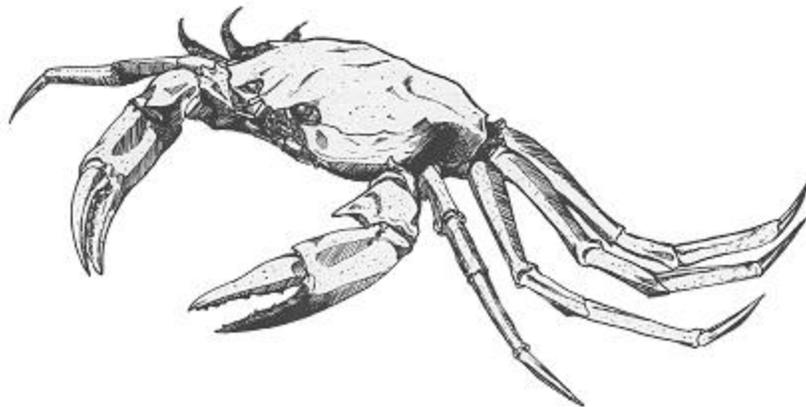

**Fishery Management Plan
for
Deep-Sea Red Crab
(*Chaceon quinquedens*)**

Volume II

Appendices



March 2002

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Appendices
to the
Deep-Sea Red Crab
Fishery Management Plan
and
Environmental Impact Statement

Appendix A: EFH Source Document

Appendix B: Social and Economic Baseline Information

Appendix C: Draft Regulatory Text

Appendix D: PRA Supporting Statements

Appendix E: CZMA Transmittal Letters

**Appendix F: Public Hearing Summaries / Written Public
Comments**

Appendix A

**EFH Source Document: Deep-Sea Red Crab Life History and
Habitat Characteristics**



NOAA Technical Memorandum NMFS-NE-163

Essential Fish Habitat Source Document:

**Red Deepsea Crab, *Chaceon*
(*Geryon*) *quinquedens*,
Life History and Habitat Characteristics**

U. S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Northeast Region
Northeast Fisheries Science Center
Woods Hole, Massachusetts

January 2001

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NOAA Technical Memorandum NMFS-NE-163

This series represents a secondary level of scientific publishing. All issues employ thorough internal scientific review; some issues employ external scientific review. Reviews are -- by design -- transparent collegial reviews, not anonymous peer reviews. All issues may be cited in formal scientific communications.

Essential Fish Habitat Source Document:

Red Deepsea Crab, *Chaceon* (*Geryon*) *quinquedens*, Life History and Habitat Characteristics

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Woods Hole, Massachusetts

January 2001

Editorial Notes on Issues 122-152 and 163 in the NOAA Technical Memorandum NMFS-NE Series

Editorial Production: For Issues 122-152 and 163, staff of the Northeast Fisheries Science Center's (NEFSC's) Ecosystems Processes Division have largely assumed the role of staff of the NEFSC's Editorial Office for technical and copy editing, type composition, and page layout. Other than the four covers (inside and outside, front and back) and first two preliminary pages, all preprinting editorial production has been performed by, and all credit for such production rightfully belongs to, the authors and acknowledgees of each issue, as well as those noted below in "Special Acknowledgments."

Special Acknowledgments: David B. Packer, Sara J. Griesbach, and Luca M. Cargnelli coordinated virtually all aspects of the preprinting editorial production, as well as performed virtually all technical and copy editing, type composition, and page layout, of Issues 122-152. David B. Packer coordinated those aspects for Issue 163. Rande R. Cross, Claire L. Steimle, and Judy D. Berrien conducted the literature searching, citation checking, and bibliographic styling for Issues 122-152. Claire L. Steimle and Judy D. Berrien conducted those functions for Issue 163. Joseph J. Vitaliano produced all of the food habits figures in Issues 122-152.

Internet Availability: Issues 122-152 and 163 are being copublished, *i.e.*, both as paper copies and as web postings. All web postings are available at: www.nefsc.nmfs.gov/nefsc/habitat/efh. Also, all web postings will be in "PDF" format.

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Species Names: The NMFS Northeast Region's policy on the use of species names in all technical communications is generally to follow the American Fisheries Society's lists of scientific and common names for fishes (*i.e.*, Robins *et al.* 1991^a), mollusks (*i.e.*, Turgeon *et al.* 1998^b), and decapod crustaceans (*i.e.*, Williams *et al.* 1989^c), and to follow the Society for Marine Mammalogy's guidance on scientific and common names for marine mammals (*i.e.*, Rice 1998^d). Exceptions to this policy occur when there are subsequent compelling revisions in the classifications of species, resulting in changes in the names of species (*e.g.*, Manning and Holthius 1989^e, Cooper and Chapleau 1998^f, McEachran and Dunn 1998^g).

^aRobins, C.R. (chair); Bailey, R.M.; Bond, C.E.; Brooker, J.R.; Lachner, E.A.; Lea, R.N.; Scott, W.B. 1991. Common and scientific names of fishes from the United States and Canada. 5th ed. *Amer. Fish. Soc. Spec. Publ.* 20; 183 p.

^bTurgeon, D.D. (chair); Quinn, J.F., Jr.; Bogan, A.E.; Coan, E.V.; Hochberg, F.G.; Lyons, W.G.; Mikkelsen, P.M.; Neves, R.J.; Roper, C.F.E.; Rosenberg, G.; Roth, B.; Scheltema, A.; Thompson, F.G.; Vecchione, M.; Williams, J.D. 1998. Common and scientific names of aquatic invertebrates from the United States and Canada: mollusks. 2nd ed. *Amer. Fish. Soc. Spec. Publ.* 26; 526 p.

^cWilliams, A.B. (chair); Abele, L.G.; Felder, D.L.; Hobbs, H.H., Jr.; Manning, R.B.; McLaughlin, P.A.; Pérez Farfante, I. 1989. Common and scientific names of aquatic invertebrates from the United States and Canada: decapod crustaceans. *Amer. Fish. Soc. Spec. Publ.* 17; 77 p.

^dRice, D.W. 1998. Marine mammals of the world: systematics and distribution. *Soc. Mar. Mammal. Spec. Publ.* 4; 231 p.

^eManning, R.B.; Holthius, L.B. 1989. Two new genera and nine new species of geryonid crabs (Crustacea, Decapoda, Geryonidae). *Proc. Biol. Soc. Wash.* 102:50-77.

^fCooper, J.A.; Chapleau, F. 1998. Monophyly and interrelationships of the family Pleuronectidae (Pleuronectiformes), with a revised classification. *Fish. Bull. (U.S.)* 96:686-726.

^gMcEachran, J.D.; Dunn, K.A. 1998. Phylogenetic analysis of skates, a morphologically conservative clade of elasmobranchs (Chondrichthyes: Rajidae). *Copeia* 1998(2):271-290.

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Statistical Terms: The NEFSC Editorial Office's policy on the use of statistical terms in all technical communications is generally to follow the International Standards Organization's handbook of statistical methods (*i.e.*, ISO 1981^g).

^aRobins, C.R. (chair); Bailey, R.M.; Bond, C.E.; Brooker, J.R.; Lachner, E.A.; Lea, R.N.; Scott, W.B. 1991. Common and scientific names of fishes from the United States and Canada. 5th ed. *Amer. Fish. Soc. Spec. Publ.* 20; 183 p.

^bTurgeon, D.D. (chair); Quinn, J.F., Jr.; Bogan, A.E.; Coan, E.V.; Hochberg, F.G.; Lyons, W.G.; Mikkelsen, P.M.; Neves, R.J.; Roper, C.F.E.; Rosenberg, G.; Roth, B.; Scheltema, A.; Thompson, F.G.; Vecchione, M.; Williams, J.D. 1998. Common and scientific names of aquatic invertebrates from the United States and Canada: mollusks. 2nd ed. *Amer. Fish. Soc. Spec. Publ.* 26; 526 p.

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^fMcEachran, J.D.; Dunn, K.A. 1998. Phylogenetic analysis of skates, a morphologically conservative clade of elasmobranchs (Chondrichthyes: Rajidae). *Copeia* 1998(2):271-290.

^gISO [International Organization for Standardization]. 1981. ISO standards handbook 3: statistical methods. 2nd ed. Geneva, Switzerland: ISO.

FOREWORD

One of the greatest long-term threats to the viability of commercial and recreational fisheries is the continuing loss of marine, estuarine, and other aquatic habitats.

Magnuson-Stevens Fishery Conservation and Management Act (October 11, 1996)

The long-term viability of living marine resources depends on protection of their habitat.

NMFS Strategic Plan for Fisheries Research (February 1998)

The Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), which was reauthorized and amended by the Sustainable Fisheries Act (1996), requires the eight regional fishery management councils to describe and identify essential fish habitat (EFH) in their respective regions, to specify actions to conserve and enhance that EFH, and to minimize the adverse effects of fishing on EFH. Congress defined EFH as “those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity.” The MSFCMA requires NMFS to assist the regional fishery management councils in the implementation of EFH in their respective fishery management plans.

NMFS has taken a broad view of habitat as the area used by fish throughout their life cycle. Fish use habitat for spawning, feeding, nursery, migration, and shelter, but most habitats provide only a subset of these functions. Fish may change habitats with changes in life history stage, seasonal and geographic distributions, abundance, and interactions with other species. The type of habitat, as well as its attributes and functions, are important for sustaining the production of managed species.

The Northeast Fisheries Science Center compiled the available information on the distribution, abundance, and habitat requirements for each of the species managed by the New England and Mid-Atlantic Fishery Management Councils. That information is presented in this series of 31 EFH species reports (plus one consolidated methods report). The EFH species reports comprise a survey of the important literature as well as original analyses of fishery-

independent data sets from NMFS and several coastal states. The species reports are also the source for the current EFH designations by the New England and Mid-Atlantic Fishery Management Councils, and have understandably begun to be referred to as the “EFH source documents.”

NMFS provided guidance to the regional fishery management councils for identifying and describing EFH of their managed species. Consistent with this guidance, the species reports present information on current and historic stock sizes, geographic range, and the period and location of major life history stages. The habitats of managed species are described by the physical, chemical, and biological components of the ecosystem where the species occur. Information on the habitat requirements is provided for each life history stage, and it includes, where available, habitat and environmental variables that control or limit distribution, abundance, growth, reproduction, mortality, and productivity.

Identifying and describing EFH are the first steps in the process of protecting, conserving, and enhancing essential habitats of the managed species. Ultimately, NMFS, the regional fishery management councils, fishing participants, Federal and state agencies, and other organizations will have to cooperate to achieve the habitat goals established by the MSFCMA.

A historical note: the EFH species reports effectively recommence a series of reports published by the NMFS Sandy Hook (New Jersey) Laboratory (now formally known as the James J. Howard Marine Sciences Laboratory) from 1977 to 1982. These reports, which were formally labeled as *Sandy Hook Laboratory Technical Series Reports*, but informally known as “Sandy Hook Bluebooks,” summarized biological and fisheries data for 18 economically important species. The fact that the bluebooks continue to be used two decades after their publication persuaded us to make their successors – the 31 EFH source documents – available to the public through publication in the *NOAA Technical Memorandum NMFS-NE* series.

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HIGHLANDS, NEW JERSEY
SEPTEMBER 1999

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NORTHEAST FISHERIES SCIENCE CENTER

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INTRODUCTION

Deep-sea red crabs, *Chaceon (Geryon) quinquedens* Smith 1879 (Figure 1), are contagiously distributed along the continental shelf edge and slope of the western Atlantic, occurring mostly between 200 and 1800 m from Emerald Bank, Nova Scotia (and into the Gulf of Maine) and along the continental slope of the east coast of the U.S. into the Gulf of Mexico (Pequegnat 1970; Williams and Wigley 1977; Elner et al. 1987). Previous reports of the occurrence of *Geryon (Chaceon) quinquedens* off West Africa and elsewhere outside of the western North Atlantic continental shelf edge and slope (including Bermuda, Brazil, and Argentina) were found to involve several new geryonid species or mis-identifications (Manning and Holthuis 1981, 1986, 1989). The species' distribution in the depths of the Caribbean Sea, around the West Indies Islands, and off northeastern South America remains uncertain (R. Manning, National Museum of Natural History, Smithsonian Institution, Washington DC, personal communication, January 2000).

The red crab, like most deep-sea organisms, is slow growing but reaches a maximum size of about 180 mm carapace width (CW) and may live for 15 years or more, although precise information on life span is lacking (Serchuk and Wigley 1982). While catches of red crabs have been noted since the early days of deep-sea trawling in the 1880s (McRae 1961), only since the late 1960s and early 1970s has there been an interest in developing a commercial fishery for this deep-water crab (Wigley et al. 1975). The interest since the 1970s in deep-sea red crab as a harvestable species is thought to be the result of a decline in other coastal and offshore crab and lobster fisheries (Gerrior 1981; Hastie 1995). A deep-sea red crab fishery (and for its sibling species, the golden crab, *Chaceon fenneri*) also developed slightly later in southeastern U.S. and Gulf of Mexico waters (Lindberg and Wenner 1990). To support the development of the red crab fishery, there have been a number of biological and technological studies that were summarized by Hastie (1995). Compared to some other commercially harvested deep-sea crabs, red crabs are medium sized. However, it is primarily the crabs' relatively long (to 60 cm each) walking legs and attached body sections that reach the human consumer (Wigley et al. 1975). Larger (> 114 mm CW) male crabs have traditionally been the target of the fishery (Serchuk and Wigley 1982). They are harvested by trap and trawl, although most of the fishery is part-time or a by-catch from the offshore lobster or groundfish fishery and few fishermen pursue the fishery full time. As a result of this variable effort, annual landings have varied by an order of magnitude and also because the fishery is partially bycatch.

It is important to note that in the information sources reviewed here the size of the deep-sea red crab is usually reported as carapace width (CW); however, this dimension was not measured consistently, and sometimes

included the posterior lateral spines [as on Northeast Fisheries Science Center (NEFSC) surveys], or sometimes the space between the notches forward of this spine, or at time the carapace width limits were unspecified. The percent contributions of the spines to carapace width, compared to inter-notch carapace width, for all size ranges are unknown, at present. Sometimes carapace length is presented, which is the distance between the rostral spine to posterior edge of carapace; this dimension is about 80-82% of the carapace width (Gerrior 1981).

LIFE HISTORY

A graphic summary of the life cycle of deep-sea red crabs was developed by Hastie (1995), based on the work of several researchers (Figure 2). In summary, the red crab's life cycle is typical of most brachyuran crabs with male-female coupling when the mature female molts; fertilized eggs are brooded attached to the undersides of the females; larvae are released into the water column for distribution; and after several typical crab larval stages, juveniles settle to the seabed for a benthic existence through the rest of its relatively long life.

EGGS

Mature eggs are large and yolky for crustaceans and range in diameter from 484 to 846 μm , and are thought to be the largest eggs known for crabs with planktonic development (Haefner 1977, 1978; Hines 1982, 1988). As for most decapod crustaceans, red crab eggs are ovipositioned and held *en mass* on the female pleopods under their abdominal flap for up to nine months until the eggs hatch and the larvae are released into the water column (Haefner 1978). The development of the ova was described by Haefner (1978).

LARVAE

Larval biology for deep-sea red crab is poorly known as few zoea and megalops have been collected or identified in zooplankton collections. None were identified among the 4400 brachyuran crab larvae found in the 1977-1998 NEFSC MARMAP zooplankton collections (J. Goulet, NMFS, NEFSC, Narragansett Laboratory, Narragansett, RI, personal communication, December 1999). However, Roff et al. (1986) reported sparse collections (averaging < 10 per 500 m^3 neuston tow) of the zoeal stage (but not megalops) from off central Nova Scotia into the outer Gulf of Maine and over the northeast peak of Georges Bank. No other larval survey data is known for this species in the northwest Atlantic.

