

AMENDMENT #7 TO THE
FISHERY MANAGEMENT PLAN FOR THE
ATLANTIC SURF CLAM AND OCEAN QUAHOG FISHERIES

October 1986

Mid-Atlantic Fishery Management Council

in cooperation with the

National Marine Fisheries Service

and the

New England Fishery Management Council

Draft adopted by MAFMC: 7 January 1987

Final adopted by MAFMC: 1 April 1987

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II. SUMMARY

This Amendment to the Fishery Management Plan for the Atlantic Surf Clam and Ocean Quahog Fisheries (FMP), prepared by the Mid-Atlantic Fishery Management Council (Council), is intended to: (1) change the quarterly quota allocation for the Georges Bank Area from 10%-40%-40%-10% to 25% for each quarter; (2) remove for all Areas the 5,000 bushel threshold for transfer of unharvested quota from one quarter to the next; (3) add the provision that any unharvested quota be distributed proportionally among the remaining quarters in the year rather than being added totally to the next quarter for the Nantucket Shoals and Georges Bank Areas; (4) remove the 10% limit on carry over of unharvested quota from one year to the next, but provide that any such carry over be distributed proportionally to each quarter for the Nantucket Shoals and Georges Bank Areas; (5) provides for annual renewal of vessel permits; and (6) makes changes to the regulations to enhance enforcement and prosecution. The management unit is all surf clams (*Spisula solidissima*) and all ocean quahogs (*Arctica islandica*) in the Atlantic fishery conservation zone (FCZ). The objectives of the FMP are:

1. Rebuild the surf clam populations to allow eventual harvest approaching the 50 million pound level, which is the estimate of maximum sustainable yield over the range of the resource, based on the average yearly catch from 1960 to 1976.
2. Minimize economic dislocation to the extent possible consistent with objective 1 and encourage efficiency in the fishery.
3. Prevent the harvest of ocean quahogs from exceeding maximum sustainable yield and direct the fishery toward achieving Optimum Yield.
4. Provide the greatest degrees of freedom and flexibility to all harvesters of these resources consistent with the attainment of the other objectives of this Plan.
5. Optimize yield per recruit.
6. Increase understanding of the conditions of the stocks and fishery.

The FMP contains three management areas for surf clams: the Mid-Atlantic Area (south of the line that begins at 41°18'16.249" north latitude and 71°54'28.477" west longitude and proceeds S 37°22'32.75" E to the point of intersection with the outward boundary of the FCZ), the Nantucket Shoals Area (north of the line that begins at 41°18'16.249" north latitude and 71°54'28.477" west longitude and proceeds S 37°22'32.75" E to the point of intersection with the outward boundary of the FCZ and west of 69° longitude), and the Georges Bank Area (north of the line that begins at 41°18'16.249" north latitude and 71°54'28.477" west longitude and proceeds S 37°22'32.75" E to the point of intersection with the outward boundary of the FCZ and east of 69° longitude).

The Amendment would change the relevant paragraphs of section XIII.B.2.a. as follows (deleted material overstruck, bolded material added):

In the Georges Bank Area the annual quota is divided into ~~quarterly quotas, the quarters and share being: 1 January - 31 March, 10%; 1 April - 30 June, 40%; 1 July - 30 September, 40%; and 1 October - 31 December, 10%~~ **equal quarterly quotas, the quarters being: 1 January - 31 March, 1 April - 30 June, 1 July - 30 September, and 1 October - 31 December.** If the first day of a calendar quarter does not fall on Sunday, then the fishing quarter will begin on the first Sunday of the new calendar quarter.

In the Mid-Atlantic Area, if the actual catch of surf clams in any one quarter falls ~~more than 5,000 bu~~ short of the specified quarterly quota, the Regional Director shall add the amount of the shortfall to the next succeeding quarterly quota. If the actual catch of surf clams in any quarter exceeds the specified quarterly quota, the Regional Director shall subtract the amount of the excess from the next succeeding quarterly quota. The Regional Director shall publish a notice in the *Federal Register* whenever the quarterly quota for surf clams is adjusted. It is understood that this process would also operate between years, that is, between the last quarter of one year and the first quarter of the next year.

In the Nantucket Shoals Area, if the actual catch of surf clams in any quarterly period falls ~~more than 5,000 bushels~~ short of the specified quarterly quota, the Regional Director will add the amount of the shortfall ~~to the succeeding quarterly quota proportionally to the quotas of the remaining quarters of the year~~. If the actual catch of surf clams exceeds the quarterly quota, the Regional Director will subtract the amount of the excess from the succeeding quarterly quota. The Regional Director shall publish a notice in the *Federal Register* whenever any quarterly quota for surf clams is adjusted as described above. The shortfall or excess will carry over from the last quarter of one year to the ~~first quarter of the next year except that no more than 10% of the annual quota may be carried over to the next year and any such carry over shall be distributed proportionally to each quarter of the new year~~.

In the Georges Bank Area, if the actual catch of surf clams in any quarterly period falls ~~more than 5,000 bushels~~ short of the specified quarterly quota, the Regional Director will add the amount of the shortfall ~~to the succeeding quarterly quota equally to the quotas of the remaining quarters of the year~~. If the actual catch of surf clams exceeds the quarterly quota, the Regional Director will subtract the amount of the excess from the succeeding quarterly quota. The Regional Director shall publish a notice in the *Federal Register* whenever any quarterly quota for surf clams is adjusted as described above. The shortfall or excess will carry over from the last quarter of one year to the ~~first quarter of the next year except that no more than 10% of the annual quota may be carried over to the next year and any such carry over shall be distributed equally to each quarter of the new year~~.

With regard to the annual permit provision, the Amendment would change the relevant paragraphs of section XIII.B.2.a. as follows (deleted material overstruck, bolded material added):

Permits expire:

when the owner or operator retires the vessel from the fishery (it is a rebuttable presumption that failure to land any surf clams or ocean quahogs for 52 consecutive weeks constitutes retirement from the fishery); or

when the ownership of the vessel changes, however, the Regional Director may authorize continuation of a vessel permit for the surf clam fishery if the new owner so requests and the vessel meets the relevant eligibility criteria; or

on 31 December of each year.

Vessels that establish eligibility to fish in both the Mid-Atlantic and New England Areas pursuant to XIII.A.2 need not re-establish such eligibility as part of the annual permit renewal.

In addition to being revised to implement the proceeding changes to the FMP, the regulations would be amended as set forth below. These measures are already provided for in the FMP and are included here only to facilitate understanding of the proposed action. The complete regulation revisions are presented in Appendix V to this Amendment.

Section 652.1 is amended by designating the existing section as (a) and adding a new paragraph (b) to read as follows:

(b) These regulations implement the Fishery Management Plan for the Surf Clam and Ocean Quahog Fisheries.

In section 652.7, paragraph (a) introductory text and paragraph (f)(1) are revised and paragraph (m) is redesignated as (n) and a new paragraph (m) is added to read as follows:

(a) No permit holder may fish for any surf clams or ocean quahogs:

(f)(1) Refuse to permit an authorized officer to board a fishing vessel subject to such a person's control no matter where that vessel may be located, or to enter areas of custody subject to such a person's

control, for purposes of conducting any search or inspection in connection with the enforcement of the Act, these regulations, or any other regulations issued under the Act.

(m) No dealer, vessel owner, operator, or other person will knowingly submit false information in records and reports required to be kept and filed under section 652.6.

In section 652.22, paragraphs (a)(4) and (f)(1) are revised to read as follows:

(a)(4) *Make-up periods.* Commencing at 0001 hours on the first Sunday of November and ending at 2400 hours on the last Thursday of April, and during the intervening months, fishermen may claim a make-up period, if in the opinion of the vessel operator, weather or sea conditions would prevent effective fishing or endanger the vessel or crew.

(f) *Presumption.* (1) The presence of surf clams or ocean quahogs aboard any vessel engaged in the surf clam or ocean quahog fishery or the presence of any part of a vessel's gear in the water more than 12 hours after a closure occurs under this section will be *prima facie* evidence that such vessel was fishing for surf clams or ocean quahogs in violation of these regulations.

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IV. INTRODUCTION

IV.A. DEVELOPMENT OF THE FMP

The original FMP was approved in November 1977 for the period through September 1979. Amendment #1 extended it through 31 December 1979. Amendment #2 extended it through the end of 1981. Amendment #3, approved 13 November 1981, extended the FMP indefinitely.

Amendment #4 was initiated in response to a closure of the New England Area to surf clam fishing during the second half of 1983. On 21 July 1983 the New England Council sent a letter to Secretary of Commerce Malcolm Baldrige requesting Secretarial action to reopen the New England Area surf clam fishery. The Mid-Atlantic Council passed a motion in August 1983 recommending that the Secretary not accept the proposal of the New England Council. After receiving a letter from Secretary Baldrige on 6 September 1983 denying implementation of emergency action to reopen the surf clam fishery in the New England Area, work was begun to investigate methods for avoiding an extended closure in 1984. In November 1983 the Mid-Atlantic Council passed a motion authorizing the Regional Director and the New England Council to prepare an Amendment for the New England Area involving trip limits, quarterly quotas, or similar strategies to insure fishing throughout the year. A proposed Amendment #4 was drafted by the New England Council staff in cooperation with NMFS staff and hearings were held on 21 and 22 March 1984. At a joint meeting of the New England and Mid-Atlantic Councils in May 1984 representatives of the surf clam industry from both New England and the Mid-Atlantic presented revisions to the proposed regime. The Mid-Atlantic Council passed a motion to adopt the proposed Amendment #4 to the Surf Clam and Ocean Quahog FMP as amended to provide that any unharvested portion of a bimonthly allocation be added to the immediately following bimonthly allocation rather than being prorated over all remaining bimonthly periods and that trip and weekly limits be by vessel classes based on relative fishing power using the following ratios: Class 1 = 1.0, Class 2 = 1.8, and Class 3 = 3.4, and that NMFS use a rulemaking procedure to implement the Amendment on an emergency basis. The New England Council voted at the same meeting to adopt the Amendment.

The provisions of Amendment #4 were implemented on an emergency basis for 180 days beginning 1 July 1984, during which time the Amendment was finalized by the New England Council and submitted for Secretarial approval. However, it was determined that the document was not structurally complete for review.

Amendment #5, approved 28 February 1985, allowed for revision of the surf clam minimum size limit provisions, extended the size limit throughout the entire fishery, and instituted a requirement that cages be tagged.

Amendment #6 was begun in October 1984 following an exploratory fishery conducted on Georges Bank as a result of emergency regulations published 2 August 1984 (49 FR 30946-30948), primarily to address problems associated with the development of a surf clam fishery on Georges Bank. At its October 1984 meeting the Council voted to divide the New England Area into the Nantucket Shoals and Georges Bank Areas, the dividing line being 69 degrees longitude. At the same meeting the Council voted to approve revising Amendment #4 so its provisions applied to that portion of the New England Area west of 69 degrees longitude.

In response to the Council's recommendation that Amendment #4 be revised to apply only to that portion of the New England Area west of 69 degrees, the New England Council held a hearing on 11 December 1984.

At its December 1984 meeting the Council adopted the provisions of Amendment #6. The Amendment was adopted by the Council for hearings in January 1985, with hearings held 18 and 19 February 1985. The Council adopted Amendment #6 for Secretarial approval at its March 1985 meeting. At that time Amendment #4 still had not been found structurally complete. Given the relationship between the provisions of Amendments #4 and #6, the decision was made to abandon Amendment #4 and combine the provisions of Amendment #4 with the Mid-Atlantic Council's Amendment #6 in one document. The combination of Amendments #4 and #6 did not change any substantive provisions of either Amendment.

The Council was notified via a letter of 25 July 1985 that NMFS had partially approved Amendment #6. The letter from Acting Regional Director Richard H. Schaefer to Council Chairman Robert L. Martin stated in part:

"The measures in Amendment 6 that I disapproved are the Nantucket Shoals Area bimonthly quota guidelines and effort control measures, the one landing per day restriction applying to the Mid-Atlantic Area, the provision prohibiting the Regional Director from subdividing allowable fishing hours when the hours are set at 12 or less, and the portion of the notification provision prohibiting vessels that have fished in a notification zone from returning to fish in the same notification zone within that calendar month. The disapproval of the bimonthly guidelines for Nantucket Shoals removed the basis for adjusting the quotas between bimonthly periods when harvest either exceeds or falls short of quota. Therefore, this provision, while not specifically disapproved, can not be implemented on Nantucket Shoals at this time."

Amendment #6 was revised to replace the bimonthly quotas with quarterly quotas, eliminate the weekly landing limits for the Nantucket Shoals Area, clarify the quota adjustment provisions for the Nantucket Shoals and Georges Bank Areas, and present additional justification for the one landing per trip provision. The other disapproved provisions (prohibition on subdividing allowed fishing times under certain conditions and portions of the notification system) were deleted from the Amendment. The Amendment was approved on 9 April 1986 when the 60 day review period expired without action by NMFS.

IV.B. PROBLEMS ADDRESSED BY THIS AMENDMENT

IV.B.1. Georges Bank Area Quarterly Quota Allocation

The FMP currently provides:

"In the Georges Bank Area the annual quota is divided into quarterly quotas, the quarters and share being: 1 January - 31 March, 10%; 1 April - 30 June, 40%; 1 July - 30 September, 40%; and 1 October - 31 December, 10%. If the first day of a calendar quarter does not fall on Sunday, then the fishing quarter will begin on the first Sunday of the new calendar quarter."

Since the maximum quota for the Georges Bank Area is 300,000 bu, the quota for the last quarter is 30,000 bu. Given 13 weeks to the quarter, this would allow an average weekly catch in the last quarter of about 2,300 bu. There is concern that this may be inadequate to provide the basis for a fishery.

IV.B.2. Quota Transfer Limitations

The FMP currently provides:

"if the actual catch of surf clams in any one quarter falls more than 5,000 bu short of the specified quarterly quota, the Regional Director shall add the amount of the shortfall to the next succeeding quarterly quota. If the actual catch of surf clams in any quarter exceeds the specified quarterly quota, the Regional Director shall subtract the amount of the excess from the next succeeding quarterly quota."

This provision has been in the FMP from the time there was only one management area. The theory behind the initial inclusion of this provision in the FMP was that the 5,000 bu would provide some insurance against data system inadequacies. In other words, if 5,000 bu is not rolled over into the new quarter if the quota is undercaught but all of the excess is deducted if the quota is exceeded, there is a bias toward conservatism. Adding any roll over to the succeeding quarterly quota was never seen as a problem because the frame of reference was the Mid-Atlantic Area where the size of any roll over has always been insignificant in terms of the base quarterly quota.

The New England Council position (Marshall, pers. comm.) is that there should be carry overs from quarter to quarter, both plus and minus, without limit, but that there be no carry over (plus or minus) from year to year.

The Mid-Atlantic Council has not accepted this position because no deductions for exceeding the quota would violate National Standard #1.

While this 5,000 bu roll over threshold makes no significant difference in the Mid- Atlantic Area, where the quarterly quota has been 662,500 bu in the recent past, it is significant in the Nantucket Shoals and Georges Bank Areas where the maximum quarterly quotas are 50,000 bu and 75,000 bu, respectively. If the quota is not harvested for four quarters, theoretically 20,000 bu, or 10% of the maximum annual quota, could not be taken from the Nantucket Shoals Area. Additionally, there is concern that if a significant portion of a quarterly quota were not caught, it could lead to a major increase in the next quarterly quota in the Nantucket Shoals and Georges Bank Areas, thereby conflicting with the objective of a stable year-round fishery.

For the Nantucket Shoals and Georges Bank Areas, the FMP currently provides:

"The shortfall or excess will carry over from the last quarter of one year to the first quarter of the next year except that no more than 10% of the annual quota may be carried over to the next year."

The 10% carry over limit was added through Amendment #6 because of a concern that substantial portions of the quotas from these Areas may not be harvested and could be additive over time. Since the 10% limit is essentially arbitrary, it is considered preferable to not limit the roll over and, if the roll over should become so excessive so as to present a conservation problem, the annual quota could be set at a lower level than might otherwise be the case.

IV.B.3. Regulation Provisions

In November of 1985 NMFS published a number of proposed changes to the regulations implementing the FMP (50 FR 46145). The changes were published as technical amendments to the regulations since they were intended to refine the regulations implementing the FMP, generally so as to improve enforcement and prosecution effectiveness. Although no comments were received by NMFS, the decision was made to not implement the changes because it was judged they should have been processed as a regulatory amendment. Insofar as the proposals would improve implementation of the FMP, it seems appropriate to attempt to secure their implementation through the vehicle of an FMP Amendment, although they would not amend the FMP *per se*, only the implementing regulations. Processing them through the Amendment will assure that they are subject to public review as well as to review through the Environmental Assessment and Regulatory Impact Review processes.

The statement of purpose of the regulations at 652.1 makes reference only to the regulation of fishing for surf clams and ocean quahogs although the regulation of other activities is encompassed by the FMP such as the possession of surf clams and ocean quahogs harvested under the jurisdiction of the FMP. It is proposed that language be added to the Purpose section stating that the regulations implement the terms of the FMP, clarifying that the scope of the regulations encompasses regulation of all activities included in the FMP and not just fishing for surf clams and ocean quahogs.

The prohibition at section 652.7(a) as now written states that permit holders will not "catch and retain on board" any surf clams or ocean quahogs during closed seasons or in closed areas as specified by the regulations. The intent of this prohibition is to prevent unauthorized harvest of surf clams and ocean quahogs for conservation purposes. However, the language appears to require that the "catching" or "retaining" of surf clams be witnessed in order to allege violation of the regulations. The loophole created by this language has hindered enforcement efforts.

To better reflect the intent of the provision, it is proposed that section 652.7(a) be revised to prohibit permit holders from fishing for surf clams or ocean quahogs during closed seasons or in closed areas. The prohibition against "fishing" versus "catching and retaining" permits enforcement when a vessel is observed with its gear in the water. This revision is consistent with the definition of "fishing" in section 652.2 which encompasses any activity which can be expected to result in the catching, taking, or harvesting of fish, or operations at sea in support of fishing, and not merely the catching of fish.

The prohibition at section 652.7(f) expressly permits authorized officers to search fishing vessels incident to enforcement efforts. The substance of the FMP, however, which encompasses possession of surf clams in places other than aboard fishing vessels, e.g., on docks and at processing facilities, provides the grounds for searches of other areas of custody. Clarification is proposed to this section to expressly include searches of places other than fishing vessels.

Current regulations at section 652.5 require dealers, owners, and operators of vessels to file accurate reports of various activities on a regular basis. The prohibition at section 552.7(e) prohibits undertaking certain actions without completing those reports. However, neither section clearly defines a prohibition for filing false reports. This is a significant omission in a system which depends upon reliable data on which to base management actions. It is proposed that a new prohibition paragraph (m) be added to make it an express violation to knowingly include false information in the reports required under section 652.5.

Section 652.22(a)(4) of the regulations allows fishermen to claim a make-up period during November through April. The regulation, as presently written, is interpreted to allow make-up periods only during the period of 1 November through 30 April. An unintentional impact of this provision is the potential for its inequitable treatment of fishermen. Depending on which days of the week 1 November and 30 April fall, fishermen can claim a make-up period during the first week the provision is effective, the first and the last week, or neither the first or the last week, depending on their fishing day. In order to assure that all participants in the fishery share an equal opportunity to claim a make-up day during the winter months, it is proposed to tailor the duration of the make-up provision to the fishing week in the Mid-Atlantic Area. Thus, the make-up period could be claimed as of the first Sunday in November through the last Thursday in April.

Section 652.22(f) of the regulations is unclear as to observations that must be made to support a presumption that violations of fishery closures or of closed areas have occurred. The first part of the section appears to provide that violations may be presumed if observation is made of either clams aboard or fishing gear in the water. The last sentence, however, could be read to require observations of clams aboard in addition to gear in the water where observation of gear is at issue. Changes are proposed to clarify the section so that presumptions may be made that violations of the section have occurred if observation is made of either clams aboard or gear in the water after closure of the fishery.

IV.B.4. Annual Permits

Under the current FMP, permits expire: (1) when the owner or operator retires the vessel from the fishery (it is a rebuttable presumption that failure to land any surf clams or ocean quahogs for 52 consecutive weeks constitutes retirement from the fishery); or (2) when the ownership of the vessel changes, however, the Regional Director may authorize continuation of a vessel permit for the surf clam fishery if the new owner so requests and the vessel meets the relevant eligibility criteria.

Additionally, the FMP requires that vessel information be submitted annually to update the permit file. While this provision is in the regulations, it has never been implemented by NMFS.

The Atlantic mackerel, squid, butterfish, and groundfish fisheries have all been converted to annual permits in an attempt to improve the quality of the permit file data base. These problems relate (1) to the fact that information submitted on the permit application becomes useless if it is not kept current and (2) vessels may get permits in anticipation of entering a fishery, not actually enter the fishery, but the permit continues in force so long as the vessel does not change hands. In the Mid- Atlantic Area surf clam and ocean quahog fishery, 145 vessels were permitted in 1985 (Table 1) while 125 reported fishing for only Mid-Atlantic Area surf clams during 1985 (Table 2). There were 746 vessels permitted for the New England Area only (Nantucket Shoals and Georges Bank in 1985, plus the 145 Mid-Atlantic Area vessels, for a total of 891 (Table 1), while only 2 vessels fished only the Nantucket Shoals area only, none fished the Georges Bank only, and 1 fished both Nantucket Shoals and Georges Bank only (Table 2).

The indication that all of the permitted vessels may not be in the fishery is corroborated by the gear carried by those vessels. The permit file shows that the vessels with Mid-Atlantic Area surf clam permits carry dredges (102 out of the 144, with 42 not reporting; Table 3), while for the vessels with permits in the other categories (850) slightly more than half (464) carry dredges and 225 have bottom trawls (Table 3).

Extending the annual permit to the surf clam and ocean quahog fisheries should help solve these problems and also foster uniform permit requirements for all fisheries. If vessel operators are required to reapply annually, those who are not in the fishery may not expend the effort necessary to renew and the permitted vessels may begin to match those actually in the fishery.

IV.C. MANAGEMENT OBJECTIVES

The objectives of the FMP are:

1. Rebuild the surf clam populations to allow eventual harvest approaching the 50 million pound level, which is the estimate of maximum sustainable yield over the range of the resource, based on the average yearly catch from 1960 to 1976.
2. Minimize economic dislocation to the extent possible consistent with objective 1 and encourage efficiency in the fishery.
3. Prevent the harvest of ocean quahogs from exceeding maximum sustainable yield and direct the fishery toward achieving Optimum Yield.
4. Provide the greatest degrees of freedom and flexibility to all harvesters of these resources consistent with the attainment of the other objectives of this Plan.
5. Optimize yield per recruit.
6. Increase understanding of the conditions of the stocks and fishery.

IV.D. MANAGEMENT MEASURES CURRENTLY IN EFFECT

IV.D.1. Permits

The permit requirements provide that a vessel owner or operator must obtain a permit in order to conduct a directed fishery for surf clams or ocean quahogs within the EEZ, or land or transfer to another vessel any surf clams or ocean quahogs or part thereof caught within the EEZ. Vessels of persons catching surf clams or ocean quahogs for the operators' personal use are not required to have a permit.

IV.D.1.a. Surf Clam Permit Eligibility - Mid-Atlantic and New England Areas

A vessel owner or operator must obtain a permit in order to conduct a directed fishery for surf clams or ocean quahogs within the EEZ or land or transfer to another vessel any surf clams or ocean quahogs or part thereof caught within the EEZ. Vessels taking surf clams or ocean quahogs for personal use are exempt from this requirement.

A vessel is eligible for a permit to harvest surf clams in both the New England and Mid-Atlantic Areas if it meets any of the following criteria:

- a. The vessel has landed surf clams in the course of conducting a directed fishery for surf clams between 18 November 1976 and 17 November 1977; or
- b. The vessel was under construction for, or was being rerigged for, use in the directed fishery for surf clams on 17 November 1977. For the purpose of this paragraph, "under construction" means that the keel has been laid, and "being rerigged" means physical alteration of the vessel or its gear had begun to transform the vessel into one capable of fishing commercially for surf clams; or
- c. The vessel is replacing a vessel of substantially similar harvesting capacity which involuntarily left the surf clam fishery during the moratorium, and both the entering and replaced vessels are owned by the same person.

IV.D.1.b. Surf Clam Permit Eligibility - New England Area

There are no eligibility restrictions for vessels fishing for surf clams in the New England Area. The New England Area is made up of the Nantucket Shoals and Georges Bank Areas.

IV.D.1.c. Ocean Quahog Permit Eligibility

There are no eligibility restrictions for vessels fishing for ocean quahogs.

IV.D.1.d. General Permit Requirements

Permit applications are processed by the Regional Director. The application form shall require provision of at least the following information: names, addresses, and telephone numbers of the owner and operator; the name of the vessel; the vessel's US Coast Guard documentation number or State license number; engine and pump horsepower; home port of the vessel; directed fishery or fisheries; fish hold capacity (in cages or bushels); dredge size; and number of dredges. The vessel owner or operator is required to notify NMFS of any changes of address or physical characteristics of vessels.

There is no fee for the initial permit. A lost or mutilated permit may be replaced at a cost of \$25.

A permit is valid only for the vessel for which it is issued. The permit must be carried, at all times, on board the vessel for which it is issued, and must be maintained in legible condition. The permit, the vessel, its gear, and catch are subject to inspection by any authorized official.

IV.D.2. Recordkeeping and reporting requirements

IV.D.2.a. General

The reporting requirements are intended for the Council and NMFS to acquire accurate data on the surf clam and ocean quahog catch, disposition of such catch, effort in the fishery, and importance of surf clams and ocean quahogs relative to other species. These data are necessary to manage the fishery for the maximum benefit of the United States. It is necessary that reporting be as comprehensive as possible and include the territorial sea and the EEZ. The following are designed to meet this need. If it is determined that the Secretary does not have the authority to mandate reporting of catches from the territorial sea, alternative methods of securing the data must be developed.

IV.D.2.b. Dealers

All persons who buy surf clams and ocean quahogs from vessels engaged in the surf clam or ocean quahog fishery shall provide at least the following information to the Regional Director on a weekly basis on forms supplied by the Regional Director: dates of purchases; number of bushels purchased, by species; name and permit number of the vessel from which surf clams or ocean quahogs are landed or received; price per bushel, by species; mailing address of dealer or processing plant; and meat yield per bushel by species.

All persons required to submit reports under the above paragraph shall also be required to submit at least the following information to the Regional Director on an annual basis on forms supplied by the Regional Director: number of dealer or processing plant employees, by month; number of employees processing surf clams and ocean quahogs, by species, by month; total payroll for surf clam and ocean quahog processing, by month; capacity to process surf clams and ocean quahogs, by species; and projected capacity to process surf clams and ocean quahogs, by species, for the following year.

All persons purchasing or receiving any surf clams or ocean quahogs at sea for transport to any port in the US shall maintain and provide to the Regional Director records identical to those required under the above paragraphs.

Violations of these requirements shall be subject to the penalties provided for in the MFCMA.

IV.D.2.c. Owners and Operators

The owner or operator of any vessel with a permit in the surf clam or ocean quahog fishery shall maintain on a daily basis an accurate log for each fishing trip, on forms supplied by NMFS showing at least: name and permit number of the vessel; total amount in bushels of each species taken; date(s) caught; time at sea; duration of fishing time; locality fished; crew size; crew share by percentage; landing port; date sold; price per bushel; buyer; and size distribution of surf clams and ocean quahogs sold, by species, on a percentage basis. The owner or operator shall make the log available for inspection by an authorized official at any time during or after a trip. The owner or operator shall keep each logbook for one year after the date of the last entry in the log. The owner or operator shall submit copies of logbook forms weekly to the Regional Director.

All persons required to submit reports under the above paragraphs shall submit annually to the Regional Director on forms supplied by the Regional Director at least the following information relating to vessel characteristics: name of the vessel, vessel's US Coast Guard documentation number or State license number, engine and pump horsepower, homeport of vessel, hold capacity (in bushels or cages), and dredge size and number of dredges.

The Regional Director shall revoke, modify, or suspend the permit of a vessel whose owner or operator falsifies or fails to submit the records and reports prescribed by this section.

IV.D.3. Catch quotas

IV.D.3.a. Surf clams

The Optimum Yield, Domestic Annual Harvest, Domestic Annual Processing, and annual quota for surf clams range between 1.8 and 2.9 million bu (approximately 30 - 50 million lbs) for the Mid-Atlantic Area, between 25,000 and 200,000 bu (approximately 425,000 - 3,400,000 lbs) for the Nantucket Shoals Area, and between 25,000 and 300,000 bu (approximately 425,000 - 5,100,000 lbs) for the Georges Bank Area.

In the Mid-Atlantic Area the annual quota is divided into equal quarterly quotas, the quarters being: 1 January - 31 March, 1 April - 30 June, 1 July - 30 September, and 1 October - 31 December. If the first day of a calendar quarter does not fall on Sunday, then the fishing quarter will begin on the first Sunday of the new calendar quarter.

In the Nantucket Shoals Area the annual quota is divided into quarterly quotas as follows: 20% for January through March, 30% for April through June, 30% for July through September, and 20% October through December.

In the Georges Bank Area the annual quota is divided into quarterly quotas, the quarters and share being: 1 January - 31 March, 10%; 1 April - 30 June, 40%; 1 July - 30 September, 40%; and 1 October - 31 December, 10%. If the first day of a calendar quarter does not fall on Sunday, then the fishing quarter will begin on the first Sunday of the new calendar quarter.

Prior to the beginning of each year, after consultation with the Council and opportunity for public comment, the Regional Director may adjust quotas and estimates of DAH and DAP within the ranges specified. In selecting the quota the Regional Director shall consider current stock assessments, catch reports, and other relevant information concerning: exploitable and spawning biomass relative to the OY; fishing mortality rates relative to the OY; magnitude of incoming recruitment; projected effort and corresponding catches; and status of areas previously closed to surf clam fishing that are to be opened during the year and areas likely to be closed to fishing during the year. The quota shall be set at that amount which is most consistent with the objectives of this FMP. It is the Council's intent that this quota setting process will not involve the preparation of an FMP amendment and a Supplemental Environmental Impact Statement to establish the annual quota.

In the Mid-Atlantic Area, if the actual catch of surf clams in any one quarter falls more than 5,000 bu short of the specified quarterly quota, the Regional Director shall add the amount of the shortfall to the next succeeding quarterly quota. If the actual catch of surf clams in any quarter exceeds the specified quarterly quota, the Regional Director shall subtract the amount of the excess from the next succeeding quarterly quota. The Regional Director shall publish a notice in the *Federal Register* whenever the quarterly quota for surf clams is adjusted. It is understood that this process would also operate between years, that is, between the last quarter of one year and the first quarter of the next year.

In the Nantucket Shoals Area, if the actual catch of surf clams in any quarterly period falls more than 5,000 bushels short of the specified quarterly quota, the Regional Director will add the amount of the shortfall to the succeeding quarterly quota. If the actual catch of surf clams exceeds the quarterly quota, the Regional Director will subtract the amount of the excess from the succeeding quarterly quota. The Regional Director shall publish a notice in the *Federal Register* whenever any quarterly quota for surf clams is adjusted as described above. The shortfall or excess will carry over from the last quarter of one year to the first quarter of the next year except that no more than 10% of the annual quota may be carried over to the next year.

In the Georges Bank Area, if the actual catch of surf clams in any quarterly period falls more than 5,000 bushels short of the specified quarterly quota, the Regional Director will add the amount of the shortfall to the succeeding quarterly quota. If the actual catch of surf clams exceeds the quarterly quota, the Regional Director will subtract the amount of the excess from the succeeding quarterly quota. The Regional Director shall publish a notice in the *Federal Register* whenever any quarterly quota for surf clams is adjusted as described above. The shortfall or excess will carry over from the last quarter of one year to the first quarter of the next year except that no more than 10% of the annual quota may be carried over to the next year.

IV.D.3.b. Ocean quahogs

The annual Optimum Yield, Domestic Annual Harvest, Domestic Annual Processing, and quota for ocean quahogs ranges between 4.0 million bushels and 6.0 million bushels (approximately 40 - 60 million pounds of meats). If it appears that the annual quota for ocean quahogs will be exceeded, the Regional Director, in consultation with the Council, may establish quarterly quotas for ocean quahogs, and in that event, the Regional Director shall publish notice of such quarterly quotas in the *Federal Register*. The distribution of the annual quota to quarterly quotas will be based on historic harvesting patterns in the fishery. The annual quota and estimates of Domestic Annual Harvest and Domestic Annual Processing for ocean quahogs will be developed following the procedures described above for surf clams.

IV.D.4. Closure

If the Regional Director determines (based on logbook reports, processor reports, vessel inspections, or other information) that the quota for surf clams in any Area for any time period or ocean quahogs for any time period will be exceeded, the Regional Director shall publish a notice in the *Federal Register*, stating the determination and, if necessary, stating a date and time for closure of the surf clam or ocean quahog fishery for the remainder of the time period. The Regional Director shall send notice of the action to each surf clam or ocean quahog processor and to each permitted surf clam or ocean quahog vessel owner or operator.

IV.D.5. Effort restrictions

IV.D.5.a. Surf Clams - Mid-Atlantic Area

Fishing for surf clams shall be permitted only during the period beginning 6:00 am Sunday and ending 6:00 pm Thursday and be conducted during this period only at the times and under the conditions authorized by the Regional Director. If fishing is permitted for periods of 18 hours, 36 hours, or other time periods that are evenly divisible by 18, the Regional Director may permit fishing beginning at 12:00 am Sunday if, in consultation with the Council, he determines that enforcement resources are adequate to monitor this expanded fishing period. This shall be accomplished by publishing a notice in the *Federal Register*.

