

6.4 Economic Impacts (Preliminary Regulatory Economic Evaluation)

The proposed management changes contain a variety of measures that, if implemented would have an impact on vessels that participate in monkfish fisheries. These measures include decoupling of DAS, changes in DAS counting, gear changes (minimum mesh and trawl mesh configuration), minimum fish size, closed seasons, and provisions for a special access program in the SFMA as well as qualification for fisheries South of 38 deg. N. In addition, the Amendment contains provisions to address bycatch, Essential Fish Habitat, cooperative research, and exemptions for vessels fishing outside the U.S. EEZ. For the most part, the economic impact of these potential changes will have some monetary impact but are very difficult to quantify. For this reason, much of the following contains a qualitative assessment of how vessels will be affected relative to taking No Action. Even though a quantitative assessment is not possible, in many cases the type of vessel that may reasonably be expected to be affected can be identified. Thus, wherever possible the number of vessels that may be affected is estimated.

6.4.1 Separation of DAS

Of all the management measures considered herein, separation of monkfish DAS from scallop and groundfish DAS would have the largest potential impact on affected vessels. Since this measure would only affect vessels that have either groundfish or scallop DAS allocations, separation of DAS would have no direct impact on the 55 Category A & B limited access or the 2,138 Category E open access vessels that held a monkfish permit in the most recent complete fishing year (2002), given that Fleet DAS would remain at current levels. Since proposed individual DAS allocations are based on past performance the impact would be minimal, even though some vessels would see an increase and others a decrease in allocation. Under individual DAS, the overall level of effort (cumulative of all vessels) is not being reduced.

The economic impact of separating DAS on the 328 Category C and 334 Category D permit holders will depend on whether they hold a groundfish or a scallop permit and whether they fish, or plan to fish, exclusively in one management area or both. Thus, for purpose of discussion the 662 C&D permit holders are sub-divided into four different groups; vessels that have a scallop permit; vessels that have a groundfish permit that fish exclusively in the NMA; vessels with a groundfish permit that fish exclusively in the SMA; and vessels that have a groundfish permit that fish in both management areas. Note that multispecies combination permit holders (Category E) will be treated as a special case of a scallop vessel.

Separation of DAS would not make any vessel worse off than they would be under No Action since all vessels will have the choice to have separated DAS or to fish under current regulations. In either case, vessels would retain the ability to fish a groundfish or scallop-only DAS, a monkfish-only DAS, or a combined DAS. Therefore, the economic impact of either Alternative 1A or Alternative 1B is likely to be positive, or at worst neutral, relative to No Action (Alternative 2).

6.4.1.1 Scallop Vessels

There were 176 scallop permit holders among the 662 C&D vessels, of which, 155 were Category C vessels. A total of 40 scallop permit holders also held a combination (Category E) multispecies permit. Under No Action a scallop vessel may choose to use a monkfish DAS but

must forego the opportunity to use a scallop DAS to do so, since scallop vessels cannot direct on monkfish and scallops with a dredge or a scallop net. With separation of DAS, scallop vessels could choose to fish a monkfish-only DAS without having to give up a scallop DAS. Given current allocations, full-time permit holders would be able to use scallop gear for 120 DAS and then target monkfish using either large mesh trawl or gillnet gear for an additional 40 DAS.

Given, current resource conditions in the scallop fishery there is little economic incentive to use a monkfish-only DAS because the opportunity cost of losing a scallop DAS is too high. With separation of DAS, scallop vessels would be able to diversify their business into a directed monkfish fishery without compromising scallop sales. Note that this does not necessarily mean that all scallop vessels will take advantage of the opportunity since it would require installation of a net reel as well as the purchase of nets. In addition, vessels with little experience in a directed trawl or gillnet monkfish fishery may be less inclined to take advantage of the separation of DAS. Note, however, scallop vessels that do decide to add directed monkfish activity to their overall business would be competing with other limited access permit holders for a limited resource which could result in a change in the distribution of monkfish revenues among vessels. If scallop vessels choose to fish with gillnets it may also contribute to increased gear conflicts with other vessels as competition over limited bottom would increase.

Even though separation of DAS would offer scallop vessel owners an opportunity to expand their business, this opportunity would be enhanced under Alternative 1B compared to Alternative 1A. Neither alternative would have any affect on scallop activity but Alternative 1B would make it possible for a scallop vessel to use monkfish-only DAS in either the NFMA or the SFMA, whereas, Alternative 1A would mean that, if enrolled, the vessel could only use a monkfish-only DAS in the SFMA.

6.4.1.2 Multispecies Vessels

While the general impact on scallop vessels is unambiguous, the impact of separation of DAS for limited access multispecies vessels is less clear largely because the regulations under which a vessel may participate in the monkfish fishery depend on area fished, and absent an exempted trawl fishery in the NFMA, gear used. For this reason, multispecies vessels have been subdivided into three categories based on area fished.

6.4.1.3 Vessels that Fish Exclusively in the NFMA

Alternative 1A - This alternative would require an annual declaration to decouple DAS in the SFMA only. Such a declaration would mean that the vessel could still declare on a trip-by-trip basis whether a monkfish-only or a combined DAS were being used but could only fish for monkfish in the SFMA. Vessels that do not declare for decoupled DAS would fish for monkfish and multispecies under No Action regulations.

For vessels that fish for monkfish exclusively in the NFMA the economic effect of Alternative 1A would be unchanged relative to No Action since the trip-by-trip choices available to these vessels would be unaltered. That is, assuming a 40 DAS monkfish allocation, a vessel with a total of 50 groundfish DAS would still be limited to fishing a maximum of 50 DAS for either monkfish or groundfish and would still be able to fish up to 10 groundfish-only DAS without a monkfish trip limit. By contrast, if a vessel did declare into the SFMA it would be possible to fish up to a total of 50 groundfish-only and 40 monkfish-only DAS but would not be able to use

a monkfish-only or a combined DAS in the NFMA. Thus, while vessels that fish monkfish only in the NFMA may elect to have separation of monkfish DAS, to do so would require a complete change in fishing location which could require a change in home port as well. Such a decision seems unlikely to make economic sense particularly when the majority of vessels that fish for monkfish only in the NFMA also fish for all other species exclusively in the NFMA.

Alternative 1B - This alternative would require an annual declaration to decouple DAS but would not require an area designation. Vessels that elected to have separated DAS would still declare on a trip-by-trip basis whether they are fishing a groundfish-only, a monkfish-only or a combined DAS but would have to fish as Category E vessel in both management areas on a groundfish-only DAS. For vessels that fish exclusively in the NFMA this condition means that the vessel would not be able to fish without a monkfish trip limit on a groundfish-only DAS. Vessels would still retain the option to fish without separated DAS, under the No Action rules. Compared to No Action, Alternative 1B would provide greater flexibility to vessel owners and would allow them to choose whichever option would be most likely to improve economic performance.

At least until an exempted fishery has been established for a monkfish trawl fishery in the NFMA trawl vessels that fish only in the Northern area may not be likely to declare for separated DAS since there would be nowhere to fish on a monkfish-only DAS in the North. This means that potential gross revenue could actually decline relative to No Action because the vessel would be limited to fishing 40 combined DAS and 10 groundfish-only DAS with a 400 pound per DAS trip limit. If the same vessel elected to fish under No Action it would be able to fish up to 50 groundfish DAS with no monkfish trip limit.

Depending on fishing patterns, gillnet vessels may be better off with separation of DAS since an exempted fishery already exists in the NFMA. This means that gillnet vessels would have an opportunity to increase total fishing days for monkfish and groundfish, although they may still not elect to have separated DAS if they still want to preserve the option to fish a groundfish-only DAS without a monkfish trip limit.

6.4.1.4 Vessels that Fish Exclusively in the SFMA

Alternative 1A - For vessels that fish exclusively in the SFMA Alternative 1A would provide an opportunity to increase the total number of DAS that could be used in groundfish and monkfish fisheries combined. Unlike, their Northern counterparts, declaration into separated monkfish DAS would be advantageous since they already fish monkfish only in the SFMA. Additionally, SFMA vessels would not be giving anything if they chose to fish a groundfish-only DAS since the monkfish trip limits would be the same as No Action. The actual mix of ground fish-only, monkfish-only, or combined DAS that a vessel may choose cannot be predicted but Alternative 1A would give vessel owners greater flexibility than they have now; enhancing their ability to operate a profitable business. Note that vessels that do not elect to have separated DAS would fish under No Action alternatives which would leave vessels owners no worse off than their current position.

Alternative 1B - Alternative 1B would have the same economic impact on vessels that fish for monkfish exclusively in the SFMA. Vessels would still be able to elect to have separated DAS or not and would still be able to declare into a monkfish-only, groundfish-only, or combined

DAS on a trip-by-trip basis. Alternative 1B would provide vessels with greater flexibility, however, because vessels would be able to fish a monkfish or a combined DAS in the NFMA. Having this choice does not necessarily mean that vessels that fish only in the SFMA would actually choose to shift some effort to the Northern area since most of these vessels fish for all species only in the Southern area and many of them are based out of ports in Southern New England or Mid-Atlantic states. Nevertheless, Alternative 1B would provide vessels with greater flexibility and an opportunity to improve profitability compared to either No Action or Alternative 1A.

6.4.1.5 Vessels that Fish in Both Management Areas

Alternative 1A - For vessels that do not elect to have separated DAS there would be no economic impact relative to Alternative 2 since these vessels would fish under No Action rules.

Presumably, vessel owners that do declare into a separated DAS for the SFMA would do so because they believe they can be more profitable. These vessel owners would be able to continue to fish for monkfish in the SFMA but would have to give up any directed monkfish trips that may have been taken in the NFMA and they would no longer be able to take a groundfish-only trip in the NFMA and fish without a monkfish trip limit.

Alternative 1B - Alternative 1B would generally have the same impact as that of Alternative 1A but would provide vessel owners with more flexibility. Specifically, vessels owners would be able to fish for monkfish on either a monkfish-only or a combined DAS instead of being limited to the SFMA-only for directed monkfish fishing.

6.4.1.6 Fleet DAS Allocations

Under No Action, limited access monkfish vessels are based on a fleet-wide allocation of 40 DAS. The intent of the Council was to develop a management program that would adjust either DAS allocations or trip limits needed to achieve a target TAC. However, due to deficiencies in available data, no reliable method for estimating DAS allocations could be developed. This means that allocations consistent with Option 1a(2) (Variable trip limits/uniform DAS by permit category) could not be estimated. Similarly a uniform DAS allocation with a variable trip limit (Option 1a(1)) other than the current fleet allocation could not be estimated. Therefore, fleet allocations may not change from No Action levels while adjustments in trip limits as prescribed under existing conditions (implemented through Framework 2) would continue to prevail.

In some respects retaining the current fleet allocation system would have no economic impact on vessels since DAS allocations would not change. In other respects fleet allocations retain a certain amount of latent effort in the monkfish fishery making it difficult to keep up with activation of latent effort which, in turn, compromises development of a DAS leasing program. Given changes in both scallops and groundfish, some vessels may want to be able to increase their monk fish activity but would not be able to do so without leasing. While fleet allocations could be adjusted to permit increased activity by some vessels but could not do so without also increasing allocations to all vessels; both active and inactive.

6.4.1.7 Individual Allocations (Alternative 1, Option 1b)

As proposed individual allocations would be adjusted annually based on target TAC's, incidental catch set-asides, and expected catch rates in the directed fishery. As such, DAS allocations themselves would be more clearly linked to resource conditions and would be

adjusted as stock conditions improve or decline. The qualification criteria and subsequent allocations would roughly preserve historic shares in the monkfish fishery and leave competitive positions similar to what they have been over the past 5-6 years.

Individual allocations would reduce the ability of vessels that have been comparatively inactive from increasing directed monkfish effort without also implementing DAS leasing.

6.4.1.8 DAS transfer alternatives

Transfer of DAS is being proposed to be implemented either under Amendment 2 or through a future framework adjustment. In either case two possible transfer programs are proposed; DAS leasing and DAS sale. A number of options have been developed for these programs. The potential economic impacts of these proposed measures are outlined below. However, since some components of the transfer options have not been specified (for example, the leasing option would limit leasing to category A DAS but no definition of A DAS has been developed) only a general treatment of DAS transfer is possible.

From an economic perspective transfer of DAS would provide a means for increasing overall efficiency and profitability of vessels operating in the monkfish fishery over the long term provided the pool of transferable DAS was reasonably calibrated to the conservation objectives of the FMP. That is, latent effort could not be leased, sold, or used. Note individual vessels could realize increase in profits by leasing latent DAS from other vessels, but doing so would be likely to result in excess effort that would require additional reductions in DAS or trip limits. This cycle would continue until allocations would be restrictive enough so that transfers would no longer compromise rebuilding objectives.

6.4.1.8.1 DAS leasing

A lease would affect a temporary transfer of DAS from one vessel to another. Presumably, such a transaction would be conducted to the mutual benefit of both vessels. In general terms, markets convey information to potential buyers and sellers on the value of the commodity being traded. As a conveyor of information, market performance is enhanced where there are a large number of buyers and sellers, the cost of participating in the market is low, the commodity is divisible, and the use of the commodity is relatively unrestricted. This means that the economic value of a leasing alternative would be affected by options that compromise an efficient leasing market from developing.

Of the common elements for DAS leasing allowing for multiple leases among vessels and leasing on a unit basis would contribute to leasing market performance. The former would increase the number of potential buyers and sellers while the latter is a small enough unit as to reveal the price of a single DAS.

In the sense that each trade conveys information, sub-leasing of DAS would increase the possible number of trades while fewer trades hence less information would be revealed with a prohibition on sub-leasing.

Calibration within vessel size limits (Option 1) may have the effect of creating segmented markets for vessels of varying sizes. This would limit the number of possible buyers and sellers in each segmented market which means that overall market efficiency would be compromised.

By contrast, a calibration schedule that standardizes trades across different platforms (Option 2) would allow a single DAS leasing market to emerge where the advantage of many buyers and sellers would be preserved.

6.4.1.8.2 DAS sale

Unlike a DAS lease, a sale would be a permanent transfer of DAS from one vessel to another. The proposed options are patterned after the DAS transfer proposal in Amendment 13 to the Multispecies FMP. As was the case for leasing, DAS sale allows individual vessels to achieve improvements in profitability. However, while the number of potential buyers may be large, the number of potential sellers may be quite limited since sellers would be required to surrender their monkfish permit as well as every other permit attached to the vessel. This means that elements that affect the potential return to the selling vessel would have greater impact on the number of potential trades under a DAS sale option. In this respect, options that maximize the number of DAS that would be identified as active, options that minimize the conservation tax on transfers, options that minimize limitations on sales to vessels of different size, and options that permit earliest use of acquired DAS would provide greatest potential return to a selling vessel.

The leasing alternative contains options that would retain leasing until terminated by the Council (Option 1) or would include a, to be determined, sunset provision (Option 2). Depending on which of these options is selected there could be an impact on the desirability or development of a DAS market. With a sunset provision, vessels may prefer to secure a long term claim to DAS in the monkfish fishery rather than pursue a short term lease that would eventually no longer be available. In this event, the value of a DAS transfer could increase which would make it more likely that there will be some willing sellers. By contrast, as long as a leasing market remains available, the urgency to secure a longer term position in the fishery will not be as great which would also tend to reduce the value of DAS transfer since an alternative DAS markets would be available.

6.4.2 Trip Limits for Incidental Catch

Changes in incidental catch limits would provide small entities an opportunity to retain larger quantities of monkfish than under No Action. Since the proposed changes represent an increase over current trip limits recent data cannot be used to quantify the potential economic impact of a higher trip limit. However, observed data may provide some insights into the number of trips and vessels that may benefit. Data from fishing year 2001 VTR records were used to identify the number of trips that may be affected. For these identified trips, distributions of trip duration, monkfish discards, and monkfish landings were also constructed. These distributions provide an indication of the proportion of trips that may benefit from a higher trip limit.

During FY2001 a total of 12,000 trips were taken by monkfish permit holders that were determined as potentially subject to the 50 pound incidental trip limit of which 2,500 trips by 202 vessels actually reported landing monkfish. The proposed change would convert the 50 pound trip limit to a daily 50 pound limit up to a maximum of either 150 (option 2) or 500 pounds (option 3). This means that the trip limit change would only affect trips that are at least more than 24 hours in duration and that landed more than 50 pounds.

