changes to the monkfish incidental catch limits in the SFMA. The AP did not have a recommendation on these alternatives, noting that a lower limit will discourage directed fishing under the incidental limit, while a higher limit will minimize bycatch. The PDT and Monkfish Committee recommended Alternative 1, primarily because it reduces the incentive to target monkfish when not on a monkfish DAS and does not appear to cause an increase in monkfish discards based on the observed catch of vessels fishing under the incidental limit.

3.3.1 NFMA Incidental limit Alternative 1 (proposed action)

Under this alternative, permit Category E vessels on a multispecies DAS, and limited access vessels not fishing on a multispecies DAS, but not a monkfish DAS would be limited to 300 lbs. (tail wt.) per DAS or 25% (based on tail weight or its equivalent) of the total weight of fish on board, whichever is less. This is the incidental limit that was in place under the original FMP regulations. Based on a review of catch data, the Councils do not expect this lower limit to increase bycatch (discards) since vessels catching less than 300 lbs., or even the higher incidental limit of 400 lbs. have averaged well below those limits, suggesting that the limits are not restrictive and are not being used to conduct a non-DAS targeted fishery.

3.3.2 NFMA Incidental limit Alternative 2 – no action

Under this alternative, permit Category E vessels on a multispecies DAS, and limited access vessels not fishing on a multispecies DAS, but not a monkfish DAS would be limited to 400 lbs. (tail wt.) per DAS or 50% (based on tail weight or its equivalent) of the total weight of fish on

board, whichever is less. This is the incidental limit that was implemented in 2003 under the Framework 2 regulations. The reason Framework 2 increased the incidental limit is that, at that time, the northern stock was nearly rebuilt, and there were no other regulations to relax to allow for achievement of optimum yield since limited access vessels fishing on a multispecies DAS already had no monkfish trip limit or monkfish DAS restrictions.

3.4 Trip Limit/DAS Alternatives

The following section contains the alternative trip limit and DAS combinations for the directed fishery that have been calculated to produce the target TAC alternatives, after taking into account the expected incidental catch of monkfish by vessels not on a monkfish DAS. The calculations are based on the method that has been used to calculate SFMA trip limits/DAS since the adoption of Framework 2 in 2003 (see Section 1.2.1.1). In the SFMA, DAS were calculated with a trip limit (in tail weight) of 550 lbs./DAS and 450 lbs./DAS for permit categories ACG and BDH, respectively, as in the current plan. A second alternative used trip limits of 475 lbs./DAS and 375 lbs./DAS, at the request of some members of the industry. In the SFMA calculation, the expected incidental catch is a known value based on the previous year's landings by vessels not on a monkfish DAS (i.e., category E vessels, dredge vessels and unknown vessels). The full report on the analysis of SFMA trip limits and DAS is provided in Appendix II. The results are summarized below, and in Table 2.

In the NFMA, the calculation is more complicated, but is essentially the same for most alternatives. For two of the five NFMA alternatives, the DAS options from the SFMA calculation were used to determine the appropriate trip limit. These DAS options enable a consistent DAS allocation fishery wide, but the Councils could still select different DAS options for each area. One of the NFMA alternatives is based on the 40 monkfish DAS allocation baseline from the original FMP. One NFMA alternative also includes no monkfish trip limit while a vessel is on a monkfish DAS, and one alternative calculates the trip limit that would apply if multispecies/monkfish vessels were not required to call in a monkfish DAS (that is, if NFMA DAS Alternative 2 - no action is adopted under Section 3.2.2). One of the complicating factors is determining the incidental catch portion of the total TAC, which would now include the catch of limited access monkfish vessels not on a monkfish DAS (i.e., only on a Northeast Multispecies DAS), in addition to the catch by Category E (open access) and dredge vessels. The full report on the analysis of trip limits and DAS for the NFMA is provided in Appendix II. The results are summarized below, and in Table 3

While the DAS allocations in the two areas may be different, they are not additive, and the higher DAS allocation is the maximum DAS that a vessel may fish. In other words, while the original FMP set a 40 DAS baseline, vessels may not fish the allocation in each area up to the maximum of 40 DAS combined, but are restricted to fishing the maximum of the highest of the two allocations. If the DAS are the same in both areas, then that is the total number of DAS a vessel can fish in either area. If the DAS are different in each area, a vessel can fish up to the allocation in the area with the lower number of DAS and fish the difference in the other area. Furthermore, carryover DAS (Section 3.6) would be based on the number of unused DAS from the allocation of DAS, based on the higher of the two areas, if DAS are different, not on the 40 DAS.

Readers should note that the following analyses reference TAC Alternative 2 which was included in the PDT's analysis reports, but which was subsequently rejected by the Monkfish Committee for consideration or further analysis.

3.4.1 SFMA Trip limits and DAS Alternatives

The following Table 2 summarizes the SFMA trip limits/DAS alternatives described in the subsequent text:

	TAC	Trip Limit (Alt.#)	DAS
TAC Alternative 1	**5,100 mt** 2007-2009	550/450 (1, no action)	**23**
		475/375 (2)	**31**
TAC Alternative 3 (no action) survey up 50%	* **6,009 mt** (2006, calculated annually)	550/450 (1, no action)	**34**
		475/375 (2)	**40** **
TAC Alternative 3 (no action) survey down 50%	* **4,268 mt** (2006, calculated annually)	550/450 (1, no action)	**16**
		475/375 (2)	**20**

* TAC calculated using current method with FY2005 landings, and observed 2006 survey index. Value cannot be determined until 12/06, after survey is completed. Reliance on Albatross survey, renders this option infeasible after 2007.

** DAS generated under this TAC would exceed the maximum of 40 DAS by 11 DAS.

Table 2 Summary of SFMA Trip Limits/DAS Alternatives for each TAC alternative, proposed action is shaded.

The AP did not reach consensus on this decision, citing pros and cons of each. The AP stated that they would support an option that would allow vessels the ability to make an annual declaration into one or the other alternative. The PDT did not make a recommendation on either alternative. The Monkfish Committee recommended Alternative 1, but proposed the establishment of an enrollment program that gives vessels the option to elect at the start of the year to fish under Alternative 2 measures for the year. This proposal (identified as Alternative 2 Enrollment Program, below) was not adopted by the Councils.

3.4.1.1 SFMA trip limits/DAS Alternative 1 (proposed action)

Under this alternative, the trip limit (in tail weight) would be set at **550 lbs./DAS and 450 lbs./DAS** for permit categories ACG and BDH, respectively, as in the current plan (i.e. no action on the trip limit).

3.4.1.1.1 DAS/trip limits under proposed TAC Alternative 1

Under the proposed TAC Alternative 1 (Section 3.1.1), vessels will have **23 monkfish DAS** to fish in the SFMA. Since the NFMA DAS/trip limit alternative adopted (Section 3.4.2) allocates more monkfish DAS for the NFMA than the SFMA, vessels would be able to fish the difference between their NFMA and SFMA DAS allocations (8 DAS) as NFMA monkfish-only or monkfish/multispecies DAS in the NFMA. To fish under a monkfish-only DAS in the NFMA, a vessel would have to fish under the existing Monkfish Gillnet Exempted Fishery in the Gulf of Maine (gillnets only), or any other monkfish exempted fishery that is established in the future. Vessels enrolling in the Offshore Monkfish Fishery with a trip limit of 1,600 lbs./DAS would have 7.9 DAS and 6.5 DAS, for permit categories AC and BD, respectively.

3.4.1.1.2 DAS/trip limits under TAC Alternative 2 (rejected)

Under TAC Alternative 2 (no longer under consideration, Section 3.1.2), vessels would also have **23 monkfish DAS** to fish in the SFMA. As with TAC Alternative 1, if the NFMA alternative adopted, results in vessels having more DAS allocated for the NFMA than the SFMA, vessels could fish the difference between NFMA and SFMA DAS allocations as NFMA monkfish-only or monkfish/multispecies DAS in the NFMA. To fish under a monkfish-only DAS in the NFMA, a vessel would have to fish under the existing Monkfish Gillnet Exempted Fishery in the Gulf of Maine (gillnets only), or any other monkfish exempted fishery that is established in the future. Vessels enrolling in the Offshore Monkfish Fishery with a trip limit of 1,600 lbs./DAS would have 7.9 DAS and 6.5 DAS, for permit categories AC and BD, respectively.

3.4.1.1.3 DAS/trip limits under TAC Alternative 3 (rejected)

Under TAC Alternative 3 – no action (Section 3.1.3), vessels would have **between 16 and 34 monkfish DAS** to fish in the SFMA, based on the sensitivity analysis assuming a 50% decline or increase in the fall survey biomass index between 2005 and 2006. These DAS allocations would only remain in effect for one year, and would be readjusted annually based on the calculation method adopted in Framework 2. If the NFMA alternative adopted, results in vessels having more DAS in the NFMA than the SFMA, these vessels would be able to fish the difference between NFMA and SFMA DAS allocations as monkfish-only or monkfish/multispecies DAS in the NFMA. To fish under a monkfish-only DAS in the NFMA, a vessel would have to fish under the existing Monkfish Gillnet Exempted Fishery in the Gulf of Maine (gillnets only), or any other monkfish exempted fishery that is established in the future. Vessels enrolling in the Offshore Monkfish Fishery with a trip limit of 1,600 lbs./DAS would have 5.5 – 11.7 DAS and 4.5 – 9.6 DAS, for permit categories AC and BD, respectively, for FY2007.

3.4.1.2 SFMA trip limits/DAS Alternative 2

Under this alternative, the trip limit (in tail weight) would be set at **475 lbs./DAS and 375 lbs./DAS** for permit categories ACG and BDH, respectively.

Under TAC Alternative 1 (Section 3.1.1), vessels would have **31 monkfish DAS** to fish in the SFMA. Depending on the NFMA alternative adopted, vessels could potentially be allocated more monkfish DAS for the NFMA than the SFMA. In this case, vessels would be able to fish the difference between their NFMA and SFMA DAS allocations as monkfish-only or monkfish/multispecies DAS in the NFMA. To fish under a monkfish-only DAS in the NFMA, a vessel would have to fish under the existing Monkfish Gillnet Exempted Fishery in the Gulf of Maine (gillnets only), or any other monkfish exempted fishery that is established in the future. Vessels enrolling in the Offshore Monkfish Fishery with a trip limit of 1,600 lbs./DAS would have 9.2 DAS and 7.3 DAS, for permit categories AC and BD, respectively.

Under TAC Alternative 2 (which was considered but rejected by the Committee and not considered by the Councils, Section 3.1.1), vessels would have **32 monkfish DAS** to fish in the SFMA. As with target TAC Alternative 1, if the NFMA alternative adopted results in vessels having more DAS allocated for the NFMA than the SFMA, these vessels could fish the difference between their NFMA and SFMA DAS allocations as monkfish-only or monkfish/multispecies DAS in the NFMA. To fish under a monkfish-only DAS in the NFMA, a vessel would have to fish under the existing Monkfish Gillnet Exempted Fishery in the Gulf of

Maine (gillnets only), or any other monkfish exempted fishery that is established in the future. Vessels enrolling in the Offshore Monkfish Fishery with a trip limit of 1,600 lbs./DAS would have 9.5 DAS and 7.5 DAS, for permit categories AC and BD, respectively.

Under TAC Alternative 3 – no action (Section 3.1.3), vessels would have **between 20 and 40 monkfish DAS** to fish in the SFMA, based on the sensitivity analysis assuming a 50% decline or increase in the fall survey biomass index between 2005 and 2006. (Note: the calculation of DAS under the assumption of a 50% increase in the 2006 survey index produced a result that exceeded the FMP established maximum of 40 DAS by 11, and, therefore, the result was fixed at 40 for this alternative.) These DAS allocations would only remain in effect for one year, and would be readjusted annually based on the calculation method adopted in Framework 2. If the NFMA alternative adopted results in vessels having more DAS allocated for the NFMA than the SFMA, these vessels would be able fish the difference between their NFMA and SFMA DAS allocations as monkfish-only or monkfish/multispecies DAS in the NFMA. To fish under a monkfish-only DAS in the NFMA, a vessel would have to fish under the existing Monkfish Gillnet Exempted Fishery in the Gulf of Maine (gillnets only), or any other monkfish exempted fishery that is established in the future. Vessels enrolling in the Offshore Monkfish Fishery with a trip limit of 1,600 lbs./DAS would have 5.9 – 11.9 DAS and 4.7 – 9.4 DAS, for permit categories AC and BD, respectively, for FY2007.

3.4.1.3 Alternative 2 Enrollment Program

Under this proposal, a vessel fishing in the SFMA would operate under the provisions of Alternative 1 unless it declared at the start of the fishing year that it would be operating under the provisions of Alternative 2. This program may be administered either as a Letter of Authorization or an annual permit. The AP and Monkfish Committee recommended this alternative, but the Councils rejected it primarily out of concerns for enforcement and administration, as well as the added complexity it layered onto the FMP.

3.4.2 NFMA Trip limits and DAS Alternatives

The PDT analyzed a range of five trip limit/DAS alternatives for each TAC alternative and each of two incidental catch alternatives for vessels fishing in the NFMA. The first four alternatives apply if the Councils adopt NFMA DAS Alternative 1, requiring vessels to call in a monkfish DAS when targeting monkfish (exceeding the incidental limit), (Section 3.2.1). The fifth alternative would apply if the Councils took no action with respect to requiring vessels to call in a monkfish DAS when targeting monkfish (exceeding the incidental limit), that is adopted NFMA DAS Alternative 2 (Section 3.2.2). While the analysis of alternatives for the SFMA used specific trip limit options and solved for the resulting DAS, the analysis of NFMA used specific DAS allocations to solve for the trip limits for three of the alternatives. The fourth alternative is based on the Councils taking no action with respect to a monkfish trip limit (no trip limit on a monkfish DAS), and solved for the number of DAS that could be allocated under such a circumstance. A sixth option represents the no action alternative for both DAS and trip limits.

The first two alternatives establish monkfish trip limits based on the monkfish DAS allocations that were produced in the analysis of SFMA alternatives for each of the target TAC alternatives. The third alternative sets monkfish DAS at 40, the baseline allocation under the original FMP. The fourth alternative is based on the Councils taking no action with regard to a monkfish trip

limit in the northern area (no trip limit on a monkfish/multispecies DAS), and the fifth sets monkfish trip limits that would apply if the Councils do not adopt the NFMA Monkfish DAS Alternative 1 in Section 3.2.1.

The AP did not make a recommendation on these alternatives, again citing the tradeoff between higher trip limits or more DAS. The options under consideration particularly affected Category BD vessels, because under the two most likely options, the trip limits for Category AC vessels are the same, while under Option 2 the DAS are higher. The PDT did not recommend a specific option but strongly recommended against the no-trip-limit option (Option 4). The Committee recommended Option 2 (31 DAS), and this is the option being recommended by the Councils.

The following Table 3 summarizes the NFMA trip limits/DAS alternatives described in the subsequent text:

TAC Alternatives	TAC (mt)	TAC (lbs.)	Incidental limit	Estimated incidental landings	AC allocation of TAC	BD allocation of TAC	Trip Limit AC (tail weight/DAS)	Trip Limit BD (tail weight/DAS)	DAS (Option #)
TAC Alt. 1 2007-2008	5,000	11,023,113	Inc. Limit Alt.1 25%/300 lbs.	3,364,401	4,130,908	3,527,804	1250	886	23 (1)
				2,791,523	4,439,903	3,791,687	**1250**	**470**	**31 (2)**
				2,326,739	4,690,595	4,005,779	869	338	40 (3)
				4,000,000	3,792,481	3,230,632	None (No action)	None (No action)	21 (4)
				1,713,357	5,021,437	4,288,319	168	152	No action (5, MF DAS not req.'d)
			Inc. Limit Alt.2 50%/400 lbs. (no action)	3,705,220	3,947,079	3,370,814	1250	683	23 (1)
				3,014,084	4,319,859	3,689,170	1250	435	31 (2)
				2,453,358	4,622,300	3,947,455	787	327	40 (3)
				4,000,000	3,792,481	3,230,632	None (No action)	None (No action)	21(4)
				1,713,357	5,021,437	4,288,319	168	152	No action (5, MF DAS not req.'d)
TAC Alt. 3 FY2007 no action, 2006 survey up 50%	5,132	11,314,123	Inc. Limit Alt.1 25%/300 lbs.	2,599,382	4,700,502	4,014,239	1250	452	34 (1)
				2,326,739	4,847,558	4,139,826	1250	367	40 (2)
				2,326,739	4,847,558	4,139,826	1250	367	40 (3)
				4,000,000	3,949,627	3,364,497	None (No action)	None (No action)	22 (4)
				1,713,357	5,178,401	4,422,366	177	161	No action (5, MF DAS not req.'d)
				1,713,357	5,178,401	4,422,366	None (No action)	None (No action)	No action (6, MF DAS not req.'d)
			Inc. Limit Alt.2 50%/400 lbs.(no action)	2,782,281	4,601,851	3,929,991	1250	426	34 (1)
				2,453,358	4,779,264	4,081,502	1060	353	40 (2)
				2,453,358	4,779,264	4,081,502	1060	353	40 (3)
				4,000,000	3,949,627	3,364,497	None (No action)	None (No action)	22 (4)
				1,713,357	5,178,401	4,422,366	177	161	No action (5, MF DAS not req.'d)
				1,713,357	5,178,401	4,422,366	None (No action)	None (No action)	No action (6, MF DAS not req.'d)
TAC Alt.3 FY2007 no action, 2006 Survey down 50%	3,471	7,652,245	Inc. Limit Alt.1 25%/300 lbs.	3,888,928	2,029,834	1,733,483	793	269	16 (1)
				3,587,679	2,192,320	1,872,246	493	222	20 (2)
				2,326,739	2,872,438	2,453,068	225	137	40 (3)
				4,500,000	1,702,212	1,450,033	None (No action)	None (No action)	7 (4)
				1,713,357	3,203,280	2,735,608	89	76	No action (5, MF DAS not req.'d)
				1,713,357	3,203,280	2,735,608	None (No action)	None (No action)	No action (6, MF DAS not req.'d)
			Inc. Limit Alt.2 50%/400 lbs.(no action)	4,338,023	1,787,604	1,526,618	506	208	16 (1)
				3,974,589	1,983,631	1,694,025	380	180	20 (2)
				2,453,358	2,804,143	2,394,745	215	132	40 (3)
				4,500,000	1,702,212	1,450,033	None (No action)	None (No action)	7 (4)
				1,713,357	3,203,280	2,735,608	89	76	No action (5, MF DAS not req.'d)
				1,713,357	3,203,280	2,735,608	None (No action)	None (No action)	No action (6, MF DAS not req.'d)

Table 3 NFMA trip limit/DAS alternatives under TAC Alternatives 1 and 3 (no action). Shaded cells are those where the allowable trip limit is lower than the incidental catch limit. The bolded text under Option 2 is the Councils' recommendation.

3.4.2.1 NFMA trip limits/DAS Alternatives under TAC Alternative 1

Under TAC Alternative 1 (Section 3.1.1) vessels on a monkfish DAS in the SFMA would have 23 DAS or 31 DAS, depending on the trip limit adopted. If a vessel's monkfish DAS allocation exceeds its multispecies DAS allocation, and after using up its allocation of multispecies DAS, the vessel may fish the remaining DAS (monkfish DAS allocation minus multispecies DAS allocation) as monkfish-only DAS. To fish under a monkfish-only DAS in the NFMA, a vessel would have to fish under the existing Monkfish Gillnet Exempted Fishery in the Gulf of Maine (gillnets only), or any other monkfish exempted fishery that is established in the future.

Option 1 - With 23 DAS, permit category A and C vessels in the NFMA would have a monkfish trip limit of 1,250 lbs./DAS (tail weight) under both NFMA Incidental Limit Alternative 1 (Section 3.3.1) and Alternative 2 (Section 3.3.2). However, permit category B and D vessels would have trip limits of 886 lbs./DAS and 683 lbs./DAS under NFMA Incidental Limit Alternatives 1 and 2, respectively.

The analysis of this option produced results where the calculated trip limit for permit category A and C vessels exceeded the highest observed daily average value of 1,250 lbs. (tail weight). Therefore, the trip limit was capped at 1,250 lbs., and the calculated excess portion of the target TAC that would be unused by category A and C vessels under this trip limit, based on information about recent fishing patterns, would serve as a buffer against changes in fishing behavior that could increase vessel catch rates.

Option 2 (proposed action)- With 31 DAS, permit category A and C vessels in the NFMA would have a monkfish trip limit of 1,250 lbs./DAS (tail weight) under both NFMA Incidental Limit Alternatives, while category B and D vessels would have trip limits of 470 lbs./DAS and 435 lbs./DAS under NFMA Incidental Limit Alternatives 1 and 2, respectively.

Similar to Option 1, the analysis of this option produced results where the calculated trip limit for permit category A and C vessels exceeded the highest observed daily average value of 1,250 lbs. (tail weight). Therefore, the trip limit was capped at 1,250 lbs., and the calculated excess portion of the target TAC that would be unused by category A and C vessels under this trip limit, based on information about recent fishing patterns, would serve as a buffer against changes in fishing behavior that could increase vessel catch rates.

Option 3 – With 40 DAS, permit category A and C vessels in the NFMA would have a monkfish trip limit of 869 lbs./DAS (tail weight) under NFMA Incidental Limit Alternative 1, and 787 lbs./DAS under NFMA Incidental Limit Alternative 2. Category B and D vessels would have trip limits of 338 lbs./DAS and 327 lbs./DAS under NFMA Incidental Limit Alternatives 1 and 2, respectively. Note that 327 lbs./DAS is less than the maximum amount allowed under Incidental Limit Alternative 2, effectively eliminating the directed fishery.

Option 4 – This option would not apply a monkfish trip limit when on a monkfish DAS. Under this option, vessels would have 21 DAS.

Option 5 – This option would apply if the Councils did not adopt NFMA DAS Alternative 1, and vessels were not required to call in a monkfish DAS when exceeding the incidental limit. In effect, the DAS allocation is what each vessel is allocated under the Multispecies FMP. Under this circumstance, the allowable catch is well below the incidental limits under either of NFMA the Incidental Limit Alternatives under consideration, effectively eliminating the directed monkfish fishery in the NFMA. Under this option, category A and C vessels would be limited to 168 lbs./DAS and category B and D vessels would be limited to 152 lbs./DAS.

Option 6 – This option represents no action on both the trip limit and DAS measures. Under this option, limited access monkfish vessels fishing on a multispecies DAS have no monkfish trip limit and are not required to call in a monkfish DAS.

3.4.2.2 NFMA trip limits/DAS Alternatives under TAC Alternative 2

Under TAC Alternative 2 (which was considered but rejected by the Committee and not considered by the Councils,Section 3.1.2) vessels on a monkfish DAS in the SFMA would have 23 DAS or 32 DAS, depending on the trip limit adopted. *Readers should note that the following analyses reference TAC Alternative 2 which was included in the PDT's analysis reports, see Appendix II, but which was subsequently rejected by the Monkfish Committee for consideration or further analysis.*

Option 1 - With 23 DAS, permit category A and C vessels in the NFMA would have a monkfish trip limit of 1,250 lbs./DAS (tail weight) under both NFMA Incidental Limit Alternative 1 (Section 3.3.1) and Alternative 2 (Section 3.3.2), while category B and D vessels would have trip limits of 400 lbs./DAS and 346 lbs./DAS under NFMA Incidental Limit Alternatives 1 and 2, respectively.

The analysis of this option produced results where the calculated trip limit for permit category A and C vessels exceeded the highest observed daily average value of 1,250 lbs. (tail weight). Therefore, the trip limit was capped at 1,250 lbs., and the calculated excess portion of the target TAC that would be unused by category A and C vessels under this trip limit, would serve as a buffer against changes in fishing behavior that could increase vessel catch rates.

Option 2 - With 32 DAS, permit category A and C vessels in the NFMA would have a monkfish trip limit of 633 lbs./DAS (tail weight) under NFMA Incidental Limit Alternative 1, and 565 lbs./DAS under NFMA Incidental Limit Alternative 2. Category B and D vessels would have trip limits of 271 lbs./DAS and 253 lbs./DAS under NFMA Incidental Limit Alternatives 1 and 2, respectively. Note that the trip limit for Category B and D vessels is below the incidental limit for both alternatives, effectively eliminating the directed fishery.

Option 3 – With 40 DAS, permit category A and C vessels in the NFMA would have a monkfish trip limit of 431 lbs./DAS (tail weight) under NFMA Incidental Limit Alternative 1, and 411 lbs./DAS under NFMA Incidental Limit Alternative 2. Category B and D vessels would have trip limits of 222 lbs./DAS and 214 lbs./DAS under NFMA Incidental Limit Alternatives 1 and 2, respectively. Note that the trip limit for Category B and D vessels is below the incidental limit for both alternatives, effectively eliminating the directed fishery.

Option 4 - This option would not apply a monkfish trip limit when on a monkfish DAS. Under this option, vessels would have 14 DAS.

Option 5 - This option would apply if the Councils did not adopt NFMA DAS Alternative 1, and vessels were not required to call in a monkfish DAS when exceeding the incidental limit. In effect, the DAS allocation is what each vessel is allocated under the Multispecies FMP. Under this circumstance, the allowable catch is well below the incidental limits under either NFMA Incidental Limit Alternatives, effectively eliminating the directed monkfish fishery in the NFMA. Under this option, category A and C vessels would be limited to 128 lbs./DAS and category B and D vessels would be limited to 112 lbs./DAS.

Option 6 – This option represents no action on both the trip limit and DAS measures. Under this option, limited access monkfish vessels fishing on a multispecies DAS have no monkfish trip limit and are not required to call in a monkfish DAS.

3.4.2.3 NFMA trip limits/DAS Alternatives under TAC Alternative 3

TAC Alternative 3 is the no action alternative with respect to setting target TACs, and is an infeasible alternative from a practical standpoint, due to the retirement of the R/V Albatross IV after the 2007 survey. Nevertheless, the PDT analyzed the trip limits and DAS that would be associated with this alternative for FY2007. Since the 2006 survey indices will not be known until December, the PDT ran a sensitivity analysis assuming a 50% decline or increase in the fall survey biomass index between 2005 and 2006 to provide a range of possible FY2007 target TACs under the current TAC-setting method.

Under TAC Alternative 3 (Section 3.1.3) vessels on a monkfish DAS in the SFMA would have in the range of 16 – 34 DAS under the higher trip limit, and 20 – 40 DAS under the lower trip limit options. The range of DAS is based on whether the 2006 survey index declines or increases 50% from the 2005 index. If a vessel's monkfish DAS allocation exceeds its multispecies DAS allocation, and after using up its allocation of multispecies DAS, the vessel may fish the remaining DAS (monkfish DAS allocation minus multispecies DAS allocation) as monkfish-only DAS. To fish under a monkfish-only DAS in the NFMA, a vessel would have to fish under the existing Monkfish Gillnet Exempted Fishery in the Gulf of Maine (gillnets only), or any other monkfish exempted fishery that is established in the future.

Option 1 - At the high end of the range of target TACs (survey index increases 50% in 2006), with 34 DAS, permit category A and C vessels in the NFMA would have a monkfish trip limit of 1,250 lbs./DAS (tail weight) under both NFMA Incidental Limit Alternative 1 (Section 3.3.1) and Alternative 2 (Section 3.3.2), and if the survey declines 50% in 2006, with 16 DAS the trip limit would be 793 lbs. or 506 lbs. under the respective incidental limit alternatives. With 34 DAS Category B and D vessels would have trip limits of 452 lbs./DAS and 426 lbs./DAS under NFMA Incidental Limit Alternatives 1 and 2, respectively, and with 16 DAS, those limits would fall to 269 lbs. and 208 lbs. (lower than the incidental limit).

Option 2 - At the high end of the range of TACs (survey index increases 50% in 2006), with 40 DAS, permit category A and C vessels in the NFMA would have a monkfish trip limit of 1,250 lbs./DAS (tail weight) under NFMA Incidental Limit Alternative 1 (Section 3.3.1) and 1,060

lbs./DAS under NFMA Incidental Limit Alternative 2 (Section 3.3.2). If the survey declines 50% in 2006, with 20 DAS the trip limit would be 493 lbs. or 380 lbs. under the respective incidental limit alternatives. With 40 DAS Category B and D vessels would have trip limits of 367 lbs./DAS and 353 lbs./DAS under NFMA Incidental Limit Alternatives 1 and 2, respectively, and with 20 DAS, those limits would fall to 222 lbs. and 180 lbs., each of which are lower than their respective incidental limit alternative.

Option 3 - With 40 DAS, permit category A and C vessels in the NFMA would have a monkfish trip limit of 1,250 lbs./DAS (tail weight) under NFMA Incidental Limit Alternative 1, and 1,060 lbs./DAS under NFMA Incidental Limit Alternative 2. Category B and D vessels would have trip limits of 367 lbs./DAS and 353 lbs./DAS under NFMA Incidental Limit Alternatives 1 and 2, respectively, the latter being lower than the incidental limit. If the survey declines 50% in 2006, with 40 DAS the trip limit on category A and C vessels would be 225 lbs. or 215 lbs. under the respective incidental limit alternatives, and category B and D vessels would have trip limits of 137 lbs./DAS and 132 lbs./DAS under NFMA Incidental Limit Alternatives 1 and 2, respectively, (all are lower than the incidental limit).

Option 4 - This option would not impose a monkfish trip limit when a vessel is on a monkfish DAS. Under this option, vessels would have 22 DAS if the 2006 survey index rises 50%, or 7 DAS if the index declines 50%.

Option 5 - This option would apply if the Councils did not adopt NFMA DAS Alternative 1, and vessels were not required to call in a monkfish DAS when exceeding the incidental limit. In effect, the DAS allocation is what each vessel is allocated under the Multispecies FMP. Under this circumstance, the allowable catch is well below the incidental limits under either NFMA Incidental Limit Alternatives, effectively eliminating the directed fishery. Under this option, category A and C vessels would be limited to 177 lbs./DAS if the survey increases 50% in 2006, or 89 lbs./DAS if the survey declines 50%. Corresponding trip limits for category B and D vessels would be 161 lbs./DAS and 76 lbs./DAS, respectively.

Option 6 – This option represents no action on both the trip limit and DAS measures. Under this option, limited access monkfish vessels fishing on a multispecies DAS have no monkfish trip limit and are not required to call in a monkfish DAS.

3.4.3 Moratorium on directed fishing

The original FMP called for ending the directed monkfish fishery in Year 4 of the rebuilding plan, that is, no monkfish DAS would be allocated, and all vessels would be operating under an incidental catch limit. That provision was replaced in Framework 2 by measures that would allow for annual adjustment to DAS and trip limits in the SFMA, and continuation of the directed fishery with no trip limit while on a multispecies DAS in the NFMA. At the time Framework 2 was being developed, the northern stock was nearly rebuilt, and additional restrictions on catch (other than the multispecies DAS controls) did not appear to be warranted, and, in fact, Framework 2 raised the NFMA incidental catch limit. With only three years remaining in the rebuilding plan, however, and both stocks still below the minimum biomass threshold as measured by the survey index, the Councils reconsidered, but rejected the closure of the directed fishery to achieve the rebuilding goals. The AP did not support this alternative. The

Committee took no action on this alternative, anticipating that it would make alternative recommendations on trip limits and DAS for each area. The PDT made no recommendation on this alternative.

Under this alternative, monkfish limited access vessels would have no monkfish DAS, and all vessels, including those fishing in the NFMA on a multispecies DAS would operate under the applicable incidental catch limit. It should be noted that a number of options for the NFMA effectively result in a closure of the directed fishery, if the trip limit calculated under those options is less than the incidental catch limit (see Section 3.4.2 and Appendix II). This action would remain in effect until the stocks rebuild and the Councils develop a program for allowing directed fishing to achieve optimum yield from the rebuilt stocks.

The program for the re-opened directed fishery would be implemented through a separate action. If the Councils adopt this alternative, then the DAS and trip limit alternatives under consideration in Sections 3.2 and 3.4 and other measures other than modifications to the incidental limits below, would not be relevant. All of the target TAC would be allocated to fisheries operating under their respective incidental catch limits.

This alternative, that is, a moratorium on directed fishing, would also be implemented under the proposed TAC overage backstop alternative described below in Section 3.5.1, if the landings in fishing year 2007 exceed the target TAC by more than 30%. That proposal calls for ending the directed fishery in fishing year 2009 by notice action when the TAC overage is greater than 30%.

3.5 TAC Overage Backstop Alternatives

The proposed TAC alternatives and associated management measures are designed to remain in effect for the final three years of the rebuilding plan. While the method used to calculate SFMA trip limits and DAS associated with target TACs that was implemented in 2003 has proven effective at keeping landings from exceeding the TAC, there is no assurance that the success will continue, or that similar results will occur in the NFMA where there has been no monkfish trip limit. Therefore, the Councils are proposing a backstop provision that will enable the NMFS Regional Administrator to re-calculate the trip limits and DAS and implement the adjustment by notice action for the final year of the rebuilding plan (2009). Such an adjustment would likely be implemented through a proposed and final rule procedure to be in effect May 1, 2009. The AP did not make a recommendation on these Alternatives, but a majority did not support Alternative 1 out of concern about the uncertainty in the underlying science used to develop the management program. The PDT and the Monkfish Committee recommend Alternative 1.

3.5.1 TAC Overage Alternative 1 (proposed action)

If the FY2007 landings in either management area exceed the respective target TACs by 10% or less, no action will be taken to adjust the trip limits and/or DAS. If the overage is greater than 30%, the directed fishery in that area would be closed in FY2009 (no monkfish DAS, all vessels operate under incidental catch limits). If the FY2007 landings overage is between >10% and 30%, an adjustment to the DAS will be calculated using the existing method, based on revision to the catch (both the directed and incidental) and effort data input to the calculation, using 2007 data (the year in which the TAC overage occurred). The NMFS Regional Administrator will

publish the revised management measures as a proposed and final rule for implementation on May 1, 2009.

3.5.2 TAC Overage Alternative 2 – no action

Under the no action alternative, if landings exceed the target TAC in either management area, there would be no adjustment to the management measures unless implemented through a framework adjustment or plan amendment.

3.6 DAS Carryover Alternatives

The Councils considered modifying or eliminating the DAS carryover provision in the FMP, to reduce the potential dilution of the effort control program. The AP and the Monkfish Committee recommend Alternative 3, no action, noting that as DAS are reduced, the economic need for carryover DAS is more urgent. The PDT had recommended a reduction in carryover DAS to 4, which was modified by the Committee to 6 DAS under Alternative 1. The Councils recommend no action.

Carryover DAS are based on the higher allocated DAS in either area, not on the baseline of 40 DAS set in the original FMP. In other words, if the maximum DAS allocated in either area is 31, for example, and a vessel fishes 30 DAS total (counting DAS used in both areas) then a vessel would have one carryover DAS, not 10 DAS under Alternative 3 (40 baseline minus 30 used), or 6 under Alternative 1 (40 baseline minus 30 used to a maximum of 6).

3.6.1 DAS Carryover Alternative 1

This alternative would modify the provision that enables vessels to carryover up to 10 unused monkfish DAS to the next fishing year, out of the baseline allocation of 40 monkfish DAS. Under this alternative, the DAS carryover would be limited to 6 monkfish DAS, or 15% of the FMP baseline allocation, regardless of the DAS allocated to vessels under this framework adjustment to the rebuilding program.

3.6.2 DAS Carryover Alternative 2 (rejected from further analysis)

Under this alternative, the provision enabling vessels to carryover unused monkfish DAS to the next year would be eliminated. Vessels would start each year with the DAS allocated under whichever provision is adopted in Section 3.4 of this framework. At the September 18th meeting, the Monkfish Committee voted to reject this alternative from consideration or further analysis. The Committee agreed that elimination of the carryover DAS would not be appropriate, given that the measure is intended to promote safety by providing a contingency for unforeseen events (weather, breakdowns) for vessels that have retained some DAS for use at the end of the fishing year.

3.6.3 DAS Carryover Alternative 3 – no action (proposed)

Under this alternative, vessels would continue to be able to carryover up to 10 unused monkfish DAS, out of the baseline allocation of 40, regardless of the DAS allocated under the options being considered in Section 3.4.

3.7 Permit Category H (NC/VA) Fishery boundary

The Councils propose a change to the boundary of the fishery that was established in Amendment 2 for vessels that did not qualify for a limited access permit in the initial FMP. A total of seven vessels qualified and only five or six are actively fishing. These vessels have limited season when monkfish are available in late spring, and are constrained by the closures in place to protect sea turtles, such that the area available is approximately 20 miles wide. At the request of the industry, the Councils are considering moving the boundary northward 20 miles which would increase the opportunity for the affected vessels to prosecute their fishery within the allocation of DAS and trip limits, and provide some additional area to move into, in the event sea turtles appear in the open area. The two alternatives are shown in Figure 2. The AP and the Monkfish Committee recommend Alternative 1, in agreement with the objective of reducing interaction between the gillnet fishery and sea turtles. The PDT did not make a recommendation.

3.7.1 Category H Fishery boundary Alternative 1 (proposed action)

This alternative would move the northern boundary of the Category H fishery from 38°20'N to 38°40'N.

3.7.2 Category H Fishery boundary Alternative 2 (no action)

This alternative would retain the current northern boundary of the Category H fishery at 38°20'N.

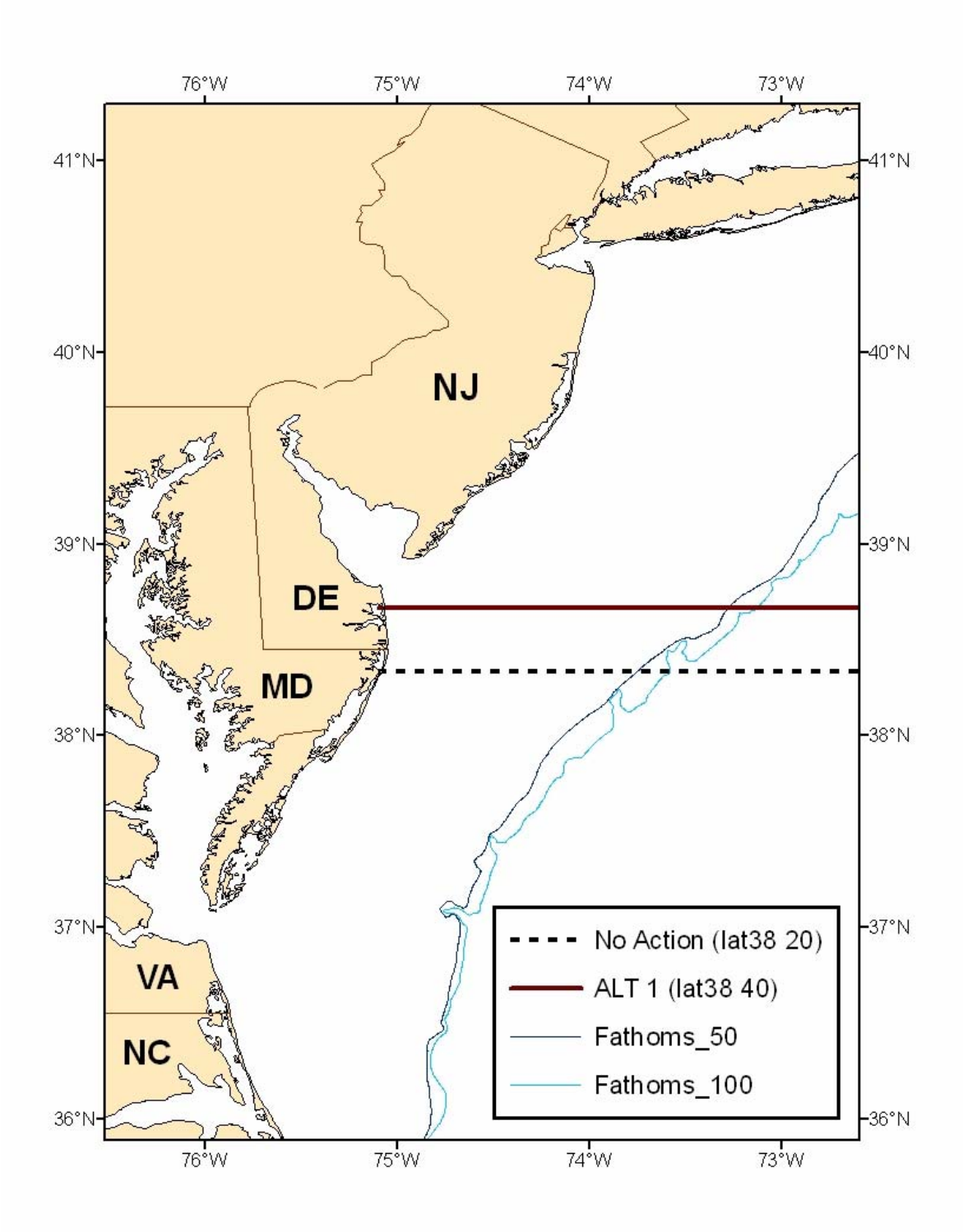

Figure 2 Permit Category H Fishery Boundary Alternatives

3.8 Extension of measures beyond 2009

While the actions proposed in this framework are intended to cover the remaining three years of the rebuilding program, through FY2009, the possibility exists, for a variety of reasons, that the Councils will not have completed the follow-up action that would manage the fishery beyond that time. For example, new biological reference points may not be not defined, or a status determination based on new reference points may not be made early enough to provide sufficient time to develop an appropriate management program, or the Councils simply may not complete the development process prior to the end of FY2009 with sufficient time for review and rulemaking procedures. In that case, the Committee and Councils recommended Alternative 1. The only difference between the two alternatives is that under Alternative 1, if the TAC Overage Backstop measure results in a closure of the directed fishery in 2009, then the measures that would be in place for 2010 and beyond would be those that were in place in FY2008. Under the no action alternative, Alternative 2, whatever measures are in place in 2009 would remain in place until modified by the Councils through a regulatory action.

3.8.1 Measures for 2010 and beyond Alternative 1 (proposed action)

Under this alternative, if the Councils do not modify the management program by framework or amendment prior for the start of FY2010, then the measures in place in FY2009 would continue in effect, unless the TAC Overage Backstop measure results in a closure of the directed fishery (no DAS in one or both areas) in 2009. In that case, the measures that would be in place for 2010 and beyond would be those that were in place in FY2008 in that area where the directed fishery had been closed. This is the recommendation of the Monkfish Committee and the Councils.

3.8.2 Measures for 2010 and beyond Alternative 2, no action

Under this alternative, if the Councils do not modify the management program prior for the start of FY2010, then the measures in place in FY2009 would continue in effect, including the closure of the directed fishery in either or both areas, if such action was taken under the TAC Overage Backstop provision.

3.9 Scallop Closed Area Access Program Monkfish Incidental Limit

Representatives of the scallop industry had requested that the Councils clarify their intent with regards to the monkfish incidental catch limits applicable to limited access scallop dredge vessels fishing in the Closed Area Access Programs. Prior to Scallop Framework 18, those vessels were on a Scallop DAS, and the incidental limit was 300 lbs. tail wt. per DAS, if the vessel held a monkfish limited access permit. In Framework 18, however, the Closed Area Access program was modified, such that participating vessels were given a scallop trip limit, and no longer charged a DAS, or a DAS equivalent. As a result, NMFS informed those vessels that the monkfish incidental limit would not be that applicable to vessels on a scallop DAS, but rather that which applied to vessels fishing with a dredge and not on a scallop DAS. That limit is 50 lbs. tail weight per day up to a maximum of 150 lbs. tail weight per trip.

3.9.1 Scallop Closed Area Access Program Monkfish Incidental Limit Alterntive 1 (proposed action)

This alternative, proposed by the Councils, would allow limited access scallop dredge vessels that hold monkfish limited access permits and fishing on Scallop Closed Area Access trips, not on a scallop DAS, to retain the same monkfish incidental limit that applies to such vessels fishing on a DAS outside the Closed Area Access programs, or 300 lbs. tail wt. per day. Under this alternative, the time being counted for purposes of determining the total amount of monkfish allowed would be via the VMS as only the time in the closed area, not to include steaming time outside the closed area. Vessels participating in this program are prohibited from fishing outside the areas on Closed Area Access trips under the existing terms of the program. This is the recommendation of the AP and Monkfish Committee.

3.9.2 Scallop Closed Area Access Program Monkfish Incidental Limit Alterntive 2, no action

Under the no action alternative, limited access scallop dredge vessels, including those that hold limited access monkfish permits, fishing on Scallop Closed Area Access trips, not on a scallop DAS, may retain the same monkfish incidental limit that applies to other vessels fishing with a dredge and not on a DAS, or 50 lbs. tail wt. per day to a maximum of 150 lbs tail weight per trip.

3.10 Other alternatives considered but rejected from further analysis

3.10.1 TAC Alternative 2

As noted in Section 3.1.2 of this document, at the June 29, 2006 meeting, the Monkfish Oversight Committee put forward target TAC Alternative 2, which is based on the current target TAC-setting method, using the FY2005 landings and an assumption that the survey index in 2006 will be the same as that in 2005 for the purpose of determining a 3-yr. average index value. The PDT determined that the target TAC associated with this approach would be 4,299 mt and 5,138 mt for the NFMA and SFMA, respectively. At the September 18th meeting, the Committee agreed to not consider this alternative further. The rationale for this decision was that the alternative was based on only one method for calculating the TAC, and was, therefore, less defensible than the alternative recommended by the PDT. Furthermore, the TACs calculated under this method were not significantly different than under the recommended method for the SFMA, 38 mt (less than 1%) higher, and 700 mt (about 14%) lower for the NFMA.

3.10.2 DAS Leasing

The Committee initially considered developing a DAS leasing program in this framework to help mitigate the impact on vessels of any effort control measures that reduced monkfish DAS. At the June 29 meeting, the Committee considered PDT comments and concurred with the recommendation to not develop a monkfish DAS leasing program at this time. The PDT made this recommendation primarily on the basis that it could not develop a program that could be firmly conservation neutral. Among the problems are “latent effort” (DAS allocated in excess of those used), and a lack of data on monkfish effort in the NFMA, where vessels were able to target monkfish on a multispecies DAS, and, therefore, did not use monkfish DAS. The PDT noted that a leasing program could be developed in the future, when the issues can be resolved. The PDT also pointed out that the time and resources necessary to develop and analyze a conservation-neutral leasing program would risk delaying the framework, particularly the modifications to the rebuilding program, beyond the start of the 2007 fishing year.

3.10.3 Large-mesh gillnet fishery

At the request of some industry members, the Monkfish Committee initially considered establishment of a large-mesh gillnet permit category that would allocate more monkfish DAS to vessels enrolled in a program where they would be required to use gillnets with mesh that is larger than the current minimum size, and be restricted to fishing in the SFMA. At the June 29th meeting, the Committee removed this proposal from further consideration and analysis in the Framework 4, primarily based on the comments and recommendation of the PDT.

The PDT recommended against this proposal primarily because of the technical problems in trying to calculate an appropriate pro-rating of DAS based on a nominal increase in gillnet mesh sizes. The data on actual meshes in use and the associated catch composition is not adequate. The PDT recognized that some, if not many vessels have already been using meshes larger than the minimum size, so simply looking at the fishery-wide catch composition would not work. There is insufficient data on gillnet selectivity of monkfish across a range of fishery conditions and for the larger mesh size, so even calculating a theoretical pro-rating is not possible. Furthermore, the PDT recommended against creating additional permit categories in this already complicated FMP.

3.10.4 Mandatory VMS and electronic catch reporting

The Monkfish Committee considered two proposals for requiring electronic vessel monitoring systems (VMS) on monkfish limited access vessels, and using the VMS for daily catch reporting. One proposal was to require VMS on all vessels fishing in the multispecies Georges Bank Regulated Mesh Area and that they report daily their monkfish catch. The purpose of this proposal was to address alleged violations of the monkfish SFMA trip limit by vessels fishing under the NFMA exemption letter (where there is no monkfish trip limit while fishing on a multispecies DAS in the NFMA), where those vessels cross the NFMA/SFMA boundary and catch monkfish in the southern area in excess of the SFMA trip limits. The second proposal would have required all monkfish limited access vessels to have a VMS installed, and to either require or request voluntary daily monkfish catch reporting. This second proposal was intended to improve the collection of monkfish catch data (including catch per unit effort and location), as well as enforcement of DAS and trip limit rules.

While these measures were never fully developed, the Committee re-considered the need for either proposal, and whether the benefits would outweigh the costs. Recognizing that the cost of installation has dropped in recent years due to multiple vendors and economies of scale, as more vessels have installed VMS, the Committee still considered that the operational and messaging fees were still a major consideration. Even though the vast majority of monkfish limited access vessels have VMS, or will have pending the approval of the VMS requirements in Northeast Multispecies Framework 42, the Committee did not think the incremental benefits in terms of catch data would outweigh the cost, especially since vessels and dealers are already required to submit catch (VTR) and landings (dealer weighout) data. Secondly, the issue of vessels fishing in the SFMA while under the NFMA letter of authorization would be minimized if those vessels were under monkfish DAS and trip limits, as proposed.

3.10.5 In-season adjustment for TAC overage

In developing the TAC backstop alternatives in the event of an overage, the PDT advised the Committee that one approach would be to have an adjustment take place whenever the TAC overage occurred, or was anticipated to occur during the middle of the fishing year. In its comments, however, the PDT concluded that an in-season adjustment was not practical and could be self-fulfilling. That is, if fishermen anticipated an in-season adjustment, they would likely fish their DAS earlier in the year rather than risk losing some or all as a result of the adjustment, increasing the likelihood that an adjustment would be needed because landings would accumulate earlier than in previous years. The PDT agreed that, from a practical perspective, the lag time in availability of landings data coupled with the fact that the peak fishing season occurs during the late fall and early winter months would mean that the in-season adjustment would only affect the last month of the fishing year, at which point it becomes an adjustment for the subsequent year, based on partial year data. Since full-year landings data are not available for several months after the start of the next fishing year, making an adjustment in the second year would effectively be an in-season adjustment. The PDT observed that if vessels anticipated an in-season adjustment, they would use their DAS early in the year to prevent losing them under an in-season adjustment (or, if the adjustment were to the trip limit, they would use their DAS when they could land more per DAS before the adjustment). This type of behavior could increase fishing activity during the early part of the fishing year, increasing the likelihood that the target TAC would be exceeded, and, thereby, increasing the likelihood that an adjustment would be necessary. Not having an in-season adjustment would increase the flexibility of vessels to plan their fishing strategy over the entire year. Based on those comments, the Committee rejected this in-season adjustment in the event of a TAC overage from further analysis.

3.10.6 DAS carryover alternatives

The Committee considered a range of alternatives for the DAS carryover provisions, including no action (10 DAS), a modification to the carryover provision, and eliminating it (no carryover DAS). The PDT recommended a reduction in the carryover DAS to 4, representing 10% of the baseline allocation of 40 DAS in the FMP, and also recommended against eliminating the carryover provision. The Committee agreed that a reduction in carryover DAS would be appropriate considering the range of DAS allocations being considered for the monkfish fishery in Framework 4, but some members felt that a reduction from 10 DAS to 4 DAS was too severe. Some committee members were also concerned about the precedent that might be set for the multispecies fishery if a 10% standard is adopted as recommended by the PDT. The Committee, therefore, modified the PDT's recommendation and proposed 6 DAS, or 15% of the baseline 40 DAS allocation (Section 3.6.1). The Committee also agreed that elimination of the carryover DAS would not be appropriate, given that the measure is intended to promote safety by providing a contingency for unforeseen events (weather, breakdowns) for vessels that have retained some DAS for use at the end of the fishing year.

3.10.7 Trip limit cap for rebuilt fishery

Early in the development of Framework 4, the Committee considered a proposal from the Advisory Panel to cap trip limit increases to not more than 20% in any year, once the fishery is rebuilt. While this proposal did not receive much discussion during the ensuing months, the Committee addressed it at the September 18, 2006 meeting after reviewing PDT comments and recommendations. The PDT commented that it is premature to address this matter in Framework

4, and that the proposal should be considered in the broader context of a future regulatory action that deals with the full management program for the rebuilt fishery. At this time, there is no program for managing the rebuilt fishery, and furthermore, the biological reference points on which such a program would be based will have to be revised prior to the development and implementation of a management regime for the rebuilt fishery, due to the changeover in survey vessels and the anticipated stock assessments. The Committee concurred with the PDT recommendation and removed this proposal from further consideration and analysis in Framework 4.

4.0 Affected Environment (2005 SAFE Report)

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. Since this section of the document also contains the same information, it will serve as the SAFE Report for the 2005 fishing year. The 2005 fishing year is the most recent year for which complete information is 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.

In regards to estimates of stock biomass, the SAW 40 report noted that the 3-year moving average (2001-2003) of the survey index was above $B_{threshold}$ in the NFMA and equivalent to $B_{threshold}$ in the SFMA. Due to the timing of data availability, the assessment was not able to use 2004 cooperative survey trawl efficiency analysis to calculate swept area biomass estimates. Assuming intermediate trawl efficiencies from the 2001 cooperative survey, however, and 2004

nominal tow distances, swept area biomass estimates for the NFMA from the 2004 cooperative survey were 25-percent less than the 2001 cooperative swept area biomass estimates for this survey, while swept area biomass estimates for the SFMA from the 2004 cooperative survey were 66-percent higher than the 2001 estimates.

4.1.1.2 2005 Fall Survey Results

The FMP uses the NMFS fall bottom trawl survey to determine monkfish stock status (biomass) relative to management reference points. To smooth out year-to-year variability in the survey, a three-year running average is used to evaluate the stock against the MSY proxy target, and minimum biomass reference points. As shown in Table 4 both northern and southern stock components are below the minimum biomass threshold, and are, therefore, overfished. This is a change of status from 2004 when both stocks were not overfished.

kg/tow	2000	2001	2002	2003	2004	2005	2006	3-yr. Ave.	Bthreshold	Btarget
NFMA	2.495	2.052	2.103	1.925	0.638	1.078	1.066	0.927	1.25	2.5
SFMA	0.477	0.708	1.253	0.828	0.742	0.765	0.807	0.771	0.93	1.86

Table 4 2000 – 2005 NMFS autumn bottom trawl survey indices of monkfish abundance and biomass reference points.

Framework 2, adopted in 2003, established a method for evaluating on an annual basis the rebuilding progress of the fishery. That method compares the three-year running average of the biomass index to annual biomass targets which are ten equal increments between the 1999 observed value (at the start of the 10-year rebuilding program) and the 2009 target (Btarget). The relationship of the observed 3-year average to the annual target value is applied to the previous year's landings to set target TACs for the upcoming year. The annual targets and the 1999-2005 observed values are shown in Figure 3 and Figure 4 for the NFMA and SFMA, respectively. The biomass indices remained essentially flat in 2006, and the northern and southern stocks are approximately 54% and 46% below their 2006 targets, respectively.

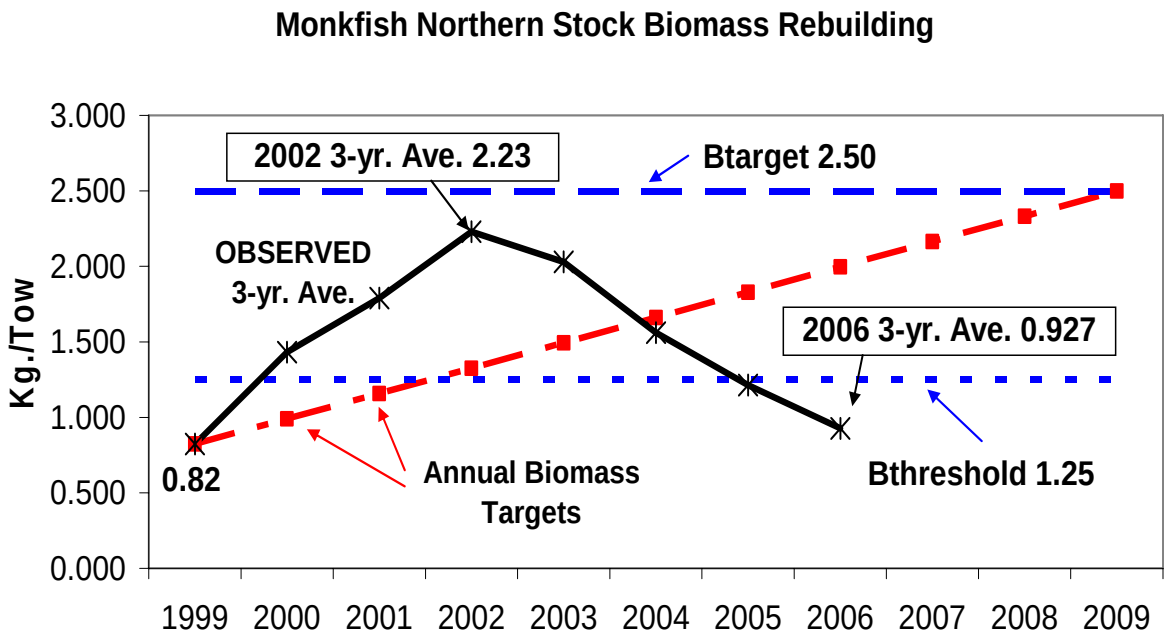

Figure 3 - NFMA biomass index (2005 three-year running average) relative to annual rebuilding targets.