Much of what we know about the development of this stage comes from eggs that were collected from captured females and then hatched and raised in laboratories. Larval development was observed to consist of four zoeal stages and a final megalopa. The zoea is typical in appearance to most brachyurans; i.e., with a large dorsal spine, and the megalops is also of a typical crab form (Perkins 1973). The larval stages of this species are relatively large in size compared to other brachyuran crabs (Sulkin and Van Heukelem 1980). Kelly et al. (1982) estimated that, depending upon the water temperatures and food encountered during development, the red crab larvae requires about 23-125 days from hatching until the megalops settles. Larvae have been collected in surface waters in June, according to Serchuk and Wigley (1982), but details of these collections were unreported. Roff et al. (1986) also reported collections of these larvae in surface waters (< 40 m) near Nova Scotia.

JUVENILES

Settling is reported at a relatively large first post-megalop instar stage, about 4 mm CW (Van Heukelem et al. 1983). This large size at settlement may be an adaptation to slow post-settlement growth, in that a large size at settlement will reduce the time and number of instars required to reach maturity (Hines 1986, 1990). Growth of juveniles is also partially temperature dependent, as Van Heukelem et al. (1983) reported that juvenile crabs maintained at 9-15°C grew six times faster than those maintained at 6°C, and at least five molts are required to grow to about 20 mm CW.

ADULTS

Haefner (1978) and Van Heukelem et al. (1983) suggest that the red crab requires about 18-20 molts before it reaches its maximum size of about 180 mm CW. Based on tagging studies, older crabs might molt infrequently, and intermolt periods can be 6-7 yrs for larger crabs, > 100 mm CW (Gerrior 1981; Lux et al. 1982). Molting can increase carapace size by about 7-12% and body weight by about 33% (Serchuk and Wigley 1982). The degree of chitinoclasia (black shell disease) and barnacle colonization on red crab carapaces (see the Natural Mortality and Competition sections below) was suggested as useful indicators of the length of time since a red crab's last molt (Haefner 1978).

Van Heukelem et al. (1983) believed that red crabs begin to recruit to the fishery at about 114 mm (CW), which corresponds to an age of about 5-6 yrs. Van Heukelem et al. (1983) also reported that male red crabs reach a maximum size of about 150 mm CW and females are slightly smaller, about 140 mm CW. Gerrior (1981),

however, reports larger maximum sizes for males, 178 mm CW, but a smaller maximum size, ~ 120 mm CW, for females.

Farlow (1980) developed the following size-weight regressions for red crabs:

Males: $\log_{10}W = 3.09970 \log_{10}D - 0.59763$ ($r = 0.96717$, $p = 0.00001$, $N = 140$);

Females: $\log_{10}W = 2.75225 \log_{10}D - 0.34986$ ($r = 0.87320$, $p = 0.00010$, $N = 110$);

All: $\log_{10}W = 3.26202 \log_{10}D - 0.80350$ ($r = 0.97126$, $p = 0.00001$, $N = 263$);

where W = grams (wet weight) and D = cm (posterior lateral spine, point-to-point carapace width). It is noted that this width measurement (D) may be slightly larger than the carapace widths noted in other studies which did not include the lateral spines in their measurements; for example, Gray (1970) measured carapace width between the notches anterior to this spine. Farlow (1980) found the size-weight relationship was curvi-linear for both sexes, with weight gain per growth in width slow at carapace widths below ~ 80 mm, but above 80 mm CW, weight increased rapidly with carapace width expansion. Haefner (1978) reported a similar relationship, as did Twigg et al. (1997) for the Gulf of Mexico population, and they also noted that the size and weight structure of red crabs in the Gulf of Mexico was similar to the population on the Atlantic slope.

REPRODUCTION

Haefner (1977) reports the size at maturity of red crabs off Virginia was between 80-91 mm CW. Several studies reported ovigerous crabs are found primarily at sizes between 80-130 mm CW (Wigley et al. 1975; Haefner 1977; Hines 1988), although some egg-bearing red crabs were observed as small as 61 mm CW (Elner et al. 1987). Lawton and Duggan (1998) suggest that males smaller than 115 mm CW may be functionally immature. Mating behavior is considered typical of other crabs (Hastie 1995). The amount of time a male encases a recently molted female can be several weeks (Elner et al. 1987). The opposite sexes probably rely on pheromones to find each other for mating (Hines 1990), and pheromones are useful if each sex has different preferred depths of occurrence during non-mating periods. Egg mass can be as much as 22% of female body weight, which is much higher than the average 10% for almost all other crabs (Hines 1982). Female red crab fecundity has been estimated to range from 36×10^3 to 226×10^3 eggs per female, and is directly related to female body size (Hines 1988).

Erdman et al. (1991) suggested that the egg brooding period may be about nine months, at least for the Gulf of Mexico population, and larvae are hatched in the early

spring there. There is no evidence of any restricted seasonality in spawning activity in any geographic region of the population, although a mid-winter peak is suggested as larval releases are reported to extend from January to June (Wigley et al. 1975; Haefner 1978; Lux et al. 1982; Erdman et al. 1991; Biesiot and Perry 1995). Laboratory studies also found hatching to occur from April to June (Perkins 1973). Gerrior (1981), however, suggested that red crab egg hatching occurred later, between July and October, based on the ratio of egg-bearing to non-egg-bearing crabs.

Because of the long intermolt period for adult females (5-7 yrs), and the assumption that like most other brachyurans fertilization only occurs at molting, it has been speculated that red crabs may not spawn annually, although it is possible that sperm could be stored for intermolt spawning efforts; thus there can be annual brooding within the population, although not for every mature individual (Hines 1982; Lux et al. 1982; Erdman et al. 1991; Biesiot and Perry 1995). Hines (1990) reports that there is no evidence of senility or any reproduction capacity decline at the largest sizes for the species. However, Lux et al. (1982) and Lawton and Duggan (1998) suggest that there is evidence for a terminal molt; this may restrict any significant increases in fecundity with age.

FOOD HABITS

No information is known on the natural diets of red crab larvae, but it is probably zooplanktivorous, as they were found to thrive on rotifers, brine shrimp, and chopped mollusk meats in laboratory cultures (Perkins 1973; Sulkin and Van Heukelem 1980; Van Heukelem et al. 1983). Sulkin and Van Heukelem (1980) believe that the ability of red crab larvae to develop with reduced growth on a relatively poor diet (i.e., rotifers) suggests an adaptation to patchy and often poor food resources in slope waters. This can also allow the larvae considerable flexibility in prey choice.

Farlow (1980) reported that red crabs are opportunistic feeders, a characteristic of many deep-sea organisms. He reported that post-larval, benthic red crabs ate a wide variety of infaunal and epifaunal benthic invertebrates that they find in the silty sediment or pick off the seabed surface (Gerrior 1981). This observation is supported by submersible observations of red crabs being commonly found in shallow pits and excavations in softer sediments, and by infaunal bivalve mollusks being found in red crab stomachs (Valentine et al. 1980). Farlow (1980) also reported that smaller red crabs ate sponges, hydroids, gastropod and scaphopod mollusks, small polychaetes and crustaceans, and possibly tunicates. Larger crabs ate similar small benthic fauna and larger prey, such as demersal and mid-water fish (*Nezumia* and myctophids were identified in red crab guts), squid, and

the relatively large, epibenthic, quill worm (*Hyalinoecia artifex*). Farlow's (1980) finding of sponges, hydroids, and tunicates in the diets suggests that epifauna attached to solid surfaces are also preyed upon; such epifauna is most common within the deeper rocky areas of the Gulf of Maine and within submarine canyons. Gray (1970) reported that red crabs held in aquaria ate anemones by hovering over an anemone until it extended its tentacles, then it reached down with its chelipeds and gently pulled off and ate one tentacle at a time until the anemone was bare of tentacles. Farlow (1980) considered the red crab the dominant large predator of the biomass on the upper slope.

They can also scavenge deadfalls (e.g., trawl discards) of fish and squid, as they are readily caught in traps with these as bait (Gerrior 1981) and eat them when held in aquaria (Gray 1970). Olfaction appears to be important in locating foodfalls as they are reported to be attracted to bait within a several km radius (Diehl and Biesiot 1994). They also probably resort to sediment deposit feeding at times and consume anything else they might encounter that can provide sustenance, including man-made artifacts; e.g., wood chips, pieces of yellow rubber and glass tubing have been found in the stomachs of some red crabs (Farlow 1980). American lobsters are also known to eat such man-made artifacts in coastal waters (Steimle 1994).

Elnor et al. (1987) reports that unlike other crabs, red crabs do not stop feeding during mating; this is possibly an adaptation to an uncertain food supply and an extended male-female coupling period. Farlow (1980) estimated that "average-sized" red crabs fed in laboratory aquaria ate an average of 0.32 g wet wt of prey per day.

NATURAL MORTALITY

There are few records of predation on red crabs and these are by several species of gadid fishes. Sedberry and Musick (1978) reported that the longfin hake (*Urophycis chesteri*) ate red crab as a minor prey. A search of the 1973-1990 NEFSC food habits data base (Reid et al. 1999) and shark prey data base found only a few instances of red crab identified as being eaten by, for example, cod (*Gadus morhua*) and red hake (*Urophycis chuss*), and there was no evidence of predation by larger sharks (W. Pratt, NMFS, NEFSC, Narragansett Laboratory, Narragansett, RI, personal communication, December, 1999). This lack of predation is unexpected as they do not have any obviously strong defensive mechanisms (they are non-burrowing, relatively slow moving, and weakly spined) and, as prey, they have a food energy value that is mid-range for deep-sea benthic crustaceans (Steimle and Terranova 1988). Farlow (1980) reports fresh red crab shell remains in the stomachs of larger crabs, suggesting a possibility of cannibalism; he discounted the possibility that these remains were

remnants of molted shells. Gray (1970) noted that red crabs tend to autonomize any legs that are damaged; this can also be a source of any red crab fragments found in stomachs.

The pathology of deep-sea red crabs is also poorly known. Red crabs have been reported often with dark lesions, shell disease, or chitinoclasia on their carapace (Hines 1990; Young 1991). These lesions are thought to be caused by bacteria that are found attached or adhering to the crab's carapace; several bacterial taxa have been isolated from the infected lesions (Bullis et al. 1988). An association of the lesions with a former deep-water sewage sludge disposal activity was tentatively implicated as a cause of these lesions, although there is insufficient evidence to fully support such an association because a relatively high incidence of shell disease was also identified on specimens collected and preserved during the late nineteenth century, well prior to any substantial offshore waste disposals (Young 1991; Hastie 1995). Larger crabs are reported to have more incidences of lesions, probably because of a longer intermolt period, and the lesions are thought to disappear with molting (Young 1991). Diehl and Biesiot (1994) report that there is a notable relationship between the degree of multi locus heterozygosity (genetic variability) and shell disease in individuals of this species that is "novel". The effect of the lesions on the health of red crabs is poorly known, although the lesions can affect marketability, if the crabs are sold whole. Red crabs do not appear to be susceptible to gaffkemia, or red tail disease, that occurs in the American lobster (Cornick and Stewart 1975).

The relatively long life span of red crabs potentially exposes them over an extended period of time to the accumulation of contaminants that become available offshore; e.g., from atmospheric deposition, currents, or waste disposal. Examinations of red crab tissues, however, have shown that levels of certain toxic metals are similar, but no higher, to that found for short-lived, coastal species (Greig et al. 1976).

COMPETITION

Although observations on competitive interactions of red crabs with other species are poorly known, Hines (1990) suggested that the strong-clawed Jonah crab, *Cancer borealis*, and the American lobster, *Homarus americanus*, may be competing with red crabs on the continental shelf edge, although the nature of this competition (food or habitat) has not been observed. Hagfish (*Myxine* spp.) and other scavengers can compete for deadfalls (Lockhart et al. 1990). A variety of benthivorous demersal fish that occur on the upper slope, such as those commonly found in red crab or deep-sea lobster traps, including cusk (*Brosme brosme*) (Stone and Bailey 1980), or observed by divers where red crabs occur, such as eelfish (*Aldrovandia affinis*), rattails

(*Coryphanoides* sp.), white hake (*Urophycis tenuis*), and galatheid crabs (*Munida* sp.) (Whitlatch et al. 1990), can compete with red crabs for benthic prey. Near and south of Cape Hatteras, a larger geryonid crab – the North American golden crab, *Chaceon fenneri*, is also found on the upper slope and could be competing with *C. quinquedens* for some habitat space or other resources if the two species populations overlap in habitat use (Lockhart et al. 1990; Hastie 1995).

Although not strictly a competitive relationship, a number of macroscopic organisms are reported to live epizoically on the surfaces of the red crab shell; these commonly include some species of stalked or "goose" barnacles, which are filter-feeders. A commensal polychaete worm, *Dorveilla geryonicola*, has been reported to inhabit the gill chamber of red crabs, but its source of food and effect on the crab is unknown (Gaston and Benner 1981).

MIGRATION

Tagging studies off southern New England by Ganz and Herrmann (1975) and Lux et al. (1982) suggest adult red crabs move both up and down the continental slope, covering a range of about 500 m in depth, perhaps as part of their spawning cycle. The adults were also found to move laterally almost 100 km along the slope, but most tag returns were from areas within 20 km of their release location. Movements of the tagged crabs within the ~200-1000 m depth zone, between Hudson and Block Canyons, seem to be generally without any predominant direction. Juvenile red crabs, which are thought to settle from their larval stage to the seabed in deeper mid-slope waters, are reported to move gradually upslope into shallower waters with growth (Wigley et al. 1975), but this may not be a true migration.

STOCK STRUCTURE

Wigley et al. (1975) reported a bimodal depth distribution in male and female red crab size frequency distributions south of Georges Bank, although Farlow (1980) and Gerrior (1981) found less distinct segregation of sexes in their studies. Lockhart et al. (1990) suggested that the habitat use and distribution of the Gulf of Mexico population of red crabs seems different from what has been reported for the Middle Atlantic Bight population. This suggests that there can be physiological tolerance differences between these two populations. However, Diehl and Biesiot (1994) reported that red crabs have a high degree of genetic variability, more so than other deep-sea crustaceans, which can mask evidence of a genetic separation trend.

HABITAT CHARACTERISTICS

The larvae of this species are pelagic and occur in warmer and lower salinity surface waters above and beyond the continental slope habitat frequented by adult females. Post-larval red crabs are primarily inhabitants of the silty seabed of the deep cold water on the outer continental shelf and mid to upper continental slope of the western North Atlantic, south of the Gulf of Saint Lawrence (Canada), into the partially rocky Gulf of Maine, and along the continental shelf edge and slope into the Gulf of Mexico, and possibly the western South Atlantic. These crabs are considered part of an assemblage of deep-water crustaceans that inhabit the mid to upper continental slope of the northwest Atlantic, and this assemblage includes a number of smaller shrimp and crabs (Wenner and Boesch 1979). Salinities on the upper slope where benthic red crabs occur tend to be stable and oceanic at about 35-36 ppt (Schmitz et al. 1987). The thermal regime can be more variable, ~ 4-10°C, and include the temporary warming effects of the passage of an inshore loop or gyre of the Gulf Stream along the upper slope and shelf edge.

EGGS

As for most decapod crustacea, the eggs of the red crab are attached *en mass* to pleopods under the abdominal flap of females until the eggs hatch and the larvae are released into the water column (Haefner 1978). Egg-bearing females are most commonly found on the shallow continental slope, between about 200-400 m, where temperatures are typically between 4-10°C (Wigley et al. 1975; Kelly et al. 1982; Lindberg et al. 1990). Gray (1970) suggested that egg-bearing females are common within submarine canyons off southern New England.