Approximately two-thirds of trips landings monkfish landed less than 50 pounds leaving about 835 trips that may have been constrained by the 50 pounds incidental trip limit in FY2001.

These trips either caught and landed no more than 50 pounds of monkfish or caught more than 50 pounds but discarded any overages. If these discards were reported an estimate of the additional benefit of being able to retain more monkfish could be estimated. Unfortunately, over 90% of affected trips report no discards at all. Given the fact that fully one-third of affected trips are at exactly the trip limit it seems unlikely that available data would provide a reliable estimate of the economic benefit of increasing the incidental trip limit. Nevertheless, an upper bound estimate can be calculated by assuming that all trips would retain the maximum allowable limit.

Option 1 – 50 pounds per day up to a maximum of 150 pounds

As calculated from the logbooks, a total of 3,385 days absent were associated with the 335 trips that may benefit from Option 1. Given the maximum limit of 150 pounds trips that were more than 3 days (72 hours) would not be able to retain any more monkfish. This means that a maximum of 75,900 pounds of monkfish could be retained under this option. Average monkfish price for 2001 was approximately \$2.53 per pounds so the maximum revenue gain would be \$192 thousand. A total of 112 vessels had at least one trip that would benefit from Option 1 for an average benefit of \$1,700 in gross fishing revenue.

Option 2 – 50 pounds per day up to a maximum of 500 pounds

This Option does not affect the total number of potential vessels that may benefit from a trip limit change but does increase the maximum amount of monkfish that could be retained by extending the maximum trip duration to 10 days (240 hours) over which benefits may accrue. This means that the maximum benefit would increase to 127 thousand pounds or \$322 thousand; an average benefit of \$2,900 per vessel.

6.4.3 General Category Scallop Dredge and Clam Dredge

Under current monkfish regulations neither vessels fishing under a general category permit using scallop dredge gear nor vessels using clam dredges may retain any monkfish. Alternative 2 would change current restrictions to be equivalent to that of the incidental trip limit of 50 pounds or to that of Option 1 or Option 2 described above.

Based on FY2001 VTR data there were a total of 1,620 trips taken by 52 different vessels that were determined to be consistent with either a clam or a general category scallop trip. None of these trips reported any monkfish discards so these data provide no information regarding potential catch rates on general category scallop or clam trips. Of these trips over 90% were 24 hours or less and 99% of trips were less than 48 hours. Given these trip durations the maximum benefit from a 50 pound trip limit would be 81 thousand pounds or \$204 thousand. This assumes that catch rates on every trip are at least 50 pounds which is unlikely since median landings on incidental trips were only 25 pounds. At this median level, revenue benefits on clam or general category scallop trips would be approximately \$102 thousand or an average benefit of just under \$2,000 per vessel. Incidental trip limit Options 1 and 2 would provide only modest increases above this level since only 10% (162) of general category scallop or clam dredge trips are more than 24 hours in duration and the vast majority of these are no more than 48 hours. Assuming median landings, this leaves a maximum benefit of only \$10,250 over and above the 50 pound incidental trip limit.

6.4.4 Incidental Catch Limit on Summer Flounder Vessels

Alternative 2 would restore fishing opportunities for vessels involved in a summer flounder fishery in the affected areas. The economic impact of this change was estimated by using FY2001 VTR data where trips taken by vessels with a fluke permit that used between 5.5" and 6" mesh that retained fluke within statistical areas 612, 613, 615, 616, 622, 623, 627, 628, 633, 634, 636, and 637. Although, these statistical areas do not correspond precisely to the regulated mesh area boundaries, they provide a rough approximation. Note also, that the VTR reports only a single coordinate to represent an entire trip that may take place anywhere within a statistical area so the statistical area may be a better proxy for trips that may have be affected by the regulatory change than strict adherence to location data.

By adjusting these observed monkfish landings by the No Action incidental catch limit of 50 pounds per trip an estimate of the potential revenues that would be restored under Alternative 2 is obtained. Specifically, across the 113 vessels in the data set that landed monkfish the average annual restored landings would be 334 pounds of monkfish. At an average price of \$2.53 per pound this translates into \$845 per vessel. However, the impact varies considerably across vessels ranging from no impact (i.e. no observed trip exceeded 50 pounds) to almost \$17,000.

6.4.5 Minimum Mesh Size on Directed Monkfish DAS

The preferred alternative would leave current mesh regulations for directed monkfish DAS unchanged. As such the No Action alternative would have no deleterious economic impact. If any of the other mesh alternatives were to be adopted, at a minimum, individual vessels may be required to replace any nonconforming gear to the appropriate configuration. Since any of these alternatives would apply only to trawl gear the economic impact would be felt only by vessels using large mesh otter trawls. Unless, or until, a large mesh trawl exempted fishery is developed and approved in the NMA vessels that fish only in the NMA would not be affected by the proposed mesh alternatives. However, vessels that fish in the SMA with large mesh trawl gear may be affected. Based on FY2001 VTR data the number of vessels using large mesh trawl was very low (12), of which, only 1 vessel used exclusively large mesh of 10-inches or greater but less than 12-inches. VTR data do not provide sufficient information to evaluate net configurations (diamond or square or what size mesh is in what part of the net) so there is no way to know whether other vessels using 12-inch or larger mesh are using square or diamond mesh.

6.4.6 Minimum Fish Size

A change in the minimum size would change economic opportunities available to vessels fishing for monkfish. All other things being equal, an increase in the size limit would reduce economic opportunities since fewer individuals caught would be able to be retained while a reduction in the minimum size would have the opposite effect. Four alternatives for minimum fish size (including no action) are being considered for Amendment 2. Alternative 1 (no action) would leave existing minimum fish sizes unchanged and would not change economic opportunities in the monkfish fishery.

The preferred alternative would implement a uniform minimum fish size in both management areas. Option 1 would leave the NMA size limit unchanged but would reduce the SMA size limit to be equivalent to that of the NMA (11-inch tail or 17-inches whole). This change would not have any economic impact on trips taken in the Northern area but would increase economic

opportunity for vessels fishing for monkfish in the SMA. A reduction in the size limit may also make fishing in the SMA area more attractive since some vessels may have chosen to fish in the NMA to take advantage of the smaller size limit. Without detailed information on the size distribution of the commercial catch in both areas, an accurate assessment of how much economic benefit will accrue to individual vessels is not possible.

Option 2 of Alternative 2 would also implement a uniform size limit but would reduce the minimum size in both management areas to 10-inches (tail) or 15-inches (whole). This change would increase economic opportunities for all vessels fishing for monkfish but would have probably greater beneficial impact on vessels fishing in the SMA.

Alternative 3 would eliminate the minimum size limit and would provide for greatest economic opportunity for vessels participating in the monkfish fishery. Alternative 3 would not necessarily mean that all monkfish that were caught would be retained since there may be little or no market for monkfish below certain sizes. Nevertheless, elimination of the size limit would provide some incentive to develop markets for smaller monkfish.

Contingent on selection of separation of monkfish DAS, Alternative 4 would adopt a minimum size limit that would be 14-inches (tail) or 21-inches (whole) while vessels are fishing on a monkfish-only DAS. Vessels that typically fish in the SMA would not be affected by Alternative 4 since the size limit would be the same as current regulation allows. Vessels fishing in the NMA on a monkfish-only DAS may experience losses in economic opportunity. However, since the size limit would apply on trips that would be required to use large mesh anyway, lost economic opportunity may be negligible.

6.4.7 Closed Season or Time Out of the Fishery

Current regulations require vessels (except Category C or D scallopers) to take a 20-day block out of the monkfish fishery during the Spring. This requirement corresponds with the spawning season for monkfish. Alternative 1 would retain current regulations and would, therefore, not change regulatory costs already being borne from the time-out requirement by monkfish vessels.

Alternative 2 would eliminate the requirement for limited access monkfish vessels to take a 20-day block out of the fishery. This Alternative would remove any regulatory burden associated with the time-out requirement. Just how much regulatory relief removal of the 20-day block requirement provides is really not known. The 20-day block out only means that vessels cannot call-in a monkfish DAS. It does not mean that vessels cannot fish nor does it mean that limited access permit holders cannot retain monkfish. Since the 20-day block may be taken at any time during the prescribed period vessels may choose the specific block that would be expected to be most advantageous. Nevertheless, removing the requirement would provide vessels with greater flexibility in choosing when to fish for monkfish and when to fish for other species without being constrained by regulation.

Alternative 3 would double the current 20-day block to 40 days where vessels may choose to take the entire 40-days consecutively or may take two 20-day blocks. This change would mean that out a 90-day period of time vessels would need to identify 40 days in 20-day increments to take time out of a directed monkfish fishery. This would place a greater burden on trip scheduling and planning since the time period (March to May for Category C and D groundfish

and April to June for Category A and B vessels) also corresponds to a time of year where weather can be quite variable. This could leave vessels with few opportunities to actually fish if weather conditions are poor during the time a vessel has declared into the fishery. As noted above, the economic impact of blocks out of the fishery are difficult to assess since vessels may still engage in other fisheries and may still retain monkfish up to bycatch limits for the specified fishery. In a relative sense, however, Alternative 3 would be more burdensome than Alternative 1 (No Action).

If monkfish DAS are separated scallop vessels would be included in the requirement to take time out of monkfish. This would represent a change from the flexibility currently available to scallop vessels but may not have a substantial impact. Since implementation of the Monkfish FMP scallop vessel landings of monkfish have fallen primarily because of improvements in the scallop resource itself. The scallop fishing year begins in March which corresponds with the beginning of the proposed spawning closure period where a 20-day block (or two 20-day blocks) out of the directed monkfish would be required. Most scallop vessels would be more likely to be engaged in a directed scallop fishery than a monkfish fishery even if monkfish DAS were separated from scallop DAS. Further, prior to FMP implementation monkfish landings by scallop vessels peaked during fall and early winter months when monkfish prices (livers in particular) were peaking and were lowest during spring. This suggests that if scallop vessels were to take advantage of separated monkfish DAS to take a monkfish-only trip they would be most likely to use those days during a season other than Spring. Therefore, the requirement to take time-out of a directed monkfish fishery for 20 or 40 days March to May would not be likely to have a substantial adverse impact on scallop vessels.

6.4.8 Authorized Fishery Programs

Under authorized fishery programs two programs are proposed, an offshore SFMA program and a permit qualification program for South of 38-degrees N. The purpose of the former is to create opportunities for participating vessels to engage in an offshore monkfish fishery under certain conditions unique to the program. As such, enrollment would be voluntary and would not affect economic opportunities for vessels that choose not to enroll. The latter would create economic opportunities for vessels fishing south of the Virginia border. However, these vessels would be fishing from the same SFMA TAC which means that creating opportunities for North Carolina-based vessels can only be accomplished by reducing or holding down increased opportunity for vessels from other monkfish vessels more than would otherwise be necessary.

6.4.8.1 Offshore SFMA Fishery

The proposed offshore SFMA would permit enrolled vessels to effectively increase the amount of monkfish that could be retained per DAS. Over a fishing season the program would allow vessel to achieve higher profitability because more product would be able to be retained using fewer overall inputs. Note that enrolled vessels would use up DAS at a higher rate so no more fishing time would be used but vessels would be able to use available time more efficiently.

Participating vessels would be subject to VMS requirements which means that vessels that currently do not have VMS installed would have to bear the cost of doing so. However, since participation would be voluntary, each individual would still be able to weigh the benefits and costs of obtaining VMS. Given the proposed distance from shore participation in the fishery would likely be limited to larger vessels.

6.4.8.2 Modification of Permit Qualification for South of 38-degrees N

The Councils are considering a revision to the limited access permit system for monkfish in Amendment 2 to the Monkfish FMP for reasons described in Section 4.1.6.2. The following permit qualification criteria options are being considered for inclusion in Amendment 2 (Table 91). Under each option, all vessels whose combined landings were greater than or equal to 166,000 pounds whole weight (50,000 pounds tail weight) within the time period and geographical range would qualify for Monkfish type A and C permits and all vessels whose combined landings were greater than 24,900 pounds whole weight (7,500 pounds tail weight) and were less than 51 gross registered tons (GRTs) or had a Multispecies DAS permit would qualify for Monkfish type B and D permits.

Option 1: Vessels that landed monkfish of south of 38° N from June 15, 1994 through June 15, 1998 and met the FMP qualification permit criteria for each permit type would qualify for monkfish limited access permits. Vessels that qualify for monkfish limited access permits under this measure would be restricted to fishing for monkfish south of 38° N.

Option 2: Vessels that landed monkfish south of 38° N from June 15, 1993 through June 15, 1997 and met the FMP qualification permit criteria for each permit type would qualify for monkfish limited access permits. Vessels that qualify for monkfish limited access permits under this measure would be restricted to fishing for monkfish south of 38° N.

Option 3: Vessels that landed monkfish south of 38° N between March 15 through June 15 each year, from 1994 through 1998 and met the FMP qualification permit criteria for each permit type would qualify for monkfish limited access permits. Vessels that qualify for monkfish limited access permits under this measure would be restricted to fishing for monkfish south of 38° N.

Option 4: Vessels that landed monkfish south of 38° N between March 15 through June 15 each year, from 1993 through 1997 and met the FMP qualification permit criteria for each permit type would qualify for monkfish limited access permits. Vessels that qualify for monkfish limited access permits under this measure would be restricted to fishing for monkfish south of 38° N.

Option 5: No action.

Analysis:

Four sets of data were analyzed to determine the number of vessels that would qualify for a monkfish permit under each option.

NMFS weighout data were analyzed to determine the number of vessels that would qualify for monkfish limited access permits under each option (Table 1). The data set that was used for 1993 monkfish landings was created on 26 January 1995 from NMFS weighout data and the data sets that were used for landings from 1994 through 1998 were created on 11 November 2002 from NMFS weighout data. A SAS data set was created from the data sets which includes all monkfish landings from NMFS weighout data from 1993 through 1998.

Monkfish landings that meet the temporal/geographical criteria under each option were summed by vessel. For example, all landings that occurred in Virginia or North Carolina from 15 June 1994 through 15 June 1998 were summarized by vessel number for Option 1, while all landings that occurred from 15 June 1994 through 15 June 1998 were summarized by vessel for Option 3. The 38°N latitude occurs at the Maryland/Virginia border. Since latitude and longitude data are not available in the weighout data, all landings that occurred in Virginia and North Carolina were treated as south of 38°N. Once landings were summarized by vessel they were compared to the permit qualification criteria established in the monkfish FMP. All vessels whose combined landings were greater than or equal to 166,000 pounds whole weight (50,000 pounds tail weight) within the time period and geographical range would qualify for Monkfish type A and C permits. All vessels whose combined landings were greater than 24,900 pounds whole weight (7,500 pounds tail weight) and were less than 51 GRTs or had a Multispecies DAS permit would qualify for Monkfish type B and D permits. Landings within time/geographical constraints were summarized by vessel and compared to the minimum landing weight maximum size class and permit criteria, to determine if a vessel would qualify for a monkfish permit under each option. These data were merged with NMFS permit data to determine if the vessels that met all the criteria possessed a monkfish permit. All the vessels which possessed a monkfish permit were removed from the analysis, leaving only vessels that would qualify for permits and did not already possess a monkfish permit.

Additionally, there are vessels that were not required to report landings of monkfish during this period (i.e., vessels landing monkfish in state waters in Virginia and North Carolina that did not possess federal permits). Therefore, state landings from Virginia and North Carolina were also analyzed to determine which fishermen and vessel owners, respectively, would qualify for monkfish limited access permits under the criteria specified in Table 91. It is important to note that a difference exists between the NMFS federal permit system and the state permit systems for Virginia and North Carolina. NMFS issues permits to vessels, while the states issue permits to fishermen and vessel owners, respectively. As such, the identifier for trip level landings for NMFS, Virginia, and North Carolina data is vessel, fisherman, and vessel owner, respectively. Even though monkfish limited access permit are administered to vessels level, the limitations of state data make it impossible to analyze these data on the vessel level.

Virginia Marine Resources Commission (VMRC) personnel analyzed the Virginia state landings and found that no fishermen would qualify for permits (i.e., no vessel landed at least a total of 24,900 pounds whole weight of monkfish for the periods 1993-1997 or 1994-1998 in Virginia state waters; Iverson pers. comm.).