Fishing time shall be regulated by the Regional Director to allow fishing for surf clams to be conducted throughout the entire quarter without exceeding the allocation for that quarter and at a rate that will

minimize the number of changes to allowed fishing times during the quarter. It is anticipated that the general method of regulating fishing times, both in reopened areas and in the fishery outside of reopened areas, will be regulating the hours per week each vessel may fish. However, catch rates, particularly in reopened areas, may be such that regulating hours per week may result in time periods so short that they are uneconomic for the harvesters. If this were to occur, the Regional Director may regulate hours over a longer time period (i.e., hours per month or hours per quarter) so that each vessel could have a reasonable trip, even though the total hours of permitted fishing for the time period might be quite small. Vessels shall be required to stop fishing at uniform hours.

The Regional Director shall regulate fishing times for reopened areas to allow fishing for surf clams to be conducted in such areas throughout the entire time period established for each area without exceeding the estimated allowable catch for the area and at a rate that will minimize the number of changes to the allowed fishing times during the quarter. Reopened areas shall be managed with specific estimates of allowable harvest and effort restrictions until the catch per unit of effort in the reopened area equals the general catch per unit of effort in the overall fishery. The Regional Director may designate the maximum number of vessels that may fish in a reopened area at any one time and, if conflicts develop between that number and the fishing periods requested by fishermen, he may select the vessels that fish on particular days by use of a lottery.

If the Regional Director determines during the quarter that the quarterly allocation will be (will not be) exceeded, he may reduce (increase) the number of hours during which fishing for surf clams is permitted to avoid prolonged vessel tie-up times and fluctuations in the supply of surf clams which would result if the allocations were taken rapidly during the beginning of each quarter (facilitating the catch of the full quarterly allocation).

The Regional Director shall publish a notice in the *Federal Register* of any reduction or increase in days during which fishing for surf clams is permitted. The reduction or increase may take effect immediately upon publication in the *Federal Register*. The Regional Director shall also send notice of the change to each surf clam or ocean quahog processor in the fishery and to each surf clam or ocean quahog vessel owner or operator.

If NMFS continues the procedure of requiring surf clam fishermen to specify their fishing days, provision is made for an alternate fishing day in the event of unsafe weather conditions on the specified day. A fisherman may claim a weather day if the fisherman notifies the appropriate official designated by NMFS of his intent to claim a weather day within four hours of his official starting time for fishing and if he lands no clams on that day. This make-up day shall be the next fishing day and shall amount to the same number of hours as the fisherman normally has on a fishing day. A fisherman will not be permitted to claim an additional make-up day if weather conditions prohibited fishing on a make-up day. This make-up day provision shall be in effect only for the months of November, December, January, February, March, and April.

In addition to the effort restrictions in the current FMP presented above, surf clam vessels may land surf clams only one time during an authorized time period.

IV.D.5.b. Surf Clams - Nantucket Shoals Area

In the Nantucket Shoals Area, no catch restrictions shall be applied to the fishery until 50% of the quarterly quota has been landed. The Regional Director will monitor landings from the Nantucket Shoals Area and will determine either when the 50% point has been reached or when that point will likely be reached. The Regional Director will thereupon consult with the Councils in the selection of trip limits to control catch adequately to keep the fishery open for the balance of the quarter. Trip limits will be established by vessel class as follows: for Class 1 vessels, trip limits may not be less than 224 bu/trip; for Class 2 vessels, trip limits may not be less than 416 bu/trip for Class 2, and for Class 3 vessels, trip limits may not be less than 768 bu/trip. Trip limits must maintain a fixed ratio of 1.0: 1.8: 3.4 for Class 1, 2, and 3, respectively. In the event that trip limits are not sufficient to keep landings to within the quota levels, the Regional Director may close the fishery until the beginning of the next quota period.

Once initial trip limits have been established in consultation with the Councils, the Regional Director will notify the Councils in advance of any proposed action to further specify trip limits or close the fishery. The Regional Director will consider any comments received by the Councils or the public before implementing any adjustments in the Nantucket Shoals management program.

IV.D.5.c. Surf Clams - Georges Bank Area

There are no effort restrictions for fishing for surf clams in the Georges Bank Area.

IV.D.5.d. Ocean Quahogs

Fishing for ocean quahogs is permitted seven days per week.

When 50% of the quota of ocean quahogs for any time period has been caught, the Regional Director shall determine whether the total catch of ocean quahogs during the applicable time period will exceed the quota for that time period. If the Regional Director determines that the quota probably will be exceeded, he may reduce the number of days per week during which fishing for ocean quahogs is permitted for the remainder of the time period.

The Regional Director shall publish a notice in the *Federal Register* of any reduction in days per week during which fishing for ocean quahogs is permitted. The reduction shall be effective immediately upon publication in the *Federal Register*. The Regional Director shall also send notice of any reduction to each surf clam or ocean quahog processor in the fishery and to each surf clam or ocean quahog vessel owner or operator.

IV.D.6. Closed areas

It shall be unlawful to fish for surf clams or ocean quahogs in any designated closed surf clam or ocean quahog area.

The following areas shall be closed to fishing because of environmental degradation:

38°20'00"N - 38°25'00"N and 74°10'00"W - 74°20'00"W
38°40'00"N - 39°00'00"N and 72°00'00"W - 72°30'00"W

The Regional Director may open these areas when the Food and Drug Administration determines that the adverse environmental conditions have been corrected. If additional areas, due to the presence or introduction of hazardous materials or pollutants, are identified as being contaminated by the Food and Drug Administration, they may be closed by the Regional Director after public hearing is held to discuss and assess the effects of such closure.

Areas may be closed to surf clam and ocean quahog fishing upon a determination by the Regional Director (based on logbook entries, processors' reports, survey cruises, and other information) that the area contains surf clams of which 60% or more are smaller than 4.5" in size and not more than 15% are larger than 5.5" in size. Sizes shall be measured at the longest dimension of the surf clam. This determination will be based on a recommendation by the Council and the Regional Director shall hold a public hearing on the proposed closure.

The Regional Director shall publish notice of any closed area in the *Federal Register*. The Regional Director shall send notice of the closed area to each surf clam or ocean quahog processor and to each surf clam or ocean quahog vessel owner or operator.

Areas or portions of closed areas may be reopened to fishing when the average clam length in the dominant (in terms of weight) size class has reached 5.5" in length, if appropriate given all relevant biological, environmental, and economic considerations. It also is permissible to selectively open closed areas or portions thereof under specially developed controls to permit selective harvesting if the long-term yield or growth rate of the dominant (in terms of weight) surf clam size class in the area to be reopened would be

significantly enhanced by permitting such reopening. The Council's Scientific and Statistical Committee will review available data and make a recommendation to the Council for a reopening. The Council may also consult the Surf Clam and Ocean Quahog Advisory Subpanel. The Council will then make a recommendation to the Regional Director. The Regional Director may hold a public hearing on the reopening prior to making a final decision. Reopening decisions will be made so that the anticipated yield from a reopened area will be accounted for in the development of the annual quota.

IV.D.7. Size restriction

There is a surf clam minimum size limit. After consultation with the Council and opportunity for public comment, the Regional Director shall adjust, by increments no less than 0.25", the surf clam minimum size limit to a value less than 5.5" as necessary, so that discards on average do not exceed 30% of the trip catch. In no event shall the size limit be less than 4.75". When data indicate the clams have grown sufficiently, the limit would be increased, ultimately reaching the 5.5" limit. There is a tolerance of 240 undersized clams per cage but no more than 50 clams per cage under 4.75". If any cage is in violation of the size limit, the entire load is in violation. In adjusting the size limit the Regional Director shall consider current stock assessments, catch reports, and other relevant information concerning the size distribution of the surf clam resource. No person shall harvest or possess surf clams smaller than the minimum size limit.

All surf clam cages shall be tagged before leaving the vessel and tags shall not be removed until cages are emptied at the processing plant. Information to be shown on the tags shall be determined by the Regional Director, in consultation with the Council, but will include at least the information needed to establish a chain of evidence adequate for enforcement of the surf clam minimum size limit from the vessel through the transportation system to the processor, inclusive. The Regional Director shall determine the minimum specifications of the tags, which as a minimum shall assure that markings are not erased prior to the cages being emptied at the processing plant.

All surf clams landed on an authorized EEZ fishing day are assumed to have been caught in the EEZ and are subject to the Federal size limit.

IV.D.8. Other measures

No person shall catch and retain on board any surf clams or ocean quahogs during closed seasons, in closed areas, or on days of the week during which fishing for these species is not permitted.

Possession of surf clams or ocean quahogs, by any person aboard any fishing vessel engaged in those fisheries, in closed areas or more than 12 hours after a closure announcement becomes effective shall be *prima facie* evidence that such clams or quahogs were taken in violation of the provisions of the Act and the regulations.

No person shall possess, have custody of or control of, ship, transport, offer for sale, deliver for sale, sell, purchase, import, export, or land, any surf clams, ocean quahogs, or part thereof, which was taken in violation of the Act or any regulations issued under the Act.

No person engaged in the surf clam or ocean quahog fisheries as an owner or operator, or as a dealer, processor or buyer shall unload or cause to be unloaded, or sell or buy, any surf clams or ocean quahogs whether on land or at sea, without preparing and submitting the documents required by the regulations.

No person shall refuse to permit an authorized officer to board a fishing vessel subject to such person's control for purposes of conducting any search, no matter where that vessel may be situated, in connection with the enforcement of the Act or any regulations issued under the Act; forcibly assault, resist, oppose, impede, intimidate or interfere with any authorized officer in the conduct of any search or inspection; resist a lawful arrest for any act prohibited by the regulations; or interfere with, delay, or prevent, by any means, the apprehension or arrest of another person knowing that such other person has committed any act prohibited by the regulations.

Vessel owners or operators must notify NMFS in advance if they intend to fish for surf clams in a Notification Zone. For vessels authorized to fish in both the Mid-Atlantic and New England Areas (i.e., with permits issued pursuant to the moratorium) with home ports in the Mid-Atlantic Area the Nantucket Shoals or Georges Bank Areas are Notification Zones. For vessels authorized to fish in both the Mid-Atlantic and New England Areas (i.e., with permits issued pursuant to the moratorium) with home ports in the New England Area the Mid-Atlantic or Georges Bank Areas are Notification Zones. For vessels authorized to fish only in the New England Area the Georges Bank Area is a Notification Zone. Home port is that specified on the vessel's permit application form. If an operator intends to change the vessel's Area of fishing, NMFS must be notified in advance.

Any person or vessel found to be in violation of these regulations, including the logbook and other reporting requirements, shall be subject to the civil and criminal penalty provisions and forfeiture provisions prescribed in the Act and pertinent regulations. It is recommended that the Secretary establish a specific list of penalties for specific civil violations of these regulations in order to expedite resolution of violations. It is recommended that the penalty for a first offense for any violation be a permit suspension for thirty days and that the penalty for a second offense be a permit suspension for ninety days. Subsequent offenses should carry penalties of a permit suspension combined with a fine. Appropriate fines should be specified for violations by processors.

Each fishing vessel 25 feet in length or greater subject to these regulations shall display its official number on both sides of the deckhouse or hull, and on an appropriate weather deck. Vessels under 25 feet in length do not need to display any number. The official number is that number issued by the US Coast Guard associated with the documentation of the fishing vessel or the official number issued by a State or the US Coast Guard for undocumented vessels. Such markings shall be at least 18" in height and be legibly painted in a contrasting color. The operator of each vessel shall keep the required markings clearly legible and in good repair and insure that no part of the vessel, its rigging or its fishing gear obstructs the view of the markings from an enforcement vessel or aircraft. Vessels licensed under state law shall use the appropriate vessel identification markings established by that State.

The owner or operator of any vessel subject to these regulations shall immediately comply with instructions issued by authorized officers to facilitate boarding and inspection of the vessel for the purpose of enforcing the Act and the regulations. Upon being approached by a Coast Guard cutter or aircraft, or other vessel or aircraft authorized to enforce the Act, the vessel shall be alert for signals conveying enforcement instructions. Standard signals and requirements should be developed and implemented by regulations.

V. DESCRIPTION OF THE STOCKS

There is no need to amend this section at this time.

VI. DESCRIPTION OF HABITAT

There is no need to amend this section at this time.

VII. FISHERY MANAGEMENT JURISDICTION, LAWS, AND POLICIES

There is no need to amend this section at this time.

VIII. DESCRIPTION OF FISHING ACTIVITIES

VIII.A. DOMESTIC FISHING ACTIVITY

VIII.A.1. Total Landings

In 1950, 8 million lbs of surf clam meats were landed, with New York and New Jersey ports accounting for 97% of the total (Table 4). The Maryland fishery developed in the early 1950s, but New Jersey dominated the fishery until the early 1970s. Significant Virginia landings first occurred in 1972 when that state accounted for 37% of the total 64 million lbs landed. Since that time, New Jersey, Maryland, and Virginia

have been the major harvesting states, although the share of total landings for each state changed from year to year (Table 4). There have been landings in New England throughout the period since 1950, although landings have been small relative to the total fishery, in most years amounting to less than 0.5% of the total, but with an increasing share of 7% in 1983, 11% in 1984, and 14% in 1985 (Table 4).

The surf clam fleet typically concentrates its efforts in one area until the catch rates decline, and then moves to more productive grounds. Decreasing abundance of surf clams off New Jersey and discovery of large beds off Virginia resulted in a shift of effort to the latter area in the early 1970s. The introduction of mechanical shucking devices around 1970 greatly increased the capacity of processing plants. These devices, coupled with the expansion of the fishing grounds, are the major reasons for most of the industry's growth after 1970.

Surf clam landings peaked at approximately 96 million lbs in 1974, about 2.5 times the weight landed only a decade earlier (Table 4). After 1974, landings began to decline rapidly and, except for 1977, declined continuously to a low of 35 million lbs in 1979. The FMP was implemented in November, 1977, and the slight increase (Table 4) in total surf clam landings that year, to about 52 million lbs, was due at least in part to greatly increased effort by the industry. There was a significant increase in the number of vessels which entered the fishery that year in anticipation of the stringent quota management and the vessel moratorium to be imposed by the FMP. Total landings increased 9% between 1979 and 1980, 21% between 1980 and 1981, 9% between 1981 and 1982, 12% between 1982 and 1983, 25% between 1983 and 1984, and 4% between 1984 and 1985, to a 1985 level of 73 million lbs, the highest since 1976 (Table 4).

Total surf clam and ocean quahog landings more than doubled between 1967 and 1974, from 45 to 97 million lbs of meats (Table 5), with ocean quahogs contributing about 1 million lbs to the 1974 total. Landings dropped rapidly to about 55 million lbs in 1976, with quahogs contributing almost 6 million lbs. Since then landings have generally increased, although there have been year-to-year fluctuations. Landings in 1985 were approximately 125 million lbs, a 15% increase from the 1984 level.

The ocean quahog fishery was traditionally a small industry operated out of Rhode Island ports, with annual landings through 1975 amounting to 200,000 bu or less. Total quahog landings increased from 600,000 bu in 1976 to 3.5 million bu in 1979, and remained at about that level through 1983 (Table 5). The development of the fishery is attributable to advances in ocean quahog processing technology, the relatively high value of surf clams, the effects of surf clam quota management, and the excess harvesting capacity of the Mid-Atlantic surf clam fleet.

The ocean quahog share of the total clam meat supply has increased significantly, from less than 1% in 1967, 4% or less between 1968 and 1975, 11% in 1976, 26% in 1977, 37% in 1978, 50% in 1979, 47% in 1980, 44% in 1981, 41% in 1982, 38% in 1983, 36% in 1984 and 42% in 1985. The significant increases in the ocean quahog share of total landings in the late 1970s came during a period of decreased surf clam landings (Table 5), but, when surf clam landings began to recover in 1980, the ocean quahog share decreased. Now they have begun to increase again, possibly in response to stable EEZ surf clam quotas and growing demand.

VIII.A.2. FCZ Landings

EEZ surf clam landings in 1981 and 1982 were approximately 37 million lbs, half of the peak 1974 level and 93% of the 40 million lbs 1982 quota. EEZ landings for 1983 were 45 million lbs relative to a quota of 41.7 million lbs. EEZ landings for 1984 and 1985 were 55 and 52 million lbs, respectively, relative to a quota in both years of 53.5 million lbs. Landings from the EEZ increased 21% between 1979 and 1980 and 6% between 1980 and 1981, remained constant between 1981 and 1982, and increased 22% between 1982 and 1983 and between 1983 and 1984, and fell 5% between 1984 and 1985, for a 73% increase during the 1979-1985 period (Table 5).

Reported Mid-Atlantic EEZ landings for 1986 (through 21 June) total about 1.5 million bu, 53% of the annual quota at 48% of the year. Nantucket Shoals Area landings for the same period were 118,000 bu, 59% of the quota, while Georges Bank Area landings were 122,000 bu, 41% of the annual quota.

The EEZ ocean quahog fishery began in New Jersey in 1976 (400,000 bu) and grew rapidly until 1979 (3.2 million bu, Table 5). Landings were relatively stable in the early 1980's. However, landings increased in 1985 to 5.2 million bu. Landings through 21 June 1986 were 1.9 million bu.

VIII.A.3. Surf Clam Vessel Performance

VIII.A.3.a. Mid-Atlantic Area

Total Mid-Atlantic EEZ landings for 1985 were about 2.5 million bu (slightly less than the annual quota), with yearly estimates of 1.7, 1.9, 2.0, 2.0, 2.3, and 2.6 million bu annually for 1979 - 1984, respectively (Table 6). Average annual catch per vessel was about 10,000 bu in 1979, 15,000 bu in 1980, 16,000 bu in 1981, 17,000 bu in 1982, 21,000 bu in 1983, 22,000 bu in 1984, and 20,000 bu in 1985.

Average annual Mid-Atlantic surf clam vessel catch per unit of effort (CPUE) increased from 1979 through 1981, decreased in 1982, and increased every year from 1983 through 1985 (Table 6). Average CPUE was 27 bu/hr in 1979, 33 bu/hr in 1980, 48 bu/hr in 1981, 36 bu/hr in 1982, 49 bu/hr in 1983, 79 bu/hr in 1984, and 169 bu/hr in 1985. The increase in 1981 was due to catches dominated by small clams from the relatively strong 1976 and 1977 year classes off New Jersey and Delmarva, respectively. These small clams were targeted because of their very high abundance; traditionally, however, the fishery targeted on clams at least as large as the current minimum size limit. In 1982, CPUE decreased after implementation of the 5.5" minimum surf clam size limit effective 26 July 1981. In 1983 it began to increase because of increased availability of harvestable clams due to growth of the 1976 and 1977 dominant year classes and decreases in the minimum size limit.

CPUE has changed differently for each of the three vessel classes (Class 1 = less than 50 Gross Registered Tons, Class 2 = 51-100 GRT, and Class 3 = greater than 100 GRT; Table 7). For Class 1 vessels, CPUE was 18 bu/hr in 1979, 22 bu/hr in 1980 and 1981, 20 bu/hr in 1982, 28 bu/hr in 1983, 42 bu/hr in 1984, and 80 bu/hr in 1985. Class 2 CPUE was 21 bu/hr, 25 bu/hr, 39 bu/hr, 29 bu/hr, 43 bu/hr, 72 bu/hr, and 137 bu/hr in 1979-1985, respectively. Class 3 CPUE was 32 bu/hr, 40 bu/hr, 57 bu/hr, 43 bu/hr, 57 bu/hr, 96 bu/hr, and 211 bu/hr in 1979-1985, respectively.

An attempt was made to standardize effort by adjusting for dredge size on a vessel by vessel basis. The largest dredge reported is 240" (two 120" dredges). All dredge sizes were divided by 240", with fishing hours multiplied by the resulting index, resulting in "Adjusted Hours Fishing" (Table 6). The Adjusted Hours Fishing was divided into landings to get an "Adjusted CPUE". This standardization tends to decrease the spread in CPUE between the vessel classes and in some years leads to Class 1 having a higher Adjusted CPUE than Class 3.

VIII.A.3.b. Nantucket Shoals Area

Because of the small number of vessels fishing in the Nantucket Shoals Area (or at least submitting logbooks), only data for Class 3 may be published. The total number of vessels has decreased from 11 in 1983 to 9 in 1984 to 7 in 1985 (Table 8). Class 3 participation was cut in half, from 10 to 5, during the period. While fishing hours increased from 1983 to 1985, landings decreased (83,041 to 77,273 bu), so CPUE fell from 111 bu/hr to 46 bu/hr. Adjusted CPUE also decreased from 128 bu/hr to 93 bu/hr during the period.

VIII.A.3.c. Georges Bank Area

The Georges Bank Area existed only since 1984. No Class 1 vessels fished in the Area. While the number of vessels, trips, and hours fished increased between 1984 and 1985, landings decreased from 341,625 to 290,149 bu. CPUE decreased from 145 bu/hr to 90 bu/hr and Adjusted CPUE fell from 207 bu/hr to 130 bu/hr (Table 9).

VIII.A.4. Ocean Quahog Vessel Performance

Most of the ocean quahog vessels are Class 3 (37 of 59 in 1979, 33 of 53 in 1980, 36 of 48 in 1981, 31 of 44 in 1982, 29 of 37 in 1983, 41 of 57 in 1984, and 47 of 64). While Class 1 vessels have never reported landing

ocean quahogs to a significant extent (a maximum of 4 vessels in 1980), Class 2 participation has been increasing from a low of 7 in 1983 to 17 in 1985, likely as a result of severely restricted surf clam fishing times in the Mid-Atlantic Area (Table 10).

CPUE has exhibited no trends, averaging 128 bu/hr for the 1979-1985 period, with a low of 116 bu/hr in 1980, a high of 140 bu/hr in 1983, and 136 bu/hr in 1985 (Table 10). Adjusted CPUE has decreased in recent years, probably as a result of increasing numbers of Class 3 vessels.

VIII.A.5. Fleet Composition

There have been significant changes to the Mid-Atlantic surf clam fleet over time. In 1965 there were 68 vessels; 33 Class 1, 33 Class 2, and 2 Class 3 (Table 11). Fleet size increased rapidly in the mid-1970s, to 122 vessels in 1976, 155 in 1977, 157 in 1978, and a peak of 162 in 1979. From that level, it decreased by 22% to 126 vessels in 1980, by 5% to 120 vessels in 1981, by 4% to 115 vessels in 1982, and by 2% to 113 vessels in 1983 (14 Class 1, 47 Class 2, and 52 Class 3). However, in 1984 and 1985 the fleet increased to 116 and 125 vessels, respectively. Much of this growth was in Class 3, with 53 vessels in 1984 and 65 vessels in 1985.

The composition of the Mid-Atlantic fleet has also changed. In 1965 48% of the vessels were Class 1, 48% Class 2, and 3% Class 3. In 1978 the distribution was 13% Class 1, 37% Class 2, and 50% Class 3. The 1985 distribution was 10% Class 1, 38% Class 2, and 52% Class 3 (Table 11).

With changes between the surf clam and ocean quahog categories and the creation of several surf clam management categories, it becomes important to consider the relationship of vessels to the several categories. There has been an increase in the number of vessels that fish for both surf clams and ocean quahogs. In 1979 48 vessels (31 Class 3) reported landing both surf clams and ocean quahogs (Table 12). That number fell to 27 (19 Class 3) in 1983, followed by increases to 42 (28 Class 3) in 1984 and 56 (42 Class 3) in 1985. In all years, the ocean quahog trips and ocean quahog landings exceeded the surf clam trips and surf clam landings (Table 12). For example, in 1985, vessels operating in both categories reported landing about one million bushels of Mid-Atlantic Area surf clams and about four million bushels of ocean quahogs. Comparison with total ocean quahog activity (Table 10) shows that the vessels that landed both Mid-Atlantic Area surf clams and ocean quahogs accounted for 56 of the 64 vessels that landed ocean quahogs, 3,360 of the 3,723 trips, and 4,016,901 bu of the total 4,569,285 bu reported landed. In other words, vessels fishing in both categories accounted for 88% of the vessels landing ocean quahogs, made 93% of the quahog trips, and landed 88% of the ocean quahogs. From the Mid-Atlantic Area surf clam perspective (Table 6) these vessels were 45% of the vessels landing Mid-Atlantic Area surf clams, 41% of the trips, and 42% of the Mid-Atlantic Area surf clam landings.

The above analysis between Mid-Atlantic Area surf clams and ocean quahogs can be repeated for the various combinations that account for the Nantucket Shoals and Georges Bank Areas. To examine the interrelationships in the four categories, a count was made of the number of vessels that reported fishing in each category only and in all of the possible combinations (Table 2). This analysis covers only 1983-1985, since before that time the Nantucket Shoals and Georges Bank Areas did not exist, so the Mid-Atlantic Area surf clam vis-a-vis ocean quahog analysis in Table 12 is adequate. A total of 125 vessels fished in 1983, 130 in 1984, and 136 in 1985 (Table 2). The Mid-Atlantic Area surf clam category accounted for 113, 116, and 125 vessels in each of the three years, respectively, although only 78, 63, and 63 vessels, respectively, fished only in the Mid-Atlantic Area for surf clams. Ocean quahogs accounted for 37, 57, and 64 vessels in 1983, 1984, and 1985, respectively, although only 9, 10, and 6 vessels fished only for ocean quahogs. Vessels fishing in the Georges Bank Area totalled 17 in 1984 and 23 in 1985 (the Area did not exist in 1983), although no vessel fished only in that Area. The Nantucket Shoals Area accounted for 11 vessels in 1983, 13 in 1984, and 8 in 1985, but vessels fishing only in that Area numbered fewer than 3 in each of the 3 years.

Another way of considering the question of participants in the fishery is to examine permit data, since each vessel must have a permit allowing it to harvest surf clams in all Areas and ocean quahogs (a permit issued pursuant to the moratorium), a permit allowing it to harvest only ocean quahogs, or a permit allowing it to harvest surf clams in the New England Area only (the Nantucket Shoals and Georges Bank Areas).

As of the end of 1983, 148 vessels had surf clam and ocean quahog permits, a number that decreased to 145 by the end of 1985 (Table 1). While these permits are fixed by the moratorium, vessels may be bought and sold, and there apparently was such activity between 1983 and 1985, since Massachusetts and Rhode Island each lost a vessel, while New Jersey gained 10 and Virginia gained 5 vessels. Pennsylvania, Maryland, and Delaware also experienced losses (Table 1).

The number of ocean quahog only permits increased dramatically from 156 in 1983 to 568 in 1985, while the New England surf clam only permits increased from 362 to 746 (Table 1).

There are significant differences between the number of vessels that are permitted and the number of active vessels. Of the 145 vessels with permits to land surf clams from the Mid-Atlantic Area as of the end of 1985 (Table 1), only 125 actually landed such clams during the year (Table 6). Vessels permitted to harvest ocean quahogs totalled 713 as of the end of 1985 (145 moratorium permits plus 568 ocean quahog only, Table 1), whereas only 64 vessels landed ocean quahogs in 1985 (Table 10). The comparisons for the Nantucket Shoals Area (only 4 vessels that did not have a moratorium permit reported landings from that Area) and the Georges Bank Area (only 2 vessels that did not have a moratorium permit reported landings from that Area) compared to the 891 vessels that had permits (145 moratorium plus 746 New England surf clam only; Tables 8 and 9).

If all of these vessels have permits but do not land the species for which they have permits, it becomes important to consider what other fisheries these vessels may be permitted in. For this analysis the number of permits change slightly from that discussed above since data from May 1986 were used to provide an up to date picture. Of the 144 vessels with moratorium permits (Table 13), 3 also had ocean quahog only permits and 29 had New England surf clam only permits (both redundant since the moratorium permits are good for all categories under the FMP). Fifteen of these vessels had scallop permits, 10 had groundfish permits, with decreasing numbers in some of the other fisheries.

When the ocean quahog only and New England Area surf clam only permit categories are examined there is a significantly increased incidence of permits in other fisheries, for example, scallops, groundfish, lobster, and mackerel, squid, and butterfish (15 vessels had bluefin tuna harpoon permits, Table 13). If these vessels carry permits in other fisheries to a significant degree, additional investigation is necessary to determine if they are really in the surf clam/ocean quahog fishery. Analysis of logbooks is not possible since logbooks are only required in the surf clam and ocean quahog fishery. The permit application form includes questions on the gear the vessels carries and the area the vessel is to fish in. For the 144 vessels with moratorium permits (Table 13), 102 are shown as having boat dredges, with the remainder having that question unanswered. Of the 850 vessels with ocean quahog only and/or New England Area surf clam only permits, 464 have boat dredges, 225 carry bottom trawls, 50 carry hand dredges, with the remainder reporting a variety of gear (including 2 hook and line; Table 3). Another clue is the primary area fished question on the permit application (Table 14), where 558 of the 850 ocean quahog/New England Area permits listed the Gulf of Maine and 118 additional listed Southern New England.

Clearly, except for the permits issued pursuant to the moratorium, most of the remaining vessels have permits because little effort and no cost is involved. In fact, all that is necessary is to check off a box on the application form along with all the other permits which the vessel may or may not need. The logbook data are a much better source for developing a picture of the fishery than are the permit data.

Another issue relative to the fleet is the age of the vessels. The NMFS permit file was examined for vessels with moratorium permits and for ocean quahog and New England Area only permits (Table 15). Of the 144 records of vessels with moratorium permits, 70 showed no vessel age data, 19 were built prior to 1950, 46 were built after 1950 but prior to 1980, and 9 were built in 1980 or more recently. In other words, of the 74 vessels with moratorium permits with construction dates reported, 26% were built prior to 1950, 62% were built between 1950 and 1980, and only 12% were built since 1980. For the non-moratorium vessels with construction dates reported (Table 15), 12% were built prior to 1950, 66% were built in the 1950-1980 period, and 23% were built since 1980 (Table 15). Clearly the vessels controlled by the moratorium are older than the uncontrolled vessels.

VIII.A.6. Surf Clam Fishing Time

Surf clam fishing effort in the Mid-Atlantic Area is regulated by adjusting the number of hours per week that vessels are permitted to fish. Between 1 January 1978 and 11 July 1986, allowable times ranged from 0 (closure) to 96 hours per week (Table 16), but these extremes have been the exception. The 96 hours per week period lasted for only 4 weeks (in 1978). While closures were fairly rare in the early years of the FMP, since December 1984 they have occurred about every 6 months (Table 16).

During the period 1 January 1978 through 11 July 1986, of the total 445 weeks, 233 (52%) were at 24 hours per week, 57 (13%) were at 12 hours per week, 30 (7%) were at 36 hours per week, 26 (6%) were at 48 hours per week, 15 (3%) were accounted for by closures, and 4 (less than 1%) were at 96 hours per week (Table 17). The increasing incidence of closures is shown by the fact that 4 weeks were lost to closure in 1978, none in 1979 through 1983, 5 in 1984, 4 in 1985, and 2 through the first half of 1986.

There were 9,288 hours of fishing possible from 1 January 1978 through 11 July 1986, 60% of it in periods of 24 hours per week, 13% in periods of 48 hours per week, 12% in periods of 36 hours per week, 7% in periods of 12 hours per week, 4% in periods of 96 hours per week, 2% in periods of 6 hours every other week, and 1% in periods of 6 hours per week (Table 18).

Allowable fishing hours have changed from 1,752 hours in 1978 to 1,440 hours in 1979 (-18%), to 1,728 hours in 1980 (+20%), to 972 hours in 1981 (-44%), to 1,248 hours (+28%) in 1982 and 1983. Allowed hours totalled 618 in 1984, down 50% from the 1983 level, and 204 in 1985, off 67% from the 1984 level. There has also been a decrease in the time periods (i.e., hours per week) during which fishing is allowed. In 1978, 40% of the hours were at 24 hours per week, 30% at 48 hours per week, 22% at 96 hours per week, and 8% at 36 hours per week. In 1979 allowable fishing hours were split between 24 hours per week (60%) and 36 hours per week (40%). In 1980, 42% of the time was at 48 hours per week, 38% at 24 hours per week, and 21% at 36 hours per week. During 1981 allowable hours decreased significantly to 72% at 24 hours per week and 28% at 12 hours per week. For 1982 there was an increase to 100% at 24 hours per week (Table 10). The rate continued at 24 hours per week through all of 1983. The rate was at 12 hours per week for most (66%) of 1984, and was 56% at 6 hours per week and 44% at 6 hours every other week in 1985. The rate continued at 6 hours every other week for the first half of 1986, with a two week closure at the end of that period.

VIII.B. FOREIGN FISHING ACTIVITY

The surf clam and ocean quahog fisheries are domestic fisheries only.

VIII.C. INTERACTION BETWEEN DOMESTIC AND FOREIGN PARTICIPANTS IN THE FISHERY

There are no records of foreign (including Canadian) catches of either species in the northwest Atlantic.

IX. DESCRIPTION OF ECONOMIC CHARACTERISTICS OF THE FISHERY

IX.A. DOMESTIC HARVESTING SECTOR

IX.A.1. Surf Clam Ex-vessel Value and Price

Surf clam ex-vessel value for the period 1950-1985 (Table 19) peaked at approximately \$39 million in 1985. On a state by state basis, value has moved in a pattern similar to landings, with total 1985 value shared primarily by New Jersey (46%), New England states (15%), Virginia (18%); and Maryland (13%).

The ex-vessel value of the surf clam catch in current dollars, both total and in the EEZ, tripled between 1974 and 1985 (Table 20). The EEZ has consistently accounted for a greater share of the value than of landings: 83% of the value and 77% of landings in 1974; 81% of the value and 74% of landings in 1982, and 74% of the value and 71% of the landings in 1985.