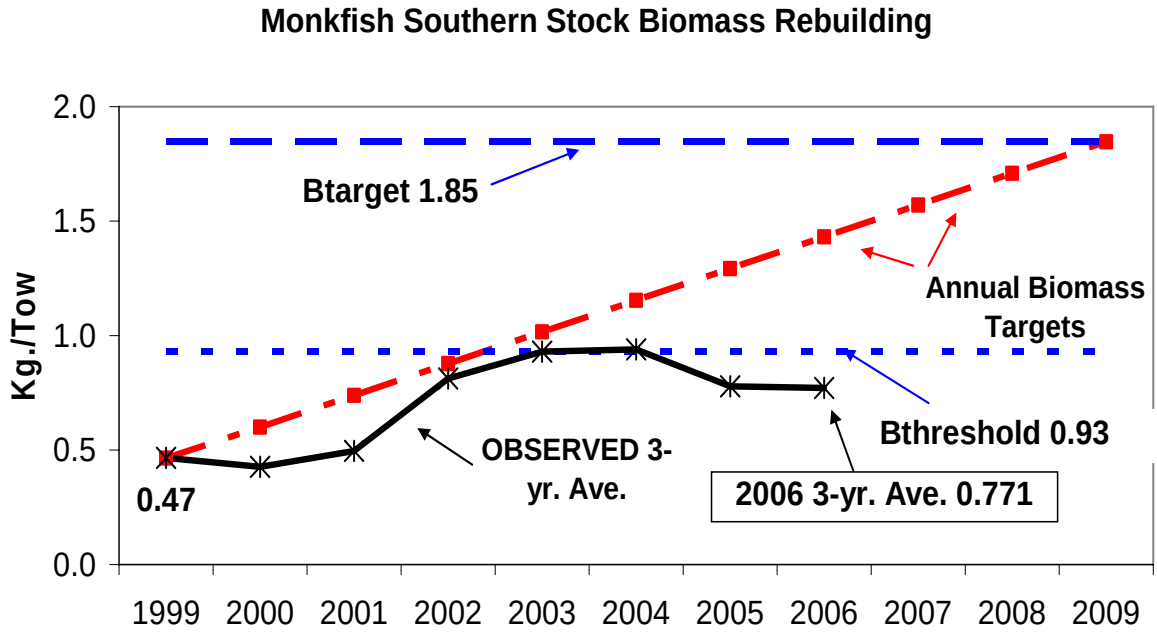

Figure 4 - SFMA biomass index (2005 three-year running average) relative to annual rebuilding targets.

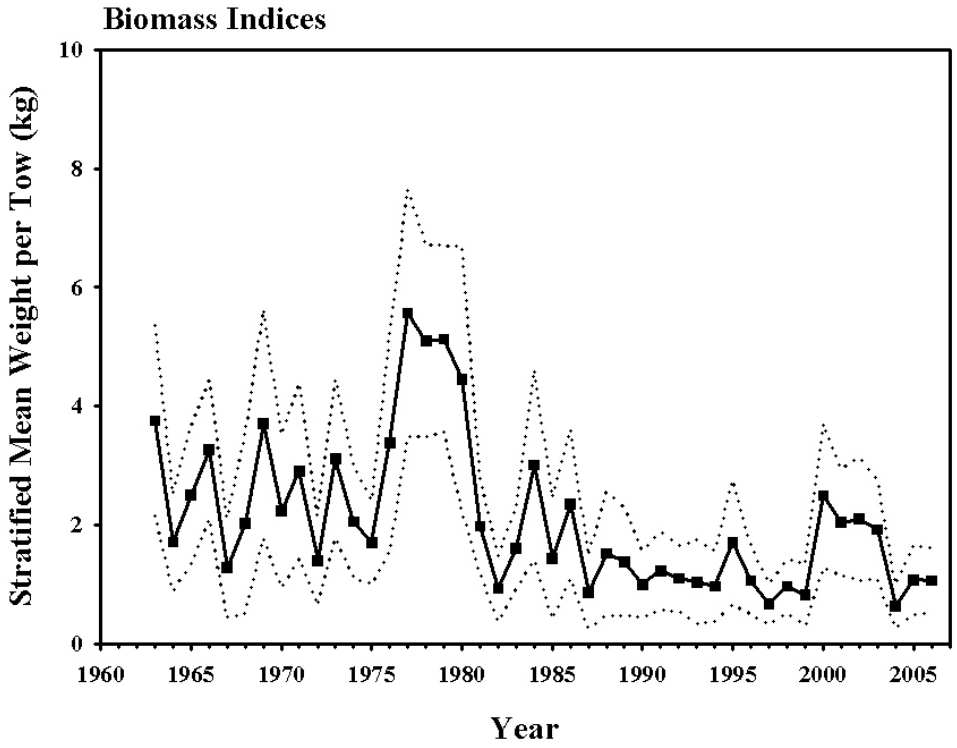

Figure 5 NFMA Fall Survey Biomass indices 1963-2005

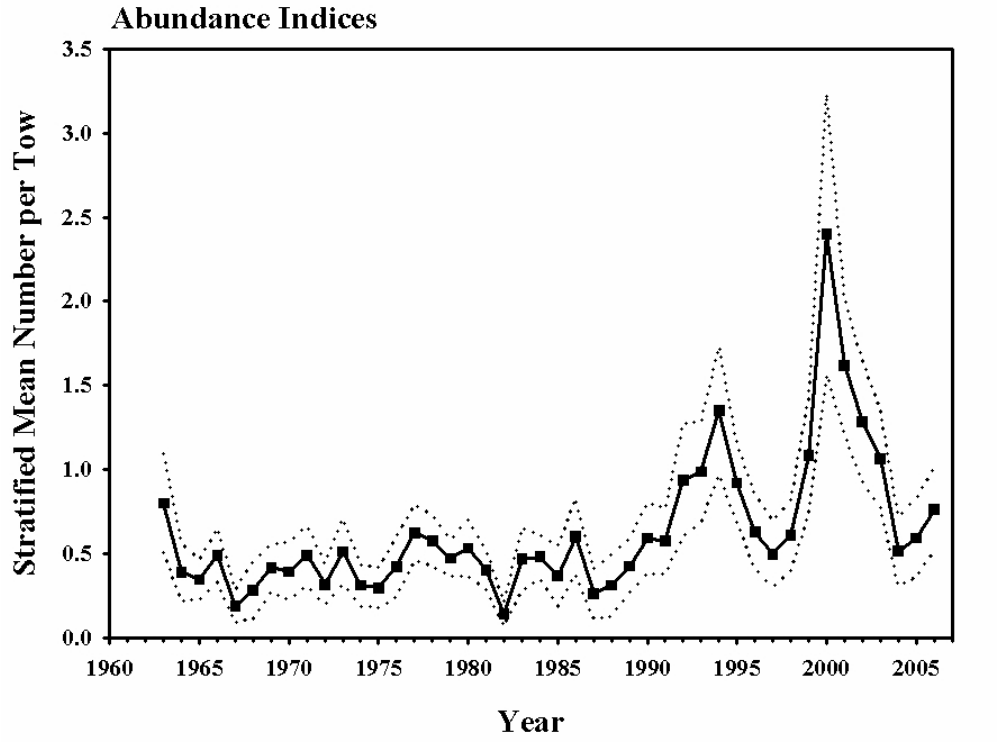

Figure 6 NFMA Fall Survey Abundance indices 1963-2005

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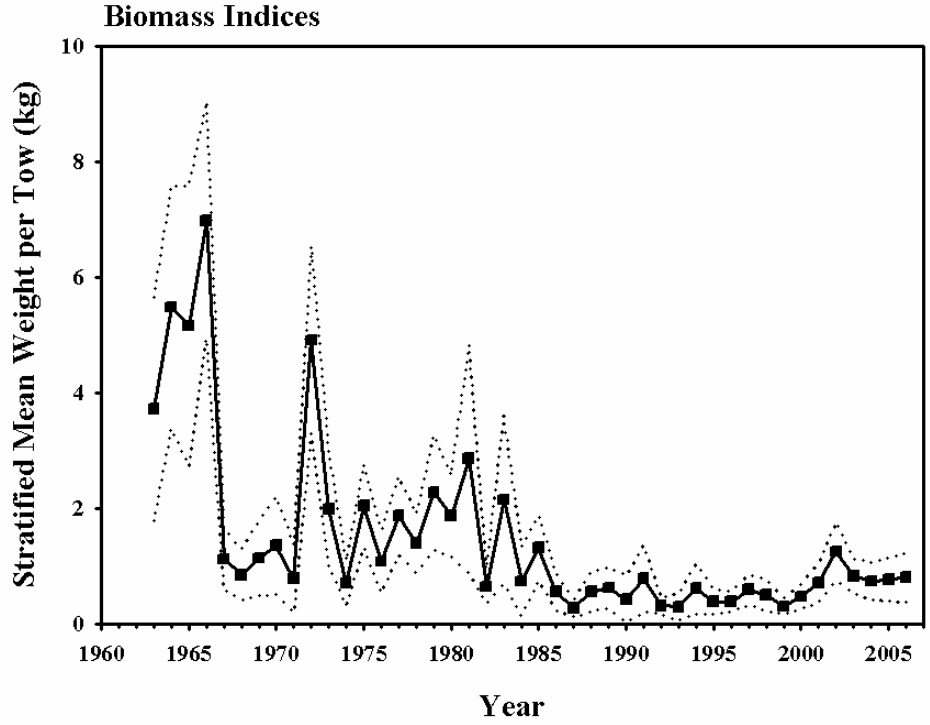

Figure 7 SFMA Fall Survey Biomass indices 1963-2005

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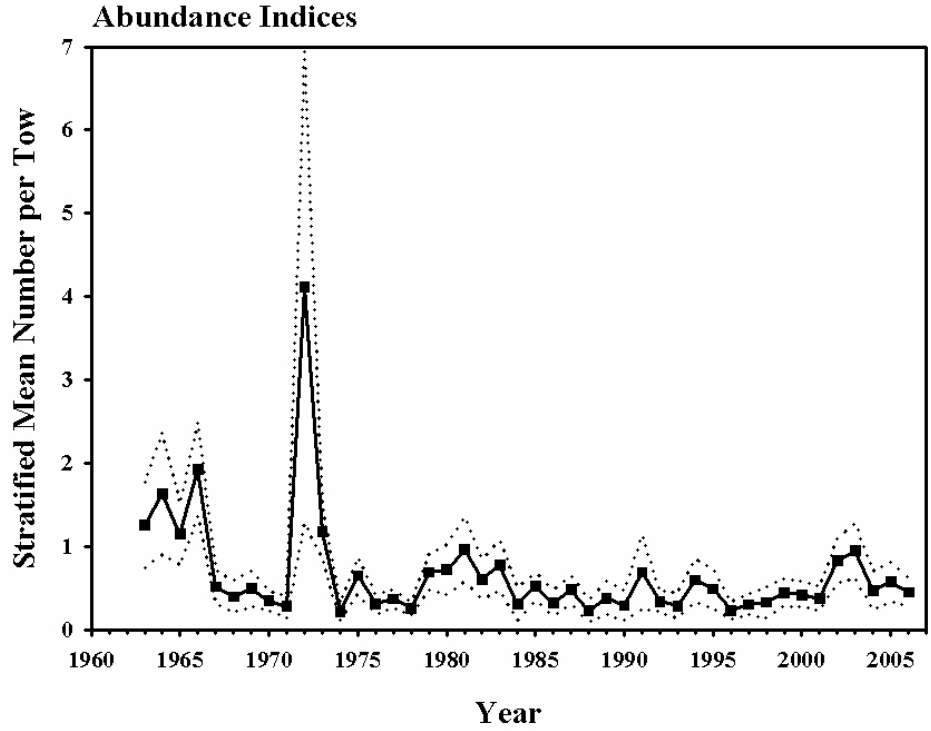


Figure 8 SFMA Fall Survey Abundance indices 1963-2005

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 1.2.3.2 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 (*Physeter macrocephalus*)	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 (*Phoca vitulina*)	Protected
Gray seal (*Halichoerus grypus*)	Protected
Harp seal (*Phoca groenlandica*)	Protected
Hooded seal (*Crystophora cristata*)	Protected
Sea Turtles	
Leatherback sea turtle (*Dermochelys coriacea*)	Endangered
Kemp's ridley sea turtle (*Lepidochelys kempii*)	Endangered
Green sea turtle (*Chelonia mydas*)	Endangered*
Loggerhead sea turtle (*Caretta caretta*)	Threatened
Fish	
Shortnose sturgeon (*Acipenser brevirostrum*)	Endangered
Atlantic salmon (*Salmo salar*)	Endangered
Critical Habitat Designations	
Right whale Cape Cod Bay	
Great South Channel	

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

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 effects will occur as well as the magnitude of effects when they do occur will vary amongst 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 of published documents. These include sea turtle status reviews and biological reports (NMFS and USFWS 1995; 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*. 2005), 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).

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 5, provides the most recent information on observed turtle interactions with the monkfish fishery for the period 2003 – Aug. 2006. The data

has not been analyzed with respect to trends or impact of effort controls and/or sea turtle closures. 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

Table 5 Turtle Interactions in Gillnet Gear Targeting Monkfish, 2003-Sept 2005.
Source: NEFSC Observer Data

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 and 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. 2005). 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*. 2005). 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*. 2005). 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*. (2005). Small cetaceans are known be captured in gillnet and trawl gear (Waring *et al*. 2005).

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*. 2005). 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*. 2005). 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*. 2005). All four species of seals are known to be captured in gillnet and/or trawl gear (Waring *et al*. 2005).

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 based on the 3rd Quarterly Update of the 2006 Status of Stocks Report (NOAA/NMFS):

- **Winter skate** – not overfished, overfishing is occurring
- **Thorny skate –** overfished, overfishing is not occurring,
- **Spiny dogfish** – no minimum biomass threshold adopted in the FMP but based on NMFS' recommended threshold, 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. Figure 9 shows the sediment types in the Northeast, overlaid with the monkfish management areas.

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 re-suspended 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 0.02ºC 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.

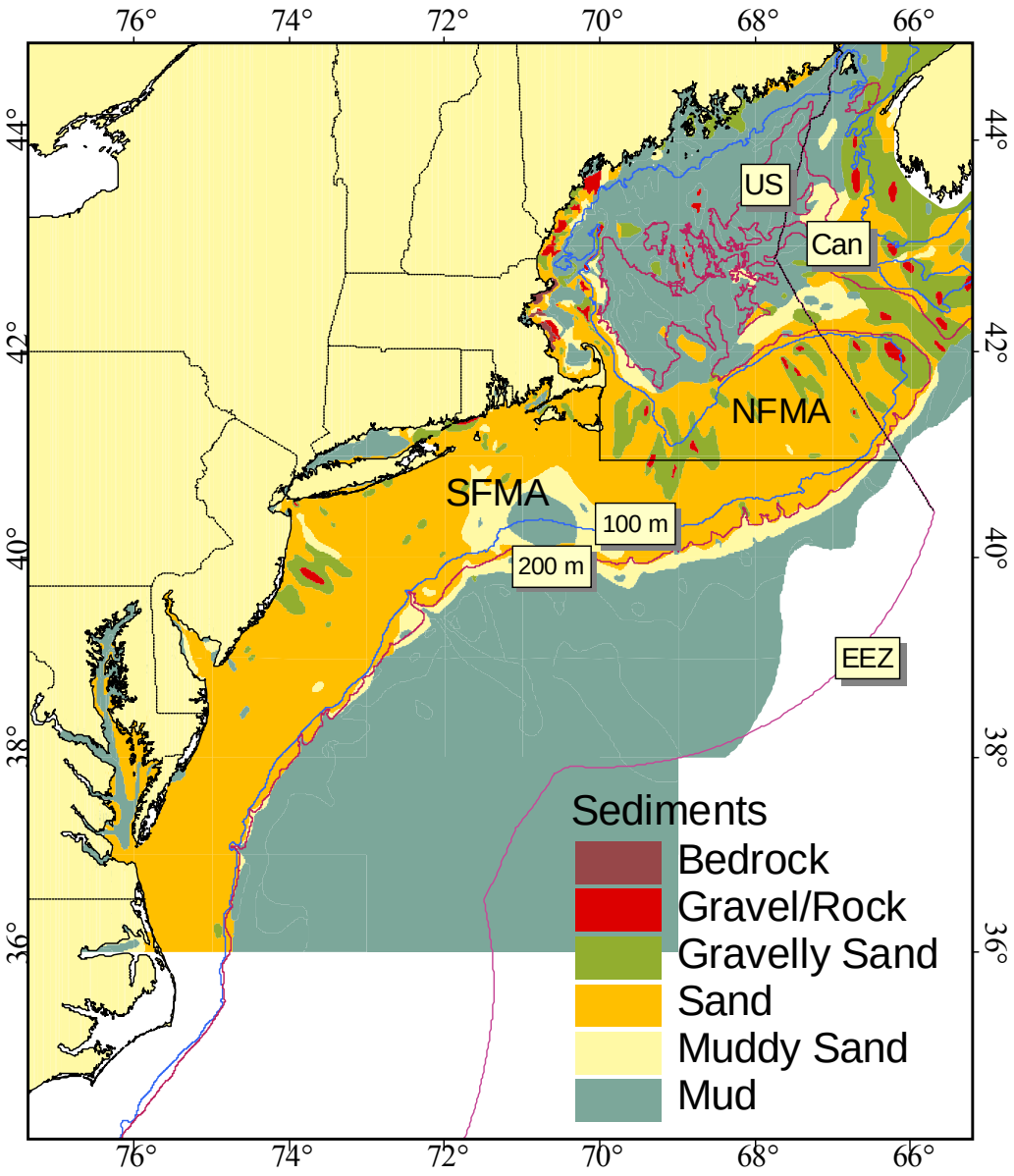


Figure 9. Overlap of sediment types and fishery management areas in Monkfish FMP (Poppe *et al*. 1989a and b).

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 10 shows the areas designated as EFH for juvenile monkfish (corresponding to Figure 4.3 in the excerpt), Figure 11 shows EFH designated for adult monkfish (Figure 4.4), and Figure 12 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 mid-shelf 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.

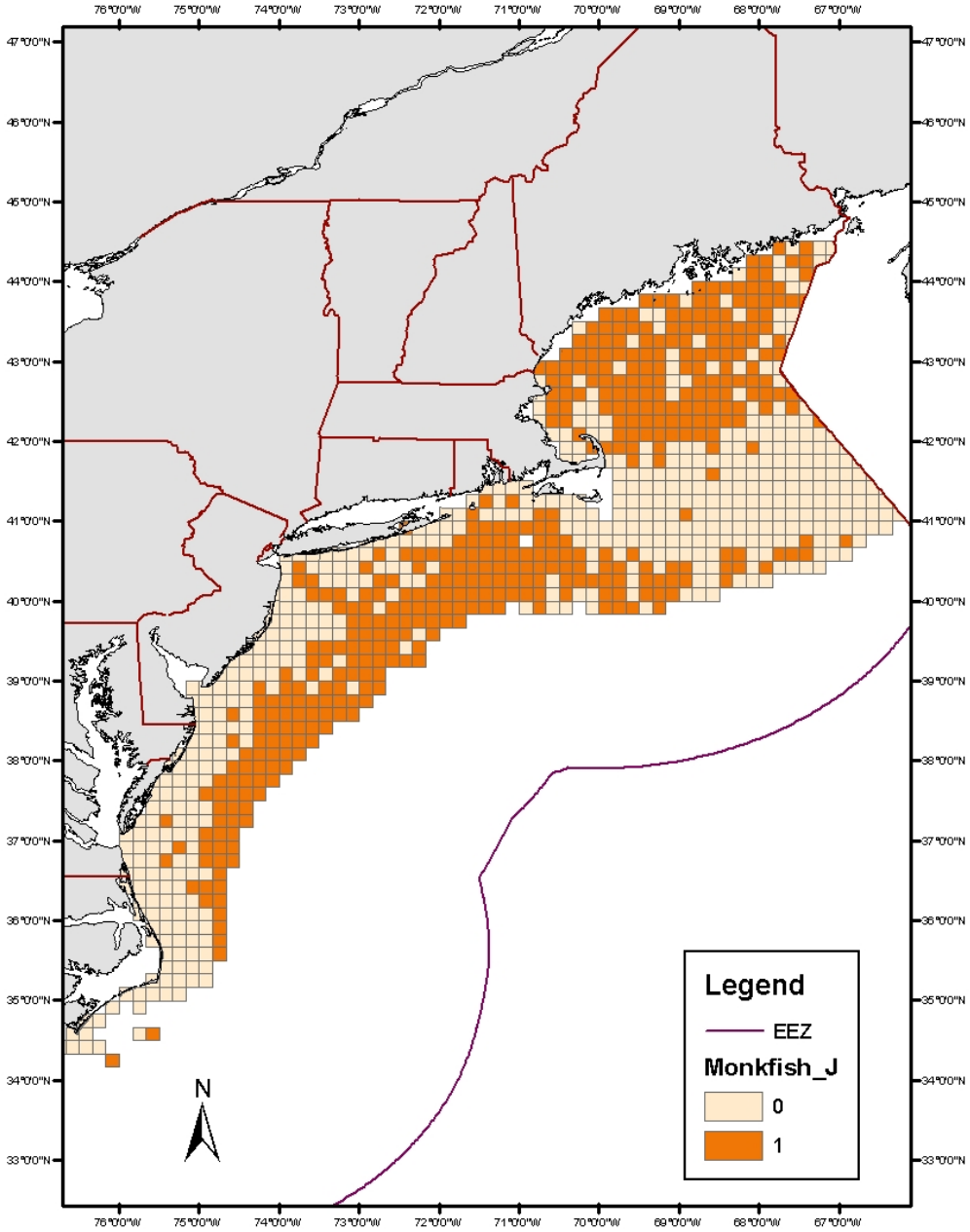


Figure 10 – EFH Designation for Juvenile Monkfish is highlighted in the shaded ten-minute squares

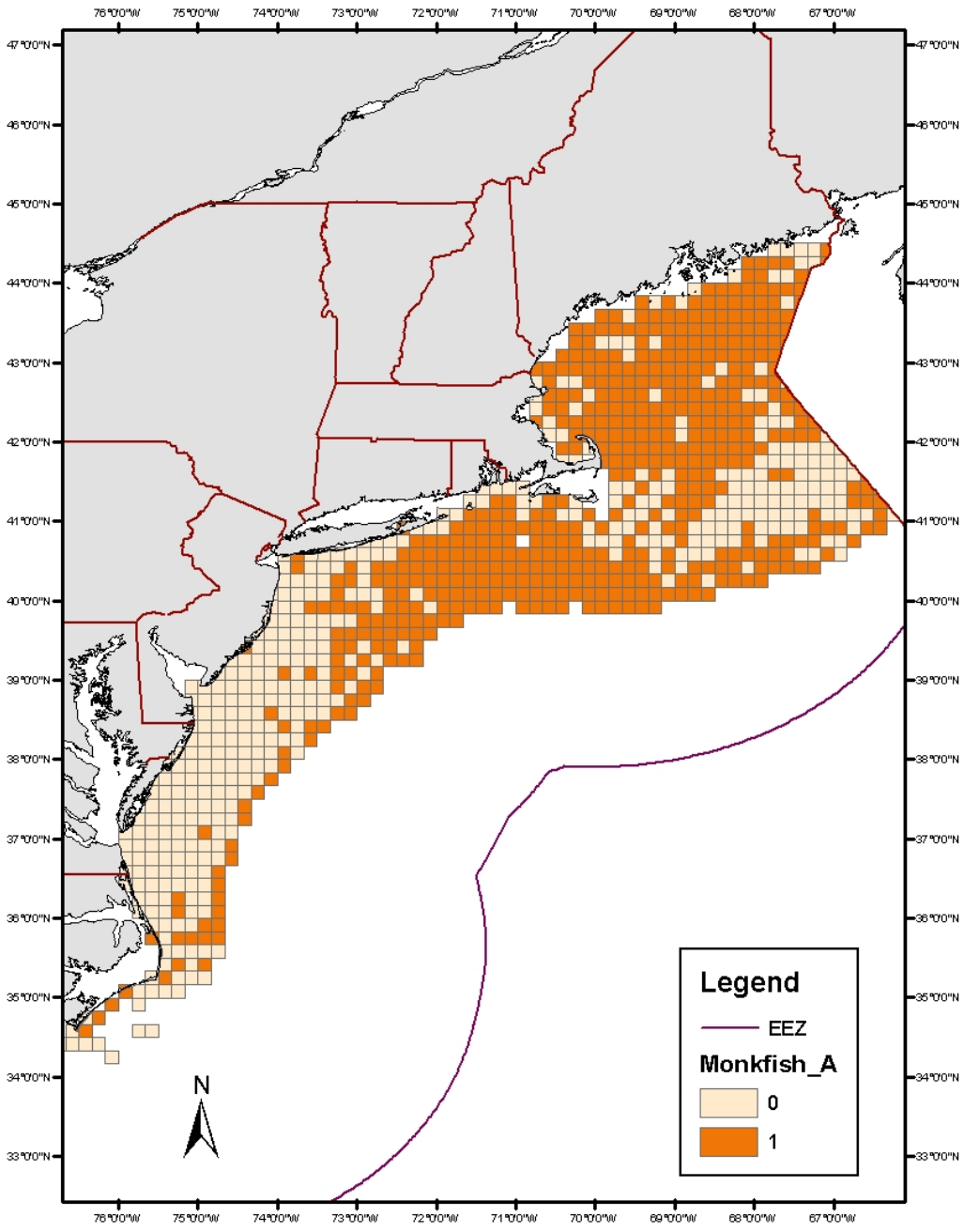


Figure 11 – EFH Designations for Adult Monkfish is highlighted in the shaded ten-minute squares

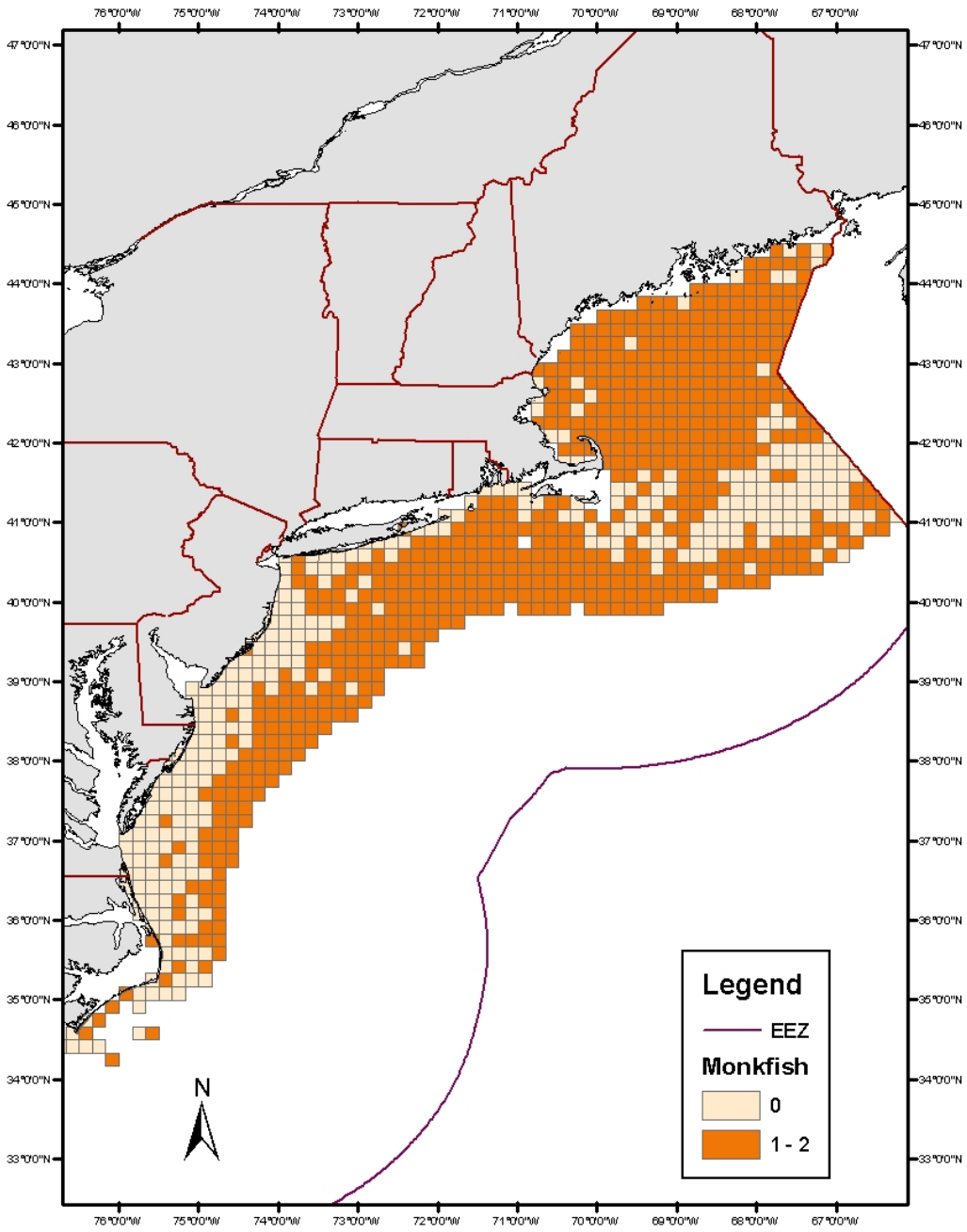


Figure 12 – EFH Designation for both Juvenile and Adult Monkfish combined is highlighted in the shaded ten-minute squares

4.3.2 Effects of fishing gear on monkfish Essential Fish Habitat

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 less than 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*., in press):

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*., in press).

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 days-at-sea 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 northern fishery management area and the habitat closed areas extend into the southern fishery management area, 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 Vessels, Ports and Communities

This section updates information provided in the annual SAFE Report for the Monkfish FMP, adding data for the 2005 fishing year.

4.4.1 Vessels and Fishery Sectors

The following sections show the distribution of effort and landings by permit category, area and gear type.

4.4.1.1 Permits

In 2005, there were 756 monkfish limited access vessels, of which 346 were Category C permits holding limited access permits in either a Multispecies (61%) or Scallop (47%) fisheries, and 348 were Category D permits, primarily (98%) holding limited access Multispecies permits (Table 6). Overall, 73% of monkfish limited access permit holders also hold multispecies limited access permits. Vessels in all four monkfish permit categories also hold limited access permits in a number of New England and Mid-Atlantic fisheries. In 2005 there were six new Category H limited access permits issued under the provision of Amendment 2 for vessels fishing off the North Carolina/Virginia coast.

MONKFISH PERMIT CATEGORY	NUMBER OF MONKFISH PERMITS	NUMBER OF MONKFISH VESSELS ALSO ISSUED A LIMITED ACCESS PERMIT FOR:									
		BLACK SEA BASS	SUMMER FLOUNDER	LOBSTER	MULTI-SPECIES	OCEAN QUAHOG	RED CRAB	SCALLOP	SCUP	SQUID/ MACKEREL/ BUTTERFISH	TILEFISH
A	14	7	2	7	0	0	0	0	5	1	1
B	42	20	6	19	2	0	0	0	13	0	3
C	346	129	259	285	211	0	0	163	145	111	1
D	348	121	200	315	342	0	0	19	152	104	4
H	6	1	0	0	0	0	0	0	0	0	0
TOTAL	756	278	467	626	555	0	0	182	315	216	9

MONKFISH PERMIT CATEGORY	NUMBER OF MONKFISH PERMITS	PERCENT OF MONKFISH VESSELS ALSO ISSUED A LIMITED ACCESS PERMIT FOR:									
		BLACK SEA BASS	SUMMER FLOUNDER	LOBSTER	MULTI-SPECIES	OCEAN QUAHOG	RED CRAB	SCALLOP	SCUP	SQUID/ MACKEREL/ BUTTERFISH	TILEFISH
A	14	50%	14%	50%	0%	0%	0%	0%	36%	7%	7%
B	42	48%	14%	45%	5%	0%	0%	0%	31%	0%	7%
C	346	37%	75%	82%	61%	0%	0%	47%	42%	32%	0%
D	348	35%	57%	91%	98%	0%	0%	5%	44%	30%	1%
H	6	17%	0%	0%	0%	0%	0%	0%	0%	0%	0%
TOTAL	756	37%	62%	83%	73%	0%	0%	24%	42%	29%	1%

Table 6 – Number and Percent of monkfish limited access vessels also issued a limited access permit in other fisheries in 2005, by permit category

The FMP also provides an open-access permit (Category E) for vessels that did not qualify for a limited access permit so those vessels can land monkfish caught incidentally in other fisheries. Table 7 shows that the number of category E permits increased during the first few years of the

FMP but has remained relatively steady since 2001, although the number declined about 10% between 2005 and 2006.

Fishing Year	Number of permits
1999	1466
2000	1882
2001	1991
2002	2142
2003	2120
2004	2256
2005	2379
2006	2131
TOTAL	3577

Table 7 – Monkfish open-access (Category E) permits issued each year since implementation of the FMP in 1999.
The total is the number of unique Category E permits issued since inception of the plan.

4.4.1.2 Landings and Revenues

Table 8 shows monthly landings for FY 2004 by area and gear, as well as total monthly landings since FY 2000. Monkfish landings increased between FY 2002 and FY 2003, principally due to the increase trip limits in the SFMA but declined in FY2004 as trip limits and DAS allocations were reduced in that area. In FY2005 total landings increased by 1,295 mt, or about 7% due to an increase in SFMA landings as a result increased trip limits and DAS allocations, and in spite of a decline of 2,379 mt or 20% in NFMA landings from the previous year. For the first time since FY2000, SFMA landings exceeded those in the NFMA. In FY2002 and FY2004, nearly two-thirds of the total landings were from the NFMA, Figure 13, while in FY 2000, 2001 and 2003, the NFMA accounted for 60%, 57% and 54% of the total, respectively. In FY 1999, before the FMP measures took effect, the NFMA accounted for only 40% of the total.

Table 9 shows monthly landings by gear from the dealer reports for FY 2005, both as reported (landed weight) and converted to live weight. The lower landed weights reflect the fact that monkfish are landed as tails only, and as whole fish. The lower ratio of landed weight to live weight for otter trawls (0.38), compared to gillnets (0.80), is the result of a greater proportion of tails being landed by otter trawls, while gillnets land mostly whole fish.

Figure 14 shows the long-term trend in landings (live weight equivalent) and revenues based on a calendar year. For the four-year period prior to 2000, when the FMP took effect and the five-years since the FMP, landings averaged 58.7 and 50.4 million pounds, respectively, while revenues averaged $37.0 and $41.5 million. In 2004 and 2005, landings declined but in 2005 revenues actually increased to the fourth highest in the time series (since 1982). Whether the decline in landings is due to effort controls in monkfish and multispecies fisheries or to monkfish abundance, or both, is unknown, and possibly different for each management area. Table 10, which is based on fishing year, not calendar year as Figure 14, shows a similar trend in revenues, but actually shows a slight increase in landed weights in FY2005, reflecting a trend toward landing more whole fish rather than tails.

Figure 15 illustrates the seasonal pattern of monkfish landings in FY 2005, and the distinct difference between NFMA and SFMA fisheries, not only in terms of seasonality, but also in terms of the predominant gear. In the NFMA, trawl gear is the primary gear landing monkfish, and gillnet gear landings are a small proportion during the winter months. In the SFMA, on the other hand, gillnet gear accounts for the majority of monkfish landings, with a peak in the late spring/early summer months, and showing less of a winter effect. Figure 16 shows the annual distribution of landings by gear for each area since FY 1999. While the NFMA pattern is fairly consistent over that period in terms of the proportion landed by gear type, the proportion of landings accounted for by trawl vessels has declined in the SFMA, although it nearly doubled in FY2005 from the previous year.

	MAY - 2005	JUN - 2005	JUL - 2005	AUG - 2005	SEP - 2005	OCT - 2005	NOV - 2005	DEC - 2005	JAN - 2006	FEB - 2006	MAR - 2006	APR - 2006	MAY 05 - APR 06		2005*		2004*	
															May05-Apr06 as a	Target TAC	May04-Apr05 as a	Target TAC
	Metric Tons	Metric Tons	Metric Tons	Metric Tons	Metric Tons	Metric Tons	Metric Tons	Metric Tons	Metric Tons	Metric Tons	Metric Tons	Metric Tons	Metric Tons	Percent of Area	% of Target	Metric Tons	% of Target	Metric Tons
NORTHERN	**601**	**1,134**	**1,002**	**962**	**927**	**777**	**761**	**686**	**801**	**535**	**730**	**408**	**9,325**	**49%**	**71%**	**13,160**	**69%**	**16,968**
OTTER TRAWL	507	808	530	507	621	541	533	514	761	499	707	371	6,897	36%	52%		49%	
GILLNET	92	324	464	442	291	226	220	171	40	36	23	32	2,361	12%	18%		20%	
HOOK	0	0	0	0	0	1	1	1	0	0	0	0	3	0%	0%		0%	
OTHER GEARS	1	2	8	13	15	10	7	1	0	0	0	6	64	0%	0%		0%	
SOUTHERN	**1,470**	**1,952**	**860**	**525**	**420**	**326**	**856**	**728**	**678**	**606**	**576**	**901**	**9,897**	**51%**	**102%**	**9,673**	**92%**	**6,772**
OTTER TRAWL	135	119	175	310	366	226	422	191	326	168	181	268	2,886	15%	30%		22%	
GILLNET	1,242	1,678	578	91	12	62	385	501	333	264	345	532	6,022	31%	62%		59%	
HOOK	0	0	0	0	0	0	0	0	0	0	0	0	0	0%	0%		0%	
OTHER GEARS	94	154	107	124	42	38	49	36	19	174	49	101	989	5%	10%		11%	
ALL AREAS	**2,071**	**3,085**	**1,862**	**1,487**	**1,347**	**1,103**	**1,617**	**1,414**	**1,480**	**1,140**	**1,306**	**1,309**	**19,222**	**100%**				
OTTER TRAWL	642	927	704	817	987	767	955	705	1,087	666	887	638	9,783	51%				
GILLNET	1,334	2,002	1,043	533	303	288	605	672	373	300	369	563	8,384	44%				
HOOK	0	0	0	0	0	1	1	1	0	0	0	0	3	0%				
OTHER GEARS	95	156	115	137	57	48	57	37	20	174	49	107	1,052	5%				
ALL AREAS																		
Fishing Year 2005	**2,071**	**3,085**	**1,862**	**1,487**	**1,347**	**1,103**	**1,617**	**1,414**	**1,480**	**1,140**	**1,306**	**1,309**	**19,222**					
Fishing Year 2004	**1,806**	**1,979**	**1,581**	**1,380**	**1,304**	**1,243**	**1,803**	**1,681**	**1,264**	**1,173**	**1,235**	**1,478**	**17,927**					
Fishing Year 2003	**2,681**	**3,199**	**1,913**	**1,746**	**1,420**	**2,253**	**2,823**	**1,907**	**1,976**	**2,386**	**2,172**	**1,797**	**26,273**					
Fishing Year 2002	**1,574**	**2,093**	**1,489**	**1,382**	**1,524**	**1,643**	**1,937**	**2,203**	**2,015**	**1,762**	**2,631**	**1,553**	**21,807**					
Fishing Year 2001	**2,041**	**2,456**	**1,691**	**1,504**	**1,495**	**2,026**	**2,655**	**2,984**	**2,446**	**1,937**	**2,022**	**2,665**	**25,922**					

1. 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

2. Landings in live weight.
3. Gear data are based on vessel trip reports.

* Fishing Year is May 1 through April 30.

Table 8 – Monkfish landings by area, gear and month for FY 2005 (converted to live weight).

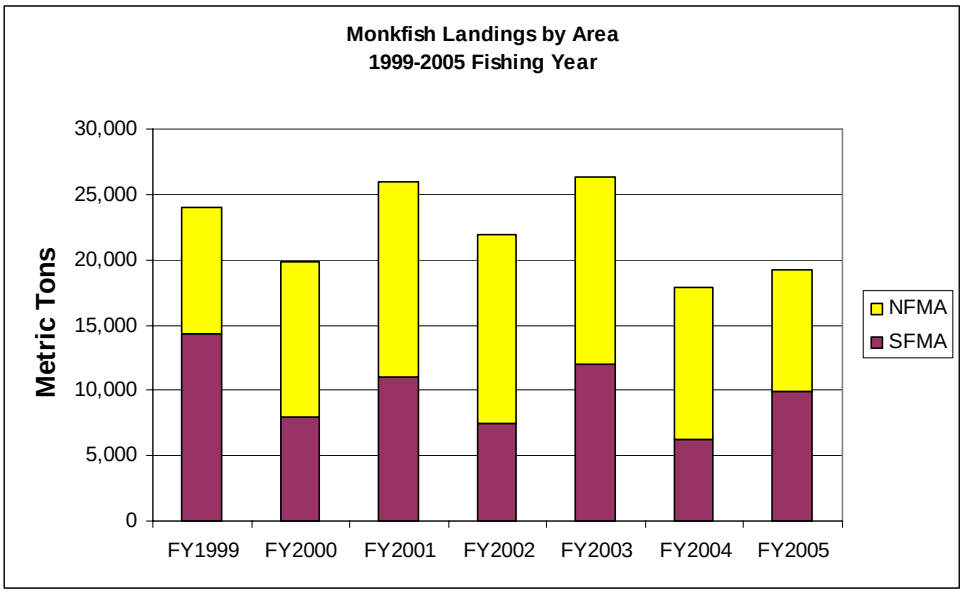


Figure 13 – Monkfish landings by management area, FY 1999 – 2005

Month	Otter Trawl	Scallop Dredge	Gillnet	Hook	Other	Total Pounds
May	1,304,815	132,950	2,338,375	106,823	509,950	4,392,913
June	1,786,455	154,876	3,649,132	104,270	661,121	6,355,854
July	1,172,497	133,307	2,017,737	118,067	416,055	3,857,663
August	1,366,520	151,495	1,047,933	137,752	378,749	3,082,449
September	1,890,639	95,962	539,625	96,007	264,662	2,886,895
October	1,520,087	59,225	472,721	16,619	301,522	2,370,174
November	1,833,984	77,539	1,105,883	8,153	438,150	3,463,709
December	1,414,420	32,324	1,217,065	9,577	346,935	3,020,321
January	1,666,149	43,416	1,047,500	8,179	368,567	3,133,811
February	1,499,977	28,815	520,568	8,206	386,908	2,444,474
March	1,728,404	41,481	655,517	3,330	415,957	2,844,689
April	1,088,603	70,316	1,097,546	2,650	503,362	2,762,477
TOTAL	**18,272,550**	**1,021,706**	**15,709,602**	**619,633**	**4,991,938**	**40,615,429**

Source: NMFS Statistics Office, dealer weighout database

** May include data from CT vessels without a 2005 Monkfish permit*

LANDED WEIGHT for FY 2005

Month	Otter Trawl	Scallop Dredge	Gillnet	Hook	Other	Total Pounds
May	493,902	42,469	1,958,853	55,329	266,909	2,817,462
June	607,365	48,264	2,876,716	65,188	347,050	3,944,583
July	405,835	41,430	1,394,118	54,643	189,462	2,085,488
August	468,318	46,917	643,829	75,116	130,268	1,364,448
September	673,395	29,438	369,670	52,387	88,572	1,213,462
October	543,881	18,081	370,744	14,413	103,377	1,050,496
November	683,842	24,584	938,286	6,421	169,328	1,822,461
December	558,512	10,370	1,051,185	9,377	159,236	1,788,680
January	756,476	13,776	923,529	7,358	173,135	1,874,274
February	682,069	8,710	472,233	5,225	164,205	1,332,442
March	698,923	12,494	575,327	2,415	161,091	1,450,250
April	426,332	21,282	970,942	1,255	179,611	1,599,422
TOTAL	**6,998,850**	**317,815**	**12,545,432**	**349,127**	**2,132,244**	**22,343,468**

Table 9 – FY2005 monkfish landings from dealer reports, showing live weight and landed weights.

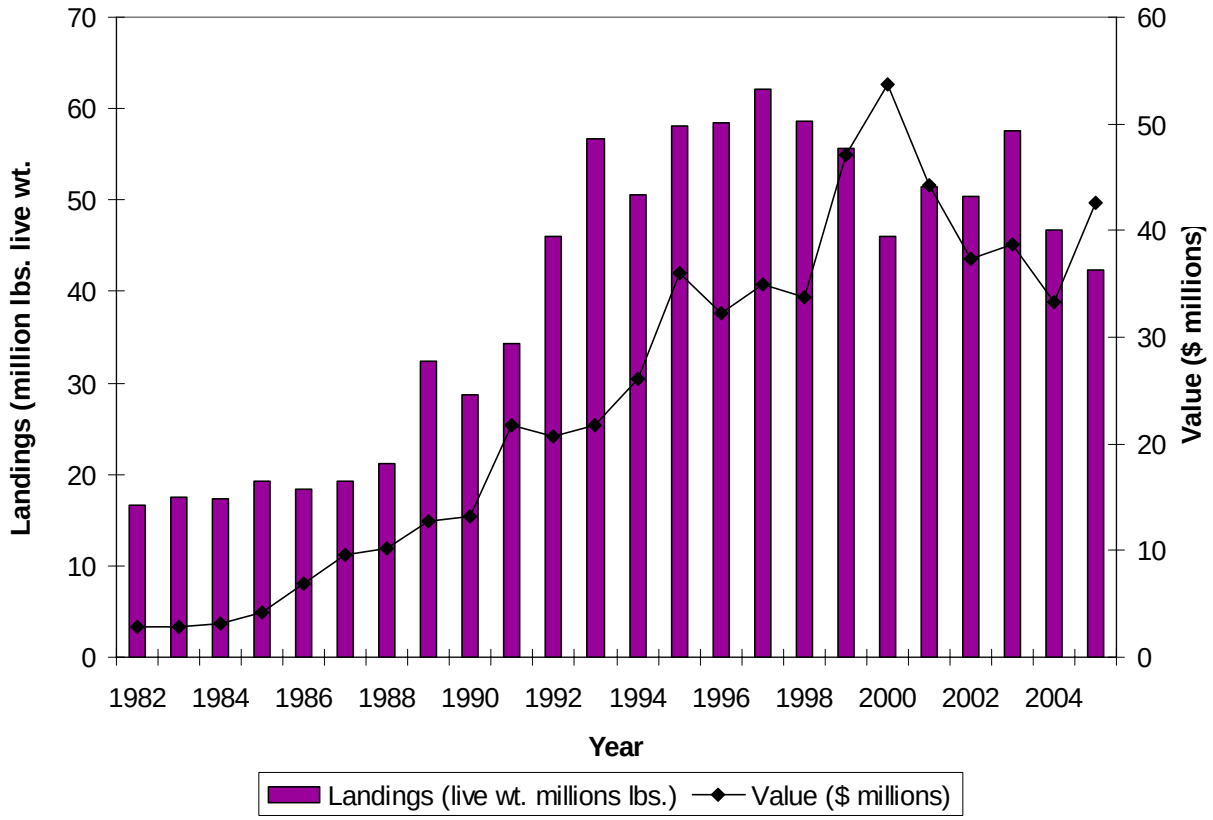


Figure 14 Calendar year monkfish landings and revenues, 1982-2005.

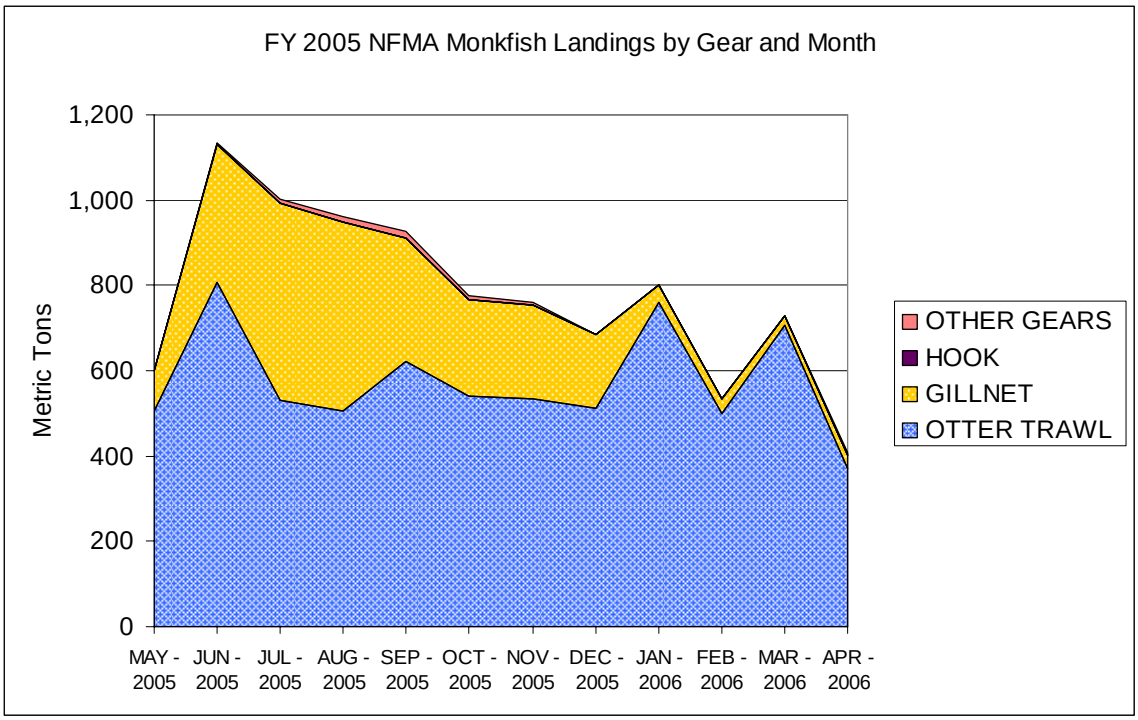
Fishing Year (May 1 - April 30)	Landings* (1,000 lbs. landed wt.)	Revenues* ($1,000)
1995	18,415.6	$24,758.8
1996	20,732.6	$26,188.5
1997	21,774.3	$30,127.0
1998	24,156.0	$34,682.0
1999	26,077.2	$48,713.7
2000	23,422.8	$46,122.9
2001	30,519.6	$42,353.5
2002	25,312.0	$35,256.4
2003	29,344.8	$37,506.7
2004	18,001.5	$30,361.3
2005	22,343.5	$41,143.7

** May include data from CT vessels without a 2001, 2002, 2003, 2004, or 2005 Monkfish permit*

1995-2001 data based on vessels that were issued a monkfish permit during the 2001 fishing year. 2002-2005 fishing year data are based on vessels issued a monkfish permit during the 2002-2005 fishing years, respectively.

Table 10 – Fishing year landings (in landed weights) and revenues, 1995 – 2005

(a)



(b)

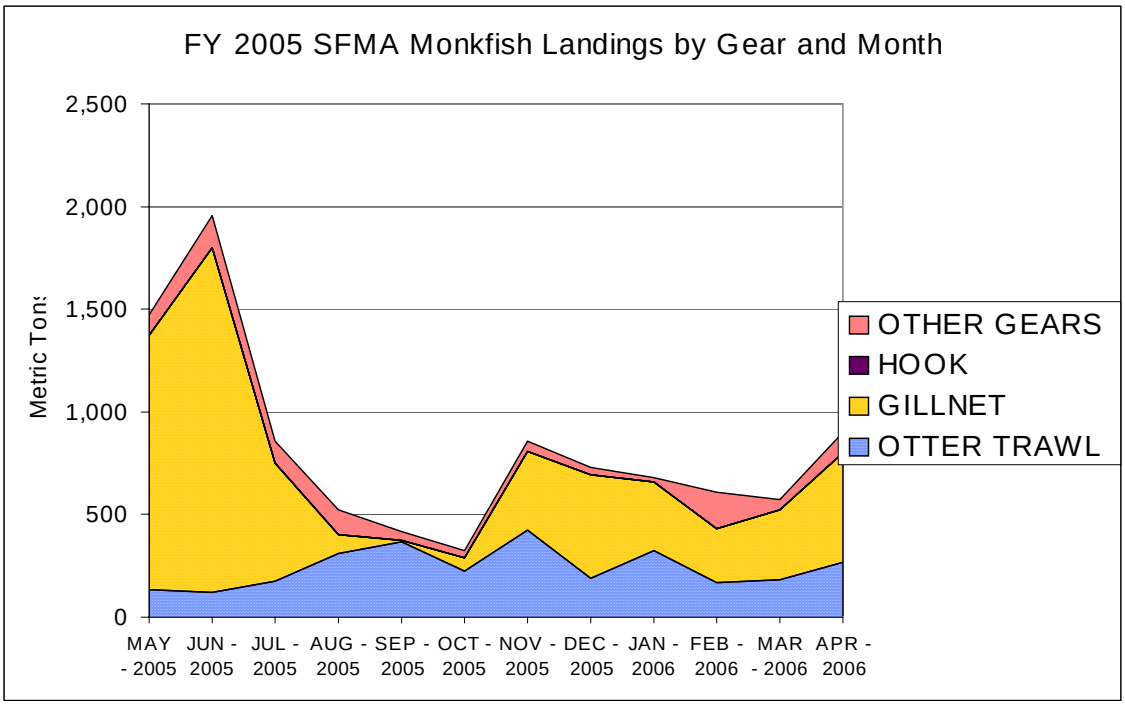
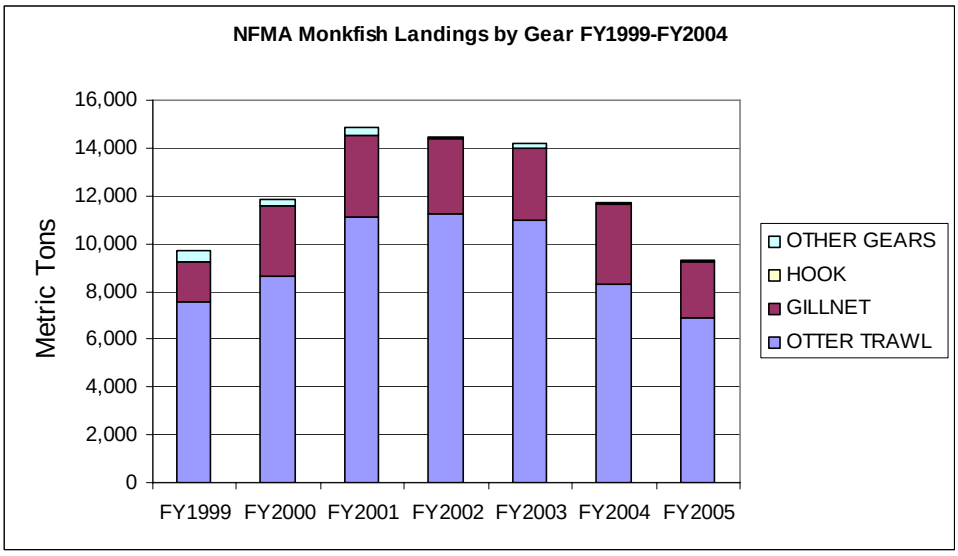


Figure 15 – FY2005 NFMA (a) and SFMA (b) monkfish landings by gear and month

(a)



(b)

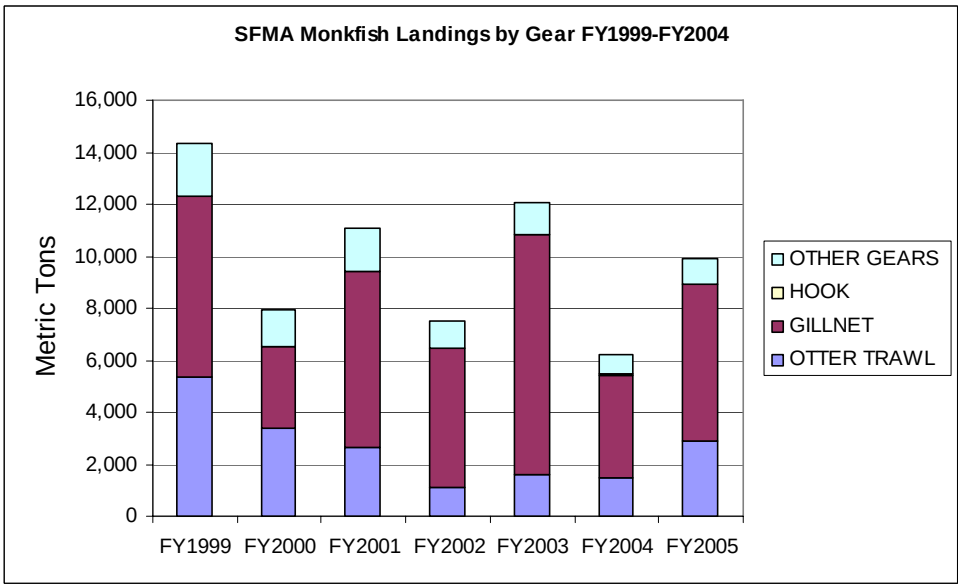


Figure 16 - NFMA (a) and SFMA (b) monkfish landings by gear, FY1999 – 2005

Massachusetts continues to account for the greatest proportion (nearly half) of all monkfish landings, followed by New Jersey, Rhode Island and Maine (Table 11).