North Carolina Division of Marine Fisheries (NCDMF) staff provided trip level landings of monkfish from 1994-1999 for participants that landed at least a total 24,900 pounds of monkfish between 1994 and 1998 (Sabo pers. comm.). Data from 1993 were not available because the North Carolina trip ticket program did not start until 1994. While 1994 data were provided, the only participant identifier available was North Carolina license number. As such, the 1994 North Carolina data could not be linked to a vessel owner so these data were not included in the analysis. Monkfish landings in the NCDMF data were summarized by vessel owner to determine which vessel owners would qualify for monkfish limited access permits under each of the options (Table 91). Because of the data limitations cited above, only data from 1995-1998 were used for Options 1 and 3 and only data from 1995 through 1997 were used for options 2

and 4 (Table 91). Additionally, NCDMF staff indicated that 37% of the total monkfish landings could be matched to the user in 1995, 69% in 1996, 56% in 1997, 59% in 1998 (Sabo pers. comm.). Thus, the North Carolina results represent a minimum number of vessels that could qualify for permits. Once the North Carolina data were analyzed, the names of individual vessel owners that would qualify for permits were cross-referenced with the NMFS permit data base for 1999-2000 to determine which vessel owners already held monkfish permits. If a vessel owner did not hold a monkfish permit, the vessel owner was included in Table 92.

The fourth source of information about potential qualifying vessels included a list provided by the NMFS Northeast Regional Office which identified 90 vessels which filed an appeal for a permit after they were denied a limited access permit under the Monkfish FMP. Of these 90 vessels, 51 vessels did not receive a monkfish limited access permit, 23 vessels did receive a permit, 8 appeals are still pending, and 8 appeals were withdrawn. Landings in the weighout data were summarized for the time period and geographical area under each option for each of the 51 vessels that did not receive a limited access permit through the appeals process, to determine how many of those vessels would qualify under one of the 4 options considered.

Results:

Analysis of the NMFS weighout and NCDMF data indicate that the number of vessels/owners that would qualify for monkfish limited access permits range from three under Option 4 to seven under Option 1 (Table 92). No vessels in the NMFS weighout database would qualify for permits under options that only include landings south of 38° N (Options 1-4). NMFS NERO appeals records and permit file data indicate that the 2 vessels that applied for an appeal and would qualify for permits under all four options considered (Table 93).

The vessel level economic impact on affected vessels is likely to be positive, due to the increased opportunity to fish for monkfish in the EEZ, but the magnitude of this impact cannot be determined. These vessels already prosecute a monkfish fishery in state waters and during the same limited season when they would be able to fish in the EEZ if they qualified for a federal permit. Secondly, it is unclear how the limitations on this fishery resulting from the sea turtle closures would offset any immediate benefit these vessel might realize by obtaining a federal monkfish permit.

Depending on the number of vessels that actually qualify for a limited access permit under this program, and their actual level of effort (DAS used) and catch rates, the four alternatives that would allow for new permits could have an impact on the trip limits for other vessels fishing in the SFMA, since the TAC would now be distributed over an increased number of vessels (3-7 vessels). An analysis done by the PDT, that assumed the same average DAS usage rate as the rest of the fleet and the same average catch per DAS, concluded that Category A and C vessels' trip limits would need to be reduced 13.6 lbs./DAS per vessel, while B and D trip limits would have to be reduced 10.1 lbs./DAS per vessel. If 6 new permits were issued, the trip limits would be reduced by approximately 100 lbs./DAS (tail wt.) if the trip limits were originally at 1,200 lbs./DAS (roughly the FY2003 limits), and would be reduced by proportionally less amounts at lower trip limits. Comments by the public and the Monkfish Committee, however, suggest that these effects are unrealistically high due to the DAS usage and catch rate assumptions. For that

reason, it is not possible to estimate with any degree of confidence what the economic impact would be on the rest of the fleet from the addition of 3-7 new permits.

Option	Geography	A, C	B, D	Data			
				Weighout		North Carolina	
				Time Period	Identifier	Time Period	Identifier
1	S. of 38°N – Virginia and North Carolina	combined landings for time period total 50,000 lbs t-w (166,000 lbs w -w)	combined landings for time period total 7,500 lbs t-w (24,900 lbs w -w) and vessel <51 GRT or multispecies DAS permit	June 15, 1994 through June 15, 1998	Permit Number	June 14, 1995 through June 15, 1998	Vessel Owner
2	S. of 38°N – Virginia and North Carolina	combined landings for time period total 50,000 lbs t-w (166,000 lbs w -w)	combined landings for time period total 7,500 lbs t-w (24,900 lbs w -w) and vessel <51 GRT or multispecies DAS permit	June 15, 1993 through June 15, 1997	Permit Number	June 14, 1995 through June 15, 1997	Vessel Owner
3	S. of 38°N – Virginia and North Carolina	combined landings for time period total 50,000 lbs t-w (166,000 lbs w -w) 00 lbs t-w 166,000 lbs w -w	combined landings for time period total 7,500 lbs t-w (24,900 lbs w -w) and vessel <51 GRT or multispecies DAS permit	March 15 - June 15 (1994- 1998)	Permit Number	March 15 - June 15, (1995-1998)	Vessel Owner
4	S. of 38°N – Virginia and North Carolina	combined landings for time period total 50,000 lbs t-w (166,000 lbs w -w) 50,000 lbs t-w 166,000 lbs w -w	combined landings for time period total 7,500 lbs t-w (24,900 lbs w -w) and vessel <51 GRT or multispecies DAS permit	March 15 - June 15 (1993-1997)	Permit Number	March 15 - June 15, (1995- 1997)	Vessel Owner

North Carolina data are not used prior to 1995 because identifier available in 1994 and earlier is North Carolina license.

Table 91 Evaluation criteria to determine the number of vessels/owners that would qualify for a monkfish limited access permit under each alternative.

Option	Weighout Data			North Carolina Data			Grand Total ^c
	Permit Type		Total	Permit Type		Total	
	A, C	B, D		A, C	B, D		
1	0	0	0	0	7	7 ^a	7
2	0	0	0	0	3	3 ^b	3
3	0	0	0	0	5	5 ^a	5
4	0	0	0	0	3	3	3

^a Includes North Carolina state landings by owner from 1995-1998.

^b Includes North Carolina state landings by owner from 1995-1997. North Carolina data are not used prior to 1994 because the only identifier available in 1994 is North Carolina license.

^c Indicates a maximum (there may be some overlap between data sets).

Table 92 Estimated number of vessels expected to qualify for a monkfish limited access permit under the various options.

Option	Weighout Data		
	Permit Type		Total
	A, C	B, D	
1	0	2	2
2	0	2	2
3	0	2	2
4	0	2	2

Table 93 Estimated number of vessels that failed to receive a limited access monkfish permit through the appeals process, but are expected to qualify for a monkfish limited access permit under the various options.

6.4.9 NAFO Regulated Area Exemption Program

Alternative 1 would exempt anyone fishing in the NAFO regulatory area from EEZ regulations. Vessels would be presumed to be in compliance with appropriate NAFO regulations and would be issued a High Seas Fishing Compliance permit. This alternative would relieve participating vessels from dual compliance with both EEZ and NAFO regulations and would provide vessels with greater flexibility compared to current regulations. The economic impact of such a change cannot be estimated with precision since it is not known to what extent current regulations inhibit domestic vessels from participating in the NAFO Regulatory Area. Nevertheless, the economic impact is at least likely to be positive as vessels would be relieved of more restrictive EEZ measures while fishing in international waters.

6.4.10 Measures to Minimize Fishery Impact on EFH

The economic impacts of all the measures proposed in this Amendment are summarized within the Practicability Analysis (Section 6.3.3). The analysis focuses on the directed monkfish fishery, since most of the impacts on other fisheries are negligible or unaffected. Overall, this Amendment would impose no immediate term economic impacts on fishery participants. There are no area closures or specific measures to reduce effort significantly that will have negative impacts on fishing communities. Furthermore, the long-term economic impacts are unknown.

6.4.11 Cooperative Research Programs Funding

Cooperative research has proven to be an important component of monitoring and assessment of the monkfish resource. Alternative 3 (no action) would not prevent vessels from engaging in cooperative research programs but essentially increases the transactions costs of initiating any specific study. By creating a DAS set-aside (Alternative 1, preferred) or DAS exemption (Alternative 2) the potential monkfish mortality effects of cooperative would be accounted for up-front and would stream-line the process for initiating and approving cooperative research.

Alternative 1 would spread the set-aside equally across all monkfish vessels but would impact all vessels equally. Vessels that use their full allocation would lose monkfish fishing opportunities. However, if these vessels were also the ones engaged in a cooperative research program and lost DAS would be recouped and total fishing time on monkfish could actually increase.

Alternative 2 would exempt DAS used in a cooperative research project from counting against a vessels allocation. Like Alternative 1, an exemption program would make it possible for some vessels to realize an increase in monkfish fishing opportunity but does so without initially taking DAS away from anyone. That is, vessels that lose DAS under Alternative 1 may not necessarily be the ones that are successful in developing a proposal for a cooperative research study or that may even be interested in participating in cooperative research at all.

6.4.12 Bycatch Monitoring

No additional measures beyond that discussed elsewhere are being proposed for either bycatch monitoring or bycatch reduction. Therefore, relative to No Action there would be no anticipated change in economic costs or benefits associated with bycatch measures.

6.4.13 Clarification of Vessel Baseline History

Clarification of vessel baseline would have no immediate economic impact on a vessel's ability to earn fishing income in the monkfish fishery as no proposed measures are specifically tied to any physical dimension of the vessel. A change in baseline could affect the value of a vessel depending on whether the baseline was to be higher or lower than the current monkfish baseline. A change in baseline may also have some implications in the event a DAS leasing program was to be developed. The proposed DAS leasing program for Amendment 13 of the Multispecies plan is based on a vessel's baseline. This leasing program makes it possible for smaller vessels to obtain DAS from larger vessels but leases from smaller to larger vessels would not be allowed. Within this setting, the smaller the baseline, the larger the pool of potential trading partners.

6.4.14 NFMA Experimental Fishery

Under No Action there would be no possibility for trawl vessels to use a monkfish-only DAS in the NFMA because there is no exempted fishery in the area. For this reason, separation of monkfish and groundfish DAS would provide no economic benefit to trawl vessels in the NFMA. Alternative 2 would establish an experimental fishery wherein participating vessels would be able to retain both their groundfish and monkfish catch while engaged in the experiment. Should the experiment prove successful, an exempted trawl fishery could be established allowing a larger number of vessels increased fishing opportunities under DAS separation. Without separated DAS there would be little economic benefit for trawl vessels to use larger mesh since they would be better off by using groundfish gear and fish with no trip limit in the NFMA.

6.4.15 Change in Fishing Year

The preferred alternative (Alternative 1) would make no change to the Monkfish fishing year. Therefore, no economic impacts would be anticipated as this alternative would make no change to existing regulation. The primary reason for considering a change in the fishing year is to retain consistency with the multispecies fishing year since more than half of all monkfish permit holders also hold monkfish permits. Additionally, the timing of assessment information and annual adjustments is a consideration. Note that at this time, Amendment 13 would make no change to the multispecies fishing year.

Alternative 2 would change the fishing year to correspond to a calendar year. Current reliance on the fall survey index makes the change to a calendar year less of an issue since adequate time is available to make the survey data available, and still have adequate time to make annual adjustments. Alternative 2 would also align the monkfish fishing year with the calendar year fishing years of several other Mid-Atlantic fisheries, potentially assisting vessel owners with annual planning of fishing activities. However,

Alternative 2 would mean that the fishing year would not be aligned with either multispecies or scallop fishing years which would make the permit renewal process cumbersome, especially since the permit renewal cycle for most fisheries (with the exception of scallops and red crab) is based on the multispecies fishing year. Additionally, whether or not DAS are separated, the allocation, monitoring, and enforcement of DAS allocations that become renewed at different times of the year would be complicated. Note that this complication would also extend to vessel owners as they would also have to make annual planning decisions based on receiving different DAS allocations at different times of the year.

Alternative 3 would change the monkfish fishing year to October - September. This alternative would put monkfish at odds with the permit renewal schedule for every other FMP in the Northeast region and would increase the cost of applying for and administering these renewals. This alternative would also introduce some of the same complications noted above both from an administrative and a fishing vessel perspective.

Alternative 4 would change the monkfish fishing year to July – June. This alternative offers no clear advantage over Alternative 1, especially since the multispecies fishery would not change under the Amendment 13 preferred alternative. Given this fact, this alternative would introduce the same administrative complications and would complicate vessel business planning.

A change in the fishing year will require DAS to be prorated. The Councils are considering two alternatives for prorating DAS. The only difference between the alternatives is that Alternative 2 provides for a longer transition period by extending the proration period into the 2006 fishing year. Thus, Alternative 2 may provide vessels with greater flexibility, and increase economic opportunity as a result.

6.4.16 Framework Adjustment Process Changes

The Councils are proposing to add two items to the list of measures in the FMP that can be implemented through the framework adjustment process. These two items are measures to protect sea turtles and other species protected under the Endangered Species and/or Marine Mammal Protection Act, and measures to implement bycatch reduction devices.

Including these items in the list of framework measures under the FMP is administrative in nature, and, therefore, will not result in any economic impacts at this time. The economic impacts associated with any protected species or bycatch reduction measures considered by the Councils in the future will be fully analyzed in the associated framework action.

6.5 Social and Community Impacts

6.5.1 Overview

This social impact assessment examines the magnitude and extent of the social impacts likely to result from alternatives considered in Amendment 2 to the Monkfish Fishery

Management Plan. In so far as is possible, this assessment provides an evaluation of potential social impacts specifically regarding changes in DAS provisions for Permit Categories C and D.

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 amendment.

Daily routines, safety, occupational opportunities, and community infrastructure are examples of social impacts that can be affected by changes in management measures. Modifications to daily routines can make long-term planning difficult. New gear requirements such as netting and some equipment must be ordered months in advance resulting in changes to daily routines when these modifications cannot be met in a time and cost efficient manner. Further the cost of making such changes may prove to be a burden for some vessel owners. Changes in management measures that limit access to fishing may increase the likelihood of safety risks. Increased risk can result when fishermen spend longer periods at sea in order to minimize steam time to and from fishing grounds, operate with fewer crew, and fish in poor weather conditions. Occupational opportunities within the fishing industry in general appear to be largely on the decline with more people leaving the industry than entering it. Management measures that further reduce occupational opportunities may have profound social impacts on the future occupational viability of commercial fishing. Impacts that decrease occupational opportunities in turn can affect community infrastructure. More specifically, port infrastructure may be affected by the gradual loss of shore-based services essential to a strong working waterfront.

The analysis presented in this section is based on a select group of ports identified as primary ports in the affected human environment section of this document. These ports were drawn from an evaluation of both weighout port landings and homeport landings value data following the *primary* and *secondary* port criteria used in the initial fishery management plan and subsequently in annual SAFE report analysis. Primary ports for this and earlier analysis are considered to be ports with average (1999-2002) landings value above \$1,000,000 while secondary ports are those showing average annual landings value of \$50,000 to \$1,000,000.

Data by dealer weighout port and homeport landings value showed considerable consistency over time for the top five ports in both sets of analysis with difference in primacy emerging for ports with lower landings value. The social impact assessment provided in this section combines the results from the homeport and weighout port analysis by including all ports that qualified as primary ports. It additionally includes five top producing secondary ports with landings value in excess of \$800,000 that were found to be highly dependent on monkfish relative to the total value of all species landed. Data for this social impact assessment were culled to include only vessels with either a monkfish category C or D permit who were determined to be the primary vessels of concern for DAS social impact analysis.

Port level activity for monkfish landings in pounds relative to all other species landed is related to port size and the species diversification of ports. Westport, MA, Tiverton, RI, Little Compton, RI, and Barnegat Light, NJ all show a dependency on monkfish landings in excess of 40% of total species landed (Table 94). Less species diversified, more specialized ports such as these are potentially more reactive to changes in the monkfish fishery than other ports such as Point Judith, RI that is more species diversified. Nine of the fifteen ports (Westport, Fairhaven, Boston, Chatham, and Gloucester, MA; Tiverton and Little Compton, RI; Barnegat Light, NJ; Port Clyde and Portland, MA) evaluated show an increasing dependency on monkfish in pounds. Fairhaven and New Bedford, MA show decreasing activity due in part to improved conditions in the scallop fishery. Port level dependency contrasts with port level production of monkfish for the primary producing ports (Table 95). While the most dependent ports, in pounds, tend to be smaller ports, larger ports are the producers of the greatest quantities of monkfish.