Surf clam landings, value, and price were examined on a quarterly basis from January 1975 through March 1986 (Table 21 and Figures 1 and 2). Quarterly landings have been moving generally upward from a low point in late 1979. Price has been stable to increasing in the last few years.

IX.A.2. Ocean Quahog Ex-vessel Value and Price

Ocean quahog ex-vessel value (Table 20), in current dollars, was less than \$500,000 for 1974 and 1975. It then increased to \$2 million in 1976, \$6 million in 1977, \$7 million in 1978, \$10 million in 1979 through 1981, \$11 million in 1982 and 1983, \$12 million in 1984, and \$16 million in 1985. The EEZ share increased from 77% when the fishery began in 1976 to 100% in 1985 (Table 20).

Ocean quahog landings, value, and price were also examined on a quarterly basis from January 1975 through March 1986 (Table 21 and Figures 3 and 4). Quarterly landings reached an all time peak in mid-1985 at 1,555,375 bu. Nominal price has been stable at about \$3.00 per bu throughout virtually the entire time series, meaning that real price (discounted for inflation) has in fact been falling.

Examination of the surf clam and ocean quahog landings and price graphs (Figures 1 through 4) suggests that the increase in quahog landings has not driven down surf clam landings or prices. Since the species are largely substitutable in the production of many clam products, demand for such products must be substantial, particularly in light of the quotas on the several areas and species. This situation, along with the increasing number of vessels fishing for both species, indicates that management should be standardized as much as possible among the three areas and two species.

IX.A.3. Surf Clam Quarterly Price Model

In order to be able to forecast effects of management measures on surf clam prices, an analysis was undertaken using NMFS quarterly surf clam and ocean quahog landing and price data. The results presented below incorporate data up to and including the last quarter of 1985. Prices were adjusted for inflation using the Producer Price Index, All Commodities, Not Seasonally Adjusted, 1967 = 100 (USDC, 1986a). Disposable Personal Income in constant 1982 dollars (USDC, 1986a) and Total US Population (USDC, 1986b) were also used. To determine the best relationship a series of regression equations were prepared using prices in both nominal and deflated terms and using various combinations of surf clam landings, ocean quahog landings, ocean quahog prices, surf clam landings per capita, ocean quahog landings per capita, a series of dummy variables to adjust for possible quarterly variations, and a dummy variable to adjust for a combination of unusually high surf clam prices combined with relatively low landings during the third and fourth quarters of 1976 and the first and second quarters of 1977.

The best equation predicted surf clam prices in nominal terms, using surf clam landings (in bu), per capita disposable personal income, and the dummy variable to adjust for the last two quarters in 1976 and the first two quarters in 1977 (set equal to 1 for those quarters and 0 for all other quarters). The equations were also run with the data transformed into natural logarithms.

The variables are:

SCP = surf clam price (\$ per bu) in nominal terms.

SCL = surf clam landings in bu.

DPY = per capita disposable personal income in 1982 dollars.

D1 = 1 for 1976 quarters 3 and 4 and 1977 quarters 1 and 2; else 0.

The equation is:

$$SCP = -16.57 - 0.00000503 \times SCL + 0.00290 \times DPY + 3.44 \times D1$$

The R² is 0.83 and the Durbin-Watson is 1.82. The T statistics are -9.41 for SCL, 9.76 for DPY, and 7.19 for D1. The signs on the regression coefficients are correct, that is, the coefficient for SCL is negative (prices should rise as landings fall) and the coefficient for DPY is positive (prices should rise as incomes rise).

The quarters adjusted by the D1 variable reflect a response to two essentially concurrent phenomena. Through 1975 the fishery was dependent to a significant degree on surf clam beds off Virginia. Those beds were effectively depleted by 1976, resulting in a sharp drop in landings (Table 4 and Figure 5). The anoxia kill off New Jersey beginning in the third quarter of 1976 further reduced landings. Price began to gradually increase in the first quarter of 1976, reaching almost \$10/bu by the third quarter of that year (Figure 6). Price probably did not immediately rise with the drop in landings because of inventory left from the earlier periods. Prices were just as high at lower landing levels during later quarters. The problem with the quarters in question was apparently that processors responded to a severe drop in landings (from 5.6 million bu in 1974 to 2.9 million bu in 1976; obviously they did not know how bad it was really going to get in the future) by offering prices much higher than appropriate given the price and landing relationships for earlier and subsequent periods in the series. In other words, prices were bid up in what at the time seemed to be an immediate crisis and then settled down when it became clear that the crisis was a long term problem.

Note must be made of the difference between nominal and deflated prices. All of the significant statistical tests had lower statistical values when deflated prices were used. Surf clam prices have not kept pace with inflation. Fishermen's costs have likely not decreased, and have likely increased during the period. While CPUE data are not available prior to 1979, it is likely that CPUE declined beginning in 1976 and did not begin improving significantly until 1983. The apparent conclusion is that fishermen were willing to land surf clams at lower effective prices. Since cost data are unavailable, it cannot be determined whether this was a result of continued profitability, a lack of alternatives in spite of limited profits, or both.

The dummy variables to adjust for possible seasonal differences between quarters had T statistics that were not significant. An examination of landings by quarter (Figure 5) in fact shows no consistent seasonal pattern. The 10 year landing average (1976- 1985) of surf clams during the second quarter (791,847 bu) was the highest, while the fourth quarter averaged 693,923 bu and was the lowest quarterly average. The first and third quarters over this period averaged approximately 740,000 bu and 722,000 bu, respectively. The large amount of variability which existed among years during the quarters prevented the detection of significant differences between quarterly averages.

IX.B. DOMESTIC PROCESSING SECTOR

There is no need to amend this section at this time.

IX.C. INTERNATIONAL TRADE

There is no need to amend this section at this time.

X. DESCRIPTION OF BUSINESSES, MARKETS, AND ORGANIZATIONS ASSOCIATED WITH THE FISHERY

There is no need to amend this section at this time.

XI. DESCRIPTION OF SOCIAL AND CULTURAL FRAMEWORK OF DOMESTIC FISHERMEN AND THEIR COMMUNITIES

There is no need to amend this section at this time.

XII. DETERMINATION OF OPTIMUM YIELD

XII.A. DESCRIPTION OF THE AMENDMENT

This Amendment:

1. changes the quarterly quota allocation for the Georges Bank Area from 10%-40%- 40%-10% to 25% for each quarter;

2. removes for all Areas the 5,000 bushel threshold for transfer of unharvested quota from one quarter to the next;
3. adds the provision that any unharvested quota be added equally to the remaining quarters in the year rather than being added totally to the next quarter for the Nantucket Shoals and Georges Bank Areas;
4. removes the 10% limit on carry over of unharvested quota from one year to the next, but provides that any such carry over be distributed equally to each quarter for the Nantucket Shoals and Georges Bank Areas;
5. changes the permit requirement so that permits expire annually as well as with the sale of the vessel; and
6. changes the regulations to enhance enforcement and prosecution.

The changes made through items 1-5 are set forth in the subsections of section XIII cited above. The changes to the regulations are discussed in Section IV.B.3 and presented in Appendix V.

XII.B. IMPACTS OF THE AMENDMENT

XII.B.1. Changing the Quarterly Quota Allocation for the Georges Bank Area from 10%- 40%-40%-10% to 25% for Each Quarter

The quarterly quotas are intended to distribute fishing in the Georges Bank Area through as much of the year as feasible in light of the steaming distance to the fishing grounds coupled with weather conditions. The concept of keeping the fishery operating throughout the year has been a key consideration in the FMP since its inception. This is considered a desirable goal in order to stabilize employment for fishermen and processing plant workers and to provide for an uninterrupted supply of product to processors in both New England and the Mid-Atlantic.

Price Impacts

In order to evaluate the potential impact on surf clam prices from equalizing the quarterly quotas for the Georges Bank Area, use can be made of the price model discussed in Section IX. All other things being equal (i.e., per capita disposable income and the dummy for 1976-1977 fluctuations), the ex-vessel price effect of an increase or decrease in surf clam landings should simply equal the value of that change multiplied by the coefficient of landings in the model (0.00000503).

Currently the 300,000 bu maximum quota for the Georges Bank Area is distributed such that 30,000 bu, 120,000 bu, 120,000 bu, and 30,000 bu may be caught in the first through fourth quarters, respectively. The amendment would level this out to 75,000 bu per quarter. This represents a change of \pm 45,000 bu depending on which quarter is considered. When this value is multiplied by the coefficient on landings in the price model, the effect on price comes to \$0.226/bu. In other words, price would increase by \$0.226/bu in the second and third quarters when allowed landings decline, and decrease \$0.226/bu in the first and fourth quarters when allowed landings increase. Fluctuations of this magnitude can hardly be considered significant when compared with the annual average price fluctuation of \$2.08/bu for the last seven years (1979-1985), a period which was, in fact, one of relatively high stability in the industry.

The following discussion is divided into three sections: Positive Impacts, Negative Impacts, and Distributional Effects, where Distributional Effects are those impacts which could be either positive or negative depending on an individual's position in the industry.

Positive Impacts

The new quarterly allocation would permit vessels to provide a steady, year-round supply of surf clams to processors from the New England area, as opposed to the current regime where quota allocations are highly

concentrated in the summer months. This may be seen as fostering the growth of the surf clam industry in New England.

Negative Impacts

The new allocation might increase somewhat the likelihood of accidents in the fishery, since higher landings would be allowed in harsher winter months. However, if a protracted period of good weather occurs during the winter months, fishermen should be allowed to take advantage of it. If the weather proves dangerous, fishermen can remain safely at the dock knowing that the roll over provisions of the Amendment will allow them to harvest those clams when the weather clears, or in later quarters if need be. Fishermen have been making the decision on whether it is safe to fish for centuries; there is no sudden need for government to make it for them.

Distributional Effects

New England vessels/industry will benefit somewhat to the detriment of Mid-Atlantic participants because there will be fewer clams available for pulse fishing in the summer months (i.e., a maximum of 75% of the annual quota available instead of 90% if the first quarter quota is rolled over). In order for it to be profitable for the large vessels of the Mid-Atlantic fleet to travel all the way to New England waters to fish, it is necessary for there to be substantial quantities of clams available for harvesting. Spreading availability evenly throughout the year reduces the incentive for Mid-Atlantic vessels to make the trip.

An increased winter fishery off Georges Bank also puts Mid-Atlantic vessels at a disadvantage since the greater travel time and distance for their vessels leaves them vulnerable to the weather for longer intervals.

Though currently not an issue, there is a potential for distributional effects to occur between large and small vessels within the New England area itself. Given the current quota distribution, the majority (up to 90%) of the clam resource is reserved for harvest in the good weather months when both large and intermediate-to-small sized vessels may operate safely on Georges Bank. Shifting portions of the Georges Bank quota to the winter months (i.e., 10% of annual quota changing to 25%) may effectively prohibit smaller vessels from fishing on them.

In 1985, 23 vessels fished for surf clams on Georges Bank. Of those vessels, only two did not have a moratorium permit to fish in the Mid-Atlantic, and so are presumably from New England ports (Table 2). Virtually 100% of landings from Georges Bank occurred in the two summer quarters (unpub. prelim. NMFS data), when Mid-Atlantic vessels sailed north, based themselves out of New England ports, and sent their catches back south by truck.

Since the quota is being fully harvested, a principal impact of this provision will be the eventual replacement of some of these Mid-Atlantic vessels with New England vessels. From an industry-wide perspective, many of the benefits then will simply net out. The problem of over-capitalization in the Mid-Atlantic fleet was relieved somewhat when the Georges Bank resource was discovered. It may be that the loss of this safety valve there will be counterbalanced by its creation in New England, and that underutilized vessels in the groundfish and scallop fleets will be converted to clamming rather than new boats built.

Processing facilities present a similar situation: new capacity in New England will replace existing capacity in the Mid-Atlantic.

Conclusions

Clearly, a substantial portion of this provision deals with distributional effects and an underlying question of equity: should Mid-Atlantic vessels be allowed to dominate the harvest of a resource spilling over into an adjoining region, or should measures be taken to foster exploitation in New England and discourage Mid-Atlantic participation? Complicating this question is the current state of industry development, where over capacity exists in both harvesting and processing sectors, and the further use of society's resources to increase capacity must be given careful consideration.

While the issue of vessel safety in the winter months is an important consideration, it should not be considered an impenetrable barrier to achieving other plan objectives, such as allowing a steady supply of clams to reach processors. If a protracted period of good weather occurs during the winter months, fishermen should be allowed to take advantage of it. If the weather proves dangerous, fishermen can remain safely at the dock knowing that the roll over provisions of the Amendment will allow them to harvest those clams when the weather clears, or in later quarter if need be. Fishermen have been making the decision on whether it is safe to fish for centuries; there is no sudden need for government to make it for them.

XII.B.2. Removing for All Areas the 5,000 Bushel Threshold for Transfer of Unharvested Quota from One Quarter to the Next

Eliminating the 5,000 bushel threshold for quota carry over is essentially a precautionary measure designed to ensure that significant portions of the Georges Bank and Nantucket Shoals Area quotas are not lost to fishermen.

The threshold was originally conceived for the Mid-Atlantic area to act as a buffer for delays in landing reports. It is always the case that at the end of each quarter, the amount of quota remaining is understated by logbook tallies because not all logbooks are turned in on time. The 5,000 bushel threshold was instituted as a way of compensating for this occurrence, and preventing large amounts of quota from being passed to subsequent quarters which would ultimately have to be removed when all logbooks were finally accounted for.

When the Nantucket Shoals and Georges Bank areas were created, the threshold provision was extended to cover them as well. However, it was pointed out that while an accumulation of lost landings due to the threshold would amount to an insignificant portion of the Mid-Atlantic annual quota, this is not the case for the two New England areas with their much smaller quotas.

It is theoretically possible that 4,999 bushels could remain in the quarterly quota for an area and fail to be carried over due to the threshold. In the unlikely event that this should be repeated in each of the four quarters, a total of 19,996 bushels could be lost to fishermen in each area, with a value of \$180,000 at the average 1985 price of \$8.98/bu (Table 21). In the Mid-Atlantic Area this quantity amounts to only 0.8% of the current annual quota. However, it represents almost 7% of the current Georges Bank quota, and approximately 10% of the current Nantucket Shoals quota.

The minimum impact of this provision will occur when the quarterly quotas are fully utilized in all three areas. No clams would have been lost to fishermen from the threshold; however, revisions to quarterly quota figures can be expected to be larger due to the loss of the buffer which the threshold provided.

An additional benefit that will be lost with the threshold is the compensating mechanism it provides for landings that are under reported in the New England areas, where logbooks are only sporadically used by fishermen.

The maximum impact of this provision would be the preservation of approximately 20,000 bushels of clams harvested in each area should the threshold generate its greatest possible effect. Summed across all three areas this represents \$540,000 in revenue (at 1985 prices) which is no longer at risk to the industry.

XII.B.3. Adding the Provision that any Unharvested Quota be Added Equally to the Remaining Quarters in the Year for the Nantucket Shoals and Georges Bank Areas

As with the provision that redistributes the Georges Bank quarterly quota to even amounts throughout the year, this provision is also intended to encourage the stability of clam supplies to the processing sector of the industry.

The impacts of this provision, then, would be of the same nature as those discussed in section XII.B.1.

XII.B.4. Removing the 10% Limit on Carry Over of Unharvested Quota from one Year to the Next for the Nantucket Shoals and Georges Bank Areas

As with the provision that removes the 5,000 bushel threshold for quota transfer within years, this measure is designed to reduce the likelihood that fishermen will be prohibited from harvesting surf clam resources when there is no substantial biological or economic justification to do so. Both measures were initially conceived to encourage supply stability through prevention of quota "ballooning", where failure to harvest over several periods could theoretically lead to large accumulations of clam quotas. If these accumulations were to be harvested in a short period of time, the excess supply was thought likely to cause market disruption and a falling of clam prices. This possibility must be balanced against the revenue losses which could occur if the 5,000 bushel threshold and 10% annual carry over limit measures were left in place and low harvests cause them to have their maximum effect.

Neither scenario is, in fact, likely to occur. Consumer demand for clam products is substantial, and processors have reported no problems in moving product. In order for the "ballooning effect" to occur, quotas will have to go unharvested for substantial periods of time. Given the processors' needs for a steady product flow, and the fact that periodic closures have had to be instituted in recent years because of the fleet's tendency to harvest quotas in record time, there is little evidence on which fears of ballooning may be founded.

It is possible that in the short run, there will not be a sufficient number of New England boats large enough to harvest the new first quarter quota of 75,000 bushels out on Georges Bank. If bad weather and a small quota discourage Mid-Atlantic boats from joining the fishery, then some portion of this quota will indeed be transferred to later periods, as it should be. However, it is unlikely that any massive accumulation will occur in the New England areas because the weather will improve with time, and the Mid-Atlantic fleet will act as a "safety valve". For though the initial quotas may be insufficient to make it profitable for Mid-Atlantic boats to make the trip north, quota accumulation will at some point cause this to change, and the excess will be utilized.

XII.B.5. Changing the permit requirement so that permits expire annually as well as with the sale of the vessel

The Council proposed the revision to the permit system to make it a more effective support for the management and to bring it into line with the annual permit requirements of the Atlantic Mackerel, Squid, and Butterfish FMP, the Atlantic Sea Scallop FMP, the American Lobster FMP, and the Northeast Multispecies FMP. The principal objective is to have the system operate in a manner which enables the Council and NMFS to know on an accurate and timely basis how many participants there are in the fishery during a given year. A second benefit of annual permits is the ability to continually update the vessel and owner information on the permit form. These data are used in analyzing FMP alternatives and, for the analyzes to be as accurate as possible, the data must be as current as possible.

Estimates of the costs of issuing and renewing annual permits were generated for Amendment #2 to the Atlantic Mackerel, Squid, and Butterfish FMP. Below are estimates for the surf clam and ocean quahog fishery. To the extent these vessels have other annual permits, the costs would be reduced because the permit would be issued for all fisheries for which the operator applied and the vessel was eligible simultaneously (i.e., the cost could be allocated proportionally to all of the FMPs with annual permits).

1) Costs to Issue Each NEW Permit:

Computer costs	2.88	
Labor costs	1.60	
Permit form & mailer	0.15	
Postage	<u>0.22</u>	
TOTAL	4.85	× 1,084 permits = \$5,257 (maximum)

2) Costs to RENEW Each Permit:

Computer costs (half)	1.44	
Labor costs	0.96	
Permit form & mailer	0.15	
Postage	<u>0.22</u>	
TOTAL	2.77	× 1,084 permits = \$3,003 (maximum)

Notes:

- The cost of mailing out permit application forms adds an additional \$185.
- Labor costs equal \$0.16 per minute. This is the wage rate for a government employee at Level GS-5 Step 1 (\$14,390) plus overhead of 27.5% (benefits and taxes).

The benefits of instituting an annual permit system are several. The first and most direct benefit is the value to managers of knowing how many participants are actively engaged in a given fishery, as well as basic information on how it is being executed (gear types, vessel sizes, etc.). Those who are familiar with the current (perpetual) permit system are aware that fishermen can obtain a permit for any fishery (except Surf Clams) simply by checking off boxes on the application form. The most common tendency is to check off all the boxes, regardless of whether a real interest exists for participating in any given fishery. This may be simply for the purpose of leaving all options open, or in some cases fishermen fear the prospect of a limited entry program being instituted at some point in the future, and wish to establish a record of having participated.

There is no current provision for discovering if a given vessel did indeed exercise its right to fish for any particular species. Nor is there any capability for updating this information across time. A vessel may actually have participated in a fishery, but then left it a short time later. Its name will still appear in the permit files on an equal basis with the rest. In essence, the fishery manager is currently denied the most fundamental information on entry to and exit from the fishery.

A second benefit from the new system is a vastly improved ability to conduct the Regulatory Impact Reviews of management plans which are required of the Councils by E.O. 12291. In order to assess the impacts of management measures on fishermen, it is clearly necessary to be able to identify who these fishermen are.

A third benefit is that the three-tier information collecting system used by NMFS is based on samples. The Permit File, theoretically, is the one data bank available which covers 100% of the population in question. Clearly it would be beneficial to fishery managers to be able to utilize its full potential.

Finally, it should be recognized that the Permit Files have the potential for being an invaluable data base on the East Coast fishing fleet as a whole, not simply from the perspective of individual fisheries. If annual permits were required across all fisheries, a comprehensive and continually updated data base would be the resultant product.

It must be recognized by vessel owners that, while it would not be necessary to requalify a vessel annually under the moratorium in order to obtain the annual permit, failure to apply for the annual permit would cancel the permit and eliminate the vessel from the fishery. Also, these provisions would not change the responsibility of the NMFS to withdraw permits of vessels that do not fish for 52 consecutive weeks as provided for currently.

XII.B.6. Changing the regulations to enhance enforcement and prosecution.

The regulatory changes are not seen as having any cost impacts. The respecification of the starting and ending times for the make up day are essentially a matter of equity. The current specification keyed to particular dates could cause a fishermen to lose a day because of when the calendar dates fell relative to the fishing week. Keying the make-up provision to the fishing week eliminates this negative potential.

The other regulatory changes are designed to facilitate enforcement. To the extent that they improve the conviction rate, they could be seen as cost saving measures.

XII.B.7. Management Costs

The Amendment: (1) changes the quarterly quota allocation for the Georges Bank Area from 10%-40%-40%-10% to 25% for each quarter; (2) removes for all Areas the 5,000 bushel threshold for transfer of unharvested quota from one quarter to the next; (3) adds the provision that any unharvested quota be distributed proportionally among the remaining quarters in the year rather than being added totally to the next quarter for the Nantucket Shoals and Georges Bank Areas; (4) removes the 10% limit on carry over of unharvested quota from one year to the next, but provides that any such carry over be distributed proportionally to each quarter for the Nantucket Shoals and Georges Bank Areas; (5) provides for annual renewal of vessel permits; and (6) makes changes to the regulations to enhance enforcement and prosecution.

The above provisions are not expected to significantly alter management costs from those currently incurred. All are simple revisions of current practice except for the annual renewal of vessel permits which is being implemented by NMFS for all permitted fisheries.

XII.C. TRADEOFFS BETWEEN THE BENEFICIAL AND ADVERSE IMPACTS OF THE PROPOSED AMENDMENT

The benefits of the proposed Amendment are:

1. The new quarterly allocation would permit vessels to provide a steady, year-round supply of surf clams to processors from the New England area, as opposed to the current regime where quota allocations are highly concentrated in the summer months. This may be seen as fostering the growth of the surf clam industry in New England.
2. Eliminating the 5,000 bushel threshold for quota carry over is essentially a precautionary measure designed to ensure that significant portions of the Georges Bank and Nantucket Shoals Area quotas are not lost to fishermen.
3. As with the provision that redistributes the Georges Bank quarterly quota to even amounts throughout the year, the provision that any unharvested quota be added equally to the remaining quarters in the year for the Nantucket Shoals and Georges Bank Areas is also intended to encourage the stability of clam supplies to the processing sector of the industry.
4. The benefits of instituting an annual permit system are several: (a) the value to managers of knowing how many participants are actively engaged in a given fishery, as well as basic information on how it is being executed (gear types, vessel sizes, etc.); (b) a vastly improved ability to conduct the Regulatory Impact Reviews of management plans which are required of the Councils by E.O. 12291; (c) the three-tier information collecting system used by NMFS is based on samples and the Permit File, theoretically, is the one data bank available which covers 100% of the population in question, hence, it would be beneficial to fishery managers to be able to utilize its full potential; and (d) it should be recognized that the Permit Files have the potential for being an invaluable data base on the East Coast fishing fleet as a whole, not simply from the perspective of individual fisheries.
5. The regulatory changes provide several benefits in that they prevent the loss of fishing days through adjustment of the make-up day specification and they facilitate enforcement.

The possible adverse impacts of the proposed Amendment are:

1. The new quarterly allocation for the Georges Bank Area might increase somewhat the likelihood of accidents in the fishery, since higher landings would be allowed in harsher winter months. However, if a protracted period of good weather occurs during the winter months, fishermen should be allowed to take advantage of it. If the weather proves dangerous, fishermen can remain safely at the dock knowing that the roll over provisions of the Amendment will allow them to harvest those clams when the weather clears, or in later quarters if need be. Fishermen have been making the decision on whether it is safe to fish for centuries; there is no sudden need for government to make it for them.

The Amendment Relative to the National Standards

Section 301(a) of the MFCMA states: "Any fishery management plan prepared, and any regulation promulgated to implement such plan ... shall be consistent with the following national standards for fishery conservation and management." The following is a discussion of the standards and how this Plan meets them:

1. Conservation and management measures shall prevent overfishing while achieving, on a continuous basis, the optimum yield from each fishery.

The Amendment does not change the MSYs, OYs, or quota setting process and, therefore, does not alter the FMP's consistency with this standard.

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

This Amendment is based on the best and most recent scientific information available.

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

The Amendment does not alter the FMP's consistency with this standard.

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

The Amendment does not alter the FMP's consistency with this standard.

The management measures proposed by this amendment will apply equally to all fishermen. Although surf clams are managed differently in the Nantucket Shoals, Georges Bank, and Mid-Atlantic Areas because of the different character and demands of the respective resources for conservation, the measures do not discriminate between fishermen on the basis of State of origin.

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

The Amendment does not alter the FMP's consistency with this standard.

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

The Amendment does not alter the FMP's consistency with this standard.

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

The Amendment does not alter the FMP's consistency with this standard.

XII.E. SPECIFICATION OF OPTIMUM YIELD

The annual surf clam OY for the Mid-Atlantic Area continues unchanged at 1.8 to 2.9 million bu (30 - 50 million lbs of meats). The OY for the Nantucket Shoals Area is 25,000 to 200,000 bu (425,000 -3.4 million lbs

of meats). The OY for the Georges Bank Area is 25,000 to 300,000 bu (425,000 - 5.1 million lbs of meats). A conversion of 17 pounds of meats per bushel for offshore surf clams has been used to convert from bushels to pounds. The annual ocean quahog OY for the entire area continues unchanged at between 4.0 and 6.0 million bu (40 - 60 million lbs of meats), with a conversion factor of 10 pounds of meats per bushel. The annual quotas are set following the procedures in Section XIII.B.2, which are not changed by this Amendment.

The surf clam OY for the Mid-Atlantic Area has as its lower bound the quota level that has been in effect since the original Plan and is considered to be the lowest necessary quota in the absence of a major resource crisis. The upper bound is the maximum sustainable yield estimate. The upper bound of the surf clam OY range for the Nantucket Shoals Area is based on the NEFC stock assessment (Murawski and Serchuk, 1983a) and the lower bound is considered to be the lowest necessary quota in the absence of a major resource crisis. The limits of the surf clam OY for the Georges Bank Area were based on the same considerations as those of the Nantucket Shoals Area, specifically the NEFC stock assessment (Murawski and Serchuk, 1984b) for the upper limit and the lowest necessary quota in the absence of a major resource crisis for the lower limit. The ocean quahog OY range is based on available biological information (Murawski and Serchuk, 1983b).

As specified in the FMP, since US harvesting capacity, and the intent of US fishermen to use that capacity (Section IX) if permitted by the quotas, for both species exceeds the OYs, the Total Allowable Level of Foreign Fishing is 0. Since US processing capacity, and the intent of US processors to use that capacity if quotas permitted, is at least equal to the OYs and to US harvesting capacity, there is no provision for joint venture processing.

XIII. MEASURES, REQUIREMENTS, CONDITIONS, OR RESTRICTIONS SPECIFIED TO ATTAIN MANAGEMENT OBJECTIVES

XIII.A. PERMITS AND FEES

XIII.A.1. General Permit Requirements

A vessel owner or operator must obtain a permit in order to conduct a directed fishery for surf clams or ocean quahogs within the EEZ or land or transfer to another vessel any surf clams or ocean quahogs or part thereof caught within the EEZ. Vessels taking surf clams or ocean quahogs for personal use are exempt from this requirement.

XIII.A.2. Surf Clam Permit Eligibility - Mid-Atlantic and New England Areas

A vessel is eligible for a permit to harvest surf clams in both the New England and Mid-Atlantic Areas if it meets any of the following criteria:

- a. The vessel has landed surf clams in the course of conducting a directed fishery for surf clams between 18 November 1976 and 17 November 1977; or
- b. The vessel was under construction for, or was being rigged for, use in the directed fishery for surf clams on 17 November 1977. For the purpose of this paragraph, "under construction" means that the keel has been laid, and "being rigged" means physical alteration of the vessel or its gear had begun to transform the vessel into one capable of fishing commercially for surf clams; or
- c. The vessel is replacing a vessel of substantially similar harvesting capacity which involuntarily left the surf clam fishery during the moratorium, and both the entering and replaced vessels are owned by the same person.

XIII.A.3. Surf Clam Permit Eligibility - New England Area

There are no eligibility restrictions for vessels fishing for surf clams in the New England Area. The New England Area is made up of the Nantucket Shoals and Georges Bank Areas.

XIII.A.4. Ocean Quahog Permit Eligibility

There are no eligibility restrictions for vessels fishing for ocean quahogs.

XIII.A.5. Application

Permit applications are processed by the Regional Director. The application form shall require provision of at least the following information: names, addresses, and telephone numbers of the owner and operator; the name of the vessel; the vessel's US Coast Guard documentation number or State license number; engine and pump horsepower; home port of the vessel; directed fishery or fisheries; fish hold capacity (in cages or bushels); dredge size; and number of dredges. The vessel owner or operator is required to notify NMFS of any changes of address or physical characteristics of vessels.

There is no fee for the initial permit. A lost or mutilated permit may be replaced at a cost of \$25.

XIII.A.6. Transfer

A permit is valid only for the vessel for which it is issued.

XIII.A.7. Display

The permit must be carried, at all times, on board the vessel for which it is issued, and must be maintained in legible condition. The permit, the vessel, its gear, and catch are subject to inspection by any authorized official.

XIII.A.8. Expiration

Permits expire: when the owner or operator retires the vessel from the fishery (it is a rebuttable presumption that failure to land any surf clams or ocean quahogs for 52 consecutive weeks constitutes retirement from the fishery); or when the ownership of the vessel changes, however, the Regional Director may authorize continuation of a vessel permit for the surf clam fishery if the new owner so requests and the vessel meets the relevant eligibility criteria; or on 31 December of each year.

Vessels that establish eligibility to fish in both the Mid-Atlantic and New England Areas pursuant to XIII.A.2 need not re-establish such eligibility as part of the annual permit renewal.

XIII.A.9. Sanctions

Permits may be revoked by the Regional Director for violations of this FMP.

XIII.B. CATCH LIMITATIONS

XIII.B.1. Foreign Fishing

Fishing for surf clams or ocean quahogs in the FCZ by any vessel other than a vessel of the US is prohibited.

XIII.B.2. Domestic Catch Quotas

XIII.B.2.a. Surf clams

The Optimum Yield, Domestic Annual Harvest, Domestic Annual Processing, and annual quota for surf clams equal between 1.8 and 2.9 million bu (approximately 30 - 50 million lbs) for the Mid-Atlantic Area, between 25,000 and 200,000 bu (approximately 425,000 - 3,400,000 lbs) for the Nantucket Shoals Area, and between 25,000 and 300,000 bu (approximately 425,000 - 5,100,000 lbs) for the Georges Bank Area.

In the Mid-Atlantic Area the annual quota is divided into equal quarterly quotas, the quarters being: 1 January - 31 March, 1 April - 30 June, 1 July - 30 September, and 1 October - 31 December. If the first day of a

calendar quarter does not fall on Sunday, then the fishing quarter will begin on the first Sunday of the new calendar quarter.

In the Nantucket Shoals Area the annual quota is divided into quarterly quotas as follows: 20% for January through March, 30% for April through June, 30% for July through September, and 20% October through December. If the first day of a calendar quarter does not fall on Sunday, then the fishing quarter will begin on the first Sunday of the new calendar quarter.

In the Georges Bank Area the annual quota is divided into equal quarterly quotas, the quarters being: 1 January - 31 March, 1 April - 30 June, 1 July - 30 September, and 1 October - 31 December. If the first day of a calendar quarter does not fall on Sunday, then the fishing quarter will begin on the first Sunday of the new calendar quarter.

Prior to the beginning of each year, after consultation with the Council and opportunity for public comment, the Regional Director may adjust quotas and estimates of DAH and DAP within the ranges specified. In selecting the quota the Regional Director shall consider current stock assessments, catch reports, and other relevant information concerning: exploitable and spawning biomass relative to the OY; fishing mortality rates relative to the OY; magnitude of incoming recruitment; projected effort and corresponding catches; and status of areas previously closed to surf clam fishing that are to be opened during the year and areas likely to be closed to fishing during the year. The quota shall be set at that amount which is most consistent with the objectives of this FMP. It is the Council's intent that this quota setting process will not involve the preparation of an FMP amendment and a Supplemental Environmental Impact Statement to establish the annual quota.

In the Mid-Atlantic Area, if the actual catch of surf clams in any one quarter falls short of the specified quarterly quota, the Regional Director shall add the amount of the shortfall to the next succeeding quarterly quota. If the actual catch of surf clams in any quarter exceeds the specified quarterly quota, the Regional Director shall subtract the amount of the excess from the next succeeding quarterly quota. The Regional Director shall publish a notice in the *Federal Register* whenever the quarterly quota for surf clams is adjusted. It is understood that this process would also operate between years, that is, between the last quarter of one year and the first quarter of the next year.