STATE	Thousands of Pounds of Monkfish										
	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
CT*	1,029	733	592	574	557	603	787	455	585	373	352
MA	10,023	8,955	9,893	11,353	11,167	10,643	12,298	10,684	12,059	8,333	10,745
MD	178	524	382	322	341	107	158	38	119	55	139
ME	1,815	1,932	2,102	1,986	3,193	3,993	5,012	4,971	3,716	2,900	2,107
NC	0	431	445	395	432	166	167	112	187	47	85
NH	329	401	523	452	801	1,477	1,928	1,233	909	1,087	791
NJ	1,414	2,321	2,680	3,903	4,371	2,825	5,261	3,886	5,349	2,195	3,242
NY	248	513	654	775	573	435	707	694	1,047	541	1,058
RI	2,829	4,080	3,732	3,597	3,969	2,720	3,519	2,808	4,617	2,092	3,039
VA	550	841	773	799	671	455	683	431	758	379	785
TOTAL	**18,416**	**20,733**	**21,774**	**24,156**	**26,077**	**23,423**	**30,520**	**25,312**	**29,345**	**18,002**	**22,343**

Source: NMFS Statistics Office, dealer weighout database & permit database

** May include data from CT vessels without a 2001, 2002, 2003, 2004, or 2005 Monkfish permit*

1995-2001 data based on vessels that were issued a monkfish permit during the 2001 fishing year. 2002-2005 fishing year data are based on vessels issued a monkfish permit during the 2002-2005 fishing years, respectively.

Table 11 – Monkfish landings by state (landed weight), FY 1995-2005

The following tables, Table 12 and Table 13 show monkfish landings and revenues as a percentage of total landings and revenues by permit categories for FY 1995 – 2005. For the years prior to 2001, the data is based on vessels that held a monkfish permit in 2001. For subsequent years, the data is based on vessels that held a permit in those years. Data for Connecticut is shown separately because there may have been landings by vessels that did not have a federal permit in 2001 – 2004 due to the way that state's landings are reported to NMFS. In the first few years after implementation of the FMP, vessels with Category B and D permits showed an increased reliance on monkfish revenues, although this trend reversed somewhat in FY2004 as a result of lower monkfish landings, it returned to near-peak levels in FY2005. Category A vessels dependence on monkfish revenues peaked in FY1999, and has since returned to pre-FMP levels but also showing an increase in FY2005. Category C vessels, of which 48% also hold scallop limited access permits have seen their dependence on monkfish revenues decline steadily as revenues from scallops have increased in the past five years.

When monkfish landings and revenues are shown by vessel length category (Table 14 and Table 15), a decreased reliance on monkfish is evident for the larger size classes, while an increased reliance is evident for vessels in the 30-49 ft. and 50-69 ft. classes, with the 30-49 ft. vessels being the most reliant on monkfish throughout the period, while vessels in the 50-69 ft. class have relied less on monkfish revenues than in he first few years of the FMP. Overall, the reliance on monkfish revenues, determined as the percent of total revenues was relatively steady between FY2004 and FY2005.

Monkfish Permit Category	1,000 pounds, landed weight										
	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
A	453	817	563	1,093	1,277	845	1,152	1,072	1,375	727	1,117
% of Total A Landings	49.1%	54.1%	13.4%	10.0%	20.5%	6.5%	6.8%	4.6%	4.9%	14.1%	14.2%
B	322	583	479	992	1,474	1,050	2,084	1,594	1,932	916	1,838
% of Total B Landings	14.0%	18.2%	23.4%	24.1%	36.9%	30.2%	46.4%	40.1%	48.9%	28.7%	43.5%
C	11,504	12,322	12,364	12,144	11,876	10,583	12,708	10,359	11,021	6,832	8,420
% of Total C Landings	10.4%	9.3%	7.5%	8.2%	8.5%	6.9%	6.4%	7.9%	8.5%	5.4%	8.3%
D	4,094	5,020	6,139	7,509	8,982	8,905	11,974	10,388	12,944	8,041	9,239
% of Total D Landings	4.6%	5.3%	5.8%	6.7%	11.1%	9.7%	11.7%	9.9%	12.9%	8.0%	10.9%
H											235
% of Total H Landings											24.9%
E (Open Access)	1,014	1,257	1,637	1,845	1,911	1,459	1,816	1,452	1,489	1,112	1,169
% of Total E Landings	0.5%	0.6%	0.5%	0.6%	0.8%	0.6%	0.7%	0.6%	0.4%	0.3%	0.3%
CT	1,029	733	592	574	557	580	787	448	583	373	325
% of Total CT Landings	5.7%	4.0%	3.3%	3.5%	2.9%	3.3%	4.5%	2.9%	3.8%	2.4%	3.1%
TOTAL MONK LANDED	18,416	20,733	21,774	24,156	26,077	23,423	30,520	25,312	29,345	18,002	22,343

Source: NMFS Statistics Office, dealer weighout database

** May include data from CT vessels without a 2001, 2002, 2003, 2004, or 2005 Monkfish permit*

1995-2001 data based on vessels that were issued a monkfish permit during the 2001 fishing year. 2002-2005 fishing year data are based on vessels issued a monkfish permit during the 2002-2005 fishing years, respectively.

Table 12 – Monkfish landings as a percent of total landings by permit category, 1995-2005.

Monkfish Permit Category	$1,000, nominal (not discounted)										
	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
A	$582	$849	$663	$1,262	$2,011	$1,428	$1,615	$1,439	$1,432	$900	$1,819
% of Total A Revenues	36.9%	41.4%	35.7%	51.2%	63.5%	46.6%	50.6%	42.5%	35.8%	38.1%	49.3%
B	$391	$583	$552	$1,183	$2,528	$1,699	$2,828	$2,099	$1,998	$1,094	$2,519
% of Total B Revenues	24.6%	33.5%	38.7%	49.6%	62.2%	48.1%	60.3%	53.3%	54.2%	31.5%	51.5%
C	$16,014	$16,423	$18,091	$18,501	$23,250	$22,380	$17,503	$14,713	$15,582	$12,925	$16,622
% of Total C Revenues	13.0%	12.0%	13.3%	14.0%	13.5%	11.5%	9.2%	7.4%	7.1%	5.0%	6.1%
D	$4,736	$5,649	$7,514	$10,076	$16,043	$16,620	$16,836	$14,434	$15,723	$13,043	$17,059
% of Total D Revenues	8.2%	9.3%	11.2%	14.9%	20.4%	19.9%	20.2%	17.3%	18.4%	14.5%	17.5%
H											$283
% of Total H Revenues											36.9%
E (Open Access)	$1,263	$1,452	$2,270	$2,642	$3,471	$2,848	$2,504	$1,970	$2,000	$1,851	$2,344
% of Total E Revenues	1.1%	1.2%	1.7%	2.1%	2.4%	1.9%	1.6%	1.2%	1.0%	0.7%	0.8%
CT	$1,772	$1,233	$1,036	$1,018	$1,410	$1,148	$1,067	$603	$772	$548	$497
% of Total CT Revenues	4.1%	2.5%	3.1%	3.0%	3.6%	3.8%	3.5%	2.2%	2.5%	1.7%	1.6%
TOTAL MONK REVENUE	$24,759	$26,188	$30,127	$34,682	$48,714	$46,123	$42,354	$35,256	$37,507	$30,361	$41,144

Source: NMFS Statistics Office, dealer weighout database

** May include data from CT vessels without a 2001, 2002, 2003, 2004, or 2005 Monkfish permit*

1995-2001 data based on vessels that were issued a monkfish permit during the 2001 fishing year. 2002-2005 fishing year data are based on vessels issued a monkfish permit during the 2002-2005 fishing years, respectively.

Table 13 - Monkfish revenues as a percent of total revenues by permit category, 1995-2005.

Vessel Length Category	1,000 pounds, landed weight										
	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
0-29 Feet	70	61	21	20	50	62	73	54	55	42	26
% of Total 0-29 Landings	11.7%	10.5%	3.1%	2.5%	6.9%	7.1%	6.8%	6.5%	8.5%	4.9%	2.0%
30-49 Feet	5,303	6,317	6,415	8,458	10,537	9,291	13,067	11,384	14,785	9,151	11,570
% of Total 30-49 Landings	8.7%	10.3%	10.7%	13.3%	18.5%	17.0%	24.0%	23.7%	28.3%	17.9%	22.9%
50-69 Feet	2,675	3,771	3,398	4,057	4,550	4,983	7,056	5,919	6,364	3,237	4,048
% of Total 50-69 Landings	3.5%	4.7%	3.2%	4.7%	5.5%	5.9%	8.7%	7.6%	8.4%	4.6%	6.6%
70-89 Feet	7,228	8,208	9,629	9,217	8,904	7,469	8,250	6,846	6,754	4,586	5,775
% of Total 70-89 Landings	4.0%	4.4%	3.6%	3.8%	4.0%	3.4%	3.5%	3.1%	2.9%	1.9%	2.9%
90+ Feet	2,109	1,643	1,718	1,830	1,480	1,038	1,285	661	805	613	600
% of Total 90+ Landings	2.1%	1.3%	1.2%	1.1%	1.2%	0.7%	0.6%	0.4%	0.3%	0.3%	0.2%
CT	1,029	733	592	574	557	580	787	448	583	373	325
% of Total CT Landings	5.7%	4.0%	3.3%	3.5%	2.9%	3.3%	4.5%	2.9%	3.8%	2.4%	3.1%
TOTAL MONK LANDED	18,416	20,733	21,774	24,156	26,077	23,423	30,520	25,312	29,345	18,002	22,343

Source: NMFS Statistics Office, dealer weighout database

** CT data may include landings from vessels without a 2001, 2002, 2003, 2004, or 2005 Monkfish permit*

1995-2001 data based on vessels that were issued a monkfish permit during the 2001 fishing year. 2002-2005 fishing year data are based on vessels issued a monkfish permit during the 2002-2005 fishing years, respectively.

Table 14 – Monkfish landings as a percent of total landings by vessel length category, 1995 - 2005

Vessel Length Category	$1,000, nominal (not discounted)										
	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
0-29 Feet	$72	$60	$34	$25	$99	$98	$98	$66	$61	$57	$42
% of Total 0-29 Revenues	8.3%	8.3%	3.3%	2.4%	8.9%	9.4%	8.4%	6.3%	6.4%	5.3%	3.7%
30-49 Feet	$5,657	$6,474	$7,049	$9,933	$16,887	$16,199	$18,410	$15,353	$15,824	$11,972	$18,441
% of Total 30-49 Revenues	13.1%	15.1%	15.4%	20.2%	29.3%	29.3%	31.0%	27.9%	28.1%	20.0%	21.4%
50-69 Feet	$3,524	$4,530	$4,488	$5,718	$8,669	$9,963	$9,931	$8,460	$8,583	$6,283	$8,190
% of Total 50-69 Revenues	7.2%	8.4%	7.7%	10.3%	13.0%	13.6%	13.5%	11.3%	11.0%	7.4%	8.4%
70-89 Feet	$10,548	$11,509	$14,712	$14,957	$18,420	$16,034	$11,161	$9,894	$11,040	$10,153	$12,735
% of Total 70-89 Revenues	7.1%	7.2%	8.6%	8.8%	8.7%	6.8%	4.8%	4.0%	3.9%	3.0%	3.3%
90+ Feet	$3,186	$2,383	$2,808	$3,031	$3,228	$2,682	$1,687	$880	$1,227	$1,349	$1,239
% of Total 90+ Revenues	5.6%	3.8%	4.7%	5.4%	4.9%	3.8%	2.3%	1.2%	1.4%	1.2%	1.1%
CT	$1,772	$1,233	$1,036	$1,018	$1,410	$1,148	$1,067	$603	$772	$548	$497
% of Total CT Revenues	4.1%	2.5%	3.1%	3.0%	3.6%	3.8%	3.5%	2.2%	2.5%	1.7%	1.6%
TOTAL MONK REVENUE	$24,759	$26,188	$30,127	$34,682	$48,714	$46,123	$42,354	$35,256	$37,507	$30,361	$41,144

Source: NMFS Statistics Office, dealer weighout database

** CT data may include landings from vessels without a 2001, 2002, 2003, 2004, or 2005 Monkfish permit*

1995-2001 data based on vessels that were issued a monkfish permit during the 2001 fishing year. 2002-2005 fishing year data are based on vessels issued a monkfish permit during the 2002-2005 fishing years, respectively.

Table 15– Monkfish revenues as a percent of total revenues by vessel length category, 1995 – 2005

When viewed in aggregate, vessels that hold a monkfish permit are not significantly reliant on monkfish, as monkfish has accounted for less than 10 percent of total landings and revenues during FY 1995-2005, Table 16 and Table 17. While prior to FY2004 the proportion of monkfish remained relatively constant (4-5% of landings, 7-11% of revenues), it declined as a result of the reduced monkfish landings and revenues under the management restrictions. The proportion of most other species remained relatively constant, although the proportion of scallop landings and revenues has increased significantly, reflecting improvements in the scallop fishery in recent years, and the proportion of multispecies landings has declined modestly since FY2002.

Species Category	1,000 pounds, landed weight										
	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
Dogfish	33,914	32,392	23,902	34,127	22,942	6,742	4,129	3,632	2,285	1,582	2,190
Dogfish % of Total Landings	7.8%	6.8%	4.0%	5.9%	4.6%	1.3%	0.7%	0.7%	0.4%	0.3%	0.4%
Fluke	7,829	7,941	7,732	9,396	9,478	8,670	11,375	12,092	13,992	16,185	12,422
Fluke % of Total Landings	1.8%	1.7%	1.3%	1.6%	1.9%	1.7%	1.9%	2.3%	2.2%	2.6%	2.1%
Monkfish	18,416	20,733	21,774	24,156	26,077	23,423	30,520	25,312	29,345	18,002	22,343
Monkfish % of Total Landings	4.2%	4.3%	3.7%	4.2%	5.2%	4.5%	5.0%	4.8%	4.6%	2.9%	3.8%
Multispecies	47,365	53,830	62,951	67,977	68,654	88,095	102,515	83,362	81,269	75,521	63,006
Multispecies % of Total Landings	10.8%	11.3%	10.6%	11.7%	13.6%	16.8%	16.9%	16.0%	12.7%	12.3%	10.7%
Scallops	14,535	15,852	11,834	12,565	23,332	35,380	47,572	50,541	58,583	61,166	52,443
Scallops % of Total Landings	3.3%	3.3%	2.0%	2.2%	4.6%	6.8%	7.9%	9.7%	9.2%	10.0%	8.9%
Skates	9,134	17,503	16,740	18,756	18,061	17,643	17,987	16,849	20,890	15,179	15,401
Skates % of Total Landings	2.1%	3.7%	2.8%	3.2%	3.6%	3.4%	3.0%	3.2%	3.3%	2.5%	2.6%
Other	306,209	329,535	448,958	412,327	334,735	343,322	390,973	330,310	432,833	424,080	423,705
Other % of Total Landings	70.0%	69.0%	75.6%	71.2%	66.5%	65.6%	64.6%	63.3%	67.7%	69.3%	71.6%
TOTAL LBS. LANDED	437,402	477,786	593,890	579,303	503,280	523,275	605,071	522,098	639,197	611,715	591,511

Source: NMFS Statistics Office, dealer weighout database

** CT data may include landings from vessels without a 2001, 2002, 2003, 2004, or 2005 Monkfish permit*

1995-2001 data based on vessels that were issued a monkfish permit during the 2001 fishing year. 2002-2005 fishing year data are based on vessels issued a monkfish permit during the 2002-2005 fishing years, respectively.

Table 16 – FY 1995-2004 Landings of monkfish and other species as a percent of total landings, on vessels with a monkfish permit in 2001 – 2005.

Species Category	$1,000, nominal (not discounted)										
	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
Dogfish	$6,610	$6,003	$3,555	$5,876	$4,072	$1,798	$1,110	$870	$537	$446	$572
Dogfish % of Total Revenues	1.9%	1.6%	1.0%	1.6%	0.9%	0.4%	0.2%	0.2%	0.1%	0.1%	0.1%
Fluke	$13,961	$13,243	$14,061	$14,418	$16,148	$13,663	$14,305	$16,649	$20,899	$23,728	$20,809
Fluke % of Total Revenues	4.1%	3.6%	3.8%	3.9%	3.7%	2.9%	3.0%	3.5%	3.9%	3.7%	2.9%
Monkfish	$24,759	$26,188	$30,127	$34,682	$48,714	$46,123	$42,354	$35,256	$37,507	$30,361	$41,144
Monkfish % of Total Revenues	7.3%	7.1%	8.2%	9.5%	11.0%	9.9%	9.0%	7.3%	7.0%	4.8%	5.8%
Multispecies	$57,323	$60,825	$71,309	$82,758	$83,994	$93,601	$102,070	$98,877	$88,852	$79,726	$80,937
Multispecies % of Total Revenues	16.8%	16.5%	19.3%	22.6%	19.0%	20.1%	21.8%	20.5%	16.5%	12.6%	11.4%
Scallops	$75,624	$92,763	$76,005	$72,999	$122,812	$169,409	$172,621	$201,193	$244,876	$336,776	$404,111
Scallops % of Total Revenues	22.2%	25.2%	20.6%	19.9%	27.8%	36.3%	36.8%	41.8%	45.5%	53.2%	57.1%
Skates	$2,708	$5,440	$3,071	$3,471	$3,234	$3,598	$3,105	$3,489	$4,517	$3,245	$4,317
Skates % of Total Revenues	0.8%	1.5%	0.8%	0.9%	0.7%	0.8%	0.7%	0.7%	0.8%	0.5%	0.6%
Other	$159,711	$163,907	$171,432	$152,363	$162,812	$138,606	$133,675	$125,062	$141,135	$158,659	$155,908
Other % of Total Revenues	46.9%	44.5%	46.4%	41.6%	36.9%	29.7%	28.5%	26.0%	26.2%	25.1%	22.0%
TOTAL REVENUE	$340,696	$368,369	$369,559	$366,568	$441,785	$466,797	$469,240	$481,396	$538,324	$632,943	$707,798

Source: NMFS Statistics Office, dealer weighout database

** CT data may include landings from vessels without a 2001, 2002, 2003, 2004, or 2005 Monkfish permit*

1995-2001 data based on vessels that were issued a monkfish permit during the 2001 fishing year. 2002-2005 fishing year data are based on vessels issued a monkfish permit during the 2002-2005 fishing years, respectively.

Table 17 – FY 1995-2004 Revenues of monkfish and other species as a percent of total landings, on vessels with a monkfish permit in 2001-2005.

4.4.1.3 Days-at-sea (DAS)

Starting in Year 2 of the FMP (May, 2000 –April, 2001) limited access monkfish vessels (Categories A, B, C, and D) were allocated 40 monkfish DAS. By definition, Category A and B vessels do not qualify for limited access multispecies or scallop permits, and Category C and D vessels must use either a multispecies or scallop DAS while on a monkfish DAS. Beginning in FY2005 six vessels qualified for a permit Category H fishery under the provisions adopted in Amendment 2, for vessels fishing exclusively in the southernmost area of the fishery.

In the NFMA, there has been no monkfish trip limit when a limited access vessel is on either a combined (monkfish/multispecies or monkfish/scallop) DAS or a multispecies-only DAS, and, consequently, multispecies vessels in Categories C and D and fishing in the NMFA do not call-in monkfish DAS. Therefore, DAS usage, has been well below the total DAS allocated (Table 18), and primarily reflects monkfish fishing activity in the SFMA. In FY2004 call-in vessels (that is those fishing primarily in the SFMA) used only 35% of their allocated DAS (Table 19). In FY2005, the number of DAS used increased nearly 28%, from approximately 5,568 in FY2004 to 7,114 in FY2005 (Figure 17), and the percentage of allocated DAS used increased to 54%.

Permit Category	All Vessels		Call-In Vessels	
	DAS Allocated	DAS Used	DAS Allocated	DAS Used
A	694	432	594	432
B	2,069	894	1,549	894
C	17,087	2,509	4,365	2,509
D	17,185	3,174	6,490	3,174
H	240	104	200	104
TOTAL	**37,275**	**7,114**	**13,198**	**7,114**

Source: NMFS Days-at-Sea (DAS) database via onboard Vessel Monitoring Systems

Table 18 – Monkfish DAS usage, FY 2005

Permit Category	DAS Allocated	DAS Used				
		Monkfish	Monkfish/ Multispecies	Monkfish/ Scallop	Total	% Used
A	594	432	0	0	432	73%
B	1,549	894	0	0	894	58%
C	4,365	0	2,509	0	2,509	57%
D	6,490	0	3,174	0	3,174	49%
H	200		104		104	52%
TOTAL	**13,198**	**1,326**	**5,788**	**0**	**7,114**	54%

Source: NMFS Days-at-Sea (DAS) database via onboard Vessel Monitoring Systems (VMS)

Table 19 - Monkfish-only, Monkfish/Multispecies and Monkfish/Scallop DAS Usage by call-in vessels (vessels fishing in the SFMA), FY 2005.

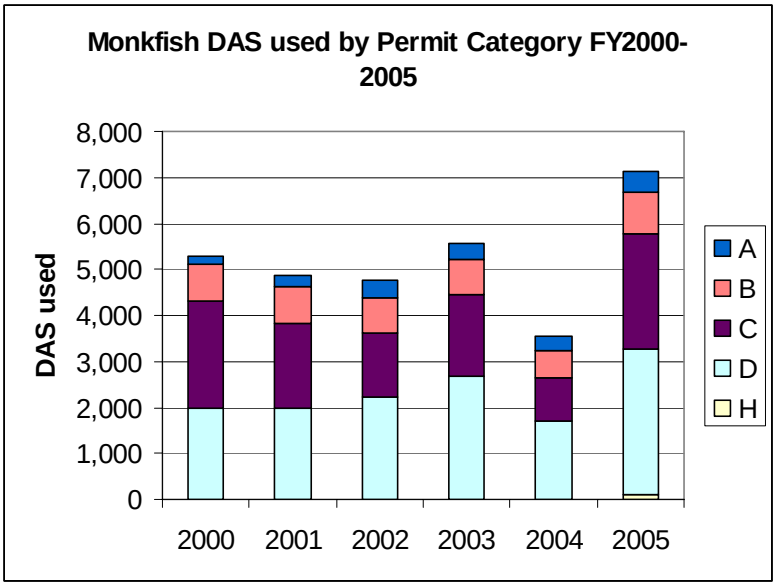


Figure 17 - DAS used by permit category, FY 2001 – 2005.

4.4.2 Ports and communities

This section updates information contained in the FSEIS for Amendment 2 and the SAFE for the 2003 fishing year. The Monkfish FMP references Amendments 5 and 7 to the Northeast Multispecies FMP and Amendment 4 to the Sea Scallop FMP for social and cultural information about monkfish ports, including port profiles. Because of the nature of the monkfish fishery, there is significant overlap between the vessels and communities involved with the monkfish fishery and those involved with the multispecies (groundfish) and scallop fisheries. Many of the same boats that target monkfish or catch them incidentally also target groundfish or scallops. Only about six percent of the limited access monkfish permit holders do not also hold limited access permits in either multispecies or scallops.

For the purposes of this SAFE Report, "primary monkfish ports" are defined as those averaging more than $1,000,000 in monkfish revenues from 1994-1997 (based on the dealer weighout data presented in Table 45 of the Monkfish FMP). "Secondary monkfish ports" are defined as those averaging more than $50,000 in monkfish revenues from 1994-1997 (based on the dealer weighout data presented in the Monkfish FMP.

Primary monkfish ports include:

- Portland, ME
- Boston, MA
- Gloucester, MA
- New Bedford, MA
- Long Beach/Barnegat Light, NJ, and
- Point Judith, RI.

Secondary monkfish ports include:

- Rockland, ME

- Port Clyde, ME
- South Bristol, ME
- Ocean City, MD
- Chatham, MA
- Provincetown, MA
- Scituate, MA
- Plymouth, MA
- Westport, MA
- Portsmouth, NH
- Point Pleasant, NJ
- Cape May, NJ
- Greenport, NY
- Montauk, NY
- Hampton Bay, NY
- Newport, RI
- Hampton, VA, and
- Newport News, VA.

Table 20 shows the distribution of monkfish permit holders by homeport and monkfish permit category for the six primary, 18 secondary, and "other" monkfish ports for FY2000 - 2005. Table 21 shows the VTR landings for five of the six major ports (as reported by NMFS in their regular "Northeast Preliminary Fisheries Statistics" Report, not including Long Beach/Barnegat Light, NJ) and states, broken down by management area from which landings were reported, as well as by gear type. Virtually all of the monkfish landed in Portland, Gloucester and Boston come from the NFMA, while about 60% of New Bedford's landings and only 1 percent of Pt. Judith's landings come from the NFMA in FY2005. Portland and Boston's landings are almost totally from otter trawls, while otter trawls make up about 65% of New Bedford landings in FY2005. Gloucester and Pt. Judith landings are evenly split between trawls and gillnets, while New Hampshire, New York and New Jersey landings are predominately (>80%) caught by gillnet gear. This is similar to the distribution by gear for each port in the previous fishing year, except that in FY2003 New Bedford monkfish landings by scallop dredge (included in "other gear" in the table) were 18% of the port's monkfish landings, while in FY2004 those declined to 12% and in FY2005 to 9%, while the proportion of trawl landings increased.

Port landings and revenue data based on May-April fishing year is presented in Table 22 and Table 23, for primary and secondary ports (as identified in the original FMP), respectively, for FY1995-FY2005. Data is based on the vessel's homeport and, for FY2005, on the vessel's principal port of landing as indicated on the permit application. While vessels homeported in New Bedford recorded the highest monkfish landings and revenues from 1995-1999, their share declined in more recent years, while the share of vessels homeported in Boston has increased. Of note is the observation that while Boston ranked the highest in monkfish revenues based on the vessels' homeport, New Bedford, Portland and Gloucester were the highest based on principal port in FY2005, while Boston and Pt. Judith were the lowest of the six primary ports. Revenues from monkfish increased slightly in all primary ports from FY 2002 to FY 2003, with the exception of Boston where monkfish revenues declined about 11%. In FY2004, however, only

New Bedford and Gloucester showed modest revenue increases while Long Beach/Barnegat Light and Point Judith experienced declines of about 50%, reflecting the lower trip limits and DAS available in the SFMA. In FY2005, all primary ports with the exception of Portland saw increased monkfish revenues; Portland' monkfish revenues declined by 16%, or 392 mt. Monkfish landings and revenues are noticeably smaller for the secondary ports (Table 23), but monkfish revenues make up a greater proportion of total revenues for many of those ports (Table 24).

HOMEPORT		FY 2002 by Category						FY 2003 by Category						FY 2004 by Category						FY 2005 by Category						
		A	B	C	D	E	TOTAL	A	B	C	D	E	TOTAL	A	B	C	D	E	TOTAL	A	B	C	D	E	H	TOTAL
PRIMARY PORTS		4	17	194	158	403	776	5	17	203	160	396	781	4	15	206	161	398	784	5	16	202	164	404	X	791
Portland	ME	X	X	10	14	20	45	X	X	12	17	27	57	X	X	15	19	24	58	X	X	12	20	23	X	55
Boston	MA	X	X	43	43	126	215	X	X	39	40	116	198	X	X	39	29	100	169	X	X	36	29	81	X	147
Gloucester	MA	X	X	18	33	138	189	X	X	20	34	129	183	X	X	21	38	133	192	X	X	22	42	128	X	192
New Bedford	MA	X	X	94	35	68	197	X	X	102	33	68	203	X	X	102	44	77	223	X	X	102	43	101	X	248
Barnegate Light	NJ	X	14	11	17	15	59	X	14	10	20	19	65	X	15	11	17	23	68	X	15	12	14	28	X	71
Point Judith	RI	X	X	18	16	36	71	X	X	20	16	37	75	X	X	18	14	41	74	X	X	18	16	43	X	78
SECONDARY PORTS		3	8	59	74	388	532	5	10	61	77	396	549	4	11	64	82	451	612	X	14	66	81	484	X	647
Rockland	ME	X	X	X	X	4	5	X	X	X	X	3	4	X	X	X	X	6	7	X	X	X	X	5	X	6
Port Clyde	ME	X	X	5	3	5	13	X	X	5	4	5	14	X	X	5	5	5	15	X	X	6	4	4	X	14
South Bristol	ME	X	X	X	3	4	9	X	X	X	4	3	9	X	X	X	5	6	13	X	X	X	5	5	X	12
Ocean City	MD	X	X	X	X	14	14	X	X	X	X	16	16	X	X	X	X	18	18	X	X	X	X	19	X	19
Chatham	MA	X	X	X	12	69	81	X	X	X	14	71	85	X	X	X	15	64	79	X	X	X	15	60	X	77
Provincetown	MA	X	X	X	5	13	18	X	X	X	3	14	17	X	X	X	3	20	23	X	X	X	3	16	X	19
Scituate	MA	X	X	X	7	30	38	X	X	X	6	31	38	X	X	X	7	32	39	X	X	X	8	28	X	36
Plymouth	MA	X	X	X	X	18	22	X	X	X	3	17	23	X	X	X	3	24	31	X	X	3	X	21	X	28
Westport	MA	X	X	X	5	18	24	X	X	X	5	19	25	X	X	X	4	19	23	X	X	X	X	18	X	20
Portsmouth	NH	X	X	3	10	23	36	X	X	3	10	19	32	X	X	3	12	32	47	X	X	3	12	31	X	46
Point Pleasant	NJ	X	3	X	5	32	42	X	4	X	4	33	44	X	4	X	4	37	47	X	4	X	5	48	X	58
Cape May	NJ	X	X	18	5	59	84	X	X	20	6	66	94	X	X	23	6	75	106	X	X	26	7	105	X	139
Greenport	NY	X	X	X	X	6	7	X	X	X	X	7	8	X	X	X	X	7	8	X	X	X	X	7	X	8
Montauk	NY	X	X	4	7	65	77	X	X	4	8	65	79	X	3	5	8	74	90	X	4	5	8	73	X	90
Hampton Bay	NY	X	X	X	X	5	8	X	X	X	X	7	9	X	X	X	X	6	7	X	X	X	X	9	X	10
Newport	RI	X	X	5	7	12	25	X	X	7	8	8	24	X	X	7	8	13	29	X	X	7	8	16	X	32
Hampton	VA	X	X	5	X	3	8	X	X	3	X	3	7	X	X	4	X	X	7	X	X	X	X	4	X	6
Newport News	VA	X	X	11	X	8	21	X	X	11	X	9	21	X	X	11	X	11	23	X	X	11	X	15	X	27
OTHER PORTS		8	15	75	103	1,346	1,547	6	13	76	104	1,317	1,516	5	15	73	112	1,392	1,597	7	12	78	103	1,481	6	1,687
TOTAL		15	40	328	335	2,137	2,855	16	40	340	341	2,109	2,846	13	41	343	355	2,241	2,993	14	42	346	348	2,369	6	3,125

Source: NMFS Statistics Office, permit databases

Table 20 – Monkfish permits by port, FY 2002 – 2005.
Ports where there are fewer than three permits are marked "x" for confidentiality reasons.

PORT/ STATE	MAY 05 - APR 06	STOCK AREAS				GEAR TYPES							
		NORTHERN		SOUTHERN		OTTER TRAWL		GILLNET		HOOK		OTHER GEARS	
	Metric Tons	Metric Tons	Percent	Metric Tons	Percent	Metric Tons	Percent	Metric Tons	Percent	Metric Tons	Percent	Metric Tons	Percent
Portland, ME	2,304	2,296	100%	7	0%	2,190	95%	113	5%	0	0%	0	0%
Gloucester, MA	2,450	2,270	93%	180	7%	1,256	51%	1,048	43%	0	0%	146	6%
Boston, MA	1,337	1,293	97%	43	3%	1,337	100%	0	0%	0	0%	0	0%
New Bedford, MA	5,100	2,027	40%	3,073	60%	3,338	65%	1,286	25%	0	0%	475	9%
Point Judith, RI	1,261	18	1%	1,243	99%	564	45%	675	54%	0	0%	22	2%
MAINE	2,643	2,630	99%	13	1%	2,459	93%	178	7%	0	0%	6	0%
NEW HAMPSHIRE	532	529	99%	3	1%	60	11%	472	89%	0	0%	0	0%
MASSACHUSETTS	10,126	6,094	60%	4,032	40%	6,120	60%	3,365	33%	3	0%	638	6%
RHODE ISLAND	2,189	62	3%	2,127	97%	681	31%	1,417	65%	0	0%	90	4%
CONNECTICUT	213	2	1%	211	99%	37	17%	152	71%	0	0%	24	11%
NEW YORK	801	2	0%	798	100%	116	14%	682	85%	0	0%	3	0%
NEW JERSEY	2,035	3	0%	2,033	100%	212	10%	1,612	79%	0	0%	211	10%
OTHER NORTHEAST	683	3	0%	680	100%	96	14%	507	74%	0	0%	80	12%
TOTAL	**19,222**	**9,325**	**49%**	**9,897**	**51%**	**9,783**	**51%**	**8,384**	**44%**	**3**	**0%**	**1,052**	**5%**

1. 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

2. Landings in live weight.
3. Gear data are based on vessel trip reports.

Table 21 – Preliminary FY2005 monkfish landings by primary port (excluding Long Beach/Barnegat Light, NJ) and State, by gear.

HOME PORT		MONKFISH LANDINGS AND REVENUES											Principal Port
		FY1995	FY1996	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2005
Portland, ME	1,000 Lbs.	1,446.2	1,604.8	1,691.7	1,472.8	2,542.9	2,995.8	1,487.6	1,498.2	1,436.1	990.0	890.5	1,913.6
	$1,000	$2,257.6	$2,393.9	$2,707.1	$2,640.2	$5,472.7	$6,707.8	$2,004.9	$2,289.6	$2,667.0	$2,471.3	$2,079.7	$4,391.2
Boston, MA	1,000 Lbs.	822.8	674.0	917.6	781.9	1,267.6	960.9	4,964.1	4,777.8	4,291.2	2,829.7	3,363.7	1,654.1
	$1,000	$1,082.5	$936.3	$1,300.3	$1,104.1	$2,240.1	$2,027.5	$6,737.6	$6,629.9	$5,947.0	$5,165.8	$6,121.6	$2,803.6
Gloucester, MA	1,000 Lbs.	1,675.6	1,154.1	844.3	941.6	1,700.9	2,364.8	2,090.8	2,055.4	1,961.8	1,353.3	1,765.8	2,312.5
	$1,000	$1,620.8	$1,097.7	$1,037.9	$1,382.6	$3,060.7	$4,441.5	$3,053.4	$2,923.5	$2,604.0	$2,702.3	$3,497.3	$4,387.9
New Bedford, MA	1,000 Lbs.	5,983.8	5,789.6	7,345.5	8,537.1	7,026.5	5,515.4	3,452.8	2,319.5	2,584.6	2,003.9	2,364.8	2,993.1
	$1,000	$8,980.7	$8,260.4	$11,686.0	$13,926.2	$14,442.8	$11,783.9	$4,697.9	$3,278.4	$3,918.8	$4,191.9	$5,554.8	$6,840.5
Long Beach/Barnegat Light, NJ	1,000 Lbs.	846.4	1,382.2	729.0	1,702.9	2,568.7	1,801.5	3,582.0	2,435.4	3,625.5	1,418.0	2,013.4	1,952.9
	$1,000	$1,210.6	$1,531.5	$977.7	$2,099.9	$4,430.7	$3,049.4	$4,807.6	$3,227.3	$3,870.5	$1,797.6	$2,849.5	$2,750.4
Point Judith, RI	1,000 Lbs.	1,194.2	2,444.6	2,125.9	1,485.1	1,708.7	1,635.0	643.4	511.9	954.3	422.3	838.6	1,448.1
	$1,000	$1,645.1	$3,366.8	$3,248.1	$2,175.5	$3,275.3	$3,423.8	$1,008.6	$779.4	$1,381.3	$672.8	$1,821.2	$2,923.0

Source: NMFS Statistics Office, dealer weighout & permits databases

Pounds are in landed weight

1995-2001 data based on vessels that were issued a monkfish permit during the 2001 fishing year. 2002-2005 fishing year data are based on vessels issued a monkfish permit during the 2002-2005 fishing years, respectively.

Table 22 – Monkfish landings and revenues for monkfish primary ports, FY 1995 – 2005, and principal port, FY 2005.

HOME PORT		MONKFISH LANDINGS AND REVENUES											Principal Port
		FY1995	FY1996	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2005
Rockland, ME	1,000 Lbs.	47.7	42.5	37.1	56.3	53.9	74.0	8.3	3.8	3.1	7.3	0.9	34.3
	$1,000	$61.2	$55.3	$54.3	$90.0	$113.2	$184.5	$15.5	$5.5	$5.4	$14.3	$2.4	$86.9
Port Clyde, ME	1,000 Lbs.	119.2	120.0	183.0	210.4	294.3	325.1	543.5	471.9	386.6	293.8	203.5	225.7
	$1,000	$148.5	$152.7	$260.9	$328.4	$581.8	$749.5	$748.4	$676.8	$679.8	$645.7	$505.2	$563.6
South Bristol, ME	1,000 Lbs.	126.4	109.5	89.9	93.3	106.6	219.2	278.7	238.3	233.6	235.6	191.5	142.0
	$1,000	$162.9	$145.1	$131.2	$146.5	$217.4	$494.5	$410.1	$342.7	$431.7	$539.2	$470.6	$353.9
Ocean City, MD	1,000 Lbs.	178.5	520.8	348.5	282.0	314.1	106.7	3.1	2.6	2.4	3.3	3.5	8.3
	$1,000	$241.0	$450.5	$310.3	$254.1	$347.4	$154.4	$4.6	$4.2	$3.9	$5.5	$7.0	$15.6
Chatham, MA	1,000 Lbs.	126.3	97.5	117.2	231.6	212.7	475.3	613.4	944.1	1,317.9	649.3	1,194.3	1,233.4
	$1,000	$110.9	$936.3	$126.9	$237.2	$327.1	$771.5	$829.9	$1,229.6	$1,364.5	$749.6	$1,904.8	$1,961.4
Provincetown, MA	1,000 Lbs.	83.3	38.8	24.4	85.6	79.9	35.1	25.9	19.8	38.0	39.2	21.1	22.1
	$1,000	$108.0	$51.8	$36.7	$141.5	$136.4	$76.8	$37.7	$26.4	$75.2	$84.0	$57.2	$59.9
Scituate, MA	1,000 Lbs.	58.9	45.3	43.2	330.0	331.0	434.4	100.0	206.8	202.9	117.6	173.0	350.3
	$1,000	$67.9	$53.0	$50.3	$391.6	$561.5	$745.7	$147.7	$266.4	$216.1	$186.3	$324.0	$599.8
Plymouth, MA	1,000 Lbs.	53.5	33.0	27.6	42.3	13.9	276.5	585.5	613.1	717.2	306.1	168.8	169.5
	$1,000	$61.6	$37.6	$25.5	$55.8	$24.3	$508.0	$826.2	$795.9	$704.8	$403.5	$311.4	$313.3
Westport, MA	1,000 Lbs.	809.6	856.9	461.4	539.0	451.9	307.4	685.7	549.5	830.6	246.4	164.7	244.6
	$1,000	$764.5	$768.5	$387.6	$543.3	$691.2	$568.3	$1,022.6	$739.3	$799.1	$248.5	$273.2	$386.9
Portsmouth, NH	1,000 Lbs.	370.7	387.9	519.9	474.7	845.3	1,253.7	1,098.7	671.8	562.9	439.4	434.0	749.1
	$1,000	$447.5	$443.0	$636.9	$532.5	$1,319.5	$2,122.7	$1,578.8	$967.0	$641.6	$612.1	$750.2	$1,245.0
Point Pleasant, NJ	1,000 Lbs.	84.3	517.7	1,091.5	1,578.5	1,286.0	772.5	337.9	128.3	401.2	312.1	191.7	259.9
	$1,000	$111.4	$565.8	$1,096.5	$1,884.9	$2,320.0	$1,208.2	$441.5	$164.4	$395.6	$401.9	$286.0	$392.3
Cape May, NJ	1,000 Lbs.	273.0	312.6	465.0	316.3	124.3	117.5	187.5	117.9	162.1	87.6	118.0	127.0
	$1,000	$370.1	$389.2	$571.7	$398.2	$255.7	$266.2	$248.2	$134.7	$206.3	$131.6	$213.3	$224.6
Greenport, NY	1,000 Lbs.	26.1	48.9	62.9	41.9	12.1	3.6	6.9	19.8	7.8	13.6	22.1	22.2
	$1,000	$35.1	$72.0	$86.2	$62.2	$20.0	$8.7	$10.7	$32.6	$14.5	$36.6	$61.8	$61.9
Montauk, NY	1,000 Lbs.	46.9	53.0	92.2	157.4	79.7	47.2	146.7	238.4	572.5	239.2	381.2	374.9
	$1,000	$62.3	$74.2	$135.9	$246.9	$170.1	$122.2	$237.5	$358.4	$694.4	$370.4	$626.2	$610.7
Hampton Bays, NY	1,000 Lbs.	87.0	318.9	309.5	454.3	415.7	316.6	93.2	138.8	128.9	8.2	47.0	48.7
	$1,000	$120.5	$516.1	$589.6	$733.0	$661.6	$562.6	$134.4	$191.2	$134.8	$11.8	$72.1	$76.1
Newport, RI	1,000 Lbs.	312.0	406.9	436.3	406.8	581.5	360.9	614.2	671.1	1,234.6	738.2	864.9	854.0
	$1,000	$388.0	$505.4	$558.1	$584.3	$1,229.4	$808.1	$848.2	$917.9	$1,507.4	$1,018.9	$1,559.5	$1,540.3
Hampton, VA	1,000 Lbs.	256.2	336.0	113.4	134.9	42.2	35.8	20.7	3.6	4.7	7.4	11.0	29.4
	$1,000	$326.5	$350.5	$129.3	$178.5	$79.1	$76.1	$23.8	$3.6	$6.3	$11.6	$18.1	$52.2
Newport News, VA	1,000 Lbs.	184.3	253.9	373.0	275.2	95.9	90.0	39.6	43.8	37.3	30.4	31.5	38.0
	$1,000	$221.1	$285.0	$454.0	$333.1	$140.4	$106.5	$42.9	$50.9	$43.3	$41.4	$49.0	$58.8

Source: NMFS Statistics Office, dealer weighout database & permit database

Pounds are in landed weight

1995-2001 data based on vessels that were issued a monkfish permit during the 2001 fishing year. 2002-2005 fishing year data are based on vessels issued a monkfish permit during the 2002-2005 fishing years, respectively.

HOME PORT		MONKFISH LANDINGS AND REVENUES											Principal Port
		FY1995	FY1996	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2005
All Other Ports	1,000 Lbs.							8699.4	6182.4	7063.9	4836.3	6558.7	4810.9
	$1,000							$12,153	$8,618	$8,421	$7,299	$11,231	$7,947
Summary of "Primary", "Secondary" and "Other" Ports								30,310	24,864	28,762	17,628	22,018	22,018
								$42,072	$34,654	$36,735	$29,813	$40,646	$40,646

Table 23 - Monkfish landings and revenues for monkfish secondary and other ports, FY 1995 – 2005, and principal port, FY 2005.

	HOME PORT	Number of Vessels	FY1995	FY1996	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005
1	Westport, MA	27	56.9%	69.0%	42.5%	40.8%	49.6%	51.2%	62.9%	37.4%	47.3%	28.9%	30.7%
2	Port Clyde, ME	21	10.6%	7.7%	13.7%	19.2%	37.6%	44.6%	36.5%	32.7%	36.1%	35.4%	13.6%
3	Plymouth, MA	24	6.0%	4.2%	6.3%	7.9%	7.5%	38.5%	29.8%	28.6%	4.6%	23.0%	9.2%
4	South Bristol, ME	3	7.1%	7.6%	7.5%	13.5%	22.6%	42.5%	32.4%	27.7%	35.6%	34.1%	35.9%
5	Portsmouth, NH	38	11.8%	12.5%	19.8%	19.4%	38.4%	39.9%	49.8%	37.8%	31.3%	28.4%	30.7%
6	Scituate, MA	35	5.9%	3.5%	3.2%	20.2%	30.5%	40.5%	34.5%	17.5%	30.7%	13.9%	10.5%
7	Boston, MA	32	13.1%	10.8%	14.0%	13.5%	27.4%	30.8%	20.6%	23.6%	23.3%	27.8%	30.2%
8	Portland, ME	120	12.5%	13.0%	13.9%	14.4%	23.5%	26.2%	22.2%	27.6%	26.3%	27.4%	23.1%
9	Rockland, ME	3	17.6%	22.4%	4.1%	9.0%	12.3%	14.3%	9.5%	2.8%	4.2%	0.3%	
10	Long Beach/Barnegat Light, NJ	4	17.7%	21.6%	14.8%	28.6%	39.1%	22.3%	34.2%	24.0%	25.1%	74.1%	88.0%
11	Gloucester, MA	271	10.2%	6.9%	5.2%	5.8%	13.2%	18.0%	15.8%	15.1%	12.9%	14.2%	13.2%
12	Point Judith, RI	155	6.6%	12.7%	9.1%	8.5%	10.6%	13.3%	11.2%	8.0%	8.5%	4.3%	8.7%
13	Newport, RI	75	6.2%	9.5%	10.1%	10.7%	23.6%	11.4%	13.3%	12.1%	18.0%	10.9%	6.4%
14	Chatham, MA	129	2.8%	22.4%	2.6%	4.9%	5.7%	11.2%	9.3%	19.9%	18.1%	10.8%	21.1%
15	Point Pleasant, NJ	120	2.0%	7.1%	10.6%	19.0%	19.1%	9.0%	13.8%	8.0%	7.1%	3.7%	4.7%
16	New Bedford, MA	513	13.4%	9.4%	14.0%	15.8%	11.5%	8.1%	5.9%	4.1%	4.5%	3.5%	3.9%
17	Hampton Bays, NY	53	2.5%	9.5%	8.1%	10.0%	10.1%	7.9%	9.7%	7.0%	6.4%	3.4%	11.8%
18	Ocean City, MD	59	7.3%	15.0%	12.3%	11.7%	15.3%	4.3%	4.8%	0.8%	2.2%	1.2%	2.7%
19	Provincetown, MA	45	9.0%	4.9%	2.5%	8.1%	6.7%	4.3%	0.9%	2.2%	4.3%	5.0%	2.5%
20	Montauk, NY	100	0.9%	1.4%	1.8%	3.3%	2.1%	1.6%	2.3%	3.4%	6.2%	3.4%	4.8%
21	Cape May, NJ	220	1.5%	1.8%	2.4%	1.9%	1.4%	1.2%	0.7%	0.5%	0.6%	0.3%	0.9%
22	Greenport, NY	5	1.7%	2.6%	2.9%	2.0%	1.3%	1.0%	1.1%	0.6%	0.2%	0.1%	0.5%
23	Hampton, VA	63	4.0%	5.1%	2.7%	2.9%	1.2%	0.8%	0.6%	0.2%	0.2%	0.3%	0.5%
24	Newport News, VA	74	1.8%	2.2%	3.9%	2.8%	0.9%	0.5%	0.2%	0.2%	0.2%	0.1%	0.1%

Source: NMFS Statistics Office, dealer weighout database & permit database

1995-2001 data based on vessels that were issued a monkfish permit during the 2001 fishing year. 2002-2005 fishing year data are based on vessels issued a monkfish permit during the 2002-2005 fishing years, respectively.

Table 24 - Monkfish Revenues, FY 1995-2005, as a Percentage of Total Revenues by Port

5.0 Environmental Consequences of Proposed Action

5.1 Biological Impacts

5.1.1 Impact on monkfish and non-target species

The scientific basis of monkfish management in the region is fraught with technical difficulties such as a lack of an analytical assessment, inability to determine current fishing mortality rates and conduct projections for evaluating rebuilding strategies, reliance on a trawl survey index as the primary indicator of stock status, and uncertainty in the magnitude of historical catches. A shortage of knowledge of basic monkfish biology (growth rates, reproduction, stock definition and inter-relationships, full species range, and life history) also contributes to the difficulty in formulating management measures designed to achieve a specific biological objective, such as a biomass target, or to evaluate measures for their efficacy in achieving specific objectives. Therefore, the following analysis of biological impacts of management alternatives must, for all practical purposes, be qualitative and relative to other alternatives under consideration, rather than quantitative and absolute.

5.1.1.1 Biological impact of TAC alternatives

Two target TAC alternatives are under consideration, including the no action alternative.

TAC Alternative 1 (the proposed action) was developed by the PDT and incorporates a range of nine different methods that could be used to calculate appropriate target catch levels (see APPENDIX I), which were subsequently synthesized to a single value. Although the recommended target TAC cannot be analyzed to determine whether it will, in fact result in the needed rebuilding, it represents the PDT's best estimate of a target catch that could facilitate stock rebuilding and maintain a limited directed fishery, consistent with Framework 4 objectives.

The various methods yield a small range of TAC's. For the northern stock, the median of all methods is 5,000 tons with a range of 2,800 to 6,500 tons. Relative exploitation associated with the TAC's for the northern stock is reduced from current values. Landings are reduced to values generally observed in the 1980's. For the southern stock, the median of all methods is 5,100 tons with a range of 3,300 to 9,400 tons. The 9,400 ton value is based on a trimmed average but is still influenced by two high values retained in the average. The distribution of relative exploitation (catch/survey) is highly skewed in the south with extremely high values in 1993 and 1996 occurring as a result of extremely low survey values. The PDT determined that these values were extreme outliers and dropped them from the calculation of the average relative exploitation index used to calculate the TAC.

Relative exploitation associated with the TAC is maintained near recent values and in general, is similar to values observed in the mid 1980's. The range of TAC's, with the exception of the 9,400 tons TAC, is similar to landings observed during the 1980's, a period when the directed fishery was just beginning to emerge. Therefore, these TAC's should reduce exploitation for the northern stock, and maintain exploitation near recent values for the southern stock. These TAC's,

based on the median of all nine methods, are similar to landings observed during the mid 1980's for both stocks.

The other target TAC alternative considered by the Councils, Alternative 3, is the no action alternative. (The Monkfish Committee eliminated Alternative 2 from further analysis in the final stages of the development of this document.) Since the no action alternative relies on a trawl survey index that is obtained during the NEFSC autumn bottom trawl survey, a specific TAC value cannot be calculated until those data are available, around the middle of December each year. Thus, the calculation of the final TACs for the 2007 fishing year under the no action alternative cannot be done until after the final Council meetings on this framework adjustment.

To facilitate discussion of this alternative, relative to Alternative 1, the PDT calculated a range of possible TACs based on changes in the trawl survey index of 50% (+ or -) from the previous year. This TAC would remain in effect for one year, under the no action alternative, and a new TAC would have to be recalculated as each new survey is conducted. Therefore, it is not possible to analyze the relative biological impacts of Alternative 3, compared to Alternative 1, for the three-year period covered by this framework adjustment because conducting a 50% sensitivity analysis for year two on a 50% range for year 1 yields a meaninglessly wide range of possible results. Furthermore, with the retirement of the R/V Albatross IV after 2007, this alternative is not feasible from a practical perspective beyond the 2008 fishing year.

Relatively and qualitatively, however, the impact of TAC Alternative 1 on monkfish, compared to the no action alternative (Alternative 3), would depend on whether the TACs under Alternative 3 are higher or lower than those under Alternative 1. A higher TAC would allow for removal of more monkfish from the population and would, therefore, be less conservative than a lower TAC, and reduce the likelihood that the rebuilding objectives will be met. Since the TACs are simply the basis for developing effort controls (principally, DAS and trip limits), the effect each alternative depends on the relative magnitude of the TAC. Conversely, a lower TAC, and corresponding management measures, would have a more positive impact on monkfish by allowing more animals to survive, contributing to stock biomass growth and reproductive capability.

In terms of the impact of the two TAC alternatives on non-target species, however, the converse may be true. If a lower TAC results in fewer DAS being used to target monkfish, then vessels will have more time available to target other species, and an economic incentive to do so. This effect is probably greater than the impact on incidental catch of non-target species that would occur on monkfish DAS, since most directed monkfish trips are taken with large-mesh gear, particularly in the SFMA, and the incidental catch of other species is minimal, with the exception in some cases of skates.

5.1.1.2 Biological impact of NFMA DAS Alternatives

The Councils considered two alternatives for monkfish DAS requirements in the NFMA, either to require vessels to use monkfish DAS when exceeding the monkfish incidental limit (NFMA DAS Alternative 1, the proposed action), or to continue the current program that does not require monkfish limited access vessels exceeding the incidental limit to call in a monkfish DAS (NFMA DAS Alternative 2, no action). Under Alternative 1, vessels would be required to either

call in a monkfish DAS (either monkfish-only DAS if fishing with large-mesh gillnets in the Gulf of Maine Monkfish Exempted Fishery, or monkfish/multispecies DAS), or, if the vessel is equipped with a VMS, to declare a monkfish/multispecies DAS prior to crossing the VMS demarcation line upon returning to port. Under Alternative 2, a vessel is not required to call in a monkfish DAS, and there is no provision for using the VMS to declare a monkfish DAS, should a vessel elect to do so. Currently, monkfish limited access vessels fishing in the NFMA on a multispecies DAS have no monkfish trip limit, and, therefore, do not call-in monkfish DAS.

If vessels are not required to use a monkfish DAS (Alternative 2, no action), the PDT analysis indicates that the trip limits necessary to keep catches below the target TAC are well below the levels under the proposed incidental catch alternatives, effectively eliminating the directed fishery. Furthermore, under Alternative 2, if the average catch equals the incidental limit (either the 300 lbs. or 400 lbs./DAS maximum), then the projected catch would exceed the target TAC, and be nearly double the TAC under the higher incidental limit. If the average catch under the incidental limits remains at the level observed in 2005 for vessels catching less than the incidental limit, which is unlikely, then the projected catch would be about ½ the TAC. As a result, the PDT notes that even with no directed fishery (all vessels fish under the incidental catch limit), there is still a high risk of exceeding the TAC under either incidental catch alternative under NFMA DAS Alternative 2 (no action).

The biological impact of requiring vessels to call in a monkfish DAS in the NFMA (Alternative 1, proposed action), compared to the no action alternative is qualitatively more conservative, since such a requirement would allow for the calculation of DAS and trip limit combinations that are expected to keep monkfish catches below the target TAC. Furthermore, allowing vessels to declare a monkfish DAS at the end of the trip, through the VMS provision, will minimize monkfish bycatch because vessels that have not declared a monkfish DAS prior to the start of the trip could make such a declaration if their monkfish catch exceeds the incidental limit, rather than be forced to discard the overage. Likewise, if a vessel is required to call in a monkfish DAS prior to leaving port, it might continue fishing because it has not caught its limit of monkfish rather than "lose" those monkfish DAS even though the trip would otherwise have ended, with commensurate impacts on incidentally caught species. In other words, if a vessel continues to fish for monkfish, in order to catch its allowed limit, it would also continue have some incidental catch of other species which may also be under landings limits, such as dogfish or cod, or for which there is no market, and which it would, therefore, discard.

5.1.1.3 Biological impact of NFMA Incidental Catch Alternatives

The Councils propose reducing the monkfish incidental catch limit in the NFMA to the level that was in place prior to Framework 2, which took effect May 1, 2003, (NFMA Incidental Limit Alternative 1). This limit would apply to all permit Category E vessels and, if NFMA DAS Alternative 1 is adopted, to all monkfish limited access vessels not fishing on a monkfish-only or monkfish/multispecies DAS in the NFMA. The Councils propose no changes to the monkfish incidental catch limits in the SFMA.

Under the no action alternative, Alternative 2, the incidental limit in place in the NFMA allows vessels to retain monkfish up to 50% of the total weight of fish on board (where the weight of all monkfish is converted to tail weight) to a maximum of 400 lbs. (tail weight). Alternative 1 would

reduce that limit to 25% of the total weight of fish on board, to a maximum of 300 lbs. The Councils increased the monkfish incidental limit in Framework 2 because at the time the stock was nearly rebuilt and, in order to achieve the optimum yield from the fishery, there were no other management restrictions to relax in the Monkfish FMP. Since that time, the survey biomass index used to gauge the status of the stock has declined, and is below the minimum biomass threshold where the stock is considered overfished.