State	Homeport	1997	1998	1999	2000	2001	Ave.
MA	WESTPORT	55%	54%	66%	70%	61%	61%
RI	TIVERTON	26%	47%	63%	45%	72%	51%
RI	LITTLE COMPTON	45%	47%	44%	42%	51%	46%
NJ	BARNEGAT LIGHT	32%	38%	50%	46%	57%	44%
MA	FAIRHAVEN	36%	37%	29%	17%	20%	28%
RI	NEWPORT	16%	22%	28%	18%	20%	21%
ME	PORT CLYDE	13%	16%	19%	24%	26%	20%
NJ	POINT PLEASANT	14%	22%	20%	20%	19%	19%
MA	BOSTON	13%	18%	19%	18%	18%	17%
NH	PORTSMOUTH	9%	7%	14%	20%	29%	16%
MA	CHATHAM	8%	8%	12%	22%	24%	15%
MA	GLOUCESTER	8%	8%	13%	21%	19%	14%
MA	NEW BEDFORD	21%	20%	11%	8%	8%	14%
ME	PORTLAND	7%	8%	15%	14%	16%	12%
RI	POINT JUDITH	6%	5%	5%	5%	5%	5%

Note: only includes ports with average (1999-2002) landings value in excess of \$1,000,000 for either homeport or weighout port and select highly dependent (\$) ports with average landings value in excess of \$800,000. Base measurement is pounds landed by homeport. Percent values are weighted within port. Data source: logbooks.

Table 94 Port Level Landings Activity for Monkfish as a % of Total Lbs. Landed

Homeport	1997	1998	1999	2000	2001	Ave.
BOSTON	3,120,275	3,844,657	4,221,916	3,407,539	3,748,884	3,668,654
NEW BEDFORD	4,376,436	4,329,465	3,015,468	2,670,653	3,574,212	3,593,247
BARNEGAT LIGHT	819,892	1,486,927	1,661,085	1,175,117	2,145,032	1,457,611
GLOUCESTER	685,442	769,365	1,273,418	1,736,545	1,823,630	1,257,680
PORTLAND	441,526	460,030	1,019,863	1,012,746	1,271,608	841,155
POINT JUDITH	893,737	751,284	765,534	576,671	460,958	689,637
WESTPORT	581,765	548,134	536,200	528,532	671,004	573,127
NEWPORT	353,809	478,854	804,735	463,521	616,939	543,572
CHATHAM	220,541	285,743	351,809	625,771	681,309	433,035
PORTSMOUTH	230,226	202,657	367,036	469,916	751,024	404,172
TIVERTON	247,575	199,780	401,312	208,618	520,996	315,656
POINT PLEASANT	290,856	530,852	352,166	161,159	133,136	293,634
FAIRHAVEN	278,762	325,136	210,425	217,708	400,625	286,531
PORT CLYDE	177,741	173,563	245,874	342,768	464,790	280,947
LITTLE COMPTON	218,808	168,084	140,373	132,100	256,832	183,239
Total	12,937,391	14,554,531	15,367,214	13,729,364	17,520,979	14,821,896

Note: only includes ports with average (1999-2002) landings value in excess of \$1,000,000 for either homeport or weighout port and select highly dependent (\$) ports with average landings value in excess of \$800,000. Base measurement is pounds landed by homeport. Data source: logbooks.

Table 95 Port Level Production of Monkfish in Pounds

As described earlier in the affected human environment section, there is a general trend toward vessel reliance on fishing areas commensurate to the size and mechanical capabilities of a vessel. Smaller vessels tend to fish closer to home and landing ports while larger vessels have the capability to work further out at sea. Overall, an increase in fishing capacity may be realized by some vessels if DAS for monkfish is decoupled from monkfish category C and D permits for either multispecies or scallop fisher. Area fished dependency on homeport monkfish landings for the northeast and mid-Atlantic regions are geographically correlated (Table 96). Vessels homeported in northern states tend to fish more consistently in the northern management area while vessels homeported in mid-Atlantic states are more likely to fish in the southern management area with some boats from each area crossing over. Those ports located near the border of the two management areas tend to more often have vessels that fish in both areas than ports located at either end of the respective northern and southern management areas.

Some management measures considered in this amendment apply differently to fish harvested in northern and southern management areas. Consideration of the potential impacts of DAS allocations considered in this amendment is compounded by trip limits that are used in the southern management area but not in the north. This analysis compares areas where monkfish are harvested with key species (groundfish, small mesh multispecies, and scallops and monkfish) related to monkfish permit categories C and D. Figure 86 - Figure 89 show that vessels that fish for monkfish in both the northern and southern areas (B) and those vessels that fish for monkfish exclusively in the north (N) produce the largest volume of landings. Landings in these areas for most species show increased volume of pounds landed. This is in contrast to landings in the southern management area that are smaller in volume for the species in question (groundfish, small mesh multispecies, or scallops) and where monkfish harvest volume shows a steady decline.

The results for the southern management area contrast with the industry norms for the principle producing ports where an overall increase in monkfish production is evident (Figure 85). Note that the relative difference between species in tonnage does not necessarily translate proportionately to the value of different species and should therefore be evaluated separately. While scallops landing quantities are substantially less than for either groundfish or small mesh multispecies (Figure 85), the value of scallops is substantially greater approximately valued at five times of the price per pound for groundfish (haddock) or monkfish, and ten times the price per pound for small mesh multi-species (whiting) in 1999.

Homeport	Fishing Area for Monkfish	Year					
		1997	1998	1999	2000	2001	Ave.
PORT CLYDE	B	0%	13%	17%	0%	0%	6%
	N	13%	16%	20%	24%	26%	20%
PORT CLYDE Total		13%	16%	19%	24%	26%	20%
PORTLAND	B	9%	6%	23%	15%	11%	13%
	N	7%	8%	14%	14%	16%	12%
	S	3%	1%	0%	0%	0%	1%
PORTLAND Total		7%	8%	15%	14%	16%	12%
PORTSMOUTH	B	19%	26%	42%	11%	45%	29%
	N	5%	3%	5%	22%	22%	11%
	S	0%	0%	0%	10%	0%	2%
PORTSMOUTH Total		9%	7%	14%	20%	29%	16%
GLOUCESTER	B	12%	7%	26%	38%	31%	23%
	N	5%	5%	10%	17%	17%	11%
	S	40%	64%	0%	0%	6%	22%
GLOUCESTER Total		8%	8%	13%	21%	19%	14%
BOSTON	B	16%	16%	20%	15%	15%	16%
	N	8%	12%	15%	17%	19%	14%
	S	19%	44%	29%	47%	24%	33%
BOSTON Total		13%	18%	19%	18%	18%	17%
CHATHAM	B	1%	2%	45%	54%	38%	28%
	N	9%	9%	5%	16%	15%	11%
CHATHAM Total		8%	8%	12%	22%	24%	15%
FAIRHAVEN	B	41%	41%	29%	21%	32%	33%
	N	0%	0%	0%	2%	11%	3%
	S	10%	18%	0%	8%	8%	9%
FAIRHAVEN Total		36%	37%	29%	17%	20%	28%
NEW BEDFORD	B	22%	19%	10%	7%	6%	13%
	N	13%	14%	17%	14%	15%	15%
	S	27%	32%	18%	9%	11%	19%
NEW BEDFORD Total		21%	20%	11%	8%	8%	14%
WESTPORT	B	0%	0%	0%	90%	62%	31%
	S	55%	54%	66%	63%	60%	60%
WESTPORT Total		55%	54%	66%	70%	61%	61%
LITTLE COMPTON	B	58%	0%	0%	0%	0%	12%
	S	39%	47%	44%	42%	51%	44%
LITTLE COMPTON Total		45%	47%	44%	42%	51%	46%
TIVERTON	B	0%	1%	0%	70%	94%	33%
	N	7%	0%	0%	0%	0%	1%
	S	36%	63%	63%	56%	67%	57%
TIVERTON Total		26%	47%	63%	45%	72%	51%
NEWPORT	B	7%	12%	17%	18%	11%	13%
	N	0%	0%	0%	16%	0%	3%
	S	29%	38%	54%	20%	39%	36%
NEWPORT Total		16%	22%	28%	18%	20%	21%
POINT JUDITH	B	5%	4%	4%	4%	5%	4%
	N	6%	12%	11%	10%	0%	8%
	S	6%	5%	7%	6%	5%	6%
POINT JUDITH Total		6%	5%	5%	5%	5%	5%
POINT PLEASANT	B	0%	0%	4%	0%	0%	1%
	S	14%	22%	31%	20%	19%	21%
POINT PLEASANT Total		14%	22%	20%	20%	19%	19%
BARNEGAT LIGHT	B	93%	74%	28%	36%	40%	54%
	N	1%	2%	0%	0%	0%	1%
	S	34%	42%	64%	52%	58%	50%
BARNEGAT LIGHT Total		32%	38%	50%	46%	57%	44%
al		16%	18%	17%	17%	19%	17%

Table 96 Monkfishing Area and Monkfish Dependency as a % of Total Landings

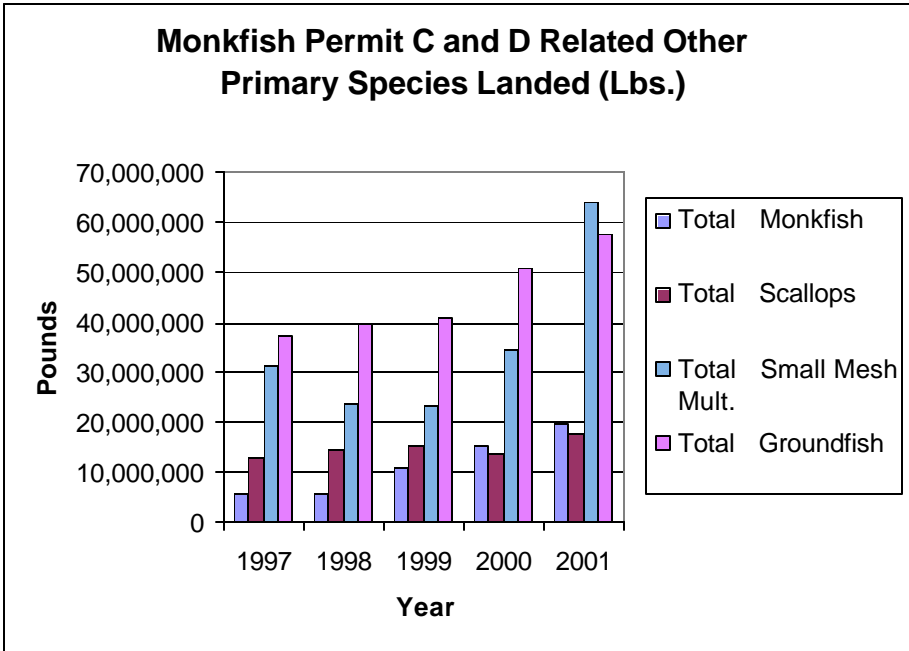


Figure 85 Monkfish Permit C and D Related Other Primary Species Landed (Lbs.)