In the Nantucket Shoals Area, if the actual catch of surf clams in any quarterly period falls short of the specified quarterly quota, the Regional Director will add the amount of the shortfall proportionally to the quotas of the remaining quarters of the year. If the actual catch of surf clams exceeds the quarterly quota, the Regional Director will subtract the amount of the excess from the succeeding quarterly quota. The Regional Director shall publish a notice in the *Federal Register* whenever any quarterly quota for surf clams is adjusted as described above. The shortfall or excess will carry over from the last quarter of one year to the next year and any such carry over shall be distributed proportionally to each quarter of the new year.

In the Georges Bank Area, if the actual catch of surf clams in any quarterly period falls short of the specified quarterly quota, the Regional Director will add the amount of the shortfall equally to the quotas of the remaining quarters of the year. If the actual catch of surf clams exceeds the quarterly quota, the Regional Director will subtract the amount of the excess from the succeeding quarterly quota. The Regional Director shall publish a notice in the *Federal Register* whenever any quarterly quota for surf clams is adjusted as described above. The shortfall or excess will carry over from the last quarter of one year to the next year and any such carry over shall be distributed equally to each quarter of the new year.

XIII.B.2.b. Ocean quahogs

There is no need to amend this section at this time.

XIII.B.2.c. Closure.

If the Regional Director determines (based on logbook reports, processor reports, vessel inspections, or other information) that the quota for surf clams in any Area for any time period or ocean quahogs for any time period will be exceeded, the Regional Director shall publish a notice in the *Federal Register*, stating the

determination and, if necessary, stating a date and time for closure of the surf clam or ocean quahog fishery for the remainder of the time period. The Regional Director shall send notice of the action to each surf clam or ocean quahog processor and to each permitted surf clam or ocean quahog vessel owner or operator.

XIII.C. RESTRICTIONS

There is a surf clam minimum size limit. After consultation with the Council and opportunity for public comment, the Regional Director shall adjust, by increments no less than 0.25", the surf clam minimum size limit to a value less than 5.5" as necessary, so that discards on average do not exceed 30% of the trip catch. In no event shall the size limit be less than 4.75". When data indicate the clams have grown sufficiently, the limit would be increased, ultimately reaching the 5.5" limit. There is a tolerance of 240 undersized clams per cage but no more than 50 clams per cage under 4.75". If any cage is in violation of the size limit, the entire load is in violation. In adjusting the size limit the Regional Director shall consider current stock assessments, catch reports, and other relevant information concerning the size distribution of the surf clam resource. No person shall harvest or possess surf clams smaller than the minimum size limit.

All surf clam cages shall be tagged before leaving the vessel and tags shall not be removed until cages are emptied at the processing plant. Information to be shown on the tags shall be determined by the Regional Director, in consultation with the Council, but will include at least the information needed to establish a chain of evidence adequate for enforcement of the surf clam minimum size limit from the vessel through the transportation system to the processor, inclusive. The Regional Director shall determine the minimum specifications of the tags, which as a minimum shall assure that markings are not erased prior to the cages being emptied at the processing plant.

All surf clams landed on an authorized FCZ fishing day are assumed to have been caught in the FCZ and are subject to the Federal size limit.

No person shall catch and retain on board any surf clams or ocean quahogs during closed seasons, in closed areas, or on days of the week during which fishing for these species is not permitted.

Possession of surf clams or ocean quahogs, by any person aboard any fishing vessel engaged in those fisheries, in closed areas or more than 12 hours after a closure announcement becomes effective shall be prima facie evidence that such clams or quahogs were taken in violation of the provisions of the Act and the regulations.

Possession of surf clams, by any person aboard any fishing vessel engaged in the surf clam fishery, more than 12 hours after a weekly closure occurs shall be prima facie evidence that such surf clams were taken in violation of the Act and the regulations.

No person shall possess, have custody of or control of, ship, transport, offer for sale, deliver for sale, sell, purchase, import, export, or land, any surf clams, ocean quahogs, or part thereof, which was taken in violation of the Act of any regulations issued under the Act.

No person engaged in the surf clam or ocean quahog fisheries as an owner or operator, or as a dealer, processor or buyer shall unload or cause to be unloaded, or sell or buy, any surf clams or ocean quahogs whether on land or at sea, without preparing and submitting the documents required by the regulations.

No person shall refuse to permit an authorized officer to board a fishing vessel subject to such person's control for purposes of conducting any search, no matter where that vessel may be situated, in connection with the enforcement of the Act or any regulations issued under the Act; forcibly assault, resist, oppose, impede, intimidate or interfere with any authorized officer in the conduct of any search or inspection; resist a lawful arrest for any act prohibited by the regulations; or interfere with, delay, or prevent, by any means, the apprehension or arrest of another person knowing that such other person has committed any act prohibited by the regulations.

Vessel owners or operators must notify NMFS in advance if they intend to fish for surf clams in a Notification Zone. For vessels authorized to fish in both the Mid-Atlantic and New England Areas (i.e., with permits

issued pursuant to the moratorium) with home ports in the Mid-Atlantic Area the Nantucket Shoals or Georges Bank Areas are Notification Zones. For vessels authorized to fish in both the Mid-Atlantic and New England Areas (i.e., with permits issued pursuant to the moratorium) with home ports in the New England Area the Mid-Atlantic or Georges Bank Areas are Notification Zones. For vessels authorized to fish only in the New England Area the Georges Bank Area is a Notification Zone. Home port is that specified on the vessel's permit application form. If an operator intends to change the vessel's Area of fishing, NMFS must be notified in advance.

Any person or vessel found to be in violation of these regulations, including the logbook and other reporting requirements, shall be subject to the civil and criminal penalty provisions and forfeiture provisions prescribed in the Act and pertinent regulations. It is recommended that the Secretary establish a specific list of penalties for specific civil violations of these regulations in order to expedite resolution of violations. It is recommended that the penalty for a first offense for any violation be a permit suspension for thirty days and that the penalty for a second offense be a permit suspension for ninety days. Subsequent offenses should carry penalties of a permit suspension combined with a fine. Appropriate fines should be specified for violations by processors.

XIII.D. EFFORT RESTRICTIONS

XIII.D.1. Surf Clams - Mid-Atlantic Area

Fishing for surf clams shall be permitted only during the period beginning 6:00 am Sunday and ending 6:00 pm Thursday and be conducted during this period only at the times and under the conditions authorized by the Regional Director. If fishing is permitted for periods of 18 hours, 36 hours, or other time periods that are evenly divisible by 18, the Regional Director may permit fishing beginning at 12:00 am Sunday if, in consultation with the Council, he determines that enforcement resources are adequate to monitor this expanded fishing period. This shall be accomplished by publishing a notice in the *Federal Register*.

Fishing time shall be regulated by the Regional Director to allow fishing for surf clams to be conducted throughout the entire quarter without exceeding the allocation for that quarter and at a rate that will minimize the number of changes to allowed fishing times during the quarter. It is anticipated that the general method of regulating fishing times, both in reopened areas and in the fishery outside of reopened areas, will be regulating the hours per week each vessel may fish. However, catch rates, particularly in reopened areas, may be such that regulating hours per week may result in time periods so short that they are uneconomic for the harvesters. If this were to occur, the Regional Director may regulate hours over a longer time period (i.e., hours per month or hours per quarter) so that each vessel could have a reasonable trip, even though the total hours of permitted fishing for the time period might be quite small. Vessels shall be required to stop fishing at uniform hours.

The Regional Director shall regulate fishing times for reopened areas to allow fishing for surf clams to be conducted in such areas throughout the entire time period established for each area without exceeding the estimated allowable catch for the area and at a rate that will minimize the number of changes to the allowed fishing times during the quarter. Reopened areas shall be managed with specific estimates of allowable harvest and effort restrictions until the catch per unit of effort in the reopened area equals the general catch per unit of effort in the overall fishery. The Regional Director may designate the maximum number of vessels that may fish in a reopened area at any one time and, if conflicts develop between that number and the fishing periods requested by fishermen, he may select the vessels that fish on particular days by use of a lottery.

If the Regional Director determines during the quarter that the quarterly allocation will be (will not be) exceeded, he may reduce (increase) the number of hours during which fishing for surf clams is permitted to avoid prolonged vessel tie-up times and fluctuations in the supply of surf clams which would result if the allocations were taken rapidly during the beginning of each quarter (facilitating the catch of the full quarterly allocation).

The Regional Director shall publish a notice in the *Federal Register* of any reduction or increase in days during which fishing for surf clams is permitted. The reduction or increase may take effect immediately

upon publication in the *Federal Register*. The Regional Director shall also send notice of the change to each surf clam or ocean quahog processor in the fishery and to each surf clam or ocean quahog vessel owner or operator.

If NMFS continues the procedure of requiring surf clam fishermen to specify their fishing days, provision is made for an alternate fishing day in the event of unsafe weather conditions on the specified day. A fisherman may claim a weather day if the fisherman notifies the appropriate official designated by NMFS of his intent to claim a weather day within four hours of his official starting time for fishing and if he lands no clams on that day. This make-up day shall be the next fishing day and shall amount to the same number of hours as the fisherman normally has on a fishing day. A fisherman will not be permitted to claim an additional make-up day if weather conditions prohibited fishing on a make-up day. This make-up day provision shall be in effect only for the months of November, December, January, February, March, and April.

In addition to the effort restrictions in the current FMP presented above, surf clam vessels may land surf clams only one time during an authorized time period.

XIII.D.2. Surf Clams - Nantucket Shoals Area

In the Nantucket Shoals Area, no catch restrictions shall be applied to the fishery until 50% of the quarterly quota has been landed. The Regional Director will monitor landings from the Nantucket Shoals Area and will determine either when the 50% point has been reached or when that point will likely be reached. The Regional Director will thereupon consult with the Councils in the selection of trip limits to control catch adequately to keep the fishery open for the balance of the quarter. Trip limits will be established by vessel class as follows: for Class 1 vessels, trip limits may not be less than 224 bu/trip; for Class 2 vessels, trip limits may not be less than 416 bu/trip for Class 2, and for Class 3 vessels, trip limits may not be less than 768 bu/trip. Trip limits must maintain a fixed ratio of 1.0: 1.8: 3.4 for Class 1, 2, and 3, respectively. In the event that trip limits are not sufficient to keep landings to within the quota levels, the Regional Director may close the fishery until the beginning of the next quota period.

Once initial trip limits have been established in consultation with the Councils, the Regional Director will notify the Councils in advance of any proposed action to further specify trip limits or close the fishery. The Regional Director will consider any comments received by the Councils or the public before implementing any adjustments in the Nantucket Shoals management program.

XIII.D.3. Surf Clams - Georges Bank Area

There are no effort restrictions for fishing for surf clams in the Georges Bank Area.

XIII.D.4. Ocean Quahogs

There is no need to amend this section at this time.

XIII.E. Closed Areas

There is no need to amend this section at this time.

XIII.F. Vessel Identification

There is no need to amend this section at this time.

XIII.G. FACILITATION OF ENFORCEMENT

There is no need to amend this section at this time.

XIII.H. HABITAT PRESERVATION, PROTECTION, AND RESTORATION

There is no need to amend this section at this time.

XIII.I. DEVELOPMENT OF FISHERY RESOURCES

There is no need to amend this section at this time.

XIII.J. MANAGEMENT COSTS

Management costs are discussed in Section XII.B.

XIV. SPECIFICATIONS AND SOURCES OF PERTINENT FISHERY DATA

There is no need to amend this section at this time.

XV. RELATIONSHIP OF THE RECOMMENDED MEASURES TO EXISTING APPLICABLE LAWS AND POLICIES

XV.A. FISHERY MANAGEMENT PLANS

This FMP is related to other FMPs to the extent that all fisheries of the northwest Atlantic are part of the same general geophysical, biological, social, and economic setting. US fishermen often are active in more than a single fishery. Thus regulations implemented to govern harvesting of one species or a group of related species may impact on other fisheries by causing transfers of effort.

Many fisheries of the northwest Atlantic result in significant non-target species fishing mortality. Therefore, each FMP must consider the impact of non-target species fishing mortality on other stocks and as a result of other fisheries. There is almost no bycatch of other species in either the surf clam or ocean quahog fisheries.

XV.B. TREATIES OR INTERNATIONAL AGREEMENTS

No treaties or international agreements, other than GIFAs entered into pursuant to the MFCMA, relate to this fishery.

XV.C. FEDERAL LAWS AND POLICIES

The only Federal Law that controls the fishery covered by this FMP is the MFCMA.

Marine Sanctuary and Other Special Management Systems

The *USS Monitor* National Marine Sanctuary off North Carolina is in the area covered by the FMP. The Sanctuary was officially established on 30 January 1975 under the Marine Protection, Research, and Sanctuaries Act of 1972. Rules and regulations have been issued for the Sanctuary (15 CFR 924) that prohibit deploying any equipment in the Sanctuary, fishing activities which involve "anchoring in any manner, stopping, remaining, or drifting without power at any time" (924.3 (a)), and "trawling" (924.3(h)). The Sanctuary is clearly designated on all National Ocean Survey charts by the caption "protected area", which minimizes the potential for damage to the Sanctuary by fishing operations. Details on sanctuary regulations may be obtained from the Director, Sanctuary Programs Office, Office of Coastal Zone Management, NOAA, 3300 Whitehaven Street NW, Washington, D.C. 20235.

Potential Impact on Marine Mammals and Endangered Species

Numerous species of marine mammals and sea turtles occur in the northwest Atlantic Ocean. The most recent comprehensive survey in this region was done in 1979 by the Cetacean and Turtle Assessment Program (CeTap), at the University of Rhode Island (University of Rhode Island, 1981), under contract to the Minerals Management Service (MMS), Department of the Interior. The following is a summary of some of

the information gathered in that study, which covered the area from Cape Sable, Nova Scotia, to Cape Hatteras, North Carolina, from the coastline to 5 nautical miles seaward of the 100 fathom isobath.

Twenty one cetaceans and the 4 turtle species were encountered in the 1979 survey (Table 22). Also presented in Table 22 are the study team's "estimated minimum population number" for the area, as calculated, and those species currently included under the Endangered Species Act. All information is preliminary.

The study team concluded that "both large and small cetaceans are widely distributed throughout the study area in all four seasons," and grouped the 13 most commonly seen species into three categories, based on geographical distribution. The first group contains only the harbor porpoise, which is distributed only over the shelf and throughout the Gulf of Maine, Cape Cod, and Georges Bank, but probably not southwest of Nantucket. The second group contains the most frequently encountered baleen whales (fin, humpback, minke, and right whales) and the white-sided dolphin. These are found in the same areas as the harbor porpoise, and also occasionally over the shelf at least to Cape Hatteras or out to the shelf edge. The third group "shows a strong tendency for association with the shelf edge" and includes the grampus, striped, spotted, saddleback, and bottlenose dolphins, and the sperm and pilot whales.

Loggerhead turtles were found throughout the study area, but appear to migrate north to about Massachusetts in summer and south in winter. Leatherbacks appear to have a more northerly distribution. The study team hypothesized a "northward migration in the Gulf Stream with a southward return in continental shelf waters nearer to shore." Both species usually were found "over the shoreward half of the slope" and in depths less than 200 feet. No live green or Kemp's ridley turtles were found, and the latter's population has been estimated at only about 500 adults. The study area may be important for sea turtle feeding or migrations, but the nesting areas for these species generally are in the South Atlantic and Gulf of Mexico.

The only other endangered species occurring in the northwest Atlantic is the shortnose sturgeon (*Acipenser brevirostrum*).

The range of surf clams and ocean quahogs and the above marine mammals and endangered species overlap to a large degree, and there always exists some very limited potential for an incidental kill. Except in unique situations (e.g., tuna-porpoise in the central Pacific), such accidental catches should have a negligible impact on marine mammal/endangered species abundances, and the Council does not believe that implementation of this FMP will have any adverse impact upon these populations. As additional information on this subject becomes available, it will be integrated into future Amendments to this FMP. The regulation of commercial landings by this FMP should reduce the potential for the capture of endangered species.

Oil, Gas, Mineral, and Deep Water Port Development

While Outer Continental Shelf (OCS) development plans may involve areas overlapping those contemplated for offshore fishery management, no major conflicts have been identified to date. The Council, through involvement in the Intergovernmental Planning Program of the MMS monitors OCS activities and has opportunity to comment and to advise MMS of the Council's activities. Certainly, the potential for conflict exists if communication between interests is not maintained or appreciation of each other's efforts is lacking. Potential conflicts include, from a fishery management position: exclusion areas, adverse impacts to sensitive biologically important areas, oil contamination, substrate hazards to fishing gear, and competition for crews and harbor space. The Council is unaware of pending deep water port plans which would directly impact offshore fishery management goals in the areas under consideration, and is unaware of potential effects of offshore fishery management plans upon future development of deep water port facilities.

XV.D. STATE, LOCAL, AND OTHER APPLICABLE LAWS AND POLICIES

Coastal Zone Management (CZM) Programs

The CZM Act of 1972, as amended, provides measures for ensuring stability of productive fishery habitat while striving to balance development pressures with social, economic, cultural, and other impacts on the coastal zone. It is recognized that responsible management of both coastal zones and fish stocks must involve mutually supportive goals.

The Council must determine whether the Amendment will affect a State's coastal zone. If it will, the Amendment must be evaluated relative to the State's approved CZM program to determine whether it is consistent to the maximum extent practicable. The States have 45 days in which to agree or disagree with the Council's evaluation. If a State fails to respond within 45 days, the State's agreement may be presumed. If a State disagrees, the issue may be resolved through negotiation or, if that fails, by the Secretary.

The New England Council determined that draft Amendment #4 was consistent to the extent practicable with the approved CZM Programs in the relevant coastal States. This determination was made in compliance with the provisions of the CZM Act. Concurrences with this determination are on file.

In order to comply with the CZM Act, Amendment #6 was reviewed relative to the approved CZM programs of Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, and Maryland. Letters will be sent to all of the States listed above stating that the Council concluded that the Amendment is consistent to the maximum extent practicable with the State's CZM program as understood by the Council.

XVI. COUNCIL REVIEW AND MONITORING OF THE PLAN

There is no need to amend this section at this time.

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XVIII. TABLES AND FIGURES

Table 1. Number of Surf Clam and Ocean Quahog Permits by State of Registry, 1983 and 1985

	<u>Surf Clam/Ocean Quahog</u>		<u>Ocean Quahog</u>		<u>Surf Clam/New England</u>	
	<u>1983</u>	<u>1985</u>	<u>1983</u>	<u>1985</u>	<u>1983</u>	<u>1985</u>
ME	-	-	36	63	55	86
NH	-	-	11	23	17	30
MA	2	1	72	311	210	442
RI	4	3	14	36	35	50
CT	-	-	1	6	3	8
NY	5	5	7	24	5	18
NJ	65	75	7	63	7	53
PA	9	6	-	-	-	-
DE	3	2	1	1	1	-
MD	40	27	-	3	19	13
VA	20	25	5	19	7	28
Other	-	-	2	19	3	18
Total	148	145	156	568	362	746

Source: unpub. prelim. NMFS data.

Table 2. Number of Vessels Fishing by Category, 1983-1985

	<u>1983</u>	<u>1984</u>	<u>1985</u>
Mid-Atlantic surf clams	78	63	63
Ocean quahogs	9	10	6
Georges Bank surf clams	NA	-	-
Nantucket Shoals surf clams	2	1	2
Mid-Atlantic surf clams + Ocean quahogs	27	34	40
Mid-Atlantic + Georges Bank surf clams	NA	4	6
Mid-Atlantic + Nantucket Shoals surf clams	8	1	-
Nantucket Shoals + Georges Bank surf clams	NA	1	1
Georges Bank surf clams + Ocean quahogs	NA	-	1
Nantucket Shoals surf clams + Ocean quahogs	1	1	1
Mid-Atlantic + Georges Bank surf clams + Ocean quahogs	NA	6	12
Mid-Atlantic + Nantucket Shoals surf clams + Ocean quahogs	-	3	1
Mid-Atlantic + Georges Bank + Nantucket Shoals surf clams	NA	3	-
Georges Bank + Nantucket Shoals surf clams + Ocean quahogs	NA	1	-
Mid-Atlantic + Georges Bank + Nantucket Shoals surf clams + Ocean quahogs	NA	2	3
Mid-Atlantic surf clams Total	113	116	125
Ocean quahogs Total	37	57	64
Georges Bank surf clams Total	NA	17	23
Nantucket Shoals surf clams Total	11	13	8
Grand Total	125	130	136

- = zero.

NA = not applicable (Georges Bank Area did not exist in 1983).

Source: NMFS NER logbook data.

Table 3. Gear Type Listed for Vessels with Surf Clam and Ocean Quahog Permits

<u>Gear Type</u>	Mid-Atlantic Area <u>Surf Clams</u>	Ocean Quahogs and/or New England <u>Area Surf Clams</u>
No data	42	38
Purse seines	-	1
Boat seines	-	6
Bottom trawls	-	225
Mid-water trawls	-	4
Other trawls	-	8
Boat dredges	102	464
Hand dredges	-	50
Lift nets	-	2
Gill/entangling nets	-	9
Rod and reel	-	2
Set lines	-	1
Other gear	-	40
Total	144	850

Source: NMFS/NER Permit File, May 1986.

Table 4. Surf Clam Landings (millions of lbs of meat)
and Distribution by State, 1950-1985

	New England		NY		NJ		DE		MD		VA		Total#		Change
	Land	%	Land	%	Land	%	Land	%	Land	%	Land	%	Land	%	
1950	*	1	3	42	4	55	-	-	*	2	-	-	8	100	
1951	*	*	4	34	6	53	-	-	2	13	-	-	12	100	50%
1952	*	*	4	33	7	59	-	-	1	9	-	-	13	100	8
1953	-	-	3	27	7	53	-	-	2	20	-	-	12	100	-8
1954	*	3	3	28	7	58	-	-	1	11	-	-	12	100	*
1955	*	*	2	17	8	69	-	-	2	14	-	-	12	100	*
1956	*	1	2	15	12	72	*	*	2	12	-	-	16	100	33
1957	*	*	2	9	15	85	*	1	1	5	-	-	18	100	13
1958	*	*	*	3	13	85	1	5	1	5	-	-	15	100	-17
1959	*	*	1	2	20	87	2	7	1	4	-	-	23	100	53
1960	*	*	1	3	23	94	*	2	*	2	-	-	25	100	9
1961	*	*	1	3	27	97	-	-	*	*	-	-	28	100	12
1962	*	*	1	3	30	97	*	*	*	*	-	-	31	100	11
1963	-	-	1	3	38	97	-	-	*	*	-	-	39	100	26
1964	*	*	1	3	37	97	-	-	*	*	-	-	38	100	-3
1965	*	-	2	3	42	96	-	-	*	1	-	-	44	100	16
1966	*	*	2	4	43	96	-	-	*	*	-	-	45	100	2
1967	*	*	2	5	42	92	-	-	1	3	-	-	45	100	*
1968	*	*	3	7	32	79	-	-	5	13	*	*	41	100	-9
1969	*	*	3	7	36	73	3	6	7	1	*	*	50	100	22
1970	*	*	4	6	40	59	9	13	14	20	1	1	67	100	34
1971	*	1	4	7	29	55	8	15	8	15	5	9	53	100	-21
1972	*	*	3	4	21	34	9	14	7	12	23	37	64	100	21
1973	*	*	3	4	22	26	7	8	7	9	43	53	82	100	28
1974	*	*	4	4	23	24	6	6	5	6	58	61	96	100	17
1975	*	*	5	5	36	41	2	3	5	6	39	45	87	100	-9
1976	*	*	3	7	24	50	-	-	7	15	14	29	49	100	-44
1977	1	2	3	7	23	45	-	-	8	16	16	31	52	100	6
1978	1	2	2	6	15	39	-	-	8	21	13	32	40	100	-23
1979	1	4	2	4	12	35	-	-	8	22	13	35	35	100	-13
1980	1	2	2	5	10	25	-	-	11	30	14	38	38	100	9
1981	1	1	2	5	20	44	-	-	12	25	11	24	46	100	21
1982	3	6	2	5	24	49	-	-	10	19	10	21	50	100	9
1983	4	7	2	4	24	43	-	-	7	13	18	32	56	100	12
1984	8	11	3	4	39	56	-	-	7	10	13	19	70	100	25
1985	10	14	7	10	33	45	-	-	9	12	13	18	73	100	4

% = % of total annual landings.

% Change = % change in total landings from previous year.

Includes any unallocated catch.

- = zero.

* = less than 500,000 lbs or .5%.

Rows may not add to Total because of rounding and unallocated catch.

Source: USDC, 1986 and unpub. prelim. NMFS data.

Table 5. EEZ and Total Surf Clam and Ocean Quahog Landings
(millions of lbs of meat), 1967-1985

	Surf Clam						Ocean Quahog					Surf Clam + Ocean Quahog	
	EEZ			Total			EEZ			Total		Land	Change
	Land	% of Total	% Change	Land	% Change	Land	% of Total	% Change	Land	% Change			
1967	na	na	na	45		-	-	-	*		45		
1968	na	na	na	41	-9	-	-	-	*	*	41	-9	
1969	na	na	na	50	22	-	-	-	1	*	50	22	
1970	na	na	na	67	34	-	-	-	2	200	69	38	
1971	50	95	na	53	-21	-	-	-	2	*	55	-20	
1972	64	87	28	64	21	-	-	-	1	-50	65	18	
1973	73	88	14	82	28	-	-	-	1	*	84	29	
1974	74	77	1	96	17	-	-	-	1	*	97	15	
1975	44	50	-41	87	-9	-	-	-	1	*	88	-9	
1976	43	86	-2	49	-44	4	73	-	6	600	55	-38	
1977	43	84	*	52	6	16	86	400	18	300	70	27	
1978	31	79	-28	40	-23	20	88	25	23	28	63	-10	
1979	29	82	-6	35	-13	32	91	60	35	52	70	11	
1980	35	92	21	38	9	31	90	-3	34	-3	72	3	
1981	37	80	6	46	21	35	98	13	36	6	82	14	
1982	37	74	*	50	9	34	99	-3	35	-3	85	4	
1983	45	80	22	56	12	34	97	*	35	*	91	7	
1984	55	79	22	70	25	36	92	6	39	11	109	20	
1985	52	71	-5	73	4	52	100	44	52	33	125	15	

- = zero. * = less than 500,000 lbs or .5%. na = data not available.

Source: USDC, 1986 and unpub. prelim. NMFS data.

Table 6. Mid-Atlantic Area Surf Clam Fishing Activity by Class, 1979-1985

	<u>Class</u>	<u>Vessels</u>	<u>Trips</u>	<u>Hours at Sea</u>	<u>Hours Fishing</u>	<u>Landings</u>	<u>Adj. Hours Fishing</u>	<u>CPUE</u>	<u>Adj. CPUE</u>
1979	1	26	576	8898	5671	101144	1663	18	61
	2	62	2093	40324	23183	494540	8387	21	59
	3	74	2665	59136	34552	1088050	18947	32	57
	All	162	5334	108358	63406	1683734	28998	27	58
1980	1	14	411	5690	3663	79745	1034	22	77
	2	53	2201	38682	23975	594687	8721	25	68
	3	59	2443	53060	31166	1253035	20858	40	60
	All	126	5055	97432	58804	1927467	30613	33	63
1981	1	16	329	4702	2929	64942	815	22	80
	2	46	1554	25066	14549	573308	5496	39	104
	3	58	2226	47514	23493	1334129	15240	57	88
	All	120	4109	77282	40971	1972379	21551	48	92
1982	1	15	514	7535	4908	97833	1299	20	75
	2	47	2051	32900	20914	613943	8251	29	74
	3	53	2744	55783	29679	1288508	20169	43	64
	All	115	5309	96218	55501	2000284	29719	36	67
1983	1	14	408	6320	4020	113753	996	28	114
	2	47	2027	29962	19083	814999	7517	43	108
	3	52	2260	46727	24497	1395368	16611	57	84
	All	113	4695	83009	47600	2324120	25124	49	93
1984	1	14	312	4532	2981	124897	889	42	141
	2	49	1682	24214	15367	1102805	6065	72	182
	3	53	1425	26629	13990	1335719	8577	96	156
	All	116	3419	55375	32338	2563421	15531	79	165
1985	1	12	188	2040	1071	85215	327	80	261
	2	48	1214	14412	6620	908066	2592	137	350
	3	65	1309	21895	7184	1513307	4283	211	353
	All	125	2711	38347	14875	2506588	7202	169	348

- = zero.

Adjusted Hours Fishing equals the sum of Hours Fishing for each vessel multiplied by the dredge size of that vessel divided by 240" (the largest dredge size in the fleet).

CPUE = Landings divided by Hours Fishing.

Adjusted CPUE = landings divided by Adjusted Hours Fishing.

Source: NMFS NER logbook data.

Table 7. Size Composition (%) of Ocean Quahogs Sampled from Commercial Catches off New Jersey and Delmarva, 1977-1983

	Shell Length (in)										Mean Length (in)	
	1.2- <u>1.5</u>	1.6- <u>1.9</u>	2.0- <u>2.3</u>	2.4- <u>2.7</u>	2.8- <u>3.1</u>	3.2- <u>3.5</u>	3.6- <u>3.9</u>	3.9- <u>4.3</u>	4.3- <u>4.7</u>	4.7- <u>5.1</u>		5.1- <u>5.5</u>
New Jersey												
1977	-	*	*	1	13	48	32	5	1	*	-	3.5
1978	-	-	*	2	14	40	35	9	-	-	-	3.5
1979	-	-	-	2	26	42	26	3	1	*	-	3.4
1980	-	-	-	2	22	61	15	1	-	-	-	3.3
1981	-	-	-	6	39	46	10	-	-	-	-	3.2
1982	-	-	-	2	10	28	36	22	3	*	-	3.7
1983#	-	-	-	-	4	22	56	17	1	-	-	3.7
Delmarva												
1977	-	-	-	1	6	66	24	3	-	-	-	3.4
1978	-	-	-	1	17	54	25	4	-	-	-	3.4
1979	-	-	-	1	23	60	15	1	*	-	-	3.3
1980	-	-	*	1	27	59	12	1	-	-	-	3.3
1981	-	-	*	1	27	59	12	*	-	-	-	3.3
1982	-	-	-	*	23	57	17	3	*	-	-	3.4
1983#	-	-	-	*	11	59	28	2	*	-	-	3.4

- = zero.

* = less than 0.5%.

= 1983 data through August.

Source: Murawski and Serchuk, 1983b.

Table 8. Nantucket Shoals Area Surf Clam Fishing Activity by Class, 1983-1985

	<u>Class</u>	<u>Vessels</u>	<u>Trips</u>	<u>Hours at Sea</u>	<u>Hours Fishing</u>	<u>Landings</u>	<u>Adj. Hours Fishing</u>	<u>CPUE</u>	<u>Adj. CPUE</u>
1983	1	-	-	-	-	-	-	-	-
	2	1	*	*	*	*	*	*	*
	3	10	79	2154	750	83041	647	111	128
	All	11	79	2154	750	83041	647	111	128
1984	1	1	*	*	*	*	*	*	*
	2	2	*	*	*	*	*	*	*
	3	7	26	796	380	25407	283	67	90
	All	9	26	796	380	25407	283	67	90
1985	1	1	*	*	*	*	*	*	*
	2	2	*	*	*	*	*	*	*
	3	5	92	3129	1698	77273	831	46	93
	All	7	92	3129	1698	77273	831	46	93

- = zero.

* = data confidential because fewer than 3 vessels in category.

Adjusted Hours Fishing equals the sum of Hours Fishing for each vessel multiplied by the dredge size of that vessel divided by 240" (the largest dredge size in the fleet).

CPUE = Landings divided by Hours Fishing.

Adjusted CPUE = landings divided by Adjusted Hours Fishing.

Source: NMFS NER logbook data.

Table 9. Georges Bank Area Surf Clam Fishing Activity by Class, 1984-1985

	<u>Class</u>	<u>Vessels</u>	<u>Trips</u>	<u>Hours at Sea</u>	<u>Hours Fishing</u>	<u>Landings</u>	<u>Adj. Hours Fishing</u>	<u>CPUE</u>	<u>Adj. CPUE</u>
1984	1	-	-	-	-	-	-	-	-
	2	3	15	709	237	13665	76	58	179
	3	14	193	7467	2121	327960	1575	155	208
	All	17	208	8176	2358	341625	1651	145	207
1985	1	-	-	-	-	-	-	-	-
	2	5	22	597	225	17659	95	79	187
	3	18	194	7562	2986	272490	2134	91	128
	All	23	216	8159	3211	290149	2229	90	130

- = zero.

Adjusted Hours Fishing equals the sum of Hours Fishing for each vessel multiplied by the dredge size of that vessel divided by 240" (the largest dredge size in the fleet).

CPUE = Landings divided by Hours Fishing.

Adjusted CPUE = landings divided by Adjusted Hours Fishing.

Source: NMFS NER logbook data.

Table 10. Ocean Quahog Fishing Activity by Class, 1979-1985

	<u>Class</u>	<u>Vessels</u>	<u>Trips</u>	<u>Hours at Sea</u>	<u>Hours Fishing</u>	<u>Landings</u>	<u>Adj. Hours Fishing</u>	<u>CPUE</u>	<u>Adj. CPUE</u>
1979	1	3	17	259	121	10149	41	84	249
	2	19	739	10221	4849	472724	1353	98	349
	3	37	2146	36084	20660	2584462	8176	125	316
	All	59	2902	46564	25630	3067335	9570	120	321
1980	1	4	8	110	59	8228	14	140	610
	2	16	574	7712	3459	345360	965	100	358
	3	33	2092	39423	21984	2604159	9620	119	271
	All	53	2674	47245	25502	2957747	10598	116	279
1981	1	1	*	*	*	*	*	*	*
	2	11	404	5865	2749	246897	788	90	314
	3	36	2066	37967	20882	2640909	8360	127	316
	All	48	2470	43832	23631	2887806	9147	122	316
1982	1	2	*	*	*	*	*	*	*
	2	11	273	4281	2327	184573	830	79	222
	3	31	2197	39983	21527	3053956	8745	142	349
	All	44	2470	44264	23854	3238529	9575	136	338
1983	1	1	*	*	*	*	*	*	*
	2	7	218	3435	1879	156591	661	83	237
	3	29	2249	40675	21018	3056426	8231	145	371
	All	37	2467	44110	22897	3213017	8892	140	361
1984	1	2	*	*	*	*	*	*	*
	2	14	465	7236	3860	369113	1441	96	256
	3	41	2755	51479	26785	3593150	11744	134	306
	All	57	3220	58715	30645	3962263	13185	129	301
1985	1	-	-	-	-	-	-	-	-
	2	17	613	9346	4745	483004	2066	102	239
	3	47	3110	58409	28924	4086281	13334	141	307
	All	64	3723	67755	33669	4569285	15400	136	297

- = zero.