LARVAE

Sulkin et al. (1980) reported that early larval stages show positive phototaxis down to light intensities of $2 \times 10^{-2} \text{ W/m}^2$. At lower intensities the majority of the larvae were indifferent or negatively phototactic. The larvae were also found to be able to swim through relatively sharp thermal gradients; e.g., 10°C. Kelly et al. (1982) believed that hatched zoea are negatively geotactic and positively phototactic; i.e., they tend to move upward in the water column, and somehow swim hundreds of meters to surface waters. During this ascent, they are thus exposed to changing thermal and prey and predator availability conditions. Roff et al. (1986) reported that the greatest collections of decapod crustacean larvae in Gulf of Maine and Nova Scotian waters, including that of the red crab, occurred in neuston samples from surface waters, < 40 m. Roff et al. also reported that the red crab larvae were collected in relatively low (averaging less

than 10 per neuston tow) concentrations where surface salinities ranged between 28.9 and 33.0 ppt, and temperatures were between 6.0° and 19.5°C. Kelly et al. (1982) reported that red crab larvae can survive temperatures as high as 25°C (as found at the summer sea surface and within parts of the Gulf Stream water mass).

Red crab larvae were also collected between 12 and 270 km offshore in the Nova Scotian-Georges Bank area and, based on a factorial analysis of crustacean larval abundance and distribution collection data, were not strongly associated with concentrations of any other larval crustaceans (Roff et al. 1986).

Red crab zoeal swimming activity slows down as they approach metamorphosis into the megalops or first crab instar stage, which serves to let the megalopa gravitationally (or actively?) descend to the seabed (Kelly et al. 1982).

JUVENILES

The benthic settlement of the first "crab" stage of red crabs is reported to occur in mid-slope water (~ 1000 m), but the growing juveniles may gradually move upslope to warmer, upper slope waters (Wigley et al. 1975). Wigley et al. (1975) reported that "young" red crabs were only collected in cold water, 4.4-5.5°C, which is characteristically found below the ~ 500 m lower limit of the shelf break "warm band" inhabited by tilefish, *Lopholatilus chamaeleonticeps*, and associated species (Steimle et al. 1999). This upslope movement can expose the juveniles to warmer water, and juvenile red crab growth rates were reported to increase as they are gradually exposed to warmer waters in the laboratory (Van Heukelem et al. 1983); this can be a survival enhancement adaptation. Availability of benthic prey may also be a factor in the upslope movement (if it is real), because the mean biomass of benthic infauna increases from 1000 m to 100 m in the Middle Atlantic Bight and New England (Wigley and Theroux 1981; Theroux and Wigley 1998). The juveniles were collected or observed on smooth or dimpled surfaced, silt-clay sediments (Auster et al. 1991), but might occur on other sediment types, especially in the heterogeneous sediment types of the Gulf of Maine and submarine canyons. Gray (1970) reported that the results of his trawl surveys suggested that submarine canyons off southern New England held concentrations of small crabs of both sexes.

The NEFSC collections of juvenile red crab from the bottom trawl surveys that are accompanied by hydrographic data are too few to summarize and draw any conclusions relative to their depth and temperature preferences and thus are not presented.

ADULTS

Like juveniles, adult red crabs are reported associated with smooth or dimpled, unconsolidated and consolidated

silt-clay sediments (Haefner and Musick 1975; Wigley et al. 1975; Valentine et al. 1980; Lindberg et al. 1990), although Schroeder (1959) reported that there were good catches from both hard and soft bottom grounds. However, Herrmann (1974) reported that pot (trap) catches on hard bottoms were small compared to pot catches on softer sediments. Haefner and Musick (1974) reported that catches were lower within Norfolk Submarine Canyon (off Virginia) than on the slope adjacent to the canyon; their report is consistent with Gray (1970) who also noted this inter-canyon habitat preference for adults (especially males) off southern New England. However, Valentine et al. (1980) reported that red crabs were common in Oceanographer Canyon on the southern edge of Georges Bank. Auster et al. (1991) reported submersible observations showing that red crab seem to have a completely random distribution across the seabed, at a depth of about 700 m, without any apparent aggregation nodes.

The upper thermal limits for the benthic red crab have been reported to be about 10-12°C (Haefner 1978), which is also typical of the shelf edge "warm band" favored by tilefish (Steimle et al. 1999), but red crabs were reported to exhibit thermal stress at temperatures above 10°C (Gray 1970; Serchuk and Wigley 1982). The NEFSC spring and fall bottom trawl survey data for small and large (i.e., harvestable-sized) adult red crabs collected at depths less than 400 m shows that, in the shallow edge of their known depth distribution, both size groups were most commonly collected at bottom temperatures of about 11°C in during the February-March spring surveys (Figure 3) and at slightly cooler areas of about 7-9°C during the September-November fall surveys (Figure 4). Both size groups were mostly collected at depths greater than 300 m in both seasons. They were also collected in minor quantities at a greater range of temperatures (3-14°C) and at depths as shallow as 80 m.

The upper depth limits of red crab occurrence along the slope overlaps the deep-sea oxygen minimum zone, which occurs at about 200-400 m along the slope; this zone is where dissolved oxygen concentrations (DO) can be as low as 3 ml/l, while DO concentrations above or below this minimum zone are usually about 5-7 ml/l (Flagg 1987; Schmitz 1987). The ability of red crab to tolerate hypoxic conditions reported by Henry et al. (1990a) and Erdman et al. (1991) seems an adaptation for adults to transcend or inhabit the upper slope oxygen minimum depth zone. Laboratory studies have found that red crabs are intolerant of salinities below 20 ppt (Henry et al. 1990b); however, these low salinity levels are unlikely to occur in the depths of the edge of the continental shelf.

Hastie (1995) believes that several submersible studies (e.g., Valentine et al. 1980; Whitlatch et al. 1990) suggest that red crabs can be locally important bioturbators of surface sediments (and associated infaunal communities) by their sediment digging and benthic foraging activities. This bioturbation was speculated to

play an important role in maintaining deep-sea biodiversity.

Although red crabs are most often found in outer continental shelf and slope depths > 100 m, they are also reported at depths as shallow as 40 m in the Gulf of Maine (Lux et al. 1982). Red crabs have not been reported to be a common member of the tilefish pueblo village, burrow, or canyon community, although red crab and tilefish depth distribution zones overlap (Grimes et al. 1987; Cooper et al. 1987). Red crabs, however, can be common in some canyon systems, such as Oceanographer Canyon and others along southern New England (Gray 1970; Valentine et al. 1980).

Haedrich et al. (1980) found red crab the second most abundant megafaunal species in the 653-1290 m depth zone off southern New England, after the northern cutthroat eel, *Synaphobranchus kaupi*. Hecker (1990) also included three other fish species as representative members of the megafaunal assemblage on the mid- to upper slope off southern New England: a grenadier (*Nezumia* spp.), the longfin hake (*Phycis chesteri*), and the witch flounder (*Glyptocephalus cynoglossus*). To this assemblage that includes red crab, Farlow (1980) added offshore hake (*Merluccius albidus*) and the wolf eelpout (*Lycenchelys verrilli*).

Sexual separation in habitat use has been reported, with females being more abundant in shallower and warmer slope waters (Schroeder 1959; Haefner and Musick 1974; Wigley et al. 1975; Haefner 1978; Stone and Bailey 1980; Lux et al. 1982; Lindberg et al. 1990). Although the portion of the NEFSC bottom trawl survey results for red crab that includes sexual differentiation and temperature data is small (181 samples between 1963-1999), it suggests that within the relatively shallow, <400 m survey depth range, females were more commonly collected on about a 2:1 ratio than males, and females were slightly more common in the fall than in the spring. Because of the limited depth scope and sample size of the survey results, these tentative conclusions can be biased.

Known large scale disturbances on the continental slope can affect the red crab population, as well as most other benthic species that live there. One such disturbance is that in the past areas of the continental slope with soft sediments have become dislodged and slumped into deeper waters (Tucholke 1987). This can undoubtedly have an effect on biological populations in and near the slump zone. Another such disturbance was that which caused the mass mortalities of tilefish and associated organisms in 1880 (Steimle et al. 1999). Although the actual cause of the massive tilefish mortality is not known, the oceanographic or geological factors involved (assuming either of these was involved) in that event, which basically decimated the tilefish population and most other organisms associated with the warm band in the Middle Atlantic Bight for over a decade, could reoccur and also have an effect on the red crab population. A recent analysis suggests that anomalously cold water was in the area of the 1880s tilefish kill and

probably responsible for the mortality event (Marsh et al. 1999).

GEOGRAPHICAL DISTRIBUTION

Post-larval red crabs are inhabitants of the seabed of the mid to upper continental slope of the western North Atlantic, Gulf of Mexico and possibly the northwestern South Atlantic, and the larvae inhabit the water column generally above and near the adult distributions. The NEFSC bottom trawl surveys collect small quantities of benthic red crabs, but these surveys are typically restricted to depths less than 400 m on the upper slope, although they occasionally trawl in deeper canyons (Reid et al. 1999). Fishery independent information of red crab distributions below this NEFSC bottom trawl survey depth limit are only available from infrequent, special surveys, such as those reported by McRae (1961), Haefner and Musick (1974), or Wigley et al. (1975).

EGGS

Egg-bearing females are generally found distributed on shallow slope waters of less than 400 m (Kelly et al. 1982) and from Nova Scotia to at least the Gulf of Mexico. As for most decapod crustacea, eggs are held *en mass* on the pleopods under the female's abdominal flap until the eggs hatch and the larvae are released into the water column (Haefner 1978).

LARVAE

Larvae have been collected from off Nova Scotia (Roff et al. 1986), but have not yet reported from other areas where adults occur, including the Gulf of Mexico. In the northwest Atlantic, Kelly et al. (1982) suggested that because the early red crab larval stages seek surface waters and grow faster in warm water, the movement of the Gulf Stream [and its meanders and gyres] south of Georges Bank can have a role in larval dispersal. Larvae can tolerate water temperatures as high as 25°C, as would be found in Gulf Stream or South Atlantic Bight/Gulf of Mexico surface waters, as well as < 10°C water temperatures found on the continental slope seabed. With offshore Nova Scotia being the northern boundary of where they are known to be found, if the Gulf Stream is a significant red crab larvae dispersal factor, it is possible that a red crab larval source from as far south as the South Atlantic Bight can be important to juvenile recruitment in the New England area. However, there is general southerly shelf water movement inshore of the Gulf Stream affected area, and occasional southward moving Gulf Stream gyres or eddies can distribute the larvae from southern New England and Georges Bank spawning

populations south to near Cape Hatteras, too (Kelly et al. 1982). Kelly et al. (1982) also estimated that the range of larval dispersal can vary with their position in the water column and season, and dispersal might range from about 150 to almost 1000 km from the hatching area. Kelly et al. (1982) also presented a larval dispersal model that suggested that recruitment to southern New England red crab stocks might be variable, while recruitment to the stocks off Virginia might be more predictable.

JUVENILES

Juvenile red crabs were reported or presumed to have the same latitudinal distribution as adults; i.e., occurring from Nova Scotia to at least the Gulf of Mexico. However, their distribution along the continental slope depth gradient within this range may differ from that of adults. Wigley et al. (1975) and Haefner (1977) believed that metamorphosing megalopa settle to the seabed at mid-slope depths (~ 1000 m) as first instar juveniles and move upslope gradually as they grow. This pattern of settlement and gradual redistribution was supported by an inverse relationship between body size and depth reported by Wigley et al. (1975). They also report that only small specimens are usually collected in deep water, 740-1051 m, off southern New England. On the Scotian shelf, however, a wider range of sizes were found at the 720-900 m depths (Stone and Bailey 1980), and no clear relationship between red crab individual weight and depth was found by Farlow (1980). McRae (1961) noted that most of the large numbers of red crabs collected in a 1955-1957 survey of the Gulf of Maine (i.e., generally at depths of less than 300 m) were "small"; but this shallow depth distribution of presumed juvenile red crabs could be also the result of an early 1950s strong year class using most acceptable habitats, or an unusual pattern of settling larvae.

In the ~ 400 m depth-limited 1964-1999 NEFSC bottom trawl surveys, juvenile red crabs (equal or less than 7 cm CW) were collected in small quantities (less than 6 per tow) mostly within the western Gulf of Maine and even less were collected on the continental shelf edge between southern Georges Bank and near Toms Canyon (Figure 5). Because of the depth limitations of the NEFSC surveys, their assessments of the distribution of red crabs are incomplete, and juveniles (and adults) that are known to occur deeper on the continental slope were not surveyed.

ADULTS

In the Northeast, adult red crabs occur along the continental shelf edge and upper slope from the Scotian Shelf and the Gulf of Maine to Cape Hatteras (Serchuk and Wigley 1982). The species also occurs south of Cape

Hatteras into at least the Gulf of Mexico at similar depths. For an examination of the 400 m depth-limited 1964-1999 NEFSC bottom trawl survey data, the adult red crabs were segregated into two groups for analysis: below harvestable-size (small) adults (8-11 cm CW; Figure 6) and large adults at or above the commonly used harvestable size of 11 cm CW (Figure 7). The small adults were not collected during the winter bottom trawl surveys and only a few were collected in the summer surveys within and around the perimeter of the Gulf of Maine, but during the spring and fall surveys, they were collected in minor to moderate numbers both within the western Gulf of Maine and along the outer continental shelf between southern Georges Bank and Norfolk Canyon (Figure 6). The larger, harvestable adults were collected in a similar pattern, although fewer of the larger crabs were collected within the Gulf of Maine during the spring and fall trawl surveys (Figure 7).

As previously noted, there may be an inverse relationship between body size and depth (Wigley et al. 1975). Stone and Bailey (1980) reported that large crabs were only collected at 180-360 m depths on the Scotian Shelf. In the Gulf of Mexico, red crabs were not commonly collected above the 677 m depth zone; temperature or bottom sediment type could be prime factors controlling their distribution in the Gulf of Mexico (Lindberg et al. 1990; Lockhart et al. 1990).

From around Cape Hatteras into the Gulf of Mexico, red crabs may partially overlap the distribution of a larger sibling species, the golden crab (*C. fenneri*, previously called *Geryon affinis*), that was noted to occur uncommonly off southern New England, too (Wigley et al. 1975).

STATUS OF THE STOCKS

Although occasional surveys of the relative abundance and distribution of this species have been conducted since the 1950s in some areas (Schroeder 1959; McRae 1961; Haefner and Musick 1974; Wigley et al. 1975; Haefner 1978; Gerrior 1981; Stone and Bailey 1980; McElman and Elner 1982) there have not been any broad-scale, long-term, fishery-independent surveys for this species to document any trends in relative population abundance and distribution (F. Almeida, NMFS, NEFSC, Woods Hole Laboratory, Woods Hole, MA, personal communication, December 1999). Broad-scale pot surveys have not been done, either, although pots may be better collectors of red crabs than trawls (P. Gerrior, NMFS, NEFSC, Woods Hole Laboratory, Woods Hole, MA, personal communication, August 2000). Hastie (1995) summarized a number of previous stock assessments and density estimates for the species to the early 1990s, but these also included information from south of Cape Hatteras. Annual northeast landings were reported since the 1970s but the data were not comprehensive until the early 1980s (C. Yustin, NMFS,

NERO, Gloucester, MA, personal communication, January 2000). Landings between 1982 and 1998 averaged overall about 1800 MT, but reported landings annually varied between a range of 0.25 and 3800 MT. Peak harvests were reported in 1984 and 1988, and an almost insignificant harvest was reported in 1994 (Figure 8); CPUE data are not available.