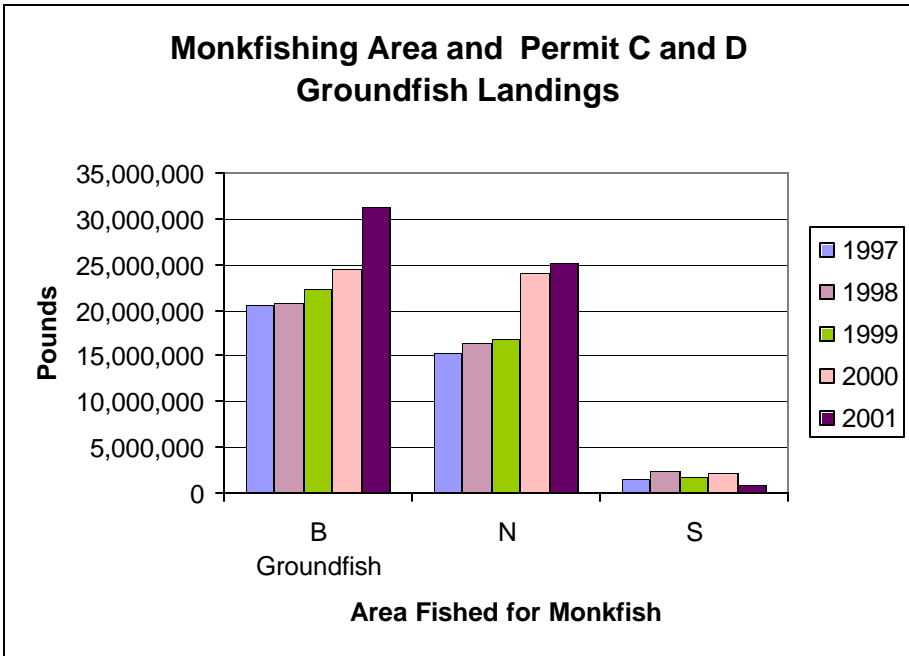


Figure 86 Monkfishing Area and Permit C and D Groundfish Landings

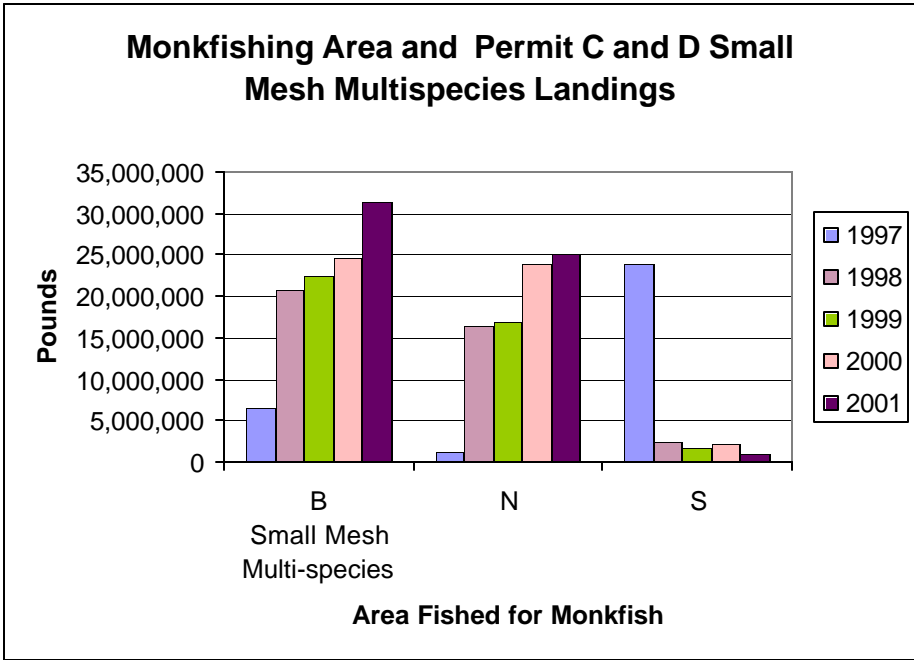


Figure 87 Monkfishing Area and Permit C and D Small Mesh Multispecies Landings

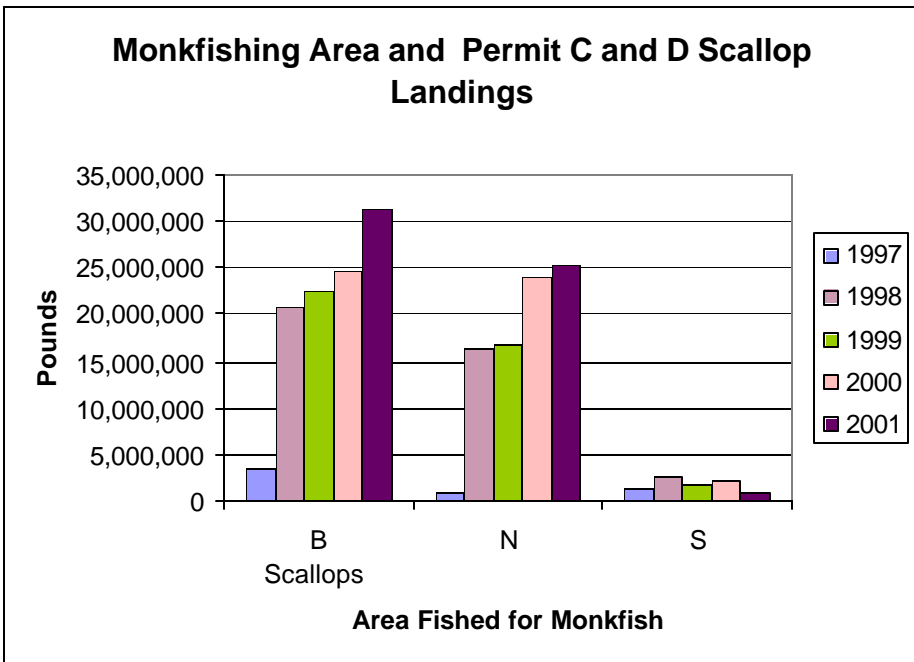


Figure 88 Monkfishing Area and Permit C and D Scallop Landings

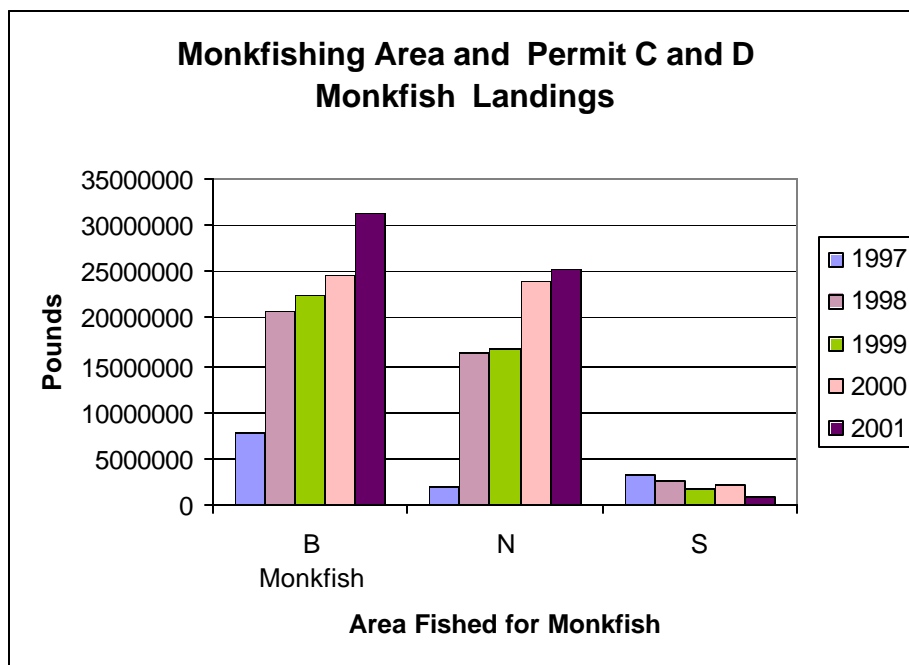


Figure 89 Monkfishing Area and Permit C and D Monkfish Landings

At the port level, monkfish tends to serve as an important secondary or tertiary fishery. A notable increase in monkfishing effort in New Bedford coincided with poor scallop harvests in the 1990's. When conditions in the scallop fishery improved, New Bedford vessels shifted effort away from monkfish back to the more profitable scallop fishery. Nevertheless, there has been a general trend toward increased dependency on this fishery largely due to poor conditions in other fisheries and resultant regulatory restrictions. While Westport, MA, Tiverton, RI, Little Compton, RI, and Barnegat Light, NJ are more dependent on monkfish landings quantities relative to other species, Boston and New Bedford, MA are the highest producing ports in terms of pounds landed (Table 97 and Table 98).

	Ave. Pounds Landed (1997- 2001)			
Homeport	Monkfish	Groundfish	Sm. Mesh Multi.	Scallops
BOSTON	3,668,654	12,264,185	7,712,682	803,379
NEW BEDFORD	3,593,247	13,098,676	12,787,883	8,693,591
BARNEGAT LIGHT	1,457,611	124,190	43,866	748,460
GLOUCESTER	1,257,680	6,617,237	1,435,301	76,772
PORTLAND	841,155	4,462,072	3,112,943	606
POINT JUDITH	689,637	3,421,908	8,254,926	71,587
WESTPORT	573,127	16,787	1,501	0
NEWPORT	543,572	1,000,258	626,919	125
CHATHAM	433,035	1,529,741	24,142	6,984
PORTSMOUTH	404,172	1,509,432	1,010,013	77,861
TIVERTON	315,656	87,030	89,971	8
POINT PLEASANT	293,634	50,974	349,419	227,556
FAIRHAVEN	286,531	198,799	65	701,135
PORT CLYDE	280,947	848,619	885	875
LITTLE COMPTON	183,239	11,797	3,547	14

Table 97 Port Level Monkfish Landings and Monkfish Category C and D Related Other Species.

State	Homeport	Fishing Area for Monkfish	Species	Pounds Landed					Ave	
				1997	1998	1999	2000	2001		
ME	PORT CLYDE	B	Groundfish	0	90,006	161,950	0	0	50,391	
			Small Mesh Mu	0	25	0	0	0	5	
			Scallops	0	0	1,825	0	0	365	
			Monkfish	0	18,100	56,835	0	0	14,987	
		N	Groundfish	758,924	547,371	555,149	903,063	1,226,632	798,228	
			Small Mesh Mu	0	1,283	365	1,651	1,100	880	
			Scallops	790	1,555	10	0	195	510	
			Monkfish	177,741	155,463	189,039	342,768	464,790	265,960	
		PORT CLYDE Groundfish			758,924	637,377	717,099	903,063	1,226,632	848,619
		PORT CLYDE Small Mesh Mult.			0	1,308	365	1,651	1,100	885
	PORT CLYDE Scallops			790	1,555	1,835	0	195	875	
	PORT CLYDE Monkfish			177,741	173,563	245,874	342,768	464,790	280,947	
	PORTLAND	B	Groundfish	1,345,956	412,712	649,645	1,594,712	487,808	898,167	
			Small Mesh Mu	433,104	32,448	9,941	442,042	0	183,507	
			Scallops	0	0	8	0	0	2	
			Monkfish	165,191	36,386	175,581	310,202	63,010	150,074	
		N	Groundfish	2,292,014	3,386,798	3,614,678	3,104,337	5,247,116	3,528,989	
			Small Mesh Mu	172,769	196,523	1,645,287	1,986,261	10,645,981	2,929,364	
			Scallops	2,173	205	0	320	325	605	
			Monkfish	268,701	421,256	844,282	702,544	1,208,598	689,076	
S		Groundfish	82,310	92,275	0	0	0	34,917		
		Small Mesh Mu	317	40	0	0	0	71		
	Scallops	0	0	0	0	0	0			
	Monkfish	7,634	2,388	0	0	0	2,004			
PORTLAND Groundfish			3,720,280	3,891,785	4,264,323	4,699,049	5,734,924	4,462,072		
PORTLAND Small Mesh Mult.			606,190	229,011	1,655,228	2,428,303	10,645,981	3,112,943		
PORTLAND Scallops			2,173	205	8	320	325	606		
PORTLAND Monkfish			441,526	460,030	1,019,863	1,012,746	1,271,608	841,155		
NH	PORTSMOUTH	B	Groundfish	429,348	367,606	274,255	227,875	584,719	376,761	
			Small Mesh Mu	9,450	1,330	1,559	0	15,712	5,610	
			Scallops	0	0	0	115,436	182,158	59,519	
			Monkfish	154,823	137,431	291,110	44,400	352,347	196,022	
	N	Groundfish	1,191,835	1,206,739	1,010,009	1,106,735	914,989	1,086,061		
		Small Mesh Mu	190,347	2,706,490	1,896,084	75,893	152,426	1,004,248		
		Scallops	110	931	90,595	25	50	18,342		
		Monkfish	75,403	65,226	75,926	398,702	398,677	202,787		
	S	Groundfish	0	0	0	233,049	0	46,610		
		Small Mesh Mu	0	0	0	775	0	155		
Scallops		0	0	0	0	0	0			
Monkfish		0	0	0	26,814	0	5,363			
PORTSMOUTH Groundfish			1,621,183	1,574,345	1,284,264	1,567,659	1,499,708	1,509,432		
PORTSMOUTH Small Mesh Mult.			199,797	2,707,820	1,897,643	76,668	168,138	1,010,013		
PORTSMOUTH Scallops			110	931	90,595	115,461	182,208	77,861		
PORTSMOUTH Monkfish			230,226	202,657	367,036	469,916	751,024	404,172		
MA	GLOUCESTER	B	Groundfish	1,869,184	1,443,794	1,300,846	331,399	1,875,076	1,364,060	
			Small Mesh Mu	704,043	652,222	7,737	8,295	111,420	296,743	
			Scallops	44,042	0	69,451	117,383	730	46,321	
			Monkfish	388,761	241,907	663,390	267,750	519,558	416,273	
		N	Groundfish	3,799,919	3,918,164	4,860,585	6,760,995	6,924,850	5,252,903	
			Small Mesh Mu	379,515	411,931	1,863,939	1,669,921	1,367,179	1,138,497	
			Scallops	3,906	768	9	434	7,769	2,577	
			Monkfish	245,020	296,233	610,028	1,468,795	1,297,527	783,521	
		S	Groundfish	573	800	0	0	0	275	
			Small Mesh Mu	0	305	0	0	0	61	
Scallops	0		32,332	0	0	107,037	27,874			
Monkfish	51,661		231,225	0	0	6,545	57,886			
GLOUCESTER Groundfish			5,669,676	5,362,758	6,161,431	7,092,394	8,799,926	6,617,237		
GLOUCESTER Small Mesh Mult.			1,083,558	1,064,458	1,871,676	1,678,216	1,478,599	1,435,301		
GLOUCESTER Scallops			47,948	33,100	69,460	117,817	115,536	76,772		
GLOUCESTER Monkfish			685,442	769,365	1,273,418	1,736,545	1,823,630	1,257,680		

Table 98 Monkfishing Area and Monkfish Permit C and D Related Other Species

State	Homeport	Fishing Area	Species	1997	1998	1999	2000	2001	Ave		
MA	BOSTON	B	Groundfish	6,402,021	6,542,300	6,617,928	7,153,875	10,062,334	7,355,692		
			Small Mesh Mu	1,651,825	5,427,956	4,132,651	1,455,981	4,177,893	3,369,261		
			Scallops	115,176	226,637	832,888	1,063,807	666,183	580,938		
			Monkfish	2,215,703	2,013,738	2,554,647	1,432,526	1,845,112	2,012,345		
		N	Groundfish	4,645,628	4,385,461	3,653,475	6,280,785	5,040,467	4,801,163		
			Small Mesh Mu	240,962	162,407	423,459	6,351,196	188,734	1,473,352		
			Scallops	111,459	22,227	13,717	35,473	43,329	45,241		
			Monkfish	571,764	843,233	980,561	1,823,379	1,634,387	1,170,665		
		S	Groundfish	144,575	75,270	129,338	101,174	86,295	107,330		
			Small Mesh Mu	13,399,697	158,988	233,478	11,270	546,911	2,870,069		
			Scallops	131,608	62,149	0	0	692,241	177,200		
			Monkfish	332,808	987,686	686,708	151,634	269,385	485,644		
	BOSTON Groundfish				11,192,224	11,003,031	10,400,741	13,535,834	15,189,096	12,264,185	
	BOSTON Small Mesh Mult.				15,292,484	5,749,351	4,789,588	7,818,447	4,913,538	7,712,682	
	BOSTON Scallops				358,243	311,013	846,605	1,099,280	1,401,753	803,379	
	BOSTON Monkfish				3,120,275	3,844,657	4,221,916	3,407,539	3,748,884	3,668,654	
	CHATHAM	B	Groundfish	254,420	130,602	229,809	209,575	435,302	251,942		
			Small Mesh Mu	3,130	3,205	1,050	118	3,441	2,189		
			Scallops	0	0	0	0	23,556	4,711		
			Monkfish	2,625	6,539	239,210	183,521	340,133	154,406		
		N	Groundfish	1,364,798	1,058,450	1,331,487	1,597,552	1,036,708	1,277,799		
			Small Mesh Mu	39,719	2,720	20,463	31,362	15,502	21,953		
			Scallops	200	0	0	7,509	3,655	2,273		
			Monkfish	217,916	279,204	112,599	442,250	341,176	278,629		
		CHATHAM Groundfish				1,619,218	1,189,052	1,561,296	1,807,127	1,472,010	1,529,741
		CHATHAM Small Mesh Mult.				42,849	5,925	21,513	31,480	18,943	24,142
		CHATHAM Scallops				200	0	0	7,509	27,211	6,984
		CHATHAM Monkfish				220,541	285,743	351,809	625,771	681,309	433,035
	FAIRHAVEN	B	Groundfish	65,939	67,661	26,425	122,447	222,842	101,063		
			Small Mesh Mu	0	0	0	65	0	13		
			Scallops	327,439	296,697	739,017	742,482	486,816	518,490		
			Monkfish	268,178	306,541	210,425	190,388	308,541	256,815		
		N	Groundfish	0	0	0	96,935	389,610	97,309		
			Small Mesh Mu	0	0	0	0	0	0		
			Scallops	0	0	0	0	0	0		
			Monkfish	0	0	0	2,810	55,769	11,716		
		S	Groundfish	0	684	0	850	600	427		
			Small Mesh Mu	0	0	0	0	0	0		
			Scallops	98,113	79,824	0	281,263	454,022	182,644		
			Monkfish	10,584	18,595	0	24,510	36,315	18,001		
	FAIRHAVEN Groundfish				65,939	68,345	26,425	220,232	613,052	198,799	
	FAIRHAVEN Small Mesh Mult.				0	0	0	65	0	13	
	FAIRHAVEN Scallops				425,552	376,521	739,017	1,023,745	940,838	701,135	
	FAIRHAVEN Monkfish				278,762	325,136	210,425	217,708	400,625	286,531	
	NEW BEDFORD	B	Groundfish	8,879,247	9,021,271	9,875,613	11,026,682	13,612,691	10,483,101		
			Small Mesh Mu	1,002,813	958,254	4,945,927	13,900,516	20,023,250	8,166,152		
			Scallops	2,983,226	3,427,356	7,815,034	9,714,419	12,510,197	7,290,046		
			Monkfish	3,746,420	3,117,059	2,330,722	1,866,844	1,943,901	2,600,989		
		N	Groundfish	877,269	1,631,623	1,763,324	3,557,201	4,419,290	2,449,741		
			Small Mesh Mu	7,885	1,040	258,265	168,414	19,180	90,957		
			Scallops	686,045	557,898	82,319	407,363	49,699	356,665		
			Monkfish	253,781	300,816	533,035	719,618	875,147	536,479		
		S	Groundfish	125,133	156,903	362,020	3,744	181,368	165,834		
			Small Mesh Mu	1,047,885	1,971,961	265,789	0	19,368,238	4,530,775		
			Scallops	494,727	520,093	342,006	1,247,591	2,629,984	1,046,880		
			Monkfish	376,235	911,590	151,711	84,191	755,164	455,778		
	NEW BEDFORD Groundfish				9,881,649	10,809,797	12,000,957	14,587,627	18,213,349	13,098,676	
	NEW BEDFORD Small Mesh Mult.				2,058,583	2,931,255	5,469,981	14,068,930	39,410,668	12,787,883	
	NEW BEDFORD Scallops				4,163,998	4,505,347	8,239,359	11,369,373	15,189,880	8,693,591	
	NEW BEDFORD Monkfish				4,376,436	4,329,465	3,015,468	2,670,653	3,574,212	3,593,247	
	WESTPORT	B	Groundfish	0	0	0	3,050	39,623	8,535		
			Small Mesh Mu	0	0	0	0	1,814	363		
			Scallops	0	0	0	0	0	0		
			Monkfish	0	0	0	398,762	510,538	181,860		
		S	Groundfish	15,772	10,804	12,287	1,657	740	8,252		
			Small Mesh Mu	1,525	2,265	0	1,900	0	1,138		
			Scallops	0	0	0	0	0	0		
			Monkfish	581,765	548,134	536,200	129,770	160,466	391,267		
	WESTPORT Groundfish				15,772	10,804	12,287	4,707	40,363	16,787	
	WESTPORT Small Mesh Mult.				1,525	2,265	0	1,900	1,814	1,501	
	WESTPORT Scallops				0	0	0	0	0	0	
	WESTPORT Monkfish				581,765	548,134	536,200	528,532	671,004	573,127	

Table 98 Monkfishing Area and Monkfish Permit C and D Related Other Species (cont'd.)