* = data confidential because fewer than 3 vessels in category.

Adjusted Hours Fishing equals the sum of Hours Fishing for each vessel multiplied by the dredge size of that vessel divided by 240" (the largest dredge size in the fleet).

CPUE = Landings divided by Hours Fishing.

Adjusted CPUE = landings divided by Adjusted Hours Fishing.

Source: NMFS NER logbook data.

Table 11. Mid-Atlantic Surf Clam Fishery, Vessel Distribution by Class, 1965-1985

	<u>Class 1</u>			<u>Class 2</u>			<u>Class 3</u>			<u>Total</u>	
	<u>No.</u>	<u>% of Total</u>	<u>% Change</u>	<u>No.</u>	<u>% of Total</u>	<u>% Change</u>	<u>No.</u>	<u>% of Total</u>	<u>% Change</u>	<u>No.</u>	<u>% Change</u>
1965	33	48		33	48		2	3		68	
1966	34	46	3	34	46	3	6	8	200	74	9
1967	40	44	18	40	44	18	11	12	83	91	23
1968	38	44	-5	42	49	5	6	7	-46	86	-6
1969	32	35	-16	56	61	33	4	4	-33	92	7
1970	33	32	3	59	57	5	12	12	200	104	13
1971	28	30	-15	46	50	-22	18	20	50	92	-12
1972	29	32	4	44	49	-4	17	19	-6	90	-2
1973	32	34	10	44	47	-	17	18	-	93	3
1974	35	36	9	46	47	5	17	17	-	98	5
1975	35	35	-	46	46	-	18	18	6	99	1
1976	33	27	-6	55	45	20	34	28	89	122	23
1977*	22	14	-33	56	36	2	77	50	126	155	27
1978**	21	13	-5	58	37	4	78	50	1	157	1
1979**	26	16	24	62	38	7	74	46	-5	162	3
1980**	14	11	-46	53	42	-15	59	47	-20	126	-22
1981**	16	13	14	46	38	-13	58	48	-2	120	-5
1982**	15	13	-6	47	41	2	53	46	-9	115	-4
1983**	14	12	-7	47	42	-	52	46	-2	113	-2
1984**	14	12	-	49	42	4	53	46	2	116	3
1985**	12	10	-14	48	38	-2	65	52	23	125	8

* = licenses issued as of 31 Dec. 1977.

** = vessels active in the fleet based on logbook reports.

- = zero.

Source: unpub. prelim. NMFS logbook data.

Table 12. Ocean Quahog and Mid-Atlantic Surf Clam Catch by Vessels Fishing in both Categories by Class, 1979-1985

	Class	Mid-Atl. Surf Clams			Ocean Quahogs	
		Vessels	Trips	Landings	Trips	Landings
1979	1	1	*	*	*	*
	2	16	591	138694	182	113415
	3	31	856	292047	1582	1868265
	All	48	1447	430741	1764	1981680
1980	1	4	141	22958	8	8228
	2	14	676	242871	279	176747
	3	27	797	410150	1650	1936403
	All	45	1614	675979	1937	2121378
1981	1	1	*	*	*	*
	2	8	286	125693	98	67340
	3	31	991	629813	1501	1894724
	All	40	1277	755506	1599	1962064
1982	1	2	*	*	*	*
	2	10	358	115119	228	159276
	3	24	781	263476	1583	1902350
	All	36	1139	378595	1811	2061626
1983	1	1	*	*	*	*
	2	7	311	118050	218	156591
	3	19	503	237522	1318	1646137
	All	27	814	355572	1536	1802728
1984	1	2	*	*	*	*
	2	12	370	231514	375	304133
	3	28	692	609076	1453	1755578
	All	42	1062	840590	1828	2059711
1985	1	-	-	-	-	-
	2	14	358	310599	605	477484
	3	42	754	753781	2755	3539417
	All	56	1112	1064380	3360	4016901

- = zero.

* = data confidential because fewer than 3 vessels in category.

Source: NMFS NER logbook data.

Table 13. Permits Held by Vessels with Surf Clam and Ocean Quahog Permits

Permit Type	Mid-Atlantic Area <u>Surf Clams</u>	Ocean <u>Quahogs</u>	New England Area <u>Surf Clams</u>	Ocean Quahogs and/or New England Area <u>Surf Clams</u>
Mid-Atlantic Surf Clams/Commercial	144	-	-	-
Ocean Quahogs	3	74	549	549
New England Surf Clams	29	549	227	549
Scallops/Commercial	15	36	117	493
Bluefin Tuna/Incidental	1	11	8	34
Bluefin Tuna/General	2	35	179	262
Bluefin Tuna/Harpoon	-	2	12	15
Groundfish/Commercial	10	52	186	502
Groundfish/Charter/Party	-	1	6	4
Groundfish/Incidental	3	5	16	15
Lobster/Commercial	9	21	55	430
Mackerel/Squid/Butterfish/Commercial	9	31	171	486
Mackerel/Squid/Butterfish/Charter/Party	-	-	6	3
Mackerel/Squid/Butterfish/Incidental	1	6	21	23

Source: NMFS/NER Permit File, May 1986.

Table 14. Fishing Area Identified by Vessels with Surf Clam and Ocean Quahog Permits

<u>Fishing Area</u>	<u>Mid-Atlantic Area Surf Clams</u>	<u>Ocean Quahogs and/or New England Area Surf Clams</u>
No data	40	32
Gulf of Maine	33*	558
Georges Bank	1	38
Southern New England	2	118
New Jersey/New York	56	85
Delmarva	7	8
Virginia/Hatteras	1	1
Hatteras south	4	10
Total	144	850

*Examination of detailed records suggests these are Delmarva-based vessels that may have checked all areas and data were entered for lowest numbered area.

Source: NMFS/NER Permit File, May 1986.

Table 15. Number of Vessels Built per Decade with Surf Clam and Ocean Quahog Permits

<u>Year Built</u>	<u>Mid-Atlantic Area Surf Clams</u>	<u>Ocean Quahogs and/or New England Area Surf Clams</u>
No data	70	18
Prior to 1900	1	-
1900-1929	5	11
1930-1949	13	87
1950-1959	10	68
1960-1969	20	171
1970-1979	16	307
1980-1986	9	188
Total	144	850

Source: NMFS/NER Permit File, May 1986.

Table 16. Mid-Atlantic Allowable Surf Clam Fishing Time (hours/week)
17 November 1977 - 11 July 1986

<u>Date</u>	<u>Hrs/wk</u>	<u>Number of Weeks</u>	<u>Number of Hours</u>
11/17/77	48	6	288
1/1/78	96	4	384
1/30/78	48	6	288
3/10/78	Close	3	-
4/1/78	48	5	240
5/7/78	24	21	504
10/1/78	36	4	144
10/30/78	24	8	192
12/21/78	Close	1	-
1/1/79	24	9	216
2/27/79	36	5	180
4/1/79	24	27	648
10/15/79	36	11	396
1/1/80	24	9	216
2/18/80	36	6	216
3/31/80	24	3	72
4/20/80	36	4	144
5/18/80	48	6	288
6/29/80	24	1	24
7/7/80	48	9	432
9/28/80	24	14 (80), 29 (81)	336 (80), 696 (81)
7/21/81	12	23	276
1/4/82	24	52 (82), 52 (83), 8 (84)	1,248 (82), 1,248 (83), 192 (84)
2/26/84	12	17	204
6/24/84	Close	2	-
7/8/84	12	10	120
9/16/84	Close	2	-
9/30/84	12	7	84
11/18/84	6 every other	4	12
12/16/84	6	1	6
12/23/84	Close	1	-
12/30/84	6	19	114
5/12/85	6 every other	6	18
6/23/85	Close	2	-
7/5/85	6 every other	24	72
12/19/85	Close	2	-
12/29/85	6 every other	26	78
6/27/86	Close	2	-
7/11/86	6 every other		

Table 17. Mid-Atlantic Allowed Surf Clam Fishing Time by Weeks, 1978-1986

	<u>Close</u>	<u>6 every other</u>	<u>6</u>	<u>12</u>	<u>Hours/Week</u>			<u>96</u>	<u>Total</u>
					<u>24</u>	<u>36</u>	<u>48</u>		
1978	4	-	-	-	29	4	11	4	
1979	-	-	-	-	36	16	-	-	
1980	-	-	-	-	27	10	15	-	
1981	-	-	-	23	29	-	-	-	
1982	-	-	-	-	52	-	-	-	
1983	-	-	-	-	52	-	-	-	
1984	5	4	1	34	8	-	-	-	
1985	4	30	19	-	-	-	-	-	
1986	2	26	-	-	-	-	-	-	
Total	15 3%	60 13%	20 5%	57 13%	233 52%	30 7%	26 6%	4 *	445 100%

* = less than 0.5%.

Table 18. Mid-Atlantic Allowed Surf Clam Fishing Time by Hours, 1978-1986

	<u>6 every other</u>	<u>6</u>	<u>12</u>	<u>Hours/Week</u>				<u>Total</u>	<u>Change</u>
				<u>24</u>	<u>36</u>	<u>48</u>	<u>96</u>		
1978	-	-	-	696 40%	144 8%	528 30%	384 22%	1,752 100%	
1979	-	-	-	864 60%	576 40%	-	-	1,440 100%	-18%
1980	-	-	-	648 38%	360 21%	720 42%	-	1,728 100%	20%
1981	-	-	276 28%	696 72%	-	-	-	972 100%	-44
1982	-	-	-	1,248 100%	-	-	-	1,248 100%	28
1983	-	-	-	1,248 100%	-	-	-	1,248 100%	-
1984	12 2%	6 1%	408 66%	192 31%	-	-	-	618 100%	-50%
1985	90 44%	114 56%	-	-	-	-	-	204 100%	-67%
1986	78 100%	-	-	-	-	-	-	78 100%	
Total	180 2%	120 1%	684 7%	5,592 60%	1,080 12%	1,248 13%	384 4%	9,288 100%	

Table 19. Surf Clam Ex-Vessel Value (millions of \$)
and Distribution (%) by State, 1950-1985

	<u>NE</u>		<u>NY</u>		<u>NJ</u>		<u>DE</u>		<u>MD</u>		<u>VA</u>		<u>Total#</u>	
	<u>Val</u>	<u>%</u>	<u>Val</u>	<u>%</u>										
1950	*	1	*	43	*	54	-	-	*	1	-	-	1	100
1951	*	1	*	36	1	52	-	-	*	12	-	-	1	100
1952	*	*	*	31	1	57	-	-	*	12	-	-	1	100
1953	-	-	*	30	1	56	-	-	*	15	-	-	1	100
1954	*	2	*	29	1	58	-	-	*	12	-	-	1	100
1955	*	*	*	19	1	71	-	-	*	10	-	-	1	100
1956	*	2	*	17	1	72	*	-	*	10	-	-	2	100
1957	*	*	*	10	2	83	*	*	*	6	-	-	2	100
1958	*	-	*	4	1	84	*	6	*	6	-	-	2	100
1959	*	*	*	3	2	84	*	9	*	4	-	-	2	100
1960	*	-	*	5	2	90	*	3	*	2	-	-	2	100
1961	*	*	*	4	2	96	-	-	*	*	-	-	2	100
1962	*	*	*	4	2	95	*	1	*	*	-	-	2	100
1963	-	-	*	3	3	96	-	-	*	*	-	-	3	100
1964	*	*	*	4	3	96	-	-	*	*	-	-	3	100
1965	*	-	*	4	3	95	-	-	*	1	-	-	3	100
1966	*	*	*	4	4	96	-	-	*	*	-	-	4	100
1967	*	*	*	4	4	93	-	-	*	2	-	-	4	100
1968	*	*	*	7	3	80	-	-	1	13	*	*	4	100
1969	*	*	*	7	4	72	*	6	1	15	*	*	6	100
1970	*	1	*	6	5	61	1	12	1	19	*	1	8	100
1971	*	*	*	6	4	56	1	15	1	14	1	8	7	100
1972	*	1	*	4	3	35	1	14	1	15	3	32	8	100
1973	*	*	*	4	3	28	1	8	1	12	5	48	10	100
1974	*	*	1	6	3	24	1	6	1	8	7	56	12	100
1975	*	*	1	6	5	38	*	3	1	8	6	45	13	100
1976	*	*	1	5	11	46	-	-	4	16	8	32	23	100
1977	*	2	1	4	12	44	-	-	5	18	9	33	27	100
1978	*	1	1	4	8	36	-	-	5	24	7	35	21	100
1979	1	3	1	3	6	32	-	-	5	23	7	37	20	100
1980	*	2	1	4	5	25	-	-	6	30	8	39	19	100
1981	*	1	1	3	10	41	-	-	6	26	7	29	23	100
1982	2	7	1	3	12	45	-	-	5	21	6	24	26	100
1983	2	8	1	4	10	40	-	-	3	12	8	32	25	100
1984	4	12	1	3	19	56	-	-	4	12	6	18	34	100
1985	6	15	3	8	18	46	-	-	5	13	7	18	39	100

Includes any unallocated value.

- = zero.

* = less than \$500,000 or .5%.

Rows may not add to Total because of rounding.

Source: USDC, 1986 and unpub. prelim. NMFS data.

Table 20. EEZ and Total Surf Clam and Ocean Quahog Ex-Vessel Value
(millions of \$)

	<u>EEZ</u>		<u>Surf Clams</u>			<u>EEZ</u>		<u>Ocean Quahogs</u>		
	<u>Value</u>	<u>Change</u>	<u>% of Total</u>	<u>Value</u>	<u>Change</u>	<u>Value</u>	<u>Change</u>	<u>% of Total</u>	<u>Value</u>	<u>Change</u>
1974	10		83	12		-	-	-	*	*
1975	7	-30%	54	13	8%	-	-	-	*	*
1976	21	300%	91	23	77%	1	-	77	2	552
1977	24	14%	89	27	17%	5	500	83	6	300
1978	18	-25%	86	21	-22%	6	20	86	7	17
1979	17	-6%	85	20	-5%	9	50	90	10	43
1980	18	6%	95	19	-5%	9	*	90	10	*
1981	20	11%	87	23	21%	10	11	98	10	*
1982	21	5%	81	26	13%	10	*	98	11	10
1983	21	*	84	25	4%	10	*	95	11	*
1984	27	29%	79	34	36%	11	10	92	12	-
1985	29	7%	74	39	15%	16	45	100	16	33

- = zero.

* = less than \$500,000 or .5%.

Source: USDC, 1986 and unpub. prelim. NMFS data.

Table 21. Surf Clam and Ocean Quahog Quarterly Landings (bu),
Ex-Vessel Value (\$), and Price (\$/bu).

Year	Quarter	Surf Clams			Ocean Quahogs		
		Landings	Value	Price	Landings	Value	Price
1975	1	1318915	2944200	2.23	8623	27193	3.15
	2	1379488	3409835	2.47	50243	123377	2.45
	3	1158941	3039489	2.62	24866	47935	1.92
	4	1253146	3140649	2.52	37224	72806	1.95
76	1	698838	3611582	5.16	38338	87670	2.28
	2	657876	5236109	7.95	98418	243827	2.47
	3	857472	8065083	9.40	164690	501395	3.04
	4	672538	6400895	9.51	270239	799597	2.95
77	1	732498	7156566	9.77	500182	1529145	3.05
	2	957006	9386735	9.80	588911	1742794	2.95
	3	728803	5573071	7.64	379426	1108367	2.92
	4	577730	4276589	7.40	361545	1070924	2.96
78	1	585685	4319906	7.37	557485	1660994	2.97
	2	679213	6784146	9.98	546495	1617372	2.95
	3	527674	5018035	9.50	509472	1490505	2.92
	4	507109	4746789	9.36	740761	2103431	2.83
79	1	478194	4091444	8.55	743319	2132933	2.86
	2	544266	5218961	9.58	947088	2762942	2.91
	3	578140	5691207	9.84	783078	2308989	2.94
	4	444183	4175325	9.40	968008	2920317	3.01
80	1	443807	3831350	8.63	896076	2712373	3.02
	2	597501	5282923	8.84	939394	2809615	2.99
	3	627535	5407775	8.61	779371	2343442	3.00
	4	560365	4679965	8.35	754921	2266673	3.00
81	1	603004	5126101	8.50	859351	2619243	3.04
	2	901869	7764420	8.60	765878	2325760	3.03
	3	585546	5545793	9.47	692753	2114564	3.05
	4	587733	4748411	8.07	636370	1929563	3.03
82	1	793147	6352264	8.00	968104	2901062	2.99
	2	681143	6387117	9.37	851871	2605604	3.05
	3	679213	6450495	9.49	815221	2507114	3.07
	4	733829	6264360	8.53	902029	2771078	3.07
83	1	774313	6198580	8.00	907417	2778235	3.06
	2	750103	5943156	7.92	944434	2892833	3.06
	3	870553	6522383	7.49	863140	2627699	3.04
	4	844417	5647395	6.68	878767	2684899	3.05
84	1	1149618	8495844	7.39	963086	2933459	3.04
	2	1118567	9593030	8.57	1110761	3401721	3.06
	3	924370	7843843	8.48	858531	2614168	3.04
	4	964601	8612669	8.92	1140545	3496609	3.06
85	1	1137652	10088479	8.86	849261	2634464	3.10
	2	1028072	8699956	8.46	1555375	4795687	3.08
	3	842895	7295629	8.65	1487109	4546597	3.05
	4	1046712	10174962	9.72	1066357	3252076	3.04
86	1	1517913	15750189	10.37	932021	2831904	3.03

Source: Brey, pers. comm.

Table 22. Cetaceans and Turtles Found in Survey Area

<u>Scientific name</u>	<u>Common name</u>	<u>Est. Minimum Number in Study Area</u>	<u>Endan- gered</u>	<u>Threat- ened</u>
LARGE WHALES				
<i>Balaenoptera physalus</i>	fin whale	1,102	X	
<i>Megaptera novaeangliae</i>	humpback whale	684	X	
<i>Balaenoptera acutorostrata</i>	minke whale	162		
<i>Physeter catodon</i>	sperm whale	300	X	
<i>Eubalaena glacialis</i>	right whale	29	X	
<i>Balaenoptera borealis</i>	sei whale	109	X	
<i>Orcinus orca</i>	killer whale	unk		
SMALL WHALES				
<i>Tursiops truncatus</i>	bottlenose dolphin	6,254		
<i>Globicephala</i> spp.	pilot whales	11,448		
<i>Lagenorhynchus acutus</i>	Atl. white-sided dolphin	24,287		
<i>Phocoena phocoena</i>	harbor porpoise	2,946		
<i>Grampus griseus</i>	grampus (Risso's) dolphin	10,220		
<i>Delphinus delphis</i>	saddleback dolphin	17,606		
<i>Stenella</i> spp.	spotted dolphin	22,376		
<i>Stenella coeruleoalba</i>	striped dolphin	unk		
<i>Lagenorhynchus albirostris</i>	white-beaked dolphin	unk		
<i>Ziphius cavirostris</i>	Cuvier's beaked dolphin	unk		
<i>Stenella longirostris</i>	spinner dolphin	unk		
<i>Steno bredanensis</i>	rough-toothed dolphin	unk		
<i>Delphinapteras leucas</i>	beluga	unk		
<i>Mesoplodon</i> spp.	beaked whales	unk		
TURTLES				
<i>Caretta caretta</i>	loggerhead turtle	4,017		X
<i>Dermochelys coriacea</i>	leatherback turtle	636	X	
<i>Lepidochelys kempi</i>	Kemp's ridley turtle	unk	X	
<i>Chelonia mydas</i>	green turtle	unk		X

Source: University of Rhode Island, 1981.

SURF CLAM LANDINGS

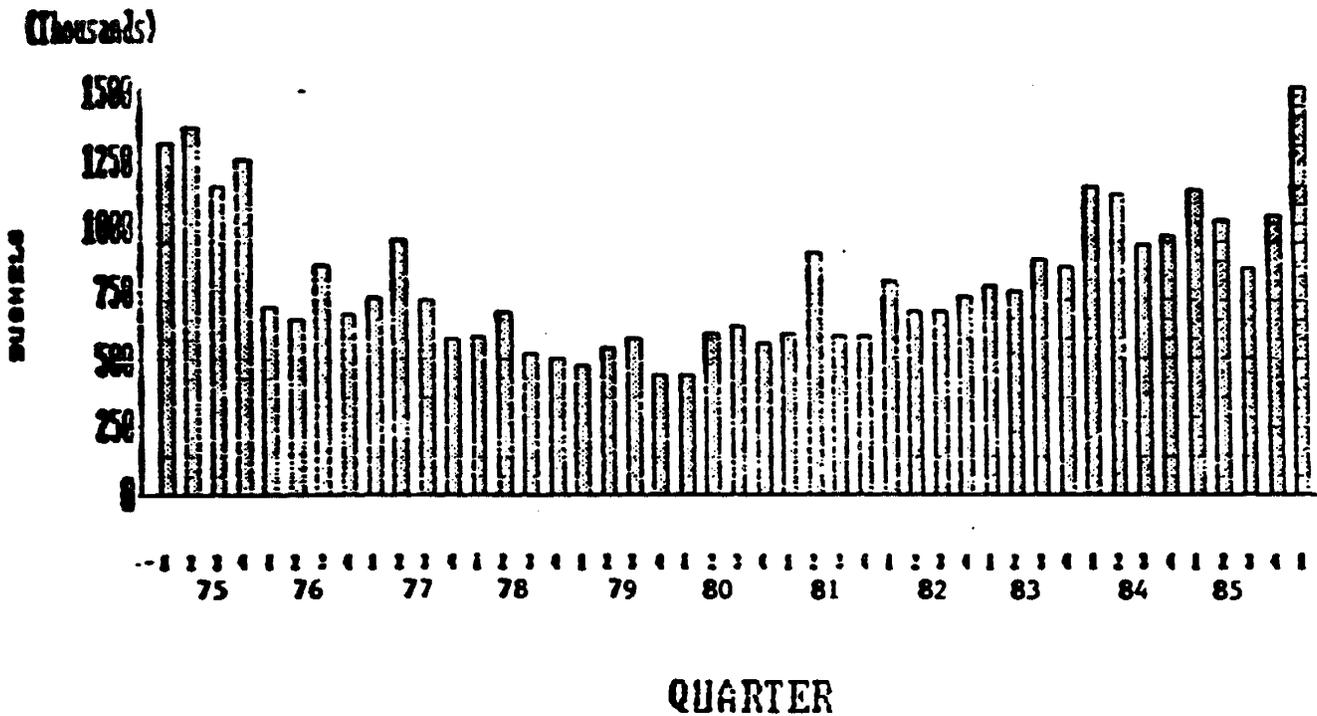


Figure 1. Quarterly Surf Clam Landings (thousands of bushels), 1975-1986.
 Source: Brey, pers. comm.

SURF CLAM PRICE

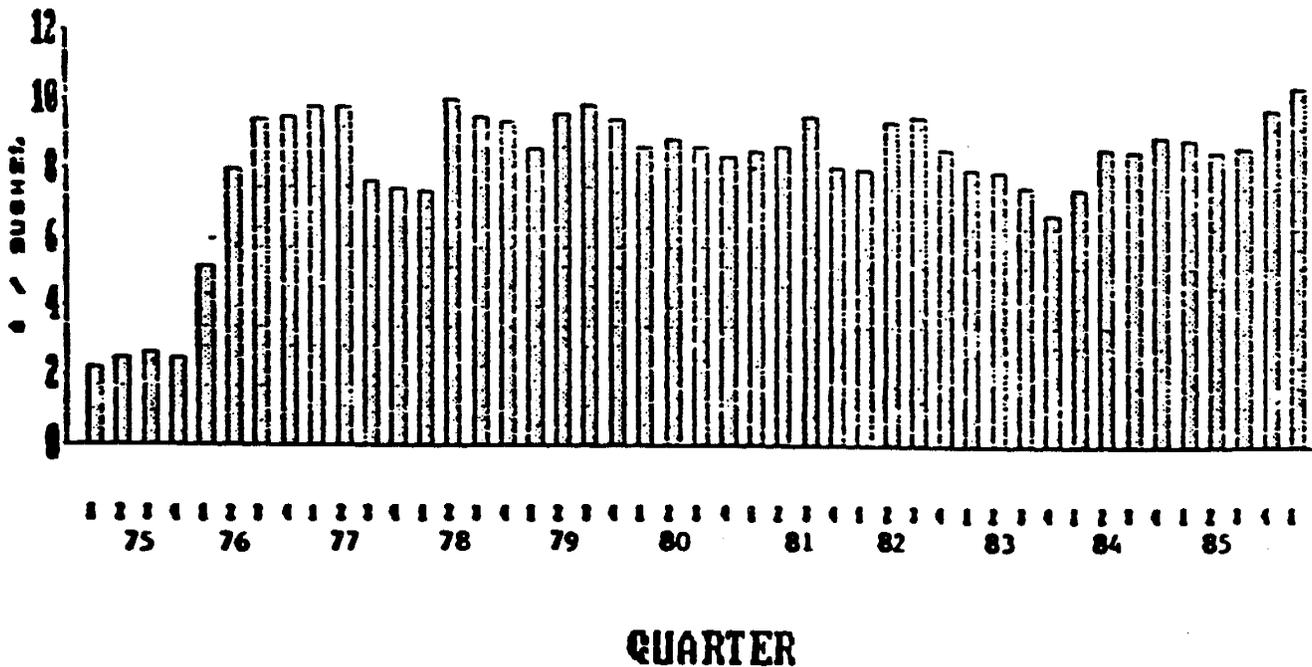


Figure 2. Quarterly Surf Clam Ex-Vessel Price (\$/bushel), 1975-1986.
 Source: Brey, pers. comm.

OCEAN QUAHOG LANDINGS

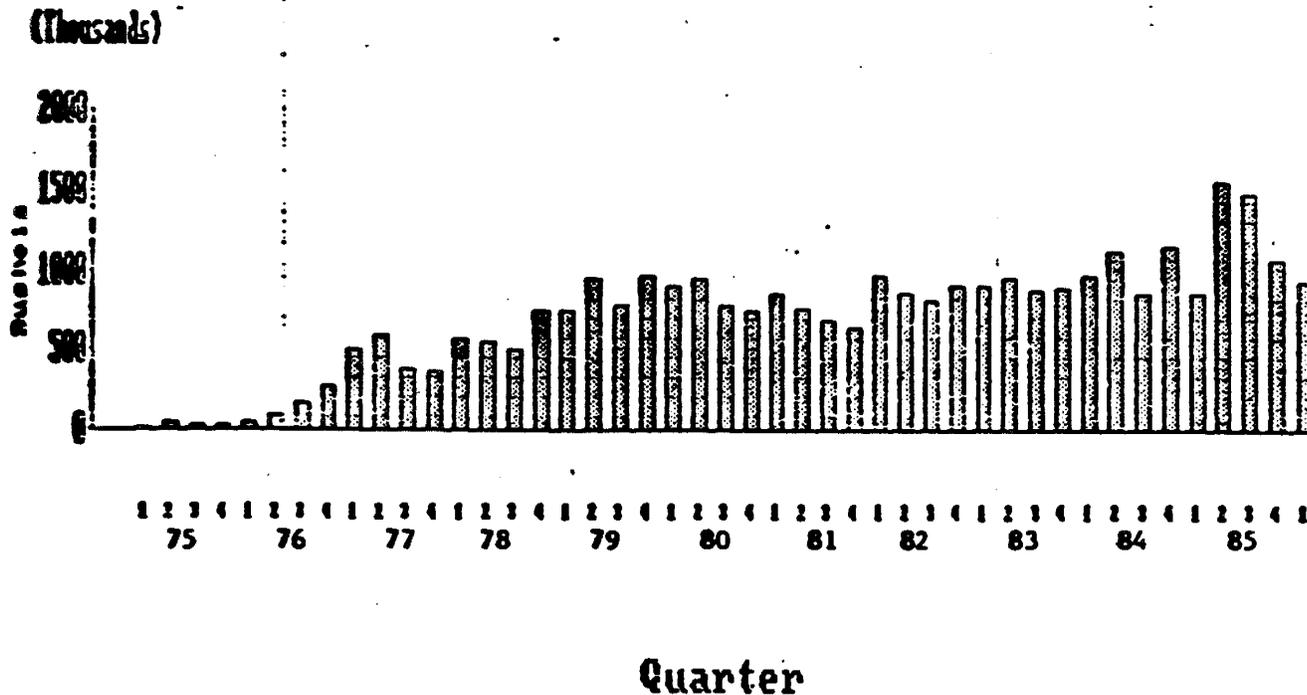


Figure 3. Quarterly Ocean Quahog Landings (thousands of bushels), 1975-1986
Source: Brey, pers. comm.

OCEAN QUAHOG PRICE

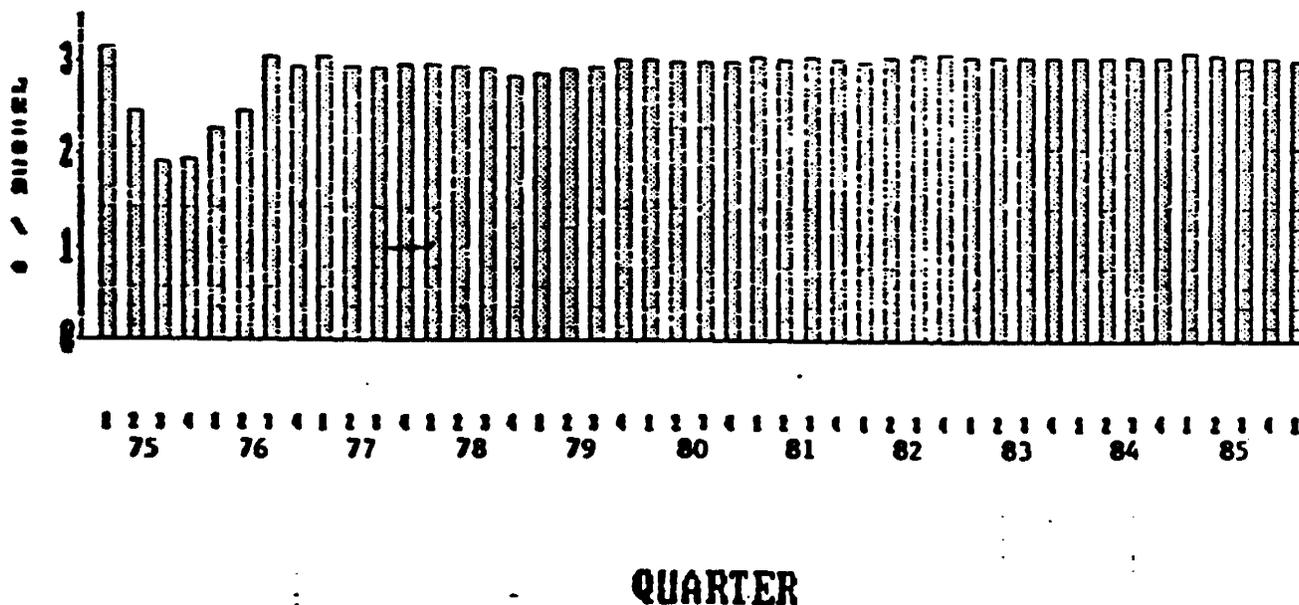


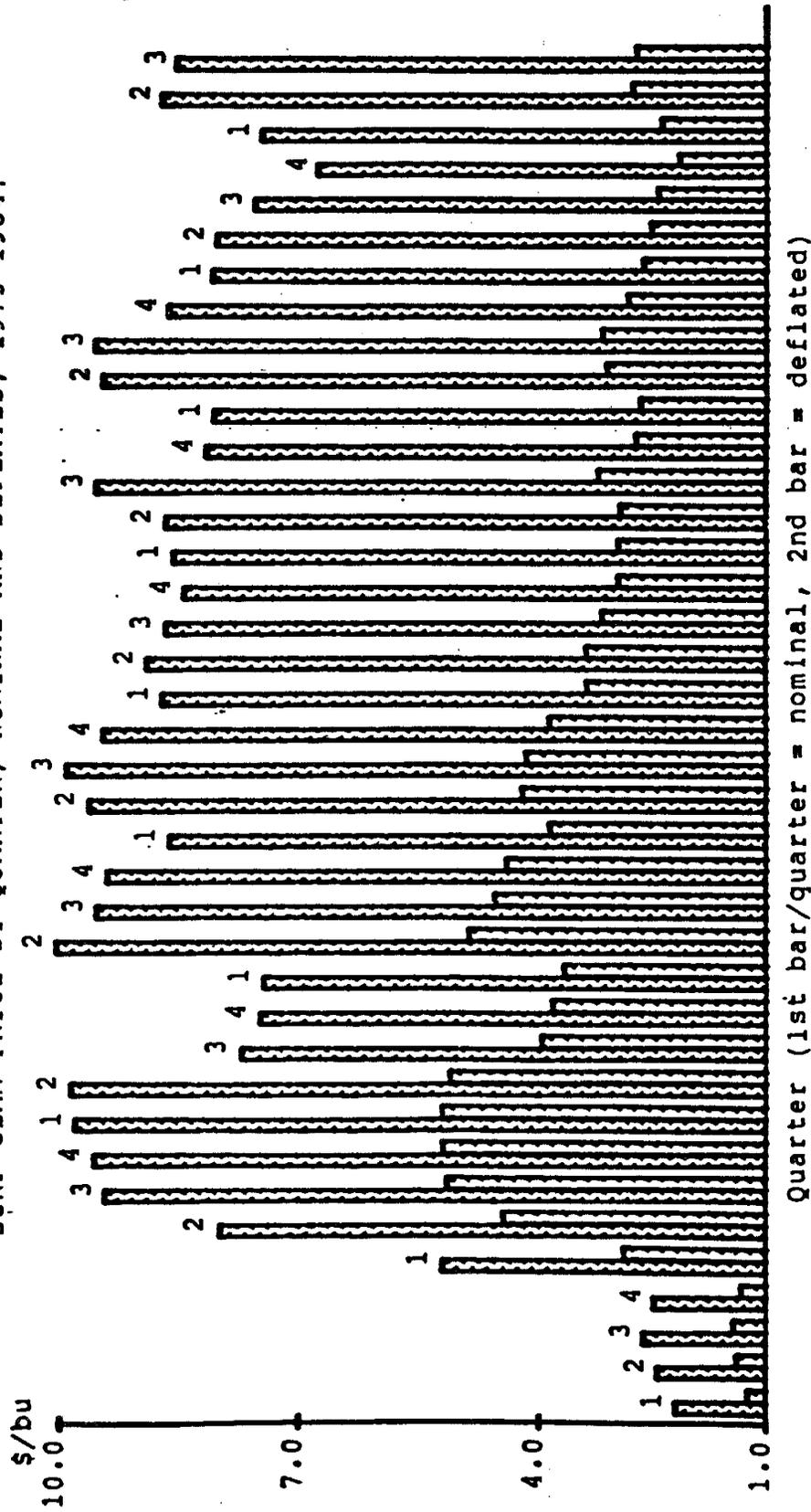
Figure 4. Quarterly Ocean Quahog Ex-Vessel Price (\$/bushel), 1975-1986.
Source: Brey, pers. comm.