The purpose of the incidental limit is to minimize bycatch (discards) of monkfish on vessels fishing for other species and having an incidental catch of monkfish. A higher incidental limit, qualitatively, reduces bycatch because vessels can keep more incidentally caught monkfish, but at the same time has the potential to increase overall monkfish mortality if the limit is high enough to provide an incentive for those vessels to target monkfish under the incidental limit. Based on PDT analyses of both limits for potential impact on discards, it does not appear that the lower limit will cause a discard problem because even under the higher limit in place since Framework 2, the average monkfish landings of vessels fishing under the 400 lb. incidental limit is 92 lbs. Therefore, Alternative 1 is likely to reduce overall monkfish mortality compared to the no action alternative because there will be less of an incentive for vessels to target monkfish under the lower limit, and discards are not expected to increase. Furthermore, if the incentive to target monkfish under the incidental limit is reduced (Alternative 1), then vessels will be less likely to take a trip to target monkfish under the incidental limit, simultaneously reducing the frequency of incidental catch of other species.

5.1.1.4 Biological impact of SFMA Trip Limits/DAS Alternatives

The Councils considered two sets of trip limit alternatives for each TAC alternative for the SFMA. These trip limit alternatives were then analyzed for the number of DAS that could be allocated so that the total monkfish landings, including incidental catch, remains under the target TAC. The trip limits are expressed as tail weight per DAS, and are higher for permit category A and C vessels, compared to category B, D and H vessels because of the higher monkfish landings during the permit qualification period. The two trip limit alternatives are (Alternative 1, no action) 550 lbs./450 lbs. and (Alternative 2) 475 lbs./375 lbs., for categories AC and BDH, respectively. The Councils propose taking no action on the trip limit, Alternative 1, which results in 23 DAS available for vessels to fish in the SFMA. The following table shows the DAS associated with each trip limit alternative for the two TAC alternatives under consideration (the Monkfish Committee eliminated TAC Alternative 2 from further analysis and consideration):

	TAC	Trip Limit	DAS
TAC Alternative 1	**5,100 mt** 2007-2009	550/450 (no action)	**23**
		475/375	**31**
TAC Alternative 3 (no action) survey up 50%	(1) **6,009 mt** (2006, calculated annually)	550/450 (no action)	**34**
		475/375	**40** (2)
TAC Alternative 3 (no action) survey down 50%	(1) **4,268 mt** (2006, calculated annually)	550/450 (no action)	**16**
		475/375	**20**

(1) TAC calculated using current method with FY2005 landings, and observed 2006 survey index. Value cannot be determined until 12/06, after survey is completed. Reliance on Albatross survey, renders this option infeasible after 2007.

(2) DAS generated under this TAC would exceed the maximum of 40 DAS by 11 DAS.

Table 25 SFMA trip limit/DAS alternatives under TAC Alternatives 1 and 3 (no action).

The biological impact of the higher trip limit (under no action) compared to Trip Limit/DAS Alternative 2 depends on whether the lower trip limit simply results in monkfish being discarded rather than landed. If fish are discarded, and they do not survive, then the impact of a lower limit could be negative compared to a higher limit. This situation would be exacerbated by the fact that under the lower limit, vessels have more DAS for a given target TAC. Based on past experience with in the SFMA, however, discarding on monkfish trips may not be a major problem, since fishermen have stated they reduce the number of nets fished when the trip limit is under the lower trip limit. The majority (65-70%) of monkfish landings from the SFMA are made by vessels fishing with gillnets. If, on the other hand, discards do not increase as a result of the lower limit, then the two alternatives would be equivalent in terms of impact on monkfish, since they are both designed to achieve the same target TAC.

In terms of the impact on non-target species, the larger number of allocated DAS under Trip Limit/DAS Alternative 2 (lower monkfish trip limit, higher monkfish DAS) could potentially result in increased incidental catch of other species due to a greater amount of time gear is in the water. The principal species other than monkfish caught on monkfish DAS are skates and dogfish, according to the analysis of bycatch in Amendment 2. Conversely, with fewer monkfish DAS under Trip Limit/DAS Alternative 1, then vessels will have more time available to target other species, and an economic incentive to do so. This biological impact on non-target species of reallocating fishing effort is likely greater than the impact of having more monkfish DAS because the bycatch of incidentally caught species is minimal in monkfish gillnet gear due to the use of lage mesh in this fishery (i.e. 10-inch or 12-inch mesh).

5.1.1.5 Biological Impacts of NFMA Trip Limits/DAS Alternatives

The Councils considered a range of six trip limit/DAS alternatives for each TAC alternative and each of two incidental catch alternatives for vessels fishing in the NFMA (Section 3.4.2). Since the Monkfish Committee eliminated TAC Alternative 2 from further consideration, the two TAC alternatives considered by the Councils were TAC Alternative 1 (Section 3.4.2.1), the proposed action, and TAC Alternative 3, no action (Section 3.4.2.3). The six alternatives are labeled "Options 1-6" within each TAC Alternative discussion. The Councils recommend adoption of Option 2, which under TAC Alternative 1 and Incidental Limit Alternative 1, would result in 31 DAS available to fish in the NFMA, with trip limits of 1,250 lbs. and 470 lbs. (tail weight per DAS) for Category AC and BD permits, respectively.

Since the Councils adopted NFMA DAS Alternative 1, requiring vessels to call in a monkfish DAS when targeting monkfish (exceeding the incidental limit) only the first four trip limit/DAS options apply. While the analysis of alternatives for the SFMA used specific trip limit options and solved for the resulting DAS, the analysis of NFMA used specific DAS allocations to solve for the trip limits for three of the options. The fourth option is based on the Councils taking no action with respect to a monkfish trip limit (no trip limit on a monkfish DAS), and solved for the number of DAS that could be allocated under such a circumstance. The fifth option would apply if the Councils took no action with respect to requiring vessels to call in a monkfish DAS when targeting monkfish (exceeding the incidental limit), that is NFMA DAS Alternative 2. Option 6 represents the no action alternative for both trip limits and DAS.

The first two options establish monkfish trip limits based on the monkfish DAS allocations that were produced in the analysis of SFMA alternatives for each of the target TAC alternatives. The third option sets monkfish DAS at 40, the baseline allocation under the original FMP. The fourth option is based on the Councils taking no action with regard to a monkfish trip limit in the northern area (no trip limit on a monkfish/multispecies DAS), and the fifth sets monkfish trip limits that would apply if the Councils did not adopt the NFMA Monkfish DAS Alternative 1. There are no trip limits or monkfish DAS limitations under Option 6.

With respect to the biological impacts on monkfish, the first three options are roughly equivalent because they are all designed to achieve the same target TAC under different DAS allocations while fishing under a monkfish trip limit. The analysis of Option 4, the no-trip limit alternative, presented a more technical problem. There are three variables involved in the analysis: the total incidental catch (which is used to apportion the total TAC to the directed fishery), the trip limits, and the DAS. When DAS are known, the total incidental catch can be calculated and a directed fishery TAC can be established, which in turn can be used to solve for the applicable trip limit. However, when the measure specifies no trip limit, and the analysis must solve for the applicable DAS, there are two unknown variables (DAS and incidental portion of the total catch), requiring that an assumption be made about the incidental catch, so that the number of allowable DAS under no trip limit can be calculated. Making such an assumption can be done but it significantly increases the uncertainty in the projected total catch, especially considering that vessels will likely change their behavior and increase their monkfish catch on monkfish DAS, if such DAS are limited and no monkfish trip limit applies. Furthermore, changes in behavior in reaction to the implementation of Multispecies Framework 42 would likely cause future catches of monkfish per DAS to increase over what was observed in 2005, as vessels seek to make up lost revenue from groundfish by increasing their monkfish catch per DAS if monkfish trip limits are not applied.

If vessels are not required to use a monkfish DAS (Option 5, the no-DAS option), the PDT analysis indicates that the trip limits necessary to keep catches below the target TAC are well below the levels under the proposed incidental catch alternatives, effectively eliminating the directed fishery. Furthermore, under the no-DAS option, if the average catch equals the incidental limit (either the 300 lbs. or 400 lbs./DAS maximum), then the projected catch would exceed the target TAC, and be nearly double the TAC under the higher incidental limit. If the average catch under the incidental limits remains at the level observed in 2005 for vessels catching less than the incidental limit, which is unlikely, then the projected catch would be about ½ the TAC. As a result, the PDT notes that even with no directed fishery (all vessels fish under the incidental catch limit), there is still a high risk of exceeding the TAC under either incidental catch alternative.

Since Option 6 is the no action alternative for both monkfish trip limits and monkfish DAS, the biological impact would be that which occurred in the most recent year, adjusted for any changes in multispecies effort (both the number of DAS available and how those DAS are used) and any changes in the catchability of monkfish. The previous year's NFMA monkfish landings of approximately 9,231 mt indicates that this option is inconsistent with any of the target TAC

alternatives under consideration, including the no action NFMA TAC Alternative 2 scenario where the survey index increases by 50% in 2006.

TAC Alternatives	TAC (mt)	TAC (lbs.)	Incidental limit	Estimated incidental landings	AC allocation of TAC	BD allocation of TAC	Trip Limit AC (tail weight/DAS)	Trip Limit BD (tail weight/DAS)	DAS (Option #)
1. 2007-2008	5,000	11,023,113	25%/300 lbs.	3,364,401	4,130,908	3,527,804	1250	886	23 (1)
				2,791,523	4,439,903	3,791,687	1250	470	31 (2)
				2,326,739	4,690,595	4,005,779	869	338	40 (3)
				4,000,000	3,792,481	3,230,632	None (No action)	None (No action)	21 (4)
				1,713,357	5,021,437	4,288,319	168	152	No action (5, MF DAS not req.'d)
			50%/400 lbs. (no action)	3,705,220	3,947,079	3,370,814	1250	683	23 (1)
				3,014,084	4,319,859	3,689,170	1250	435	31 (2)
				2,453,358	4,622,300	3,947,455	787	327	40 (3)
				4,000,000	3,792,481	3,230,632	None (No action)	None (No action)	21(4)
				1,713,357	5,021,437	4,288,319	168	152	No action (5, MF DAS not req.'d)
3. FY2007 no action, 2006 survey up 50%	5,132	11,314,123	25%/300 lbs.	2,599,382	4,700,502	4,014,239	1250	452	34 (1)
				2,326,739	4,847,558	4,139,826	1250	367	40 (2)
				2,326,739	4,847,558	4,139,826	1250	367	40 (3)
				4,000,000	3,949,627	3,364,497	None (No action)	None (No action)	22 (4)
				1,713,357	5,178,401	4,422,366	177	161	No action (5, MF DAS not req.'d)
				1,713,357	5,178,401	4,422,366	None (No action)	None (No action)	No action (6, MF DAS not req.'d)
			50%/400 lbs.(no action)	2,782,281	4,601,851	3,929,991	1250	426	34 (1)
				2,453,358	4,779,264	4,081,502	1060	353	40 (2)
				2,453,358	4,779,264	4,081,502	1060	353	40 (3)
				4,000,000	3,949,627	3,364,497	None (No action)	None (No action)	22 (4)
				1,713,357	5,178,401	4,422,366	177	161	No action (5, MF DAS not req.'d)
				1,713,357	5,178,401	4,422,366	None (No action)	None (No action)	No action (6, MF DAS not req.'d)
3. FY2007 no action, 2006 Survey down 50%	3,471	7,652,245	25%/300 lbs.	3,888,928	2,029,834	1,733,483	793	269	16 (1)
				3,587,679	2,192,320	1,872,246	493	222	20 (2)
				2,326,739	2,872,438	2,453,068	225	137	40 (3)
				4,500,000	1,702,212	1,450,033	None (No action)	None (No action)	7 (4)
				1,713,357	3,203,280	2,735,608	89	76	No action (5, MF DAS not req.'d)
				1,713,357	3,203,280	2,735,608	None (No action)	None (No action)	No action (6, MF DAS not req.'d)
			50%/400 lbs.(no action)	4,338,023	1,787,604	1,526,618	506	208	16 (1)
				3,974,589	1,983,631	1,694,025	380	180	20 (2)
				2,453,358	2,804,143	2,394,745	215	132	40 (3)
				4,500,000	1,702,212	1,450,033	None (No action)	None (No action)	7 (4)
				1,713,357	3,203,280	2,735,608	89	76	No action (5, MF DAS not req.'d)
				1,713,357	3,203,280	2,735,608	None (No action)	None (No action)	No action (6, MF DAS not req.'d)

Table 26 NFMA trip limit/DAS alternatives under TAC Alternatives 1 and 3 (no action). Shaded cells are those where the allowable trip limit is lower than the incidental catch limit.

5.1.1.6 Biological impact of Moratorium on Directed Fishing

The Councils are not recommending this alternative. The overall impact on monkfish of a moratorium on directed fishing would be a reduction in overall monkfish catch, and an increase in the rate at which the stock biomass increases, initially as more fish survive to older ages (growth), and subsequently as those fish spawn and provide additional numbers of fish contributing to the stock biomass (recruitment). The magnitude of this effect cannot be calculated, however, especially considering the uncertainty about the impact of cannibalism by older fish and the rate of natural mortality, as well as the lack of data about the rate of growth and reproductive capabilities of older monkfish.

A moratorium on directed fishing (no monkfish DAS) would also result in an increase in the amount of monkfish caught incidental to fishing for other species (as vessels redirect their effort to other fisheries), and to a lesser extent to targeted fishing under the monkfish incidental limit. The magnitude of that increase in incidental catch cannot be calculated, but the effect would be to offset some, but certainly not all of the benefits to biomass growth that would otherwise occur. Furthermore, the redirection of effort to other fisheries by displaced monkfish vessels would have a negative impact on the rebuilding of other stocks.

5.1.1.7 Biological impact of the TAC Backstop Alternatives

The Councils recommend a TAC Backstop provision that would result in a recalculation of FY2009 DAS and/or trip limits in the event that landings in FY2007 exceed the target TACs by more than 10%. Since the target TACs cannot be demonstrated to achieve stock rebuilding due to technical and scientific uncertainty, it is unknown whether such an adjustment will result in the ultimate objective of rebuilding the stocks, but it will allow for some degree increased survival of monkfish and an increased likelihood that the objective will be achieved than if such an adjustment were not taken (under the no action alternative). If the TAC overage exceeds 30% in FY2007 in either management area, the proposal calls for a moratorium on directed fishing in that area, with same impacts as discussed in the previous section (Section 5.1.1.6).

5.1.1.8 Biological impact of DAS Carryover Alternatives

The Councils considered, but are not recommending reducing the number of unused monkfish DAS that a vessel may carryover from the current level (no action alternative) of 10 DAS to 6 DAS. The biological impact of this proposal would be some reduction in potential fishing effort in the year in which those vessels use those carryover DAS. The PDT agreed that as a percentage of total monkfish DAS allocations, even under the baseline of 40 DAS, the allowance of 10 DAS as a carryover could seriously undermine the effort control program, it had recommended a more conservative value (4 DAS) than that being recommended by the Monkfish Committee (6 DAS), but the PDT could not quantify the impact, especially because the impact depends on whether a vessel has carryover DAS to use, and if, and when that vessel uses those DAS. Qualitatively, Alternative 1 would be more precautionary from a biological point of view than the no action alternative.

5.1.1.9 Biological impact of Permit Category H boundary Alternatives

The Councils propose moving the boundary of the Permit Category H Fishery 20 miles northward, from 38°20’N (Alternative 2, no action) to 38°40’N (Alternative 1). The Permit

Category H fishery was established in Amendment 2 for vessels that did not qualify for a limited access permit in the initial FMP. A total of seven vessels qualified and only five or six are actively fishing. These vessels are allocated the same number of DAS and trip limits as Category B and D vessels fishing in the SFMA, and the vessels are considered in the analysis of the TAC that is used to set the management measures.

The vessels have limited season when monkfish are available in late spring, and are constrained by the closures in place to protect sea turtles, such that the area available is approximately 20 miles wide. The vessels are prohibited from targeting monkfish north of the boundary line. At the request of the industry, the Councils are considering moving the boundary northward 20 miles which would increase the opportunity for the affected vessels to prosecute their fishery within the allocation of DAS and trip limits, and provide some additional area to move into, in the event sea turtles appear in the open area. The PDT reviewed DAS and landings data for vessels holding category H permits, and concluded that there is no technical basis for preventing an adjustment to the boundary because the DAS allocated to those vessels, and used by them, was accounted for and considered in Amendment 2, and has been incorporated into the DAS/trip limit analyses for the SFMA. In other words, there is likely no biological impact on target or non-target species compared to taking no action.

5.1.1.10 Biological impact of Extension of measures beyond FY2009

The two alternatives, including no action, describe the measures that would be in place beyond the final three years of the rebuilding program, if the Councils take no action to implement a revised management program. Under Alternative 2, the no action alternative, whatever measures are in effect in 2009 would remain in place, even if the directed fishery is shut down under the TAC Overage Backstop provision (if adopted). Under Alternative 1, the proposed action, if the directed fishery is shut down under the TAC Overage Backstop provision, and the Councils take no action to revise the management program for FY 2010 and beyond, then the measures in place in FY2008 would be in effect.

The biological impact of these two options cannot be quantified at this time (as noted in other sections of this document, there is no technical capability to do either short-term or long-term projections of stock growth under different effort scenarios), except to state that the closure of the directed fishery continuing into 2010 and beyond (if that occurs) would likely be more conservative for monkfish than allowing a directed fishery to occur, but may result in increased effort in other fisheries as vessels seek to compensate for the closure. Whether such an action is necessary, however, will be unknown unless new biological reference points are adopted and an updated stock status determination is made. The relative impact on protected species would depend on what other fisheries the affected vessels engage in in response to the monkfish management program.

5.1.1.11 Biological Impact of Scallop Closed Area Access Program Monkfish Incidental Limit Alternatives

Under the no action alternative (Alternative 2), limited access scallop vessels fishing in the Closed Area Access programs have a monkfish incidental limit applicable to vessels fishing with a dredge and not on a scallop DAS, or 50 lbs. per day to a maximum of 150 lbs. tail weight. Under the proposed action, Alternative 1, the incidental limit applicable to those vessels would

be the same as applies to scallop vessels fishing on a scallop DAS, or 300 lbs. tail wt. per DAS, except that the incidental limit will be based only on the time that the vessel is in the closed area, and not including steaming time. The two alternatives will likely have the same biological impact because the effect of Alternative 1 would be to convert incidentally caught monkfish from discards to landings. The Councils do not expect that Alternative 1 presents any new incentive for scallop vessels to target monkfish under the increased incidental limit, given the relative value of the scallop catch to the difference in allowable monkfish landings under the two alternatives. Since the two alternatives are equivalent in terms of their impact on fishing effort, there is no difference in terms of impact on protected species.

5.1.2 Impact on Protected Species

NOAA Fisheries previously considered the effects of implementation of Framework 2 on Endangered Species Act (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 (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 Impacts of TAC Alternatives on Protected Species

The TACs are the basis for developing effort controls (principally, DAS and trip limits), with the effect that each alternative is dependent on the relative magnitude of the TAC. With respect to protected species, the most relevant factor about the range of the proposed TACs is the fact that they are likely to reduce exploitation for the northern stock of monkfish, and maintain exploitation near recent values for the southern stock. As such, impacts to protected species should not be substantially different, and possibly less than they are under the current management measures.

The No Action alternative TAC (Alternative 3) is not yet available for the reasons cited in Section 3.1.3 (timing of 2006 trawl survey data availability). The impacts relative to the proposed action, Alternative 1, however, would depend on whether the TACs under Alternative 3 are higher or lower than those under Alternative 1. A higher TAC would allow for removal of more monkfish from the population as a result of increased effort and possibly result in greater impacts to protected species. The converse would be true with a lower TAC.

5.1.2.2 Impacts of NFMA DAS Alternatives on Protected Species

The Councils considered two alternatives for monkfish DAS requirements in the NFMA, either to require vessels to use monkfish DAS when exceeding the monkfish incidental limit (NFMA DAS Alternative 1, the proposed action), or to continue the current program that does not require monkfish limited access vessels exceeding the incidental limit to call in a monkfish DAS (NFMA DAS Alternative 2, No Action). In comparing these alternatives, better monitoring of catch and effort, in this case using a monkfish DAS, nearly always enhances the understanding of interactions with protected resources. More importantly, the requirement in Alternative 1 would allow for the calculation of DAS and trip limit combinations that are expected to keep

monkfish catches below the target TAC. Control over the TACs would directly control effort, possibly producing indirect benefits to protected species or at least resulting in effects that are unchanged from current levels.

5.1.2.3 Impacts of NFMA Incidental Catch Alternatives on Protected Species

The incidental limit currently in place (Alternative 2) in the NFMA allows vessels to retain monkfish up to 50% of the total weight of fish on board (where the weight of all monkfish is converted to tail weight) to a maximum of 400 lbs. (tail weight). The proposed action, Alternative 1 would reduce that limit to 25% of the total weight of fish on board, to a maximum of 300 lbs.

The purpose of the incidental catch limit is to minimize bycatch (discards) of monkfish on vessels fishing for other species and having an incidental catch of monkfish. As stated in Section 5.1.1.3, Alternative 1 is likely to reduce overall monkfish mortality compared to the no action alternative because there will be less of an incentive for vessels to target monkfish under the lower limit. While it is unclear what the impacts of a reduced incidental limit might be on protected species, given that a reduction in monkfish bycatch does not necessarily equate to a reduction in protected species interactions, the reduced incentive to target monkfish under the lower incidental limit reduces the likelihood of interactions with protected species. No Action would result in the status quo with respect to protected species impacts, and would not realize any possible ancillary benefits of a reduced incentive to target monkfish, if there is a relationship between the gear types that are subject to this measure and protected species interactions. It is also possible that neither Alternative 1 nor 2 is likely to result in discernable or quantifiable changes in effects to protected species.

5.1.2.4 Impacts of SFMA Trip Limits and DAS Alternatives on Protected Species

Relative to each other, the most distinctive impact of the higher trip limit (under the proposed action, Alternative 1) compared to Trip Limit/DAS in Alternative 3 will stem from the larger number of allocated DAS that could occur under Alternative 3 if the survey index is up by 50%. While interactions with protected species are dependent on the prosecution of the fishery in areas where sea turtles, cetaceans and pinnipeds are distributed, gillnet gear, the most prevalent gear in the SFMA monkfish fishery, already has documented interactions with the aforementioned protected species. While fishermen have reported that when trip limits are lower they tailor the amount of gear used to the expected/allowed catch, the difference between the two trip limits under consideration is not large enough to substantially affect the amount of gear used. Increased DAS, as the tradeoff to lower trip limits could, however, have negative impacts to protected species if effort increases overlap with protected species.

If the survey index is down 50%, DAS in Alternative 3 would be lower than Alternative 1. Impacts resulting from vessels fishing the difference between their NFMA and SFMA DAS allocations as monkfish-only or monkfish/multispecies DAS in the NFMA, would be mitigated by the fact that monkfish-only DAS effort would be limited to the existing Monkfish Gillnet Exempted Fishery in the Gulf of Maine or would have to occur within the confines of the number of allocated groundfish DAS.

5.1.2.5 Impacts of NFMA Trip Limits and DAS Alternatives on Protected Species

Gillnet gear, which is the gear with documented interactions with protected species, only accounts for 25-30% of NFMA monkfish landings. As discussed in the previous section, if DAS are the primary factor in evaluating protected species interactions, as opposed to trip limits, the larger number of allocated DAS under any of the options discussed, the greater the risk of interactions. This assumption is contingent on an overlap between effort and the presence of any of the species of protected species that interact with the monkfish fishery. A possible mitigating factor is that, as noted above, some fishermen have stated they reduce the number of nets fished when trip limit levels are low. Reduced numbers of nets may contribute to reduced risks, but such actions may be difficult to evaluate if they are not required and without significant observer coverage. Nevertheless, day gillnet vessels currently fishing for monkfish in the NFMA on a multispecies DAS have limitations on the number of nets they can fish under the multispecies regulations. Option 6, the No Action Alternative, would result in impacts that reflect the status quo.

5.1.2.6 Impacts of Moratorium on Directed Fishing on Protected Species

The overall impact of a moratorium on directed fishing would be a reduction in overall monkfish catch and possible benefits to protected species only if this effort did not shift to fisheries that result in similar or greater negative impacts on protected resources.

5.1.2.7 Impacts of the TAC Backstop Alternatives on Protected Species

The backstop measures could ultimately result in a moratorium on directed fishing by area, and would likely have the same outcome as discussed in the previous Section 5.1.2.6.

5.1.2.8 Impacts of DAS Carryover Alternatives on Protected Species

Using the same logic as above regarding the relationship between DAS and fishing effort, a reduction in carryover DAS could be a potential benefit to protected species relative to the status quo. The Councils are not proposing any reduction in carryover DAS.

5.1.2.9 Permit Category H Fishery Boundary on Protected Species

The proposed change to the boundary of the fishery that was established in Amendment 2 for vessels that did not qualify for a limited access permit in the initial FMP may have some benefits to protected species, particularly sea turtles. Of the seven vessels that initially qualified, only five or six are actively fishing. Because they have a limited season when monkfish are available in late spring and are constrained by the closures in place to protect sea turtles such that the area available is approximately 20 miles wide, this alternative proposes to move the boundary northward 20 miles increasing the opportunity for the affected vessels to prosecute their fishery within the allocation of DAS and trip limits. An expanded area would serve to spread effort out in the event sea turtles appear in the open area, possibly reducing the risks of interactions particularly when it is known that fishing effort often concentrates along the edges of closed areas. This measure would likely produce a greater positive outcome than the status quo, an area that historically has not accounted for interactions beyond any other open area.

5.1.2.10 Protected species impact of Extension of measures beyond FY2009

The relative impact on protected species cannot be determined, because it depends on what other fisheries the affected vessels engage in response to the monkfish management program (that is, the indirect impact). Generally, the limited level of effort allowed under the rebuilding program

will have positive direct benefits for protected species. See discussion above under Section 5.1.1.10.

5.1.2.11 Protected species impact of Scallop Closed Area Access Program Monkfish Incidental Limit Alternatives

Since the two alternatives are equivalent in terms of their impact on fishing effort, there is no difference in terms of impact on protected species. Scallop vessels will continue to fish at the same level while targeting scallops under the closed area access program regardless of the monkfish incidental limit. This limit does not provide an incentive to target monkfish and increase fishing effort by the affected vessels. See discussion above under Section 5.1.1.11.

5.2 Habitat Impacts

This action will increase SFMA monkfish effort from the previous year in FY 2007 through 2009, the level of effort will be below any year prior to FY2006, and the habitat effects will not be significant, primarily because the majority of fishing effort is using gillnets, and the remaining trawl effort is conducted over sandy substrates that are less vulnerable to gear effects of trawling. In the NFMA, where monkfish fishing is predominantly with trawl gear, the alternatives under consideration will reduce the number of DAS available for targeting monkfish from the current level (under no action). These alternatives are not likely to change the impact of the monkfish fishery on EFH of any managed species relative to prior EFH assessments of the fishery, however, because under no action, monkfish effort is embedded in multispecies effort (vessels fishing on multispecies DAS have no monkfish trip limit, therefore, do not use monkfish DAS). In other words, the proposed alternatives, while potentially reducing the DAS available for targeting monkfish, do not change the overall DAS allocated to these vessels under the Multispecies FMP.

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 (see Amendment 11 to the Northeast Multispecies FMP for a list of species for which EFH was designated, the maps of the distribution of EFH, and descriptions of the characteristics that comprise the EFH). 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.

The proposed action, if adopted would set target TACs, trip limits and DAS for the remaining years of the rebuilding plan, 2007-2009, and beyond if the Councils do not take action to modify the plan. This action would require, for the first time since FMP implementation, vessels to use monkfish DAS in the NFMA, and fish under a monkfish trip limit. This framework will also reduce the monkfish incidental catch limit in the NFMA to the level established in the original FMP. Other measures adopted in this framework action include: a TAC overage backstop provision that could result in a reduction in monkfish DAS, or closure of the directed fishery in 2009, depending on the magnitude of the overage; an expansion of the area accessible to permit Category H vessels by 20 miles; and, restoration of the monkfish incidental limit on scallop

vessels fishing in the closed area access programs to that applicable to vessels fishing on a scallop DAS. These measures are described in detail in Section 3.0.

The proposal to require vessels in the NFMA to use monkfish DAS would not result in a reduction in overall mobile gear effort in that area, even though the monkfish TAC is reduced substantially, since all mobile gear vessels are required to fish under a multispecies DAS when fishing on a monkfish DAS. Hence their overall effort is controlled by DAS allocated under the Multispecies FMP. While this action will not reduce any adverse impacts of the fishery on EFH, it is similarly not expected to increase such effort. Other actions proposed in this framework will not have any material change to the effect of the fishery on EFH.

The fishery must continue to respect the 2,811 square nautical miles of habitat closed areas established by the Amendment 13 as well as the Oceanographer and Lydonia Canyon closures adopted in Amendment 2 to the Monkfish FMP. Therefore, effort will 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 less than temporary in nature.

5.3 Economic Impacts of the Alternatives

The proposed management changes encompass a variety of measures that would impact vessels participating in the monkfish fishery. The measures under consideration include the establishment of an annual TAC for the NFMA and SFMA for FY 2007 - 2009, a requirement that vessels fishing in the NFMA call in a monkfish DAS when planning to land more than the incidental trip limit, a change in the NFMA incidental limit, trip limits and DAS allocation for the NFMA and SFMA, a moratorium on directed fishing, a TAC overage backstop, and a change to the number of DAS that may be carried over to the next fishing year.

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 October 13, 2006, there are approximately 731 limited access monkfish permit holders and approximately 2,121 vessels holding an open access Category E permit. This action would affect limited access monkfish vessels while fishing for monkfish in the SFMA, and all vessels fishing for monkfish in the NFMA.

Based on activity reports for the 2005 fishing year (the most recent fishing year for which complete information is available) there were 627 limited access permit holders participating in the monkfish fishery. Of these, 150 fished for monkfish exclusively in the NFMA and 226 fished for monkfish in only the SFMA. The remaining 251 vessels fished for monkfish in both management areas. During the same time period, 570 incidental permit holders reported landing monkfish. Of these, 163 landed monkfish solely from the NFMA, 344 landed monkfish solely from the SFMA, and 63 landed monkfish from both areas. Table 27 reports the number of vessels fishing in each area.

Permit Category	Only NFMA Trips	Only SFMA Trips	NFMA and SFMA Trips
A	1	9	2
B	0	29	3
C	49	98	149
D	100	85	97
E	163	344	63
H	0	5	0

Table 27 Number of vessels fishing in NFMA and SFMA by permit category.

The proposed measures would affect at least the 627 vessels that fished for monkfish in the NFMA and SFMA, as well as the 226 incidental permit holders landing monkfish from the NFMA. However, the measures would be likely to have greatest effect on the 163 limited access vessels that fished for monkfish exclusively in the NFMA. In addition, monkfish dealers will likely be affected by the reduction in the NFMA and total TAC. This may increase their costs relative to FY 2006. However, while the NFMA TAC will decrease there will be a concurrent increase in TAC in the SFMA, which could mitigate any cost increases.

The following sections provide a discussion of the impacts for each measure. Where possible, a quantitative assessment of the impacts is provided. If a quantitative assessment is not possible, an attempt is made to identify the types and number of vessels that may be reasonably expected to be affected.

5.3.1 TAC Alternatives

Under TAC Alternative 1, the proposed action, the combined TAC for both monkfish management areas would be decreased by approximately 11 percent compared to fishing year 2006. While the TAC for the NFMA would be decreased by approximately 35 percent, the SFMA TAC would be increased by approximately 39 percent. In addition, these proposed TACs would remain in place until the end of the rebuilding program in FY 2009, thereby eliminating the need for the annual adjustment process created in Framework 2. As was previously mentioned, there are three types of vessels that may be affected by the proposed measures, and thus the change in the TAC: vessels fishing solely in the NFMA, vessels fishing solely in the SFMA, and vessels fishing in both areas. There would be differential impacts on participating vessels depending on the management area in which they fish. However, in general the choice of TAC Alternative would affect any vessel fishing in either area, to the extent that they have to change their fishing behavior due to the imposition of DAS requirements or changes in current trip limits. The analyses in Section 5.3.4 below provide a synthesis of the impacts for each combination of trip limits and DAS alternatives for the aforementioned three types of vessels that may be affected by the proposed measures. It should be noted that the elimination of the annual adjustment process would remove the uncertainty associated with trip limits and DAS allocations for the SFMA. With a known trip limit and DAS allocation for the entire FY 2007 - 2009 period, vessels would be able to plan their fishing strategy more readily.

As was discussed in the biological impacts section, the other target TAC alternative considered, Alternative 3, is the no action alternative. Since the no action alternative relies on a trawl survey index that is obtained during the NEFSC autumn bottom trawl survey, a specific TAC value cannot be calculated until those data are available, around the middle of December each year.

Thus, the final TACs for the 2007 fishing year will not be available until after the final Council meetings on this framework adjustment.

5.3.2 NFMA DAS Alternatives

In FY 2005, there were 233 limited access monkfish vessels also holding limited access multispecies permits that landed more than the 400 pound incidental trip limit for monkfish while fishing in the NFMA DAS. There were 249 such vessels landing more than the proposed 300 pound incidental trip limit. Under the proposed action, NFMA DAS Alternative 1, these vessels will be required to call in a monkfish DAS if they wish to land more than the incidental trip limit. However, this is essentially an administrative burden, as it does not in itself necessarily entail a change in fishing practices. Furthermore, the provision to declare a trip to be under monkfish DAS while at sea, depending on the catch of monkfish while fishing on a multispecies DAS, reinforces that vessels will not need to change their fishing practices, to the extent that monkfish is a component of the multispecies catch on vessels fishing in the NFMA.

As was noted in the biological impacts section, if Alternative 2 were adopted, and vessels would not be required to use a monkfish DAS when fishing in the NFMA, the trip limits necessary to keep landings below the target TAC are below the proposed incidental limits, essentially eliminating the directed fishery. The resulting economic impacts are shown with the results from the trip limit model for the various incidental limits and DAS/trip limit alternatives in Section 5.3.4.

5.3.3 NFMA Incidental Limit Alternatives

The proposed change in the NFMA incidental catch limit would impact vessels fishing in the NFMA and landing more than the proposed incidental catch. These vessels will still have some number of DAS that can be used to fish at more than the incidental limit and will only be constrained to the extent that they have to reduce their monkfish landings on days fished over the monkfish DAS limit. In FY 2005, there were 250 limited access monkfish vessels (including both vessels that held, and did not hold multispecies limited access permits) fishing in the NFMA and landing more than the current 400 pound incidental trip limit, and 277 landing more than the proposed 300 pound incidental trip limit. Table 28 shows the percentage of trips by permit type exceeding the current 400 pound and the proposed 300 pound incidental trip limit.

Permit Category	% of trips less than 400 lbs.	% of trips less than 300 lbs.
A	13.2%	5.3%
B	97.1%	92.8%
C	48.8%	42.2%
D	81.2%	75.8%
E	97.9%	96.0%
Total	82.4%	78.2%

Table 28 Percent of trips landing less than current and proposed incidental limit.

The economic impacts of the choice of the proposed action, NFMA Incidental Limit Alternative 1 (300 pounds), versus the current incidental limit (Alternative 2) are incorporated into the analysis of trip limits and DAS alternatives below.

5.3.4 Trip Limit and DAS Alternatives

As was previously noted, the trip limit and DAS alternatives would impact vessels fishing for monkfish in either area, to the extent that it impacts their normal fishing activity. As in previous annual adjustments, estimation of relative economic impacts was accomplished through the use of a trip limit model to estimate 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 2005 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.

Changes in trip limits and DAS allocations are amenable to analysis when moving from higher to lower limits. While FY 2006 trip limits are the same or higher than those proposed for FY 2007-2009, the 2006 fishing year is not yet complete. FY 2005 trip limits are also higher than the proposed limits, and vessels were permitted to fish 39.3 DAS in both management areas, which is greater than the proposed limits. Therefore, this data satisfies the requirements for this analysis and can be used to analyze the economic effects of the proposed changes. As has been the case in prior annual adjustments, 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. 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.

The relative change in net return to the vessel was estimated by calculating the average per-trip returns to the vessel owner using both the FY 2006 trip limits and the proposed FY 2007 - 2009 trip limits. These returns take into account operating costs, which were estimated using trip cost data collected on observer logs in FY 2005. Trips landing monkfish during FY 2005 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 FY 2005. 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.

Since a necessary assumption of the trip limit model is that fishing location decisions are unchanged under new rules, an analysis of the impacts of the proposed measures 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 FY 2006 baseline to each of the alternative combinations. In the absence of a TAC overage, the selected alternatives would remain in place until the end of the rebuilding program. Thus, there will be a cumulative effect of the measures over the entire three year period. However, the impacts may be mitigated by an expected increase in monkfish prices due to the overall reduction in monkfish landings. At this time, no model exists that can predict monkfish prices with a sufficient degree of accuracy, due to the nature of the monkfish market. There is a limited market for monkfish in the U.S., with the majority of monkfish landings being exported to Europe and Asia. The price of monkfish received in this country is dependent on the economic conditions in the countries to which monkfish is exported, as well as worldwide landings of monkfish.

5.3.4.1 Vessels Only Fishing in NFMA

Based on the trip limit model, the results of which appear in Table 29, the per trip average vessel return on monkfish trips would decline from 2.8 to 12 percent, depending on the incidental limit and DAS/trip limit alternative chosen. Average crew return would decline between 4.6 percent and 20.1 percent, with revenues from monkfish declining between 10.4 percent and 45.7 percent. For these vessels, the simulation indicates that the combination of the 400 pound incidental limit, no trip limit, and 21 DAS would have the smallest impact. The largest impact would be seen with the alternative not requiring monkfish DAS but with trip limits of 168 pounds for permit categories A and C and 152 pounds for permit categories B and D. Since these trip limits are less than either the current or proposed incidental trip limit, this alternative would effectively end the directed fishery.

Incidental Trip Limit	Trip Limit AC	Trip Limit BD	DAS	Average Change in Vessel Return	Average Change in Net Payment to Crew	Average Change in Monkfish Revenue
300	No Limit	No Limit	21	-4.4%	-7.4%	-16.6%
	1250	886	23	-4.8%	-8.1%	-18.2%
	1250	**470**	**31**	**-4.9%**	**-8.3%**	**-18.6%**
	869	338	40	-5.1%	-8.6%	-19.5%
	168	152	Not. Req.	-12.0%	-20.1%	-45.7%
400	No Limit	No Limit	21	-2.8%	-4.6%	-10.4%
	1250	683	23	-3.4%	-5.7%	-13.0%
	1250	435	31	-3.6%	-6.0%	-13.6%
	787	327	40	-4.1%	-6.9%	-15.6%
	168	152	Not. Req.	-12.0%	-20.1%	-45.7%

Table 29 Change from FY 2006 to Alternatives - Vessels Only Fishing in NFMA. Proposed action is bold.

5.3.4.2 Vessels Only Fishing in SFMA

Simulation results for vessels only fishing in the SFMA appear in Table 30. While these results indicate uniformly positive impacts due to the increase in TAC and resulting DAS, they are likely an understatement of the true impacts. Due to the difficulties associated with linking trip reports, permit information, and DAS usage tables, it was necessary to assume for the SFMA analyses that all vessels would be subject to the minimum incidental trip limit of 50 pounds/DAS up to 150 pounds total. While this would apply for some of the vessels in this analysis, others would be permitted to retain more depending on fishing location and gear used. Such vessels would experience larger gains. Of the alternatives, the results indicate that the alternative allowing 31 DAS to be used in the SFMA with trip limits of 475 pounds for permit categories A, C, and G and 375 pounds for permit categories B, D, and H would have the largest positive impact.

Incidental Trip Limit	Trip Limit ACG	Trip Limit BDH	DAS	Average Change in Vessel Return	Average Change in Net Payment to Crew	Average Change in Monkfish Revenue
50	**550**	**450**	**23**	**3.3%**	**4.3%**	**51.2%**
50	475	375	31	4.2%	5.5%	65.6%

Table 30 Change from FY 2006 to Alternatives - Vessels Only Fishing in SFMA. Proposed action is bold.

5.3.4.3 Vessels Fishing in Both NFMA and SFMA

Vessels fishing in both the NFMA and SFMA will be simultaneously affected by the incidental trip limit and DAS/trip limit alternative chosen for the NFMA and the DAS/trip limit alternative chosen for the SFMA. While these vessels have a demonstrated capability to shift between areas and may be more likely to change fishing locations than vessels that have historically fished solely in one area, the trip limit model does not incorporate this possibility. Rather, it is assumed than vessels continue fishing in the same locations they did previously and results are calculated for each possible combination of NFMA and SFMA alternatives. Overall, the ability of these vessels to fish in both areas mitigates the impacts from changes in regulations in either area, as

has been seen in past annual adjustments. Also, as was the case with vessels fishing only in the SFMA, it was necessary to assume that all vessels would be subject to the minimum incidental trip limit of 50 pounds/DAS up to 150 pounds total in the SFMA. Since some vessels would be permitted to retain more than this amount, the impacts on these vessels would be mitigated. The results are presented in Table 31. The specific combination of measures leading to the best outcome for this set of vessels is the combination of a 400 pound incidental limit, no trip limit for directed trips, and 21 DAS in the NFMA and 550 pound trip limit for categories A, C, and G vessels, 450 pound trip limit for categories B, D, and H, and 23 DAS in the SFMA. While this combination of measures does lead to a 3.6 percent reduction in monkfish revenues, the average changes in vessel revenue and crew payment show mild increases.

NFMA Alternatives				SFMA Alternatives				Average Change in Vessel Return	Average Change in Net Payment to Crew	Average Change in Monkfish Revenue
Incidental Trip Limit	Trip Limit AC	Trip Limit BD	DAS	Incidental Trip Limit	Trip Limit ACG	Trip Limit BDH	DAS			
300	No Limit	No Limit	21	50	550	450	23	0.0%	-0.2%	-9.6%
				50	475	375	31	0.0%	-0.3%	-10.1%
	1250	886	23	50	550	450	23	0.0%	-0.3%	-10.3%
				50	475	375	31	0.0%	-0.4%	-10.8%
	1250	**470**	**31**	**50**	**550**	**450**	**23**	**-0.2%**	**-0.5%**	**-12.6%**
				50	475	375	31	-0.2%	-0.6%	-13.1%
	869	338	40	50	550	450	23	-0.3%	-0.8%	-15.4%
				50	475	375	31	-0.3%	-0.8%	-15.8%
	168	152	Not. Req.	50	550	450	23	-1.0%	-1.7%	-26.0%
				50	475	375	31	-0.9%	-1.7%	-25.5%
400	No Limit	No Limit	21	50	550	450	23	0.4%	0.3%	-3.6%
				50	475	375	31	0.4%	0.2%	-3.9%
	1250	683	23	50	550	450	23	0.2%	0.1%	-5.8%
				50	475	375	31	0.3%	0.0%	-6.0%
	1250	435	31	50	550	450	23	0.1%	-0.1%	-8.2%
				50	475	375	31	0.1%	-0.2%	-8.5%
	787	327	40	50	550	450	23	-0.1%	-0.4%	-11.1%
				50	475	375	31	0.0%	-0.4%	-11.2%
	168	152	Not Req.	50	550	450	23	-0.7%	-1.3%	-21.4%
				50	475	375	31	-0.6%	-1.2%	-20.7%

Table 31 Change from FY 2006 to Alternatives - Vessels Fishing in NFMA and SFMA. Proposed action is bold.

5.3.5 Moratorium on Directed Fishing

Table 32 reports the results from the simulation of an end of the directed monkfish fishery relative to FY 2006 conditions. The original FMP called for ending the directed fishery in the fourth year of the rebuilding plan, a provision later replaced by Framework 2 that established the annual adjustment process. Due to the large increase in the monkfish stocks necessary in the final three years of the rebuilding plan, the Councils are considering closing the directed fishery at this time. This would have uniformly negative impacts on vessel return, crew payment, and revenue from monkfish for vessels participating in the monkfish fishery. However, as in the previous analyses of vessels fishing in the SFMA, it was necessary to assume that all vessels would be subject to the minimum incidental trip limit of 50 pounds/DAS up to 150 pounds total. Some

vessels would be permitted to retain more than this amount, and the impacts on these vessels would be smaller than those reported in Table 32. This provision was not adopted by the Councils, although it could be implemented in FY2009 on an area basis, if the FY2007 landings from that area exceed the TAC by more than 30%, see discussion below in Section 5.3.6.

NFMA Alternatives				SFMA Alternatives				Average Change in Vessel Return	Average Change in Net Payment to Crew	Average Change in Monkfish Revenue
Incidental Trip Limit	Trip Limit AC	Trip Limit BD	DAS	Incidental Trip Limit	Trip Limit ACG	Trip Limit BDH	DAS			
Vessels Fishing Only in NFMA										
300	0	0	0					-6.9%	-11.9%	-26.7%
400	0	0	0					-4.8%	-8.2%	-18.6%
Vessels Fishing in SFMA Only										
				50	0	0	0	-3.4%	-4.5%	-52.6%
Vessels Fishing in NFMA and SFMA										
300	0	0	0	50	0	0	0	-3.1%	-3.5%	-19.1%
400	0	0	0	50	0	0	0	-2.7%	-2.8%	-10.8%

Table 32 Change from FY 2006 to No Directed Fishing.

5.3.6 TAC Overage Backstop Alternative

The proposed TAC overage backstop Alternative 1 would potentially affect all vessels landing more than the incidental catch limit in either the NFMA or SFMA, since it could lead to a closure of the directed fishery in either or both areas for FY2009. The analysis was again conducted for vessels fishing only in the NFMA, vessels fishing only in the SFMA, and vessels fishing in both the NFMA and SFMA. However, the results of the simulations are presented as percent changes from the different alternatives that may be adopted to the no directed fishery alternative. Further, since NFMA incidental limit could be reduced from 400 pounds to 300 pounds, the analysis is conducted for both possibilities. That is, the results from the simulations with a 300 pound incidental limit are compared to the no directed fishery alternative with a 300 pound incidental limit. Likewise, the results from the simulations with a 400 pound incidental limit are compared to the no directed fishery alternative with a 400 pound incidental limit. As was the case with the other analyses of the SFMA, the minimum trip limit of 50 pounds/DAS up to 150 pounds per trip was used, though some vessels would be permitted to retain more than this amount.

Under Alternative 2, there would not be an adjustment to the management measures in the event of a TAC overage unless implemented through a framework adjustment or plan amendment. Thus there would be no additional economic impact on vessels for FY 2009.

5.3.6.1 Vessels Only Fishing in NFMA

Except for the alternatives where the directed trip limit is less than the current or proposed incidental limit, the impact of a change from any of the possible combinations of alternatives to the no directed fishing alternative with either a 300 or 400 pound NFMA incidental trip limit would be decreases in average vessel return, average crew payment, and monkfish revenue, as shown in Table 33. The decreases in average vessel return range from 0.8 to 2.7 percent while

decreases in crew return range from 1.4 to 4.9 percent. Declines in revenue from monkfish range from 3.5 to 12.1 percent.

Incidental Trip Limit	Trip Limit AC	Trip Limit BD	DAS	Average Change in Vessel Return	Average Change in Net Payment to Crew	Average Change in Monkfish Revenue
300	No Limit	No Limit	21	-2.7%	-4.9%	-12.1%
	1250	886	23	-2.3%	-4.2%	-10.4%
	1250	**470**	**31**	**-2.2%**	**-4.0%**	**-9.9%**
	869	338	40	-2.0%	-3.6%	-9.0%
	168	152	Not. Req.	5.8%	10.3%	34.9%
400	No Limit	No Limit	21	-2.1%	-3.9%	-9.1%
	1250	683	23	-1.5%	-2.7%	-6.4%
	1250	435	31	-1.3%	-2.4%	-5.8%
	787	327	40	-0.8%	-1.4%	-3.5%
	168	152	Not. Req.	8.2%	14.9%	49.9%

Table 33 Change from Alternatives to No Directed Fishing (300 pound NFMA Incidental Limit) for Vessels Only Fishing in NFMA. Proposed action is bold.

5.3.6.2 Vessels Only Fishing in SFMA

Vessels fishing solely in the SFMA would experience decreases in average vessel return, crew return, and revenue from monkfish in the event of a closure in the directed fishery. While the assumption about the incidental limit makes this a worst case scenario, decreases in vessel return would range from 6.5 to 7.3 percent, decreases in crew return would range from 8.5 to 9.5 percent, and monkfish revenues would decline 68.6 or 71.4 percent. These results appear in Table 34.

Incidental Trip Limit	Trip Limit ACG	Trip Limit BDH	DAS	Average Change in Vessel Return	Average Change in Net Payment to Crew	Average Change in Monkfish Revenue
50	**550**	**450**	**23**	**-6.5%**	**-8.5%**	**-68.6%**
50	475	375	31	-7.3%	-9.5%	-71.4%

Table 34 Change from Alternatives to No Directed Fishing for Vessels Only Fishing in SFMA. Proposed action is bold.

5.3.6.3 Vessels Fishing in Both NFMA and SFMA

As was the case in the earlier analysis of vessels fishing in both areas, the ability to fish in both areas tends to mitigate the impacts of changes in either area. The results, which appear in Table 35, indicate that in sets of alternatives where the directed trip limits are greater than the current or proposed incidental limits there would be decreases in average vessel ranging from 2.6 to 3.1 percent, decreases in average crew payment ranging from 2.6 percent to 3.2 percent, and decreases in revenue from monkfish ranging from 2.6 percent to 10.5 percent, depending on the alternatives chosen now. These results represent the worst case scenario of both the NFMA and SFMA directed fisheries closing. Further, they incorporate the previous assumption that all vessels fishing in the SFMA would be limited to 50 pounds/DAS up to a total of 150 pounds. In reality, the backstop provision would allow for a closure of the directed fishery in only the NFMA, only the SFMA, or both areas. Also, some vessels fishing in the SFMA would be

permitted to retain more than the assumed incidental limit, so the impacts would be less for these vessels.

NFMA Alternatives				SFMA Alternatives				Average Change in Vessel Return	Average Change in Net Payment to Crew	Average Change in Monkfish Revenue
Incidental Trip Limit	Trip Limit AC	Trip Limit BD	DAS	Incidental Trip Limit	Trip Limit ACG	Trip Limit BDH	DAS			
300	No Limit	No Limit	21	50	550	450	23	-3.1%	-3.2%	-10.5%
				50	475	375	31	-3.1%	-3.2%	-10.0%
	1250	886	23	50	550	450	23	-3.1%	-3.2%	-9.8%
				50	475	375	31	-3.1%	-3.1%	-9.3%
	1250	**470**	**31**	**50**	**550**	**450**	**23**	**-2.9%**	**-3.0%**	**-7.4%**
				50	475	375	31	-3.0%	-2.9%	-6.9%
	869	338	40	50	550	450	23	-2.8%	-2.7%	-4.4%
				50	475	375	31	-2.8%	-2.7%	-4.0%
	168	152	Not. Req.	50	550	450	23	-2.2%	-1.8%	9.4%
				50	475	375	31	-2.2%	-1.9%	8.6%
400	No Limit	No Limit	21	50	550	450	23	-3.0%	-3.1%	-7.5%
				50	475	375	31	-3.0%	-3.0%	-7.2%
	1250	683	23	50	550	450	23	-2.9%	-2.9%	-5.4%
				50	475	375	31	-2.9%	-2.8%	-5.1%
	1250	435	31	50	550	450	23	-2.7%	-2.7%	-2.8%
				50	475	375	31	-2.8%	-2.6%	-2.6%
	787	327	40	50	550	450	23	-2.6%	-2.4%	0.3%
				50	475	375	31	-2.6%	-2.4%	0.4%
	168	152	Not Req.	50	550	450	23	-2.0%	-1.6%	13.4%
				50	475	375	31	-2.1%	-1.6%	12.4%

Table 35 Change from Alternatives to No Directed Fishing (300 pound NFMA Incidental Limit) for Vessels Fishing in NFMA and SFMA. Proposed action is bold.

5.3.7 DAS Carryover Alternatives

The alternatives concerning carryover DAS would affect all vessels with monkfish DAS they would like to carry over to the next fishing year. Since the average number of monkfish DAS carried over from FY 2005 to FY 2006 was roughly 8.5, Alternative 1, which is not being recommended, would represent a decrease in fishing opportunity for some vessels, to the extent that the DAS would have been used in the following fishing year. Alternative 3, the no action and proposed alternative, would allow vessels to continue to carry over 10 DAS, thereby providing vessels with more flexibility in scheduling.

5.3.8 Permit Category H (NC/VA) Fishery boundary

Amendment 2 established a new fishery for some vessels that did not qualify for a limited access permit in the initial FMP. Seven vessels qualified for this fishery and six are actively fishing. These vessels have been constrained by area closures to protect sea turtles, so that the area available to them for fishing is approximately 20 miles wide. This, coupled with the limited season when monkfish are available in the area, led the industry to request that the boundary for the fishery be moved northward 20 miles from 38°20'N to 38°40'N. The proposed action, Alternative 1, would increase the fishing opportunities available to the affected vessels. Under Alternative 2, these vessels would have continued to face their current limitations on fishing.

5.3.9 Extension of measures beyond FY2009

The two alternatives, including no action, describe the measures that would be in place beyond the final three years of the rebuilding program, if the Councils take no action to implement a revised management program. Under Alternative 2, the no action alternative, whatever measures are in effect in 2009 would remain in place, even if the directed fishery is shut down under the TAC Overage Backstop provision (if adopted). Under Alternative 1, the proposed action, if the directed fishery is shut down under the TAC Overage Backstop provision, and the Councils take no action to revise the management program for FY 2010 and beyond, then the measures in place in FY2008 would be in effect. The economic impact of these two options cannot be quantified at this time, but qualitatively, the closure of the directed fishery continuing into 2010 and beyond (if that occurs) would likely have a greater negative impact on vessels and communities dependent on monkfish than allowing a directed fishery to occur due to the lost revenues from the relatively high value monkfish fishery, to the extent those lost revenues are not made up for by any increased revenues from other fisheries as vessels seek to compensate for the closure.

5.3.10 Scallop Closed Area Access Program Monkfish Incidental Limit

Under the no action alternative (Alternative 2), scallop vessels fishing in the Closed Area Access programs have a monkfish incidental limit applicable to vessels fishing with a dredge and not on a scallop DAS, or 50 lbs. per day to a maximum of 150 lbs. tail weight. Under Alternative 1, the proposed action, the incidental limit applicable to those vessels would be the same as applies to scallop vessels fishing on a scallop DAS, or 300 lbs. tail wt. per DAS, except that the incidental limit will be based only on the time that the vessel is in the closed area, and not including steaming time. Alternative 1 will have a slightly positive economic effect compared to the no action alternative, because it will enable scallop vessels to convert discards to landings and realize the revenue from that catch. The magnitude of this effect, however, is not expected to be significant relative to the value of the scallop landings on those trips. The Councils do not expect that Alternative 1 presents any new incentive for scallop vessels to target monkfish under the increased incidental limit, given the relative value of the scallop catch to the difference in allowable monkfish landings under the two alternatives.

5.4 Social Impact Assessment for Measures under Consideration

The need to assess social impacts emanating from federally mandated fishing regulations stems from National Environmental Protection Agency (NEPA) and Sustainable Fisheries Act (SFA) mandate that the social impacts of management measures be evaluated. NEPA requires the evaluation of social and economic impacts in addition to the consideration of environmental impacts. 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 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 then 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).

Changes in management measures can affect the size, demographic characteristics, and social structure of communities. More specifically, port infrastructure may be affected by the gradual loss of shore-based services essential to a strong working waterfront. Impacts that decrease occupational opportunities in turn can affect fishing families and community infrastructure.

5.4.1 Methods

Qualitative and, where available, quantitative methods have been used to assess the relative impact of the proposed management measures outlined in this framework. Vessel trip records and dealer weighout data are used to develop baseline projections of FY 2006 revenues based on FY 2005 trips and FY 2005 prices but using FY 2006 regulations. Potential social impacts emanating from the proposed measures impacts are estimated as a percentage increase or

decrease in monkfish revenue from current conditions. While some management measures, more than others, tend to engender certain types of social impacts it is not possible to predict with accuracy precise social impacts particularly when there are multiple overlaying management measures such as in this proposed action. Therefore the discussion of social impacts for alternatives will indicate the likely directional impacts of specific measures e.g., positive, negative, or neutral.

An important note is that the following discussion focuses principally on the short-term effect of specific alternatives which, in the case of increased restrictions, may be negative compared to taking no action. On the other hand, where the no-action alternative results in a continuation of the decline in the monkfish resource, or prevents rebuilding to a higher level of sustainable catch over the long term, those short-term impacts may be outweighed by the long-term positive impacts of rebuilding the resource on which the fishery is based. This trade-off is difficult, if not impossible to quantify, however, given that long-term optimum yield, or maximum sustainable yield is unknown. Qualitatively, the stability and higher level of landings that is expected once the stocks are rebuilt will likely be positive for the individuals and communities affected by the monkfish FMP.

5.4.2 Discussion of Social Impacts by Alternative

Should the management measures proposed in this framework be adopted, port level impacts can generally be anticipated for vessels fishing exclusively in either the SFMA or the NFMA or for vessels fishing in both areas. While the extent of impact of management measures is dependent on the relative involvement of communities in monkfishing, social impacts, either positive or negative, can be buffered by diversification of area involvement in monkfishing.