State	Homeport	Fishing Area	Species	1997	1998	1999	2000	2001	Ave	
RI	LITTLE COMPTON	B	Groundfish	1,518	0	0	0	0	304	
			Small Mesh Mu	870	0	0	0	0	174	
			Scallops	0	0	0	0	0	0	
			Monkfish	61,120	0	0	0	0	12,224	
		S	Groundfish	6,001	11,021	11,986	23,769	4,690	11,493	
			Small Mesh Mu	2,004	2,112	860	4,881	7,006	3,373	
			Scallops	0	0	0	12	59	14	
			Monkfish	157,688	168,084	140,373	132,100	256,832	171,015	
	LITTLE COMPTON Groundfish			7,519	11,021	11,986	23,769	4,690	11,797	
	LITTLE COMPTON Small Mesh Mult.			2,874	2,112	860	4,881	7,006	3,547	
	LITTLE COMPTON Scallops			0	0	0	12	59	14	
	LITTLE COMPTON Monkfish			218,808	168,084	140,373	132,100	256,832	183,239	
	TIVERTON	B	Groundfish	0	251,171	0	1,203	456	50,566	
			Small Mesh Mu	0	368,980	0	169	236	73,877	
			Scallops	0	0	0	0	0	0	
			Monkfish	0	3,514	0	102,178	169,576	55,054	
		N	Groundfish	59,016	0	0	33,800	0	18,563	
			Small Mesh Mu	26,020	0	0	37,980	0	12,800	
			Scallops	0	0	0	0	0	0	
			Monkfish	13,126	0	0	120	0	2,649	
		S	Groundfish	11,476	18,402	20,660	22,382	16,585	17,901	
			Small Mesh Mu	2,217	1,612	720	946	10,975	3,294	
			Scallops	40	0	0	0	0	8	
			Monkfish	234,449	196,266	401,312	106,320	351,420	257,953	
		TIVERTON Groundfish			70,492	269,573	20,660	57,385	17,041	87,030
		TIVERTON Small Mesh Mult.			28,237	370,592	720	39,095	11,211	89,971
		TIVERTON Scallops			40	0	0	0	0	8
		TIVERTON Monkfish			247,575	199,780	401,312	208,618	520,996	315,656
	NEWPORT	B	Groundfish	721,192	941,307	811,690	714,867	1,259,432	889,698	
			Small Mesh Mu	478,515	316,281	223,638	852,362	741,568	522,473	
			Scallops	48	252	43	100	0	89	
			Monkfish	222,047	273,735	426,437	231,869	389,324	308,682	
		N	Groundfish	0	0	0	474,360	0	94,872	
			Small Mesh Mu	0	0	0	2,410	0	482	
			Scallops	0	0	0	168	0	34	
			Monkfish	0	0	0	161,487	0	32,297	
		S	Groundfish	18,025	35,617	2,607	12,528	9,663	15,688	
			Small Mesh Mu	273,431	185,330	12,337	12,112	36,611	103,964	
			Scallops	0	0	0	15	0	3	
			Monkfish	131,762	205,119	378,298	70,165	227,615	202,592	
	NEWPORT Groundfish			739,217	976,924	814,297	1,201,755	1,269,095	1,000,258	
	NEWPORT Small Mesh Mult.			751,946	501,611	235,975	866,884	778,179	626,919	
	NEWPORT Scallops			48	252	43	283	0	125	
	NEWPORT Monkfish			353,809	478,854	804,735	463,521	616,939	543,572	
	POINT JUDITH	B	Groundfish	641,897	1,478,793	2,390,582	3,122,445	2,740,426	2,074,829	
			Small Mesh Mu	2,314,793	4,175,553	5,276,352	3,687,452	2,698,294	3,630,489	
			Scallops	375	67	33,013	127,177	193,011	70,729	
Monkfish			426,857	430,061	455,078	359,594	316,859	397,690		
N		Groundfish	28,867	126,817	151,254	38,810	0	69,150		
		Small Mesh Mu	33,800	0	179	0	0	6,796		
		Scallops	2,825	0	0	0	0	565		
		Monkfish	8,218	40,201	28,512	4,448	0	16,276		
S		Groundfish	1,083,871	2,024,693	1,072,767	1,620,128	588,190	1,277,930		
		Small Mesh Mu	8,477,668	5,716,560	1,633,021	3,511,934	3,749,024	4,617,641		
		Scallops	85	500	790	25	65	293		
		Monkfish	458,662	281,022	281,944	212,629	144,099	275,671		
POINT JUDITH Groundfish			1,754,635	3,630,303	3,614,603	4,781,383	3,328,616	3,421,908		
POINT JUDITH Small Mesh Mult.			10,826,261	9,892,113	6,909,552	7,199,386	6,447,318	8,254,926		
POINT JUDITH Scallops			3,285	567	33,803	127,202	193,076	71,587		
POINT JUDITH Monkfish			893,737	751,284	765,534	576,671	460,958	689,637		

Table 98 Monkfishing Area and Monkfish Permit C and D Related Other Species (cont'd.)

State	Homeport	Fishing Area	Species	1997	1998	1999	2000	2001	Ave	
NJ	POINT PLEASANT	B	Groundfish	0	0	1,676	0	0	335	
			Small Mesh Mu	0	0	5,935	0	0	1,187	
			Scallops	0	0	205,074	0	0	41,015	
			Monkfish	0	0	16,758	0	0	3,352	
		S	Groundfish	8,752	48,211	59,422	91,340	45,467	50,638	
			Small Mesh Mu	514,677	275,005	326,893	367,446	257,141	348,232	
			Scallops	160,691	122,079	0	295,684	354,253	186,541	
			Monkfish	290,856	530,852	335,408	161,159	133,136	290,282	
	POINT PLEASANT Groundfish			8,752	48,211	61,098	91,340	45,467	50,974	
	POINT PLEASANT Small Mesh Mult.			514,677	275,005	332,828	367,446	257,141	349,419	
	POINT PLEASANT Scallops			160,691	122,079	205,074	295,684	354,253	227,556	
	POINT PLEASANT Monkfish			290,856	530,852	352,166	161,159	133,136	293,634	
	BARNEGAT LIGHT	B	Groundfish	8,042	63,033	32,315	24,237	29	25,531	
			Small Mesh Mu	0	6,486	94	4,740	2,935	2,851	
			Scallops	0	0	702,878	803,008	7	301,179	
			Monkfish	216,821	217,565	332,157	453,847	179,618	280,002	
		N	Groundfish	299,678	153,957	0	0	0	90,727	
			Small Mesh Mu	694	1,330	0	0	0	405	
			Scallops	0	0	0	0	0	0	
			Monkfish	11,483	12,759	0	0	0	4,848	
		S	Groundfish	10,100	19,133	8,604	1,521	300	7,932	
			Small Mesh Mu	67,370	95,424	5,689	26,686	7,881	40,610	
			Scallops	337,460	417,395	22	307,292	1,174,237	447,281	
			Monkfish	591,588	1,256,603	1,328,928	721,270	1,965,414	1,172,761	
		BARNEGAT LIGHT Groundfish			317,820	236,123	40,919	25,758	329	124,190
		BARNEGAT LIGHT Small Mesh Mult.			68,064	103,240	5,783	31,426	10,816	43,866
		BARNEGAT LIGHT Scallops			337,460	417,395	702,900	1,110,300	1,174,244	748,460
		BARNEGAT LIGHT Monkfish			819,892	1,486,927	1,661,085	1,175,117	2,145,032	1,457,611
Total Groundfish			37,443,300	39,719,449	40,992,386	50,599,082	57,454,298	45,241,703		
Total Small Mesh Mult.			31,477,045	23,836,066	23,191,712	34,614,778	64,150,452	35,454,011		
Total Scallops			5,500,538	5,768,965	10,928,699	15,266,986	19,579,578	11,408,953		
Total Monkfish			12,937,391	14,554,531	15,367,214	13,729,364	17,520,979	14,821,896		

Table 98 Monkfishing Area and Monkfish Permit C and D Related Other Species (cont'd.)

For the primary producing ports, gillnets are the main gear used in landing monkfish approaching 40% of monkfish landings across all vessel size classes. Thirty percent of monkfish landings are from small vessels (Table 99). For these ports only medium and large vessels in Boston, Fairhaven, and New Bedford, MA; Portsmouth, NH; and Barnegat Light and Point Pleasant, NJ fished monkfish using scallop dredge gear. Small vessels using gillnets to land monkfish are the most common gear across ports (Table 100).

Average of dep		year					
Vessel Size	monkgear	1997	1998	1999	2000	2001	Ave.
L	Gill	2%	27%	52%	41%	60%	40%
	Dredge	28%	25%	10%	5%	6%	14%
	Other	14%	9%	6%	2%	0%	10%
	Trawl	12%	14%	14%	11%	9%	12%
M	Gill	21%	23%	33%	43%	55%	37%
	Dredge	23%	22%	8%	4%	4%	12%
	Other	3%	3%	8%	8%	0%	5%
	Trawl	7%	8%	10%	9%	10%	9%
S	Gill	24%	30%	42%	46%	52%	39%
	Other	0%	0%	0%	0%	0%	0%
	Trawl	8%	11%	10%	15%	15%	12%
L Average		0.18	0.18	0.13	0.09	0.09	0.13417
M Average		0.1	0.1	0.12	0.14	0.16	0.12519
S Average		0.18	0.24	0.32	0.37	0.41	0.30835

Table 99 Primary Producing Port Dependency on Monkfish Relative to Vessel Size and Gear Configuration.

Average of dependency				YEAR						
HPST	Home Port	VSIZE	Gear	1997	1998	1999	2000	2001	Total	
MA	BOSTON	L	Gill	1%	1%	47%	64%	75%	37%	
			Dredge	21%	44%	14%	7%	6%	15%	
			Other	18%	0%	16%	0%	0%	17%	
			Trawl	13%	18%	18%	12%	12%	15%	
		M	Gill	9%	7%	26%	55%	45%	31%	
			Trawl	7%	12%	13%	11%	12%	11%	
		S	Gill	27%	36%	40%	40%	52%	39%	
			Trawl	10%	11%	12%	22%	18%	15%	
		BOSTON Average				13%	18%	19%	18%	18%
	CHATHAM	M	Gill	1%	1%	1%	28%	34%	13%	
			S	11%	11%	19%	25%	28%	20%	
		Trawl	6%	7%	5%	7%	5%	6%		
	CHATHAM Average				8%	8%	12%	22%	24%	15%
	FAIRHAVEN	L	Dredge	34%	30%	14%	7%	8%	18%	
			Trawl	46%	51%	24%	0%	17%	33%	
		M	Trawl	0%	0%	0%	2%	11%	7%	
		S	Gill	0%	0%	100%	89%	85%	91%	
	FAIRHAVEN Average				36%	37%	29%	17%	20%	27%
	GLOUCESTER	L	Gill	3%	1%	12%	19%	9%	9%	
			Dredge	48%	52%	10%	3%	6%	24%	
			Other	12%	0%	0%	0%	0%	12%	
			Trawl	8%	9%	12%	9%	12%	10%	
		M	Gill	16%	7%	12%	39%	48%	33%	
			Other	1%	2%	4%	0%	0%	3%	
			Trawl	4%	4%	8%	8%	6%	6%	
		S	Gill	10%	10%	25%	47%	38%	26%	
			Other	0%	0%	0%	0%	0%	0%	
	Trawl	8%	5%	5%	7%	9%	7%			
	GLOUCESTER Average				8%	8%	13%	21%	19%	14%
	NEW BEDFORD	L	Gill	0%	0%	0%	0%	55%	55%	
Dredge			28%	23%	10%	5%	6%	14%		
Other			12%	9%	0%	0%	0%	11%		
Trawl			15%	16%	12%	11%	9%	13%		
M		Dredge	8%	11%	5%	4%	4%	6%		
		Trawl	10%	9%	9%	7%	4%	8%		
S	Gill	26%	75%	80%	63%	56%	60%			
	Trawl	8%	36%	0%	0%	0%	22%			
NEW BEDFORD Average				21%	20%	11%	8%	8%	14%	
WESTPORT	M	Gill	91%	89%	97%	90%	81%	90%		
	S	Gill	43%	43%	56%	63%	57%	53%		
WESTPORT Average				55%	54%	66%	70%	61%	61%	

Table 100 Dependency on Monkfish Relative to Vessel Size and Gear Configuration

Average of dependency				YEAR					
HPST	Home Port	VSIZE	Gear	1997	1998	1999	2000	2001	Total
ME	PORT CLYDE	M	Trawl	12%	15%	20%	25%	28%	20%
		S	Trawl	14%	17%	18%	22%	24%	19%
	PORT CLYDE Average			13%	16%	19%	24%	26%	20%
	PORTLAND	L	Trawl	7%	8%	20%	14%	13%	13%
		M	Other	6%	4%	15%	8%	0%	7%
			Trawl	8%	9%	14%	18%	20%	14%
	S	Trawl	4%	7%	8%	9%	14%	8%	
PORTLAND Average			7%	8%	15%	14%	16%	12%	
NH	PORTSMOUTH	L	Dredge	0%	0%	2%	0%	0%	2%
			Trawl	0%	1%	0%	11%	13%	8%
		M	Gill	6%	1%	14%	10%	11%	8%
			Trawl	2%	3%	5%	14%	20%	11%
	S	Gill	11%	11%	17%	26%	38%	21%	
Trawl		7%	7%	16%	7%	12%	10%		
PORTSMOUTH Average			9%	7%	14%	20%	29%	16%	
NJ	BARNEGAT LIGHT	L	Gill	0%	78%	97%	0%	100%	91%
			Dredge	26%	24%	10%	4%	7%	14%
			Trawl	0%	0%	0%	98%	0%	98%
		M	Gill	61%	70%	95%	56%	84%	75%
	Dredge		29%	24%	9%	4%	4%	14%	
	S	Gill	31%	39%	59%	59%	70%	53%	
	BARNEGAT LIGHT Average			32%	38%	50%	46%	57%	45%
	POINT PLEASANT	L	Dredge	12%	10%	4%	2%	4%	6%
			Other	0%	0%	1%	2%	0%	1%
			Trawl	0%	1%	0%	0%	3%	1%
M		Trawl	1%	1%	0%	1%	1%	1%	
	S	Gill	44%	86%	92%	91%	82%	79%	
POINT PLEASANT Average			14%	22%	20%	20%	19%	19%	
RI	LITTLE COMPTON	M	Gill	13%	0%	1%	22%	21%	14%
		S	Gill	61%	47%	65%	51%	67%	58%
	LITTLE COMPTON Average			45%	47%	44%	42%	51%	46%
	NEWPORT	L	Trawl	8%	12%	17%	10%	12%	12%
			Gill	1%	21%	2%	15%	0%	10%
		M	Other	0%	0%	0%	0%	0%	0%
			Trawl	2%	8%	19%	7%	4%	8%
	S	Gill	52%	61%	79%	50%	59%	60%	
	NEWPORT Average			16%	22%	28%	18%	20%	21%
	POINT JUDITH	L	Other	0%	0%	0%	0%	0%	0%
			Trawl	5%	4%	7%	3%	1%	4%
		M	Gill	0%	0%	0%	0%	58%	58%
			Trawl	6%	4%	4%	4%	3%	4%
	S	Gill	0%	30%	16%	37%	40%	31%	
	POINT JUDITH Average			6%	5%	5%	5%	5%	5%
TIVERTON	M	Gill	0%	0%	0%	0%	85%	85%	
		Trawl	7%	1%	0%	0%	0%	2%	
	S	Gill	36%	63%	63%	61%	64%	59%	
TIVERTON Average			26%	47%	63%	45%	72%	52%	
Grand Total				16%	18%	17%	17%	19%	17%

Table 100 Dependency on Monkfish Relative to Vessel Size and Gear Configuration (cont'd.)