The slow growth and maturation rates of red crabs, and possible infrequent recruitment, suggests that the high yields of the 1970s-1980s will likely be unsustainable (Hastie 1995).

RESEARCH NEEDS

It is obvious more needs to be known about the distribution of the species at all life stages, the variability and trends in population abundance and dynamics, and a way to adequately sample larval stages. The studies on red crabs summarized above include some that present differing results or conclusions about the biology or habitat use of this species; e.g., do megalops settle in deeper water and move upslope with growth and are sexes distributed separately (Hines 1990)? These areas of conflicting information need to be resolved by further research or data analysis. Further research or data is also needed on: age-size relationships, lengths of intermolt periods for all size classes, mortality rates for various size classes (especially for discards), yield per recruit, upslope and lateral migrations (including for spawning or related to size class), Middle Atlantic Bight larval dispersal patterns and the testing of larval dispersal models, genetic comparison of the Northwest Atlantic and Florida/ Gulf of Mexico populations, and where and when females primarily spawn and the possibility of sperm storage by intermolt females (Kelly et al. 1982; Armstrong 1990; Lindberg and Wenner 1990; Lockhart et al. 1990; Hastie 1995). In the northeast the use of submarine canyons as preferred spawning and juvenile red crab nursery areas, as suggested by Gray (1970), needs to be re-examined and verified for the potential of this habitat being critical to the life history of the species. There is also a need to find a cost-effective approach to conducting stock assessment surveys of this and other harvestable deep-water species.

Beside these research needs, there is a need to standardize size measurements on red crabs, such as carapace widths, which should not include damageable or erodible rostral or lateral spines in the measurements, as was done in some studies. The carapace width between the notches forward of the outermost spine would provide a more consistent and reliable measure of size, and because the shell is relatively soft and can be bent with pressure, the measuring calipers should just touch the shell (Gray 1970).

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Table 1. Summary of the life history and habitat characteristics of red crab, *Chaceon (Geryon) quinque-dens*. (CW= carapace width.)

<i>Life Stage:</i>	<i>Eggs</i>	<i>Larvae</i>	<i>Juveniles</i>	<i>Adults</i>	<i>Spawning Adults</i>
Time of Year	Fall-spring.	January-June.	Throughout.	Throughout.	Fall-spring.
Size and Growth	Fecundity: up to ~ 226,000 eggs/female.	4 instar stages, then megalops stage settles to seabed.	4-70 mm CW; molting period extends with size.	80-180 mm CW' molts every 6-7 yrs; CW increases 7-12% per molt.	Egg-bearing from ~ 70 mm to 140 mm CW.
Geographic Location	Nova Scotia-Gulf of Mexico.	Nova Scotia-Gulf of Mexico.	Nova Scotia-Gulf of Mexico.	Nova Scotia-Gulf of Mexico.	Nova Scotia-Gulf of Mexico.
Habitat	Attached to female abdomen until hatching.	Water column, outer shelf and slope.	Seabed, 700-1800 m.	Seabed, 200-1300 m.	Seabed, upper slope.
Substrate	Attached to female abdomen until hatching.	Water column, surface to bottom.	Smooth-surface silt-clay.	Silty to hard sediments.	Silt-clay.
Temperature	~ 4-12°C.	~ 4-25°C.	~ 4-10°C.	~ 5-14°C.	~ 4-12°C
Salinity	~ 35 ppt.	29-36 ppt.	~ 35 ppt.	~ 35 ppt.	~ 35 ppt.
Dissolved Oxygen	~ 3-8 ml/l.	~ 5-8 ml/l.	~ 3-7 ml/l.	~ 3-8 ml/l.	~ 3-8 ml/l.
Prey	Yolk.	Probably planktivorous.	Small benthic invertebrates and detritus.	Benthic organisms and detritus, carrion.	Benthic invertebrates and detritus.
Predators	Unreported.	Unreported.	Longfin hake, other gadids.	Same as for juveniles (?)	Unreported.
Notes	Attached to female abdomen until hatching.	Early stages rise to surface; later stages gradually settle to the seabed.	May move upslope with growth.	Movements are generally limited to < 50 km.	Occurs when female molts, inter-molt sperm storage possible.

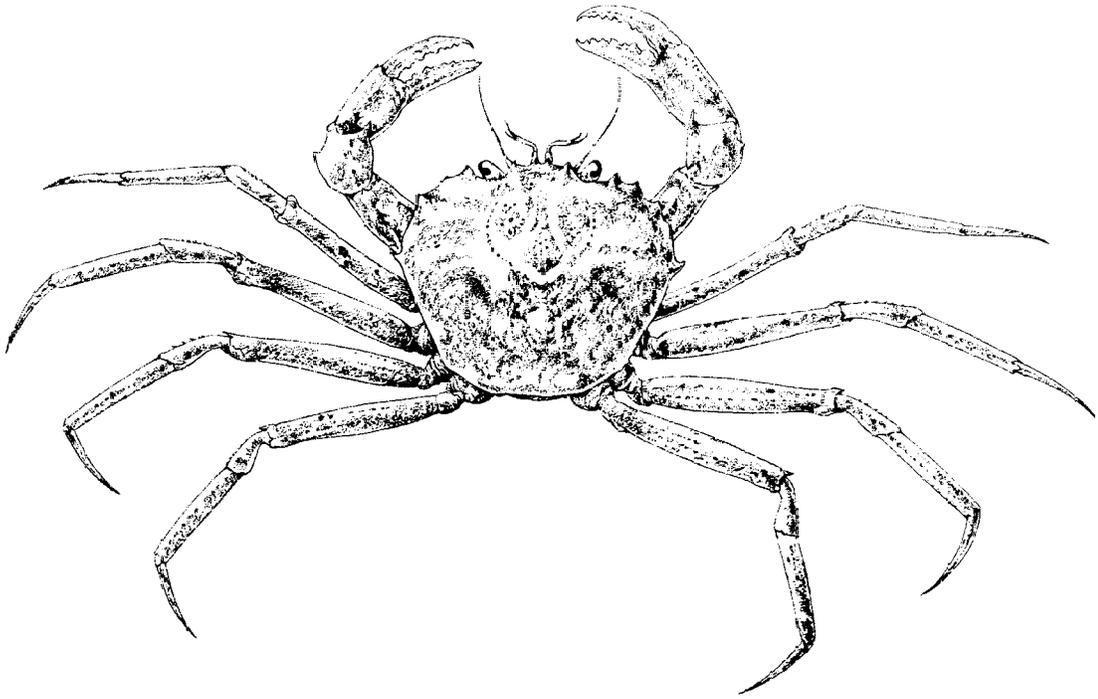


Figure 1. The red crab, *Chaceon (Geryon) quinquedens* Smith 1879.

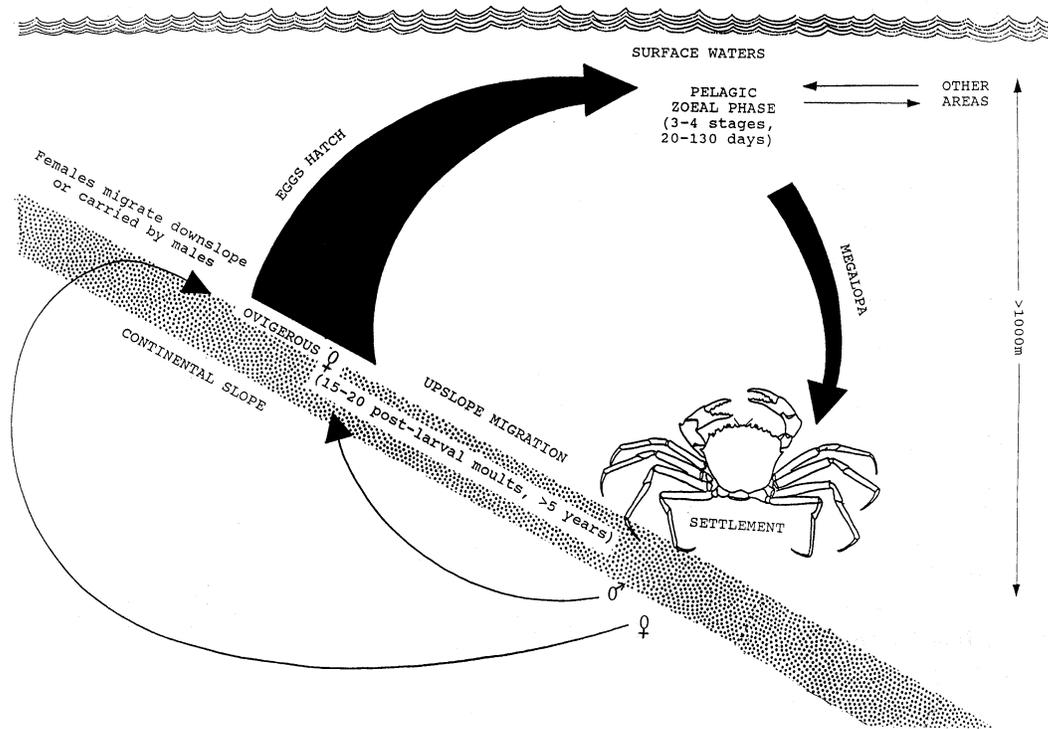


Figure 2. Summary of the life cycle of the red crab, *Chaceon (Geryon) quinquedens* [from Hastie (1995), used with permission].

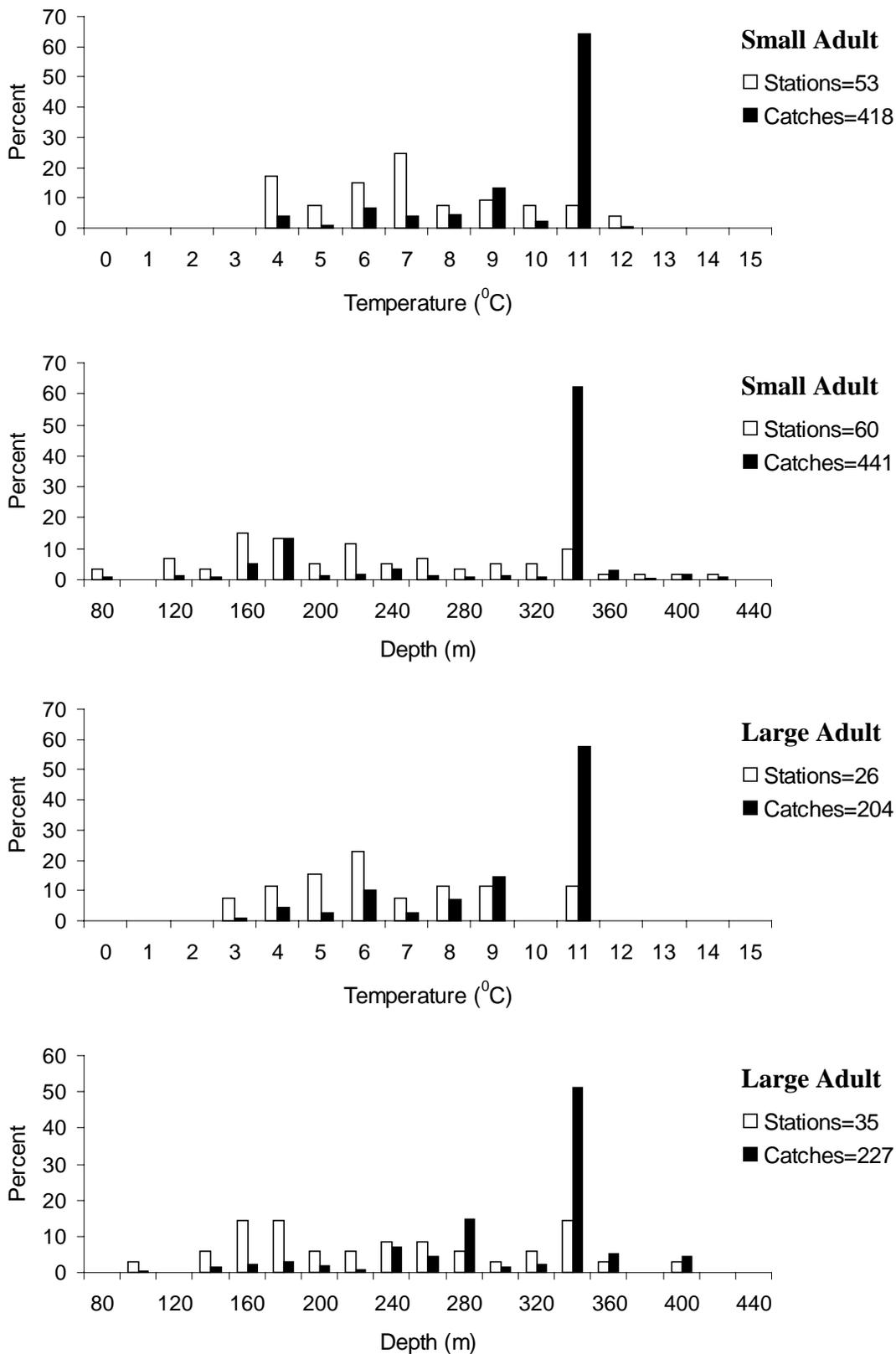


Figure 3. Distributions of small and harvestable-sized (large) adult red crabs relative to bottom water temperature and depth based on spring NEFSC bottom trawl surveys (1968-1999; all years combined). White bars give the distribution of all the stations, and black bars represent, within each interval, the percentage of the total number of red crab caught.