A comparison of port revenue by vessel involvement in management areas (Table 36 and Table 37) shows that port communities with monkfish vessels active in both areas tend to yield higher monkfish revenue than communities with vessels fishing for monkfish exclusively in one area. The shaded areas in both tables highlight ports and vessel area options by port for revenue greater than $100,000. The majority of such ports (Table 36) have vessels involved in more than a single area option with the highest producing ports involved in all three area options. This is in contrast to ports with vessels engaged in a single area option (Table 37) where total port monkfish revenue tends to be below $100,000. Because of the potential differential impacts between the NFMA i.e., negative and SFMA i.e., positive, port level social impacts would be buffered or somewhat neutralized in ports with significant vessel involvement in both areas

State	Port	Vessel N	Port Revenue for Current Conditions by Area Involvement	Area	Port Monkfish Revenue-Current Conditions
MA	Boston	25	2,005,142	B	4,704,489
		26	2,536,130	N	
		9	163,217	S	
	Gloucester	21	1,283,415	B	2,145,446
		32	862,030	N	
	New Bedford	93	2,026,053	B	2,280,315
		7	34,917	N	
		28	219,345	S	
NH	Portsmouth	3	248,645	B	622,348
		9	373,702	N	
NJ	Barnegat Light	4	13,978	B	851,066
		37	837,089	S	
	Cape May	8	45,479	B	82,260
		14	36,781	S	
RI	Newport	6	253,299	B	468,702
		7	215,403	S	
	Point Judith	22	482,586	B	655,385
		12	172,799	S	
		363	11,810,011		11,810,011

Table 36 Ports with Vessels Fishing Exclusively in Two or More Area Options - NFMA, SFMA and/or Both Areas

State	Port	Vessel N	Port Monkfish Revenue-Current Conditions	Area
VA	Newport News	11	30,779	
RI	Tiverton	5	184,097	
PA	Philadelphia	3	3,709	
	Shinnecock	6	106,468	
	New York	4	69,798	
NY	Montauk	11	263,379	
	Waretown	5	160,502	
	Point Pleasant	4	62,313	
NJ	Belford	3	34,124	
NC	Wanchese	10	79,529	
MA	Fairhaven	6	134,000	
	Less Than 3 Vessels	49	938,566	S
NH	Rye	3	83,584	
	South Bristol	6	333,530	
	Portland	17	1,487,919	
	Port Clyde	7	301,250	
ME	Cundys Harbor	3	632,591	
	Scituate	3	87,642	
	Provincetown	3	13,593	
MA	Newburyport	3	14,671	
	Less Than 3 Vessels	30	1,751,199	N
RI	Wakefield	3	71,114	
MA	Plymouth	3	150,120	
MA	Chatham	11	694,253	
CT	New London	5	26,854	
	Less Than 3 Vessels	47	1,766,540	B
		261	9,482,125	

Table 37 Ports with Vessels Fishing Exclusively in One Area Option -NFMA, SFMA, or Both Areas

5.4.3 TAC Alternatives

5.4.3.1 TAC Alternative 1 (proposed action)

A reduction in fishing effort creates the need to modify fishing practices in an attempt to maintain daily life on community, household, and personal levels. Current methods to limit the total amount of fish harvested in the monkfish fishery result in annual adjustments to TAC that are set only a few months before the beginning of the fishing year making planning beyond the short-term difficult. The proposed action would set TAC for three years improving the ability for

long-term strategic planning. This alternative would set target TACs of 5,000 mt and 5,100 mt for the NFMA and SFMA, respectively and would remain in effect for 3 years. This would reduce the uncertainty inherent in the no action alternative and make long term business and personal planning more feasible.

5.4.3.2 TAC Alternative 3 - No Action

The current method for calculating target TACs on an annual basis would remain in effect making long term planning difficult. Such methods are likely to perpetuate uncertainty and disruption to daily life and business planning and thus have negative social impacts.

5.4.4 DAS Alternatives

5.4.4.1 NFMA DAS Alternatives

The social impacts of reductions in DAS available to a vessel for monkfishing vary, depending on the amount of allocated DAS that vessels use and the availability of other opportunities. The social impacts of DAS reductions tend to be more far-reaching and long-term in nature than other management measures like trip limits. Most impacts result from direct reductions in monkfishing opportunities and revenues for vessels that are most active in the fishery. Reductions in opportunities also relate to reductions in vessels' flexibility and can have direct impacts on fishing activity within a port, thereby impacting the shore side facilities that are dependent on the affected vessels.

DAS restrictions can lead to increased safety risks driven by the need to maintain profitability in an environment of increasingly restrictive management measures. Vessel owners and captains may fish more intensively, carry weight greater than the safety limit for their vessel, and be more likely to fish in poor weather conditions in an effort to cover costs and maintain profitability with fewer fishing opportunities.

While direct control on monkfishing effort in the SFMA is already in place, the management measures proposed will impose the greatest restrictions on vessels fishing in the NFMA where monkfishing effort is currently indirectly controlled through the allocation of multispecies DAS. Given continually more restrictive measures in the multispecies fishery, effort has already shifted from groundfish to monkfish harvesting, and monkfish is an increasingly important component of the overall revenues of vessels fishing in the NFMA. Any restriction on monkfishing effort, therefore, is likely to have some negative social impact for those fishing exclusively in the NFMA during the rebuilding period.

5.4.4.2 NFMA DAS Alternative 1 (proposed action)

This alternative requires limited access vessels in the NFMA anticipating that monkfish landings will exceed incidental limits to be required to call in either a monkfish DAS or monkfish/multispecies DAS. While the SFMA has already adopted this measure, this represents a significant change in the NFMA where monkfish harvesting has been indirectly controlled using multispecies DAS.

The provision that would enable vessels to declare a monkfish DAS by VMS prior to returning to port will provide flexibility in the decision to call in a monkfish DAS, depending on actual catch,

rather than anticipated catch. This provision will also promote safety by leaving open the option to return to port regardless of whether a vessel has caught its trip limit. If a vessel is required to call in a monkfish DAS prior to leaving port, rather than having the option to call in via the VMS while at sea, then it may be compelled to continue fishing in unfavorable conditions rather than lose the revenues from that monkfish DAS. Nearly all of the monkfish vessels fishing in the NFMA are already required to have VMS installed under the Multispecies FMP regulations. This alternative will also contribute to reducing regulatory discards when vessels exceed the incidental limit and have the option to call in a monkfish DAS while at sea.

5.4.4.3 NMFA DAS Alternative 2 – no action

A monkfish limited access vessel fishing on a multispecies DAS will not be required to call in a monkfish DAS. This would allow for the continuation of current harvesting practices therefore social impacts would be unlikely.

5.4.5 NFMA Incidental Limit Alternatives

5.4.5.1 NFMA Incidental limit Alternative 1 (proposed action)

Incidental catch limits affect those vessels not on a monkfish DAS. Incidental catch limits set too low can result in discarding of excess fish considered socially unacceptable amongst fishermen. Under this alternative, permit Category E vessels on a multispecies DAS, and limited access vessels fishing on a multispecies DAS, but not a monkfish DAS would be limited to 300 lbs. (tail wt.) per DAS or 25% of the total weight of fish on board, whichever is less. This alternative would affect those vessels currently landing in excess of the proposed 300 lb. limit. Although this alternative would represent a 100 lb. reduction in the incidental catch limit social impacts are likely to be relatively neutral for the majority of potentially affected vessels for which the current limit has not been exceeded.

5.4.5.2 NFMA Incidental limit Alternative 2 – no action

This alternative affects the same vessels as in Alternative 1, with a higher incidental catch limit of 400 lbs. This incidental catch limit has been in place since the adoption of Framework 2 regulations. Social impacts are likely to be neutral should this limit remain in effect.

5.4.6 SFMA Trip Limit/DAS Alternatives

5.4.6.1 SFMA Trip Limit/DAS Alternatives 1 (proposed action)

5.4.6.1.1 Under TAC Alternative 1

Trip limits specify the amount of fish that can be harvested on a directed monkfishing trip. Changes in trip limits can affect the structure of the fishery. If the trip limit is set very low, the inshore sector of the fleet can sometimes manage to fish economically, while the offshore sector of the fleet cannot cover trip expenses. This can change the structure of financial rewards generated in the fishery and can ultimately change the short-term and long-term structure of the fishery itself. Somewhat mitigating this effect on offshore vessels is the Offshore SFMA Fishery Program adopted in Amendment 2. This program allows enrolled vessels to fish under a higher trip limit (1,600 lbs. tail wt. /DAS) in exchange for a pro-rated allocation of DAS. Further, trip

limits and incidental catch limits set too low can result in discarding of excess fish considered socially unacceptable amongst fishermen.

Vessels would be allowed up to 23 monkfish DAS under this alternative. A comparison between the proposed measures and current conditions of 12 DAS and 550 lb. trip limits for permit categories ACG and 450 lbs for permit categories BDH is found in Table 38. While the proposed trip limits stay the same, this alternative approximately doubles the allowable monkfish DAS from the current conditions of 12 to 23 DAS resulting in potential increased revenues. It is estimated that port level revenues for vessels fishing exclusively in the SFMA may increase from between 32% to 72% for most ports under the proposed action. The combined increased in DAS and stability of a TAC set for 3 years would have positive social impacts for communities.

			Current Conditions	Alternative 1		Alternative 2	
SFMA Incidental Limit			50	**50**		50	
SFMA ACG Trip Limit			550	**550**		475	
SFMA BDH Trip Limit			450	**450**		375	
SFMA DAS			12	**23**		31	
State	**Port**	**N**	**Option 0**	**Option 1**	**%**	**Option 2**	**%**
NJ	Barnegat Light	37	837,089	1,298,273	55%	1,393,002	66%
NY	Montauk	11	263,379	351,730	34%	369,126	40%
MA	New Bedford	28	219,345	309,129	41%	358,235	63%
RI	Newport	7	215,403	344,216	60%	381,946	77%
RI	Tiverton	5	184,097	314,598	71%	360,554	96%
RI	Point Judith	12	172,799	237,227	37%	259,881	50%
MA	Boston	9	163,217	256,516	57%	273,820	68%
NJ	Waretown	5	160,502	236,489	47%	251,688	57%
MA	Fairhaven	6	134,000	230,266	72%	257,715	92%
NY	Shinnecock	6	106,468	159,731	50%	176,313	66%
NC	Wanchese	10	79,529	122,735	54%	136,130	71%
NY	New York	4	69,798	97,892	40%	112,928	62%
NJ	Point Pleasant	4	62,313	82,241	32%	87,473	40%
NJ	Cape May	14	36,781	38,078	4%	49,790	35%
NJ	Belford	3	34,124	58,036	70%	62,535	83%
VA	Newport News	11	30,779	32,145	4%	35,164	14%
PA	Philadelphia	3	3,709	5,186	40%	5,186	40%
	Less Than 3 Vessels	49	938,566	1,436,275	53%	1,573,657	68%
		224					

Table 38 SFMA Trip Limits and DAS Alternatives 1 and 2. Proposed action is bold.

5.4.6.1.2 Under TAC Alternative 3 – No Action

The current method for calculating target TACs established in Framework 2 would remain in effect. DAS allocations would be adjusted annually and would result in DAS allocations in the SFMA of between 16 and 34 monkfish DAS. The current TAC is calculated annually making long term planning difficult resulting in negative social impacts.

5.4.6.2 SFMA trip limits/DAS Alternative 2

5.4.6.2.1 Under TAC Alternative 1

Vessels would be allowed up to 31 monkfish DAS under this alternative. A comparison between current conditions and those proposed of 31 DAS and 475 lbs. for permit categories ACG and 375 lbs. for permit categories BDH is found in Table 38. While proposed trip limits are reduced, this alternative more than doubles the allowable monkfish DAS from the current conditions of 12 to 31 DAS offsetting lower trip limits resulting in potential increased revenues for communities. Estimates for this alternative show that revenue for communities in the SFMA would likely increase if this alternative is adopted making long-term planning possible and resulting in positive social impacts.

5.4.6.2.2 Under TAC Alternative 3 – no action

The current method for calculating target TACs established in Framework 2 would remain in effect. DAS allocations would be adjusted annually and would result in DAS allocations in the SFMA of between 20 and 40 monkfish DAS. Social impacts are likely as the annual adjustment of TAC's will make long term planning difficult, but may be less in the short term if the TAC results in more DAS available in any year.

5.4.7 NFMA Trip limits and DAS Alternatives

5.4.7.1 NFMA trip limits/DAS Alternatives under TAC Alternative 1

5.4.7.1.1 Under NFMA Incidental Limit Alternative 1 – 300 lbs. (proposed action)

Options are compared in Table 39 to current conditions of a 400 lb. incidental trip limit with no restrictions for permit categories and no DAS requirement. A comparison of options between Incidental Trip Limits Alternatives 1 and 2 and current conditions projects more potentially affected communities under the 300 lb. incidental trip limit alternative.

NFMA Incidental Trip Limit			400	**300**					400				
NFMA AC Trip Limit			No Limit	1250	**1250**	869	No Limit	168	1250	1250	869	No Limit	168
NFMA BD Trip Limit			No Limit	886	**470**	338	No Limit	152	886	470	338	No Limit	152
NFMA DAS			Not. Req.	23	**31**	40	21	Not. Req.	23	31	40	21	Not. Req.
State	**Port**	**N**	**Current Condition**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**
MA	Boston	26	2,536,130	-24%	**-22%**	-21%	-24%	-50%	-15%	-14%	-14%	-15%	-50%
ME	Portland	17	1,487,919	-16%	**-16%**	-16%	-16%	-40%	-10%	-10%	-11%	-9%	-40%
MA	Gloucester	32	862,030	-9%	**-10%**	-15%	-6%	-46%	-9%	-10%	-16%	-3%	-46%
ME	Cundys Harbor	3	632,591	-20%	**-20%**	-20%	-20%	-55%	-13%	-13%	-14%	-11%	-55%
NH	Portsmouth	9	373,702	-13%	**-20%**	-25%	-11%	-47%	-12%	-19%	-24%	-7%	-47%
ME	South Bristol	6	333,530	-4%	**-3%**	-5%	-4%	-26%	-1%	-1%	-3%	-1%	-26%
ME	Port Clyde	7	301,250	-1%	**-1%**	0%	-1%	-9%	0%	0%	0%	0%	-9%
MA	Scituate	3	87,642	-5%	**-16%**	-24%	-2%	-47%	-9%	-18%	-24%	-1%	-47%
NH	Rye	3	83,584	0%	**0%**	0%	-1%	-14%	0%	0%	-1%	0%	-14%
MA	New Bedford	7	34,917	0%	**0%**	0%	0%	-2%	0%	0%	0%	0%	-2%
MA	Newburyport	3	14,671	0%	**0%**	0%	0%	0%	0%	0%	0%	0%	0%
MA	Provincetown	3	13,593	0%	**-3%**	-6%	0%	-9%	0%	-4%	-6%	0%	-9%
	Less Than 3 Vessels	30	1,751,199	-24%	**-27%**	-29%	-20%	-53%	-20%	-23%	-26%	-14%	-53%

Table 39 NFMA Trip Limit and DAS Alternatives. Proposed action is bold.

Option 1 – Under this option vessels would have a 300 lbs. incidental trip limit, 1,250 lbs. trip limit for permit categories AC and 886 lbs. trip limit for categories BD, and 23 DAS. Four communities with a projected decrease in revenues of greater than 10% include: Boston, MA, Portland, ME, Cundys Harbor, ME, and Portsmouth, NH. A comparison between this option and current conditions would result in negative social impacts in the NFMA.

Option 2 (proposed action) – Under this option vessels would have a 300 lbs. incidental trip limit, 1,250 lbs. trip limit for permit categories AC and 470 lbs. trip limit for categories BD, and

31 DAS. Six communities with a projected decrease in revenues of greater than 10% include Boston, MA, Portland, ME, Cundys Harbor, ME, Portsmouth, NH, Scituate, MA, and Gloucester, MA. A comparison between this option and current conditions would result in negative social impacts in the NFMA.

Option 3 – Under this option vessels would have a 300 lbs. incidental trip limit, 869 lbs. trip limit for permit categories AC and 338 lbs. trip limit for categories BD, and 40 DAS. Six communities with a projected decrease in revenues of greater than 10% include: Portsmouth, NH, Scituate, MA, Boston, MA, Cundys Harbor, ME, Portland, ME, and Gloucester, MA. A comparison between this option and current conditions would result in negative social impacts in the NFMA.

Option 4 – This option would not apply a monkfish trip limit when on a monkfish DAS. Under this option vessels would have a 300 lbs. incidental trip limit, no trip limits for permit categories AC and categories BD, and 21 DAS. Six communities with a projected decrease in revenues of greater than 10% include: Boston, MA, Cundys Harbor, ME, Portland, ME, and Portsmouth, NH. A comparison between this option and current conditions would result in negative social impacts in the NFMA.

Option 5 – Under this option vessels would have a 300 lbs. incidental trip limit, 168 lbs. trip limit for permit categories AC and 152 lbs. trip limit for categories BD, and no DAS requirement. Eight communities with a projected decrease in revenues of greater than 10% include: Cundys Harbor, ME, Boston, MA, Portsmouth, NH, Scituate, MA, Gloucester, MA, Portland, ME, and Rye, NH. A comparison between this option and current conditions would result in negative social impacts in the NFMA.

5.4.7.1.2 Under NFMA Incidental Limit Alternative 1 – 400 lbs.

Options are compared in Table 39 to current conditions of a 400 lb. incidental trip limit with no restrictions for permit categories and no DAS requirement. Compared to a 300 lb. incidental trip limit there are fewer potential affected communities than with the 400 lb. incidental trip limit. Negative social impacts are likely in affected communities.

Option 1 – Under this option vessels would have a 400 lbs. incidental trip limit, 1,250 lbs. trip limit for permit categories AC and 886 lbs. trip limit for categories BD, and 23 DAS. Four communities with a projected decrease in revenues of greater than 10% include: Boston, MA, Cundys Harbor, ME, and Portland, ME, and Portsmouth, NH. A comparison between this option and current conditions would result in negative social impacts in the NFMA.

Option 2 – Under this option vessels would have a 400 lbs. incidental trip limit, 1,250 lbs. trip limit for permit categories AC and 470 lbs. trip limit for categories BD, and 31 DAS. Six communities with a projected decrease in revenues of greater than 10% include: Portland, ME, Cundys Harbor, ME, Gloucester, MA, Boston, MA, Scituate, MA, and Portsmouth, NH. A comparison between this option and current conditions would result in negative social impacts in the NFMA.

Option 3 – Under this option vessels would have a 400 lbs. incidental trip limit, 869 lbs. trip limit for permit categories AC and 338 lbs. trip limit for categories BD, and 40 DAS. Six communities with a projected decrease in revenues of greater than 10% include: Scituate, MA, Portsmouth, NH, Boston, MA, Gloucester, MA, Cundys Harbor, ME, and Portland, ME. A comparison between this option and current conditions would result in negative social impacts in the NFMA.

Option 4 –Under this option vessels would have a 400 lbs. incidental trip limit, no trip limits for permit categories AC and categories BD, and 21 DAS. Six communities with a projected decrease in revenues of greater than 10% include: Boston, MA, and Cundys Harbor, ME. A comparison between this option and current conditions would result in negative social impacts in the NFMA.

Option 5 – Under this option vessels would have a 400 lbs. incidental trip limit, 168 lbs. trip limit for permit categories AC and 152 lbs. trip limit for categories BD, and no DAS requirement. Eight communities with a projected decrease in revenues of greater than 10% include: Cundys Harbor, ME, Boston, MA, Portsmouth, NH, Scituate, MA, Gloucester, MA, Portland, ME, South Bristol, ME, and Rye, NH. A comparison between this option and current conditions would result in negative social impacts in the NFMA.

5.4.7.2 NFMA and SFMA combined trip limits/DAS Alternatives

Communities with vessels fishing in both the NFMA and SFMA will be affected by the alternatives selected for both management areas. These vessels have the ability to shift between management areas mitigating both positive and negative social impacts of changes in regulations. The most advantageous alternative combinations are found in Table 41, indicating that the 400 lbs. incidental catch limit alternative would result in social impacts that are less substantial than the 300 lbs. incidental limit alternative for vessels that fish in both management areas.

NFMA Incidental Trip Limit			400	300									
NFMA AC Trip Limit			No Limit	No Limit		1250		**1250**		869		168	
NFMA BD Trip Limit			No Limit	No Limit		886		**470**		338		152	
NFMA DAS			No Limit	21		23		**31**		40		Not. Req.	
SFMA Incidental Trip Limit			50	50	50	50	50	**50**	50	50	50	50	50
SFMA ACG Trip Limit			550	550	475	550	475	**550**	475	550	475	550	475
SFMA BDH Trip Limit			450	450	375	450	375	**450**	375	450	375	450	375
SFMA DAS			12	23	31	23	31	**23**	31	23	31	23	31
State	**Port**	**N**	**Option 0**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**
MA	New Bedford	93	2,026,053	-9%	-9%	-8%	-9%	**-10%**	-10%	-11%	-11%	-15%	-15%
MA	Boston	25	2,005,142	-14%	-15%	-15%	-15%	**-15%**	-16%	-17%	-18%	-27%	-27%
MA	Gloucester	21	1,283,415	-6%	-6%	-7%	-7%	**-10%**	-10%	-14%	-14%	-27%	-27%
MA	Chatham	11	694,253	-5%	-7%	-8%	-11%	**-14%**	-16%	-20%	-20%	-35%	-32%
RI	Point Judith	22	482,586	-12%	-12%	-11%	-11%	**-6%**	-6%	-7%	-7%	-17%	-17%
RI	Newport	6	253,299	-16%	-16%	-6%	-6%	**-6%**	-6%	-10%	-10%	-18%	-18%
NH	Portsmouth	3	248,645	-17%	-17%	-18%	-18%	**-29%**	-29%	-36%	-36%	-52%	-51%
MA	Plymouth	3	150,120	-13%	-13%	-10%	-10%	**-2%**	-2%	-5%	-5%	-55%	-55%
RI	Wakefield	3	71,114	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	0%
NJ	Cape May	8	45,479	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	0%
CT	New London	5	26,854	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	0%
NJ	Barnegat Light	4	13,978	0%	-6%	0%	-6%	**0%**	-6%	0%	-6%	0%	-6%
	Less Than 3 Vessels	47	1,766,540	-7%	-8%	-12%	-12%	**-17%**	-17%	-20%	-20%	-33%	-33%

Table 40 Combined SFMA and NFMA Trip Limit and DAS Alternatives (300 lbs.). Proposed action is bold.

NFMA Incidental Trip Limit			400	400									
NFMA AC Trip Limit			No Limit	No Limit		1250		1250		787		168	
NFMA BD Trip Limit			No Limit	No Limit		683		435		327		152	
NFMA DAS			No Limit	21		23		31		40		Not Req.	
SFMA Incidental Trip Limit			50	50	50	50	50	50	50	50	50	50	50
SFMA ACG Trip Limit			550	550	475	550	475	550	475	550	475	550	475
SFMA BDH Trip Limit			450	450	375	450	375	450	375	450	375	450	375
SFMA DAS			12	23	31	23	31	23	31	23	31	23	31
State	**Port**	**N**	**Option 0**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**
MA	New Bedford	93	2,026,053	-3%	-4%	-4%	-4%	-5%	-6%	-6%	-7%	-10%	-10%
MA	Boston	25	2,005,142	-4%	-4%	-5%	-5%	-6%	-7%	-8%	-9%	-18%	-17%
MA	Gloucester	21	1,283,415	-1%	-1%	-2%	-2%	-7%	-7%	-11%	-11%	-23%	-23%
MA	Chatham	11	694,253	-2%	-3%	-7%	-8%	-13%	-13%	-17%	-16%	-32%	-28%
RI	Point Judith	22	482,586	-7%	-7%	-6%	-7%	-3%	-3%	-5%	-5%	-15%	-15%
RI	Newport	6	253,299	-10%	-10%	-1%	-1%	-1%	-1%	-6%	-6%	-13%	-13%
NH	Portsmouth	3	248,645	-8%	-8%	-15%	-15%	-24%	-24%	-32%	-32%	-47%	-47%
MA	Plymouth	3	150,120	-8%	-8%	-5%	-5%	0%	0%	-5%	-5%	-53%	-53%
RI	Wakefield	3	71,114	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
NJ	Cape May	8	45,479	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
CT	New London	5	26,854	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
NJ	Barnegat Light	4	13,978	0%	-6%	0%	-6%	0%	-6%	0%	-6%	0%	-6%
	Less Than 3 Vessels	47	1,766,540	-4%	-4%	-10%	-10%	-15%	-15%	-19%	-19%	-31%	-31%

Table 41 Combined SFMA and NFMA Trip Limit and DAS Alternatives (400 lbs.)

5.4.8 Moratorium on directed fishing

The Councils considered, but are not recommending closing the directed monkfish fishery due to the large increase in stocks needed in the final years of the rebuilding program. This alternative would end the directed monkfish fishery and reduce the revenues from monkfish, as discussed in Section 5.3.5. Vessels would only be allowed to operate under applicable incidental catch limits. This measure would disrupt daily life, personal routines, and business practices in ports with vessels active in all three vessel area options.

5.4.9 TAC Overage Backstop Alternatives

5.4.9.1 TAC Overage Alternative 1 (proposed action)

The alternative 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 TACs the following actions are possible No action would be taken in either management area for landings in excess of 10% of target TACs. Landings between >10% and 30% above target TACs would result in an

adjustment to DAS and/or trip limits. Landings in excess of 30% of the target TAC would result in closure of the directed monkfish fishery. Social impacts for this measure would be negative in management areas where TAC landings exceed 10% of the TAC threshold resulting in a DAS adjustment. The most severe social impacts would result from a closure of the directed fishery in management areas where the TAC was exceeded by more than 30%. The backstop provision is proposed to ensure that measures are designed to achieve the target TACs and rebuilding goals. Thus, while an adjustment under this alternative may have short-term negative impacts, it will increase the likelihood that long-term yields from the fishery will be at a sustainable and higher level.

5.4.9.2 TAC Overage Alternative 2 – no action

Under the no action alternative, if landings exceed the target TAC in either management area, there would be no adjustment to the management measures unless implemented through a framework adjustment or plan amendment. No immediate social impacts would result from the adoption of this alternative.

5.4.10 DAS Carryover Alternatives

5.4.10.1 DAS Carryover Alternative 1

This alternative restricts the number of unused monkfish DAS that could be carried over to the next fishing year. The present allowance is 10 DAS and would be reduced to 6 DAS or 15% of the FMP baseline allocation. This option would reduce fishing opportunities in the following fishing year, but would also reduce any dilution of the effort control program and the need for an adjustment under the proposed backstop provision. It will also increase the likelihood that the TACs will not be exceeded and the rebuilding goals will be met.

5.4.10.2 DAS Carryover Alternative 2 (rejected from further analysis)

5.4.10.3 DAS Carryover Alternative 3 – proposed, no action

The current provision of 10 carryover DAS would remain in effect resulting in neutral social impacts in the short term, but may increase the likelihood that an adjustment will be needed under the proposed backstop measure and delay achieving the rebuilding goals due to the dilution of the effort control program.

5.4.11 Category H Fishery boundary Alternatives

5.4.11.1 Category H Fishery boundary Alternative 1 (proposed action)

Councils are considering moving the boundary northward of the fishery that was established in Amendment 2 for vessels that did not qualify for limited access in the original FMP from 38°20’N to 38°40’N, or twenty nautical miles. Five or six of the original seven vessels that qualified are currently active in the fishery. Communities likely to be affected (Table 36 and Table 37) are those in New Jersey with vessels that fish in the zone under consideration and communities with vessels from North Carolina and Virginia that would benefit from the boundary change. If adopted, this alternative would likely result in positive impacts for Category H permit holders but could increase the competition for fishing area for vessels that fish out of adjacent ports to the north.

5.4.11.2 Category H Fishery boundary Alternative 2 – no action

Under the no action alternative, the Category H fishery boundary would remain at 38°20'N. As a result, the five or six active vessels in the Category H fishery would continue to be constrained to a twenty mile wide area in which they can prosecute their fishery, with increase risk that vessels will be have interactions with sea turtles and have to cease fishing. This alternative could, therefore, have negative social impacts compared to Alternative 1 for vessels fishing out of North Carolina and Virginia ports, but would be status quo for vessels fishing out of ports to the north.

5.4.11.3 Extension of measures beyond FY2009

The two alternatives, including no action, describe the measures that would be in place beyond the final three years of the rebuilding program, if the Councils take no action to implement a revised management program. Under Alternative 2, the no action alternative, whatever measures are in effect in 2009 would remain in place, even if the directed fishery is shut down under the TAC Overage Backstop provision (if adopted). Under the proposed action, Alternative 1, if the directed fishery is shut down under the TAC Overage Backstop provision, and the Councils take no action to revise the management program for FY 2010 and beyond, then the measures in place in FY2008 would be in effect. The social impact of these two options cannot be predicted at this time, except that the closure of the directed fishery continuing into 2010 and beyond (if that occurs) would likely have a greater negative impact on vessels and communities dependent on monkfish than allowing a directed fishery to occur due to the lost revenues from the relatively high value monkfish fishery, to the extent those lost revenues are not made up for by any increased revenues from other fisheries as vessels seek to compensate for the closure.

5.4.11.4 Scallop Closed Area Access Program Monkfish Incidental Limit

Under the no action alternative (Alternative 2), scallop vessels fishing in the Closed Area Access programs have a monkfish incidental limit applicable to vessels fishing with a dredge and not on a scallop DAS, or 50 lbs. per day to a maximum of 150 lbs. tail weight. Under the proposed action, Alternative 1, the incidental limit applicable to those vessels would be the same as applies to scallop vessels fishing on a scallop DAS, or 300 lbs. tail wt. per DAS, except that the incidental limit will be based only on the time that the vessel is in the closed area, and not including steaming time. Alternative 1 will have a slightly positive social effect since this measure would enable scallop vessels to retain and land fish that they would otherwise be required to discard. The positive social effect in this case is related to the act of creating less waste, and consequently reaping some economic benefits from reducing that waste.

5.5 Cumulative Effects

5.5.1 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. In terms of future actions, the analysis examines the period between implementation of these specifications (Spring 2007) and approximately 4 years into the future. This timeframe was chosen because the 2010 fishing year represents the final year of rebuilding under the monkfish FMP, at which time, new management measures may be considered which cannot be predicted at this time.

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 (Section 4.4), 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.

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.

NOAA Fisheries 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.

5.5.2 Past, Present, and Reasonably Foreseeable Future 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.

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 1.2.3). 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. Further, the NEFMC just initiated the development of Multispecies Amendment 16. This Amendment, scheduled for implementation in 2009, would continue rebuilding programs

started under Amendment 13 and could impose additional effort reductions. It is also possible that the NEMFC 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.

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. The NEFMC has also initiated Amendment 11 to the Scallop FMP, scheduled for implementation within the next two years, which would limit the number of General Category (open access) permit holders, likely resulting in further effort reductions. 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 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*), two marine mammal take reduction plans (Harbor Porpoise and Atlantic Large Whale Take Reduction Plans), and an interim final rule implemented by NMFS under authority of the Endangered Species Act to protect sea turtles. 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.

Non-Fishing Actions

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 fish habitats; power plant operations (thermal pollution and entrainment of larvae); global warming; and energy projects such as liquid natural gas (LNG) facilities (two onshore LNG projects have been constructed, one in Everett, MA and one in Cove Point, MD and several others have been proposed) and windfarms (only two projects have been formally proposed although several others may be proposed in the near future). 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.

5.5.3 Cumulative Effects on the Monkfish Fishery (target species)

The primary purpose of the proposed action is to achieve the stock-rebuilding goals of the original FMP, and is, therefore, expected to have a positive cumulative effect on the monkfish resource. This program sets target TACs and associated management measures at a conservative level that are reasonably expected to rebuild the stocks over the next three years. Thus, in both areas the target TACs are equivalent to the level of landings in the mid-1980's, and below the average relative exploitation rates over the 32-year period that includes both low and high levels of exploitation. The cumulative effect of actions proposed in this annual adjustment, 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.

5.5.4 Cumulative Effects on Non-target Species

Since the proposed action reduces effort levels (DAS) from the baseline level established in the FMP, the cumulative effect of the adjustment to the TACs and associated trip limits and DAS for FY 2007-2009 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 and Amendment 2). 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 is allocated under this framework adjustment, and 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.

5.5.5 Cumulative Effects on Protected Species

The proposed action maintains or reduces, depending on area, monkfish fishing effort at the level analyzed in Amendment 2 and Framework 2 (40 DAS). 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. In addition, the proposed adjustment to the Category H fishery boundary, in conjunction with the large-mesh gillnet closures off the North Carolina/Virginia coast should have a positive cumulative effect on protected sea turtles. There is no evidence suggesting that non-fishing activities are having a cumulative effect on protected species affected by this proposed action.

5.5.6 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. The low level of effort allocation in the SFMA, and the adoption of a monkfish DAS requirement in the NFMA in conjunction with effort control measures in the multispecies and sea scallop fisheries is expected to have a neutral or positive cumulative effect on habitat in the Northeast Region.

5.5.7 Cumulative Effects on Communities

The proposed action, which reduces DAS available for targeting monkfish in the NFMA, and maintains relatively low levels of effort in the SFMA will have a short-term negative effect on communities due to the resulting decrease in community, vessel and crew revenues from monkfish. 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 be negative in the short term for those communities dependant on monkfish. Over the long term, however, those communities most dependant on the directed monkfish fishery will realize the greatest cumulative benefit from stock rebuilding.

5.5.8 Summary of Cumulative Effects

There are no significant cumulative impacts of this fishery action on the monkfish resource, non-target species, social/economic resources, EFH, or protected species. The proposed action is to set monkfish TACs, and trip limits and DAS to achieve the stock rebuilding goals of the FMP by 2009. The proposed action has been determined to be “not significant” under the National Environmental Policy Act (NEPA) guidelines, even though the short-term (1 year) negative economic and social impacts could be substantial for some vessels and communities. This action is also not considered a “significant regulatory action” under the criteria established in Executive Order 12866 (See Section **Error! Reference source not found.** *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. 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.

The proposed action modifies the stock-rebuilding program established by the original FMP and modified by Framework Adjustment 2. The action does not change the biological reference points and status determination criteria, but recognizes that the retirement of the R/V Albatross will make the assessment of stock status impracticable before the end of the 10-year rebuilding plan. As noted in Section 4.1, the most recent stock assessment concluded that the estimates of fishing are not sufficiently reliable to determine whether overfishing is occurring.

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

Several sources of data were used in the development of this framework adjustment, including the analysis of impacts. These data sources include, but are not limited to, landings data from vessel trip reports and dealer weighout reports, catch data collected in the NOAA Fisheries Observer Program, effort data collected in the DAS call-in and, where applicable, the electronic vessel monitoring system programs, fisheries independent data collected in the NOAA Fisheries bottom trawl surveys, and cooperative research projects. The Councils have determined that these are the best available scientific data, and that the analyses in this document are compliant with the Data Quality Act (see Section 6.8).

(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, that had not qualified under the original FMP, conditional on those vessels being 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.

While many of the measures used in the management of the monkfish fishery reduce efficiency of vessels as a way to control catch and achieve optimum yield while minimizing the impact of restrictions on communities, reducing bycatch and reducing the interaction of the fishery with protected species and habitat. In this action, the Councils considered public comment on a range of DAS and trip limits with equivalent expected landings, in order to maximize the efficiency of the fishery within the requirements of the rebuilding plan and other applicable laws. Other measures that improve the efficiency of the fishery within the context of the rebuilding requirements include the provision that enables vessels fishing on a multispecies DAS in the NFMA to declare a monkfish DAS at sea in the event their catch of monkfish exceeds the incidental limit, and the adjustment to the monkfish incidental catch limit on scallop vessels fishing in the closed area access programs. Measures that minimize bycatch promote efficiency because of the reduction in the foregone yield represented by discards. Overall, while the FMP generally, and the proposed action in particular, may have differential impacts among different fishery groups, economic allocation is not one of the goals and objectives.

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

As noted in discussion of National Standards 3 and 4, the two-area management approach, is 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 wide differences among different fisheries that catch monkfish as a target or incidental catch species. The proposed action furthers the Councils' recognition of these differences, particularly the adjustments to the incidental catch limits, the different DAS and trip limits applicable in each area, and the flexibility provided to vessels fishing on a multispecies DAS in the NFMA to declare a monkfish DAS at sea when their catch of monkfish exceeds the incidental limit.

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

This framework adjustment contains several measures that minimize costs to vessels, either directly or indirectly, particularly measures that reduce discards. This FMP does not duplicate measures or regulations implemented under other FMPs, but coordinates with them. For example, this framework provides for vessels fishing on a multispecies DAS in the NFMA to declare a monkfish DAS at sea when their catch of monkfish exceeds the incidental limit. This FMP also applies the multispecies minimum mesh size regulations on vessels that have multispecies limited access permits and who are fishing on a monkfish DAS.

(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 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 measures proposed in this amendment are not likely to result in significant adverse impacts on affected fishing communities and, in fact, many will have a positive, but not significant impact compared to taking no action, especially over the long term as stocks are rebuilt. Among the measures expected to have a positive impact on communities are the fixed target TACs which will provide stability and enable long-term planning on the part of affected businesses, and the measure that will minimize bycatch, such as the increased incidental catch limit on scallop vessels in the closed area access program, and the provision of a capability for at-sea declaration of a monkfish DAS for vessels fishing in the NFMA. This latter measure also promotes safety, which will have a positive impact on communities. The impact of the proposed action on fishing communities is analyzed and discussed in Section 5.4.

(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 Councils propose several measures specifically intended to minimize bycatch due to regulatory discards. This framework will adjust incidental catch limits for monkfish in the sea scallop closed area access program to minimize the regulatory discarding. It will also enable vessels fishing on a multispecies DAS in the NFMA to declare a monkfish DAS at sea when their catch of monkfish exceeds the incidental limit.

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

This framework adjustment contains one measure that directly promotes safety and otherwise, does not substantially change the safety impact of the FMP. By enabling vessels fishing on a multispecies DAS in the NFMA to declare a monkfish DAS at sea when their catch of monkfish exceeds the incidental limit, this framework eliminates the incentive for vessels to remain at sea to maximize the value of their limited allocation of DAS. Without this provision, a vessel would be required to call in a monkfish DAS prior to leaving port, and, if, in the course of the trip the

vessel was unable to catch its allowed limit it would have to continue fishing to realize the full value of that monkfish DAS even if conditions (weather) were marginally safe to do so.

6.1.2 Required Provisions

Section 303 of the MSFCMA contains fourteen 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;

This framework adjustment modifies provisions of the FMP to achieve the 10-year rebuilding goals by 2009. The Councils consider the measures in this action to be necessary and appropriate to rebuild the stocks, and recognize that the status with respect to overfishing is unknown. As discussed above in Section 6.1.1, the Councils also deem this action to be consistent with the national standards, and as discussed below, other requiremed provisions of the MSA and other applicable laws.

(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, Framwork 2) and updated in the annual SAFE Reports. There is no foreign fishing, and there are no known Indian treaty fishing rights.

(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;

Both monkfish stocks are in the final three years of a 10-year rebuilding program implemented by the original FMP and modified by Framework 2. The status of the stocks, relative to the biomass targets is shown in Figure 3 and Figure 4. Both stocks are still overfished. Stock assessments have been unable to specify maximum sustainable yield, primarily due to a lack of historical catch data. Optimum yield, however, is specified as the proposed target TACs, which include both targeted and incidental catch The method for the calculation of the target TACs is described in Appendix I of this document.

(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;

The monkfish fishery is in a rebuilding program that places annual limits on the amount of fish that can be harvested, that is, optimum yield. Even though the fishery is managed under a limited access program, there is sufficient harvesting capacity to take optimum yield, and, in fact, there is sufficient capacity to take additional fish, as evident from the amount of unused DAS allocated. As such, there is no amount of optimum yield available for foreign fishing. Sufficient domestic processing capacity also exists to utilize the monkfish harvested by United States vessels.

(5) specify the pertinent data which shall be submitted to the Secretary with respect to commercial, recreational, and charter fishing 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, and the estimated processing capacity of, and the actual processing capacity utilized by, United States fish processors;

Section 4.4 of this document, Human Environment, contains a description of the fishery, including affected communities. The Councils' Monkfish Monitoring Committee compiles and publishes this information annually as part of the Stock Assessment and Fishery Evaluation Report. 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 this document contains the information and data for the 2005 fishing year that is usually provided in the SAFE Report.

(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 describe the likely effects, if any, of the conservation and management measures on-- (A) participants in the fisheries and fishing communities affected by the plan or amendment; and (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;

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;

Framework 2 implemented revisions to the threshold biomass reference point that better align the FMP with NMFS' national standards guidelines. The proposed action does not modify the management reference points, nor does it change the annual monitoring requirement contined in the FMP. Since both monkfish stocks were overfished at the time the FMP was implemented in 1999, the current management program is designed to rebuild the stocks to target biomass levels by 2009. The program includes objective and measurable criteria for determining annually the status of the stocks based on the R/V Albatross fall survey. As discussed in the Purpose and Need section of this document (Section 2.0), however, the upcoming retirement of the R/V Albatross IV, and its replacement by the R/V Bigelow, which is a different platform and will be using a different net to conduct the surveys, may require the Councils to revise the status determination criteria and biological reference points prior to 2009, unless the calibration of the new survey data with the R/V Albatross time series is successful. At this time, only two years of overlapping surveys by the two vessels is scheduled to facilitate calibration of the survey results, and, therefore, the reliability of any conversion factor is unknown. If the calibration work is unsuccessful, the biological reference points which are based on the R/V Albatross IV time series of survey data will no longer be valid. Thus, the Councils have set management targets for at least the next three years, to remove the program from reliance on the annual survey indices, and have provided a contingency if new reference points are not be defined before the end of the rebuilding period.

(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.

On March 6, 2003, NMFS unveiled a national bycatch strategy aimed at further reducing bycatch through fishing gear improvements, standardized reporting, and education and outreach. One objective of the national bycatch strategy is to develop a national approach that standardizes bycatch reporting. This program will also assess regional progress toward meeting national bycatch objectives and strategies. As part of this national bycatch strategy, each Regional Office of NMFS was tasked with producing regional implementation plans and timelines to implement the national bycatch goal. The Northeast Regional Office (NERO) of NMFS unveiled its regional bycatch plan entitled "Current Bycatch Priorites and Implementation Plan" on November 28, 2003. As part of this plan, NERO in conjunction with the New England and Mid-Atlantic Fishery Management Councils, the Atlantic States Marine Fisheries Commission, and the Northeast and Mid-Atlantic Sea Grant programs, sponsored the Northeast Regional Bycatch Workshop on June 29 – July 1, 2004. The proceedings from this workshop are available from NERO, and online at http://www.nero.noaa.gov/nero/hotnews/index.html.

The Councils are near to submitting an Omnibus Standard Bycatch Reporting Methodology Amendment to all the FMPs. This amendment will, among other things, set statistical standards for bycatch data, and will require regular reporting of bycatch in all managed fisheries.

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.

Measures proposed in this framework to minimize bycatch and/or bycatch mortality are discussed in the previous section under National Standard 9.

(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 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 accompanying the original FMP and updated in the Affected Environment Section of this Environmental Assessment (Section 4.0).

(14) to the extent that rebuilding plans or other conservation and management measures which reduce the overall harvest in a fishery are necessary, allocate 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 rebuilding 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.

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 will 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?*

Notwithstanding the technical issues with evaluating the efficacy of any monkfish management program (Section 5.1), particularly that the recommended target TAC cannot be analyzed to determine whether it will, in fact result in the needed rebuilding, the proposed action is based on the PDT's best estimate of a target catch that could facilitate stock rebuilding and maintain a limited directed fishery, consistent with Framework 4 objectives. As such, the Councils do not expect that the actions will jeopardize the sustainability of the target species, monkfish.

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 effort levels and trip limits set by this action are within the levels analyzed in the FMP, Framework 2, and Amendment 2. Although information about bycatch is limited and not conclusive 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?*

Impacts of the proposed specifications on ocean and coastal habitats and/or EFH were assessed in Section 5.2. The analysis concluded that this action is not 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 the FMP and updated in Amendment 2.

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

The proposed specifications are not expected to have substantial adverse impacts on public health or safety. The proposed action sets effort allocations within the levels established in the FMP and there has been no indication that these levels affect public health or safety. The provision enabling vessels in the northern management area to declare a monkfish DAS while at sea would promote safety by removing the incentive to remain at sea to maximize the value of a monkfish DAS if they do not catch the allowable limit before they should return to port out of safety (weather) concerns.

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 to be conducted under the proposed action are within the scope of the FMP and do not change the basis for the determinations made in previous consultations, as noted in Section 5.1.2. Potential benefits may accrue from reduced monkfish effort allocations in the northern area, as well as enhanced monitoring of monkfish fishing effort. Effort monitoring has historically improved the understanding of fishery interactions with protected species. In

addition, the proposal to expand the area of the Cateogry H fishery will provide opportunity for better dispersion of monkfish effort away from areas of higher concentrations of sea turtles that may interact with the fishery.

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 rebuilding of this predator and opportunistic feeder to 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). Even though some vessels and communities may experience a substantial reduction in revenues from monkfish fishing over the short term, the duration of this restriction reduces the significance of the proposed action in the context of NEPA. Furthermore, the long-term benefits of rebuilding the monkfish resource will be proportionally more positive for those dependant vessels and communities.

8. *Are the effects on the quality of human environment likely to be highly controversial?*

The effects of the adjustments to the FMP presented in this document on the human environment are not expected to be highly controversial, since they are based on the best and most recent scientific information available. The public and the Councils are concerned that the rebuilding program is behind schedule, and recognize that failure to address this situation will result in more severe restrictions in the future, or reductions in catch as the stock continues to decline.

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 calls for a reduction in overall monkfish effort. 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 5.4).

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?

Since the proposed action is a reduction in monkfish fishing effort in the northern area, and continuation of effort controls within the range of recent years in the southern area, there is no basis to expect that it will result in the introduction or spread of 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. Furthermore, the proposed action is not expected to

spread the species more than regular fishing activity would, however, the role of fishing gear in the spread of invasive tunicates should be 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 stock-rebuilding program that is scheduled to be completed in 2009. The future management regime for the monkfish fishery, once rebuilt, has not been established, and will depend on the advancements made in the scientific understanding of the species and its population dynamics.

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 5.4 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 4 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.

Assistant Administrator for Fisheries, NOAA **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 will 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 2003, gross monkfish revenues averaged approximately $42.9 million per fishing year. Monkfish revenues were $32.3 million in fishing year 2004, increasing to $43.1 million in fishing year 2005. Assuming the entire FY2006 TAC was taken, the total value of monkfish landings would be $25.6 million at the 2005 average price. The value of the proposed FY2007 TAC would be $22.7 million at the same price. Thus, there would be an impact on the National economy of $2.9 million in forgone revenues from monkfish landings relative to fishing year 2006.

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 the National Marine Fisheries Service 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 includes measures that would establish target monkfish TACs for the 2007-2009 fishing years, adjust the trip limits and the portion of the total monkfish DAS allocation that may be used in the Northern Fishery Management Area (NFMA) and Southern Fishery Management Area (SFMA), and reduce the incidental catch limits in the NFMA. 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 apply, the National Marine Fisheries Service has determined that the proposed action in the monkfish fishery to establish target TACs, adjust the trip limits and portion of the total monkfish DAS allocation that may be used in the NFMA and SMFA, and reduce the NFMA monkfish incidental catch limit, 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

Because the rebuilding of monkfish stocks is behind schedule, it is necessary to revise the management program to ensure that the goals of the 10-year rebuilding program may be reasonably expected to be met. The upcoming retirement of the survey vessel RV Albatross and its replacement by the RV Bigelow will complicate the assessment of the monkfish stock condition, necessitating a change in the way the TAC is determined. Further, there are concerns that reductions in fishing opportunities for multispecies permit holders may lead to more directed fishing on monkfish. As a result, it may be necessary to more closely regulate the monkfish fishery in the NFMA to ensure that the rebuilding goals are met. In addition to addressing the rebuilding program, the proposed action will also address the socio-economic problem created by the current management system in the SFMA, where vessels have been subject to wide annual fluctuation in the TAC and associated trip limits and DAS allocations. This situation has created difficulty in establishing business plans and fishing strategies.

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. As was noted earlier (see Section 2.2), the objective of this action is to achieve the goals of the FMP through adjustments to the monkfish TACs for the 2007-2009 fishing years, the trip limits and monkfish DAS allocations, and to mitigate, to the extent possible the economic effects of the rebuilding plan. 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 October 13, 2006, there are approximately 731 limited access monkfish permit holders and approximately 2,121 vessels holding an open access Category E permit. This action would affect limited access monkfish vessels while fishing for monkfish in the SFMA, and all vessels fishing for monkfish in the NFMA.

Based on activity reports for the 2005 fishing year (the most recent fishing year for which complete information is available) there were 627 limited access permit holders participating in

the monkfish fishery. Of these, 150 fished for monkfish exclusively in the NFMA and 226 fished for monkfish in only the SFMA. The remaining 251 vessels fished for monkfish in both management areas. During the same time period, 570 incidental permit holders reported landing monkfish. Of these, 163 landed monkfish solely from the NFMA, 344 landed monkfish solely from the SFMA, and 63 landed monkfish from both areas. Table 42reports the number of vessels fishing in each area.

Permit Category	Only NFMA Trips	Only SFMA Trips	NFMA and SFMA Trips
A	1	9	2
B	0	29	3
C	49	98	149
D	100	85	97
E	163	344	63
H	0	5	0

Table 42 Number of vessels fishing in NFMA and SFMA by permit category.

The proposed measures would affect at least the 627 vessels that fished for monkfish in the NFMA and SFMA, as well as the 226 incidental permit holders landing monkfish from the NFMA. However, the measures would be likely to have greatest effect on the 163 limited access vessels that fished for monkfish exclusively in the NFMA.

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 changes encompass a variety of measures that would impact vessels participating in the monkfish fishery. The following sections provide a discussion of the impacts for each alternative. Where possible, a quantitative assessment of the impacts is provided. If a quantitative assessment is not possible, an attempt is made to identify the types and number of vessel that may be reasonably expected to be affected.

6.3.2.6.1 TAC Alternatives

The combined TAC for both monkfish management areas would be decreased by approximately 11 percent compared to fishing year 2006. While the TAC for the NFMA would be decreased by approximately 35 percent, the SFMA TAC would be increased by approximately 39 percent. As was previously mentioned, there are three types of vessels that may be affected by the proposed measures, and thus the change in the TAC: vessels fishing solely in the NFMA, vessels fishing solely in the SFMA, and vessels fishing in both areas. There would be differential impacts on participating vessels depending on the management area in which they fish. However, in general the TAC Alternatives would affect any vessel fishing in either area, to the extent that they have to change their fishing behavior due to the imposition of DAS requirements or changes in current trip limits. The analyses in Section 6.3.2.6.4 below provide a synthesis of the impacts for each

combination of trip limits and DAS alternatives for the aforementioned three types of vessels that may be affected by the proposed measures.

6.3.2.6.2 NFMA DAS Alternatives

In FY 2005, there were 233 limited access monkfish vessels also holding limited access multispecies permits that landed more than the 400 pound incidental trip limit for monkfish while fishing in the NFMA DAS. There were 249 such vessels landing more than the proposed 300 pound incidental trip limit. Under the proposed action, these vessels would be required to call in a monkfish DAS if they wish to land more than the incidental trip limit. However, this is essentially an administrative burden, as it does not necessarily entail a change in fishing practices.

6.3.2.6.3 NFMA Incidental Limit Alternatives

The proposed change in the NFMA incidental catch limit would impact vessels fishing in the NFMA and landing more than the proposed limit. Under the proposed NFMA DAS alternative, these vessels will still have some number of DAS that can be used to fish at more than the incidental limit and will only be constrained to the extent that they have to reduce their monkfish landings on days fished over the monkfish DAS limit. In FY 2005, there were 250 limited access monkfish vessels fishing in the NFMA and landing more than the current 400 pound incidental trip limit, and 277 landing more than the proposed 300 pound incidental trip limit. Table 43 shows the percentage of trips by permit type not exceeding the current 400 pound and the proposed 300 pound incidental trip limit.

Permit Category	% of trips less than 400 lbs.	% of trips less than 300 lbs.
A	13.2%	5.3%
B	97.1%	92.8%
C	48.8%	42.2%
D	81.2%	75.8%
E	97.9%	96.0%
Total	82.4%	78.2%

Table 43 Percent of trips landing less than current and proposed incidental limit.

6.3.2.6.4 Trip Limit and DAS Alternatives

As was previously noted, the trip limit and DAS alternatives would impact vessels fishing for monkfish in either area, to the extent that it impacts their normal fishing activity. As in previous annual adjustments, estimation of relative economic impacts was accomplished through the use of a trip limit model to estimate 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 2005 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.

Changes in trip limits and DAS allocations are amenable to analysis when moving from higher to lower limits. While FY 2006 trip limits are the same or higher than those proposed for FY 2007-2009, the 2006 fishing year is not yet complete. FY 2005 trip limits are also higher than the

proposed limits, and vessels were permitted to fish 39.3 DAS in both management areas, which is greater than the proposed limits. Therefore, this data satisfies the requirements for this analysis and can be used to analyze the economic effects of the proposed changes. As has been the case in prior annual adjustments, 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. 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.

The relative change in net return to the vessel was estimated by calculating the average per-trip returns to the vessel owner using both the FY 2006 trip limits and the proposed FY 2007 - FY 2009 trip limits. These returns take into account operating costs, which were estimated using trip cost data collected on observer logs in FY 2005. Trips landing monkfish during FY 2005 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 FY 2005. 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.

Since a necessary assumption of the trip limit model is that fishing location decisions are unchanged under new rules, an analysis of the impacts of the proposed measures 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 FY 2006 baseline to each of the alternative combinations. In the absence of a

TAC overage, the selected alternatives would remain in place until the end of the rebuilding program. Thus, there will be a cumulative effect of the measures over the entire three year period. However, the impacts may be mitigated by an expected increase in monkfish prices due to the overall reduction in monkfish landings. At this time, no model exists that can predict monkfish prices with a sufficient degree of accuracy, due to the nature of the monkfish market. There is a limited market for monkfish in the U.S., with the majority of monkfish landings being exported to Europe and Asia. The price of monkfish received in this country is dependent on the economic conditions in the countries to which monkfish is exported, as well as worldwide landings of monkfish.

6.3.2.6.4.1 Vessels Only Fishing in NFMA

Based on the trip limit model, the results of which appear in Table 44, the per trip average vessel return on monkfish trips would decline from 2.8 to 12 percent, for the range of incidental catch limits, DAS and trip limits alternatives that the Councils considered, and 4.9 percent for the proposed action. Average crew return would decline between 4.6 percent and 20.1 percent, with revenues from monkfish declining between 10.4 percent and 45.7 percent, and 8.3 percent for the proposed action. For these vessels, the simulation indicates that the combination of the 400 pound incidental limit, no trip limit, and 21 DAS would have the smallest impact. The largest impact would be seen with the alternative not requiring monkfish DAS but with trip limits of 168 pounds for permit categories A and C and 152 pounds for permit categories B and D. Since these trip limits are less than either the current or proposed incidental trip limit, this alternative would effectively end the directed fishery.

Incidental Trip Limit	Trip Limit AC	Trip Limit BD	DAS	Average Change in Vessel Return	Average Change in Net Payment to Crew	Average Change in Monkfish Revenue
300	No Limit	No Limit	21	-4.4%	-7.4%	-16.6%
	1250	886	23	-4.8%	-8.1%	-18.2%
	1250	**470**	**31**	**-4.9%**	**-8.3%**	**-18.6%**
	869	338	40	-5.1%	-8.6%	-19.5%
	168	152	Not. Req.	-12.0%	-20.1%	-45.7%
400	No Limit	No Limit	21	-2.8%	-4.6%	-10.4%
	1250	683	23	-3.4%	-5.7%	-13.0%
	1250	435	31	-3.6%	-6.0%	-13.6%
	787	327	40	-4.1%	-6.9%	-15.6%
	168	152	Not. Req.	-12.0%	-20.1%	-45.7%

Table 44 Change from FY 2006 to Alternatives - Vessels Only Fishing in NFMA. Proposed action is in bold.

6.3.2.6.4.2 Vessels Only Fishing in SFMA

Simulation results for vessels only fishing in the SFMA appear in Table 45. While these results indicate uniformly positive impacts due to the increase in TAC and resulting DAS, they are likely an understatement of the true impacts. Due to the difficulties associated with linking trip reports, permit information, and DAS usage tables, it was necessary to assume for the SFMA analyses that all vessels would be subject to the minimum incidental trip limit of 50 pounds/DAS up to 150 pounds total. While this would apply for some of the vessels in this analysis, others

would be permitted to retain more depending on fishing location and gear used. Such vessels would experience larger gains. Of the two alternatives, the results indicate that the alternative that the Councils did not adopt, allowing 31 DAS to be used in the SFMA with trip limits of 475 pounds for permit categories A, C, and G and 375 pounds for permit categories B, D, and H would have the largest positive impact.