In terms of tonnage, groundfish and small mesh multispecies are the highest producing of the four primary species evaluated for both large and medium vessel classes with monkfish a tertiary species. Scallops rank third and fourth for these vessel classes. Smaller vessels produce a more equitable balance of groundfish and monkfish (Table 101). At the port level, Boston, Gloucester, and New Bedford, MA; Portland, ME; and Portsmouth, NH are larger ports showing primary tonnage activity coming from groundfish with Chatham, MA; Newport, RI; and Port Clyde, ME smaller ports with high volume activity (Table 102). Ports where monkfish represents the highest volume of activity relative to the other primary species evaluated include Little Compton, Westport, and Tiverton, RI; and Barnegat Light, NJ. While groundfish received the highest overall ranking (27) in importance of groundfish to port volume production, scallop received the lowest (53). This indicates the importance of the volume of landings in homeports. The value per pound of specific species (e.g., in 1999 prices (\$): monkfish - .85, haddock - 1.31, and whiting - .46 relative to scallops 5.50) is considered separately for primary and secondary ports in the affected human environment section of this document.

Pounds Landed		YEAR					
VSIZE	Data	1997	1998	1999	2000	2001	Ave.
L	Groundfish	22,738,238	25,103,433	26,356,794	33,068,142	38,603,741	29,174,070
	Sm. Mesh Multi.	25,858,124	18,656,748	17,655,822	30,506,705	60,444,137	30,624,307
	Scallops	5,157,351	5,358,315	10,210,653	14,118,783	18,226,501	10,614,321
	Monkfish	7,527,675	8,134,824	7,726,097	6,520,973	7,319,795	7,445,873
M	Groundfish	9,136,660	10,009,552	9,902,470	11,869,686	13,277,532	10,839,180
	Sm. Mesh Multi.	5,304,164	4,903,750	5,317,571	3,881,026	3,422,956	4,565,893
	Scallops	335,823	401,027	713,706	1,129,176	1,251,518	766,250
	Monkfish	2,082,275	2,272,252	2,605,690	2,859,575	3,581,591	2,680,277
S	Groundfish	5,568,402	4,606,464	4,733,122	5,661,254	5,573,025	5,228,453
	Sm. Mesh Multi.	314,757	275,568	218,319	227,047	283,359	263,810
	Scallops	7,364	9,623	4,340	19,027	101,559	28,383
	Monkfish	3,327,441	4,147,455	5,035,427	4,348,816	6,619,593	4,695,746
Total Groundfish		37,443,300	39,719,449	40,992,386	50,599,082	57,454,298	45,241,703
Total Sm. Mesh Multi.		31,477,045	23,836,066	23,191,712	34,614,778	64,150,452	35,454,011
Total Scallops		5,500,538	5,768,965	10,928,699	15,266,986	19,579,578	11,408,953
Total Monkfish		12,937,391	14,554,531	15,367,214	13,729,364	17,520,979	14,821,896

Note: only includes ports with average (1999-2002) landings value in excess of \$1,000,000 for either homeport or weighout port and select highly dependent (\$) ports with average landings value in excess of \$800,000. Base measurement is pounds landed by homeport. Vessel size classes (L = > 70 feet, M = 50-70 feet, S = < 50 feet). Data source: logbooks.

Table 101 Vessel Size and Primary Species Landings

Home Port	Data	1997	1998	1999	2000	2001	Ave.	Ground-fish	Sm. Mesh Multi.	Scallops	Monkfish
BOSTON	Groundfish	11,192,224	11,003,031	10,400,741	13,535,834	15,189,096	12,264,185	1	2	4	3
	Sm. Mesh Multi.	15,292,484	5,749,351	4,789,588	7,818,447	4,913,538	7,712,682				
	Scallops	358,243	311,013	846,605	1,099,280	1,401,753	803,379				
GLOUCESTER	Monkfish	3,120,275	3,844,657	4,221,916	3,407,539	3,748,884	3,668,654	1	2	4	3
	Groundfish	5,669,676	5,362,758	6,161,431	7,092,394	8,799,926	6,617,237				
	Sm. Mesh Multi.	1,083,558	1,064,458	1,871,676	1,678,216	1,478,599	1,435,301				
PORTLAND	Scallops	47,948	33,100	69,460	117,817	115,536	76,772	1	2	4	3
	Monkfish	685,442	769,365	1,273,418	1,736,545	1,823,630	1,257,680				
	Groundfish	3,720,280	3,891,785	4,264,323	4,699,049	5,734,924	4,462,072				
PORTSMOUTH	Sm. Mesh Multi.	606,190	229,011	1,655,228	2,428,303	10,645,981	3,112,943	1	2	4	3
	Scallops	2,173	205	8	320	325	606				
	Monkfish	441,526	460,030	1,019,863	1,012,746	1,271,608	841,155				
NEWPORT	Groundfish	1,621,183	1,574,345	1,284,264	1,567,659	1,499,708	1,509,432	1	2	4	3
	Sm. Mesh Multi.	199,797	2,707,820	1,897,643	76,668	168,138	1,010,013				
	Scallops	110	931	90,595	115,461	182,208	77,861				
CHATHAM	Monkfish	230,226	202,657	367,036	469,916	751,024	404,172	1	2	4	3
	Groundfish	739,217	976,924	814,297	1,201,755	1,269,095	1,000,258				
	Sm. Mesh Multi.	751,946	501,611	235,975	866,884	778,179	626,919				
PORT CLYDE	Scallops	48	252	43	283	0	125	1	3	4	2
	Monkfish	353,809	478,854	804,735	463,521	616,939	543,572				
	Groundfish	1,619,218	1,189,052	1,561,296	1,807,127	1,472,010	1,529,741				
NEW BEDFORD	Sm. Mesh Multi.	42,849	5,925	21,513	31,480	18,943	24,142	1	3	4	2
	Scallops	200	0	0	7,509	27,211	6,984				
	Monkfish	220,541	285,743	351,809	625,771	681,309	433,035				
POINT JUDITH	Groundfish	758,924	637,377	717,099	903,063	1,226,632	848,619	1	3	4	2
	Sm. Mesh Multi.	0	1,308	365	1,651	1,100	885				
	Scallops	790	1,555	1,835	0	195	875				
LITTLE COMPTON	Monkfish	177,741	173,563	245,874	342,768	464,790	280,947	1	2	3	4
	Groundfish	9,881,649	10,809,797	12,000,957	14,587,627	18,213,349	13,098,676				
	Sm. Mesh Multi.	2,058,583	2,931,255	5,469,981	14,068,930	39,410,668	12,787,883				
WESTPORT	Scallops	4,163,998	4,505,347	8,239,359	11,369,373	15,189,880	8,693,591	2	1	4	3
	Monkfish	4,376,436	4,329,465	3,015,468	2,670,653	3,574,212	3,593,247				
	Groundfish	1,754,635	3,630,303	3,614,603	4,781,383	3,328,616	3,421,908				
TIVERTON	Sm. Mesh Multi.	10,826,261	9,892,113	6,909,552	7,199,386	6,447,318	8,254,926	2	3	4	1
	Scallops	3,285	567	33,803	127,202	193,076	71,587				
	Monkfish	893,737	751,284	765,534	576,671	460,958	689,637				
BARNEGAT LIGHT	Groundfish	7,519	11,021	11,986	23,769	4,690	11,797	2	3	4	1
	Sm. Mesh Multi.	2,874	2,112	860	4,881	7,006	3,547				
	Scallops	0	0	0	12	59	14				
FAIRHAVEN	Monkfish	218,808	168,084	140,373	132,100	256,832	183,239	2	3	4	1
	Groundfish	15,772	10,804	12,287	4,707	40,363	16,787				
	Sm. Mesh Multi.	1,525	2,265	0	1,900	1,814	1,501				
POINT PLEASANT	Scallops	0	0	0	0	0	0	3	2	4	1
	Monkfish	581,765	548,134	536,200	528,532	671,004	573,127				
	Groundfish	70,492	269,573	20,660	57,385	17,041	87,030				
TIVERTON	Sm. Mesh Multi.	28,237	370,592	720	39,095	11,211	89,971	3	2	4	1
	Scallops	40	0	0	0	0	8				
	Monkfish	247,575	199,780	401,312	208,618	520,996	315,656				
BARNEGAT LIGHT	Groundfish	317,820	236,123	40,919	25,758	329	124,190	3	4	2	1
	Sm. Mesh Multi.	68,064	103,240	5,783	31,426	10,816	43,866				
	Scallops	337,460	417,395	702,900	1,110,300	1,174,244	748,460				
FAIRHAVEN	Monkfish	819,892	1,486,927	1,661,085	1,175,117	2,145,032	1,457,611	3	4	1	2
	Groundfish	65,939	68,345	26,425	220,232	613,052	198,799				
	Sm. Mesh Multi.	65	65	65	65	65	65				
POINT PLEASANT	Scallops	425,552	376,521	739,017	1,023,745	940,838	701,135	4	1	3	2
	Monkfish	278,762	325,136	210,425	217,708	400,625	286,531				
	Groundfish	8,752	48,211	61,098	91,340	45,467	50,974				
POINT PLEASANT	Sm. Mesh Multi.	514,677	275,005	332,828	367,446	257,141	349,419	4	1	3	2
	Scallops	160,691	122,079	205,074	295,684	354,253	227,556				
	Monkfish	290,856	530,852	352,166	161,159	133,136	293,634				
Total Groundfish		37,443,300	39,719,449	40,992,386	50,599,082	57,454,298	45,241,703				
Total Sm. Mesh Multi.		31,477,045	23,836,066	23,191,712	34,614,778	64,150,452	35,454,011				
Total Scallops		5,500,538	5,768,965	10,928,699	15,266,986	19,579,578	11,408,953				
Total Monkfish		12,937,391	14,554,531	15,367,214	13,729,364	17,520,979	14,821,896				

Table 102 Port level primary species landings and species ranking

The larger producing ports (Boston and New Bedford, MA; Portland, MA; and Point Judith, RI) analyzed in this assessment tend to produce the greatest quantities of monkfish, groundfish, small mesh multispecies, and scallops. These ports are homeport to a greater proportion of larger vessels, while medium and smaller ports are more likely to homeport medium and small vessels. The latter ports (Westport, MA; Tiverton and

Little Compton, RI; and Barnegat Light, NJ) are more dependent on monkfish as the primary species landed in pounds and, therefore, tend to be more reactive to changes in fishing activity levels (Table 103)

Pounds landed				YEAR							
HPST	Home Port	VSIZE	Data	1997	1998	1999	2000	2001	Ave.		
MA	BOSTON	L	Groundfish	7,584,033	7,772,732	7,461,275	9,896,891	11,172,650	8,777,516		
			Sm. Mesh Multi	15,010,401	5,524,098	4,292,388	7,380,936	4,679,117	7,377,388		
			Scallops	344,396	288,730	828,490	1,063,807	1,341,907	773,466		
			Monkfish	1,889,374	2,283,190	2,669,004	2,219,475	2,365,472	2,285,303		
		M	Groundfish	2,140,860	2,233,473	2,064,386	2,409,573	2,766,349	2,322,928		
			Sm. Mesh Multi	270,473	200,052	444,364	386,893	219,465	304,249		
			Scallops	11,234	16,119	15,677	29,290	46,965	23,857		
			Monkfish	325,502	494,864	633,289	527,635	562,850	508,828		
		S	Groundfish	1,467,331	996,826	875,080	1,229,370	1,250,097	1,163,741		
			Sm. Mesh Multi	11,610	25,201	52,836	50,618	14,956	31,044		
			Scallops	2,613	6,164	2,438	6,183	12,881	6,056		
			Monkfish	905,399	1,066,603	919,623	660,429	820,562	874,523		
	BOSTON Groundfish				11,192,224	11,003,031	10,400,741	13,535,834	15,189,096	12,264,185	
	BOSTON Sm. Mesh Multi.				15,292,484	5,749,351	4,789,588	7,818,447	4,913,538	7,712,682	
	BOSTON Scallops				358,243	311,013	846,605	1,099,280	1,401,753	803,379	
	BOSTON Monkfish				3,120,275	3,844,657	4,221,916	3,407,539	3,748,884	3,668,654	
	CHATHAM	M	Groundfish	299,644	212,474	265,988	208,942	153,076	228,025		
			Sm. Mesh Multi	900	0	325	25	2,615	773		
			Scallops	0	0	0	0	0	0		
			Monkfish	4,003	1,959	3,170	83,835	84,300	35,453		
		S	Groundfish	1,319,574	976,578	1,295,308	1,598,185	1,318,934	1,301,716		
			Sm. Mesh Multi	41,949	5,925	21,188	31,455	16,328	23,369		
			Scallops	200	0	0	7,509	27,211	6,984		
			Monkfish	216,538	283,784	348,639	541,936	597,009	397,581		
		CHATHAM Groundfish				1,619,218	1,189,052	1,561,296	1,807,127	1,472,010	1,529,741
		CHATHAM Sm. Mesh Multi.				42,849	5,925	21,513	31,480	18,943	24,142
		CHATHAM Scallops				200	0	0	7,509	27,211	6,984
		CHATHAM Monkfish				220,541	285,743	351,809	625,771	681,309	433,035
	FAIRHAVEN	L	Groundfish	65,939	68,345	26,425	108,225	203,353	94,457		
			Sm. Mesh Multi.								
Scallops			425,552	376,521	739,017	1,023,745	940,838	701,135			
Monkfish			278,762	325,136	167,701	92,489	152,675	203,353			
M		Groundfish				96,935	389,610	243,273			
		Sm. Mesh Multi.									
		Scallops				0	0	0			
		Monkfish				2,810	55,769	29,290			
S		Groundfish			0	15,072	20,089	11,720			
		Sm. Mesh Multi.				65		65			
		Scallops			0	0	0	0			
		Monkfish			42,724	122,409	192,181	119,105			
FAIRHAVEN Groundfish				65,939	68,345	26,425	220,232	613,052	198,799		
FAIRHAVEN Sm. Mesh Multi.							65		65		
FAIRHAVEN Scallops				425,552	376,521	739,017	1,023,745	940,838	701,135		
FAIRHAVEN Monkfish				278,762	325,136	210,425	217,708	400,625	286,531		
GLOUCESTER	L	Groundfish	2,809,746	2,816,290	3,067,749	3,889,628	4,473,117	3,411,306			
		Sm. Mesh Multi	50,984	56,192	89,985	53,128	166,294	83,317			
		Scallops	44,069	32,332	69,451	117,383	107,037	74,054			
		Monkfish	259,158	282,366	457,086	438,743	515,859	390,642			
	M	Groundfish	1,783,735	1,391,779	1,876,100	1,991,177	2,825,562	1,973,671			
		Sm. Mesh Multi	1,018,168	988,521	1,738,758	1,597,571	1,245,774	1,317,758			
		Scallops	18	0	9	0	730	151			
		Monkfish	113,813	114,645	204,904	510,142	660,968	320,894			
	S	Groundfish	1,076,195	1,154,689	1,217,582	1,211,589	1,501,247	1,232,260			
		Sm. Mesh Multi	14,406	19,745	42,933	27,517	66,531	34,226			
		Scallops	3,861	768	0	434	7,769	2,566			
		Monkfish	312,471	372,354	611,428	787,660	646,803	546,143			
GLOUCESTER Groundfish				5,669,676	5,362,758	6,161,431	7,092,394	8,799,926	6,617,237		
GLOUCESTER Sm. Mesh Multi.				1,083,558	1,064,458	1,871,676	1,678,216	1,478,599	1,435,301		
GLOUCESTER Scallops				47,948	33,100	69,460	117,817	115,536	76,772		
GLOUCESTER Monkfish				685,442	769,365	1,273,418	1,736,545	1,823,630	1,257,680		