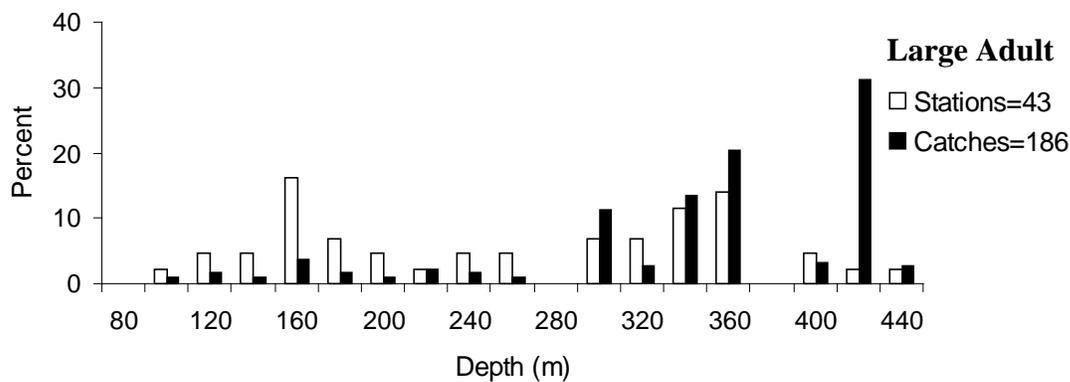
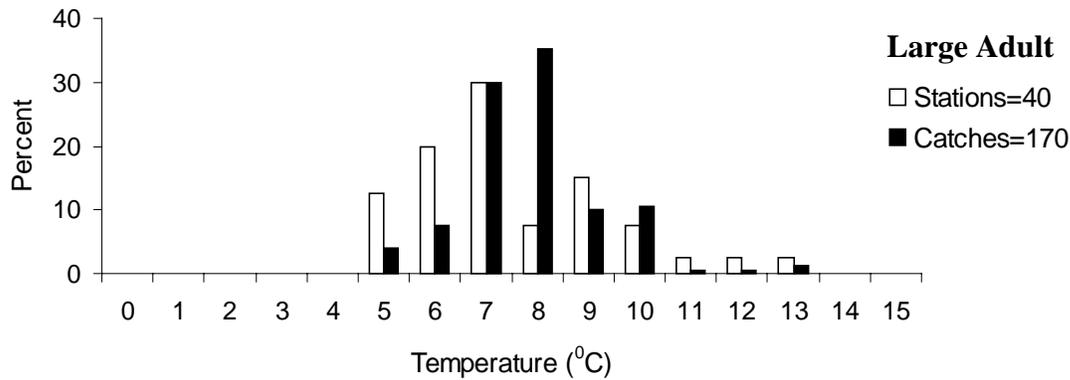
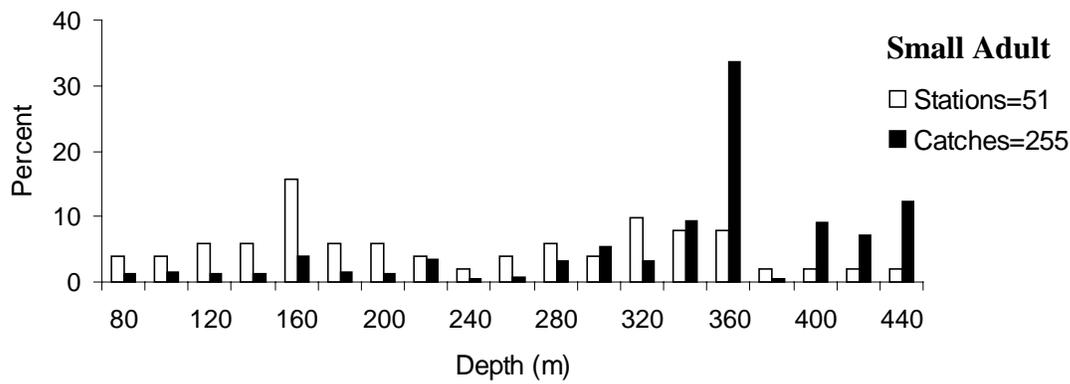
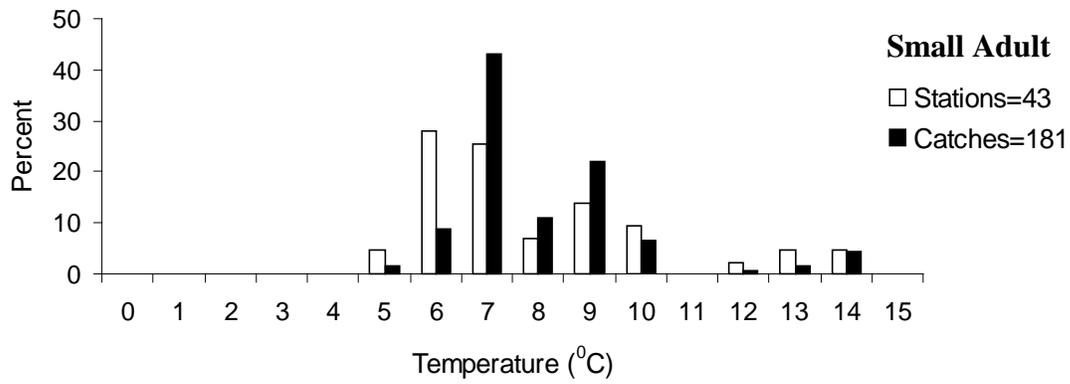


Figure 4. Distributions of small and harvestable-sized (large) adult red crabs relative to bottom water temperature and depth based on fall NEFSC bottom trawl surveys (1963-1999; all years combined). White bars give the distribution of all the stations, and black bars represent, within each interval, the percentage of the total number of red crab caught.

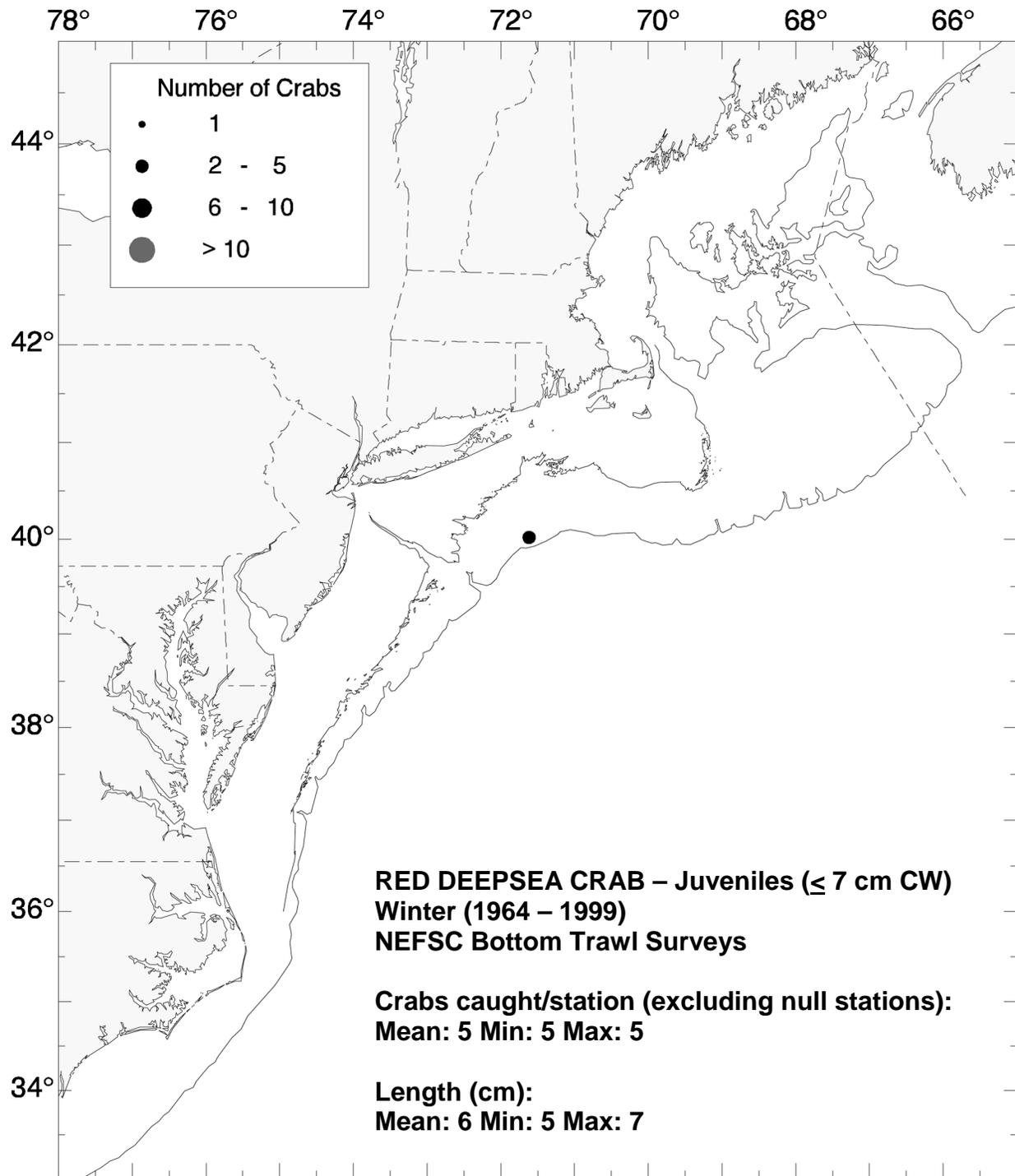


Figure 5. Seasonal distribution and abundance of juvenile red crabs (≤ 7 cm CW) collected during NEFSC bottom trawl surveys (1963-1999, all years combined).

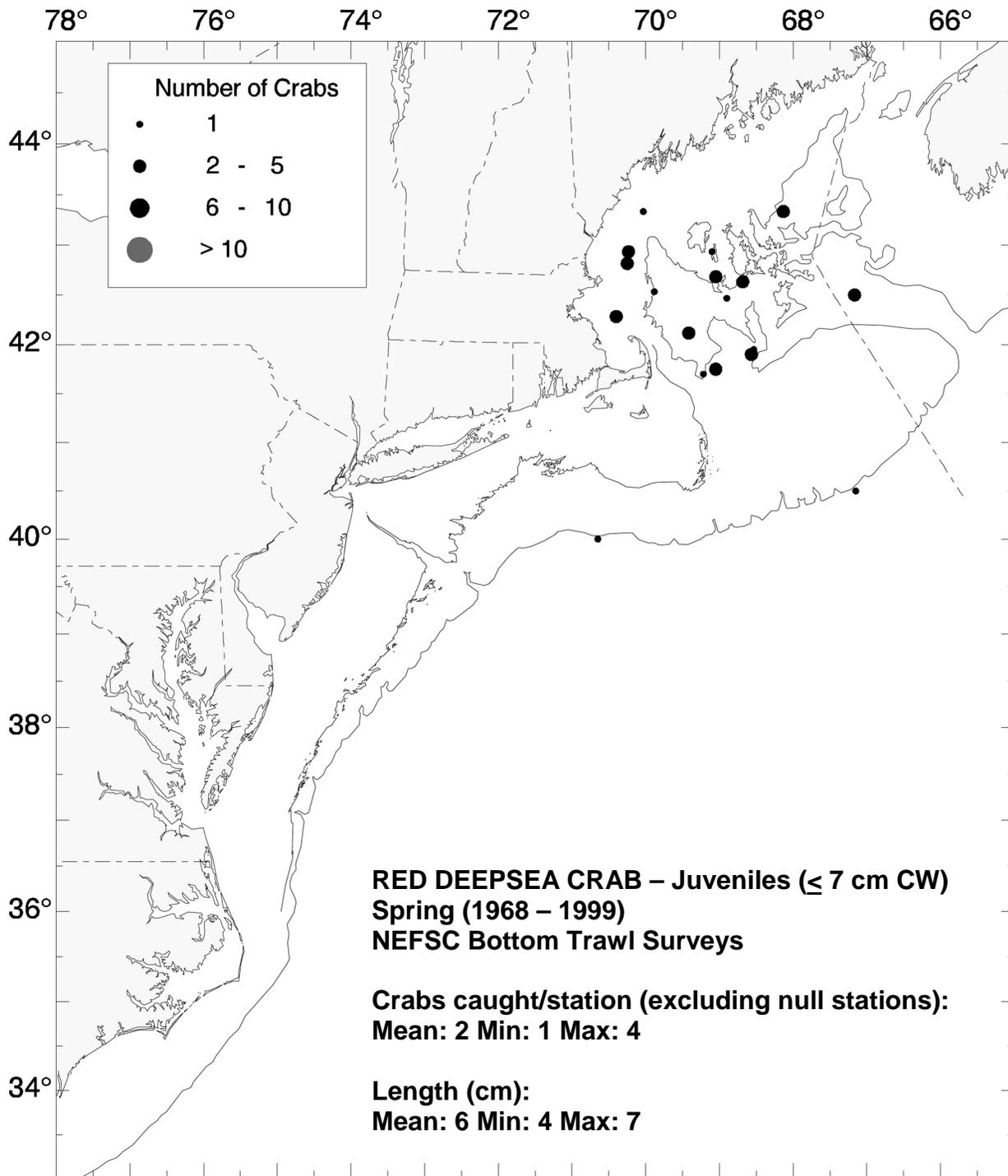


Figure 5. cont'd.