Incidental Trip Limit	Trip Limit ACG	Trip Limit BDH	DAS	Average Change in Vessel Return	Average Change in Net Payment to Crew	Average Change in Monkfish Revenue
50	**550**	**450**	**23**	**2.5%**	**3.4%**	**34.1%**
50	475	375	31	3.4%	4.6%	46.9%

Table 45 Change from FY 2006 to Alternatives - Vessels Only Fishing in SFMA. Proposed action is in bold.

6.3.2.6.4.3 Vessels Fishing in Both NFMA and SFMA

Vessels fishing in both the NFMA and SFMA will be simultaneously affected by the incidental trip limit and DAS/trip limit alternative chosen for the NFMA and the DAS/trip limit alternative chosen for the SFMA. While these vessels have a demonstrated capability to shift between areas and may be more likely to change fishing locations than vessels that have historically fished solely in one area, the trip limit model does not incorporate this possibility. Rather, it is assumed than vessels continue fishing in the same locations they did previously and results are calculated for each possible combination of NFMA and SFMA alternatives. Overall, the ability of these vessels to fish in both areas mitigates the impacts from changes in regulations in either area, as has been seen in past annual adjustments. Also, as was the case with vessels fishing only in the SFMA, it was necessary to assume that all vessels would be subject to the minimum incidental trip limit of 50 pounds/DAS up to 150 pounds total in the SFMA. Since some vessels would be permitted to retain more than this amount, the impacts on these vessels would be mitigated. The results are presented in Table 46. The specific combination of measures leading to the best outcome for this set of vessels is the combination of a 400 pound incidental limit, no trip limit for directed trips, and 21 DAS in the NFMA and 550 pound trip limit for categories A, C, and G vessels, 450 pound trip limit for categories B, D, and H, and 23 DAS in the SFMA. While this combination of measures does lead to a 3.6 percent reduction in monkfish revenues, the average changes in vessel revenue and crew payment show mild increases. Under the proposed action, the average change in vessel returns is -0.2 percent, average change in net payment to crew is -0.5 percent, and average change in monkfish revenues is -12.6 percent for vessels fishing in both areas.

NFMA Alternatives				SFMA Alternatives				Average Change in Vessel Return	Average Change in Net Payment to Crew	Average Change in Monkfish Revenue
Incidental Trip Limit	Trip Limit AC	Trip Limit BD	DAS	Incidental Trip Limit	Trip Limit ACG	Trip Limit BDH	DAS			
	No Limit	No Limit	21	50	550	450	23	0.0%	-0.2%	-9.6%
				50	475	375	31	0.0%	-0.3%	-10.1%
	1250	886	23	50	550	450	23	0.0%	-0.3%	-10.3%
				50	475	375	31	0.0%	-0.4%	-10.8%
300	**1250**	**470**	**31**	**50**	**550**	**450**	**23**	**-0.2%**	**-0.5%**	**-12.6%**
				50	475	375	31	-0.2%	-0.6%	-13.1%
	869	338	40	50	550	450	23	-0.3%	-0.8%	-15.4%
				50	475	375	31	-0.3%	-0.8%	-15.8%
	168	152	Not. Req.	50	550	450	23	-1.0%	-1.7%	-26.0%
				50	475	375	31	-0.9%	-1.7%	-25.5%
	No Limit	No Limit	21	50	550	450	23	0.4%	0.3%	-3.6%
				50	475	375	31	0.4%	0.2%	-3.9%
	1250	683	23	50	550	450	23	0.2%	0.1%	-5.8%
				50	475	375	31	0.3%	0.0%	-6.0%
400	1250	435	31	50	550	450	23	0.1%	-0.1%	-8.2%
				50	475	375	31	0.1%	-0.2%	-8.5%
	787	327	40	50	550	450	23	-0.1%	-0.4%	-11.1%
				50	475	375	31	0.0%	-0.4%	-11.2%
	168	152	Not Req.	50	550	450	23	-0.7%	-1.3%	-21.4%
				50	475	375	31	-0.6%	-1.2%	-20.7%

Table 46 Change from FY 2006 to Alternatives - Vessels Fishing in NFMA and SFMA. Proposed action is in bold.

6.3.2.6.5 Moratorium on Directed Fishing

Table 47 reports the results from the simulation of an end of the directed monkfish fishery relative to FY 2006 conditions. The original FMP called for ending the directed fishery in the fourth year of the rebuilding plan, a provision later replaced by Framework 2 that established the annual adjustment process. Due to the large increase in the monkfish stocks necessary in the final three years of the rebuilding plan, the Councils considered closing the directed fishery at this time. This would have had uniformly negative impacts on vessel return, crew payment, and revenue from monkfish for vessels participating in the monkfish fishery. However, as in the previous analyses of vessels fishing in the SFMA, it was necessary to assume that all vessels would be subject to the minimum incidental trip limit of 50 pounds/DAS up to 150 pounds total. Some vessels would be permitted to retain more than this amount, and the impacts on these vessels would be smaller than those reported in Table 47.

NFMA Alternatives				SFMA Alternatives				Average Change in Vessel Return	Average Change in Net Payment to Crew	Average Change in Monkfish Revenue
Incidental Trip Limit	Trip Limit AC	Trip Limit BD	DAS	Incidental Trip Limit	Trip Limit ACG	Trip Limit BDH	DAS			
Vessels Fishing Only in NFMA										
300	0	0	0					-6.9%	-11.9%	-26.7%
400	0	0	0					-4.8%	-8.2%	-18.6%
Vessels Fishing in SFMA Only										
				50	0	0	0	-4.2%	-5.3%	-57.9%
Vessels Fishing in NFMA and SFMA										
300	0	0	0	50	0	0	0	-3.1%	-3.5%	-19.1%
400	0	0	0	50	0	0	0	-2.7%	-2.8%	-10.8%

Table 47 Change from FY 2006 to No Directed Fishing.

6.3.2.6.6 TAC Overage Backstop Alternative

The proposed TAC overage backstop measure would potentially affect all vessels landing more than the incidental catch limit in either the NFMA or SFMA, since it could lead to a closure of the directed fishery in either or both areas for FY2009. The analysis was again conducted for vessels fishing only in the NFMA, vessels fishing only in the SFMA, and vessels fishing in both the NFMA and SFMA. However, the results of the simulations are presented as percent changes from the different alternatives that may be adopted to the no directed fishery alternative. Further, since the Councils propose reducing NFMA incidental limit from 400 pounds (no action) to 300 pounds, the analysis is conducted for both possibilities. That is, the results from the simulations with a 300 pound incidental limit are compared to the no directed fishery alternative with a 300 pound incidental limit. Likewise, the results from the simulations with a 400 pound incidental limit are compared to the no directed fishery alternative with a 400 pound incidental limit. As was the case with the other analyses of the SFMA, the minimum trip limit of 50 pounds/DAS up to 150 pounds per trip was used, though some vessels would be permitted to retain more than this amount.

6.3.2.6.6.1 Vessels Only Fishing in NFMA

Except for the alternatives where the directed trip limit is less than the current or proposed incidental limit, the impact of a change from any of the possible combinations of alternatives to the no directed fishing alternative with either a 300 or 400 pound NFMA incidental trip limit would be decreases in average vessel return, average crew payment, and monkfish revenue, as shown in Table 48. The decreases in average vessel return range from 0.8 to 2.7 percent, and are 2.2 percent for the proposed action, while decreases in crew return range from 1.4 to 4.9 percent, and are 4.0 percent for the proposed action. Declines in revenue from monkfish range from 3.5 to 12.1 percent, and average 9.9 percent under the proposed action.

Incidental Trip Limit	Trip Limit AC	Trip Limit BD	DAS	Average Change in Vessel Return	Average Change in Net Payment to Crew	Average Change in Monkfish Revenue
300	No Limit	No Limit	21	-2.7%	-4.9%	-12.1%
	1250	886	23	-2.3%	-4.2%	-10.4%
	1250	**470**	**31**	**-2.2%**	**-4.0%**	**-9.9%**
	869	338	40	-2.0%	-3.6%	-9.0%
	168	152	Not. Req.	5.8%	10.3%	34.9%
400	No Limit	No Limit	21	-2.1%	-3.9%	-9.1%
	1250	683	23	-1.5%	-2.7%	-6.4%
	1250	435	31	-1.3%	-2.4%	-5.8%
	787	327	40	-0.8%	-1.4%	-3.5%
	168	152	Not. Req.	8.2%	14.9%	49.9%

Table 48 Change from Alternatives to No Directed Fishing (300 pound NFMA Incidental Limit) for Vessels Only Fishing in NFMA. Proposed action is in bold.

6.3.2.6.6.2 Vessels Only Fishing in SFMA

Vessels fishing solely in the SFMA would experience decreases in average vessel return, crew return, and revenue from monkfish in the event of a closure in the directed fishery. While the assumption about the incidental limit makes this a worst case scenario, decreases in vessel return would range from 6.5 to 7.3 percent, decreases in crew return would range from 8.5 to 9.5 percent, and monkfish revenues would decline 68.6 or 71.4 percent. The proposed action would result in the lower of these two outcomes. These results appear in Table 49.

Incidental Trip Limit	Trip Limit ACG	Trip Limit BDH	DAS	Average Change in Vessel Return	Average Change in Net Payment to Crew	Average Change in Monkfish Revenue
50	**550**	**450**	**23**	**-6.5%**	**-8.5%**	**-68.6%**
50	475	375	31	-7.3%	-9.5%	-71.4%

Table 49 Change from Alternatives to No Directed Fishing for Vessels Only Fishing in SFMA. Proposed action is in bold.

6.3.2.6.6.3 Vessels Fishing in Both NFMA and SFMA

As was the case in the earlier analysis of vessels fishing in both areas, the ability to fish in both areas tends to mitigate the impacts of changes in either area. The results, which appear in Table 50, indicate that in sets of alternatives where the directed trip limits are greater than the current or proposed incidental limits there would be decreases in average vessel ranging from 2.6 to 3.1 percent, decreases in average crew payment ranging from 2.6 percent to 3.2 percent, and decreases in revenue from monkfish ranging from 2.6 percent to 10.5 percent, depending on the alternatives chosen now. The proposed action would result in declines of 2.9, 3.0 and 7.4 percent in average vessel returns, net payment to crew and monkfish revenues, respectively. These results represent the worst case scenario of both the NFMA and SFMA directed fisheries closing. Further, they incorporate the previous assumption that all vessels fishing in the SFMA would be limited to 50 pounds/DAS up to a total of 150 pounds. In reality, the backstop provision would allow for a closure of the directed fishery in only the NFMA, only the SFMA, or both areas. Also, some vessels fishing in the SFMA would be permitted to retain more than the assumed incidental limit, so the impacts would be less for these vessels.

NFMA Alternatives				SFMA Alternatives				Average Change in Vessel Return	Average Change in Net Payment to Crew	Average Change in Monkfish Revenue
Incidental Trip Limit	Trip Limit AC	Trip Limit BD	DAS	Incidental Trip Limit	Trip Limit ACG	Trip Limit BDH	DAS			
	No Limit	No Limit	21	50	550	450	23	-3.1%	-3.2%	-10.5%
				50	475	375	31	-3.1%	-3.2%	-10.0%
	1250	886	23	50	550	450	23	-3.1%	-3.2%	-9.8%
				50	475	375	31	-3.1%	-3.1%	-9.3%
300	**1250**	**470**	**31**	**50**	**550**	**450**	**23**	**-2.9%**	**-3.0%**	**-7.4%**
				50	475	375	31	-3.0%	-2.9%	-6.9%
	869	338	40	50	550	450	23	-2.8%	-2.7%	-4.4%
				50	475	375	31	-2.8%	-2.7%	-4.0%
	168	152	Not. Req.	50	550	450	23	-2.2%	-1.8%	9.4%
				50	475	375	31	-2.2%	-1.9%	8.6%
	No Limit	No Limit	21	50	550	450	23	-3.0%	-3.1%	-7.5%
				50	475	375	31	-3.0%	-3.0%	-7.2%
	1250	683	23	50	550	450	23	-2.9%	-2.9%	-5.4%
				50	475	375	31	-2.9%	-2.8%	-5.1%
400	1250	435	31	50	550	450	23	-2.7%	-2.7%	-2.8%
				50	475	375	31	-2.8%	-2.6%	-2.6%
	787	327	40	50	550	450	23	-2.6%	-2.4%	0.3%
				50	475	375	31	-2.6%	-2.4%	0.4%
	168	152	Not Req.	50	550	450	23	-2.0%	-1.6%	13.4%
				50	475	375	31	-2.1%	-1.6%	12.4%

Table 50 Change from Alternatives to No Directed Fishing (300 pound NFMA Incidental Limit) for Vessels Fishing in NFMA and SFMA. Proposed action is in bold.

6.3.2.6.7 DAS Carryover Alternatives

The alternatives concerning carryover DAS would affect all vessels with monkfish DAS they would like to carry over to the next fishing year. Since the average number of monkfish DAS carried over from FY 2005 to FY 2006 was roughly 8.5, the proposed measure could represent a decrease in fishing opportunity for some vessels, to the extent that the DAS would have been used in the following fishing year. The Councils took no action on these alternatives, thus there would be no impact.

6.3.2.6.8 Permit Category H (NC/VA) Fishery boundary

Amendment 2 established a new fishery for some vessels that did not qualify for a limited access permit in the initial FMP. Seven vessels qualified for this fishery and six are actively fishing. These vessels have been constrained by area closures to protect sea turtles, so that the area available to them for fishing is approximately 20 miles wide. This, coupled with the limited season when monkfish are available in the area, led the industry to request that the boundary for the fishery be moved northward 20 miles from 38°20'N to 38°40'N. The proposed action would increase the fishing opportunities available to the affected vessels.

6.3.2.6.9 Extension of measures beyond FY2009

The two alternatives, including no action, describe the measures that would be in place beyond the final three years of the rebuilding program, if the Councils take no action to implement a revised management program. Under Alternative 2, the no action alternative, whatever measures are in effect in 2009 would remain in place, even if the directed fishery is shut down under the TAC Overage Backstop provision (if adopted). Under Alternative 1, the proposed action, if the directed fishery is shut down under the TAC Overage Backstop provision, and the Councils take no action to revise the management program for FY 2010 and beyond, then the measures in place in FY2008 would be in effect. The economic impact of these two options cannot be quantified at this time, but qualitatively, the closure of the directed fishery continuing into 2010 and beyond (if that occurs) would likely have a greater negative impact on vessels and communities dependent on monkfish than allowing a directed fishery to occur due to the lost revenues from the relatively high value monkfish fishery, to the extent those lost revenues are not made up for by any increased revenues from other fisheries as vessels seek to compensate for the closure.

6.3.2.6.10 Scallop Closed Area Access Program Monkfish Incidental Limit

Under the no action alternative (Alternative 2), scallop vessels fishing in the Closed Area Access programs have a monkfish incidental limit applicable to vessels fishing with a dredge and not on a scallop DAS, or 50 lbs. per day to a maximum of 150 lbs. tail weight. Under Alternative 1, the proposed action, the incidental limit applicable to those vessels would be the same as applies to scallop vessels fishing on a scallop DAS, or 300 lbs. tail wt. per DAS, except that the incidental limit will be based only on the time that the vessel is in the closed area, and not including steaming time. Alternative 1 will have a slightly positive economic effect compared to the no action alternative, because it will enable scallop vessels to convert discards to landings and realize the revenue from that catch. The magnitude of this effect, however, is not expected to be significant relative to the value of the scallop landings on those trips. The Councils do not expect that Alternative 1 presents any new incentive for scallop vessels to target monkfish under the increased incidental limit, given the relative value of the scallop catch to the difference in allowable monkfish landings under the two alternatives.

6.4 Endangered Species Act (ESA)

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 4 is not likely to result in jeopardy to any ESA-listed species under NOAA Fisheries 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 NOAA Fisheries, 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 4 on marine mammals, and concluded that the proposed actions are 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, 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 one measure that will modify an existing collection of information burden, that is, the option for vessels fishing in the NFMA to declare a monkfish DAS via the VMS while prior to returning to port (see Section 3.2.1 for a description of the proposal). The materials and analysis pertaining to this proposal in regards to the PRA will be submitted separately, and will be presented in the Framework 4 proposed rule.

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 4 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. The NEFMC has determined that the proposed action is consistent to the maximum extent possible with the enforceable policies of the coastal zone management programs of these states and has notified them of this determination, providing them also with a copy of this document. A letter requesting their concurrence with the NEFMC's initial determination was sent January 12, 2007. A list of the specific state contacts and a copy of the letters are available upon request.

6.8 Data Quality Act (DQA)

Pursuant to NOAA Fisheries guidelines implementing Section 515 of Public Law 106-554 (the Data 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 changes to the monkfish target TACs, DAS allocations, trip limits, and incidental catch limits for FY 2007 and beyond. This information will enable these individuals to adjust their management practices and make appropriate business decisions based upon the new management measures.

Until a proposed rule is prepared and published, this document 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 contains the most recent (FY 2005) Stock Assessment and Fishery Evaluation (SAFE Report) for the monkfish fishery. The information product 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 (www.nefmc.org). The Federal Register 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 (www.nero.noaa.gov), and through the Regulations.gov website. The Federal Register 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 NOAA Fisheries 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 4. 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, and fisheries independent data collected through the NMFS bottom trawl surveys. Therefore, the analyses contained in this

document were prepared using data from accepted sources. In addition, 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 FY 2005, and also for calendar year 2005. 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.

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 NOAA Fisheries 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 NOAA Fisheries 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 (SAW 40) 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 FW 42. 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.

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Monkfish Framework 4
APPENDIX I

Preliminary Estimates of Fishing Year 2007-09 TAC's for monkfish.

Monkfish PDT

June 15, 2006

Introduction

Monkfish biomass is currently assessed with the NEFSC fall survey biomass index. An analytical assessment is not available and the PDT is unable to conduct projections for the purpose of determining rebuilding mortality rates, biomass projections or calculating target TAC. The PDT has been tasked with setting a TAC for fishing years 2007-2009.

Given the absence of an analytical assessment, the PDT used several approaches for estimating the Total Allowable Catch (TAC) (Tables 1 and 2). The TAC's were characterized by comparing relative exploitation to timeseries of either relative exploitation (landings/ survey biomass index) or the TAC to a timeseries of landings. The PDT then synthesized the results of nine different methods to come up with a recommendation for northern and southern area TACs.

Method 1. Using relative exploitation index and survey index

An index of relative exploitation was developed by dividing calendar year landings by Fall Exploitable Biomass index for the period 1963-2005. The index was constructed by applying a length-weight equation to numbers at length ≥43 cm for the north and ≥53cm for the south (Figure 1a and 1b).

The median of relative exploitation and the average relative exploitation of the timeseries were chosen as target relative exploitation rates for each stock area. These relative exploitation rates were applied to the 3 year average of exploitable biomass for the most recent three years, 2003-2005, to estimate the landings that are associated with the target relative exploitation rates.

M1: TAC = Median Relative exploitation * 3 year average exploitable biomass (03-05)

M2: TAC= Average Relative exploitation * 3 year average exploitable biomass (03-05)

The distribution of relative exploitation is highly skewed in the south with extremely high values in 1993 and 1996 occurring as a result of extremely low survey values (Figure 3). These values were identified as extreme outliers and were dropped from the calculation of the average relative exploitation index.

The TAC for the northern stock was estimated as 2,664 metric tons (mt) using **M1** (Table 1, Figure 4)**.** This reduces relative exploitation to values observed in the early to mid 1980's (Figure 5). The TAC based on the average relative exploitation yields was estimated as 5,974 mt using **M2**. This reduces relative exploitation to values observed in the late 1980's. (Figure 5)

The TAC for the southern stock was estimated at 3,300 mt using **M1.** This maintains relative exploitation near current values and is similar to values observed in the early to mid 1980's. The TAC based on the average relative exploitation yields was estimated as 9,400 mt. This slightly increases relatively exploitation from current values, and relative exploitation is similar to values observed in the late 1980's.

Rationale: This method sets the TAC based on a relative exploitation target and current survey biomass index, and reduces relative exploitation on the stock. For the northern stock, the median exploitation rate reduces exploitation to values occurring in the early 1980s while the average exploitation rate reduces exploitation to rates seen in the late 1980's (Figure 1a). For the southern stock, the median relative exploitation rate reduces exploitation to rates similar to those in the early 1980s while the trimmed average exploitation rate is similar to values seen the mid to late 1980s.

Method 2. The North Pacific Fishery Management Council approach for data-poor species

The North Pacific Council sets the Overfishing Limit (OFL) using the "Tier 6" approach when catch is the only reliable information that is available. The OFL is calculated as the average catch over a period of years (generally 1978-1995, unless otherwise determined by their SSC) when reliable catch history is known. The North Pacific Council sets the acceptable biological catch (ABC) at ≤75% of the average catch.

The PDT calculated average landings for two time periods, 1963-2005 and 1970-2005. The period from 1963-2005 encompasses the entire known landings timeseries. The PDT also selected 1970-2005 because the fishery did not begin to develop until the mid-1970's. The PDT then used 75% of the average landings as in the North Pacific Council approach. In addition, the PDT also calculated the median landings for 1963-2005.

Method M3: 75% of average landings 1963-2005

Method M4: 75% of average landings 1970-2005

Method M5: median landings 1963-2005.

The TAC for the northern stock was estimated at 4,300 mt using 1963-2005 period (**M3**), 5,000 mt using the 1970-2005 period (**M4**) and 4,300 mt using the median of the timeseries (**M5**). These TAC return relative exploitation to values observed in the mid to late 1980's.

The TAC for the southern stock was estimated at 5,000 mt using 1963-2005 period (**M3**), 5,700 mt using the 1970-2005 period (**M4**) and 4,600 mt using the median of the timeseries (**M5**). These TAC maintains relative exploitation close to recent values, and is similar in values observed in the mid 1980's.

Rationale: The North Pacific Council uses this method in situations where only landings data are available. Although the method does not adjust for survey biomass, it reduces exploitation.

Method 3. Current PDT method using FY 2005 landings

The PDT used the current method for setting the target TAC, by using an estimate of total landings for fishing year 2005 and assuming that the three year average of fall biomass index did not change. (Note: Under Method 4 described below, the PDT ran several scenarios incorporating a range of changes in the survey index.) May 2004 to January 2005 landings were

available for both stocks. Landings for the entire fishing year were estimated by applying the ratio of total FY2004 landings to May-January 2004 landings to the partial year landings:

Total landings FY 2005 = May-Jan 2005 landings * (Total landings FY 2004 / May-Jan 2004 landings)

This method assumes that the temporal distribution of landings in FY 2005 was the same as FY2004.

Method M6: TAC = FY 2005 landings * 3 yr average survey biomass index / Biomass target

The TAC for the northern stock was estimated as 5,900 mt **(M6**). This reduces relative exploitation to values observed in the mid 1980's (Figure 5). The TAC for the southern stock was estimated as 5,200 mt (**M6).** This maintains relative exploitation near current values and is similar to values observed in the mid- 1980's (Figure 7).

Rationale: This is the current method for estimating the TAC and is based on the ratio of current 3 year average survey biomass and the biomass target. The method accounts for current survey biomass index and the difference between current biomass index and the target biomass index.

Method 4. Sensitivity of TAC to ranges of FY 2005 landings and 2006 survey index.

The PDT the applied the current method to two landings scenarios (Projected FY 2005 landings and assuming that the FY 2005 TAC's were taken), and four 2006 biomass survey indices (-10%, + 10%, -50% and + 50% changes to the 2005 survey biomass index), Tables 2 and 3. The PDT used the following summary values from the analyses as TAC.

M7 = 0.75 * median value of the analyses
M8= median value of the sensitivity analyses
M9= 1.25* median value.

Results are shown in Table 2 and Table 3. For the northern stock, the median TAC was 5,200 mt (**M8**). This reduces relative exploitation to values observed in the late 1980's. Reducing the median by 25% results in a 3,800 mt TAC (**M7**) and reduces relative exploitation to values observed in the early 1980's. Increasing the median by 25% yields a TAC of 6,300 mt (**M9**). This reduces relative exploitation to values observed in the mid to late 1980's.

For the southern stock, the median TAC was 5,100 mt (**M8**). This maintains relative exploitation near current values and is similar to values observed in the mid 1980's. Reducing the median by 25% results in a 3,900 mt TAC (**M7**) and reduces relative exploitation to values observed in the mid 1980's. Increasing the median by 25% yields a TAC of 6,500 mt (**M9)**. This results in relative exploitation to values observed in the mid 1980's.

Rationale: This method provides sensitivity of the TAC under the current PDT method to potential changes in survey index and FY 2005 landings.

Synthesis of all approaches

The various methods yield a small range of TAC's. For the northern stock, the median of all methods is 5,000 tons with a range of 2,800 to 6,500 tons. Relative exploitation associated with the TAC's for the northern stock is reduced from current values. Landings are reduced to values generally observed in the 1980's.

For the southern stock, the median of all methods is 5,100 tons with a range of 3,300 to 9,400 tons. The 9,400 ton values is based on using a trimmed average, but is still influenced by two high values retained in the average. Relative exploitation associated with the TAC is maintained near recent values and in general, is similar to values observed in the mid 1980's. The range of TAC's, with the exception of the 9,400 tons, TAC, is similar to landings observed during the 1980's.

PDT recommendation

For both stocks, estimates of TAC's are centered around 5,000 tons. **The PDT recommends setting the TAC's at 5,000 tons for both stocks.** These TAC's should reduce exploitation for the northern stock, and maintain exploitation near recent values for the southern stock. (Figures 5 and 7). These TAC's are similar to landings observed during the mid 1980's for both stocks.

Although the recommended TAC cannot be analyzed to determine whether it will, in fact result in the needed rebuilding, it represents the PDT's best estimate of a target catch that will facilitate stock building and maintain a limited directed fishery, consistent with Framework 4 objectives.

Table 1. A range of TAC values for Northern and Southern Monkfish.

Method	Source/ Method for calculating TAC	TAC in 000's metric tons	
		Northern stock	Southern stock
Label	FY 2006 Status Quo	7.7	3.7
M1	Median relative exploitation (1963-2005) * 3 year average of exploitable biomass index (2003-2005)	2.7	3.3
M2[a]	Average relative exploitation (1963-2005) * 3 year average of exploitable biomass index (2003-2005)	6.0	9.4
M3	75% of average catch 1963-2005	4.3	5.0
M4	75% of average catch for 1970-2005	5.0	5.7
M5	Median catch (1963-2005)	4.3	4.6
M6[b]	Status Quo Method	5.9	5.2
M7	0.75 * Median of sensitivity analysis TAC	3.9	3.8
M8	Median of sensitivity analysis TAC	5.2	5.1
M9	1.25 * Median of sensitivity analysis TAC	6.5	6.3
	Median of all TAC's calculated in M1-M9	5.0	5.1

[a] Relative exploitation rates for the southern stock were extremely high in 1993 and 1996 as a result of high landings and an extremely low exploitable biomass index. These years are considered outliers and were not included in the calculation of the average for the southern stock.

[b] Estimate of 2005 FY landings based on May 04 -January 05 landings prorated to a full year using ratio of landings in FY 04 to May 03-Jan 04 landings. Assumes three year average survey biomass does not change.

Table 2. Sensitivity of Northern stock TAC to assumptions about FY 2005 landings and 2006 survey biomass index.

	Current method using various 2005 landings and 2006 survey index values	TAC 000's Metric Tons
	1a: 2005 landings = 9,750 t[1], 2006 biomass index increases 10%	5.3
	1b: 2005 landings = 13,028 t[2], 2006 biomass index increases 10%	5.8
	2a: 2005 landings = 9,750 t, 2006 biomass index decreases by 10%	5.4
	2b: 2005 landings = 13,028 t, 2006 biomass index decreases by 10%	5.4
	3a: 2005 landings=9,750 survey increases 50%	6.2
	3b: 2005 landings=13,028t survey increases 50%	6.8
	4a: 2005 landings=9,750 survey decreases 50%	4.0
	4b: 2005 landings=13,028t survey decreases 50%	4.4
M7	0.75 * Median of sensitivity analysis TAC	3.9
M8	Median of sensitivity analysis TAC	5.2
M9	1.25 * Median of sensitivity analysis TAC	6.5

Table 3. Sensitivity analysis of Southern stock TAC to assumptions about FY 2005 landings and 2006 survey biomass index.

	Current method using various 2005 landings and 2006 survey index values	TAC 000's Metric Tons
	1a: 2005 landings = 9,545 t^2, 2006 biomass index increases 10%	5.1
	1b: 2005 landings = 9,673 t^3, 2006 biomass index increases 10%	5.1
	2a: 2005 landings = 9,545 t, 2006 biomass index decreases by 10%	4.8
	2b: 2005 landings = 9,673 t, 2006 biomass index decreases by 10%	4.8
	3a: 2005 landings=9,545t, survey increases 50%	5.7
	3b: 2005 landings=9,673 t, survey increases 50%	5.8
	4a: 2005 landings=9,545 t, survey decreases 50%	4.1
	4b: 2005 landings=9,673 t, survey decreases 50%	4.1
M7	0.75 * Median of sensitivity analysis TAC	3.8
M8	Median of sensitivity analysis TAC	5.1
M9	1.25 * Median of sensitivity analysis TAC	6.3

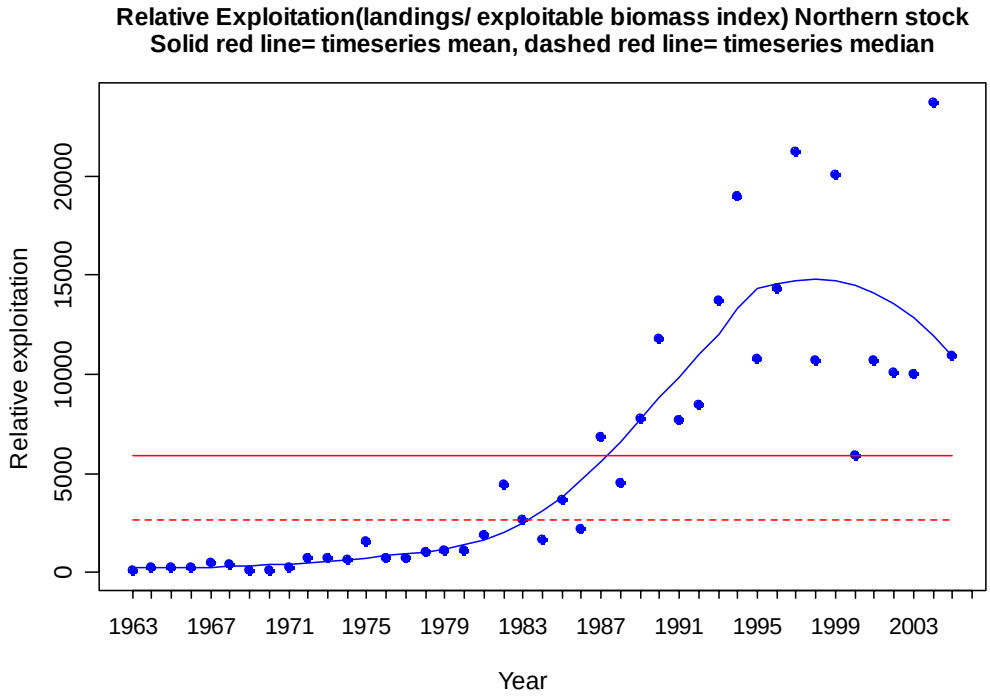

Figure 1. Trends in relative exploitation (landings/ survey exploitable biomass) for 1963-2005 for Northern Stock. Solid blue line is robust loess fit using span=.50, degree=2. Solid red line is timeseries mean. Dashed red line is timeseries median.

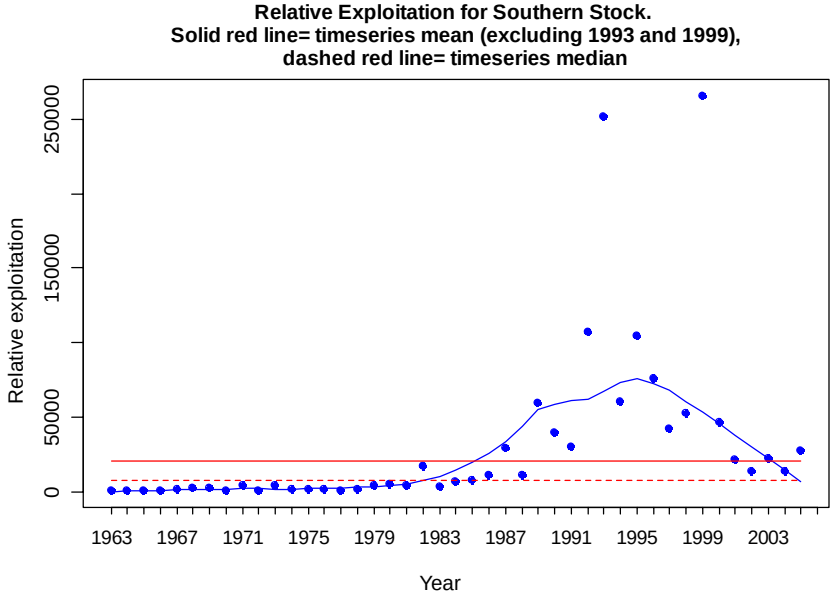

Figure 2. Trends in relative exploitation (landings/ survey exploitable biomass) for 1963-2005 for Northern Stock. Solid blue line is robust loess fit using span=.33, degree=1. Solid red line is timeseries mean (excluding 1993 and 1999). Dashed red line is timeseries median.

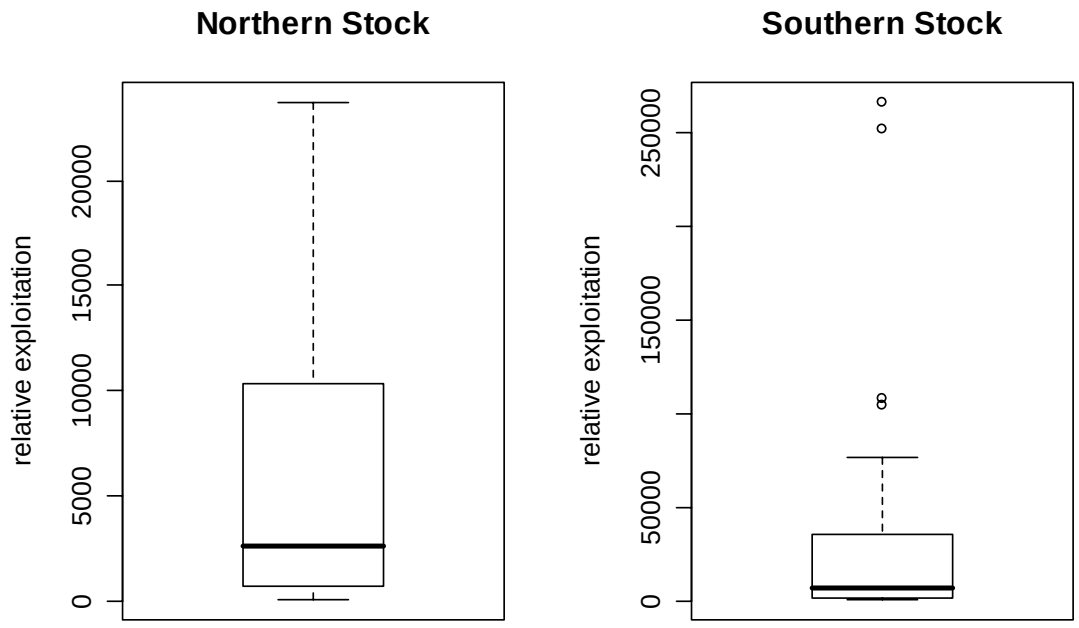

Figure 3. Box and whisker plot of relative exploitation for 1963-2005. Scales are different for both plots. The heavy line represents the median relative exploitation, and the box is the interquartile range (25^{th}-75^{th} percentile). The whisker is calculated to contain values that are less than or equal to 1.5x the interquartile range. Circles represent outliers, or data points that exceed the value of the whisker. Note the extreme outliers (representing 1993 and 1999) in the box and whisker plot for the southern stock.

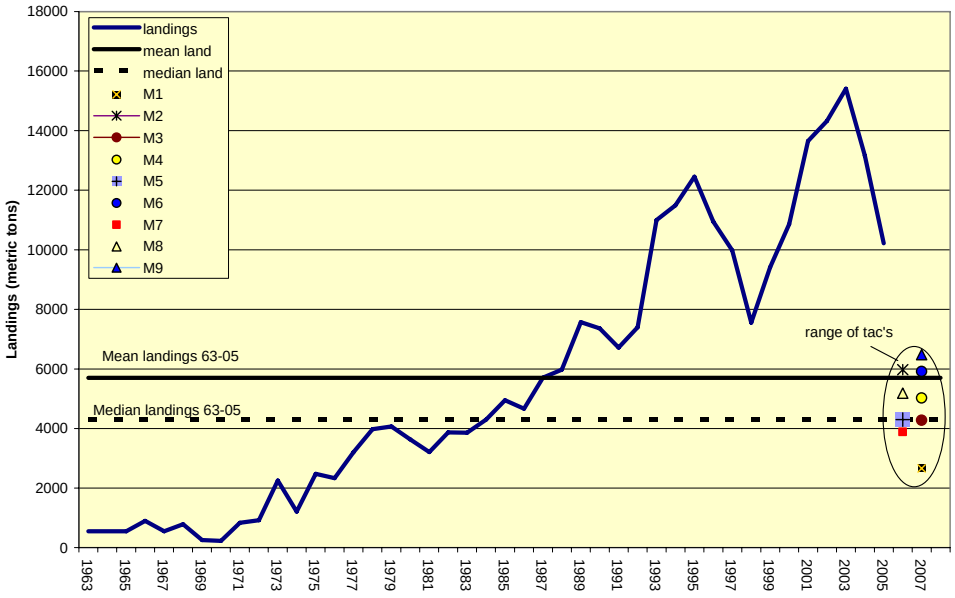

Figure 4. Northern monkfish landings for 1963-2005 and range of TAC's estimated using various methods.

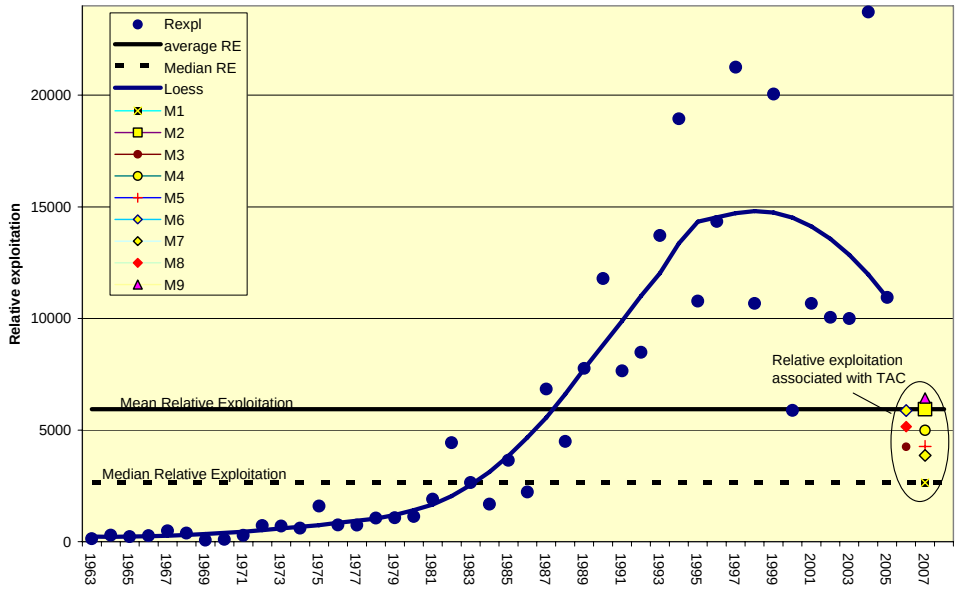

Figure 5. Timeseries of northern stock's relative exploitation and relative exploitation associated with various TAC. Blue line is robust loess fit with span= 0.50, degree=2.

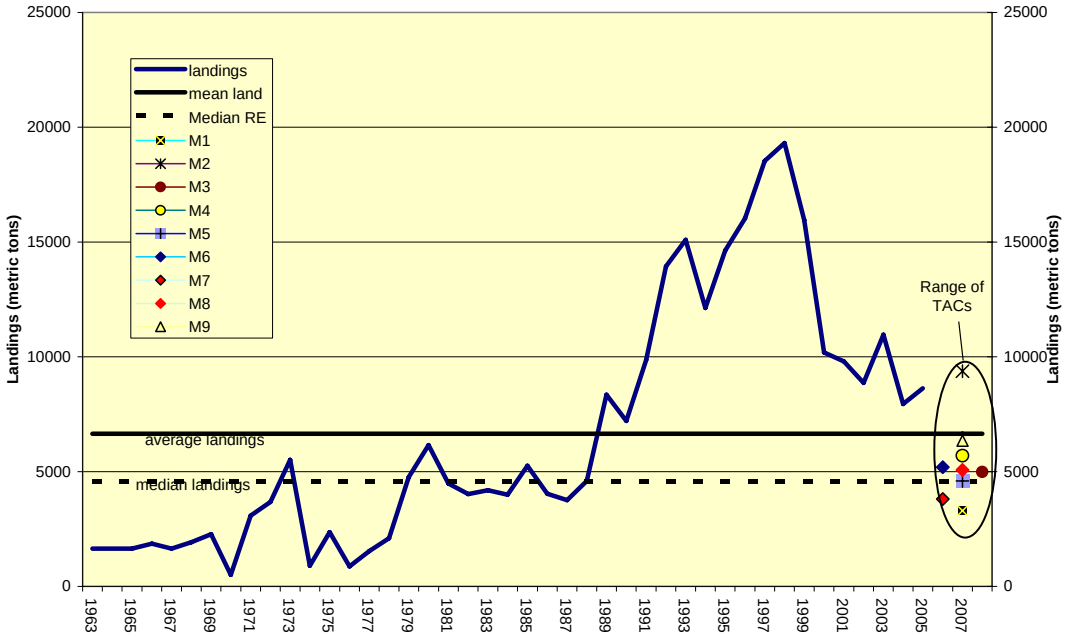

Figure 6. Timeseries of landings for the southern stock and TAC's estimated using various methods.

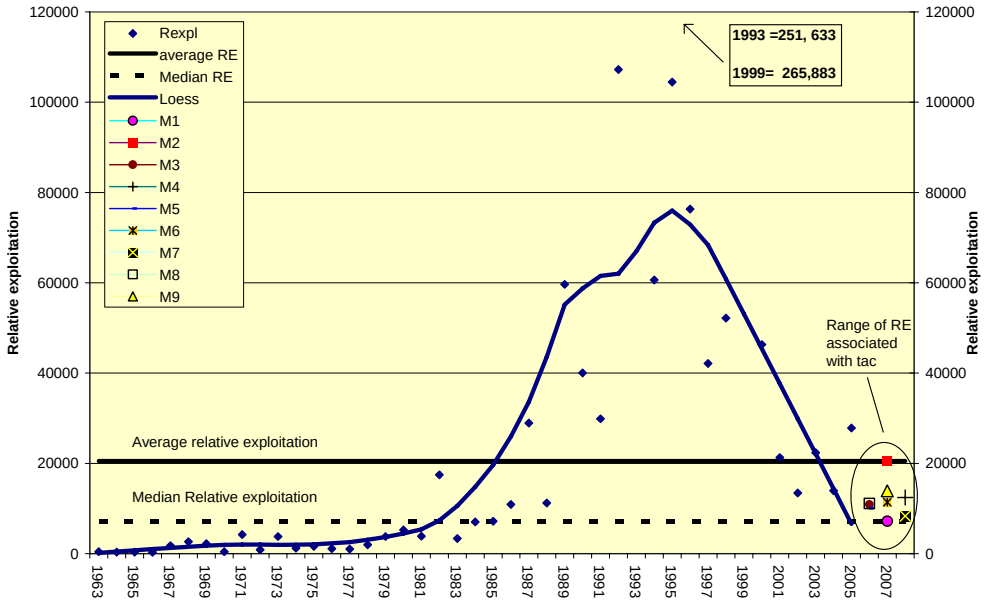

Figure 7. Timeseries of southern stock's relative exploitation and relative exploitation associated with various TAC. Blue line is robust loess fit with span= 0.33 and degree=1.

Monkfish Framework 4
APPENDIX II

SFMA and NFMA Trip Limits/DAS Analysis Reports.

FY2007 Monkfish Southern Fishery Management Area (SFMA) Daily Landings and Days-at-Sea Limit Analysis

Jay Hermsen, Ph.D.[1]

October 26, 2006

Abstract

In anticipation of changes to the way monkfish will be surveyed and assessed, the Monkfish Fishery Management Plan Development Team (PDT) has assessed effort controls over a range of total allowable catch (TAC) and daily landing per day-at-sea (DAS) limits for the SFMA. Four TACs (6009 t, 5100 t, 5138 t, 4268 t) with two sets of daily landing limits (tail weight pounds per DAS: 550 AC, 450 BDH and 475 AC, 375 BDH) were used to determine the number of DAS that could be allocated to the two sets of monkfish permit categories to achieve each target TAC. Calculations of landings per DAS, based on FY2004 data, indicate that a range of DAS allocations, from 16 to 40, are required with the specific allocation dependent upon the TAC and trip limits.

Background

According to regulations laid out in section 649.96(b)(1) of Title 50 of the Code of Federal Regulations (50 CFR 648.96(b)(1)), the Monkfish Monitoring Committee (MFMC) sets the target total allowable catch (TAC) for the SFMA for a given fishing year. The Regional Administrator is charged with setting the daily landing and DAS limits for monkfish permit categories A & C (AC) and B, D & H (BDH) in response to these TAC adjustments.

The target TAC-setting procedure has historically been formulated upon a survey-based index of monkfish abundance. In anticipation of a change to the survey vessel, the Monkfish PDT has devised a TAC-setting mechanism that will remain robust well beyond the departure of the current survey methodology. The TAC calculated via this method (Alternative 1, PDT recommendation), and a TAC based on the index of abundance of the 2005 monkfish survey (Alternative 2, Monkfish Oversight Committee motion), as well as two survey-based TACs that attempt to encapsulate changes to the upcoming 2006 monkfish survey (Alternative 3, no action) were used in an analysis of DAS allocation setting for the SFMA for 2007.

Using Vessel Trip Report (VTR) and dealer-reported data from FY2004, each of these four TACs (6009 t, 5100 t, 5138 t, 4268 t) were analyzed with two sets of daily landing limits: 550 and 450 tail weight pounds per day for permit categories AC and BDH, respectively and 475 and 375 tail weight pounds per day for permit categories AC and BDH, respectively.

DAS allocations for each set of permit categories were analyzed according to the method laid out in 50 CFR 648.96(b)(3)(iii). Basically, this method uses FY2004 vessel reports to adjust trip-level and vessel-level aggregate data down incrementally in an effort to identify DAS levels and

1- Fishery Statistics Office, Northeast Regional Office, NOAA Fisheries

trip limits that will sum to the appropriate allocated TAC for each of two permit categories. The purpose of this report is to describe the assumptions and methods used to arrive at recommended DAS allocations for each TAC/trip limit/permit category combination.

Methods

Data from fishing year 2004 were used for this analysis, as they satisfy criteria that are important to such an analysis: 1) FY2004 FVTR data are the most recent complete reference for predicting landings of monkfish in FY2007, 2) the TAC in the SFMA in FY2004, like in FY2007, was set below 8,000 mt, which required limits of 550 lbs. and 450 lbs. of monkfish tails per DAS for permit categories AC and BDH, respectively, and 3) the FY2004 TAC is greater than any of the options for the FY2007 TAC, implying that fewer DAS will be used in FY2007.

Assumptions

● Landings from permit category E, vessels employing dredge gear, and unknown category vessels will be exactly the same, in terms of live pounds landed, in the SFMA in FY2007 as they were in FY2004. This assumption enables a reasonable reduction of the FY2007 SFMA monkfish quota to account for the landings from category E, vessels employing dredge gear, and unknown category vessels.

● Vessels will use the same number of days in FY2007 as in FY2004, up to the limit available.

● Vessels will comply with the proposed mandated daily landing limits, i.e. the analysis does not account for daily landing limit overages if they did, in fact, occur.

● Fishing and landing patterns will be similar in FY2007 to those experienced in FY2004 as detailed in the text below.

Data Sources

We used the dealer weighout slips and fishing vessel trip reports (FVTR) for FY2004 to collect information for this analysis. The dealer weighout data is considered to be the most accurate accounting of total landings of monkfish. Dealer weighout landings were apportioned by permit category, gear sector and monkfish fishery management area using proportions calculated from the FVTR database. Although the landings reported on fishing vessel trip reports are considered underestimates, the proportions of landings by gear, permit category, and monkfish management area are crucial to this analysis.

Simulations

To estimate landings in the SFMA in FY2007 by permit categories AC and BDH, the proportion of catch for non-dredge AC and BD permit holders was computed for the proportions reported on VTRs. Those proportions were used to estimate FY2004 landings and the FY2007 allocations.

The number of days at sea used by a vessel was calculated by subtracting the date sailed from the date landed for each trip on a VTR submitted by the vessel, summing all trips by each vessel, and rounding any fractional days from this summation up to the next integer. In FY2004 the DAS allocation in the SFMA was 28 DAS plus any carryover. In this analysis, landings were assumed to be at a constant rate per day. The landings at any DAS level for each vessel were calculated by either including all landings if the vessel used fewer days than the proposed DAS level or reducing the landings by an amount proportionate to the days exceeding the specified DAS level. For example, if a vessel landed 1,000 pounds in 30 days of fishing, the calculated landings for 15 days would be 500 pounds. Linear interpolation was used to find the appropriate number of DAS from the resulting range of estimated landings per DAS.

For the 475/375 trip limit extension of this analysis, trip-level data were also used. Daily average landings (on a trip) above 475 tail weight pounds per DAS for permit category AC and 375 tail weight pounds per DAS for permit category BDH were scaled down to those levels, daily average landings below those levels remained static. The analysis was then conducted as the 550/450 analysis described above.

Results

The vessel trip reports database allowed for the categorization of landings of monkfish in FY2004 by permit category and gear sector (Table 1). This enables the allocation of landings from the dealer landings database by management area, permit category and gear sector. Of the total 39.7 million pounds of monkfish landed, 35% (or 13.86 million pounds) were from the SFMA.

Table 1: Summary Statistics for the Southern Fishery Management Area for Monkfish in FY2004.

Permit Category	Permitted Vessels	Reporting Vessels	Reported Trips	VTR Landings (Lbs. live weight)	Percent of total landings	Percent of total landings (excluding incidental landings)	Calculated Dealer WO Landings (lbs.)
AC, non-dredge	356	133	2,689	3,077,729	32%	37%	4,420,413
BD non-dredge	396	205	4,397	5,131,184	53%	63%	7,369,703
E, Dredge	2,241	534	4,823	1,439,153	15%		2,067,481
Total	**2,993**	**872**	**12,165**	**9,648,067**	**100%**	**100%**	**13,857,597**

Source: NMFS Permits and Vessel Trip Report Databases.

The sum of landings from permit category E, from any unknown permit category vessels, and from vessels employing a dredge in the SFMA in FY2004 represented 15% of the VTR reported landings, an estimated 2,067,481 lbs. of live weight. The four alternative FY 2007 allocations recommended by the PDT and the Oversight Committee, including the no action alternative, were reduced by this amount (Table 2). The proportion of landings accounted for by permit categories AC and BD in the SFMA in FY2004 dictate the allocation of landings to the two permit category groups in FY2007 (i.e., if category AC landed 50% of the monkfish in the

SFMA in FY2004 landed by permit categories A-D, then category AC will be allocated 50% of the landings in the SFMA in FY2007). Using their respective proportions of the landings from FY2004, categories AC and BDH receive approximately 37% and 63% of the remaining allocation, respectively (Table 2).

Table 2. Allocation of FY2007 monkfish SFMA recommended TACs.

Permit Category	Percent of ACG/BDH landings	Allocation of 5,100 t TAC (pounds)	Allocation of 5,138 t TAC (pounds)	Allocation of 6,009 t TAC (pounds)	Allocation of 4,268 t TAC (pounds)
AC	37%	3,440,031	3,471,437	4,191,312	2,752,389
BDH	63%	5,736,064	5,788,433	6,988,784	4,589,459
E, dredge		2,067,481	2,067,481	2,067,481	2,067,481
Total		11,243,576	11,327,351	13,247,577	9,409,329

Interpolation of the data to achieve the desired landings targets indicates that AC and BDH should be allocated between 16 and 40 DAS, depending upon the desired trip limit (Table 3).

Table 3. DAS allocations by trip limit and TAC.

Alternative	TAC	Incidental limit	Trip Limit	DAS
1. PDT recommendation – 2007-2009	**5,100 mt**	No action	550/450 (no action)	23
			475/375	31
2. Monkfish Oversight Committee motion– 2007-2009	(1) **5,138 mt**	No action	550/450 (no action)	23
			475/375	32
3. no action, 2006 survey up 50%	(2) **6,009 mt**	No action	550/450 (no action)	34
			475/375	40 (3)
3. no action, 2006 survey down 50%	(2) **4,268 mt**	No action	550/450 (no action)	16
			475/375	20

(1) TAC calculated using current method with FY2005 landings, and assuming 2006 survey index = 2005 survey index.
(2) TAC calculated using current method with FY2005 landings, and observed 2006 survey index. Value cannot be determined until 12/06, after survey is completed. Reliance on Albatross survey renders this option infeasible after 2007.
(3) DAS generated under this TAC would exceed the maximum of 40 DAS by 11 DAS.

It should be remembered that this analysis is extremely sensitive to the assumptions listed above. In particular, if the assumption that days-at-sea usage for the FY2007 will be the same as that of FY2004 underestimates the actual FY2007 usage, then the monkfish TAC could be very quickly exceeded. Use of latent monkfish days could occur if vessel operators switch fisheries because of reduced groundfish day-at-sea, or some other circumstance.

FY2007 Monkfish Northern Fishery Management Area (NFMA) Daily Landings and Days-at-Sea Limit Analysis

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Abstract

The Monkfish Plan Development Team (PDT) has been tasked with analyzing the effects of effort controls, days-at-sea (DAS) constraints and daily landing limits on estimated landings of monkfish in the Northern Fishery Management Area in FY2007. Four alternative total allowable catch (TAC) levels were considered for the analysis. Within each of these four TAC levels, two incidental landing limits, 3 days-at-sea limit alternatives, and alternatives with no days-at-sea and no trip limits were considered. A range of days at sea and trip limit combinations offer management flexibility in the means by which effort is regulated in this fishery.

Introduction

According to regulations laid out in section 649.96(b)(1) of Title 50 of the Code of Federal Regulations (50 CFR 648.96(b)(1)), the Monkfish Monitoring Committee (MFMC) sets the TAC for the NFMA for a given fishing year. Under current regulations, the Regional Administrator has no authority to adjust trip limits or DAS for the NFMA in response to changes in the target TAC. However, among the alternatives being considered in Framework 4 are to establish direct controls over the monkfish fishery in the NFMA by means of trip limits and/or DAS requirements. As a result, the objective of this analysis is to produce a range of trip limit and DAS options under the target TAC alternatives being considered.

The target TAC-setting procedure has historically been formulated upon a survey-based index of monkfish abundance. In anticipation of a change to the survey vessel and a concomitant change in the way monkfish will be assessed, the Monkfish PDT has devised a TAC-setting mechanism that will remain robust well beyond the departure of the current survey methodology. Four TAC alternatives were used in an analysis of DAS allocation setting for the NFMA for 2007: 1) the TAC calculated via the new PDT method (Alternative 1, PDT recommendation, 5,000 t); 2) a TAC based on the index of abundance of the 2005 monkfish survey (Alternative 2, Monkfish Oversight Committee motion, 4,299 t); and 3) two survey-based TACs that attempt to encapsulate changes to the upcoming 2006 monkfish survey (Alternative 3, no action, 5,132 t and 3,471 t).

The PDT analyzed a range of five trip limit/DAS alternatives for each TAC alternative specified above and each of two incidental daily landing limit alternatives (300 lbs. of monkfish tail weight per DAS or no more 25% of all weight of fish on board are monkfish tails, whichever is less and 400 lbs. of monkfish tail weight per DAS or no more 50% of all weight of fish on board are monkfish tails, whichever is less), for vessels fishing in the NFMA. The first four alternatives apply if the Councils adopt NFMA DAS

Alternative 1, requiring vessels to call in a monkfish DAS when targeting monkfish (exceeding the incidental limit). The fifth alternative would apply if the Councils took no action with respect to requiring vessels to call in a monkfish DAS when targeting monkfish (exceeding the incidental limit), that is NFMA DAS Alternative 2. While the analysis of alternatives for the SFMA used specific trip limit options and solved for the resulting DAS, the analysis of NFMA used specific DAS allocations to solve for the trip limits for three of the alternatives. The fourth alternative is based on the Councils taking no action with respect to a monkfish trip limit (no trip limit on a monkfish DAS), and solved for the number of DAS that could be allocated under such a circumstance.