Figure 5
SURF CLAM LANDINGS BY QUARTER, 1975 - 1984.



Source: unpub. prelim. NMFS data.

Figure 6
 SURF CLAM PRICE BY QUARTER, NOMINAL AND DEFLATED, 1975-1984.



Source: unpub. prelim. NMFS data.

APPENDIX I. ALTERNATIVES TO AMENDMENT #7

This appendix contains a description and evaluation of the alternatives considered, presented for public hearings, but not adopted for Amendment #7 to the Surf Clam and Ocean Quahog FMP. One alternative to the proposed action considered for Amendment #7 was no action. The other was a revised quota roll-over threshold.

ALTERNATIVE 1. TAKE NO ACTION AT THIS TIME

Description

No action would mean that:

1. the quarterly quota allocation for the Georges Bank Area would remain at 10%-40%-40%-10%;
2. the 5,000 bushel threshold for transfer of unharvested quota from one quarter to the next would remain in effect for all Areas;
3. any unharvested quota would continue to be added totally to the next quarter for the Nantucket Shoals and Georges Bank Areas;
4. the 10% limit on carry over of unharvested quota from one year to the next would remain in effect for the Nantucket Shoals and Georges Bank Areas;
5. permits would only expire with the sale of the vessel; and
6. the changes to the regulations to enhance enforcement and prosecution would not be made.

Because of the nature of the changes proposed in Amendment #7, to some extent the preceding items are divisible from the standpoint of taking action. Items 1-3 (the Georges Bank quarterly quota allocation, the roll-over threshold, and the distribution of any roll-over are related and should be considered a package designed to smooth the catch from the Nantucket Shoals and Georges Bank Areas throughout the year.

The permit system can stay the way it is or be changed to an annual system without impacting other parts of this Amendment or the basic FMP. Also, there seem to be no reasonable alternatives to either implementing an annual system or maintaining the status quo.

The proposed regulatory changes are also independent of other actions. For these changes also, there seem to be no reasonable alternatives to either implementing the changes or maintaining the status quo.

The quarterly quotas are intended to distribute fishing in the Georges Bank Area through as much of the year as feasible in light of the steaming distance to the fishing grounds coupled with weather conditions. The concept of keeping the fishery operating throughout the year has been a key consideration in the FMP since its inception. This is considered a desirable goal in order to stabilize employment for fishermen and processing plant workers and to provide for an uninterrupted supply of product to processors in both New England and the Mid-Atlantic.

The allocation distribution (10% each for the first and fourth and 40% each for the second and third quarters) is designed to avoid fishing during months when weather conditions are likely to be adverse (thus making it more difficult to catch the last of the quota) while still distributing the catch throughout the year as much as possible. Using the limits of the OY range, the first and fourth quarter quotas would be 2,500-30,000 bu and the second and third quarter quotas would be 10,000-120,000 bu. A Class 3 vessel can carry 60-100 cages, or 1,920-3,200 bu. Based on available assessment information (Murawski and Serchuk, 1984b), the most likely quota for the Georges Bank Area is at the maximum end of the OY, i.e., 300,000 bu. At that quota, and assuming only Class 3 vessels fished and they had an average capacity of 80 cages (2,560 bu),

during the first and fourth quarters they could make twelve trips and during the second and third quarters they could make 47 trips.

The impacts of the other components of the measure would be the opposite of the impact of the proposed Amendment as discussed in Section XII.B.

ALTERNATIVE 2: MAINTAIN THE 5,000 BUSHEL THRESHOLD FOR TRANSFER OF UNHARVESTED QUOTA FROM ONE QUARTER TO THE NEXT FOR THE MID-ATLANTIC AREA, BUT DECREASE THE THRESHOLD TO 2,500 BUSHELS FOR THE NANTUCKET SHOALS AND GEORGES BANK AREAS

This alternative could be considered a compromise position between the 5,000 bushel, all-area threshold and the preferred alternative of no threshold to any area. Lowering the threshold for the Nantucket Shoals and Georges Bank areas would reduce the risk of lost revenues yet still maintain a buffer for lagged reporting and the under reporting problem in these areas.

APPENDIX II. SUMMARY OF PUBLIC HEARINGS AND PUBLIC COMMENTS

Public Hearing, Salisbury, MD, 23 February 1987

The Mid-Atlantic Fishery Management Council held a public hearing on Amendment #7 to the Surf Clam and Ocean Quahog Fishery Management Plan in Salisbury, MD on 23 February 1987 commencing at approximately 7:10 p.m. Mr. Ricks Savage served as moderator. Seven members of the public were in attendance, including Mrs. Ann Marvin, Mr. Vernon Drewer, Mr. Verne Conaway, Mr. Thomas Alspach, Mr. David Wallace, and Mr. Bernie Rubin. Mid-Atlantic Council staff members present were Mr. David Keifer and Ms. Mary Ann Zdana.

Mr. Keifer presented a brief review of the Amendment.

Mrs. Marvin presented a statement opposing the change in quarterly quotas (Attachment 1). She offered no comments on the other provisions.

Mr. Alspach commented on the timing of Subsection 4 regarding the removal of the 10% limit on the carry-over. The concern he expressed was in reference to economic dislocation. He stated there has been a serious over-supply in the industry for some time that is affecting the processors and fishermen. The suggestion he made was that the removal of the 10% limit on the carry-over be deferred until the next calendar year so that it would commence with January 1, 1988. He feels if this provision relates back to January 1, 1987 it would only aggravate a serious over-supply problem and would cause more hardship for the fishery throughout its entire range. He had no comment on the other provisions of the Amendments.

Mr. Conaway and Mr. Wallace supported Mr. Alspach's statement.

The hearing was closed at approximately 7:35 p.m.

Public Hearing, Galilee, RI, 24 February 1987

The Mid-Atlantic Fishery Management Council held a public hearing on Amendment #7 to the Surf Clam and Ocean Quahog Fishery Management Plan in Galilee, RI on 24 February 1987 commencing at approximately 7:05 p.m. Mr. Ricks Savage served as moderator. Ten members of the public were in attendance, including Mr. John Catena for American Original, Mr. Francis Manchester, Mr. John Mentus, Mr. George Richardson representing Blount Seafood and the F/V *Wando River*, and Mr. Scott Prior. New England Council representatives in attendance were Mr. Robert Smith, Mr. Richard Allen and Mr. Rich Ruais. Mid-Atlantic Council staff members present were Mr. David Keifer and Ms. Mary Ann Zdana.

Mr. Keifer presented a brief review of the Amendment.

Mr. Robert Smith presented the following New England Council position: "I would like to endorse the regulations as just read relative to Nantucket Shoals and Georges Bank area. We also have comments relative to the exploratory fisheries around Nantucket Shoals and Georges Bank such as took place last year on Stellwagen Bank where 20,000 bushels of surf clams were caught. We discussed this in length at the Committee level and also at the Council level in February and the Council came up with a recommendation that this go to these public hearings and be presented so that, perhaps, it could be put into Amendment #7 that if there was such a fishery to take place again, wherever it may be outside of the areas that have been surveyed by Woods Hole or declared fisheries in places generally other than the known area of Nantucket Shoals or the known area as we know it to be Georges Bank, that 10% could be allocated from the total quota towards that type of a fishery whether it may be an exploratory fishery or whatever the Regional Director determined might be appropriate to call it. There was a motion made to that effect to the New England Council and passed unanimously with the Regional Director's consent at that time and I will read it: 'That a provision be established whereby up to 10% of the combined New England area quota may be harvested from an area or areas other than the two principle New England resource areas. The New England Council and NMFS will review potential areas and determine, on a case by case basis, whether the landings should qualify for and be assigned to the experimental or new area fishery quota.' I am here tonight asking

that that be included in these public hearings and, perhaps, could, through the formalities that need to take place, be adopted in Amendment #7."

Mr. John Catena read a prepared statement on behalf of Ann Marvin, President of the American Original Corporation (Attachment 1).

Mr. Ruais disagreed with the American Original statement and stated that the New England surf clam advisors are 100% in favor of the change in the quarterly quotas since there are a fair number of larger vessels in New England now that could safely harvest the quota during the winter months.

Mr. Richardson believes the main reason for the fact that very little of the first quarter quota has been caught at this point is because of market conditions. He stated that there is a fleet of New England boats that can harvest during the first and fourth quarters and have proven that this year and at the end of last year and it becomes necessary for them to have something in the first and fourth quarters inasmuch as they can't go to the Mid-Atlantic to fish. Any unused quota would be distributed equally throughout the other two or three quarters, whatever was left, of the year so none of that would be wasted and for those boats that do come up in the middle two quarters, there would be something for them also.

Mr. Manchester supported the New England position as presented by Mr. Smith.

Mr. Richardson stated that there is significant indication that there are clams in the Gulf of Maine that have never been looked at and that it seems to be a rational argument for doing something other than just adding them to the quota for a given year. He would support some research incentive that would be a little bit outside. He did not feel he could argue for a number, but that there was some incentive to look for other sources of clams, that they weren't needed this year, but it wouldn't be long before they would be.

Mr. Scott Prior supported the amendment as it is, mostly to possibly eliminate any pressure that might be created on the Nantucket Shoals in the first and last quarter; if the plan were left the way it is. It is an area that little boats can sneak out to and work on in between periods of bad weather and if boats have to work because they have no place to go, yet they are dedicated to the clam fishery, they are going to have to work on Nantucket Shoals.

Mr. Manchester, Mr. Mentus and Mr. Richardson supported the preferred alternative.

The hearing was closed at approximately 7:40 p.m.

Public Hearing, Cape May Court House, NJ, 26 February 1987

The Mid-Atlantic Fishery Management Council held a public hearing on Amendment #7 to the Surf Clam and Ocean Quahog Fishery Management Plan in Cape May Court House, NJ on 26 February 1987 commencing at approximately 7:10 p.m. Mrs. Frances Puskas served as moderator. Three members of the public were in attendance, including Mr. Rick Traber, F/V Norma Ann. Mr. Ed Watson, F/V Charles Dalton, Inc., and Ms. Ann Marvin, American Original. Mid-Atlantic Council staff members present were Mr. David Keifer and Ms. Carol Stevenson.

Mr. Keifer summarized the provisions of Amendment #7.

Ms. Ann Marvin from American Original read a statement into the record (Attachment 1). She felt that no benefit would be obtained to the fishery by changing the quarterly allocations to 25% per quarter, and that it would force the fishermen to work more in the harsher winter months. Ms. Marvin was in favor of leaving the quarterly allocations the way they currently are at 10 40 40 10.

Mr. Rick Traber indicated that it was his opinion, as well as the position taken by the United Shellfishers' Association, to retain the quarterly allocations as they currently are at 10 40 40 10. He further commented that if the preferred alternative was put into effect, he requested that it not begin until 1 January 1988.

Mr. Ed Watson echoed the sentiments of the other participants attending the hearing to leave the quarterly quotas the way they currently are at 10 40 40 10.

The hearing was closed at approximately 7:30 pm.

PUBLIC HEARING ATTENDANCE QUESTIONNAIRE SUMMARY

Attendance questionnaires were distributed at all three public hearings on Surf Clam and Ocean Quahog FMP Amendment #7. The questionnaires were intended to document attendance and opinions on the proposed alternatives.

Four questionnaires were returned at the Salisbury, MD hearing. Two favored the preferred alternative. One favored the preferred alternative so long as the provision to remove the 10% limit on carry over of unharvested quota from one year to the next, but provide that any such carry over be distributed proportionally to each quarter for the Nantucket Shoals and Georges Bank Areas is not implemented until January 1988. The last favored retention of the quarterly quota allocation for the Georges Bank Area of 10%-40%-40%-10%.

The the Galilee, RI public hearing five forms were submitted. Three supported the preferred alternative and two offered no opinions.

No forms were submitted at the Cape May Court House hearing.

**ENVIRONMENTAL ASSESSMENT ON AMENDMENT #7 TO THE
SURF CLAM AND OCEAN QUAHOG FISHERY MANAGEMENT PLAN (FMP)**

I. INTRODUCTION

The original FMP was approved in November 1977 for the period through September 1979. Amendment #1 extended it through 31 December 1979. Amendment #2 extended it through the end of 1981. Amendment #3, approved 13 November 1981, extended the FMP indefinitely.

Amendment #4 was initiated in response to a closure of the New England Area to surf clam fishing during the second half of 1983. On 21 July 1983 the New England Council sent a letter to Secretary of Commerce Malcolm Baldrige requesting Secretarial action to reopen the New England Area surf clam fishery. The Mid-Atlantic Council passed a motion in August 1983 recommending that the Secretary not accept the proposal of the New England Council. After receiving a letter from Secretary Baldrige on 6 September 1983 denying implementation of emergency action to reopen the surf clam fishery in the New England Area, work was begun to investigate methods for avoiding an extended closure in 1984. In November 1983 the Mid-Atlantic Council passed a motion authorizing the Regional Director and the New England Council to prepare an Amendment for the New England Area involving trip limits, quarterly quotas, or similar strategies to insure fishing throughout the year. A proposed Amendment #4 was drafted by the New England Council staff in cooperation with NMFS staff and hearings were held on 21 and 22 March 1984. At a joint meeting of the New England and Mid-Atlantic Councils in May 1984 representatives of the surf clam industry from both New England and the Mid-Atlantic presented revisions to the proposed regime. The Mid-Atlantic Council passed a motion to adopt the proposed Amendment #4 to the Surf Clam and Ocean Quahog FMP as amended to provide that any unharvested portion of a bimonthly allocation be added to the immediately following bimonthly allocation rather than being prorated over all remaining bimonthly periods and that trip and weekly limits be by vessel classes based on relative fishing power using the following ratios: Class 1 = 1.0, Class 2 = 1.8, and Class 3 = 3.4, and that NMFS use a rulemaking procedure to implement the Amendment on an emergency basis. The New England Council voted at the same meeting to adopt the Amendment.

The provisions of Amendment #4 were implemented on an emergency basis for 180 days beginning 1 July 1984, during which time the Amendment was finalized by the New England Council and submitted for Secretarial approval. However, it was determined that the document was not structurally complete for review.

Amendment #5, approved 28 February 1985, allowed for revision of the surf clam minimum size limit provisions, extended the size limit throughout the entire fishery, and instituted a requirement that cages be tagged.

Amendment #6 was begun in October 1984 following an exploratory fishery conducted on Georges Bank as a result of emergency regulations published 2 August 1984 (49 FR 30946-30948), primarily to address problems associated with the development of a surf clam fishery on Georges Bank. At its October 1984 meeting the Council voted to divide the New England Area into the Nantucket Shoals and Georges Bank Areas, the dividing line being 69 degrees longitude. At the same meeting the Council voted to approve revising Amendment #4 so its provisions applied to that portion of the New England Area west of 69 degrees longitude.

In response to the Council's recommendation that Amendment #4 be revised to apply only to that portion of the New England Area west of 69 degrees, the New England Council held a hearing on 11 December 1984.

At its December 1984 meeting the Council adopted the provisions of Amendment #6. The Amendment was adopted by the Council for hearings in January 1985, with hearings held 18 and 19 February 1985. The Council adopted Amendment #6 for Secretarial approval at its March 1985 meeting. At that time Amendment #4 still had not been found structurally complete. Given the relationship between the provisions of Amendments #4 and #6, the decision was made to abandon Amendment #4 and combine the provisions of Amendment #4 with the Mid-Atlantic Council's Amendment #6 in one document. The combination of Amendments #4 and #6 did not change any substantive provisions of either Amendment.

The Council was notified via a letter of 25 July 1985 that NMFS had partially approved Amendment #6. The letter from Acting Regional Director Richard H. Schaefer to Council Chairman Robert L. Martin stated in part:

"The measures in Amendment 6 that I disapproved are the Nantucket Shoals Area bimonthly quota guidelines and effort control measures, the one landing per day restriction applying to the Mid-Atlantic Area, the provision prohibiting the Regional Director from subdividing allowable fishing hours when the hours are set at 12 or less, and the portion of the notification provision prohibiting vessels that have fished in a notification zone from returning to fish in the same notification zone within that calendar month. The disapproval of the bimonthly guidelines for Nantucket Shoals removed the basis for adjusting the quotas between bimonthly periods when harvest either exceeds or falls short of quota. Therefore, this provision, while not specifically disapproved, can not be implemented on Nantucket Shoals at this time."

Amendment #6 was revised to replace the bimonthly quotas with quarterly quotas, eliminate the weekly landing limits for the Nantucket Shoals Area, clarify the quota adjustment provisions for the Nantucket Shoals and Georges Bank Areas, and present additional justification for the one landing per trip provision. The other disapproved provisions (prohibition on subdividing allowed fishing times under certain conditions and portions of the notification system) were deleted from the Amendment. The Amendment was approved on 9 April 1986 when the 60 day review period expired without action by NMFS.

II. PURPOSE OF AND NEED FOR ACTION

This Amendment to the Fishery Management Plan for the Atlantic Surf Clam and Ocean Quahog Fisheries (FMP), prepared by the Mid-Atlantic Fishery Management Council (Council), is intended to: (1) change the quarterly quota allocation for the Georges Bank Area from 10%-40%-40%-10% to 25% for each quarter; (2) remove for all Areas the 5,000 bushel threshold for transfer of unharvested quota from one quarter to the next; (3) add the provision that any unharvested quota be distributed proportionally among the remaining quarters in the year rather than being added totally to the next quarter for the Nantucket Shoals and Georges Bank Areas; (4) remove the 10% limit on carry over of unharvested quota from one year to the next, but provide that any such carry over be distributed proportionally to each quarter for the Nantucket Shoals and Georges Bank Areas; (5) provides for annual renewal of vessel permits; and (6) makes changes to the regulations to enhance enforcement and prosecution. The management unit is all surf clams (*Spisula solidissima*) and all ocean quahogs (*Arctica islandica*) in the Atlantic fishery conservation zone (FCZ). The objectives of the FMP are:

1. Rebuild the surf clam populations to allow eventual harvest approaching the 50 million pound level, which is the estimate of maximum sustainable yield over the range of the resource, based on the average yearly catch from 1960 to 1976.
2. Minimize economic dislocation to the extent possible consistent with objective 1 and encourage efficiency in the fishery.
3. Prevent the harvest of ocean quahogs from exceeding maximum sustainable yield and direct the fishery toward achieving Optimum Yield.
4. Provide the greatest degrees of freedom and flexibility to all harvesters of these resources consistent with the attainment of the other objectives of this Plan.
5. Optimize yield per recruit.
6. Increase understanding of the conditions of the stocks and fishery.

The FMP contains three management areas for surf clams: the Mid-Atlantic Area (south of the line that begins at 41°18'16.249" north latitude and 71°54'28.477" west longitude and proceeds S 37°22'32.75" E to the point of intersection with the outward boundary of the FCZ), the Nantucket Shoals Area (north of the

line that begins at 41°18'16.249" north latitude and 71°54'28.477" west longitude and proceeds S 37°22'32.75" E to the point of intersection with the outward boundary of the FCZ and west of 69° longitude), and the Georges Bank Area (north of the line that begins at 41°18'16.249" north latitude and 71°54'28.477" west longitude and proceeds S 37°22'32.75" E to the point of intersection with the outward boundary of the FCZ and east of 69° longitude).

The Amendment would change the relevant paragraphs of section XIII.B.2.a. as follows (deleted material overstruck, bolded material added):

In the Georges Bank Area the annual quota is divided into ~~quarterly quotas, the quarters and share being: 1 January - 31 March, 10%; 1 April - 30 June, 40%; 1 July - 30 September, 40%; and 1 October - 31 December, 10%~~ **equal quarterly quotas, the quarters being: 1 January - 31 March, 1 April - 30 June, 1 July - 30 September, and 1 October - 31 December.** If the first day of a calendar quarter does not fall on Sunday, then the fishing quarter will begin on the first Sunday of the new calendar quarter.

In the Mid-Atlantic Area, if the actual catch of surf clams in any one quarter falls ~~more than 5,000 bu~~ short of the specified quarterly quota, the Regional Director shall add the amount of the shortfall to the next succeeding quarterly quota. If the actual catch of surf clams in any quarter exceeds the specified quarterly quota, the Regional Director shall subtract the amount of the excess from the next succeeding quarterly quota. The Regional Director shall publish a notice in the *Federal Register* whenever the quarterly quota for surf clams is adjusted. It is understood that this process would also operate between years, that is, between the last quarter of one year and the first quarter of the next year.

In the Nantucket Shoals Area, if the actual catch of surf clams in any quarterly period falls ~~more than 5,000 bushels~~ short of the specified quarterly quota, the Regional Director will add the amount of the shortfall ~~to the succeeding quarterly quota proportionally to the quotas of the remaining quarters of the year.~~ If the actual catch of surf clams exceeds the quarterly quota, the Regional Director will subtract the amount of the excess from the succeeding quarterly quota. The Regional Director shall publish a notice in the *Federal Register* whenever any quarterly quota for surf clams is adjusted as described above. The shortfall or excess will carry over from the last quarter of one year to the ~~first quarter of the next year except that no more than 10% of the annual quota may be carried over to the next year and any such carry over shall be distributed proportionally to each quarter of the new year.~~

In the Georges Bank Area, if the actual catch of surf clams in any quarterly period falls ~~more than 5,000 bushels~~ short of the specified quarterly quota, the Regional Director will add the amount of the shortfall ~~to the succeeding quarterly quota equally to the quotas of the remaining quarters of the year.~~ If the actual catch of surf clams exceeds the quarterly quota, the Regional Director will subtract the amount of the excess from the succeeding quarterly quota. The Regional Director shall publish a notice in the *Federal Register* whenever any quarterly quota for surf clams is adjusted as described above. The shortfall or excess will carry over from the last quarter of one year to the ~~first quarter of the next year except that no more than 10% of the annual quota may be carried over to the next year and any such carry over shall be distributed equally to each quarter of the new year.~~

With regard to the annual permit provision, the Amendment would change the relevant paragraphs of section XIII.B.2.a. as follows (deleted material overstruck, bolded material added):

Permits expire: when the owner or operator retires the vessel from the fishery (it is a rebuttable presumption that failure to land any surf clams or ocean quahogs for 52 consecutive weeks constitutes retirement from the fishery); or when the ownership of the vessel changes, however, the Regional Director may authorize continuation of a vessel permit for the surf clam fishery if the new owner so requests and the vessel meets the relevant eligibility criteria; or on **31 December of each year.**

Vessels that establish eligibility to fish in both the Mid-Atlantic and New England Areas pursuant to XIII.A.2 need not re-establish such eligibility as part of the annual permit renewal.

In addition to being revised to implement the proceeding changes to the FMP, the regulations would be amended as set forth below. These measures are already provided for in the FMP and are included here only

to facilitate understanding of the proposed action. The complete regulation revisions are presented in Appendix V to this Amendment.

Section 652.1 is amended by designating the existing section as (a) and adding a new paragraph (b) to read as follows:

(b) These regulations implement the Fishery Management Plan for the Surf Clam and Ocean Quahog Fisheries.

In section 652.7, paragraph (a) introductory text and paragraph (f)(1) are revised and paragraph (m) is redesignated as (n) and a new paragraph (m) is added to read as follows:

(a) No permit holder may fish for any surf clams or ocean quahogs:

(f)(1) Refuse to permit an authorized officer to board a fishing vessel subject to such a person's control no matter where that vessel may be located, or to enter areas of custody subject to such a person's control, for purposes of conducting any search or inspection in connection with the enforcement of the Act, these regulations, or any other regulations issued under the Act.

(m) No dealer, vessel owner, operator, or other person will knowingly submit false information in records and reports required to be kept and filed under section 652.6.

In section 652.22, paragraphs (a)(4) and (f)(1) are revised to read as follows:

(a)(4) *Make-up periods.* Commencing at 0001 hours on the first Sunday of November and ending at 2400 hours on the last Thursday of April, and during the intervening months, fishermen may claim a make-up period, if in the opinion of the vessel operator, weather or sea conditions would prevent effective fishing or endanger the vessel or crew.

(f) *Presumption.* (1) The presence of surf clams or ocean quahogs aboard any vessel engaged in the surf clam or ocean quahog fishery or the presence of any part of a vessel's gear in the water more than 12 hours after a closure occurs under this section will be *prima facie* evidence that such vessel was fishing for surf clams or ocean quahogs in violation of these regulations.

III. ALTERNATIVES

This section contains a description and evaluation of the alternatives, presented for public hearings, considered but not adopted for Amendments #7 to the Surf Clam and Ocean Quahog FMP.

ALTERNATIVE 1. TAKE NO ACTION AT THIS TIME

Description

No action would mean that:

1. the quarterly quota allocation for the Georges Bank Area would remain at 10%- 40%-40%-10%;
2. the 5,000 bushel threshold for transfer of unharvested quota from one quarter to the next would remain in effect for all Areas;
3. any unharvested quota would continue to be added totally to the next quarter for the Nantucket Shoals and Georges Bank Areas;
4. the 10% limit on carry over of unharvested quota from one year to the next would remain in effect for the Nantucket Shoals and Georges Bank Areas;
5. permits would only expire with the sale of the vessel; and

6. the changes to the regulations to enhance enforcement and prosecution would not be made.

Because of the nature of the changes proposed in Amendment #7, to some extent the preceding items are divisible from the standpoint of taking action. Items 1-3 (the Georges Bank quarterly quota allocation, the roll-over threshold, and the distribution of any roll-over are related and should be considered a package designed to smooth the catch from the Nantucket Shoals and Georges Bank Areas throughout the year.

The permit system can stay the way it is or be changed to an annual system without impacting other parts of this Amendment or the basic FMP. Also, there seem to be no reasonable alternatives to either implementing an annual system or maintaining the status quo.

The proposed regulatory changes are also independent of other actions. For these changes also, there seem to be no reasonable alternatives to either implementing the changes or maintaining the status quo.

The quarterly quotas are intended to distribute fishing in the Georges Bank Area through as much of the year as feasible in light of the steaming distance to the fishing grounds coupled with weather conditions. The concept of keeping the fishery operating throughout the year has been a key consideration in the FMP since its inception. This is considered a desirable goal in order to stabilize employment for fishermen and processing plant workers and to provide for an uninterrupted supply of product to processors in both New England and the Mid-Atlantic.

The allocation distribution (10% each for the first and fourth and 40% each for the second and third quarters) is designed to avoid fishing during months when weather conditions are likely to be adverse (thus making it more difficult to catch the last of the quota) while still distributing the catch throughout the year as much as possible. Using the limits of the OY range, the first and fourth quarter quotas would be 2,500-30,000 bu and the second and third quarter quotas would be 10,000-120,000 bu. A Class 3 vessel can carry 60-100 cages, or 1,920-3,200 bu. Based on available assessment information (Murawski and Serchuk, 1984b), the most likely quota for the Georges Bank Area is at the maximum end of the OY, i.e., 300,000 bu. At that quota, and assuming only Class 3 vessels fished and they had an average capacity of 80 cages (2,560 bu), during the first and fourth quarters they could make twelve trips and during the second and third quarters they could make 47 trips.

The impacts of the other components of the measure would be the opposite of the impact of the proposed Amendment as discussed in Section XII.B.

ALTERNATIVE 2: MAINTAIN THE 5,000 BUSHEL THRESHOLD FOR TRANSFER OF UNHARVESTED QUOTA FROM ONE QUARTER TO THE NEXT FOR THE MID-ATLANTIC AREA, BUT DECREASE THE THRESHOLD TO 2,500 BUSHELS FOR THE NANTUCKET SHOALS AND GEORGES BANK AREAS

This alternative could be considered a compromise position between the 5,000 bushel, all-area threshold and the preferred alternative of no threshold to any area. Lowering the threshold for the Nantucket Shoals and Georges Bank areas would reduce the risk of lost revenues yet still maintain a buffer for lagged reporting and the under reporting problem in these areas.

IV. ENVIRONMENTAL IMPACTS

The environmental impacts of the management regime instituted in the original FMP were described in the Environmental Impact Statement accompanying the FMP, and in the Supplemental Environmental Impact Statements or Environmental Assessments accompanying the Amendments.

IV.1. CHANGING THE QUARTERLY QUOTA ALLOCATION FOR THE GEORGES BANK AREA FROM 10%-40%-40%-10% TO 25% FOR EACH QUARTER

The quarterly quotas are intended to distribute fishing in the Georges Bank Area through as much of the year as feasible in light of the steaming distance to the fishing grounds coupled with weather conditions. The concept of keeping the fishery operating throughout the year has been a key consideration in the FMP

since its inception. This is considered a desirable goal in order to stabilize employment for fishermen and processing plant workers and to provide for an uninterrupted supply of product to processors in both New England and the Mid-Atlantic.

IV.1.a. Price Impacts

In order to evaluate the potential impact on surf clam prices from equalizing the quarterly quotas for the Georges Bank Area, use can be made of the price model discussed in Section IX. All other things being equal (i.e., per capita disposable income and the dummy for 1976-1977 fluctuations), the ex-vessel price effect of an increase or decrease in surf clam landings should simply equal the value of that change multiplied by the coefficient of landings in the model (0.00000503).

Currently the 300,000 bu maximum quota for the Georges Bank Area is distributed such that 30,000 bu, 120,000 bu, 120,000 bu, and 30,000 bu may be caught in the first through fourth quarters, respectively. The amendment would level this out to 75,000 bu per quarter. This represents a change of \pm 45,000 bu depending on which quarter is considered. When this value is multiplied by the coefficient on landings in the price model, the effect on price comes to \$0.226/bu. In other words, price would increase by \$0.226/bu in the second and third quarters when allowed landings decline, and decrease \$0.226/bu in the first and fourth quarters when allowed landings increase. Fluctuations of this magnitude can hardly be considered significant when compared with the annual average price fluctuation of \$2.08/bu for the last seven years (1979-1985), a period which was, in fact, one of relatively high stability in the industry.

The following discussion is divided into three sections: Positive Impacts, Negative Impacts, and Distributional Effects, where Distributional Effects are those impacts which could be either positive or negative depending on an individual's position in the industry.

IV.1.b. Positive Impacts

The new quarterly allocation would permit vessels to provide a steady, year-round supply of surf clams to processors from the New England area, as opposed to the current regime where quota allocations are highly concentrated in the summer months. This may be seen as fostering the growth of the surf clam industry in New England.

IV.1.c. Negative Impacts

The new allocation might increase somewhat the likelihood of accidents in the fishery, since higher landings would be allowed in harsher winter months. However, if a protracted period of good weather occurs during the winter months, fishermen should be allowed to take advantage of it. If the weather proves dangerous, fishermen can remain safely at the dock knowing that the roll over provisions of the Amendment will allow them to harvest those clams when the weather clears, or in later quarters if need be. Fishermen have been making the decision on whether it is safe to fish for centuries; there is no sudden need for government to make it for them.

IV.1.d. Distributional Effects

New England vessels/industry will benefit somewhat to the detriment of Mid-Atlantic participants because there will be fewer clams available for pulse fishing in the summer months (i.e., a maximum of 75% of the annual quota available instead of 90% if the first quarter quota is rolled over). In order for it to be profitable for the large vessels of the Mid-Atlantic fleet to travel all the way to New England waters to fish, it is necessary for there to be substantial quantities of clams available for harvesting. Spreading availability evenly throughout the year reduces the incentive for Mid-Atlantic vessels to make the trip.