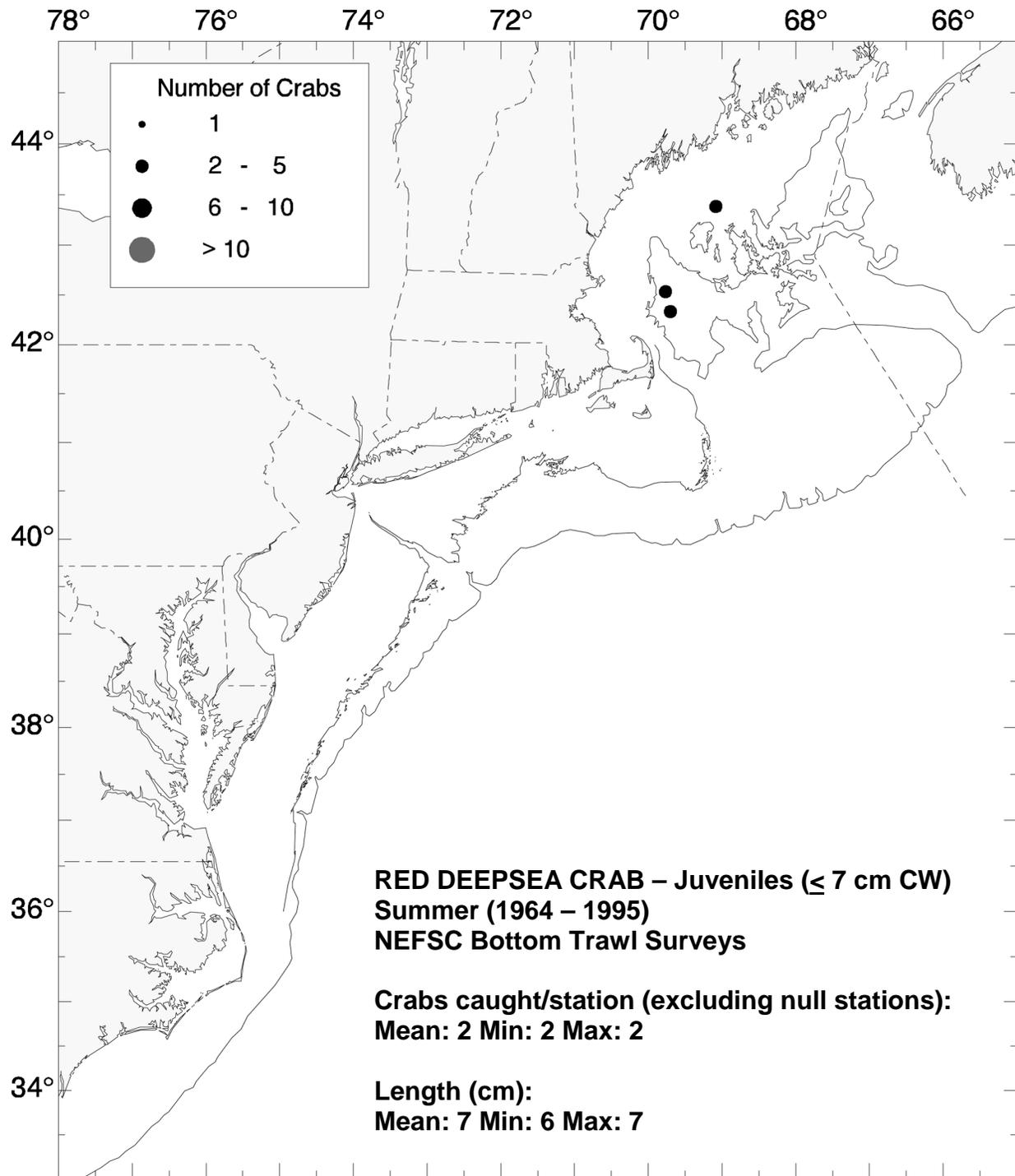


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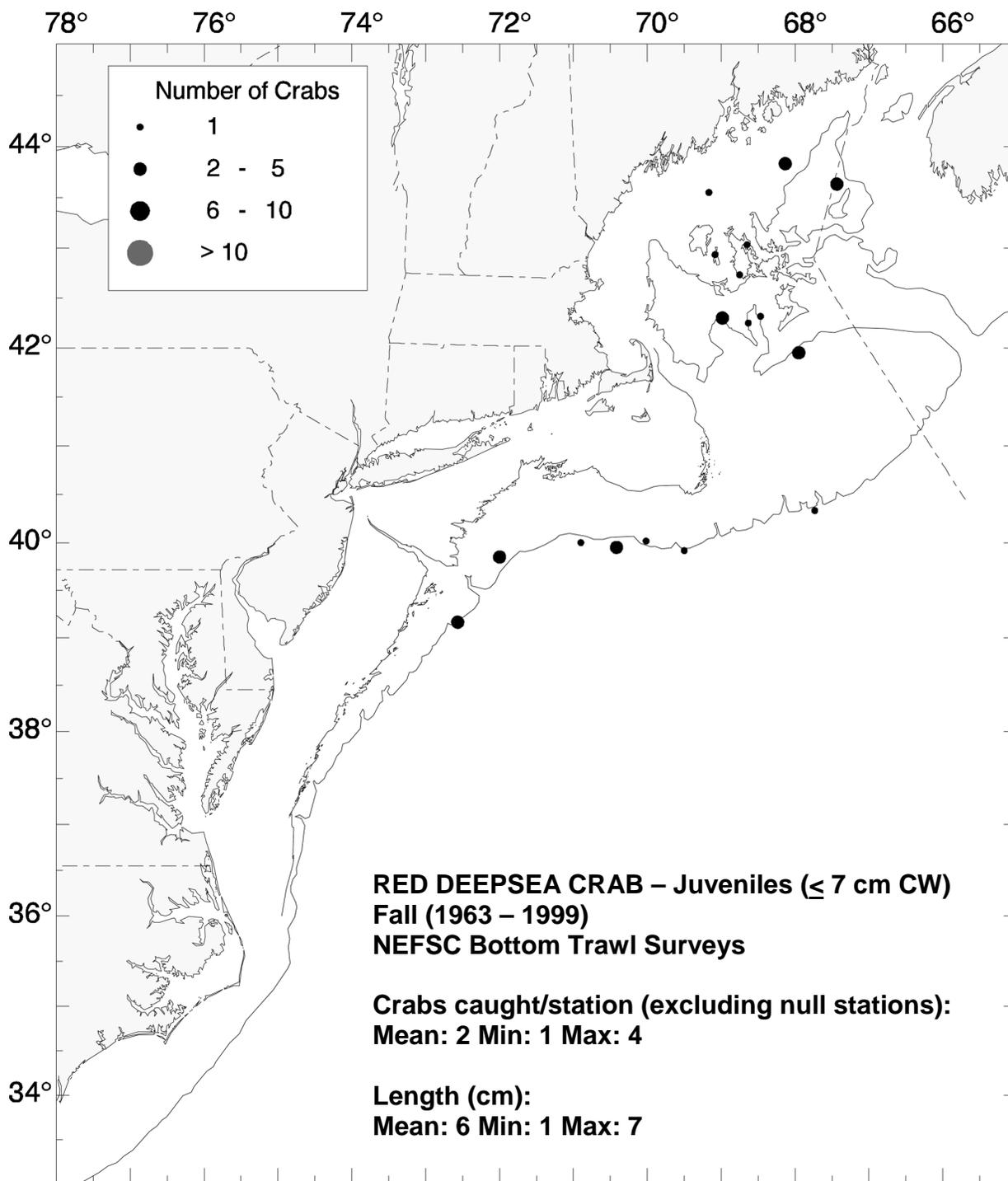


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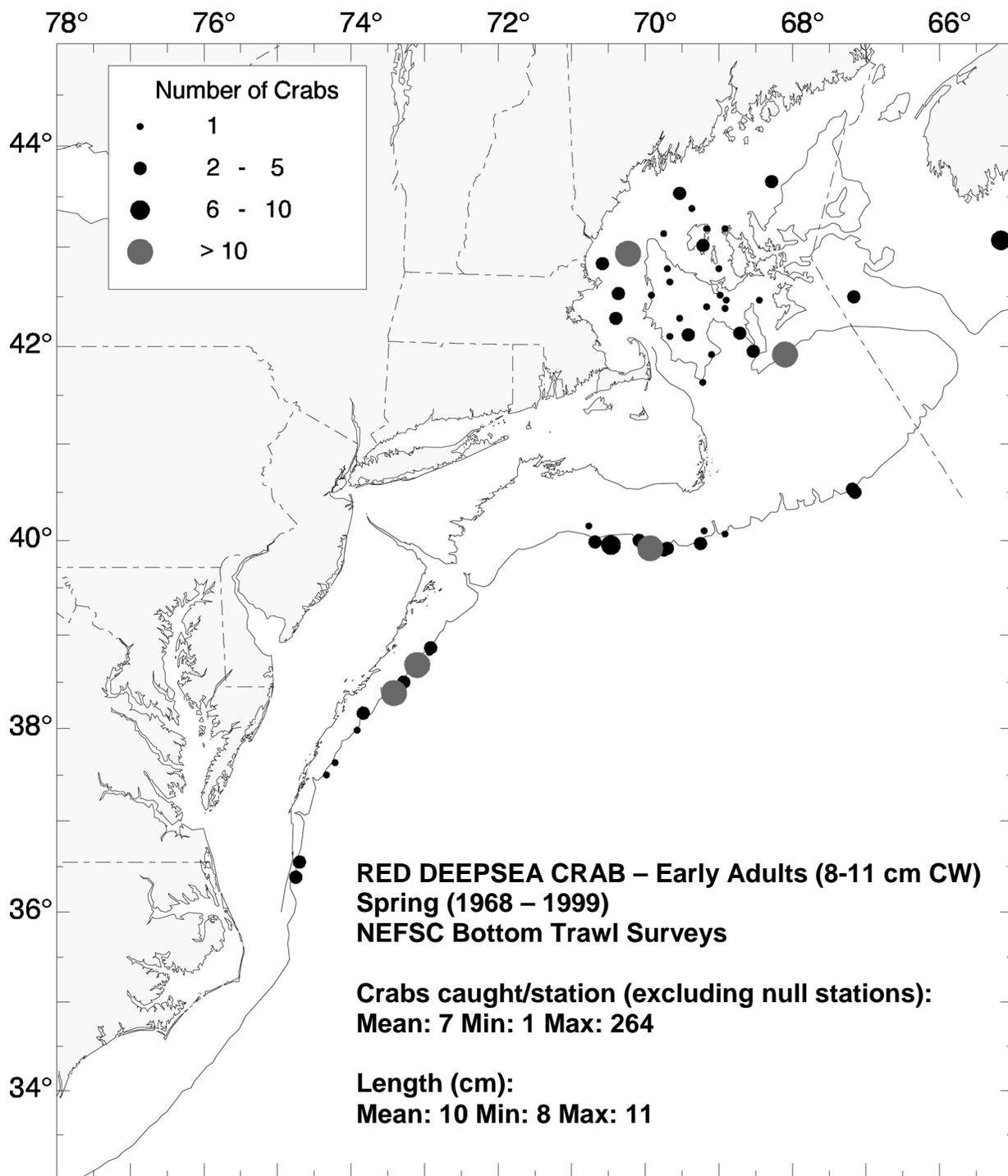


Figure 6. Seasonal distribution and abundance of small adult red crabs (8-11 cm CW) collected during NEFSC bottom trawl surveys (1963-1999, all years combined; none were collected in winter).

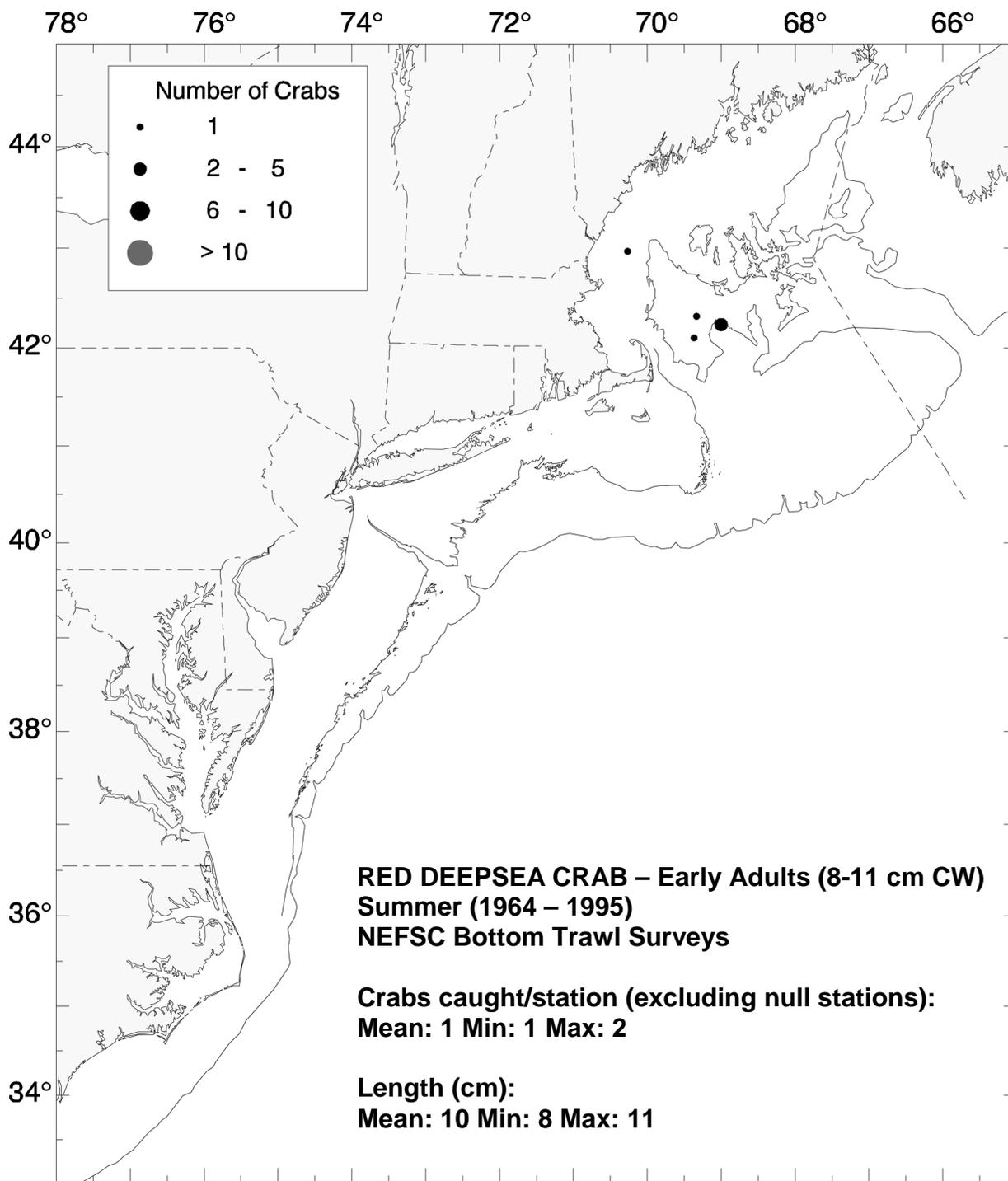


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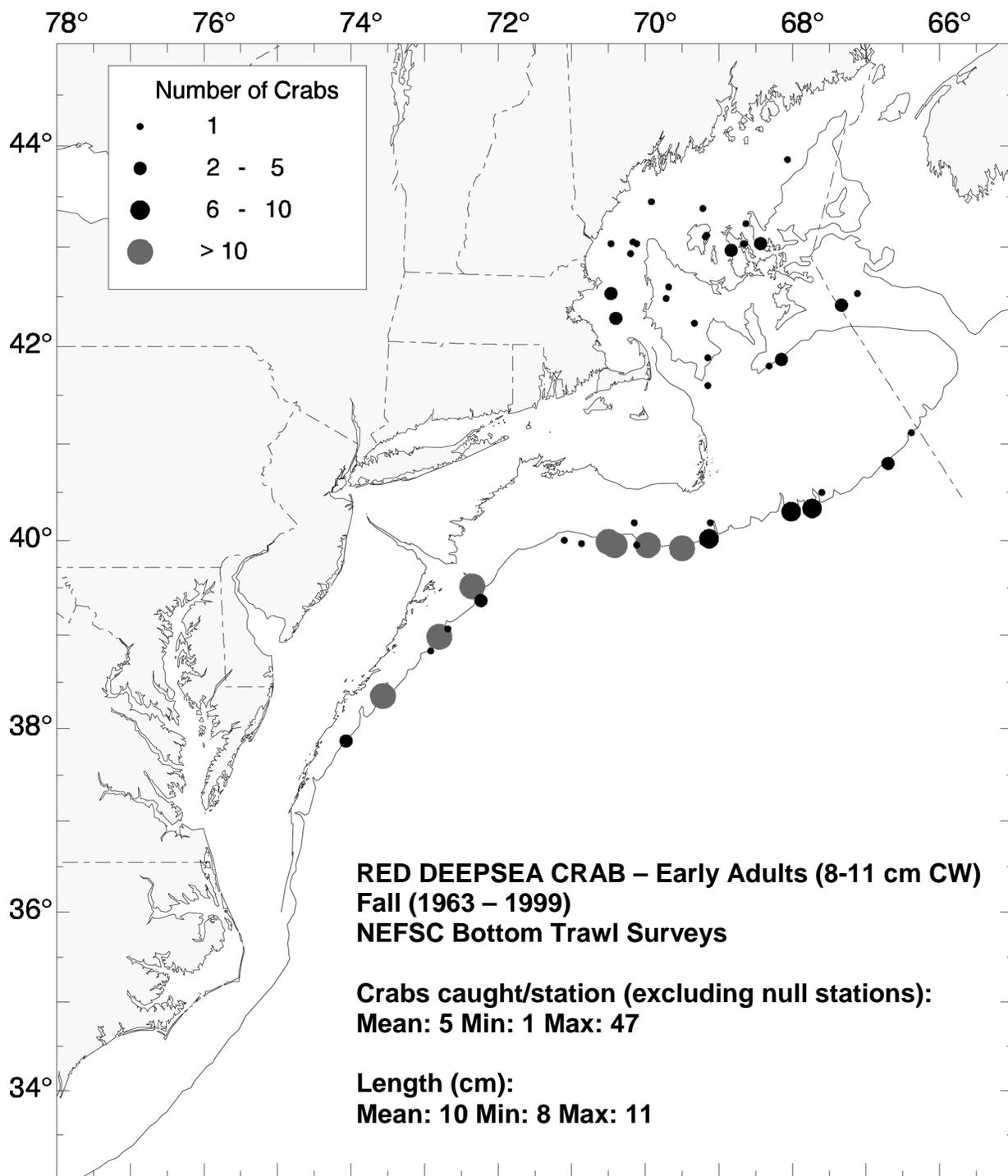


Figure 6. cont'd.