The first two trip limit/DAS allocation alternatives establish monkfish trip limits based on the monkfish DAS allocations that were produced in the analysis of SFMA alternatives for each of the target TAC alternatives. The third alternative sets monkfish DAS at 40, the baseline allocation under the original FMP. The fourth alternative is based on the Councils taking no action with regard to a monkfish trip limit in the northern area (no trip limit on a monkfish/multispecies DAS), and the fifth sets monkfish trip limits that would apply if the Councils do not adopt the NFMA Monkfish DAS Alternative 1.

Using Vessel Trip Reports (VTR) and dealer-reported data from calendar year (CY) 2005, each of these four TACs were analyzed at two different incidental landing limits and three alternative DAS allocations (which varied, depending upon the TAC). Alternatives that allowed for no days-at-sea limitations and for no trip limits were also analyzed for each TAC/incidental landing limit combination.

Trip limits and DAS allocations for each set of permit categories were analyzed with an extension to the method laid out in 50 CFR 648.96(b)(3)(iii). Basically, this method uses CY2005 vessel trip reports, scaled to dealer-reported landings, to adjust trip-level and vessel-level aggregate data down incrementally in an effort to identify DAS levels and/or trip limits that will sum to the appropriate allocated TAC for each of two sets of monkfish permit categories (monkfish limited access permit categories A and C (AC) and monkfish limited access permit categories B and D (BD)), after subtracting for estimated incidental landings. The purpose of this report is to describe the assumptions and methods used to arrive at recommended DAS allocations for each TAC/trip limit combination by permit category.

Methods

Data sources

Data from calendar year 2005 were used as our baseline set, as they satisfy criteria that are important to such an analysis: 1) CY2005 FVTR data are the most recent complete reference for predicting landings of monkfish in FY2007, 2) there were no trip limits for vessels fishing in the NFMA under a monkfish DAS in CY2005, allowing for predicted landings to be scaled down in this analysis, and 3) The dealer weighout data is considered to be the most accurate accounting of total landings of monkfish.

Dealer-reported monkfish landings, while considered more comprehensive than fishing vessel trip reports (FVTR), lack information on the location of and gear used on a monkfish trip. FVTR data, with gear and location information, are thus used to prorate the dealer-reported data by gear, area, and permit category.

Assumptions

● Landings from monkfish permit category E, vessels employing dredge gear, and unknown category vessels will be exactly the same, in terms of live pounds landed, in the NFMA in FY2007 as they were in CY2005. This assumption enables a reasonable reduction of the FY2007 NFMA monkfish quota to account for the landings from category E, vessels employing dredge gear, and unknown category vessels.

• Average daily landings on trips in CY2005 that landed less than the incidental limit (300 or 400 lbs. tail wt. per DAS) will be the same in FY2007 except under the option where monkfish DAS are not required, in which case average daily landings for all trips was used.

● Fishing and landing patterns will be similar in FY2007 to those experienced in CY2005 as detailed in the text below.

Procedures for identification of incidental monkfish landings

The regulations indicate that incidental landings of monkfish must subtracted from the total allowable catch before the remainder can be allocated to the directed fishery. For the SFMA, incidental landings of monkfish are considered to be a combination of monkfish landings by monkfish permit category E vessels, vessels landing monkfish with a dredge, and unknown vessels (reported landings from an unidentified or state-only permitted vessel) . This assumption will also apply to analyses in the NFMA, with one extension: in alternative management scenarios where a monkfish permit category C or D vessel's monkfish DAS allocation DAS could be less than their multispecies DAS allocation, landing of monkfish by those vessels fishing on a multispecies, but not a monkfish, DAS would be included in the incidental landings tally. These incidental landings need to be subtracted from the overall TAC before the remainder is allocated to the directed fishery.

Incidental landings by dredge, monkfish permit category E, and unknown vessels

FVTR's were used to calculate CY2005 monkfish catch by monkfish permit category, gear type, and management area. The proportions of monkfish landed by management area, permit category and gear type from the FVTR's were then applied to dealer-reported monkfish landings to derive total monkfish landings by area, permit category and gear type. Total landings by monkfish permit category E, landings by vessels using a dredge, and any landings by unknown vessels (the sum of these landings are referred to as incidental landings) in CY2005 were then subtracted from each of the proposed FY2007 TACs.

Incidental landings by monkfish permit category C and D vessels

For each of the four TAC alternatives considered in this analysis, four different DAS allocations were considered. Each of these DAS allocations potentially resulted in a situation where a monkfish permit category C or D vessel would be able to use a multispecies DAS while not on a monkfish DAS. Thus, it became necessary to derive a means to account for incidental landings by monkfish permit category C and D vessels, i.e. landings of monkfish by monkfish permit category C and D vessels on a multispecies, but not a monkfish, DAS.

Incidental landings by monkfish permit category C and D vessels fishing in the NFMA on a multispecies, but not a monkfish, DAS were estimated by first identifying all those vessels that had fished in the NFMA in FY2005. Each of the seven (16, 20, 23, 31, 32, 34, 40) proposed monkfish DAS allocations were subtracted from each vessel's DAS usage in FY2005 (FY2005 is used because the database maintains DAS usage by fishing year) and then multiplied by the average tail weight landed per day from trips by category C and D vessels reporting 300 or less or 400 or less tail weight pounds per day in CY2005. Trips reporting 300 or less tail weight pounds per day in CY2005 averaged 76.25 tail weight pounds per day; trips reporting 400 or less tail weight pounds per day in CY2005 averaged 92 tail weight pounds per day (Note: Individual VTR trips were prorated by Dealer weighout total pounds/VTR total monkfish pounds).

Procedures for calculation of DAS allocation and/or trip limits for each TAC/management alternative

As mentioned, trip limits and DAS allocations for each set of permit categories (AC and BD) were analyzed with an extension to the method laid out in 50 CFR 648.96(b)(3)(iii). This method uses the most recent and complete set of vessel trip reports, scaled to dealer-reported landings, to adjust trip-level and vessel-level aggregate data down incrementally in an effort to identify DAS levels and/or trip limits that will sum to the appropriate allocated TAC for each of the two sets of monkfish permit categories after subtracting for estimated incidental landings. In the first set of analyses, trip limits were assigned to the two vessel permit categories at three designated DAS allocations (ranging from 16 to 400 and changing based upon the TAC). The second analysis determined trip limit with no monkfish DAS usage required. The third analysis designated a DAS allocation in a scenario where no monkfish trip limit would be required.

Trip limit calculation with a specified DAS allocation

The number of days at sea used by a vessel was calculated by subtracting the date sailed from the date landed for each trip on a VTR submitted by the vessel, summing all trips by each vessel, and rounding any fractional days from this summation up to the next integer. In this analysis, landings were assumed to be at a constant rate per day. The landings for each vessel at a particular DAS allocation were calculated by either including all landings if the vessel used fewer days than the proposed DAS level or reducing the landings by an amount proportionate to the days exceeding the specified DAS level. For example, if a vessel landed 1,000 pounds in 30 days of fishing, the calculated landings for 15 days would be 500 pounds.

In instances where the estimated total landings at a given DAS allocation still exceeded the allocated TAC for a permit category, a trip limit analysis was conducted. This analysis built upon the DAS analysis by reducing an individual vessel's daily average landings incrementally. If the daily average landings of a vessel exceeded a specified landing limit, that vessel's daily average landings would be reduced to that limit, but remain unchanged if the average were lower than a specified limit. At each trip limit level, this limiting is done for every vessel and the results summed, producing a list of trip limits and corresponding estimates of total landings. An exact recommended trip limit was identified by linear interpolation.

Trip limit calculation with no monkfish DAS required

Under an alternative that required no monkfish DAS to be used in the NFMA, a trip limit analysis was conducted. Incidental landings in this analysis are considered to be the landings by monkfish permit category E, dredge vessel landings and unknown landings only. These incidental landings are subtracted from the TAC allocation, which is then divided between the two permit categories. In a trip limit analysis, days at sea usage in FY2007 is assumed to remain the same as in CY2005. Each monkfish vessel's daily average landings are scaled down until all summed vessel landings are equal to the allocated portion of the TAC for a given vessel permit category.

Days at sea calculation with no monkfish trip limit required

Under an alternative that required no monkfish trip limit in the NFMA, a days at sea limit analysis was conducted. An analysis of this alternative would attempt to solve for the number of DAS that could be fished with no monkfish trip limit and still keep total landings at or below the TAC. Incidental landings in this analysis are considered to be the landings by monkfish permit category E, dredge vessel landings and unknown landings along with an unknown amount of landings by monkfish C and D vessels on a multispecies, but not a monkfish, DAS. The analysis of this alternative presented some difficulty, because without a DAS allocation, incidental landings by vessels on a multispecies, but not a monkfish DAS, would be challenging, if not impossible, to estimate. In a situation with three variables and two unknowns, one can solve for a single unknown if the other unknown is assumed. In a days at sea limit analysis, a vessel's daily average landings in FY2007 is assumed to remain the same as in CY2005. Each monkfish vessel's days at sea usage is scaled down until all summed vessel landings are equal to the allocated portion of the TAC for a given vessel permit category.

No monkfish trip limit or days at sea usage required

Under this alternative, no action is taken to constrain daily trip limits or monkfish days at sea allocation. Incidental landings by monkfish permit category E, unknown, and dredge vessels are subtracted from the NFMA TAC, which is then divided between the two permit categories.

Results and Discussion

Results for identification of incidental monkfish landings

Incidental landings by dredge, permit category E, and unknown vessels
The vessel trip reports database allowed for the categorization of landings of monkfish in CY2005 by permit category and gear sector. This enables the allocation of landings from the dealer landings database by management area, permit category and gear sector (Table 1) and the allocation of FY2007 TAC to each of the two permit categories based upon historical landings. For CY2005, landings by permit category E, dredge vessels, and unknown vessels totaled 1,713,357 live pounds.

Table 1: Summary Statistics for the Northern Fishery Management Area for Monkfish in CY2005.

Permit Category	Permitted Vessels	Reporting Vessels	Reported Trips	VTR Landings (Lbs. live weight)	Percent of total landings (including incidental landings)	Percent of total landings (excluding incidental landings)	Calculated Dealer WO Landings (lbs.)
AC, non-dredge	360	135	2,153	7,463,109	50%	54%	10,672,247
BD non-dredge	390	202	5,846	6,373,512	42%	46%	9,114,123
E, Dredge	2,369	355	5,807	1,198,152	8%		1,713,357
Total	**3,119**	**692**	**13,806**	**15,034,774**	**100%**	**100%**	**21,499,726**

Source: NMFS Permits and Vessel Trip Report Databases.

Incidental landings by monkfish permit category C and D vessels
Incidental landings for each incidental landing limit and DAS alternative combination were calculated by summing estimated landings by multispecies vessels on a multispecies, but not a monkfish, DAS (live weight pounds per day) in FY2007 with landings of permit category E, unknown, and dredge vessels in CY2005 (Table 2). As the incidental landing limit increases from 300 to 400 tail weight pounds per day, the total estimated incidental landings increase. Also, as DAS allocations are reduced, incidental landings increase as more monkfish permit category C and D vessels will fish more days on a multispecies, but not a monkfish, DAS.

Table 2. Estimated incidental landings in the NFMA in FY2007 by DAS allocation and incidental landing limit.

Incidental daily landing limit (tail weight pounds per day) (1)	DAS Allocation (2)	Number of multispecies -only DAS	Incidental landings by multispecies vessels on a multispecies, but not a monkfish, DAS (tail weight pounds per day) (3)	Incidental landings by multispecies vessels on a multispecies, but not a monkfish, DAS (live weight pounds per day) (3)*3.32 = (4)	E+ dredge landings (5)	Projected FY2007 Incidental NFMA landings (live pounds) (4)+(5) = (6)
300	16	8,594	655,293	2,175,571	1,713,357	3,888,928
	20	7,404	564,555	1,874,323	1,713,357	3,587,679
	23	6,522	497,303	1,651,044	1,713,357	3,364,401
	31	4,259	324,749	1,078,166	1,713,357	2,791,523
	32	4,000	305,000	1,012,600	1,713,357	2,725,957
	34	3,500	266,875	886,025	1,713,357	2,599,382
	40	2,423	184,754	613,382	1,713,357	2,326,739
400	16	8,594	790,562	2,624,666	1,713,357	4,338,023
	20	7,404	681,094	2,261,232	1,713,357	3,974,589
	23	6,522	599,959	1,991,863	1,713,357	3,705,220
	31	4,259	391,785	1,300,728	1,713,357	3,014,084
	32	4,000	367,960	1,221,627	1,713,357	2,934,984
	34	3,500	321,965	1,068,924	1,713,357	2,782,281
	40	2,423	222,892	740,001	1,713,357	2,453,358

Results for calculation of DAS allocation and/or trip limits for each TAC/management alternative

Trip limit calculation with a specified DAS allocation

With an estimate of incidental landings by incidental landing limit and DAS allocation, the four alternative TACs (Table 3) could then be reduced and divided between each of the two permit categories.

Table 3. TAC alternatives in metric tons and pounds.

TAC (t)	TAC (lbs.)
3,471	7,652,245
4,299	9,477,673
5,000	11,023,113
5,132	11,314,123

To maintain consistency with the SFMA, DAS allocations calculated for four alternative TACs and trip limits from the SFMA DAS allocation analysis were used as a starting point for the NFMA analysis. An analysis of landings by DAS allocation for each permit category was conducted for the NFMA using vessel trip reports from CY2005. The results of this analysis then were used to determine if estimated landings by a permit

category were reduced to the TAC allocation for that permit category with a reduction in DAS alone, i.e., a trip limit would not be necessary (Table 4).

Table 4. Estimated landings at several allocated DAS levels for the NFMA in FY2007 by permit category.

Allocated DAS	Estimated VTR-reported landings (live lbs.)		Estimated dealer-reported landings (live lbs.)	
	Permit category AC	Permit category BD	Permit category AC	Permit category BD
16	1,482,386	1,905,494	2,119,812	2,724,856
20	1,836,700	2,320,526	2,626,480	3,318,352
23	2,091,508	2,619,333	2,990,856	3,745,647
31	2,731,718	3,305,533	3,906,356	4,726,912
32	2,807,272	3,384,755	4,014,399	4,840,200
34	2,954,715	3,536,542	4,225,243	5,057,255
40	3,374,196	3,918,239	4,825,100	5,603,082

Estimated landings at each DAS allocation by permit category (Table 4) were compared to their respective TAC allocation by DAS allocation (Table 5, identified by rows with assigned DAS allocations and recommended trip limits). Several DAS allocations for vessels in permit category AC were adequate to reduce landings to a level below the TAC allocation. In these scenarios, the trip limit for permit category AC was designated to be 1250 lbs. tail weight per DAS. 1250 lbs. tail weight per DAS was the highest daily average landings recorded for vessels in this permit category.

When the estimated landings by allocated DAS exceeded a given TAC allocation, a trip limit analysis was conducted. In general, as DAS allocation is increased, the recommended trip limit decreases (Table 5). In some scenarios, the recommended trip limit was lower than an incidental landing limit (Shaded cells in Table 5).

Table 5. Monkfish alternatives table for FY2007 in the NFMA, including estimated incidental limits and landings, DAS alternatives, and corresponding recommended daily landing limits. Cells where the trip limit is less than the incidental limit are shaded.

Alternatives	TAC (mt)	TAC (lbs.)	Incidental limit	Estimated incidental landings	AC allocation of TAC	BD allocation of TAC	Trip Limit AC (tail weight/DAS)	Trip Limit BD (tail weight/DAS)	DAS
1. PDT recommendation: 2007-2008	5,000	11,023,113	25%/300 lbs.	3,364,401	4,130,908	3,527,804	1250	886	23
				2,791,523	4,439,903	3,791,687	1250	470	31
				2,326,739	4,690,595	4,005,779	869	338	40
				1,713,357	5,021,437	4,288,319	168	152	No action (MF DAS not req.'d)
				4,000,000	3,792,481	3,230,632	None (No action)	None (No action)	21
			50%/400 lbs. (no action)	3,705,220	3,947,079	3,370,814	1250	683	23
				3,014,084	4,319,859	3,689,170	1250	435	31
				2,453,358	4,622,300	3,947,455	787	327	40
				1,713,357	5,021,437	4,288,319	168	152	No action (MF DAS not req.'d)
				4,000,000	3,792,481	3,230,632	None (No action)	None (No action)	21
2. Monkfish Oversight Committee motion: 2007-2008	4,299	9,477,673	25%/300 lbs.	3,364,401	3,297,338	2,815,934	1250	400	23
				2,725,957	3,641,698	3,110,018	633	271	32
				2,326,739	3,857,025	3,293,908	431	222	40
				1,713,357	4,187,867	3,576,448	128	112	No action (MF DAS not req.'d)
				4,250,000	2,822,943	2,404,729	None (No action)	None (No action)	14
			50%/400 lbs. (no action)	3,705,220	3,113,509	2,658,944	1250	346	23
				2,934,984	3,528,954	3,013,735	565	253	32
				2,453,358	3,788,731	3,235,585	411	214	40
				1,713,357	4,187,867	3,576,448	128	112	No action (MF DAS not req.'d)
				4,250,000	2,822,943	2,404,729	None (No action)	None (No action)	14
3. no action, 2006 survey up 50%	5,132	11,314,123	25%/300 lbs.	2,599,382	4,700,502	4,014,239	1250	452	34
				2,326,739	4,847,558	4,139,826	1250	367	40
				2,326,739	4,847,558	4,139,826	1250	367	40
				1,713,357	5,178,401	4,422,366	177	161	No action (MF DAS not req.'d)
				4,000,000	3,949,627	3,364,497	None (No action)	None (No action)	22
				1,713,357	5,178,401	4,422,366	None (No action)	None (No action)	No action (MF DAS not req.'d)
			50%/400 lbs.(no action)	2,782,281	4,601,851	3,929,991	1250	426	34
				2,453,358	4,779,264	4,081,502	1060	353	40
				2,453,358	4,779,264	4,081,502	1060	353	40
				1,713,357	5,178,401	4,422,366	177	161	No action (MF DAS not req.'d)
				4,000,000	3,949,627	3,364,497	None (No action)	None (No action)	22
				1,713,357	5,178,401	4,422,366	None (No action)	None (No action)	No action (MF DAS not req.'d)
3. no action, 2006 Survey down 50%	3,471	7,652,245	25%/300 lbs.	3,888,928	2,029,834	1,733,483	793	269	16
				3,587,679	2,192,320	1,872,246	493	222	20
				2,326,739	2,872,438	2,453,068	225	137	40
				1,713,357	3,203,280	2,735,608	89	76	No action (MF DAS not req.'d)
				4,500,000	1,702,212	1,450,033	None (No action)	None (No action)	7
				1,713,357	3,203,280	2,735,608	None (No action)	None (No action)	No action (MF DAS not req.'d)
			50%/400 lbs.(no action)	4,338,023	1,787,604	1,526,618	506	208	16
				3,974,589	1,983,631	1,694,025	380	180	20
				2,453,358	2,804,143	2,394,745	215	132	40
				1,713,357	3,203,280	2,735,608	89	76	No action (MF DAS not req.'d)
				4,500,000	1,702,212	1,450,033	None (No action)	None (No action)	7
				1,713,357	3,203,280	2,735,608	None (No action)	None (No action)	No action (MF DAS not req.'d)

Trip limit calculation with no monkfish DAS required

Another alternative for each TAC/incidental limit combination included a no DAS alternative. In this case, the trip limit analysis was conducted on vessels without first reducing their DAS usage (Table 5, rows identified by 'No action (MF DAS not req.'d)' in the DAS allocation column). For every TAC and incidental trip limit analyzed, the recommended trip limit was below the incidental trip limit, a result that would essentially recommend the end of the directed monkfish fishery in the NFMA.

Days at sea calculation with no monkfish trip limit required

Each TAC/incidental limit combination also included a no trip limit alternative. Landings at a particular DAS level were calculated as above (Table 6). The results were used to generate a straight line regression model of landings on DAS allocation (Figure 1). With this model, a set of DAS allocations were solved for over a range of estimated incidental landings (Table 7) and TAC levels (Table 8). The most reasonable estimated incidental landings/DAS allocation combination was then identified (Table 5, rows identified by 'None (no action)' in the Trip Limit columns).

Table 6. Estimated VTR and dealer-reported landings by DAS allocation in the NFMA.

Monkfish DAS Allocation	AC - VTR estimated landings	BD - VTR estimated landings	AC - WO estimated landings	BD - WO estimated landings
5	485,091	652,927	693,680	933,685
10	944,495	1,239,738	1,350,628	1,772,825
15	1,393,109	1,798,807	1,992,146	2,572,294
20	1,836,700	2,320,526	2,626,480	3,318,352
25	2,254,271	2,800,756	3,223,607	4,005,081
30	2,654,165	3,225,474	3,795,456	4,612,428
35	3,027,851	3,604,664	4,329,827	5,154,670
40	3,374,196	3,918,239	4,825,100	5,603,082

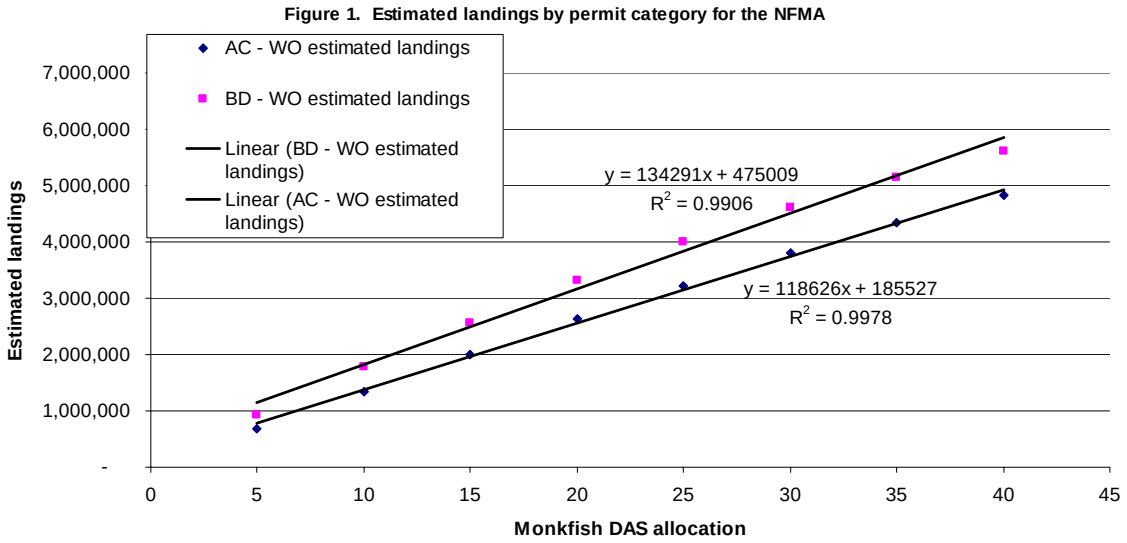

Figure 1. Estimated landings by permit category for the NFMA in FY2007.

Table 7. Proposed assumed incidental landings in the NFMA, based upon the minimum, maximum, median, and mean incidental landings from the main alternatives table 4.

	Estimated incidental catch
Minimum	1,713,357
Maximum	4,338,023
Median	2,453,358
Mean	2,649,022
Alternative 1	4,000,000
Alternative 2	4,250,000
Alternative 3	4,500,000

Table 8. Estimated DAS allocation based upon NFMA TAC and estimated incidental catch.

NFMA TAC (t)	NFMA TAC (lbs.)	Assumed incidental catch	AC TAC allocation	BD TAC allocation	AC DAS allocation	BD DAS allocation
5,000	11,023,113	4,338,023	3,609,949	3,075,141	29	19
5,000	11,023,113	4,000,000	3,792,481	3,230,632	30	21
5,000	11,023,113	2,649,022	4,008,481	3,414,632	32	22
5,000	11,023,113	2,453,358	4,627,668	3,942,088	37	26
5,000	11,023,113	1,713,357	5,027,268	4,282,488	41	28
4,299	9,477,673	4,338,023	2,775,411	2,364,239	22	14
4,299	9,477,673	4,250,000	2,822,943	2,404,729	22	14
4,299	9,477,673	2,453,358	3,793,130	3,231,185	30	21
4,299	9,477,673	2,649,022	3,687,471	3,141,179	30	20
4,299	9,477,673	1,713,357	4,192,731	3,571,585	34	23
5,132	11,314,123	4,338,023	3,767,094	3,209,006	30	20
5,132	11,314,123	4,000,000	3,949,627	3,364,497	32	22
5,132	11,314,123	2,649,022	4,679,155	3,985,947	38	26
5,132	11,314,123	2,453,358	4,784,814	4,075,952	39	27
5,132	11,314,123	1,713,357	5,184,414	4,416,353	42	29
3,471	7,652,245	4,500,000	1,702,212	1,450,033	13	7
3,471	7,652,245	4,338,023	1,789,680	1,524,542	14	8
3,471	7,652,245	2,649,022	2,701,741	2,301,483	21	14
3,471	7,652,245	2,453,358	2,807,399	2,391,488	22	14
3,471	7,652,245	1,713,357	3,207,000	2,731,889	25	17

As with all of the analyses undertaken to provide DAS and trip limits for each alternative, the no trip limit alternative has several underlying assumptions that, if violated, could result in total landings in excess of the designated TAC. The most tenuous of these assumptions is that the daily average landings between CY2005 and FY2007 will remain consistent. Given that many of the monkfish DAS allocations proposed for FY2007 will likely be highly constraining for some vessels in comparison to their CY2005 effort (i.e. days spent targeting monkfish), it is highly likely that many vessels will modify their fishing behavior. In response to severely limited DAS, vessels may focus effort on monkfish well beyond anything seen in CY2005. If this were the case, landings could quickly exceed the allocated TAC under this alternative. Because of the very high likelihood that the assumption of consistency of average daily landings between CY2005 and FY2007 will be violated under this alternative, **we strongly recommend against adoption of the no-trip-limit option**.

No monkfish trip limit or days at sea usage required

Finally, the last alternative considered was a 'no action' alternative where neither days at sea allocations nor trip limits would be required for the two 'no action' TAC alternatives. No recommended days at sea allocations or daily landing limits were calculated for these scenarios (Table 5).

Monkfish Framework 4
APPENDIX III

Monkfish Oversight Committee and Advisory Panel Meeting Summaries
&
Plan Development Team Reports

[ADD 10/31 AP and 11/1 OS summaries]

New England Fishery Management Council

SUMMARY
Monkfish Oversight Committee Meeting
Holiday Inn, Peabody, MA
March 24, 2006

The purpose of the meeting was to review the status of the monkfish rebuilding plan, review Plan Development Team (PDT) and Advisory Panel (AP) comments and recommendations (see March 23 AP Meeting Summary), specify goals and objectives for Framework 4, outline a range of alternatives to be developed and analyzed for consideration in Framework 4. The Committee's recommendations are to be presented to the New England Council for approval at the April 5 Council meeting.

Following a staff presentation on the background of Framework 4, the March 20th PDT meeting, the Committee had a question-and-answer period. The issues raised by the termination of the RV Albatross survey after 2007 was a major concern, since the reliability of the calibration of the RV Bigelow is uncertain. It is unknown whether the status of the stocks relative to their biomass target can be determined in 2009 since the reference points are based on data collected on the Albatross, and the status determination data in 2009 will be primarily collected (2 out of 3 years in the running average) on the Bigelow. These concerns were addressed later by the Committee in its recommendation to the Councils to forward a letter to NMFS and the Science Center regarding the importance of the vessel calibration studies and the cooperative survey.

Following the discussion of the PDT report, the AP chair presented the report on the previous day's AP meeting (see attached). The AP had also used the PDT report as an outline for their discussions, and recommended some modifications and additions for Committee consideration.

The Committee next took up the matter of specifying goals and objectives for Framework 4, using a staff memo and the AP recommendations as a starting point for the discussion. The staff memo provided the following:

4. Adopt a set of management measures that have a reasonable expectation of achieving the monkfish stock rebuilding goals (Bmsy) by 2009, the end of the 10-year rebuilding program.
5. Include measures that, to the extent possible, mitigate the socioeconomic effects of the measures intended to rebuild the stock while not compromising their effectiveness.
6. Develop a program that provides contingencies for anticipated changes in the basis for evaluating stock status with respect to the reference points, specifically the transition to a new trawl survey vessel and the continuation of the triennial cooperative survey.

For reference, the staff also provided the goals for the management plan adopted by the Council in the original FMP. They are:

5. To end and prevent overfishing; rebuild and maintain a healthy spawning stock

6. To optimize yield and maximize economic benefits to the various fishing sectors
7. To prevent increased fishing on immature fish
8. To allow the traditional incidental catch of monkfish to occur.

Motion

To recommend the Council adopt items 1, 2 and 3 from the staff memo as goals for Framework 4. (Ruhle/Lapointe)

After further discussion, the motion was perfected by friendly amendment as follows:

Motion perfected

To recommend the Council adopt items 1, 2, and 3 from the staff memo as objectives for Framework 4 in support of the goals of the original FMP. (**motion passed unanimously**)

The Committee then reviewed the list of measures provided by the PDT for consideration as the basis for achieving the framework objectives. The Committee also reviewed the AP's recommended modifications and additional measures. In most cases, the measures will require further analysis to specify the details, such as specific trip limits or DAS, as well as to develop options within the conceptual outline of the alternatives. The list of alternatives provided by the PDT follows below:

1. A fixed TAC with an annual adjustment of DAS and trip limits if the TAC is exceeded.
2. Fixed trip limits and DAS, including a trip limit in the northern area
3. Reduce or modify the incidental catch limits, particularly the northern area incidental limit that was increased in Framework 2, and possibly the General Category Scallop limit as a result of increased effort in that sector in recent years.
4. Eliminate DAS during the rebuilding program (that is, restore the original Year 4 default measures).
5. Modify the current annual adjustment method to not enable an increase in the TAC is the stocks are behind schedule.
6. DAS leasing, provided such a program can be demonstrated to be conservation neutral within the level of effort that will allow stock rebuilding on schedule. The need for such a program should also be demonstrated, and is likely contingent on the specific DAS and trip limits adopted.
7. Modify or eliminate the DAS carryover provision, recognizing that such a move could cause a short-term increase in effort as vessels use their DAS allocations before they expire.

The Committee clarified #4 by rewording it as follows:

7. Eliminate the directed fishery during the rebuilding period and apply incidental catch limits to all vessels.

The Committee noted that this alternative is included at this stage of the development of the framework, even though it was removed as the Year 4 default measure in the original FMP by

Framework 2, because it represents one in the range of alternatives that could address the rebuilding objective. The Committee discussed that in the final decision this alternative could be rejected on the basis that it is not be consistent with the objective of mitigating socioeconomic impacts, provided other alternatives will achieve the primary objective of rebuilding the stock by 2009.

The Committee discussed the proposal to allow leasing of monkfish DAS (#6), including the details recommended by the AP. The Committee emphasized that any such program cannot result in the activation of latent effort and must be demonstrated to be conservation neutral. If such a program could be developed, it would clearly address objective #2 by allowing fishing operations to more efficiently use invested capital (such as purchased gear). The Committee agreed to forward the alternative in concept, and, if approved for consideration in the framework, will focus on the details, including the strawman program outlined by the AP (see AP meeting summary) in upcoming meetings and after PDT analysis.

The Committee discussed alternative #7 (modify or eliminate carryover DAS) after reviewing language provided as an addendum to the PDT Report outlining an issue with the current carryover DAS measure that could undermine the effort control program. The PDT described the problem as follows:

> *All limited access monkfish vessels will be allowed to carryover up to 10 remaining monkfish DAS from the current fishing year to the next fishing year. There is currently no restriction in the FMP concerning where these carryover DAS can be utilized. Therefore, limited access monkfish vessels fishing in the SFMA that have carryover monkfish DAS may fish these carryover DAS in the SFMA. This would enable these vessels to fish up to an additional 10 monkfish DAS, above the 12 monkfish DAS that they will be restricted to fishing in this area during FY 2006. In addition, due to the restriction on DAS usage in the SFMA during FY 2006, limited access monkfish vessels that do not use their remaining monkfish DAS in the NFMA will have unused monkfish DAS to carryover to FY 2007. As a result, the following could occur: A vessel that has 10 carryover monkfish DAS from FY 2005 could fish 22 monkfish DAS (12 plus 10 carryover) in the SFMA during FY 2006, and then have DAS remaining to carryover up 10 monkfish DAS to FY 2007.*

Based on the preceding, the Committee agreed that further discussion on this matter should take place in the broader context of the effort control measures in the framework.

Based on discussions with members of the gillnet fishery, a Committee member offered an additional alternative for consideration. This proposal would include establishment of a voluntary enrollment program similar to the multispecies Large Mesh category, where gillnet vessels fishing in the Southern Fishery Management Area (SFMA) could increase their available DAS but would be required to use a larger mesh size and have a larger minimum fish size. Trawl vessels were not included in this proposal because their gear is less size selective, and including them could increase the discard rate of sublegal-size monkfish. The Committee agreed to add this to the list of alternatives for consideration, but acknowledged that it would require PDT analysis to determine the specific details and to demonstrate that such a program would be

consistent with the plan objectives and not undermine the rebuilding program. The staff noted that creating another permit category for one area with a different minimum fish size, gear and other requirements or restrictions would increase administration and enforcement difficulties with an already complicated management program.

The Committee also considered an alternative proposal put forth by a member of the trawl sector requesting analysis of a differential trip limit for trawl vessels fishing in the SFMA. In making the proposal, he noted that the court decision throwing out the original differential trip limit was based on the finding that the measure was not adequately justified, not that it violated the Magnuson-Stevens Act or other applicable laws. He pointed out that under the current restrictive trip limit in the SFMA, trawl vessels are fishing in the NFMA because they can do so with no monkfish trip limit, which may be contributing to the decline in the NFMA stocks. The Committee responded that adopting such a proposal would require reallocating a portion of the available TAC from the fixed gear sector to the trawl gear sector to stay within the overall catch targets. The Committee also noted that in Amendment 2, the Councils specifically addressed the issue of the impact of low trip limits on larger, offshore vessels, by creating the Offshore Fishery Program that increased the trip limit in exchange for reduced DAS in the SFMA. On that basis, the Committee declined to forward this proposal to the Council.

The AP recommendations included several additional proposals over what was in the PDT report. Item 8 in the AP recommendations was "to modify the annual TAC formula to cap the adjustment at 25% in either direction while preserving a minimum allocation of DAS." The Committee chair, who also attended the AP meeting, observed that the advisors said that "25%" was not hard-and-fast, but that the idea is to dampen the year-to-year swings in trip limits. Another member of the Committee felt that there are other ways to reduce the whipsawing effect of the current system without committing to a floor or ceiling in the TAC if a larger change is needed. The Committee agreed that the concept should be retained in the list of alternatives, but modified so that the change limit be based on some analysis rather than an arbitrary choice.

The Committee had limited discussion of the AP's alternative 9, which would cap increases in the trip limits to 20% in any year once the stocks are rebuilt and DAS are restored to 40, because this alternative addresses the fishery post-rebuilding while the immediate focus is on achieving the rebuilding goals by 2009. AP alternatives 10 and 11 propose mandatory VMS, either for vessels fishing in the Multispecies Georges Bank Regulated Mesh Area (#10), or for all monkfish limited access vessels (#11). Alternative 10 would also require daily catch reporting, and the purpose would be specific to addressing a loophole where vessels fishing under the NFMA exemption (that allows unlimited monkfish landings on a DAS) are actually fishing in the SFMA on the southern flank of Georges Bank where a trip limit applies. Alternative 11 would not include mandatory daily catch reporting but would enhance enforcement and monitoring of DAS usage.

The AP also proposed (#12) modifying the trip limit and DAS-setting method to base the calculation on a three-year average rather than a single year as a way to reduce the magnitude of year-to-year fluctuations. The Committee discussed this and considered a modification that would use a three-year average in landings as the basis for making the calculation of DAS and trip limits, rather than a single year's data. A second proposed modification would use landings

since 2000, the start of the effort control program under the FMP. One member suggested that at this stage it would be better to direct the PDT to develop alternative ways of calculating the DAS and trip limits in the absence of the current method relying on the trawl survey which could be used to develop the details under Alternatives 1 (fixed TAC) and 2 (fixed DAS and trip limits). He noted that based on the Committee's discussion, two suggestions have emerged: using a three-year average of DAS and trip limits and using a three-year average of landings to calculate DAS and trip limits.

Consensus

To direct the PDT to develop one or more methods to objectively set target TACs for northern and southern fisheries that could be reasonably expected to achieve stock rebuilding by 2009, including the use of three-year average DAS and trip limits and/or three-year average of landings to calculated trip limits and DAS.

The AP's alternative #13 was based on an industry request to move the boundary of the North Carolina/Virginia fishery that was established in Amendment 2. Amendment 2 set this at 38°20' N Lat, which is the northern limit where the seven vessels that qualified for a limited access permit under Amendment 2 can fish for monkfish. These vessels, however, are constrained by the seasonal availability of monkfish and by the turtle closures which extend to 38°00' N Lat. Providing an additional 15 or 20 miles to the north would eliminate the concentration of gear in a narrow zone immediately abutting the turtle closures and enable the affected vessels to use their allocation of DAS which they currently cannot. These vessels voluntarily remove their gear in order to avoid interactions with turtles when water temperature and the presence of other indicator species suggest that turtles will likely be present. Having the ability to move further north would enable the vessels to continue fishing up to the level allocated by the plan, but not to exceed what the plan already allows.

Consensus

To include an alternative that would move the boundary of the permit Category G and H fishery (although, so far, no vessels have qualified for a Category G permit) 15-20 miles northward to minimize the potential for this fishery to interact with sea turtles.

Consensus

Based on the previous discussions, the Committee agreed to forward the following set of alternatives to the Council for consideration in Framework 4:

1) Fixed TAC (not a "hard quota") with annual adjustments of DAS and trip limits if the TAC is exceeded
2) Fixed trip limits and DAS, including a trip limit in the northern area
3) Reduce or modify the incidental catch limits, particularly the incidental catch limit (category E) that was increased in FW2, and the general category scallop possession limit
4) Eliminate the directed fishery during the rebuilding period and apply incidental catch limits to all vessels.
5) Modify the current annual adjustment method so that the TAC is not increased while the stocks are behind in the rebuilding schedule

6) Implement a DAS leasing program if such a program can be demonstrated to be conservation neutral
7) Modify or eliminate the DAS carryover program
8) Modify the annual TAC formula to cap the adjustment in either direction (limit increase or decrease to a level yet to be determined), while preserving a minimum allocation of DAS
9) When the fishery is rebuilt and 40 DAS are restored, limit increases in the trip limit to no more than 20% in any one year
10) Mandatory VMS in the GB regulated mesh area, with mandatory daily catch reporting
11) Mandatory VMS everywhere, possibly to include voluntary submission of CPUE data in addition to other data collection and enforcement functions
12) One or more methods to objectively set target TACs for northern and southern fisheries that could be reasonably expected to achieve stock rebuilding by 2009, including the use of three-year average DAS and trip limits and/or three-year average of landings to calculated trip limits and DAS.
13) Modify the boundary for the Category G and H fishery (the area off North Carolina and Virginia established by Amendment 2)
14) Include the establishment of a voluntary enrollment large mesh category (in the SFMA) for gillnets in exchange for more days-at-sea.

The Committee then considered a consensus statement from the advisors supporting the continuation of the cooperative monkfish survey. The AP recommended the following:

> *The MAP strongly recommends the Council send a letter to the Regional Administrator, the Northeast Fisheries Science Center Director, and the NMFS Assistant Administrator recommending that a third industry-NMFS monkfish cooperative trawl survey be conducted in the spring of 2007, and then annually for a period of 3 to 5 years. In addition to be used to make fishery management decisions, the results will allow an evaluation of the ability of the new NOAA survey vessel to sample the monkfish resource, and its calibration if appropriate. The letter should also clearly indicate that the data collected during the 2007 survey must be used in the 2007 monkfish stock assessment to provide both councils with the best available scientific information.*

Consensus

The Committee agreed that the Chairman would work with staff to draft a letter to NMFS and the Science Center to forward the recommendation with some modifications. First, the letter should highlight the PDT comments regarding the data issues in the transition to a new NMFS survey vessel, and it should stress the need for adequate calibration work. Second, the letter should support a benchmark assessment, using cooperative survey data in 2007. And third, the recommendation should be for 2007 and 2010, not for annual surveys for a period of 3 to 5 years.

Consensus

The Committee recommends that the Council approve drafting a letter to the agency heads (Regional Administrator, Science Center Director, and state agency directors) for those agencies with membership on the PDT seeking their support over the upcoming

months in development and analysis of Framework 4 alternatives. The letter should request that if there are potential scheduling conflicts for the respective analysts, that the agencies inform the Council so appropriate adjustments can be made on the PDT. The letter should also highlight the need for a social scientist to be assigned early in the process.

New England Fishery Management Council

SUMMARY
Monkfish Oversight Committee Meeting
Holiday Inn, Mansfield, MA
June 29, 2006

The purpose of the meeting was to review the analyses and recommendations of the Plan Development Team (PDT) for Framework 4, and to identify alternatives for further development and analysis. Members of the PDT presented the results of their analysis of total allowable catch (TAC) alternatives, and the trip limit and days-at-sea (DAS) measures associated with those TACs for the southern area. The analysis of measures for the northern area is not completed due to additional steps required to estimate the proportion of total catch that would be attributable to the incidental (non-DAS) fishery if vessels are required to use a monkfish DAS and be under a trip limit in that area.

The PDT recommendations are as follows:

- **the target TACs for both stocks be set at 5,000 mt for the final three years of the rebuilding program, subject to possible adjustment if the TAC is exceeded.**
- **the monkfish incidental catch limit in the NFMA be reduced to the original level of 300 lbs. (tail weight) per DAS.**
- **monkfish limited access vessels intending to, or anticipating the possibility that they will exceed the incidental limit be required to call in a monkfish/multispecies DAS when fishing in the NFMA.**
- **vessels fishing in the NFMA under a monkfish DAS be under a monkfish trip limit**
- **backstop alternatives be included in Framework 4, and seeks input from the Committee and Advisory Panel on ways to account for TAC overages.**
- **to not develop and adopt a monkfish DAS leasing program at this time. When stocks are rebuilt, a DAS leasing program could be considered, however, to facilitate analysis of the feasibility of such a program, the PDT recommends that vessels be required to call in a monkfish DAS whenever fishing for monkfish in the NFMA, to provide more information about fishing patterns by fishery participants, and an estimate of "latent" monkfish effort.**
- **to not include an additional large-mesh gillnet permit category in Framework 4.**

Following the presentations, committee members engaged in questions and answers, and further discussion of the analyses with PDT members. One item of discussion was the analysis of measures associated with the TACs in the northern area, specifically the assumptions about the incidental catch portion of the TAC which determines the portion available to distribute to the directed fishery under DAS and a trip limit. The PDT pointed out that as DAS are reduced, more vessels will be fishing under the incidental limit, therefore, the portion of the total TAC available to the directed fishery will decline. The PDT intends to analyze northern area incidental limits of 400 and 300 lbs (tail wt.) per DAS, reflecting the current and prior limits. Some committee members expressed concern that these limits could enable some vessels to have a directed

fishery. The PDT clarified that those are maximum amounts and that the vessel are also limited to a percentage of total fish on board (that is, monkfish can only comprise 25%, under the 300 lb. limit, or 50%, under the 400 lb. limit, of the total weight of fish on board up to the maximum). This rule preserves the "incidental" aspect of the limit, although it is still possible that some vessels target monkfish under incidental limit rule.

Motion

To direct the PDT to also analyze a 200 lb. incidental limit in the northern area (Stockwell/Ruhle) **motion tabled until after the discussion of the presentations, subsequently withdrawn.**

Motion

In order to provide stability and at the same time have a reasonable expectation of achieving the goals of the rebuilding plan, the target TACs should be set at 5,000 mt for the final three years of the rebuilding program, subject to possible adjustment if the TAC is exceeded. In the event that a new option or options is presented and supported by analysis that would allow for a modification of the target TAC, the committee could reconsider the multi-year 5,000 mt TAC at a later date (Ruhle/Nolan)

Some members were concerned that the magnitude of the reduction in the northern area under a 5,000 mt, combined with the impact of other restrictions, such as Multispecies Framework 42 and action being taken to restrict monkfish fishing in some state waters, would be too severe. They advocated consideration of other methods than the synthesized approach behind the PDT's recommendation, and made the following amendment:

Motion to amend

To add another option that is based on the current TAC-setting method, using the FY2005 landings and an assumption that the survey index in 2006 will be the same as that in 2005 for the purpose of determining a 3-yr. average index value (Pierce/Leary, **motion passed unanimously**)

The Committee clarified that the TAC calculated under this proposal would remain fixed for three years. One member of the Committee noted that the PDT recommendation of 5,000 mt is lower than the 5,100 mt analysis results presented in the documents. The PDT noted that the amount is not significantly different than its recommendation, and is the result of rounding error. Nevertheless, committee members felt that such a difference could have an incremental benefit to the industry while not having any significant impact on the rebuilding.

Motion perfected by friendly amendment

To adopt the TAC values in the PDT document, 5,100 mt in the SFMA and 5,000 mt in the NFMA, rather than the rounded value in the PDT recommendation. (Nolan)

Maine motion as amended and perfected passed unanimously.

The Committee discussed the monkfish incidental limit, particularly the concerns that an incidental limit could allow a directed fishery for some vessels and potentially result in increased effort on monkfish, particularly as other opportunities are restricted.

Motion

To request the PDT develop language which will address the Committee's concerns about a directed fishery under the incidental limit, that is, catching only monkfish on trips rather than catching monkfish incidentally to other fishing (Stockwell/Ruhle, **motion passed unanimously**)

Consensus

The PDT should provide committee members with a summary of catch under the incidental limit in the NFMA, as well as the number of incidental permits issued and/or used over the past four years.

Motion

Request the PDT analyze both the 25%/300 lbs. and 50%/400 lbs. incidental limits in developing the DAS/trip limit alternatives for the NFMA (Leary/Stockwell, **motion passed unanimously**)

Motion

To adopt the PDT recommendation that monkfish limited access vessels intending to, or anticipating the possibility that they will exceed the incidental limit be required to call in a monkfish/multispecies DAS when fishing in the NFMA. (Pirece/Ruhle, **motion passed unanimously**)

Motion

That the PDT include analysis of a DAS option that would apply if vessels had no monkfish trip limit on a monkfish DAS in the NFMA (Stockwell/Pierce, **motion passed unanimously**)

The Committee then reviewed the PDT comments on the issues related to developing a TAC backstop provision. Such a provision could be incorporated into the regulations such that an adjustment to management measures would be implemented if the TAC is exceeded, or projected to be exceeded in any year. The PDT report contained several issues and problems with developing such a measure. One Committee member observed that it is difficult to justify a backstop action when the purpose of the framework adjustment is to establish a 3-year plan and avoid the year-to-year changes in regulations, particularly when the specific TAC is not tied to a specific rebuilding rate of fishing mortality, where overages would be a concern. The Chairman directed Committee members to ponder these issues over the next few weeks, to communicate with each other and with the staff, so a solution can be developed at the next meeting.

The Committee then reviewed the PDT recommendation to not develop a monkfish DAS leasing program at this time. The PDT made this recommendation primarily on the basis that it could not develop a program that could be firmly conservation neutral. Among the problems are "latent effort" (DAS allocated in excess of those used), and a lack of data on monkfish effort in the

NFMA, where vessels were able to target monkfish on a multispecies DAS, and, therefore, did not use monkfish DAS. The PDT noted that a leasing program could be developed in the future, when the issues can be resolved.

Motion

> The Committee recommends against developing and adopting a monkfish DAS leasing program at this time (Pierce/Nolan, **motion passed 3-2, with the Chair voting to break a tie**)

One member of the Committee stated that a leasing program should at least be developed so the public can have an opportunity to review and comment prior to a decision. The Chair of the Advisory Panel also stated that the advisors should have an opportunity to develop a program, at least one that would enable vessels leasing multispecies DAS to also lease the associated monkfish DAS. Another member of the industry from the southern are commented that fishermen in his area generally do not support a leasing program at this time because of the risks of delaying rebuilding if latent effort is activated under a leasing program.

Motion

> The Committee supports the PDT recommendation to not develop a large-mesh gillnet DAS category in Framework 4 (Pierce/Leary, **motion passed unanimously**)

One gillnetter from the southern area commented that fishermen he works with would support an increase in the gillnet minimum mesh size to 12 inches with not compensating DAS if it would help the rebuilding program.

The Chairman directed the staff to poll committee members for availability for meetings in August-October period.

New England Fishery Management Council

SUMMARY
Monkfish Oversight Committee Meeting
Hilton Garden Inn, Warwick, RI
September 18, 2006

The purpose of the meeting was to review the analyses and recommendations of the Plan Development Team (PDT) for Framework 4, particularly:

- the target TACs and associated trip limits and DAS alternatives
- target TAC backstop provisions
- Vessel Monitoring System (VMS) requirements and catch reporting
- DAS carryover measures, and
- modification of the permit category H (NC/VA) fishery boundary.

Following a review of these alternatives, the Committee discussed and selected the final range of alternatives to be analyzed and forwarded to the Councils for the final meeting. The Chair noted that the Advisory Panel and Committee would meet prior to the Council meeting to finalize their recommendations for measures to be submitted.

The Committee first reviewed the PDT report which included the following:

- analysis of the target TAC alternative proposed by the Committee at the June 29 meeting
- analysis of the range of trip limit and DAS combinations for both northern and southern fishery management areas (NFMA and SFMA), including the no action alternatives for target TAC, trip limits and DAS. Since the no action alternatives for the NFMA with respect to trip limits and DAS would result in either no monkfish trip limit when a vessel is on a monkfish DAS, or a trip limit that is below the incidental catch limit if a vessel is not required to use a monkfish DAS, **the PDT strongly recommended against both the no-monkfish-DAS requirement and the no-monkfish trip limit alternatives.**
- a range of target TAC backstop alternatives, including no action (no adjustment in the event of a TAC overage), an in-season adjustment (not recommended), and an alternative that would trigger an adjustment to fishing year 2009 trip limits and/or DAS in each area if the landings in 2007 exceeded that area's TAC by more than 10%. Under this alternative, if landings exceeded the target TAC in 2007 by more than 30%, the directed fishery in that area would be closed in 2009 (no monkfish DAS).
- A request for more specificity in the need and purpose of proposed VMS and catch-reporting requirements.
- A range of DAS carryover alternatives, including the no action alternative (10 DAS), elimination of the DAS carryover provision, and modification to the carryover provision, to reflect the reduced number of allocated DAS under the various trip limit/DAS alternatives being considered. **The PDT strongly recommends against 10 carryover DAS because it represents up to 50% of the DAS allowed under the DAS options**

under consideration for 2007. Also, the PDT recommends that monkfish carryover DAS be limited to 4 DAS, or 10% of the baseline monkfish DAS allocation of 40.

- A comment that there is no technical basis for preventing an adjustment to the category H fishery boundary because the DAS allocated to those vessels, and used by them, was accounted for and considered in Amendment 2, and has been incorporated into the DAS/trip limit analyses for the SFMA. The PDT suggests that this is a matter for the Committee to decide as a matter of policy, considering the fairness issue for those vessels who fish in the area that could become accessible to the category H vessels if the boundary is moved
- On the proposal to cap trip limit increases when the fishery is rebuilt to not more than 20%, the PDT suggested it was premature to consider this option because the management regime for the rebuilt fishery has not yet been defined, and, in fact, the reference points will need to be revised due to the retirement of the RV Albatross. Therefore, **the PDT recommends that the Committee remove this provision (addressing rebuilt fishery trip limits) from consideration in Framework 4.**

Following the initial review of the PDT report, Dr. Jay Hermsen presented the detailed analysis of the trip limits and DAS alternatives associated with each target TAC alternative for the SFMA and NFMA.

The Committee's first action was to remove from consideration the target TAC alternative it had proposed at the June 29 meeting. The rationale for this taking this action was that the alternative was based on only one method for calculating the TAC, and was, therefore, less reliable, or less defensible than the alternative recommended by the PDT. Furthermore, the TACs calculated under this method were not significantly different than under the recommended method for the SFMA, 38 mt (less than 1%) higher, and 700 mt (about 14%) lower for the NFMA.

Motion

To move TAC alternative 2 to the "considered and rejected" section of the Framework (Ruhle/Stockwell, **motion passed unanimously**)

The Committee then discussed the results of the trip limit/DAS analysis reports, focusing initially on the need for a DAS leasing program to alleviate the anticipated economic effects of these alternatives in the NFMA. At the June 29 meeting, the Committee voted to not consider developing a leasing program in this framework for several reasons, including that the process of developing such a program would risk delaying the framework adjustment and achieving the primary goal of revising the rebuilding program at the start of the 2007 fishing year. Furthermore, the Committee considered the PDT comments that it could not develop a program that could be firmly conservation neutral. Among the problems noted by the PDT are "latent effort" (DAS allocated in excess of those used), and a lack of data on monkfish effort in the NFMA, where vessels are currently able to target monkfish on a multispecies DAS, and, therefore, do not use monkfish DAS. The PDT noted that a leasing program could be developed in the future, when the issues can be resolved, particularly once vessels in the NFMA are under a monkfish DAS program. Many of these comments were echoed at this meeting. The Committee

decided to postpone further discussion of DAS leasing until after it had completed the other business on the agenda related to Framework 4.

VMS and daily catch reporting

In addressing the PDT's request for specificity on the rationale and details of the proposals to require monkfish vessels to have a VMS and report catches daily (either all vessels or those fishing on Georges Bank under the NFMA letter of authorization), the Committee first considered how many vessels already are required to used VMS, or would be if Multispecies Framework 42 is implemented as proposed. The PDT had provided data that suggests fewer than 50 vessels will not have VMS installed after Framework 42, and most of those vessels would be category A, C or H vessels that fish for monkfish primarily in the SFMA.

One Committee member suggested that if the VMS were required only on vessels fishing in the NFMA, it would reduce the overall cost of this proposal (since probably all vessels will already have the system installed), and it could help to track NFMA effort for the purpose of developing a DAS leasing program. A member of the audience pointed out that the cost of the systems has come down due to competition among vendors, and that the largest cost component is the messaging and pinging for location. These costs could be reduced if there were a power-down provision when a vessel is not on a monkfish DAS. A Committee member commented that with only 12 monkfish DAS this year in the SFMA, the benefits of having those vessels install and use the systems do not justify the expense.

Another member suggested that using the VMS to declare a trip to be on monkfish DAS in the NFMA if the monkfish catch on that trip were to exceed the incidental limit, would increase flexibility and greatly reduce the risk that vessels incur when they have to declare monkfish DAS prior to leaving port. He noted that there is also a safety and bycatch component to this idea, since vessels that are on a monkfish DAS, but were not able to catch their limit before the normal end of the trip may continue to fish until they maximize their catch up to the allowable limit, rather than returning to port with less than the allowable amount.

Motion

> If VMS is adopted in Framework 42, vessels fishing on a Multispecies DAS in the NFMA have to declare a Monkfish DAS using the VMS prior to crossing the demarcation line on returning to port if the monkfish catch exceeds the monkfish incidental limit (Leary/Ruhle)

On further discussion, the Committee perfected the motion, removing the reference to Framework 42 because the idea should be available for consideration regardless of what happens to Framework 42. The Committee also noted that this provision applies to all vessels fishing on a Multispecies DAS in the NFMA, regardless of the port of landing.

Motion perfected

> If a vessel has a VMS and is fishing on a Multispecies DAS in the NFMA, it may declare a Monkfish DAS any time prior to crossing the demarcation line on returning to port or leaving the NFMA if the monkfish catch exceeds the monkfish incidental limit. (**perfected motion passed unanimously**).

The Committee then discussed the proposals to require daily catch reporting using the VMS. One member noted that several research projects are underway for electronic catch recording, and that they are several years away for being ready for widespread use. The Committee questioned both the cost of such a requirement and the benefits, in terms of obtaining more accurate catch information than is already collected via the vessel trip reports and dealing weighout programs. One member also cautioned that the data collected under such a system could result in the future closure of some monkfish fishing grounds. Other members pointed out, in favor of the measure, that it will provide better monkfish effort data at the vessel level that could be used as the basis for developing a DAS leasing program, and that it would alleviate some likely enforcement concerns with two management areas with different DAS and two different trip limits in each area. There is also the safety consideration.