An increased winter fishery off Georges Bank also puts Mid-Atlantic vessels at a disadvantage since the greater travel time and distance for their vessels leaves them vulnerable to the weather for longer intervals.

Though currently not an issue, there is a potential for distributional effects to occur between large and small vessels within the New England area itself. Given the current quota distribution, the majority (up to 90%) of

the clam resource is reserved for harvest in the good weather months when both large and intermediate-to-small sized vessels may operate safely on Georges Bank. Shifting portions of the Georges Bank quota to the winter months (i.e., 10% of annual quota changing to 25%) may effectively prohibit smaller vessels from fishing on them.

In 1985, 23 vessels fished for surf clams on Georges Bank. Of those vessels, only two did not have a moratorium permit to fish in the Mid-Atlantic, and so are presumably from New England ports (Table 2). Virtually 100% of landings from Georges Bank occurred in the two summer quarters (unpub. prelim. NMFS data), when Mid-Atlantic vessels sailed north, based themselves out of New England ports, and sent their catches back south by truck.

Since the quota is being fully harvested, a principal impact of this provision will be the eventual replacement of some of these Mid-Atlantic vessels with New England vessels. From an industry-wide perspective, many of the benefits then will simply net out. The problem of over-capitalization in the Mid-Atlantic fleet was relieved somewhat when the Georges Bank resource was discovered. It may be that the loss of this safety valve there will be counterbalanced by its creation in New England, and that underutilized vessels in the groundfish and scallop fleets will be converted to clamming rather than new boats built.

Processing facilities present a similar situation: new capacity in New England will replace existing capacity in the Mid-Atlantic.

IV.1.e. Conclusions

Clearly, a substantial portion of this provision deals with distributional effects and an underlying question of equity: should Mid-Atlantic vessels be allowed to dominate the harvest of a resource spilling over into an adjoining region, or should measures be taken to foster exploitation in New England and discourage Mid-Atlantic participation? Complicating this question is the current state of industry development, where over capacity exists in both harvesting and processing sectors, and the further use of society's resources to increase capacity must be given careful consideration.

While the issue of vessel safety in the winter months is an important consideration, it should not be considered an impenetrable barrier to achieving other plan objectives, such as allowing a steady supply of clams to reach processors. If a protracted period of good weather occurs during the winter months, fishermen should be allowed to take advantage of it. If the weather proves dangerous, fishermen can remain safely at the dock knowing that the roll over provisions of the Amendment will allow them to harvest those clams when the weather clears, or in later quarter if need be. Fishermen have been making the decision on whether it is safe to fish for centuries; there is no sudden need for government to make it for them.

IV.2. REMOVING FOR ALL AREAS THE 5,000 BUSHEL THRESHOLD FOR TRANSFER OF UNHARVESTED QUOTA FROM ONE QUARTER TO THE NEXT

Eliminating the 5,000 bushel threshold for quota carry over is essentially a precautionary measure designed to ensure that significant portions of the Georges Bank and Nantucket Shoals Area quotas are not lost to fishermen.

The threshold was originally conceived for the Mid-Atlantic area to act as a buffer for delays in landing reports. It is always the case that at the end of each quarter, the amount of quota remaining is understated by logbook tallies because not all logbooks are turned in on time. The 5,000 bushel threshold was instituted as a way of compensating for this occurrence, and preventing large amounts of quota from being passed to subsequent quarters which would ultimately have to be removed when all logbooks were finally accounted for.

When the Nantucket Shoals and Georges Bank areas were created, the threshold provision was extended to cover them as well. However, it was pointed out that while an accumulation of lost landings due to the threshold would amount to an insignificant portion of the Mid-Atlantic annual quota, this is not the case for the two New England areas with their much smaller quotas.

It is theoretically possible that 4,999 bushels could remain in the quarterly quota for an area and fail to be carried over due to the threshold. In the unlikely event that this should be repeated in each of the four quarters, a total of 19,996 bushels could be lost to fishermen in each area, with a value of \$180,000 at the average 1985 price of \$8.98/bu (Table 21). In the Mid-Atlantic Area this quantity amounts to only 0.8% of the current annual quota. However, it represents almost 7% of the current Georges Bank quota, and approximately 10% of the current Nantucket Shoals quota.

The minimum impact of this provision will occur when the quarterly quotas are fully utilized in all three areas. No clams would have been lost to fishermen from the threshold; however, revisions to quarterly quota figures can be expected to be larger due to the loss of the buffer which the threshold provided.

An additional benefit that will be lost with the threshold is the compensating mechanism it provides for landings that are under reported in the New England areas, where logbooks are only sporadically used by fishermen.

The maximum impact of this provision would be the preservation of approximately 20,000 bushels of clams harvested in each area should the threshold generate its greatest possible effect. Summed across all three areas this represents \$540,000 in revenue (at 1985 prices) which is no longer at risk to the industry.

IV.3. ADDING THE PROVISION THAT ANY UNHARVESTED QUOTA BE ADDED EQUALLY TO THE REMAINING QUARTERS IN THE YEAR FOR THE NANTUCKET SHOALS AND GEORGES BANK AREAS

As with the provision that redistributes the Georges Bank quarterly quota to even amounts throughout the year, this provision is also intended to encourage the stability of clam supplies to the processing sector of the industry.

The impacts of this provision, then, would be of the same nature as those discussed in section IV.1.

IV.4. REMOVING THE 10% LIMIT ON CARRY OVER OF UNHARVESTED QUOTA FROM ONE YEAR TO THE NEXT FOR THE NANTUCKET SHOALS AND GEORGES BANK AREAS

As with the provision that removes the 5,000 bushel threshold for quota transfer within years, this measure is designed to reduce the likelihood that fishermen will be prohibited from harvesting surf clam resources when there is no substantial biological or economic justification to do so. Both measures were initially conceived to encourage supply stability through prevention of quota "ballooning", where failure to harvest over several periods could theoretically lead to large accumulations of clam quotas. If these accumulations were to be harvested in a short period of time, the excess supply was thought likely to cause market disruption and a falling of clam prices. This possibility must be balanced against the revenue losses which could occur if the 5,000 bushel threshold and 10% annual carry over limit measures were left in place and low harvests cause them to have their maximum effect.

Neither scenario is, in fact, likely to occur. Consumer demand for clam products is substantial, and processors have reported no problems in moving product. In order for the "ballooning effect" to occur, quotas will have to go unharvested for substantial periods of time. Given the processors' needs for a steady product flow, and the fact that periodic closures have had to be instituted in recent years because of the fleet's tendency to harvest quotas in record time, there is little evidence on which fears of ballooning may be founded.

It is possible that in the short run, there will not be a sufficient number of New England boats large enough to harvest the new first quarter quota of 75,000 bushels out on Georges Bank. If bad weather and a small quota discourage Mid-Atlantic boats from joining the fishery, then some portion of this quota will indeed be transferred to later periods, as it should be. However, it is unlikely that any massive accumulation will occur in the New England areas because the weather will improve with time, and the Mid-Atlantic fleet will act as a "safety valve". For though the initial quotas may be insufficient to make it profitable for Mid-Atlantic boats to make the trip north, quota accumulation will at some point cause this to change, and the excess will be utilized.

IV.5. CHANGING THE PERMIT REQUIREMENT SO THAT PERMITS EXPIRE ANNUALLY AS WELL AS WITH THE SALE OF THE VESSEL

The Council proposed the revision to the permit system to make it a more effective support for the management and to bring it into line with the annual permit requirements of the Atlantic Mackerel, Squid, and Butterfish FMP, the Atlantic Sea Scallop FMP, the American Lobster FMP, and the Northeast Multispecies FMP. The principal objective is to have the system operate in a manner which enables the Council and NMFS to know on an accurate and timely basis how many participants there are in the fishery during a given year. A second benefit of annual permits is the ability to continually update the vessel and owner information on the permit form. These data are used in analyzing FMP alternatives and, for the analyzes to be as accurate as possible, the data must be as current as possible.

Estimates of the costs of issuing and renewing annual permits were generated for Amendment #2 to the Atlantic Mackerel, Squid, and Butterfish FMP. Below are estimates for the surf clam and ocean quahog fishery. To the extent these vessels have other annual permits, the costs would be reduced because the permit would be issued for all fisheries for which the operator applied and the vessel was eligible simultaneously (i.e., the cost could be allocated proportionally to all of the FMPs with annual permits).

1) Costs to Issue Each NEW Permit:

Computer costs	2.88
Labor costs	1.60
Permit form & mailer	0.15
Postage	<u>0.22</u>
TOTAL	4.85 X 1,084 permits = \$5,257 (maximum)

2) Costs to RENEW Each Permit:

Computer costs (half)	1.44
Labor costs	0.96
Permit form & mailer	0.15
Postage	<u>0.22</u>
TOTAL	2.77 X 1,084 permits = \$3,003 (maximum)

Notes:

- 1.- The cost of mailing out permit application forms adds an additional \$185.
- 2.- Labor costs equal \$0.16 per minute. This is the wage rate for a government employee at Level GS-5 Step 1 (\$14,390) plus overhead of 27.5% (benefits and taxes).

The benefits of instituting an annual permit system are several. The first and most direct benefit is the value to managers of knowing how many participants are actively engaged in a given fishery, as well as basic information on how it is being executed (gear types, vessel sizes, etc.). Those who are familiar with the current (perpetual) permit system are aware that fishermen can obtain a permit for any fishery (except Surf Clams) simply by checking off boxes on the application form. The most common tendency is to check off all the boxes, regardless of whether a real interest exists for participating in any given fishery. This may be simply for the purpose of leaving all options open, or in some cases fishermen fear the prospect of a limited entry program being instituted at some point in the future, and wish to establish a record of having participated.

There is no current provision for discovering if a given vessel did indeed exercise its right to fish for any particular species. Nor is there any capability for updating this information across time. A vessel may actually have participated in a fishery, but then left it a short time later. Its name will still appear in the permit files on an equal basis with the rest. In essence, the fishery manager is currently denied the most fundamental information on entry to and exit from the fishery.

A second benefit from the new system is a vastly improved ability to conduct the Regulatory Impact Reviews of management plans which are required of the Councils by E.O. 12291. In order to assess the impacts of management measures on fishermen, it is clearly necessary to be able to identify who these fishermen are.

A third benefit is that the three-tier information collecting system used by NMFS is based on samples. The Permit File, theoretically, is the one data bank available which covers 100% of the population in question. Clearly it would be beneficial to fishery managers to be able to utilize its full potential.

Finally, it should be recognized that the Permit Files have the potential for being an invaluable data base on the East Coast fishing fleet as a whole, not simply from the perspective of individual fisheries. If annual permits were required across all fisheries, a comprehensive and continually updated data base would be the resultant product.

It must be recognized by vessel owners that, while it would not be necessary to requalify a vessel annually under the moratorium in order to obtain the annual permit, failure to apply for the annual permit would cancel the permit and eliminate the vessel from the fishery. Also, these provisions would not change the responsibility of the NMFS to withdraw permits of vessels that do not fish for 52 consecutive weeks as provided for currently.

IV.6. CHANGING THE REGULATIONS

The regulatory changes are not seen as having any cost impacts. The respecification of the starting and ending times for the make up day are essentially a matter of equity. The current specification keyed to particular dates could cause a fishermen to lose a day because of when the calendar dates fell relative to the fishing week. Keying the make-up provision to the fishing week eliminates this negative potential.

The other regulatory changes are designed to facilitate enforcement. To the extent that they improve the conviction rate, they could be seen as cost saving measures.

IV.7. MANAGEMENT COSTS

The Amendment: (1) changes the quarterly quota allocation for the Georges Bank Area from 10%-40%-40%-10% to 25% for each quarter; (2) removes for all Areas the 5,000 bushel threshold for transfer of unharvested quota from one quarter to the next; (3) adds the provision that any unharvested quota be distributed proportionally among the remaining quarters in the year rather than being added totally to the next quarter for the Nantucket Shoals and Georges Bank Areas; (4) removes the 10% limit on carry over of unharvested quota from one year to the next, but provides that any such carry over be distributed proportionally to each quarter for the Nantucket Shoals and Georges Bank Areas; (5) provides for annual renewal of vessel permits; and (6) makes changes to the regulations to enhance enforcement and prosecution.

The above provisions are not expected to significantly alter management costs from those currently incurred. All are simple revisions of current practice except for the annual renewal of vessel permits which is being implemented by NMFS for all permitted fisheries.

IV.8. TRADEOFFS BETWEEN THE BENEFICIAL AND ADVERSE IMPACTS OF THE PROPOSED AMENDMENT

The benefits of the proposed Amendment are:

1. The new quarterly allocation would permit vessels to provide a steady, year-round supply of surf clams to processors from the New England area, as opposed to the current regime where quota allocations are highly concentrated in the summer months. This may be seen as fostering the growth of the surf clam industry in New England.
2. Eliminating the 5,000 bushel threshold for quota carry over is essentially a precautionary measure designed to ensure that significant portions of the Georges Bank and Nantucket Shoals Area quotas are not lost to fishermen.

3. As with the provision that redistributes the Georges Bank quarterly quota to even amounts throughout the year, the provision that any unharvested quota be added equally to the remaining quarters in the year for the Nantucket Shoals and Georges Bank Areas is also intended to encourage the stability of clam supplies to the processing sector of the industry.
4. The benefits of instituting an annual permit system are several: (a) the value to managers of knowing how many participants are actively engaged in a given fishery, as well as basic information on how it is being executed (gear types, vessel sizes, etc.); (b) a vastly improved ability to conduct the Regulatory Impact Reviews of management plans which are required of the Councils by E.O. 12291; (c) the three-tier information collecting system used by NMFS is based on samples and the Permit File, theoretically, is the one data bank available which covers 100% of the population in question, hence, it would be beneficial to fishery managers to be able to utilize its full potential; and (d) it should be recognized that the Permit Files have the potential for being an invaluable data base on the East Coast fishing fleet as a whole, not simply from the perspective of individual fisheries.
5. The regulatory changes provide several benefits in that they prevent the loss of fishing days through adjustment of the make-up day specification and they facilitate enforcement.

The possible adverse impacts of the proposed Amendment are:

1. The new quarterly allocation for the Georges Bank Area might increase somewhat the likelihood of accidents in the fishery, since higher landings would be allowed in harsher winter months. However, if a protracted period of good weather occurs during the winter months, fishermen should be allowed to take advantage of it. If the weather proves dangerous, fishermen can remain safely at the dock knowing that the roll over provisions of the Amendment will allow them to harvest those clams when the weather clears, or in later quarters if need be. Fishermen have been making the decision on whether it is safe to fish for centuries; there is no sudden need for government to make it for them.

IV.9. EFFECT ON ENDANGERED SPECIES AND ON THE COASTAL ZONE

Neither the Amendment or the alternative would constitute an action that "may affect" endangered or threatened species or their habitat within the meaning of the regulations implementing Section 7 of the Endangered Species Act of 1973. Thus, consultation procedures under Section 7 will not be necessary on the Amendment.

Also, the Amendment will be conducted in a manner consistent, to the maximum extent practicable, with the Coastal Zone management Programs within the meaning of Section 307(c)(1) of the Coastal Zone Management Act of 1972 and its implementing regulations. A determination that this action is consistent with the approved State coastal zone management programs has been prepared by the Council and submitted for review to each of the State coastal zone management agencies.

IV.10. EFFECTS ON FLOOD PLAINS OR WETLANDS

The Amendment or its alternative will not adversely affect flood plains or wetlands, and trails and rivers listed or eligible for listing on the National Trails and Nationwide Inventory of Rivers.

IV.11. List of Agencies and Persons Consulted in Formulating the Proposed Action

In preparing Amendment #7, the Council consulted with NMFS, the Fish and Wildlife Service, the Department of State, and the States of New York, New Jersey, Pennsylvania, Delaware, Maryland, and Virginia through their membership on the Council. In addition to the States that are members of the Council, Maine, New Hampshire, Massachusetts, Rhode Island, and Connecticut will be consulted through the Coastal Zone Management Program consistency process. A list of the agencies and persons sent copies of the Amendment, including the EA and RIR, and notice of the public hearings will be included as an Exhibit A to the final version of this EA.

List of Preparers of Environmental Assessment and Plan Amendment

Amendment #7 was prepared by a team of fishery managers and scientists with special expertise in the surf clam resource including: the Mid-Atlantic Council Surf Clam and Ocean Quahog Committee (W. Peter Jensen, Russell Cookingham, Thomas McVey, Lee Anderson, John Burger, H.R. Humphreys, and Ricks Savage); the NEFMC Surf Clam Oversight Committee (Robert Smith, Phillip Coates, and William Lund); and MAFMC staff John C. Bryson, David R. Keifer, Thomas Hoff, Richard Tremaine, and Clayton Heaton.

Findings of No Significant Environmental Impact

For the reasons discussed above, it is hereby determined that neither approval and implementation of the proposed action nor the alternative would affect significantly the quality of the human environment, and that the preparation of an environmental impact statement on the Amendment is not required by Section 102(2)(c) of the National Environmental Policy Act nor its implementing regulations.

Assistant Administrator for Fisheries, NOAA

Date

APPENDIX IV. REGULATORY IMPACT REVIEW

I. INTRODUCTION

A. Purpose

The purpose of this document is to present an analysis of the proposed regulations for Amendment #7 (Amendment) to the Surf Clam and Ocean Quahog Fishery Management Plan (FMP). This document has been prepared in compliance with the procedures of the National Marine Fisheries Service (NMFS) to implement Executive Order (E.O.) 12291. The document also contains an analysis of the impacts of the Plan relative to the Regulatory Flexibility Act and the Paperwork Reduction Act of 1980.

The original FMP was approved in November 1977 for the period through September 1979. Amendment #1 extended it through 31 December 1979. Amendment #2 extended it through the end of 1981. Amendment #3, approved 13 November 1981, extended the FMP indefinitely.

Amendment #4 was initiated in response to a closure of the New England Area to surf clam fishing during the second half of 1983. On 21 July 1983 the New England Council sent a letter to Secretary of Commerce Malcolm Baldrige requesting Secretarial action to reopen the New England Area surf clam fishery. The Mid-Atlantic Council passed a motion in August 1983 recommending that the Secretary not accept the proposal of the New England Council. After receiving a letter from Secretary Baldrige on 6 September 1983 denying implementation of emergency action to reopen the surf clam fishery in the New England Area, work was begun to investigate methods for avoiding an extended closure in 1984. In November 1983 the Mid-Atlantic Council passed a motion authorizing the Regional Director and the New England Council to prepare an Amendment for the New England Area involving trip limits, quarterly quotas, or similar strategies to insure fishing throughout the year. A proposed Amendment #4 was drafted by the New England Council staff in cooperation with NMFS staff and hearings were held on 21 and 22 March 1984. At a joint meeting of the New England and Mid-Atlantic Councils in May 1984 representatives of the surf clam industry from both New England and the Mid-Atlantic presented revisions to the proposed regime. The Mid-Atlantic Council passed a motion to adopt the proposed Amendment #4 to the Surf Clam and Ocean Quahog FMP as amended to provide that any unharvested portion of a bimonthly allocation be added to the immediately following bimonthly allocation rather than being prorated over all remaining bimonthly periods and that trip and weekly limits be by vessel classes based on relative fishing power using the following ratios: Class 1 = 1.0, Class 2 = 1.8, and Class 3 = 3.4, and that NMFS use a rulemaking procedure to implement the Amendment on an emergency basis. The New England Council voted at the same meeting to adopt the Amendment.

The provisions of Amendment #4 were implemented on an emergency basis for 180 days beginning 1 July 1984, during which time the Amendment was finalized by the New England Council and submitted for Secretarial approval. However, it was determined that the document was not structurally complete for review.

Amendment #5, approved 28 February 1985, allowed for revision of the surf clam minimum size limit provisions, extended the size limit throughout the entire fishery, and instituted a requirement that cages be tagged.

Amendment #6 was begun in October 1984 following an exploratory fishery conducted on Georges Bank as a result of emergency regulations published 2 August 1984 (49 FR 30946-30948), primarily to address problems associated with the development of a surf clam fishery on Georges Bank. At its October 1984 meeting the Council voted to divide the New England Area into the Nantucket Shoals and Georges Bank Areas, the dividing line being 69 degrees longitude. At the same meeting the Council voted to approve revising Amendment #4 so its provisions applied to that portion of the New England Area west of 69 degrees longitude.

In response to the Council's recommendation that Amendment #4 be revised to apply only to that portion of the New England Area west of 69 degrees, the New England Council held a hearing on 11 December 1984.

At its December 1984 meeting the Council adopted the provisions of Amendment #6. The Amendment was adopted by the Council for hearings in January 1985, with hearings held 18 and 19 February 1985. The Council adopted Amendment #6 for Secretarial approval at its March 1985 meeting. At that time Amendment #4 still had not been found structurally complete. Given the relationship between the provisions of Amendments #4 and #6, the decision was made to abandon Amendment #4 and combine the provisions of Amendment #4 with the Mid-Atlantic Council's Amendment #6 in one document. The combination of Amendments #4 and #6 did not change any substantive provisions of either Amendment.

The Council was notified via a letter of 25 July 1985 that NMFS had partially approved Amendment #6. The letter from Acting Regional Director Richard H. Schaefer to Council Chairman Robert L. Martin stated in part:

"The measures in Amendment 6 that I disapproved are the Nantucket Shoals Area bimonthly quota guidelines and effort control measures, the one landing per day restriction applying to the Mid-Atlantic Area, the provision prohibiting the Regional Director from subdividing allowable fishing hours when the hours are set at 12 or less, and the portion of the notification provision prohibiting vessels that have fished in a notification zone from returning to fish in the same notification zone within that calendar month. The disapproval of the bimonthly guidelines for Nantucket Shoals removed the basis for adjusting the quotas between bimonthly periods when harvest either exceeds or falls short of quota. Therefore, this provision, while not specifically disapproved, can not be implemented on Nantucket Shoals at this time."

Amendment #6 was revised to replace the bimonthly quotas with quarterly quotas, eliminate the weekly landing limits for the Nantucket Shoals Area, clarify the quota adjustment provisions for the Nantucket Shoals and Georges Bank Areas, and present additional justification for the one landing per trip provision. The other disapproved provisions (prohibition on subdividing allowed fishing times under certain conditions and portions of the notification system) were deleted from the Amendment. The Amendment was approved on 9 April 1986 when the 60 day review period expired without action by NMFS.

The management unit is maintained as all surf clams (*Spisula solidissima*) and all ocean quahogs (*Arctica islandica*) in the Atlantic FCZ.

B. Description of User Groups

The fishery is described in Sections VIII and IX of the Amendment.

C. Problems Addressed by the Amendment

The problems to be addressed are discussed in Section IV of the Amendment.

D. Management Objectives

The objectives of the FMP are:

1. Rebuild the surf clam populations to allow eventual harvest approaching the 50 million pound level, which is the estimate of maximum sustainable yield over the range of the resource, based on the average yearly catch from 1960 to 1976.
2. Minimize economic dislocation to the extent possible consistent with objective 1 and encourage efficiency in the fishery.
3. Prevent the harvest of ocean quahogs from exceeding maximum sustainable yield and direct the fishery toward achieving Optimum Yield.
4. Provide the greatest degrees of freedom and flexibility to all harvesters of these resources consistent with the attainment of the other objectives of this Plan.

5. Optimize yield per recruit.
6. Increase understanding of the conditions of the stocks and fishery.

E. Provisions of the Amendment

This Amendment to the Fishery Management Plan for the Atlantic Surf Clam and Ocean Quahog Fisheries (FMP), prepared by the Mid-Atlantic Fishery Management Council (Council), is intended to: (1) change the quarterly quota allocation for the Georges Bank Area from 10%-40%-40%-10% to 25% for each quarter; (2) remove for all Areas the 5,000 bushel threshold for transfer of unharvested quota from one quarter to the next; (3) add the provision that any unharvested quota be distributed proportionally among the remaining quarters in the year rather than being added totally to the next quarter for the Nantucket Shoals and Georges Bank Areas; (4) remove the 10% limit on carry over of unharvested quota from one year to the next, but provide that any such carry over be distributed proportionally to each quarter for the Nantucket Shoals and Georges Bank Areas; (5) provides for annual renewal of vessel permits; and (6) makes changes to the regulations to enhance enforcement and prosecution. The management unit is all surf clams (*Spisula solidissima*) and all ocean quahogs (*Arctica islandica*) in the Atlantic fishery conservation zone (FCZ).

The FMP contains three management areas for surf clams: the Mid-Atlantic Area (south of the line that begins at 41°18'16.249" north latitude and 71°54'28.477" west longitude and proceeds S 37°22'32.75" E to the point of intersection with the outward boundary of the FCZ), the Nantucket Shoals Area (north of the line that begins at 41°18'16.249" north latitude and 71°54'28.477" west longitude and proceeds S 37°22'32.75" E to the point of intersection with the outward boundary of the FCZ and west of 69° longitude), and the Georges Bank Area (north of the line that begins at 41°18'16.249" north latitude and 71°54'28.477" west longitude and proceeds S 37°22'32.75" E to the point of intersection with the outward boundary of the FCZ and east of 69° longitude).

The Amendment would change the relevant paragraphs of section XIII.B.2.a. as follows (deleted material overstruck, bolded material added):

In the Georges Bank Area the annual quota is divided into ~~quarterly quotas, the quarters and share being: 1 January - 31 March, 10%, 1 April - 30 June, 40%, 1 July - 30 September, 40%, and 1 October - 31 December, 10%~~ **equal quarterly quotas, the quarters being: 1 January - 31 March, 1 April - 30 June, 1 July - 30 September, and 1 October - 31 December.** If the first day of a calendar quarter does not fall on Sunday, then the fishing quarter will begin on the first Sunday of the new calendar quarter.

In the Mid-Atlantic Area, if the actual catch of surf clams in any one quarter falls ~~more than 5,000 bu~~ short of the specified quarterly quota, the Regional Director shall add the amount of the shortfall to the next succeeding quarterly quota. If the actual catch of surf clams in any quarter exceeds the specified quarterly quota, the Regional Director shall subtract the amount of the excess from the next succeeding quarterly quota. The Regional Director shall publish a notice in the *Federal Register* whenever the quarterly quota for surf clams is adjusted. It is understood that this process would also operate between years, that is, between the last quarter of one year and the first quarter of the next year.

In the Nantucket Shoals Area, if the actual catch of surf clams in any quarterly period falls ~~more than 5,000 bushels~~ short of the specified quarterly quota, the Regional Director will add the amount of the shortfall to ~~the succeeding quarterly quota~~ **proportionally to the quotas of the remaining quarters of the year.** If the actual catch of surf clams exceeds the quarterly quota, the Regional Director will subtract the amount of the excess from the succeeding quarterly quota. The Regional Director shall publish a notice in the *Federal Register* whenever any quarterly quota for surf clams is adjusted as described above. The shortfall or excess will carry over from the last quarter of one year to the ~~first quarter of the next year~~ **except that no more than 10% of the annual quota may be carried over to the next year and any such carry over shall be distributed proportionally to each quarter of the new year.**

In the Georges Bank Area, if the actual catch of surf clams in any quarterly period falls ~~more than 5,000 bushels~~ short of the specified quarterly quota, the Regional Director will add the amount of the shortfall to ~~the succeeding quarterly quota~~ **equally to the quotas of the remaining quarters of the year.** If the actual

catch of surf clams exceeds the quarterly quota, the Regional Director will subtract the amount of the excess from the succeeding quarterly quota. The Regional Director shall publish a notice in the *Federal Register* whenever any quarterly quota for surf clams is adjusted as described above. The shortfall or excess will carry over from the last quarter of one year to the first quarter of the next year ~~except that no more than 10% of the annual quota may be carried over to the next year and any such carry over shall be distributed equally to each quarter of the new year.~~

With regard to the annual permit provision, the Amendment would change the relevant paragraphs of section XIII.B.2.a. as follows (deleted material overstruck, bolded material added):

Permits expire: when the owner or operator retires the vessel from the fishery (it is a rebuttable presumption that failure to land any surf clams or ocean quahogs for 52 consecutive weeks constitutes retirement from the fishery); or when the ownership of the vessel changes, however, the Regional Director may authorize continuation of a vessel permit for the surf clam fishery if the new owner so requests and the vessel meets the relevant eligibility criteria; or **on 31 December of each year.**

Vessels that establish eligibility to fish in both the Mid-Atlantic and New England Areas pursuant to XIII.A.2 need not re-establish such eligibility as part of the annual permit renewal.

In addition to being revised to implement the proceeding changes to the FMP, the regulations would be amended as set forth below. These measures are already provided for in the FMP and are included here only to facilitate understanding of the proposed action. The complete regulation revisions are presented in Appendix V to this Amendment.

Section 652.1 is amended by designating the existing section as (a) and adding a new paragraph (b) to read as follows:

(b) These regulations implement the Fishery Management Plan for the Surf Clam and Ocean Quahog Fisheries.

In section 652.7, paragraph (a) introductory text and paragraph (f)(1) are revised and paragraph (m) is redesignated as (n) and a new paragraph (m) is added to read as follows:

(a) No permit holder may fish for any surf clams or ocean quahogs:

(f)(1) Refuse to permit an authorized officer to board a fishing vessel subject to such a person's control no matter where that vessel may be located, or to enter areas of custody subject to such a person's control, for purposes of conducting any search or inspection in connection with the enforcement of the Act, these regulations, or any other regulations issued under the Act.

(m) No dealer, vessel owner, operator, or other person will knowingly submit false information in records and reports required to be kept and filed under section 652.6.

In section 652.22, paragraphs (a)(4) and (f)(1) are revised to read as follows:

(a)(4) *Make-up periods.* Commencing at 0001 hours on the first Sunday of November and ending at 2400 hours on the last Thursday of April, and during the intervening months, fishermen may claim a make-up period, if in the opinion of the vessel operator, weather or sea conditions would prevent effective fishing or endanger the vessel or crew.

(f) *Presumption.* (1) The presence of surf clams or ocean quahogs aboard any vessel engaged in the surf clam or ocean quahog fishery or the presence of any part of a vessel's gear in the water more than 12 hours after a closure occurs under this section will be *prima facie* evidence that such vessel was fishing for surf clams or ocean quahogs in violation of these regulations.

II. REGULATORY IMPACT ANALYSIS

II.A. Changing the Quarterly Quota Allocation for the Georges Bank Area from 10%-40%- 40%-10% to 25% for Each Quarter

The quarterly quotas are intended to distribute fishing in the Georges Bank Area through as much of the year as feasible in light of the steaming distance to the fishing grounds coupled with weather conditions. The concept of keeping the fishery operating throughout the year has been a key consideration in the FMP since its inception. This is considered a desirable goal in order to stabilize employment for fishermen and processing plant workers and to provide for an uninterrupted supply of product to processors in both New England and the Mid-Atlantic.

II.A.1. Price Impacts

In order to evaluate the potential impact on surf clam prices from equalizing the quarterly quotas for the Georges Bank Area, use can be made of the price model discussed in Section IX. All other things being equal (i.e., per capita disposable income and the dummy for 1976-1977 fluctuations), the ex-vessel price effect of an increase or decrease in surf clam landings should simply equal the value of that change multiplied by the coefficient of landings in the model (0.00000503).

Currently the 300,000 bu maximum quota for the Georges Bank Area is distributed such that 30,000 bu, 120,000 bu, 120,000 bu, and 30,000 bu may be caught in the first through fourth quarters, respectively. The amendment would level this out to 75,000 bu per quarter. This represents a change of $\pm 45,000$ bu depending on which quarter is considered. When this value is multiplied by the coefficient on landings in the price model, the effect on price comes to \$0.226/bu. In other words, price would increase by \$0.226/bu in the second and third quarters when allowed landings decline, and decrease \$0.226/bu in the first and fourth quarters when allowed landings increase. Fluctuations of this magnitude can hardly be considered significant when compared with the annual average price fluctuation of \$2.08/bu for the last seven years (1979-1985), a period which was, in fact, one of relatively high stability in the industry.

The following discussion is divided into three sections: Positive Impacts, Negative Impacts, and Distributional Effects, where Distributional Effects are those impacts which could be either positive or negative depending on an individual's position in the industry.

II.A.2. Positive Impacts

The new quarterly allocation would permit vessels to provide a steady, year-round supply of surf clams to processors from the New England area, as opposed to the current regime where quota allocations are highly concentrated in the summer months. This may be seen as fostering the growth of the surf clam industry in New England.

II.A.3. Negative Impacts

The new allocation might increase somewhat the likelihood of accidents in the fishery, since higher landings would be allowed in harsher winter months. However, if a protracted period of good weather occurs during the winter months, fishermen should be allowed to take advantage of it. If the weather proves dangerous, fishermen can remain safely at the dock knowing that the roll over provisions of the Amendment will allow them to harvest those clams when the weather clears, or in later quarters if need be. Fishermen have been making the decision on whether it is safe to fish for centuries; there is no sudden need for government to make it for them.

II.A.4. Distributional Effects

New England vessels/industry will benefit somewhat to the detriment of Mid-Atlantic participants because there will be fewer clams available for pulse fishing in the summer months (i.e., a maximum of 75% of the annual quota available instead of 90% if the first quarter quota is rolled over). In order for it to be profitable for the large vessels of the Mid-Atlantic fleet to travel all the way to New England waters to fish, it is necessary for there to be substantial quantities of clams available for harvesting. Spreading availability evenly throughout the year reduces the incentive for Mid-Atlantic vessels to make the trip.

An increased winter fishery off Georges Bank also puts Mid-Atlantic vessels at a disadvantage since the greater travel time and distance for their vessels leaves them vulnerable to the weather for longer intervals.