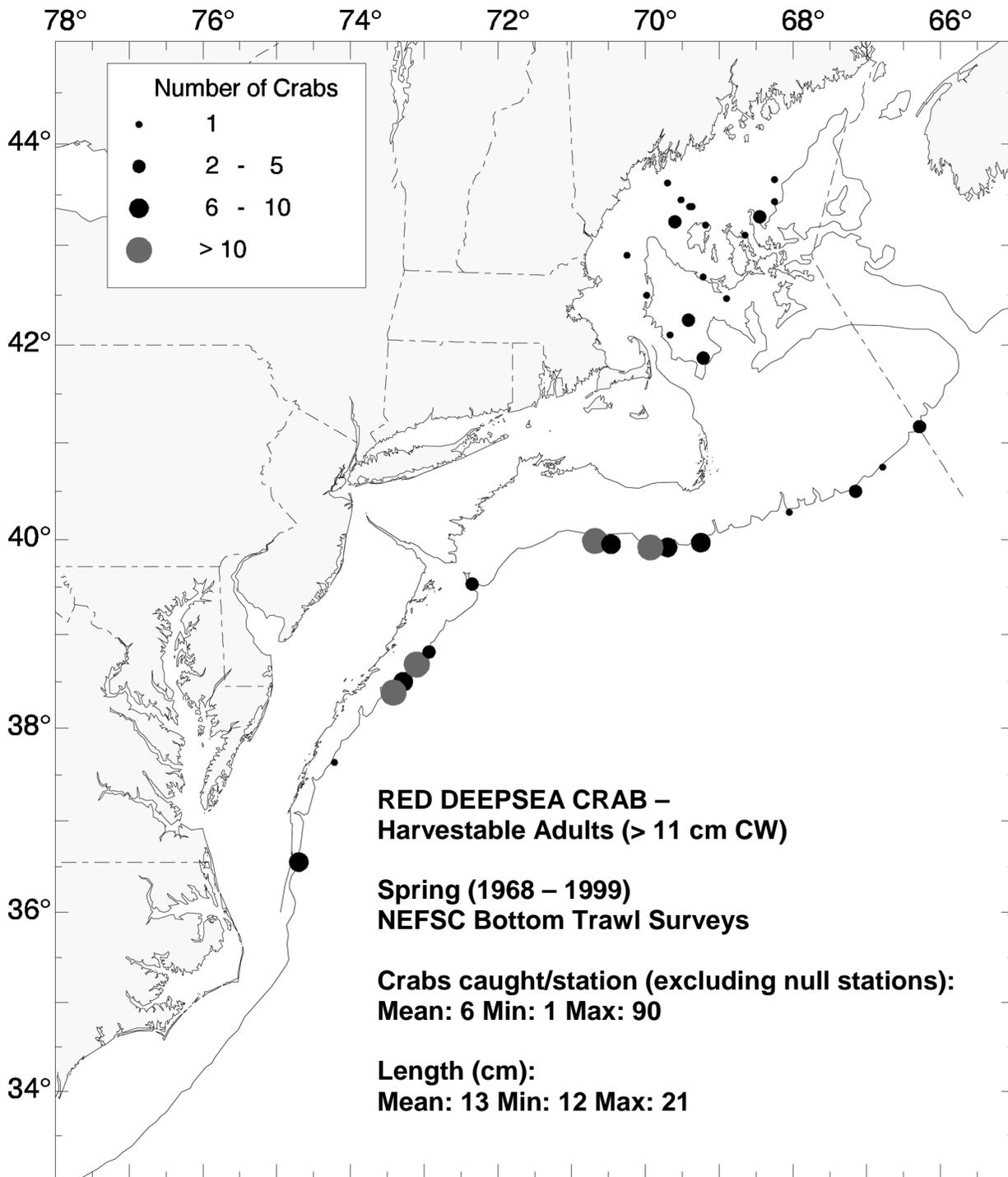


Figure 7. Seasonal distribution and abundance of harvestable-sized red crabs (> 11 cm CW) collected during NEFSC bottom trawl surveys (1963-1999, all years combined; none were collected in winter).

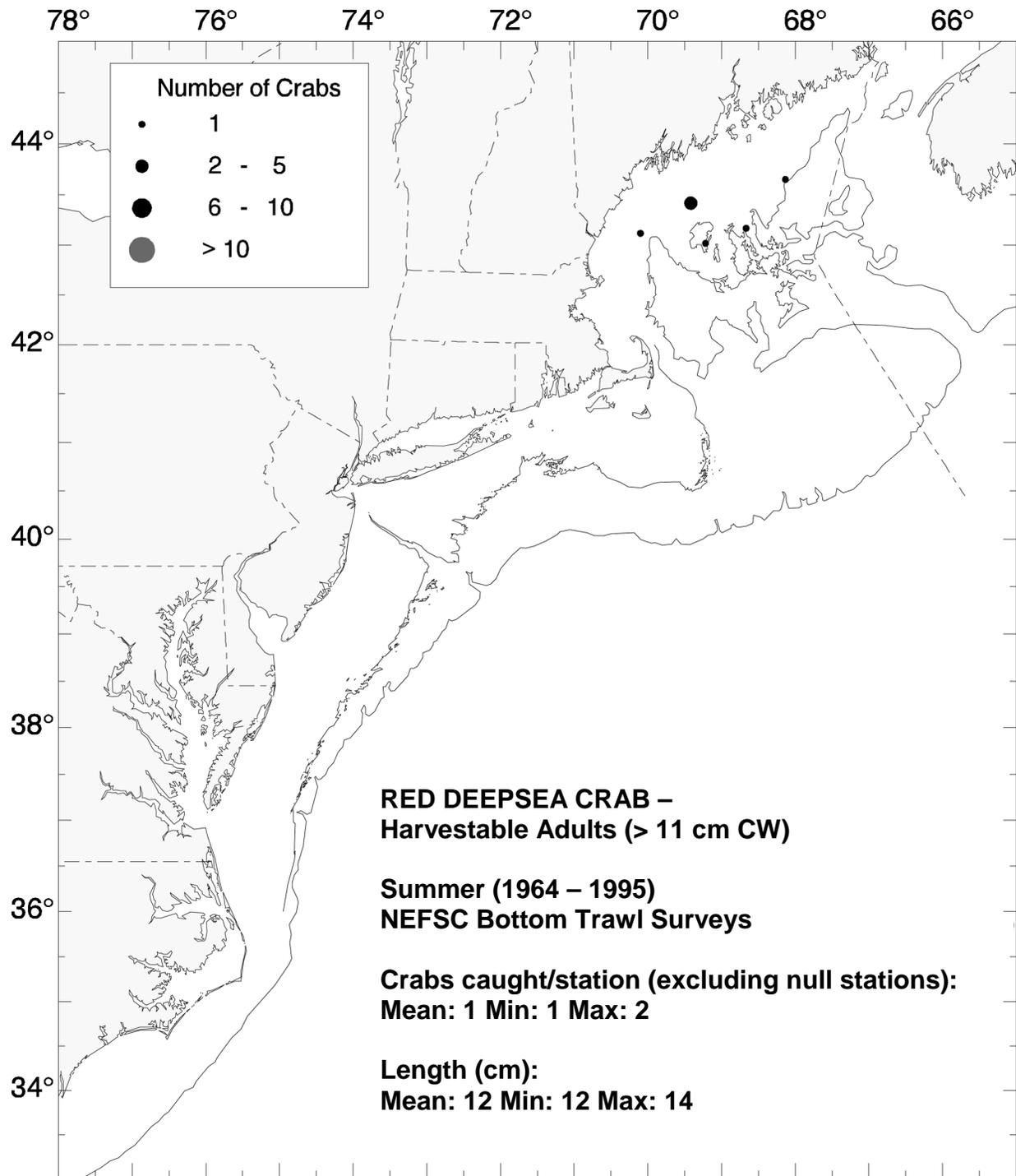


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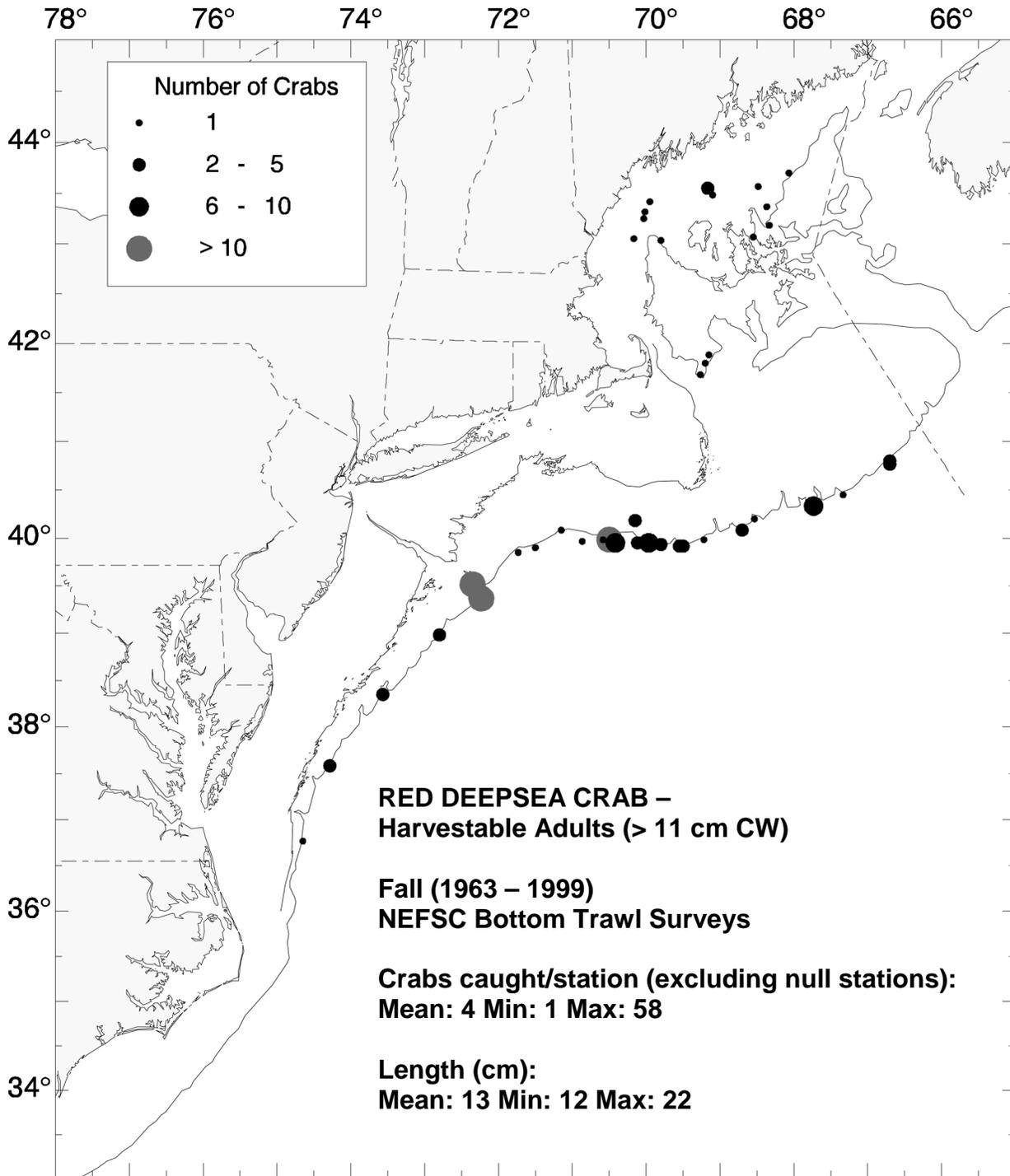


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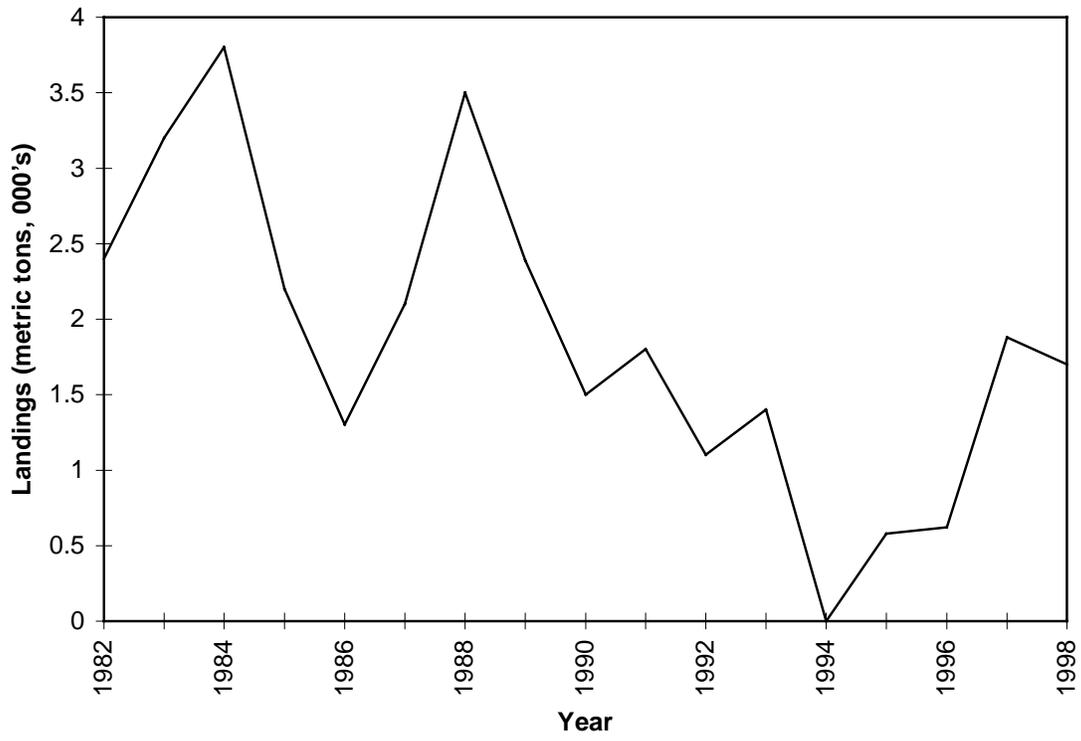


Figure 8. Commercial landings for red crab in the northeast.

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The mission of NOAA's National Marine Fisheries Service (NMFS) is "stewardship of living marine resources for the benefit of the nation through their science-based conservation and management and promotion of the health of their environment." As the research arm of the NMFS's Northeast Region, the Northeast Fisheries Science Center (NEFSC) supports the NMFS mission by "planning, developing, and managing multidisciplinary programs of basic and applied research to: 1) better understand the living marine resources (including marine mammals) of the Northwest Atlantic, and the environmental quality essential for their existence and continued productivity; and 2) describe and provide to management, industry, and the public, options for the utilization and conservation of living marine resources and maintenance of environmental quality which are consistent with national and regional goals and needs, and with international commitments." Results of NEFSC research are largely reported in primary scientific media (*e.g.*, anonymously-peer-reviewed scientific journals). However, to assist itself in providing data, information, and advice to its constituents, the NEFSC occasionally releases its results in its own media. Those media are in three categories:

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Northeast Fisheries Science Center Reference Document -- This series is issued irregularly. The series includes: data reports on field and lab observations or experiments; progress reports on continuing experiments, monitoring, and assessments; background papers for scientific or technical workshops; and simple bibliographies. Issues receive internal scientific review but no technical or copy editing. No subscriptions. Free distribution of single copies.

Fishermen's Report and The Shark Tagger -- The *Fishermen's Report* (FR) is a quick-turnaround report on the distribution and relative abundance of commercial fisheries resources as derived from each of the NEFSC's periodic research vessel surveys of the Northeast's continental shelf. There is no scientific review, nor any technical or copy editing, of the FR; copies are available through free subscription. *The Shark Tagger* (TST) is an annual summary of tagging and recapture data on large pelagic sharks as derived from the NMFS's Cooperative Shark Tagging Program; it also presents information on the biology (movement, growth, reproduction, etc.) of these sharks as subsequently derived from the tagging and recapture data. There is internal scientific review, but no technical or copy editing, of the TST; copies are available only to participants in the tagging program.

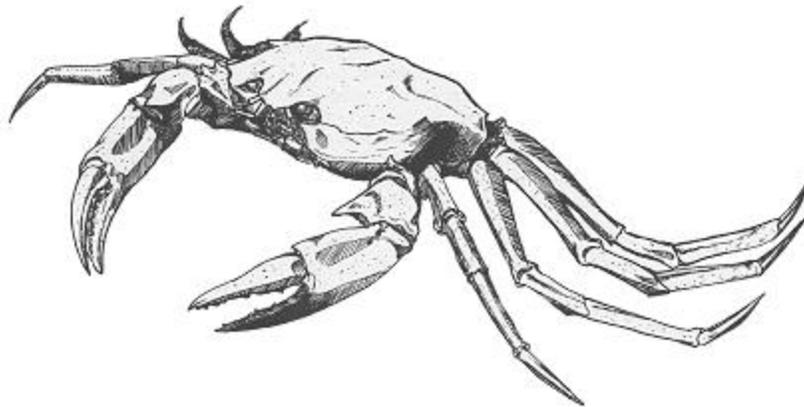
To obtain a copy of a technical memorandum or a reference document, or to subscribe to the fishermen's report, write: Research Communications Unit, Northeast Fisheries Science Center, 166 Water St., Woods Hole, MA 02543-1026. An annual list of NEFSC publications and reports is available upon request at the above address. Any use of trade names in any NEFSC publication or report does not imply endorsement.