Table 103 Port Level Vessel Size and Primary Species

HPST	Home Port	VSIZE	Data	1997	1998	1999	2000	2001	Ave.	
MA	NEW BEDFORD	L	Groundfish	8,696,655	9,558,041	10,590,509	12,666,840	16,426,395	11,587,688	
			Sm. Mesh Multi	2,046,818	2,897,684	5,329,081	14,052,499	39,409,403	12,747,097	
			Scallops	4,102,933	4,443,365	8,116,564	11,153,826	14,912,996	8,545,937	
			Monkfish	4,019,336	3,968,172	2,745,136	2,384,989	2,917,427	3,207,012	
		M	Groundfish	1,169,758	1,251,334	1,410,448	1,918,319	1,784,982	1,506,968	
			Sm. Mesh Multi	11,765	33,571	140,900	14,070	1,265	40,314	
			Scallops	61,065	61,982	122,795	215,547	276,884	147,655	
			Monkfish	259,457	244,407	187,256	164,887	85,559	188,313	
		S	Groundfish	15,236	422	0	2,468	1,972	4,020	
			Sm. Mesh Multi				2,361		2,361	
			Scallops	0	0	0	0	0	0	
			Monkfish	97,643	116,886	83,076	120,777	571,226	197,922	
	NEW BEDFORD Groundfish				9,881,649	10,809,797	12,000,957	14,587,627	18,213,349	13,098,676
	NEW BEDFORD Sm. Mesh Multi.				2,058,583	2,931,255	5,469,981	14,068,930	39,410,668	12,787,883
	NEW BEDFORD Scallops				4,163,998	4,505,347	8,239,359	11,369,373	15,189,880	8,693,591
NEW BEDFORD Monkfish				4,376,436	4,329,465	3,015,468	2,670,653	3,574,212	3,593,247	
MA	WESTPORT	M	Groundfish	0	0	0	3,050	39,623	8,535	
			Sm. Mesh Multi					1,814	1,814	
			Scallops	0	0	0	0	0	0	
			Monkfish	382,885	417,990	376,320	398,762	291,805	373,552	
		S	Groundfish	15,772	10,804	12,287	1,657	740	8,252	
			Sm. Mesh Multi	1,525	2,265	0	1,900		1,423	
	WESTPORT Groundfish				15,772	10,804	12,287	4,707	40,363	16,787
	WESTPORT Sm. Mesh Multi.				1,525	2,265	0	1,900	1,814	1,501
	WESTPORT Scallops				0	0	0	0	0	0
	WESTPORT Monkfish				581,765	548,134	536,200	528,532	671,004	573,127
	ME	PORT CLYDE	M	Groundfish	541,733	456,621	416,484	520,190	703,262	527,658
				Sm. Mesh Multi	0	1,308	0	1,000		577
Scallops				425	0	0	0	0	85	
Monkfish				118,041	112,013	164,669	218,820	278,370	178,383	
S			Groundfish	217,191	180,756	300,615	382,873	523,370	320,961	
			Sm. Mesh Multi			365	651	1,100	705	
			Scallops	365	1,555	1,835	0	195	790	
			Monkfish	59,700	61,550	81,205	123,948	186,420	102,565	
PORT CLYDE Groundfish				758,924	637,377	717,099	903,063	1,226,632	848,619	
PORT CLYDE Sm. Mesh Multi.				0	1,308	365	1,651	1,100	885	
PORT CLYDE Scallops				790	1,555	1,835	0	195	875	
PORT CLYDE Monkfish				177,741	173,563	245,874	342,768	464,790	280,947	
ME		PORTLAND	L	Groundfish	1,722,154	1,917,457	2,403,910	2,477,974	3,272,051	2,358,709
				Sm. Mesh Multi	448,753	61,018	1,634,478	2,382,574	10,558,950	3,017,155
				Scallops	0	0	0	0	0	0
	Monkfish			188,037	218,434	615,761	563,794	624,384	442,082	
	M		Groundfish	1,836,129	1,790,196	1,742,549	1,973,451	2,268,849	1,922,235	
			Sm. Mesh Multi	26,560	48,314	3,137	45,282	85,441	41,747	
			Scallops	2,023	0	8	320	325	535	
			Monkfish	227,644	204,981	369,185	408,076	599,521	361,881	
	S		Groundfish	161,997	184,132	117,864	247,624	194,024	181,128	
			Sm. Mesh Multi	130,877	119,679	17,613	447	1,590	54,041	
			Scallops	150	205	0	0	0	71	
			Monkfish	25,845	36,615	34,917	40,876	47,703	37,191	
PORTLAND Groundfish				3,720,280	3,891,785	4,264,323	4,699,049	5,734,924	4,462,072	
PORTLAND Sm. Mesh Multi.				606,190	229,011	1,655,228	2,428,303	10,645,981	3,112,943	
PORTLAND Scallops				2,173	205	8	320	325	606	
PORTLAND Monkfish				441,526	460,030	1,019,863	1,012,746	1,271,608	841,155	
NH	PORTSMOUTH	L	Groundfish		43,550	63,121	227,875	273,710	152,064	
			Sm. Mesh Multi		2,356,625	1,725,000		14,800	1,365,475	
			Scallops		0	90,550	115,436	182,158	97,036	
			Monkfish		18,900	29,210	44,400	74,000	41,628	
		M	Groundfish	655,704	688,155	364,677	412,384	493,427	522,869	
			Sm. Mesh Multi	158,054	348,960	98,909	3,713	485	122,024	
			Scallops	0	0	0	0	0	0	
			Monkfish	33,426	17,308	74,989	75,155	99,980	60,172	
		S	Groundfish	965,479	842,640	856,466	927,400	732,571	864,911	
			Sm. Mesh Multi	41,743	2,235	73,734	72,955	152,853	68,704	
			Scallops	110	931	45	25	50	232	
			Monkfish	196,800	166,449	262,837	350,361	577,044	310,698	
	PORTSMOUTH Groundfish				1,621,183	1,574,345	1,284,264	1,567,659	1,499,708	1,509,432
	PORTSMOUTH Sm. Mesh Multi.				199,797	2,707,820	1,897,643	76,668	168,138	1,010,013
	PORTSMOUTH Scallops				110	931	90,595	115,461	182,208	77,861
PORTSMOUTH Monkfish				230,226	202,657	367,036	469,916	751,024	404,172	

Table 103 Port Level Vessel Size and Primary Species (cont'd.)

HPST	Home Port	VSIZE	Data	1997	1998	1999	2000	2001	Ave.	
NJ	BARNEGAT LIGHT	L	Groundfish	551	234	363	0	0	230	
			Sm. Mesh Multi.		1,675	56	40		590	
			Scallops	79,287	95,084	128,643	223,804	194,661	144,296	
				Monkfish	28,911	349,623	151,929	192,328	127,423	170,043
			M	Groundfish	7,165	6,847	6,056	24,675	6	8,950
		Sm. Mesh Multi.		7,830	8,949	1,125	1,896	50	3,970	
		Scallops		258,148	322,311	574,235	881,632	926,189	592,503	
				Monkfish	244,156	290,661	305,101	163,449	264,431	253,560
			S	Groundfish	310,104	229,042	34,500	1,083	323	115,010
		Sm. Mesh Multi.		60,234	92,616	4,602	29,490	10,766	39,542	
		Scallops		25	0	22	4,864	53,394	11,661	
				Monkfish	546,825	846,643	1,204,055	819,340	1,753,178	1,034,008
		BARNEGAT LIGHT Groundfish			317,820	236,123	40,919	25,758	329	124,190
		BARNEGAT LIGHT Sm. Mesh Multi.			68,064	103,240	5,783	31,426	10,816	43,866
		BARNEGAT LIGHT Scallops			337,460	417,395	702,900	1,110,300	1,174,244	748,460
		BARNEGAT LIGHT Monkfish			819,892	1,486,927	1,661,085	1,175,117	2,145,032	1,457,611
		POINT PLEASANT	L	Groundfish	8,566	32,450	45,743	73,272	35,502	39,107
	Sm. Mesh Multi.			314,902	200,822	244,550	266,736	165,551	238,512	
	Scallops			160,691	122,079	205,074	295,684	354,193	227,544	
				Monkfish	40,483	35,037	21,540	20,605	30,913	29,716
			M	Groundfish	51	15,761	15,355	18,068	9,965	11,840
	Sm. Mesh Multi.			192,500	72,386	87,335	99,755	91,540	108,703	
	Scallops			0	0	0	0	60	12	
				Monkfish	3,860	3,463	2,967	3,488	4,365	3,629
			S	Groundfish	135	0	0	0	0	27
	Sm. Mesh Multi.			7,275	1,797	943	955	50	2,204	
	Scallops			0	0	0	0	0	0	
			Monkfish	246,513	492,352	327,659	137,066	97,858	260,290	
	POINT PLEASANT Groundfish			8,752	48,211	61,098	91,340	45,467	50,974	
	POINT PLEASANT Sm. Mesh Multi.			514,677	275,005	332,828	367,446	257,141	349,419	
	POINT PLEASANT Scallops			160,691	122,079	205,074	295,684	354,253	227,556	
	POINT PLEASANT Monkfish			290,856	530,852	352,166	161,159	133,136	293,634	

Table 103 Port Level Vessel Size and Primary Species (cont'd.)

HPST	Home Port	VSIZE	Data	1997	1998	1999	2000	2001	Ave.	
RI	LITTLE COMPTON	M	Groundfish	175		11,640	22,045	1,595	8,864	
			Sm. Mesh Multi	11		5	2,200	140	589	
			Scallops	0		0	0	0	0	
			Monkfish	20,900		1,370	31,977	15,785	17,508	
		S	Groundfish	7,344	11,021	346	1,724	3,095	4,706	
			Sm. Mesh Multi	2,863	2,112	855	2,681	6,866	3,075	
			Scallops	0	0	0	12	59	14	
			Monkfish	197,908	168,084	139,003	100,123	241,047	169,233	
	LITTLE COMPTON Groundfish			7,519	11,021	11,986	23,769	4,690	11,797	
	LITTLE COMPTON Sm. Mesh Multi.			2,874	2,112	860	4,881	7,006	3,547	
	LITTLE COMPTON Scallops			0	0	0	12	59	14	
	LITTLE COMPTON Monkfish			218,808	168,084	140,373	132,100	256,832	183,239	
	NEWPORT	L	Groundfish	701,773	867,573	668,000	991,248	1,004,810	846,681	
			Sm. Mesh Multi	388,926	447,434	218,117	855,912	732,273	528,532	
			Scallops	48	137	43	115	0	69	
			Monkfish	248,667	293,824	380,820	289,795	372,049	317,031	
		M	Groundfish	36,876	108,815	144,170	192,114	254,792	147,353	
			Sm. Mesh Multi	362,962	54,104	15,328	7,650	44,862	96,981	
			Scallops	0	115	0	168	0	57	
			Monkfish	16,672	52,862	49,642	37,678	17,295	34,830	
		S	Groundfish	568	536	2,127	18,393	9,493	6,223	
			Sm. Mesh Multi	58	73	2,530	3,322	1,044	1,405	
			Scallops	0	0	0	0	0	0	
			Monkfish	88,470	132,168	374,273	136,048	227,595	191,711	
		NEWPORT Groundfish			739,217	976,924	814,297	1,201,755	1,269,095	1,000,258
		NEWPORT Sm. Mesh Multi.			751,946	501,611	235,975	866,884	778,179	626,919
		NEWPORT Scallops			48	252	43	283	0	125
		NEWPORT Monkfish			353,809	478,854	804,735	463,521	616,939	543,572
	POINT JUDITH	L	Groundfish	1,148,821	2,026,761	2,029,699	2,736,189	1,742,153	1,936,725	
			Sm. Mesh Multi	7,597,340	7,111,200	4,122,167	5,514,880	4,717,749	5,812,667	
			Scallops	375	67	32,821	124,983	192,711	70,191	
			Monkfish	574,947	360,142	487,910	274,355	139,593	367,389	
		M	Groundfish	605,814	1,602,926	1,584,617	2,044,963	1,585,978	1,484,860	
			Sm. Mesh Multi	3,228,921	2,778,605	2,787,385	1,682,991	1,729,269	2,441,434	
			Scallops	2,910	500	982	2,219	365	1,395	
			Monkfish	318,790	313,585	232,828	232,741	259,781	271,545	
		S	Groundfish		616	287	231	485	405	
			Sm. Mesh Multi.		2,308		1,515	300	1,374	
			Scallops		0	0	0	0	0	
			Monkfish		77,557	44,796	69,575	61,584	63,378	
	POINT JUDITH Groundfish			1,754,635	3,630,303	3,614,603	4,781,383	3,328,616	3,421,908	
	POINT JUDITH Sm. Mesh Multi.			10,826,261	9,892,113	6,909,552	7,199,386	6,447,318	8,254,926	
	POINT JUDITH Scallops			3,285	567	33,803	127,202	193,076	71,587	
	POINT JUDITH Monkfish			893,737	751,284	765,534	576,671	460,958	689,637	
	TIVERTON	M	Groundfish	59,016	251,171		33,800	456	86,111	
			Sm. Mesh Multi	26,020	368,980		37,980	236	108,304	
			Scallops	0	0		0	0	0	
Monkfish			13,126	3,514		120	300,812	79,393		
S		Groundfish	11,476	18,402	20,660	23,585	16,585	18,142		
		Sm. Mesh Multi	2,217	1,612	720	1,115	10,975	3,328		
		Scallops	40	0	0	0	0	8		
		Monkfish	234,449	196,266	401,312	208,498	220,184	252,142		
TIVERTON Groundfish			70,492	269,573	20,660	57,385	17,041	87,030		
TIVERTON Sm. Mesh Multi.			28,237	370,592	720	39,095	11,211	89,971		
TIVERTON Scallops			40	0	0	0	0	8		
TIVERTON Monkfish			247,575	199,780	401,312	208,618	520,996	315,656		
Total Sum of qfish			37,443,300	39,719,449	40,992,386	50,599,082	57,454,298	45,241,703		
Total Sum of small			31,477,045	23,836,066	23,191,712	34,614,778	64,150,452	35,454,011		
Total Sum of scallop			5,500,538	5,768,965	10,928,699	15,266,986	19,579,578	11,408,953		
Total Sum of monklb			12,937,391	14,554,531	15,367,214	13,729,364	17,520,979	14,821,896		

Table 103 Port Level Vessel Size and Primary Species (cont'd)

Determining the magnitude of impact is dependent on an understanding of the potential directionality of social impacts. The analysis has not yet been done to more definitively define either the magnitude or directionality of impacts. Nevertheless, general responses to this management measure are likely to occur and may have either a neutral or positive impacts for category C and D permit holders (who simultaneously hold either a scallop or multispecies permit). If vessels currently use most DAS allocation in either the groundfish or scallop fisheries additional DAS allocated specifically for monkfish could be beneficial. This would increase income potential and/or mitigate the impacts of decreased income due to more stringent regulation in other fisheries. Scallop vessels are most likely to benefit from the separation of DAS.

6.5.2 Discussion of Social Impacts of the alternatives

6.5.2.1 Separation of DAS

6.5.2.1.1 Separation of DAS Alternative 1

Separation of DAS would not make vessels worse off than they would be under the No Action because vessels will have the opportunity to choose to have separated DAS or to fish under current regulations. Vessels would have the ability to fish either: 1) groundfish or scallop-only DAS, 2) monkfish-only DAS, or 3) a combined DAS. The economic and hence social impacts of either alternative 1a or 1b are likely to be positive or neutral relative to the No Action alternative, although some negative impacts could result from specific elements, as discussed below.

6.5.2.1.2 Separation of DAS Alternative 2 (no action)

As this alternative would keep the present system intact, no social impacts are anticipated.

6.5.2.1.3 Separation of DAS Alternative 1a (Area based)

A declaration to separate DAS usage requirements would be required annually for the SFMA only. For those fishing exclusively in the NFMA, alternative 1a would be the same as the No Action. This alternative provides an opportunity to increase the total number of DAS used in groundfish and monkfish fisheries combined. This is an advantage for the SFMA where Category C and D vessels currently target monkfish and have to use a multispecies DAS. This alternative would result in more options or flexibility that may enhance profitability. For vessels that fish exclusively in the NFMA, the economic and hence social impact effect of this alternative would be the same relative to the No Action. For vessels that fish in both areas, vessels that do not choose to have separated DAS would fish under the No Action rules which would have not economic or social impact.

6.5.2.1.4 Separation of DAS Alternative 1b (Annual declaration)

As with Alternative 1a, impacts are largely positive in the SFMA where Category C and D vessels would be able to direct on monkfish without having to use a multispecies DAS. This alternative may similarly benefit gillnet vessels in the NFMA, where an exempted monkfish fishery is already established, but would require a trawl exempted fishery to be