Though currently not an issue, there is a potential for distributional effects to occur between large and small vessels within the New England area itself. Given the current quota distribution, the majority (up to 90%) of the clam resource is reserved for harvest in the good weather months when both large and intermediate-to-small sized vessels may operate safely on Georges Bank. Shifting portions of the Georges Bank quota to the winter months (i.e., 10% of annual quota changing to 25%) may effectively prohibit smaller vessels from fishing on them.

In 1985, 23 vessels fished for surf clams on Georges Bank. Of those vessels, only two did not have a moratorium permit to fish in the Mid-Atlantic, and so are presumably from New England ports (Table 2). Virtually 100% of landings from Georges Bank occurred in the two summer quarters (unpub. prelim. NMFS data), when Mid-Atlantic vessels sailed north, based themselves out of New England ports, and sent their catches back south by truck.

Since the quota is being fully harvested, a principal impact of this provision will be the eventual replacement of some of these Mid-Atlantic vessels with New England vessels. From an industry-wide perspective, many of the benefits then will simply net out. The problem of over-capitalization in the Mid-Atlantic fleet was relieved somewhat when the Georges Bank resource was discovered. It may be that the loss of this safety valve there will be counterbalanced by its creation in New England, and that underutilized vessels in the groundfish and scallop fleets will be converted to clamming rather than new boats built.

Processing facilities present a similar situation: new capacity in New England will replace existing capacity in the Mid-Atlantic.

II.A.5. Conclusions

Clearly, a substantial portion of this provision deals with distributional effects and an underlying question of equity: should Mid-Atlantic vessels be allowed to dominate the harvest of a resource spilling over into an adjoining region, or should measures be taken to foster exploitation in New England and discourage Mid-Atlantic participation? Complicating this question is the current state of industry development, where over capacity exists in both harvesting and processing sectors, and the further use of society's resources to increase capacity must be given careful consideration.

While the issue of vessel safety in the winter months is an important consideration, it should not be considered an impenetrable barrier to achieving other plan objectives, such as allowing a steady supply of clams to reach processors. If a protracted period of good weather occurs during the winter months, fishermen should be allowed to take advantage of it. If the weather proves dangerous, fishermen can remain safely at the dock knowing that the roll over provisions of the Amendment will allow them to harvest those clams when the weather clears, or in later quarter if need be. Fishermen have been making the decision on whether it is safe to fish for centuries; there is no sudden need for government to make it for them.

II.B. Removing for All Areas the 5,000 Bushel Threshold for Transfer of Unharvested Quota from One Quarter to the Next

Eliminating the 5,000 bushel threshold for quota carry over is essentially a precautionary measure designed to ensure that significant portions of the Georges Bank and Nantucket Shoals Area quotas are not lost to fishermen.

The threshold was originally conceived for the Mid-Atlantic area to act as a buffer for delays in landing reports. It is always the case that at the end of each quarter, the amount of quota remaining is understated by logbook tallies because not all logbooks are turned in on time. The 5,000 bushel threshold was instituted as a way of compensating for this occurrence, and preventing large amounts of quota from being passed to

subsequent quarters which would ultimately have to be removed when all logbooks were finally accounted for.

When the Nantucket Shoals and Georges Bank areas were created, the threshold provision was extended to cover them as well. However, it was pointed out that while an accumulation of lost landings due to the threshold would amount to an insignificant portion of the Mid-Atlantic annual quota, this is not the case for the two New England areas with their much smaller quotas.

It is theoretically possible that 4,999 bushels could remain in the quarterly quota for an area and fail to be carried over due to the threshold. In the unlikely event that this should be repeated in each of the four quarters, a total of 19,996 bushels could be lost to fishermen in each area, with a value of \$180,000 at the average 1985 price of \$8.98/bu (Table 21). In the Mid-Atlantic Area this quantity amounts to only 0.8% of the current annual quota. However, it represents almost 7% of the current Georges Bank quota, and approximately 10% of the current Nantucket Shoals quota.

The minimum impact of this provision will occur when the quarterly quotas are fully utilized in all three areas. No clams would have been lost to fishermen from the threshold; however, revisions to quarterly quota figures can be expected to be larger due to the loss of the buffer which the threshold provided.

An additional benefit that will be lost with the threshold is the compensating mechanism it provides for landings that are under reported in the New England areas, where logbooks are only sporadically used by fishermen.

The maximum impact of this provision would be the preservation of approximately 20,000 bushels of clams harvested in each area should the threshold generate its greatest possible effect. Summed across all three areas this represents \$540,000 in revenue (at 1985 prices) which is no longer at risk to the industry.

II.C. Adding the Provision that any Unharvested Quota be Added Equally to the Remaining Quarters in the Year for the Nantucket Shoals and Georges Bank Areas

As with the provision that redistributes the Georges Bank quarterly quota to even amounts throughout the year, this provision is also intended to encourage the stability of clam supplies to the processing sector of the industry.

The impacts of this provision, then, would be of the same nature as those discussed in section XII.B.1.

II.D. Removing the 10% Limit on Carry Over of Unharvested Quota from one Year to the Next for the Nantucket Shoals and Georges Bank Areas

As with the provision that removes the 5,000 bushel threshold for quota transfer within years, this measure is designed to reduce the likelihood that fishermen will be prohibited from harvesting surf clam resources when there is no substantial biological or economic justification to do so. Both measures were initially conceived to encourage supply stability through prevention of quota "ballooning", where failure to harvest over several periods could theoretically lead to large accumulations of clam quotas. If these accumulations were to be harvested in a short period of time, the excess supply was thought likely to cause market disruption and a falling of clam prices. This possibility must be balanced against the revenue losses which could occur if the 5,000 bushel threshold and 10% annual carry over limit measures were left in place and low harvests cause them to have their maximum effect.

Neither scenario is, in fact, likely to occur. Consumer demand for clam products is substantial, and processors have reported no problems in moving product. In order for the "ballooning effect" to occur, quotas will have to go unharvested for substantial periods of time. Given the processors' needs for a steady product flow, and the fact that periodic closures have had to be instituted in recent years because of the fleet's tendency to harvest quotas in record time, there is little evidence on which fears of ballooning may be founded.

It is possible that in the short run, there will not be a sufficient number of New England boats large enough to harvest the new first quarter quota of 75,000 bushels out on Georges Bank. If bad weather and a small quota discourage Mid-Atlantic boats from joining the fishery, then some portion of this quota will indeed be transferred to later periods, as it should be. However, it is unlikely that any massive accumulation will occur in the New England areas because the weather will improve with time, and the Mid-Atlantic fleet will act as a "safety valve". For though the initial quotas may be insufficient to make it profitable for Mid-Atlantic boats to make the trip north, quota accumulation will at some point cause this to change, and the excess will be utilized.

II.E. Changing the permit requirement so that permits expire annually as well as with the sale of the vessel

The Council proposed the revision to the permit system to make it a more effective support for the management and to bring it into line with the annual permit requirements of the Atlantic Mackerel, Squid, and Butterfish FMP, the Atlantic Sea Scallop FMP, the American Lobster FMP, and the Northeast Multispecies FMP. The principal objective is to have the system operate in a manner which enables the Council and NMFS to know on an accurate and timely basis how many participants there are in the fishery during a given year. A second benefit of annual permits is the ability to continually update the vessel and owner information on the permit form. These data are used in analyzing FMP alternatives and, for the analyzes to be as accurate as possible, the data must be as current as possible.

Estimates of the costs of issuing and renewing annual permits were generated for Amendment #2 to the Atlantic Mackerel, Squid, and Butterfish FMP. Below are estimates for the surf clam and ocean quahog fishery. To the extent these vessels have other annual permits, the costs would be reduced because the permit would be issued for all fisheries for which the operator applied and the vessel was eligible simultaneously (i.e., the cost could be allocated proportionally to all of the FMPs with annual permits).

1) Costs to Issue Each NEW Permit:

Computer costs	2.88
Labor costs	1.60
Permit form & mailer	0.15
Postage	<u>0.22</u>
TOTAL	4.85 X 1,084 permits = \$5,257 (maximum)

2) Costs to RENEW Each Permit:

Computer costs (half)	1.44
Labor costs	0.96
Permit form & mailer	0.15
Postage	<u>0.22</u>
TOTAL	2.77 X 1,084 permits = \$3,003 (maximum)

Notes:

- 1.- The cost of mailing out permit application forms adds an additional \$185.
- 2.- Labor costs equal \$0.16 per minute. This is the wage rate for a government employee at Level GS-5 Step 1 (\$14,390) plus overhead of 27.5% (benefits and taxes).

The benefits of instituting an annual permit system are several. The first and most direct benefit is the value to managers of knowing how many participants are actively engaged in a given fishery, as well as basic information on how it is being executed (gear types, vessel sizes, etc.). Those who are familiar with the current (perpetual) permit system are aware that fishermen can obtain a permit for any fishery (except Surf Clams) simply by checking off boxes on the application form. The most common tendency is to check off all the boxes, regardless of whether a real interest exists for participating in any given fishery. This may be simply for the purpose of leaving all options open, or in some cases fishermen fear the prospect of a limited entry program being instituted at some point in the future, and wish to establish a record of having participated.

There is no current provision for discovering if a given vessel did indeed exercise its right to fish for any particular species. Nor is there any capability for updating this information across time. A vessel may actually have participated in a fishery, but then left it a short time later. Its name will still appear in the permit files on an equal basis with the rest. In essence, the fishery manager is currently denied the most fundamental information on entry to and exit from the fishery.

A second benefit from the new system is a vastly improved ability to conduct the Regulatory Impact Reviews of management plans which are required of the Councils by E.O. 12291. In order to assess the impacts of management measures on fishermen, it is clearly necessary to be able to identify who these fishermen are.

A third benefit is that the three-tier information collecting system used by NMFS is based on samples. The Permit File, theoretically, is the one data bank available which covers 100% of the population in question. Clearly it would be beneficial to fishery managers to be able to utilize its full potential.

Finally, it should be recognized that the Permit Files have the potential for being an invaluable data base on the East Coast fishing fleet as a whole, not simply from the perspective of individual fisheries. If annual permits were required across all fisheries, a comprehensive and continually updated data base would be the resultant product.

It must be recognized by vessel owners that, while it would not be necessary to requalify a vessel annually under the moratorium in order to obtain the annual permit, failure to apply for the annual permit would cancel the permit and eliminate the vessel from the fishery. Also, these provisions would not change the responsibility of the NMFS to withdraw permits of vessels that do not fish for 52 consecutive weeks as provided for currently.

II.F. Changing the regulations to enhance enforcement and prosecution.

The regulatory changes are not seen as having any cost impacts. The respecification of the starting and ending times for the make up day are essentially a matter of equity. The current specification keyed to particular dates could cause a fishermen to lose a day because of when the calendar dates fell relative to the fishing week. Keying the make-up provision to the fishing week eliminates this negative potential.

The other regulatory changes are designed to facilitate enforcement. To the extent that they improve the conviction rate, they could be seen as cost saving measures.

II.G. Management Costs

The Amendment: (1) changes the quarterly quota allocation for the Georges Bank Area from 10%-40%-40%-10% to 25% for each quarter; (2) removes for all Areas the 5,000 bushel threshold for transfer of unharvested quota from one quarter to the next; (3) adds the provision that any unharvested quota be distributed proportionally among the remaining quarters in the year rather than being added totally to the next quarter for the Nantucket Shoals and Georges Bank Areas; (4) removes the 10% limit on carry over of unharvested quota from one year to the next, but provides that any such carry over be distributed proportionally to each quarter for the Nantucket Shoals and Georges Bank Areas; (5) provides for annual renewal of vessel permits; and (6) makes changes to the regulations to enhance enforcement and prosecution.

The above provisions are not expected to significantly alter management costs from those currently incurred. All are simple revisions of current practice except for the annual renewal of vessel permits which is being implemented by NMFS for all permitted fisheries.

III. DISCUSSION OF THE BENEFITS AND COSTS OF THE AMENDMENT

E.O. 12291 requires that a benefit-cost analysis of all proposed regulations be performed.

III.A. Costs

Management costs are discussed above in section II.G. The above provisions are not expected to significantly alter management costs from those currently incurred. All are simple revisions of current practice except for the annual renewal of vessel permits which is being implemented by NMFS for all permitted fisheries.

III.B. Benefits

The benefits of the Amendment are discussed in section II.

III.C. Benefit - Cost Conclusion

The benefits of the proposed Amendment are:

1. The new quarterly allocation would permit vessels to provide a steady, year-round supply of surf clams to processors from the New England area, as opposed to the current regime where quota allocations are highly concentrated in the summer months. This may be seen as fostering the growth of the surf clam industry in New England.
2. Eliminating the 5,000 bushel threshold for quota carry over is essentially a precautionary measure designed to ensure that significant portions of the Georges Bank and Nantucket Shoals Area quotas are not lost to fishermen.
3. As with the provision that redistributes the Georges Bank quarterly quota to even amounts throughout the year, the provision that any unharvested quota be added equally to the remaining quarters in the year for the Nantucket Shoals and Georges Bank Areas is also intended to encourage the stability of clam supplies to the processing sector of the industry.
4. The benefits of instituting an annual permit system are several: (a) the value to managers of knowing how many participants are actively engaged in a given fishery, as well as basic information on how it is being executed (gear types, vessel sizes, etc.); (b) a vastly improved ability to conduct the Regulatory Impact Reviews of management plans which are required of the Councils by E.O. 12291; (c) the three-tier information collecting system used by NMFS is based on samples and the Permit File, theoretically, is the one data bank available which covers 100% of the population in question, hence, it would be beneficial to fishery managers to be able to utilize its full potential; and (d) it should be recognized that the Permit Files have the potential for being an invaluable data base on the East Coast fishing fleet as a whole, not simply from the perspective of individual fisheries.
5. The regulatory changes provide several benefits in that they prevent the loss of fishing days through adjustment of the make-up day specification and they facilitate enforcement.

The possible adverse impacts of the proposed Amendment are:

1. The new quarterly allocation for the Georges Bank Area might increase somewhat the likelihood of accidents in the fishery, since higher landings would be allowed in harsher winter months. However, if a protracted period of good weather occurs during the winter months, fishermen should be allowed to take advantage of it. If the weather proves dangerous, fishermen can remain safely at the dock knowing that the roll over provisions of the Amendment will allow them to harvest those clams when the weather clears, or in later quarters if need be. Fishermen have been making the decision on whether it is safe to fish for centuries; there is no sudden need for government to make it for them.

D. Other E.O. 12291 Requirements

E.O. 12291 requires that the following three issues be considered:

1. Will the Plan have an annual effect on the economy of \$100 million or more.
2. Will the Plan lead to an increase in the costs or prices for consumers, individual industries, Federal, State, or local government agencies or geographic regions.

3. Will the Plan have significant adverse effects on competition, employment, investment, productivity, innovation, or on the ability of US based enterprises to compete with foreign based enterprises in domestic or export markets.

The Amendment should not have an annual effect of \$100 million or more since the total fishery had a value of only \$25 million in 1983 and since 1950 has never exceeded \$27 million.

The Amendment should not lead to an increase in the costs or prices for consumers, individual industries, Federal, State, or local government agencies or geographic regions. It is expected that the governmental costs of implementing the Amendment will be similar to those experienced in enforcing the current FMP. NMFS enforcement costs should decrease because of the revisions to the enforcement provisions of the regulations.

The Amendment should not have significant adverse effects on competition, employment, investment, productivity, innovation, or on the ability of US based enterprises to compete with foreign based enterprises in domestic or export markets. It should have no impact on competition, employment, investment, innovation, or foreign competition.

V. Impacts of the Plan relative to the Regulatory Flexibility Act and the Paperwork Reduction Act of 1980.

The Regulatory Flexibility Act requires the examination of the impacts on small businesses, small organizations, and small jurisdictions. The impacts of the Amendment do not favor large businesses over small businesses. Both large and small businesses can benefit from the revisions to the Georges Bank Area regime.

The Paperwork Reduction Act concerns the collection of information. The intent of the Act is to minimize the Federal paperwork burden for individuals, small business, State and local governments, and other persons as well as to maximize the usefulness of information collected by the Federal government. This Amendment does not change the FMP's reporting and makes minor revisions to the permitting requirements. The annual permit provision is evaluated in RIR section II.E.

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration
50 CFR 652
[Docket No.]
ATLANTIC SURF CLAM AND OCEAN QUAHOG FISHERIES

AGENCY: National Marine Fisheries Service (NMFS, NOAA, Commerce).

ACTION: Proposed rule.

SUMMARY: NOAA issues a proposed rule to implement conservation and management measures as prescribed in the proposed Amendment #7 (Amendment) to the Fishery Management Plan for the Atlantic Surf Clam and Ocean Quahog Fisheries (FMP).

DATE: Comments on the proposed rule must be received on or before [insert date 30 days after publication in the FEDERAL REGISTER].

ADDRESSES: Comments on the proposed rule, the Amendment, or supporting documents should be sent to Mr. Richard Schaefer, Acting regional Director, National Marine Fisheries Service, Northeast Regional Office, 14 Elm Street, Gloucester, MA 01930-3799. Mark the outside of the envelope "Comments on Atlantic Surf Clam and Ocean Quahog Plan".

Copies of the Amendment, the environmental assessment, and the draft regulatory impact review/initial regulatory flexibility analysis are available from Mr. John C. Bryson, Executive Director, Mid-Atlantic Fishery Management Council, Room 2115 Federal Building, 300 South New Street, Dover, DE 19901-6790.

FOR FURTHER INFORMATION CONTACT: Bruce Nicholls, (617) 281-3600, ext. 232.

SUPPLEMENTARY INFORMATION:

BACKGROUND

The Amendment was prepared by the Mid-Atlantic Fishery Management Council (Council) in consultation with the New England Fishery Management Council. A notice of availability for the proposed Amendment was published in the FEDERAL REGISTER on , 1987 (FR). Copies of the Amendment are available from the Council upon request at the address given above. The Amendment revises management measures for Atlantic surf clams.

The Amendment would: (1) change the quarterly quota allocation for the Georges Bank Area from 10%-40%-40%-10% to 25% for each quarter; (2) remove for all Areas the 5,000 bushel threshold for transfer of unharvested quota from one quarter to the next; (3) add the provision that any unharvested quota be distributed proportionally among the remaining quarters in the year rather than being added totally to the next quarter for the Nantucket Shoals and Georges Bank Areas; (4) remove the 10% limit on carry over of unharvested quota from one year to the next, but provide that any such carry over be distributed proportionally to each quarter for the Nantucket Shoals and Georges Bank Areas; (5) provides for annual renewal of vessel permits; and (6) makes changes to the regulations to enhance enforcement and prosecution. The management unit is all surf clams (*Spisula solidissima*) and all ocean quahogs (*Arctica islandica*) in the Atlantic fishery conservation zone (FCZ). The objectives of the FMP are:

1. Rebuild the surf clam populations to allow eventual harvest approaching the 50 million pound level, which is the estimate of maximum sustainable yield over the range of the resource, based on the average yearly catch from 1960 to 1976.
2. Minimize economic dislocation to the extent possible consistent with objective 1 and encourage efficiency in the fishery.

3. Prevent the harvest of ocean quahogs from exceeding maximum sustainable yield and direct the fishery toward achieving Optimum Yield.
4. Provide the greatest degrees of freedom and flexibility to all harvesters of these resources consistent with the attainment of the other objectives of this Plan.
5. Optimize yield per recruit.
6. Increase understanding of the conditions of the stocks and fishery.

The FMP contains three management areas for surf clams: the Mid-Atlantic Area (south of the line that begins at 41°18'16.249" north latitude and 71°54'28.477" west longitude and proceeds S 37°22'32.75" E to the point of intersection with the outward boundary of the FCZ), the Nantucket Shoals Area (north of the line that begins at 41°18'16.249" north latitude and 71°54'28.477" west longitude and proceeds S 37°22'32.75" E to the point of intersection with the outward boundary of the FCZ and west of 69° longitude), and the Georges Bank Area (north of the line that begins at 41°18'16.249" north latitude and 71°54'28.477" west longitude and proceeds S 37°22'32.75" E to the point of intersection with the outward boundary of the FCZ and east of 69° longitude).

The Amendment would change the relevant paragraphs of section XIII.B.2.a. as follows:

1. In the Georges Bank Area the annual quota is divided into equal quarterly quotas, the quarters being: 1 January - 31 March, 1 April - 30 June, 1 July - 30 September, and 1 October - 31 December. If the first day of a calendar quarter does not fall on Sunday, then the fishing quarter will begin on the first Sunday of the new calendar quarter.
2. In the Mid-Atlantic Area, if the actual catch of surf clams in any one quarter falls short of the specified quarterly quota, the Regional Director shall add the amount of the shortfall to the next succeeding quarterly quota. If the actual catch of surf clams in any quarter exceeds the specified quarterly quota, the Regional Director shall subtract the amount of the excess from the next succeeding quarterly quota. The Regional Director shall publish a notice in the *Federal Register* whenever the quarterly quota for surf clams is adjusted. It is understood that this process would also operate between years, that is, between the last quarter of one year and the first quarter of the next year.
3. In the Nantucket Shoals Area, if the actual catch of surf clams in any quarterly period falls short of the specified quarterly quota, the Regional Director will add the amount of the shortfall proportionally to the quotas of the remaining quarters of the year. If the actual catch of surf clams exceeds the quarterly quota, the Regional Director will subtract the amount of the excess from the succeeding quarterly quota. The Regional Director shall publish a notice in the *Federal Register* whenever any quarterly quota for surf clams is adjusted as described above. The shortfall or excess will carry over from the last quarter of one year to the and any such carry over shall be distributed proportionally to each quarter of the new year.
4. In the Georges Bank Area, if the actual catch of surf clams in any quarterly period falls short of the specified quarterly quota, the Regional Director will add the amount of the shortfall equally to the quotas of the remaining quarters of the year. If the actual catch of surf clams exceeds the quarterly quota, the Regional Director will subtract the amount of the excess from the succeeding quarterly quota. The Regional Director shall publish a notice in the *Federal Register* whenever any quarterly quota for surf clams is adjusted as described above. The shortfall or excess will carry over from the last quarter of one year to the and any such carry over shall be distributed equally to each quarter of the new year.

With regard to the annual permit provision, the Amendment would change the relevant paragraphs of section XIII.B.2.a. as follows:

Permits expire:

when the owner or operator retires the vessel from the fishery (it is a rebuttable presumption that failure to land any surf clams or ocean quahogs for 52 consecutive weeks constitutes retirement from the fishery); or

when the ownership of the vessel changes, however, the Regional Director may authorize continuation of a vessel permit for the surf clam fishery if the new owner so requests and the vessel meets the relevant eligibility criteria; or

on 31 December of each year.

Vessels that establish eligibility to fish in both the Mid-Atlantic and New England Areas pursuant to XIII.A.2 need not re-establish such eligibility as part of the annual permit renewal.

In addition to being revised to implement the proceeding changes to the FMP, the regulations would be amended as set forth below. These measures are already provided for in the FMP and are included here only to facilitate understanding of the proposed action.

Section 652.1 is amended by designating the existing section as (a) and adding a new paragraph (b) to read as follows:

(b) These regulations implement the Fishery Management Plan for the Surf Clam and Ocean Quahog Fisheries.

In section 652.7, paragraph (a) introductory text and paragraph (f)(1) are revised and paragraph (m) is redesignated as (n) and a new paragraph (m) is added to read as follows:

(a) No permit holder may fish for any surf clams or ocean quahogs:

(f)(1) Refuse to permit an authorized officer to board a fishing vessel subject to such a person's control no matter where that vessel may be located, or to enter areas of custody subject to such a person's control, for purposes of conducting any search or inspection in connection with the enforcement of the Act, these regulations, or any other regulations issued under the Act.

(m) No dealer, vessel owner, operator, or other person will knowingly submit false information in records and reports required to be kept and filed under section 652.6.

In section 652.22, paragraphs (a)(4) and (f)(1) are revised to read as follows:

(a)(4) *Make-up periods.* Commencing at 0001 hours on the first Sunday of November and ending at 2400 hours on the last Thursday of April, and during the intervening months, fishermen may claim a make-up period, if in the opinion of the vessel operator, weather or sea conditions would prevent effective fishing or endanger the vessel or crew.

(f) *Presumption.* (1) The presence of surf clams or ocean quahogs aboard any vessel engaged in the surf clam or ocean quahog fishery or the presence of any part of a vessel's gear in the water more than 12 hours after a closure occurs under this section will be *prima facie* evidence that such vessel was fishing for surf clams or ocean quahogs in violation of these regulations.

CLASSIFICATION

Section 304(a)(1)(C)(ii) of the Magnuson Act, as amended by Pub. L. 97-453, requires the Secretary of Commerce (Secretary) to publish regulations proposed by a Council within 30 days of the receipt of the FMP and proposed regulations. At this time the Secretary has not determined that the FMP these rules would implement is consistent with the national standards, other provisions of the Magnuson Act, and other

applicable law. The Secretary, in making that determination, will take into account the information, views, and comments received during the comment period.

The Council prepared an environmental assessment (EA) for this Amendment which analyzes the consequences of this action. The Assistant Administrator concluded that there will be no significant impact on the human environment. A copy of the EA is available from the Council at the address listed above.

The NOAA Administrator determined that this proposed rule is not a "major rule" requiring a regulatory impact analysis under Executive Order 12291. This determination is based on the draft regulatory impact review (RIR) prepared by the Council which demonstrates positive net short-term and long-term economic benefits to the fishery under the proposed management measures. A copy of this review may be obtained from the Council at the address listed above.

This proposed rule is exempt from the procedures of E.O. 12291 under Section 8(a)(2) of that order. Deadlines imposed under the Magnuson Act, as amended, require the Secretary to publish this proposed rule 30 days after its receipt. The proposed rule is being reported to the Director of the Office of Management and Budget with an explanation of why it is not possible to follow review procedures of the order.

The Council prepared an initial regulatory flexibility analysis as part of the regulatory impact review which concludes that this proposed rule, if adopted, would not have a significant effect on small entities. A copy of this analysis may be obtained from the Council at the address listed above.

This proposed rule does not contain a collection of information requirement subject to the Paperwork Reduction Act.

The Council determined that this rule will be implemented in a manner that is consistent to the maximum extent practicable with the approved coastal zone management (CZM) programs of Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, and Virginia. This determination has been submitted for review by the responsible State agencies under Section 307 of the Coastal Zone Management Act. New Hampshire, Massachusetts, Connecticut, New York, New Jersey, Pennsylvania, Delaware, and Virginia have concurred with the Council's evaluation. Maine, Rhode Island, and Maryland made no response.

List of Subjects in 50 CFR 652

Administrative practice and procedure, Fish, Fisheries, Reporting requirement.

Dated:

Signature Block

For the reasons set out in the preamble, NOAA proposes to amend 50 CFR Part 652 as set forth below:

PART 652 -- [AMENDED]

1. The authority citation for Part 652 continues to read as follows:

AUTHORITY: 16 U.S.C. 1801 *et seq.*

2. Section 652.1 is amended by designating the existing section as (a) and adding a new paragraph (b) to read as follows:

§652.1 Purpose.

* * * * *

(b) These regulations implement the Fishery Management Plan for the Atlantic Surf Clam and Ocean Quahog Fisheries.

3. Section 652.2 is revised by adding a new definition "Areas of custody" in alphabetical order to read as follows:

§652.2 Definitions.

* * * * *

Areas of custody means any vessels, buildings, vehicles, piers, or dock facilities where surf clams or ocean quahogs may be found.

* * * * *

4. In §652.4, paragraph (h), the introductory text is revised, paragraph (2) is redesignated as (3), and a new paragraph (2) is added to read as follows:

§652.4 Permits.

* * * * *

(h) *Expiration*. Except as provided in paragraph (h)(3), a permit will expire:

* * * * *

(2) On 31 December of each year, or

* * * * *

5. In §652.7, paragraph (a) introductory text and paragraph (f)(1) are revised and paragraph (m) is redesignated as (n) and a new paragraph (m) is added to read as follows:

§652.7 Prohibitions.

(a) No permit holder may fish for any surf clams or ocean quahogs: * * *

* * * * *

(f) * * *

(1) Refuse to permit an authorized officer to board a fishing vessel subject to such person's control no matter where that vessel may be located, or to enter areas of custody subject to such a person's control, for purposes of conducting any search or inspection in connection with the enforcement of the Act, these regulations, or any other regulations issued under the Act;

* * * * *

(m) No dealer, vessel owner, operator, or other person may knowingly submit false information in records and reports required to be kept and filed under §652.5.

* * * * *

6. In §652.21, paragraphs (a)(3), (b)(3), (c)(2), and (c)(3) are revised to read as follows:

§652.21 Catch quotas.

(a) * * *

* * * * *

(3) *Adjustments.* If the actual catch of surf clams in any one quarter falls short of the specified quarterly quota, the Regional Director will add the amount of the shortfall to the succeeding quarterly quotas. If the actual catch of surf clams in any quarter exceeds the specified quarterly quota, the Regional Director shall subtract the amount of the excess from the succeeding quarterly quotas. The last quarterly period would be carried over to the first quarterly period of the next year.

(b) * * *

(3) *Adjustments.* If the actual catch of surf clams in any one quarter falls short of a quarterly quota, the Regional Director will add the amount of the shortfalls proportionally to the remaining quarterly quotas of the year. If the actual catch of surf clams exceeds a quarterly quota, the Regional Director will subtract the amount of the excess proportionally from the succeeding quarterly quotas for the year. The last quarterly period would be carried over proportionally to the four quarterly periods of the next year.

(c) * * *

(2) *Quarterly quotas.* This annual quota will be divided into quarterly quotas, the quarters and proportion of the quota being January 1 - March 31, 25 percent; April 1 - June 30, 25 percent; July 1 - September 30, 25 percent; and October 1 - December 31, 25 percent. Each fishing quarter will begin on the first Sunday of the new calendar quarter.

(3) *Adjustments.* If the actual catch of surf clams in any one quarter falls short of a quarterly quota, the Regional Director will add the amount of the shortfalls proportionally to the remaining quarterly quotas of the year. If the actual catch of surf clams exceeds a quarterly quota, the Regional Director will subtract the amount of the excess proportionally from the succeeding quarterly quotas for the year. The last quarterly period would be carried over proportionally to the four quarterly periods of the next year.

* * * * *

7. In §652.22, paragraph (a)(4) and (f)(1) are revised to read as follows:

§652.22 Effort restrictions.

(a) * * *

* * * * *

(4) *Make-up periods.* Commencing at 0001 hours on the first Sunday of November and ending at 1800 hours on the last Thursday of April, and during the intervening months, fishermen may claim a make-up period, if in the opinion of the vessel operator, weather or sea conditions would prevent effective fishing or endanger the vessel or crew.

* * * * *

(f) *Presumption.* (1) The presence of surf clams or ocean quahogs aboard any vessel engaged in the surf clam or ocean quahog fishery or the presence of any part of the vessel's gear in the water more than 12 hours after a closure occurs under this section will be *prima facie* evidence that such vessel was fishing for surf clams or ocean quahogs in violation of these regulations.

APPENDIX VI. ABBREVIATIONS AND DEFINITIONS OF TERMS

Act (MFCMA) - the Magnuson Fishery Conservation and Management Act of 1976, as amended, 16 USC 1801 *et seq.*

bushel (bu) - a standard unit of measure presumed to hold 1.88 cubic feet of surf clams or ocean quahogs in the shell (1 bu. of offshore surf clams = 17 lbs. of meats) (1 bu. of ocean quahogs = 10 lbs. of meats).

cage - a standard unit of measure presumed to hold 32 bu. of surf clams or ocean quahogs in the shell. The outside dimensions of a standard cage generally are 3' wide, 4' long, and 5' high.

CFR - Code of Federal Regulations.

Council (MAFMC) - the Mid-Atlantic Fishery Management Council.

CPUE - catch per unit of effort.

Fishery Conservation Zone (FCZ) - the zone contiguous to the territorial sea of the US, the inner boundary of which is a line coterminous with the seaward boundary of each of the coastal States and the outer boundary of which is a line drawn in such a manner that each point on it is 200 nautical miles from the baseline from which the territorial sea is measured.

Georges Bank Area - that portion of the New England Area east of 69° W. longitude.

GRT - gross registered ton.

Mid-Atlantic Area - that portion of the FCZ south of the line that begins at 41°18'16.249" north latitude and 71°54'28.477" west longitude and proceeds S 37°22'32.75" E to the point of intersection with the outward boundary of the FCZ.

MSY - maximum sustainable yield. The largest average catch of yield that can continuously be taken from a stock under existing environmental conditions.

Nantucket Area - that portion of the New England Area west of 69° W. longitude.

natural mortality - deaths from all causes except fishing, including predation, senility, epidemics, pollution, etc.

NEFC - the Northeast Fisheries Center of the NMFS.

New England Area - that portion of the FCZ north of the line that begins at 41°18'16.249" north latitude and 71°54'28.477" west longitude and proceeds S 37°22'32.75" E to the point of intersection with the outward boundary of the FCZ.

NMFS - the National Marine Fisheries Service of the National Oceanic and Atmospheric Administration (NOAA).

Notification Area - an Area within which a vessel may not fish for surf clams prior to the vessel's owner or operator notifying the Regional Director pursuant to this FMP.

OY - Optimum Yield.

Regional Director (RD) - the Regional Director, Northeast Region, NMFS.

stock assessment - the NMFS yearly biological assessment of the status of the resources. This document provides the official estimates of stock size, spawning stock size, fishing mortalities, recruitment, and other

parameters used in this Plan. The data from these assessments shall constitute the "best scientific information currently available" as required by the Act.

Territorial Sea - marine waters from the shoreline to 3 miles seaward.

USDC - US Department of Commerce.

year-class - the fish spawned or hatched in a given year.

yield per recruit (YPR) - the expected yield in weight from a single recruit.