Motion

To move both alternatives requiring VMS and daily catch reporting to the section of alternatives "considered and rejected" (Leary/Ruhle, **motion passed unanimously**)

Target TAC Backstop provisions

After considering the PDT report and recommendation on this concept, the Committee agreed that a backstop provision should be considered, as it would enhance the credibility of the rebuilding program, and would address the uncertainty of the DAS/trip limit measures in the NFMA, where such a regime has not been in place. The PDT proposed that if the 2007 target TAC is exceeded by 10% or less, no adjustment would be warranted, but if the target TAC is exceeded by more than 10%, an adjustment should be implemented for the 2009 fishing year so that the target TAC is not exceeded in that year. The PDT also stated that if the landings in 2007 exceed the target TAC by more than 30%, the adjustment that would be necessary to insure that DAS and trip limits in 2009 do not exceed the TAC would effectively eliminate the directed fishery, therefore 2009 monkfish DAS would be reduced to zero in the area where the overage occurred.

Council staff noted that the committee needed to determine what kind of adjustment they preferred (i.e., an adjustment to DAS or trip limits) for the NFMA, if one is required due to an overage, since this provision needs to be thoroughly defined in order for NMFS to be able to implement the adjustment through a notice action. If an adjustment is required for the SFMA under the backstop provision, DAS would be reduced since the trip limits for that area would already be at the minimum level that allows a directed fishery.

Motion

To include a target TAC backstop alternative as recommended by the PDT, and that any required adjustment would be in the form of DAS reductions as opposed to trip limit reductions (Ruhle/Stockwell, **motion passed unanimously**)

DAS Carryover provision

The committee reviewed the alternatives and PDT recommendation for the DAS carryover provision. Some committee members were concerned about the precedent that might be set for the multispecies fishery if a 10% standard is adopted as recommended by the PDT. They agreed,

however, that a reduction in carryover DAS would be appropriate considering the range of DAS allocations being considered for the monkfish fishery in Framework 4. The committee also agreed that elimination of the carryover DAS would not be appropriate, given that the measure is intended to promote safety by providing a contingency for unforeseen events (weather, breakdowns) for vessels that have retained some DAS for use at the end of the fishing year.

Motion

To recommend a DAS carryover of 6 DAS, or 15% of the FMP baseline of 40 DAS (Ruhle/Leary, **motion passed unanimously**)

Motion

To move the proposal to eliminate the carryover DAS provision to "alternatives considered and rejected" (Ruhle/Leary, **motion passed unanimously**)

Permit Category H Fishery

One committee member pointed out the benefits to affected industry and to protected species if the boundary line were moved 20 miles to the north. Having such a proposal in the document would enable a full dialogue and public comment by affected fishermen prior to a final decision by the Councils.

Motion

To move the northern boundary for the permit category H fishery 20 miles to the north (to 38°40'N) (Ruhle/Leary, **motion passed 3-0 with one abstention**)

Trip limit increases for the rebuilt fishery

Based on the recommendation and comment of the PDT the committee agreed to remove the proposal from consideration in this document. This discussion, however raised the question of what measures would be in place after 2009, or when the fishery is rebuilt. As the PDT noted, with the retirement of the RV Albatross, the FMP will be without measurable reference points unless an alternative approach is developed prior to 2009, and is implemented through another management action.

Motion

To remove from consideration in this framework the proposal to cap trip limit increases in any year when the fishery is rebuilt to 20% (Stockwell/Ruhle, **motion passed unanimously**)

Motion

To sunset (terminate) the DAS and trip limit components of Framework 4 at the end of the 2009 fishing year (Stockwell/Leary)

The maker of the motion stated that the intent of this proposal is to provide increased incentive to resolve the reference point problem and address monkfish management before 2009. This may require additional cooperative surveys and a benchmark stock assessment, or other approaches to addressing the problem with sufficient time to develop appropriate management measures for the 2010 fishing year. The maker also stated that if the measures sunset in 2009, there would be no

DAS or trip limit controls in effect. Some members were concerned that it is unrealistic to expect this issue to be resolved in that short time frame, especially considering that the new survey vessel will only have been operating for one or two years before the assessment needs to be completed.

Motion to amend

To move the sunset date to the end of the 2011 fishing year (Ruhle/Nolan, **motion to amend failed 1-3**)

Main motion passed unanimously

DAS Leasing

As noted earlier, the committee had put off further discussion of developing a DAS leasing program until it completed the other business of Framework 4. By the time this matter came up, it was evident that further substantive progress could not be made at this meeting.

Motion

To task the Monkfish Advisory Panel with developing a DAS leasing program that is cognizant of the need to be conservation neutral, to mitigate the economic concerns of Framework 4 to the Monkfish FMP (Ruhle/Stockwell, **motion passed, 3-1**)

The Advisory Panel chair requested committee members transmit their concerns and comments about DAS leasing so the advisors can address them specifically.

New England Fishery Management Council

SUMMARY
Monkfish Oversight Committee Meeting
Sheraton Ferncroft, Danvers, MA
November 1, 2006

The primary purpose of the meeting was to review the Framework 4 Draft Document and recommendations of the Monkfish Advisory Panel (AP), and make final recommendations to the Councils for measures to be submitted. In addition, the Committee reviewed and discussed AP recommendations for a monkfish DAS leasing program, the monkfish incidental catch on scallop vessels participating in the Closed Area Access Programs, the monkfish incidental catch on General Category Scallop vessels fishing in the Gulf of Maine, and a technical matter relating to the mesh requirements on trawls fishing with 12-inch mesh.

The Committee discussion of Framework 4 followed the format in a decision document prepared by the staff. The meeting summary below incorporates the decision memo, with respect to the Framework 4 discussions, and Section numbers provide reference to the appropriate sections of the 10/27/06 draft Framework 4 document.

Decision 1
TAC Alternatives (3.1) – Alternative 1 (PDT recommended method) or Alternative 3 (no action) The AP recommended Alternative 1.

Motion

To recommend TAC Alternative 1 (5,100 mt and 5,000 mt in the SFMA and NFMA, respectively). (Ruhle/Stockwell, **motion passed unanimously**)

Decision 2
Moratorium on Directed Fishing (3.4.3) – The AP did not support this alternative. The Committee took no action on this alternative, anticipating that it would make alternative recommendations on trip limits and DAS for each area.

Decision 3
NFMA DAS Alternatives (3.2) – Alternative 1 (require MF DAS in the NFMA) or Alternative 2 (no action, MF DAS not required). The AP supported Alternative 1 on the condition that the proposal to allow vessels to declare a monkfish DAS by VMS prior to returning to port is retained.

Motion

To recommend Alternative 1 (require MF DAS in the NFMA) (Stockwell/Ruhle)

The Committee discussed the implications for gear requirements on vessels that start a trip on a multispecies DAS and then declare a monkfish DAS at the end of the trip. This situation would only be an issue for gillnet vessels, who are required under current regulations to use larger mesh

when on a monkfish/multispecies DAS in the NFMA, while trawlers on a monkfish/multispecies DAS are allowed to use the smaller multispecies regulated mesh.

Motion perfected by friendly amendment

If a vessel calls in a monkfish DAS prior to starting a trip, then it must adhere to the monkfish gear requirements. If it starts the trip on a multispecies DAS, and declares a monkfish DAS while at sea, the multispecies gear requirements apply for the entire trip.

The Committee also discussed whether a vessel that started a trip on a multispecies B-regular DAS could "flip" to a multispecies A DAS and then declare a monkfish DAS while at sea. Under the regulations adopted in Framework 3, vessels on a multispecies B-regular DAS operate under the monkfish incidental limit, and are prohibited from directing on monkfish.

Motion perfected by friendly amendment

A vessel must start the trip on a multispecies A DAS to be able to make the at-sea declaration of a monkfish DAS

Motion as perfected (twice) passed unanimously

The Committee discussed the rationale for this provision only applying in the NFMA, and not to vessels fishing in the SFMA. They noted principally that different treatment of monkfish and multispecies vessels in the original FMP was based on a recognition that the two fisheries are distinct in their degree of directivity. In other words, vessels fishing for multispecies in the NFMA have traditionally caught monkfish as a component of their multispecies fishing, and that monkfish fishing was not *per se* a directed activity. Vessels fishing in the SFMA, on the other hand, can, and do direct their effort specifically on monkfish with minimal multispecies incidental catch. For that reason, the original FMP applied different gear requirements in the two areas, and place no restrictions on the monkfish catch on monkfish limited access vessels fishing on a multispecies DAS in the NFMA. The proposal to allow vessels in the NFMA, but not the SFMA, to declare a monkfish DAS while at sea is a recognition that such vessels are far more likely to exceed the monkfish incidental limit while fishing for multispecies on a multispecies DAS than they are in the SFMA.

Decision 4

NFMA Incidental Limit Alternatives (3.3) – Alternative 1 (300 lbs. or 25% of total wt. of fish on board) or Alternative 2 (no action, 400 lbs. or 50% of total wt. of fish on board). The AP did not have a recommendation on these alternatives, noting that a lower limit will discourage directed fishing under the incidental limit, while a higher limit will minimize bycatch. The DPT recommended the lower limit. A member of the audience supported Alternative 2 because under that alternative, permit Category C vessels would have the same trip limit but more monkfish DAS.

Motion

To recommend NFMA Incidental Limit Alternative 1. (Ruhle/Pierce, **motion passed 3-2**)

Decision 5

SFMA Trip Limits/DAS Alternatives (3.4.1) – Alternative 1 (no action, 550/450 lbs.) or Alternative 2 (475/375 lbs.). The decision is whether to reduce the trip limit, or not, and the DAS will adjust proportionally. The AP did not reach consensus on this decision, citing pros and cons of each. The AP stated that they would support an option that would allow vessels the ability to make an annual declaration into one or the other alternative. The PDT did not make a recommendation on either alternative.

The Committee entertained the AP proposal to allow an annual declaration, but were concerned about the administration of the program. A proposed solution would be to adopt one alternative as the default, and allow vessels to declare into the other program.

Motion

To recommend SFMA Trip Limit/DAS Alternative 2 as the preferred alternative (Nolan/Pierce)

Commenters noted that this alternative would be advantageous to inshore vessels, while others, particularly trip boats, or boats that travel from the NFMA to fish in the SFMA, would prefer a higher trip limit to make their DAS more efficient.

Motion to table

To table the discussion of the motion until after the Committee resolves the question of whether to include the choice provision (Stockwell/Leary, **motion to table failed 2-3**)

Main motion failed 1-4

Motion

To recommend SFMA Trip Limit/DAS Alternative 1 (no action) as the preferred alternative. (Leary/Ruhle, **motion passed 4-1**)

Motion

To recommend an enrollment program to allow vessels the ability to select into Alternative 2 at the start of the fishing year (Ruhle/Leary, **motion passed 3-0-1**)

Decision 6

NFMA Trip Limits/DAS Alternatives (3.4.2) – The range of options depends on the outcome of Decisions 1 – 3. The AP did not make a recommendation on these alternatives, again citing the tradeoff between higher trip limits or more DAS. The options under consideration particularly affected Category BD vessels, because under the two most likely options, the trip limits for Category AC vessels are the same, while under Option 2 the DAS are higher. The PDT did not recommend a specific option but strongly recommended against the no-trip-limit option (Option 4).

Motion

To recommend NFMA Trip Limits/DAS Option 1 (daily limit of 1,250 and 886 lbs. tail wt. with 23 DAS) (Leary/Ruhle)

Comments on the motion included:

- A member of the audience representing a group of primarily Category C permitted vessels opposed the motion and supported Option 2, which would give those vessels more DAS at the same trip limit as Option 1. The commenter noted that Category C vessels qualified for a monkfish permit based on significantly higher historical landings than Category D vessels, and the recent landings data illustrate the ongoing dependence of those vessels on monkfish compared to the Category D group.
- A higher trip limit for Category D vessels under Option 1 would make those DAS more efficient
- With fewer DAS under Option 1, vessels would have more days under the lower incidental limit that was already adopted.

Motion failed on a 2-2 vote

Motion

To recommend NFMA Trip Limits/DAS Option 2 (daily limit of 1,250 and 470 lbs. tail wt. with 31 DAS) (Ruhle/Stockwell, **motion failed on a 2-2 vote**)

Motion to reconsider Option 1 (Nolan/Leary) **passed 3-1**

Motion

To recommend NFMA Trip Limits/DAS Option 1 (daily limit of 1,250 and 886 lbs. tail wt. with 23 DAS) (Leary/Ruhle, **motion passed 3-1**) (*Note: the Committee reconsidered this decision under the discussion of Decision 8, DAS Carryover, and voted to recommend Option 2.*)

Decision 7

TAC Overage Backstop Alternatives (3.5) – Alternative 1 would put in place a notice action adjustment to DAS in a management area for FY2009 if the TAC for that area is exceeded in FY2007 by more than 10%, or less than 30%. If the overage exceeds 30%, the DAS allocated to vessels for that area would be reduced to zero. Under Alternative 2 (no action) there would be no adjustment in the event of a TAC overage. The AP did not make a recommendation on these Alternatives, but a majority did not support Alternative 1 out of concern about the uncertainty in the underlying science used to develop the management program. The PDT recommended Alternative 1.

General Counsel noted that the agency looks for backstop provisions when considering approval of management plans. He pointed out that Alternative 1, as written requires publication of both proposed and final rules, but the agency may want to seek a waiver of the proposed rule under the Administrative Procedures Act. He recommended that the language be changed so that the implementation of any adjustment simply be "consistent with the Administrative Procedures Act" rather than an obligation to publish a proposed rule.

Motion

To recommend TAC Overage Backstop Alternative 1 (Nolan/Ruhle)

Comments on the motion included the following:

- The trip limit/DAS setting procedure has been successful in hitting the target TAC in the SFMA, and an adjustment under the backstop will likely not be necessary
- The NFMA has not been under DAS and trip limits up to now, and there is a great deal of uncertainty as to how well the program will work in that area
- Without a backstop provision, NMFS may not approve the action
- If the Council wants to retain control over the management program, and not risk Secretarial action in the event of a TAC overage, then it needs to include a backstop provision

Motion passed 3-1

Decision 8

DAS Carryover Alternatives (3.6) –Alternative 1 (limit carryover to 6 DAS) or Alternative 3 (no action, carryover up to 10 DAS). The AP recommends no action, noting that as DAS are reduced, the economic need for carryover DAS is more urgent. The PDT had recommended a reduction in carryover DAS to 4, which was modified by the Committee to 6 DAS under Alternative 1.

Motion

To recommend DAS Carryover Alternative 3, no action. (Ruhle/Stockwell)

One Committee member commented that a larger number of carryover DAS would increase the likelihood that the TACs are exceeded and that the backstop actions would take effect. During the discussion of carryover DAS, two Committee members expressed a different interpretation of how the DAS program would work across the two areas. They understood that the allocations would be additive up to the maximum of 40 DAS which is the baseline in the FMP. In other words, they understood that if the DAS in the south were 23 and the DAS in the north were 31, that a vessel that fished 31 DAS in the north would still have 9 DAS available to fish in the south. The other Committee members, and the staff noted that this was not suggested at any time during the development of the alternatives, but that a vessel could fish in both areas but would not be able to exceed the higher number of DAS in either area. In other words, in the example above, if the vessel fished more than 23 DAS in the north, then it would not have any DAS available to fish in the south, and could fish the remaining 9 DAS only in the north.

Motion to reconsider Decision 6 (NFMA Trip Limits/DAS Alternatives) (Ruhle/Leary, **motion passed unanimously**)

Reconsidered Motion

To recommend NFMA Trip Limits/DAS (Decision 6) Option 1 (**motion failed 0-4**)

Motion

To recommend NFMA Trip Limits/DAS Option 2 (daily limit of 1,250 and 470 lbs. tail wt. with 31 DAS) (Leary/Ruhle, **motion passed unanimously**)

Motion to bring back to the table the motion concerning DAS Carryover Alternative 3 (Ruhle/Stockwell, **motion passed unanimously**)

General Counsel commented that providing the vessels with ability to fish all of their allocated DAS and also to carryover additional DAS up to the baseline of 40 is not a safety provision, but a way to exceed the effort control limits. In other words, if vessel are allocated 31 DAS in the NFMA, and fish all 31 DAS, they shouldn't be able to claim that they couldn't use their allocated DAS because of weather or breakdowns, which is the purpose for the DAS carryover. The staff noted that this provision will be re-written in the document to clarify that the carryover DAS will be based on unused DAS from the allocated DAS, not the baseline, up to whatever maximum the Councils recommend.

One Committee member sought a friendly amendment to the motion that would recommend a carryover of 6 DAS, instead of the 10 DAS under consideration. The friendly amendment was not accepted.

Motion passed 3-1 (recommending DAS Carryover Alternative 3, no action, 10 DAS)

Decision 9

Permit Category H (NC/VA) Fishery Boundary Adjustment (3.7) –Alternative 1 would shift the boundary 20 miles north, while under or Alternative 2 (no action) the boundary remains at 38°20'N. The AP recommended Alternative 1, in agreement with the objective of reducing interaction between the gillnet fishery and sea turtles. The PDT did not make a recommendation.

Motion

To recommend Permit Category H Fishery Boundary Alternative 1 (Nolan/Ruhle, **motion passed unanimously**)

Decision 10

Sunset provision. The Committee had voted at the previous meeting to include a provision that the DAS and trip limit components of Framework 4 would sunset (terminate) at the end of the 2009 fishing year. The intent of this proposal was to provide increased incentive to resolve the reference point problem and address monkfish management before 2009. Under this proposal, if the measures sunset in 2009, there would be no DAS or trip limit controls in effect.

The Committee started to discuss this proposal but interrupted the discussion to cover other items on the agenda before some interested parties had to leave to catch flights. For the purpose of this meeting summary, the entire discussion of this matter will be included in this section, despite being out of chronological order.

General Counsel suggested that the sunset provision could not be approved on a National Standard 1 basis, and that the Council needs to state what measures will be in place in 2010 barring any further action before that time. The staff pointed out that with the retirement of the RV Albatross, it would be impossible for the FMP to revert to the current system that relies on the survey index to set target TACs.

Motion

To recommend that the measures in place in 2009 will continue in 2010 and beyond, unless the backstop provision eliminates the directed fishery in 2009, in which case measures will be restored to 2008 levels in 2010 and beyond unless the Councils adopt new measures for 2010 (Ruhle/Leary, **motion passed unanimously**)

Monkfish Incidental Catch in Scallop Closed Area Access Fisheries

Representatives of the scallop industry had requested that the Councils clarify their intent with regards to the monkfish incidental catch lmits applicable to scallop dredge vessels fishing in the Closed Area Access Programs. Prior to Scallop Framework 18, those vessels were on a Scallop DAS, and the incidental limit was 300 lbs. tail wt. per DAS. In Framework 18, however, the Closed Area Access program was modified, such that participating vessels were given a scallop trip limit, and no longer charged a DAS, or a DAS equivalent. As a result, NMFS informed those vessels that the monkfish incidental limit would not be that applicable to vessels on a scallop DAS, but rather that which applied to vessels fishing with a dredge and not on a scallop DAS. That limit is 50 lbs. per day up to a maximum of 150 lbs..

The AP and the Committee reviewed preliminary observer data from Closed Area Access trips for 2004, 2005 and part of 2006 to determine whether such a change was necessary to minimize bycatch, or if the current limit was sufficient. The concern is that if the increased limit was not necessary to prevent discards, it could create an incentive to target monkfish to supplement trip revenues. This concern is magnified by the fact that dredge vessels are not size selective, increasing the risk that discards of sublegal-size monkfish could also increase under the higher incidental limit. The data presented was not sufficient to clarify whether an increase is needed.

Several people commented that scallop vessels engaged in the Closed Area Access programs have a financial incentive to return to port with their limit of scallops rather than expend additional time fishing for monkfish in order to fill their incidental limit. They argued that the relative value of monkfish, compared to the scallops would not justify continuing to target monkfish when the scallop limit is reached, especially considering the high cost of fuel. The AP recommended, therefore, that the scallopers be allowed the same bycatch levels as currently allowed on a scallop DAS. One industry representative suggested to the Committee that since all participating vessels must declare their participation in the Closed Area Access Program via the VMS, it would be possible to apply the daily limit only to the time actually fishing in the area, and not to include the steaming time. The commenter also suggested that this would be an interim solution until such time in the future when a complete review of all available data could be completed, and an appropriate incidental limit established for these vessels.

Motion

To recommend the Councils consider adopting a 300 lbs. tail wt. per day incidental limit while a vessel is in the Closed Area Access Fishery, not to include steaming time. (Stockwell/Ruhle, **motion passed unanimously**)

General Counsel advised the Committee that such an action would have to be done through a framework adjustment, and could not be a regulatory amendment or technical correction. The

Committee agreed that the intent of the motion would be that the Councils add this provision to Framework 4.

Monkfish DAS Leasing

At the June meeting, the Committee voted to remove DAS leasing from consideration in Framework 4, primarily because it did not see how a conservation-neutral leasing program could be developed in sufficient time to be adopted in Framework 4 without risking delay to the entire package beyond the start of the 2007 fishing year. At its September meeting, however, the Committee requested the AP to continue developing a leasing program. The AP reviewed a strawman proposal designed to address the Committee's concerns but opinions were mixed. Those who opposed the proposal were concerned about the impact of potential effort shifts that could undermine the rebuilding program, ultimately resulting a closure of the fishery under the backstop provisions or other reactive action. Those supporting a leasing program stressed that it is important to mitigating the economic impact of the restrictions being proposed in Framework 4, particularly in the NFMA. In general, however, even those opposed to a leasing program at this time support the concept of leasing or some other way of consolidating limited allocations of effort in the long term.

Motion

> To include a leasing program for the NFMA in Framework 4, but to delay implementation until DAS have been in place for one year (Ruhle/Stockwell)

One Committee member noted that without a fully detailed and analyzed leasing program in the Framework 4 document, it would have to be done through another regulatory action. In response, a member of the public noted that in Multispecies Amendment 13, the Council asked the agency to develop the leasing program and implement it through proposed and final rule. Even though it was not actually implemented that way, the process was established. General Counsel pointed out that the leasing program was implemented through the emergency interim rule, and was only temporary. The agency cannot implement a permanent program unless it is through a Secretarial amendment.

The Committee stressed again that any leasing program be conservation neutral, and that it may include a conservation tax on leased DAS to achieve that objective.

Motion perfected by friendly amendment

> To recommend the Council initiate Framework 5 for the sole purpose of implementing a monkfish DAS leasing program for the 2009 fishing year. The program will have the standard of being conservation neutral to the extent possible and may include a conservation tax as a means to achieving conservation neutrality, and it will incorporate DAS data from the 2007 fishing year.

Perfected motion passed unanimously

Monkfish incidental limit on General Category Scallop vessels in the Gulf of Maine

At the industry's request, the Committee considered whether to recommend allowing General Category Scallop vessels fishing in the Gulf of Maine to retain an incidental catch of monkfish.

Currently, those vessels are fishing under a Multispecies Exempted Fishery regulation that prohibits the retention of any species other than scallops. The commenter noted that at the time the exempted fishery was established, those vessels almost never caught anything but scallops, but now they have an occasional monkfish incidental catch that they are required to discard.

Motion

To recommend that General Category Scallop vessels fishing within the exemptions granted under the groundfish plan be allowed the same monkfish incidental catch allowed in small dredge fisheries in other management areas, that is, 50 lbs. tail wt. per day to a maximum of 150 lbs. (Leary/Stockwell, **motion passed unanimously**)

Other business

A member of the Committee asked that it consider a correction to the large mesh regulations for trawl vessels in the southern area, noting that when the 12-inch mesh codend requirement was put into the regulations, the number of meshes to which that requirement applied was not adjusted from that which applied to the 6-inch mesh. This creates a requirement that the codend be twice as long and is not practical. He also noted that vessels fishing with this mesh have virtually no groundfish incidental catch, yet they are required to use a multispecies DAS for each monkfish DAS. He suggested that the multispecies DAS usage requirement be reduced to ½ DAS for each monkfish DAS used when fishing with this gear.

Consensus

The Committee requested the staff to provide additional background on this rule for discussion at the Council meeting.

Monkfish Advisory Panel Meeting
March 23, 2006
Peabody, MA

Advisors in attendance:

Timothy Froelich, David Fryberg, Chris Hickman, Allyson Jordan, Louis Julliard, Matt Linnell, Dean Pesante, Ted Platz, Maggie Raymond (Chair), Barbara Stevenson (Vice-Chair), David Walker, Kevin Wark

The Monkfish Advisory Panel (MAP) agreed to recommend to the oversight committee the following goals for Framework 4 to the monkfish fishery management plan:

Goals:

1) Adopt a set of management measures that will get the plan back on track to achieve rebuilding by 2009
2) Mitigate the socioeconomic impacts of measures necessary to rebuild the stock by 2009
3) Improve fishery dependent and independent data collection
   - Increase frequency of cooperative survey (include industry gillnet survey in inshore and deep water); survey full range of the stock
   - Increase number of survey points in the inshore waters (including gillnets)
   - Increase collection of water temperature data
   - Achieve more timely collection of landings data
4) Confirm bycatch levels and mitigate discards
5) Minimize effort shifts to other areas and/or fisheries

The MAP recommends that the committee explore the following management tools to achieve the plan goals.

Management tools:

15) Fixed TAC with annual adjustments of DAS and trip limits if the TAC is exceeded
16) Fixed trip limits and DAS, including a trip limit in the northern area
17) Reduce or modify the incidental catch limits, particularly the incidental catch limit (category E) that was increased in FW2, and the general category scallop possession limit
18) Eliminate DAS during the rebuilding program (that is, restore the original default measures)
19) Modify the current annual adjustment method so that the TAC is not increased while the stocks are behind in the rebuilding schedule
20) Implement a DAS leasing program if such a program can be demonstrated to be conservation neutral
21) Modify or eliminate the DAS carryover program
22) Modify the annual TAC formula to cap the adjustment at 25% in either direction, while preserving a minimum allocation of DAS

23) When the fishery is rebuilt and 40 DAS are restored, limit increases in the trip limit to no more than 20% in any one year
24) Mandatory VMS in the GB regulated mesh area, with mandatory daily catch reporting
25) Mandatory VMS everywhere
26) Use a 3-year average for DAS and trip limits
27) Modify the southern area boundary (the area established by Amendment 2)

The MAP recommends consideration of the following **DAS Leasing Strawman**:

Objective to provide economic relief during rebuilding without increasing effort in the short or long term

1) DAS can only be leased on an annual basis
2) DAS may be leased only in units of one
3) Leased DAS may not be carried over
4) Options for transferability between vessels:
    - No restrictions on hp and length between transfers
    - Same hp & length restrictions as groundfish DAS leasing program
    - No transfers from vessels to those with lengths greater than 20% and hp greater than 25%
    - Length and hp conversion formula considered and rejected in groundfish Amendment 13
5) Options for numbers of DAS a vessel may lease:
    - No limit on number of DAS a vessel may lease
    - Only DAS active in the prior year may be leased
    - Only DAS active in the prior two years may be leased
    - Limited by original baseline (e.g. vessel may lease up to 40 DAS from other vessels)
    - Vessels with C&D permits must also lease groundfish and/or scallop DAS

6) Area options:
    - DAS may be leased only in the SFMA
    - DAS may be leased in both management areas

7) The lessee retains DAS history usage
8) The lessor retains landings history
9) Options for duration of the program
    - Indefinite
    - Indefinite with authority given to Regional Administrator to terminate (termination conditions to be developed)
    - Sunset after two years

Additional consensus statement by MAP:

The MAP strongly recommends the Council send a letter to the Regional Administrator, the Northeast Fisheries Science Center Director, and the NMFS Assistant Administrator recommending that a third industry-NMFS monkfish cooperative trawl survey be conducted in the spring of 2007, and then annually for a period of 3 to 5 years. In addition to be used to make fishery management decisions, the results will allow an evaluation of the ability of the new NOAA survey vessel to sample the monkfish resource, and its calibration if appropriate. The letter should also clearly indicate that the data collected during the 2007 survey must be used in the 2007 monkfish stock assessment to provide both councils with the best available scientific information

The MAP requests that the committee make the following recommendations to the PDT regarding data analysis:

1) Incidental catch rates from observer and VTR data in both management areas for the range of fisheries (especially the small mesh fisheries in the SFMA and the general category scallop fishery in the NFMA
2) Monkfish catch rates on vessels in the NFMA (with C& D permits) that exceed the incidental limit by gear, and separate the catch rates by C& D permit. On trawl trips separate those that catch monkfish with round fish and those that catch monkfish with flatfish
3) Impacts of DAS cuts and differential DAS counting in multispecies fishery, as well as impact of elimination of monkfish as target in B DAS program
4) Consider different trip limits in NFMA, specifically a higher trip limit for monk/multispecies DAS than for monkfish only DAS

October 31, 2006

Monkfish Advisory Panel

Advisors Present: Timothy Froelich, David Fyrberg, Chris Hickman, Allyson Jordan, Louis Julliard, Jim Kendall, Stephen Lee, Matt Linnell, Dean Pesante, Ted Platz, Maggie Raymond (Chair).

Advisors Response to Decision Document:

Decision 1 TAC Alternative: Advisors support TAC alternative 1, primarily because it will provide more stability in terms of business planning than the yearly changes that result from the current TAC determination method (no action alternative).
Decision 2 Moratorium on Directed Fishing – Advisors do not support this option

Decision 3 NMFA DAS Alternative – The advisors support alternative 1, but only if administered exactly as proposed, that is, vessels will declare a monkfish DAS prior to entering port (not prior to leaving dock).

Decision 4 Incidental Catch Limit for multispecies & category E permits– The advisors were unable to reach a consensus. In general the lower incidental catch will discourage a directed fishery, while the higher incidental catch will discourage discards.

Decision 5 SFMA DAS & Trip Limits – The advisors were unable to reach consensus. In general, neither option works well for trip/offshore boats. Option 1 is more efficient for vessels that burn a lot of fuel, while the no action alternative allows boats to spread out the market and pick weather days to fish.

However, the advisors would support development of an option that would allow vessels to make a yearly declaration choice between trip limit/DAS options 1 and 2.

Decision 6 NMFA Area Trip Limit & DAS – The advisors were unable to reach a consensus. The discussion focused again on the pros and cons of the incidental catch limit, because the incidental catch limit impacts the trip limit for C&D permits.

Decision 7 Backstop – The advisors were unable to reach a consensus. The advisors expressed great concern regarding the inexact science used to assess the status of the resource, and reiterated the position that a industry cooperative survey is essential. 2 members of the advisory panel support a backstop provision, while 9 do not.

Decision 8 DAS carryover – The advisors recommend the no action alternative. As monkfish DAS are reduced, the economic need for carryovers becomes more urgent.
Decision 9 – Permit Category H Fishery Boundary Adjustment – The advisory panel supports alternative 1 in agreement with the objective to reduce the interaction of gilllnet fishing gear with turtles.

Monkfish DAS Leasing – Initially, the advisors expressed concern about the potential for a

DAS leasing program to delay implementation of the FW. Several advisors from the SFMA were adamantly opposed to consideration of a DAS leasing program, at this time, due to concerns about the uncertain impacts of such a program on the status of the resource (exceeding the TAC, shifts of effort), but the advisors, in general, also recognize that DAS leasing would provide economic relief and mitigate discards. Ultimately, the advisors agreed to support consideration of a DAS leasing option, if the program can be limited to the NFMA, at this time.

Monkfish Bycatch in Scallop Closed Access Area Program – The advisors recommend that the scallopers be allowed the same monkfish bycatch level (for the closed area access programs) as currently allowed on a scallop DAS.

Monkfish Bycatch in General Category Scallop Fishery – the advisors recommend that general category scallop vessels fishing within the exemptions granted under the groundfish plan be allowed the same monkfish bycatch level allowed in small dredge fishery in other management areas (50 lbs/day up to a total of 150 lbs/trip).

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Frank Blount, *Chairman* | Paul J. Howard, *Executive Director*

MEMORANDUM

DATE: March 21, 2006

TO: Monkfish Committee members

FROM: Phil Haring, Monkfish PDT chair

SUBJECT: PDT comments and recommendations on Framework 4

The Monkfish Plan Development Team met on March 20 in Woods Hole. The purpose of the meeting was to identify the issues to be addressed in Framework 4 and the technical and scientific problems confronting managers in the upcoming years, to outline some management alternatives that the Council could consider for addressing those issues, and to specify short-term and long-term analysis needs to support development of Framework 4.

Initial discussions focused on the scientific basis for managing monkfish, the reference points and the methods used for measuring stock status on an annual basis, specifically the autumn trawl survey. Of particular concern to the PDT is the transition to a new survey vessel, the RV Bigelow, scheduled to begin this year, and to replace the RV Albatross in 2007 with only one year of calibration studies. The implication of this change is that in 2009 the data used for evaluating stock status will be collected on a different platform than that used as the basis for the biomass reference points, that is, the Albatross survey. It is unknown how reliable any conversion factors might be. 2007 will be the first year of the three-year average used to determine the ultimate success of the 10-year rebuilding plan, yet two of three data points will be collected on the new vessel.

It will be difficult to compare indices collected on the new vessel to reference points based on data collected by the old vessel. The PDT emphasizes the importance of being able to reliably compare the new time series with the old series, and cautions that we may not be able to reliably determine whether the plan has achieved its rebuilding objective in 2009. One solution would be to revise the biomass reference points by 2009, basing the revision on either the new survey vessel or on cooperative survey data, but the PDT notes that such revisions would probably need to be undertaken in a full amendment rather than a framework adjustment. In the short term, the PDT recommends moving away from an annual reliance on the autumn survey to measure stock status, and implementing management measures that would not require annual adjustment based on survey results in 2007-2009.

The PDT also reviewed the issues that have been identified as the need for starting Framework 4 at this time. They are:

1. The stocks are lagging behind in the rebuilding schedule, and both stocks need to double over the next three years as measured by the survey biomass indices.
2. Under the current method of annual adjustments, the southern area fishery is subject to annual swings in the TAC and associated days-at-sea and trip limits, which may not be appropriate given the stock status and which create difficulties for vessels and shoreside businesses.
3. There is no direct control on monkfish fishing effort in the northern area due to the lack of trip limit when a limited access vessel is on a multispecies DAS. Monkfish management in the northern area is principally the consequence of management actions taken in the Multispecies FMP. While the trend in the Multispecies fishery regulations has been increasingly restrictive over the past several years, there is not assurance that such a trend will continue every year, nor that sufficient safeguards are in place to prevent effort shifts to monkfish as groundfish opportunities are cut back.
4. Under the current method of setting monkfish TACs, the TAC can increase even if the stock is behind schedule, as occurred in 2005 in the southern area.
5. The newly adopted differential DAS counting in the Multispecies FMP creates complications for the management and control of monkfish effort that are not well understood.

The PDT then discussed possible changes to the management measures that could be considered in Framework 4 to address the identified issues. At this stage, the PDT did not comment on the efficacy of the proposals, nor on the pros and cons of them. The purpose of this part of the discussion was simply to compile a range of alternatives in order to frame the discussion at the Committee and Council level. The alternatives identified by the PDT include:

8. A fixed TAC with an annual adjustment of DAS and trip limits if the TAC is exceeded.
9. Fixed trip limits and DAS, including a trip limit in the northern area
10. Reduce or modify the incidental catch limits, particularly the northern area incidental limit that was increased in Framework 2, and possibly the General Category Scallop limit as a result of increased effort in that sector in recent years.
11. Eliminate DAS during the rebuilding program (that is, restore the original Year 4 default measures).
12. Modify the current annual adjustment method to not enable an increase in the TAC is the stocks are behind schedule.
13. DAS leasing, provided such a program can be demonstrated to be conservation neutral within the level of effort that will allow stock rebuilding on schedule. The need for such a program should also be demonstrated, and is likely contingent on the specific DAS and trip limits adopted.
14. Modify or eliminate the DAS carryover provision, recognizing that such a move could cause a short-term increase in effort as vessels use their DAS allocations before they expire. (See addendum at the end of this report)

The PDT noted that this list is intended to promote discussion of the full range of reasonable alternatives, and that decisions on further development should be done objectively and based on

analysis of their impacts. On that point, the PDT restated the technical problems with projecting stock rebuilding under various scenarios of effort, and the need to be objective and realistic about the efficacy and impacts of various alternatives.

The PDT then outlined some initial analysis tasks, of which one of the most important at this time is to determine the levels and trends of incidental monkfish catch by fishery and area, particularly on the General Category scallop vessels. The PDT stated that this framework document will also serve as the SAFE Report for the 2005 fishing year, and that all of the data work needed for that report should be completed on the timetable of the framework document, recognizing that the 2006 autumn survey results will not be available until a couple of weeks before the document is scheduled to be submitted.

Addendum

The following description of the DAS carryover situation was provided at the request of the PDT, as a statement of the problem:

> All limited access monkfish vessels will be allowed to carryover up to 10 remaining monkfish DAS from the current fishing year to the next fishing year. There is currently no restriction in the FMP concerning where these carryover DAS can be utilized. Therefore, limited access monkfish vessels fishing in the SFMA that have carryover monkfish DAS may fish these carryover DAS in the SFMA. This would enable these vessels to fish up to an additional 10 monkfish DAS, above the 12 monkfish DAS that they will be restricted to fishing in this area during FY 2006. In addition, due to the restriction on DAS usage in the SFMA during FY 2006, limited access monkfish vessels that do not use their remaining monkfish DAS in the NFMA will have unused monkfish DAS to carryover to FY 2007. As a result, the following could occur: A vessel that has 10 carryover monkfish DAS from FY 2005 could fish 22 monkfish DAS (12 plus 10 carryover) in the SFMA during FY 2006, and then have DAS remaining to carryover up 10 monkfish DAS to FY 2007.

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MEMORANDUM

DATE: June 20, 2006

TO: Monkfish oversight Committee members

FROM: Phil Haring, Monkfish PDT Chair

SUBJECT: PDT report and recommendations on Framework 4

The PDT has met twice, and held at least three conference calls to develop recommendations to the Committee on Framework 4.

Target TACs

The primary focus of the PDT discussions and associated analyses has been to establish target TACs necessary to develop and/or evaluate measures intended to achieve the framework objectives. The basis of monkfish management advice is fraught with technical difficulties such as a lack of an analytical assessment, inability to determine current fishing mortality rates and conduct projections for evaluating rebuilding strategies, reliance on a trawl survey index as the primary indicator of stock status, and uncertainty in the magnitude of historical catches. A shortage of knowledge of basic monkfish biology (reproduction, stock definition and inter-relationships, full species range, and life history) also contributes to the difficulty in formulating management advice. In light of these difficulties, the PDT explored a wide range of different methods that could be used to calculate appropriate target catch levels, including recommendations from the Oversight Committee. After careful review, the PDT narrowed the list down to nine methods, and from that list derived a recommendation for a single target TAC for each stock. Although the recommended TAC cannot be analyzed to determine whether it will, in fact result in the needed rebuilding, it represents the PDT's best estimate of a target catch that will facilitate stock building and maintain a limited directed fishery, consistent with Framework 4 objectives.

The PDT will present its analysis and supporting statements at the June 29th Committee meeting, and a the report on its analysis is attached ("Preliminary Estimates of Fishing Year 2007-09 TAC's for monkfish"). **The PDT recommends that the target TACs for both stocks be set at 5,000 mt for the final three years of the rebuilding program, subject to possible adjustment if the TAC is exceeded (see discussion below).** It is only coincidence that the target TACs for both northern and southern stock areas are the same.

Management measures

The PDT is in the process of calculating alternative combinations of trip limits and DAS that it expects will achieve the target TACs. Pending completion of the analysis and review by the PDT, these alternatives will be presented at the June 29th meeting. Since the recommended TAC

for the southern area is higher than that in the current fishing year (2005), the restrictions would be relaxed from their current level, but would still be below the levels in any other year under the FMP. For the northern area, the TAC is a reduction of 35% from the FY2006 TAC, and a reduction of 49% from the FY2005 landings (9750 mt based on observed landings through January of 7,558 and projected landings for Feb.-April). The PDT has the following recommendations for management measures to be considered in Framework 4:

The PDT recommends that the monkfish incidental catch limit in the NFMA be reduced to the original level of 300 lbs. (tail weight) per DAS. Framework 2 increased the incidental limit to 400 lbs. because the stock was nearly rebuilt and there were no other management restrictions to relax in the Monkfish FMP. Effort in the NFMA fishery is controlled by the restrictions in the Multispecies FMP, as there is no monkfish trip limit on limited access vessels fishing on a multispecies DAS. The PDT analyzed this recommendation for potential impact on discards, and determined that it would not likely increase discards based on the observed catch of vessels fishing under the higher limit.

The PDT recommends that monkfish limited access vessels intending to, or anticipating the possibility that they will exceed the incidental limit be required to call in a monkfish/multispecies DAS when fishing in the NFMA. The PDT reviewed the attached analysis, "Estimated Impact of Groundfish Framework 42 on Monkfish", and concluded that the reliance on effort controls in the Multispecies FMP, without additional monkfish-specific restrictions, would be insufficient to achieve the levels of reduction necessary to achieve the target TAC. In addition, as noted below in the discussion of the recommendation on DAS leasing, requiring vessels to use monkfish DAS in the NFMA will facilitate a future analysis of monkfish DAS usage that is necessary to develop a conservation-neutral leasing program, when such a program is developed.

The PDT recommends that vessels fishing in the NFMA under a monkfish DAS be under a monkfish trip limit. The PDT will provide alternative DAS/trip limit combinations for consideration in Framework 4. These alternatives will be calculated using the same method as that applied to the SFMA since Framework 2. First, the expected incidental catch will be subtracted from the TAC, and the remaining target catch will be applied to the directed fishery. After pro-rating the dealer landings data based on VTR reported landings and days absent to create a distribution of landings per trip, the catch will be reduced through an iterative process until a limit can be determined that will produce total landings equal to the target TAC. This analysis assumes that trips caught less than a given limit will catch the same in the next year, while trips over that limit will stop fishing for monkfish, thereby "saving" the fish over the limit. The analysis will also factor in a reduction in days available to target monkfish, providing alternative trip limit/DAS scenarios.

<u>Backstop provisions</u>

The PDT discussed the need to have a backstop provision in the event the TAC is exceeded, or projected to be exceeded in any given year. **The PDT recommends that backstop alternatives be included in Framework 4, and seeks input from the Committee and Advisory Panel on ways to account for TAC overages.** The issues, questions and discussion points raised by the PDT include the following:

1. Rather than waiting for the full year landings data to become available to identify and implement any needed adjustments, the PDT suggests that landings through January be the basis for taking action so that the measures can be in the year immediately following the year in which the overage occurs (or is projected to occur). This is especially important considering that 2007 will be the first of only three years remaining in the rebuilding plan. If the TAC is exceeded by January, then projections will be needed to determine the likely amount of the overage by the end of the fishing year. If the TAC is not exceeded by the time the determination needs to be made for an adjustment to be implemented, then projections will be required to evaluate whether the TAC is likely to be exceeded. Since this process involves projections of landings for the final quarter of the fishing year, the question arises whether there be some tolerance in the calculation, or a percentage of overage below which no action would be taken. If in fact the overage does occur, the amount of the overage could be applied to the projections made in the second year.
2. The range of possible adjustments should be specified and analyzed in Framework 4, and the regulations should be written so that the adjustments could be taken by notice action.
3. The Committee and Advisors should provide input on the range of adjustments that should be considered. Since trip limits will likely to be at the minimum level a directed fishery could operate under without causing discards, and to maximize the number of DAS available, the adjustment will likely come out of DAS allocations. If DAS need to be reduced, would a delayed start to the directed fishery, or a closed season for the directed fishery mitigate the economic impacts, by allowing directed fishing during the seasons of highest market demand?

TAC for rebuilt stocks

The PDT discussed whether it is possible at this time to calculate the TAC for rebuilt stocks. If possible, such information would be useful to evaluate costs and benefits of various conservation strategies under the rebuilding program, and would provide some concrete incentive to adopt the most conservative approaches so that rebuilding could occur at the fastest rate. The PDT concluded, however, that total allowable catches for a rebuilt stock cannot be reliably estimated with currently available methods and data. The methods employed in this framework use landings time series either alone or combined with the biomass index time series (relative exploitation indices), but their ability to produce the required rebuilding is unknown. To calculate a reliable value for Fmsy or a good proxy, an analytical assessment, using one of several alternative methods is necessary, and that, in turn will give us the ability to calculate the TAC for rebuilt stocks. The PDT anticipates that ongoing data collection efforts (including the cooperative surveys) will lead to an analytical assessment and estimate(s) of long term sustainable yields.

DAS leasing

The PDT discussed DAS leasing as a way to mitigate some of the economic impacts of conservation restrictions needed under the rebuilding program. The PDT discussed leasing in general and reviewed the DAS leasing proposal presented to the Oversight Committee at its

March 23 meeting. **The PDT recommends against developing and adopting a monkfish DAS leasing program at this time for the reasons cited in the attached document, "PDT Recommendation on Monkfish Days-At-Sea Leasing Program". When stocks are rebuilt, a DAS leasing program could be considered, however, to facilitate analysis of the feasibility of such a program, the PDT recommends that vessels be required to call in a monkfish DAS whenever fishing for monkfish in the NFMA, to provide more information about fishing patterns by fishery participants, and an estimate of "latent" monkfish effort.**

Southern Fishery Boundary

The PDT discussed the proposal to move the boundary of the monkfish fishery off the NC/VA coast (currently 38°20', established in Amendment 2) northward by 10-20 miles. The industry requested this measure because of the limited space and season available to prosecute their fishery as a result of both the seasonal availability of monkfish in the area and the constraints of the turtle closures. At this time, the six or seven participating vessels must operate in a zone that is only 20 miles wide, and have no room to move northward if sea turtles are observed in the area. The PDT could not reach agreement on this proposal because some members were concerned that moving the boundary, and consequently enabling the vessels to expand their effort would compromise the rebuilding program. Other members noted that these vessels are factored in to the allocation of DAS and trip limits under the SFMA TAC, and would not be allocated any additional portion of the TAC under this proposal. Furthermore, they noted that moving the boundary northward would enable the vessels to move from areas where turtles are observed and continue fishing under their allocations. To resolve this difference, the PDT will be analyzing the effort and catch of the affected vessels over the past several years to determine whether there would a potential negative impact on rebuilding as a result of the move. The PDT is currently analyzing catch and effort data for the affected vessels and may have a recommendation in the near future.

Large-Mesh Gillnet Proposal

The PDT discussed the proposal for a large-mesh gillnet category which would give participating vessels more DAS than otherwise would be allocated. **The PDT recommends against including an additional large-mesh gillnet permit category in Framework 4.** The PDT reached this conclusion primarily because of the technical problems in trying to calculate an appropriate pro-rating of DAS based on a nominal increase in gillnet mesh sizes. The data on actual meshes in use and the associated catch composition is not adequate. The PDT recognizes that some, if not many vessels have already been using meshes larger than the minimum size, so simply looking at the fishery-wide catch composition would not work. There is insufficient data on gillnet selectivity of monkfish across a range of fishery conditions and for the larger mesh size, so even calculating a theoretical pro-rating is not possible. Furthermore, the PDT recommends against creating yet another permit category or two in this already complicated FMP.

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Thomas R. Hill, *Acting Chairman* | Paul J. Howard, *Executive Director*

MEMORANDUM

DATE: August 30, 2006

TO: Monkfish Oversight Committee members

FROM: Phil Haring, Monkfish PDT Chair

SUBJECT: PDT report and recommendations on Framework 4

The PDT met on August 28 in New Bedford to review the analysis of trip limit/days-at-sea (DAS) alternatives, and to finalize its recommendations to the Committee on a range of measures under consideration in Framework 4.

Trip Limit/DAS Alternatives

Dr. Jay Hermsen presented the results of his application of the trip limits/DAS calculation method to the various target TAC alternatives previously agreed upon by the Committee. These results are presented in the attached reports covering the SFMA and NFMA. The analysis of most of the options was fairly straightforward, using the method that has been used for the past four years for the SFMA, however, two of the alternatives for the NFMA were somewhat problematic and required special consideration in the analysis: the no-DAS option (where the use of monkfish DAS would not be required on vessels targeting monkfish in the NFMA); and the no-trip limit option (where vessels on a monkfish DAS or monkfish/multispecies DAS have no trip limit, as under current regulations).

The analysis of projected landings under options where vessels have monkfish DAS (on which they can target monkfish, and multispecies-only DAS where they are fishing under an incidental limit) uses 2005 observed average landings of vessels catching less than the incidental limit (approximately 76 lbs. under the 300 lbs. limit and 92 lbs. under the 400 lbs. limit). These analyses assumed that those catches would remain the same if vessels have DAS on which they can target monkfish and DAS on which they would be subject to the incidental limit.

If vessels are not required to use a monkfish DAS (the no-DAS option), the PDT analysis indicates that the trip limits necessary to keep catches below the target TAC are well below the levels under the proposed incidental catch alternatives, effectively eliminating the directed fishery. Furthermore, under the no-DAS option, if the average catch equals the incidental limit (either the 300 lbs. or 400 lbs./DAS maximum), then the projected catch would exceed the target TAC, and be nearly double the TAC under the higher incidental limit. If the average catch under the incidental limits remains at the level observed in 2005 for vessels catching less than the incidental limit, which is unlikely, then the projected catch would be about ½ the TAC. {ref. Table]. As a result, the PDT notes that even with no directed fishery (all vessels fish under the incidental catch limit), there is still a high risk of exceeding the TAC under either incidental

catch alternative. **The PDT strongly recommends against the no-monkfish-DAS alternative for the NFMA because even if all vessels fish under the incidental catch limit, the total catch is projected to exceed the target TAC.**

The no-trip limit alternative presented a more technical problem. There are three variables involved in the analysis: the total incidental catch (which is used to apportion the total TAC to the directed fishery), the trip limits, and the DAS. When DAS are known, the total incidental catch can be calculated and a directed fishery TAC can be established, which in turn can be used to solve for the applicable trip limit. However, when the measure specifies no trip limit, and the analysis must solve for the applicable DAS, there are two unknown variables (DAS and incidental portion of the total catch), requiring that an assumption be made about the incidental catch, so that the number of allowable DAS under no trip limit can be calculated. Making such an assumption can be done but it significantly increases the uncertainty in the projected total catch, especially considering that vessels will likely change their behavior and increase their monkfish catch on monkfish DAS, if such DAS are limited and no monkfish trip limit applies. Furthermore, changes in behavior in reaction to the implementation of Multispecies Framework 42 will cause future catches of monkfish per DAS to increase over what was observed in 2005, as vessels seek to make up lost revenue from groundfish by increasing their monkfish catch per DAS if monkfish trip limits are not applied. **Therefore, the PDT strongly recommends against the no-monkfish-trip limit alternative.**

Target TAC Backstop Alternatives

The PDT then discussed the need to account for the uncertainty inherent in controlling fishing through inputs such as DAS and trip limits. Since the analysis used in designing fishing effort controls is based on data collected in previous years, and, in some cases, involves making reasoned assumptions about fishing behavior, there is some level of risk that the measures will not achieve their objectives, especially when actions taken in other management plans affecting monkfish vessels will cause future fishing behavior to be different than what was observed in the recent past. While the method that has been applied to design trip limits and DAS for the SFMA has been highly successful in achieving the target TACs over the past four years, there is no assurance that such success will continue, and that it will also occur in the NFMA, where monkfish DAS and trip limits have not yet been applied. Therefore, the PDT proposes that the Committee consider a backstop provision that would readjust the management measures in the event the target TAC is exceeded.

The PDT considered two broad approaches to backstopping the plan: an in-season adjustment, and a one-time adjustment for the third, and final year of the rebuilding plan based on performance in the first year. Whichever method would be selected, it would be analyzed and drafted in such a way that the adjustment could be made by notice action, without the need for discretionary authority, proposed rulemaking or further environmental impact documentation. Upon further discussion of these two approaches, the PDT concluded that an in-season adjustment was not practical and could be self-fulfilling.

The PDT agreed that, from a practical perspective, the lag time in availability of landings data coupled with the fact that the peak fishing season occurs during the late fall and early winter months would mean that the in-season adjustment would only affect the last month of the fishing

year, at which point it becomes an adjustment for the subsequent year, based on partial year data. Since full-year landings data are not available for several months after the start of the next fishing year, making an adjustment in the second year would effectively be an in-season adjustment. The PDT observed that if vessels anticipated an in-season adjustment, they would use their DAS early in the year to prevent losing them under an in-season adjustment (or, if the adjustment were to the trip limit, they would use their DAS when they could land more per DAS before the adjustment), thereby increasing the likelihood that such an adjustment would be necessary. Not having an in-season adjustment would increase the flexibility of vessels to plan their fishing strategy over the entire year.

The PDT then discussed what level of TAC overage should trigger an adjustment, given the uncertainty in the analyses used to design the input controls, and the fact that the target TAC is not based on a fishing mortality rate target. The PDT agreed that if the 2007 target TAC is exceeded by 10% or less, no adjustment would be warranted, but if the target TAC is exceeded by more than 10%, an adjustment should be implemented for the 2009 fishing year so that the target TAC is not exceeded in that year. Though an adjustment to the management measures would be made, overages would not be deducted from the following year (i.e., not a quota system).

The PDT also concluded that if the landings in 2007 exceed the target TAC by more than 30%, the adjustment that would be necessary to insure that DAS and trip limits in 2009 do not exceed the TAC would effectively eliminate the directed fishery, especially since the adjustment would occur one year after the TAC overage, and not in the year immediately following. For this reason, and pending approval by the Councils, the environmental assessment will analyze a range of overages between >10% and 30% to determine the impact of trip limit and/or DAS adjustments to achieve the target TAC in 2009, as well as a closure of the directed fishery (in the event the 2007 TAC overage is greater than 30%). This analysis will provide the basis for establishing a notice action adjustment, should one be necessary, without further action by the Councils.

If an adjustment were indicated (i.e. the 2007 overage was between 10% and 30%), in the SFMA, the DAS would be reduced using the same adjustment method that has been used in prior years, since SFMA trip limits are set at the lowest practical level for a directed fishery. In the NFMA, the Councils need to decide which measure, trip limits or DAS, would be reduced. If the Councils indicate trip limits should be reduced, then they should also determine if there is a minimum trip limit for the directed fishery, which would trigger a reduction in allocated DAS (as is the case in the SFMA). In either case, the associated DAS and/or trip limits will be calculated using the existing method, based on revision to the catch (both the directed and incidental) and effort data input to the calculation, using 2007 data (the year in which the TAC overage occurred).

VMS requirements and catch reporting

In support of the two proposals requiring monkfish vessels to use VMS, the PDT examined preliminary data on the number of vessels by permit category that already have VMS installed. Unfortunately, there appeared to be an error in the data, and the PDT did not discuss this matter further, although, the PDT noted that following implementation of Multispecies Framework 42 a

significant number of additional vessels will have VMS installed. The PDT also agreed that both the enforcement and scientific benefits (of daily catch reporting) need further discussion, once the actual number of VMS enabled vessels is known.

DAS carryover

The PDT discussed the effect of the current rule allowing 10 carryover DAS on the effort control program under the rebuilding plan, when monkfish DAS are reduced. The PDT noted that the number of carryover DAS was established at a time when multispecies vessels had far more DAS allocated than under current rules. The PDT agreed that as a percentage of total monkfish DAS allocations, even under the baseline of 40 DAS, the allowance of 10 DAS as a carryover could seriously undermine the effort control program. Therefore, **the PDT recommends that monkfish carryover DAS be limited to 4 DAS, or 10% of the baseline monkfish DAS allocation of 40.** This recommendation would be one of three carryover DAS alternatives for consideration in Framework 4.

The second carryover DAS alternative would be to eliminate the carryover altogether. While this alternative would reduce the "slack" in the effort control program design, it would not address the other issues which are the basis for the carryover DAS provision, namely, safety and vessel repairs. The third carryover DAS alternative is no action, retaining the 10 carryover DAS. **The PDT strongly recommends against 10 carryover DAS because it represents up to 50% of the DAS allowed under the DAS options under consideration for 2007.** The PDT commented that allowing 10 carryover DAS greatly increases the likelihood that an adjustment to the DAS will be required in 2009 under the proposed backstop provisions.

North Carolina/Virginia fishery boundary

The PDT reviewed DAS and landings data for vessels holding category G and H permits. The PDT concluded that there is no technical basis for preventing an adjustment to the boundary because the DAS allocated to those vessels, and used by them, was accounted for and considered in Amendment 2, and has been incorporated into the DAS/trip limit analyses for the SFMA. Therefore, the PDT suggests that this is a matter for the Committee to decide as a matter of policy, considering the fairness issue for those vessels who fish in the area that could become accessible to the category G and H vessels if the boundary is moved.

Trip limit increases when the fishery is rebuilt

The PDT briefly discussed a proposal under consideration in Framework 4 that would limit trip limit increases to 20% annually when the fishery is rebuilt. The PDT members agreed that it is premature to address this matter at this time, and that the proposal should be considered in the broader context of a future regulatory action that deals with the full management program for the rebuilt fishery. At this time, there is no program design for managing the rebuilt fishery, and furthermore, addressing this matter at this time is not appropriate since the biological reference points will have to be revised prior to that time (due to the changeover in survey vessels and the anticipated stock assessments). Therefore, **the PDT recommends that the Committee remove this provision (addressing rebuilt fishery trip limits) from consideration in Framework 4.**