Appendix B

Report on Social and Economic Baseline Information for the Atlantic Deep-Sea Red Crab Fishery

**Report
on
Social and Economic Baseline Information
for the
Deep-Sea Red Crab Fishery**

**Developed in Preparation
of the Red Crab Fishery Management Plan**



**New England Fishery Management Council
Newburyport, Massachusetts**

September 2001

INTRODUCTION

The development of a fishery management plan (FMP) requires the collection and analysis of much information and data, on the biological and ecological aspects of the resource species as well as on the social and economic aspects of the fishery. While we can use scientific research and literature to better understand the biology of any fishery species under management, we can best gain an understanding of the fishery itself from the members of the industry. This information helps the Council better assess the likely social and economic impacts of any management measures proposed and alternatives considered in the development of an FMP.

The development of an FMP for the Atlantic deep-sea red crab (*Chaceon quinqueedens*) fishery presents some unique challenges and opportunities. The directed fishery for red crab has traditionally been a small, full-time fishery with less than a half dozen vessels operating in the fishery at any one time. The fishery has had very little interaction with other, more visible, New England-based fisheries such as groundfish and sea scallops. Prior to late 1999 the Council had very little involvement with the red crab fishery, even though this fishery takes place entirely in federal waters. Because of this lack of involvement, and the very little interaction with other managed fisheries, the Council has little current information on this fishery.

One of the challenges associated with developing an FMP for the red crab fishery is this lack of prior knowledge and information on the fishery. The Council has little information on the operations of the fishery, on the people involved in the harvesting sector, the processing sector, and the markets for red crab products. One of the opportunities associated with developing an FMP for the red crab fishery is that due to the small size of the fishery, complete information should be relatively easy to acquire.

When the Council established an Advisory Panel for the Red Crab Oversight Committee, it was able to draw from most of the active members of the red crab industry. The current Red Crab Advisory Panel membership includes owners and operators from six active vessels with landings of red crab prior to spring of 2001. The Advisory Panel membership also includes representatives of four processors that claim involvement with the red crab fishery as well as five wholesalers/retailers of red crab products.

The intent of this report is to present baseline and demographic information on the social and economic aspects of the fishery. The baseline information presented here provides a reference point to understand the social and economic conditions of the fishery and its communities prior to any management. The information presented here was collected only from the members of the Red Crab Advisory Panel. While this report does not attempt to imply that the information presented reflects the *entire* red crab industry, it should be recognized to reflect a significant portion of the industry. This report includes responses from owners and operators of six active red crab vessels, as well as input from an additional two potential red crab vessels. The report also includes responses from all known processors dealing with product from the New England-based red crab fishery.

Because this information reflects a significant portion of the industry, it can be used to understand the basics of how the industry operates and how the industry is likely to be affected by different types of management measures. Thus, the information in this report will form the basis for the various social and economic assessments and analyses that are required as part of the FMP development process, including the fishery impact statement, the social impact assessment, and the preliminary regulatory economic evaluation.

METHODS

In order to collect the types of information necessary to understand the red crab fishery and complete the required assessments and analyses, the members of the Red Crab Advisory Panel completed a survey provided to them at an Advisory Panel meeting. The survey was developed by Council staff based on similar prior surveys conducted by the National Marine Fisheries Service (NMFS) and based on advice from the Council's Social Science Advisory Committee. The survey was reviewed by members of the Red Crab Plan Development Team and others from the NMFS Northeast Fisheries Science Center's Social Sciences Branch of the Resource Evaluation and Assessment Division.

The survey was divided into different sections for each sector of the industry. There was a section for vessel owners, operators, and captains, a section for vessel crew, a section for processors, a section for wholesalers/retailers, and a section for support services. There was also an introductory section that included basic demographic information. Each section consisted of questions pertaining to the participants' involvement and dependence on the red crab fishery, their history in the fishery, the specific circumstances of their business and its relationship to the red crab fishery and other fisheries.

The section for vessel owners, operators, and captains includes a set of questions on the operational aspects of the fishery, such as number of traps set, trap soak time, and type of bait used. The section for vessel crew was written in such a way as to be answered by the vessel owners and operators, as it was acknowledged that there were no vessel crew members on the Advisory Panel. Similarly, it was hoped that those on the Advisory Panel would have enough specific knowledge of the businesses providing vessel support services that they would be able to complete this section. The results did not bear this out, so this section was dropped from the results of the survey. In certain cases, individual questions were also dropped from the results of the survey. This was due either to a lack of responses, conflicting answers with other similar questions, or a clear misinterpretation of the question by respondents (due to lack of clear direction).

The results of the survey are summarized in such a way as to ensure the anonymity of the individual respondents. Participants were assured that individuals would not be identifiable in the presentation of the survey results. For each quantitative question, in most cases this report will provide either the average of all respondents as well as the high and low responses or the percentage of all responses in each of a set of categories. Where appropriate, the median is also provided. The median sometimes provides a better representative measure of location than the arithmetic mean, most often associated with an asymmetric distribution. For qualitative questions, the report will summarize all

answers provided. Tables are used to present the quantitative results to the extent possible and text is used to further explain the quantitative results as well as to summarize the qualitative results.

PARTICIPANTS

Participants in the Red Crab Social and Economic Baseline Information Survey included, but was not limited to, representatives of the following fishing vessels:

- F/V Canyon Enterprise
- F/V Canyon Explorer
- F/V Crystal James
- F/V Diamond Girl
- F/V Hannah Boden
- F/V Frank H. Wetmore

Participants in the survey also included, but was not limited to, representatives of the following processors and/or wholesaler/retailers:

- Atlantic Coast Fisheries, Inc.
- Cape Bald Packers / Downeast Specialty Products, Inc.
- East Bay Crab and Lobster Company
- Fisheries Management and Consulting, Inc.
- Portland Shellfish, Inc.

RESULTS

Section 1: All Respondents (Demographics and Personal History)

Age, race, education, marital status

This section of the survey asked basic questions on the demographics of the red crab fishing industry. These questions were intended to help us learn about the background of those involved in the red crab fishery in order to better understand the different people who live from fishing. This information will help us to identify patterns among those people associated with the red crab fishery that may either distinguish it from, or liken it to, other fisheries in the region. Table 1 displays some socio-demographic information collected from the industry respondents. Approximately one-third of the industry reports either some high school or high school graduate as the highest level of education they have attained. Approximately two-thirds of the industry reports attending or completing college, with a couple reporting post-graduate work. All members of industry report being white (or Caucasian). Two individuals reported their ethnicity as either Norwegian or English. All but two members of industry report being married. One each harvester and processor report being divorced. One respondent reports having no children and one

reports having six. The others all report having one or two children. Table 2 includes summary information on the ages of members of the red crab industry. The average age of all those surveyed is just under 48 years old.

Question	Percent	<i>n</i>
<u>Race</u>		8
White (Caucasian)	100%	
Other	0%	
<u>Marital Status</u>		13
Married	85%	
Not married	15%	
<u>Dependents</u>		12
Have children	92%	
Do not have children	8%	
<u>Education</u>		13
Some high school	15%	
High school graduate	15%	
Some college	31%	
College graduate	23%	
Post-graduate work	15%	

Table 1. Socio-demographic characteristics of red crab industry.

Question	Minimum	Maximum	Average	Median	<i>n</i>
Age	30 (39)	59 (56)	47.8 (47.6)	48 (46)	13 (9)
Years in Commercial Fishing	1 (14)	40 (40)	26.8 (27.4)	31 (26.5)	12 (8)
Years in Red Crab Fishery	1 (2)	30 (20)	9.7 (8.8)	6 (6)	12 (9)

Table 2. Age and tenure in commercial fishing among members of the red crab industry. Numbers in parentheses represent harvester only, while the other numbers represent all respondents.

Tenure in fishing and prior fisheries

Table 2 also includes information on the tenure in commercial fishing of members of the red crab industry. On average, the members of the red crab industry have been involved in commercial fishing more than 25 years and involved in the red crab fishery slightly less than 10 years. Looking just at those who identify themselves as harvesters, on average they have been involved in commercial fishing slightly longer and in the red crab fishery slightly less than the industry as a whole.

Most red crab industry members report having participated in a variety of other fisheries prior to entering the red crab fishery, although three harvesters report participating in no other fisheries prior to fishing for red crab. Of the harvesters with prior fisheries, one reports lobster only, one reports groundfish only and the others report a variety of fisheries such as king crab and other West Coast crabs, snow crab, salmon, and sea urchins. Processors report participating in fisheries for groundfish, lobster, scallops, dogfish, monkfish, skates, squid, Jonah crab, and soft shell clams.

Six respondents report being in the harvesting sector and two report being in harvesting and processing-at-sea. Five other respondents report being in processing and four of these also report being in wholesale/retail. One of these latter four reports being involved in the harvesting sector as well. All members of the industry responding to the survey report that they intend to remain involved in the red crab fishery for more than ten years.

Job satisfaction

Table 3 summarizes job satisfaction and recent changes to job satisfaction reported by members of the red crab industry. All but two members of industry report having either good or very good job satisfaction (most report very good). The other two report having moderate job satisfaction. Eight people report that their job satisfaction has changed in recent years. Of these, two report their job satisfaction has decreased while three respondents report an increase in job satisfaction.

Question	Percent	n
<u>Job Satisfaction</u>		13
Very poor	0%	
Poor	0%	
Moderate	15%	
Good	38%	
Very Good	46%	
<u>Changed Over Last Five Years</u>		13
No	38%	
Yes, increased	23%	
Yes, decreased	15%	

Table 3. Assessment of job satisfaction by red crab industry.

Section 2: Vessel Owners, Operators, and Captains

This section of the survey was directed at vessel owners, operators, and captains in the red crab fishery. The section included questions on the involvement and dependence on the red crab fishery, the knowledge of and involvement with management issues, family background and involvement in the fishery and other fisheries, communities and

community interactions, as well as questions on the operational aspects of the fishery. The questions were intended to help us gauge involvement in the red crab fishery compared to other fisheries and dependence upon the fishery. Individuals more dependent upon a particular fishery are often impacted differently by regulations than individuals less dependent upon that fishery.

Dependence on the fishery

Table 4 provides information on the reported dependence of the harvesting sector of the red crab fishery on commercial fishing, and the red crab fishery in particular, for their annual household income. Note that on average the respondents report greater than 90% reliance on commercial fishing-related income to support themselves and their families. The red crab fishery is less important on average, but still most respondents report 100% dependence on the red crab fishery for their annual income.

Question	Minimum	Maximum	Average	Median	<i>n</i>
Percent income from commercial fishing	75%	100%	93.3%	100%	9
Percent income from red crab fishery	25%	100%	76.1%	100%	9

Table 4. Harvesters’ economic dependence upon commercial fishing and red crab fishery for annual household income.

The majority of harvesters surveyed report being actively involved with no other commercial fisheries. The respondents that are involved in other fisheries report being involved with groundfishing, Alaskan crab, king crab, tanner crab, cod, black cod, halibut and salmon. In spite of a majority reporting to be involved with no other fisheries, only one respondent reports having no state or federal fishing permits. Permits listed for the others include tuna, lobster, groundfish, surfclam, squid, and Gulf of Mexico red crab.

When asked if the fishermen in their households have ever worked outside of the fishing industry, a slight majority report that the fishermen in their households have worked outside the fishing industry and the rest report that they have not. When asked how much they could earn if they were not fishing, one respondent reports that they would expect to earn the same, but the rest all report that they would expect to earn less or much less, with most expecting to earn less. The majority of respondents did not know what job they might have if they were not fishing. Some non-fishing-related jobs they might pursue include consulting, sales, technology, or some other marine-related employment.

Management issues

All nine respondents report that their fishing activities are affected by at least some local, informal, or traditional fishing rules, codes, or agreements. These include cooperation among red crab vessels, cooperation between red crab and offshore lobster vessels, how to first establish a new fishing area, avoiding damage to others’ gear, minimizing waste and discards and encouraging conservation, limiting total fishing effort, limiting areas fished, and designated areas for different vessels, gear types, or fisheries. Rules for

cooperation among red crab vessels, rules or traditions for avoiding damage to others' gear, and rules or traditions to minimize waste and encourage conservation were the most commonly identified informal rules that affect how they fish.

When asked whether they understand the Council management system, six respondents report that they understand the Council management process but two report that they do not. All nine report that they understand the basics of fish population dynamics. Six respondents report that they understand the important fisheries management laws such as the Magnuson-Stevens Act, two respondents report that they somewhat understand them, and one respondent reports not understanding the laws. When asked whether they know how economic and social/cultural information is used in the management process, seven respondents report understanding how economic information is used, six report understanding how social/cultural information is used, two report that they do not know how economic information is used and three report that they do not know how social/cultural information is used.

The harvesters responding to the survey were asked to provide information on the degree with which they agree or disagree with a selection of possible goals or philosophies for fisheries management in New England. Table 5 summarizes these responses. As Table 5 shows, most respondents agree with attempting to maximize the economic benefits to the nation, with matching harvesting capacity to the available resources, and with maximizing benefits to the community. Most agree, but some disagree, with attempting to limit new entrants into a fishery to equal the number exiting the fishery, with retaining secure places for existing fishermen with opportunities not reduced by new entrants, with having the maximum number possible of fishermen involved in a fishery, and with having the maximum number possible of fishing-related jobs that can be supported by the resource. More disagree than agree with the notion of unlimited entry in any fishery.

Statements of management philosophy	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Maximum economic benefits to the nation	78%	11%	11%	0%	0%
Harvest capacity matched to resources	67%	22%	11%	0%	0%
Unlimited entry in any fishery	22%	11%	22%	0%	44%
New entrants limited to numbers exiting	44%	22%	11%	11%	11%
Secure places for existing fishermen with opportunities not reduced by new entrants	50%	25%	0%	12.5%	12.5%
Maximum benefits to the community	67%	22%	11%	0%	0%
Maximum possible number of fishermen	33%	22%	33%	0%	11%
Maximum possible number of fishing jobs the resource can support	44%	22%	11%	0%	22%

Table 5. The degree to which members of the industry agree or disagree with eight possible goals or philosophies for fisheries management in New England now and in the future.

Family involvement in fishing

All of the harvesters responding to the survey report that their parents and grandparents were not involved in commercial fishing. Three-quarters of the respondents report being the first generation of their family involved in commercial fishing, the rest report being the second generation. Most report that no other members of their families are involved in commercial fishing, although one respondent did report as many as four other family members are involved in commercial fishing. Of the other family members involved in fishing, responses included wives, brothers, and sons.

When asked about their interest in having their children pursue a career in commercial fishing, only two report being interested. Six respondents report being not interested in having their children involved with commercial fishing, and answers for why they are not interested ranged from a belief that there is no future in fishing to a preference that they attend college. Other reasons included children being female, too many variables in fishing, and the suggestion that the decision was the choice of their children. When asked about whether their children themselves are interested in commercial fishing, only two report their children are interested. Five respondents report that their children are not interested in commercial fishing. Reasons given for why their children are not interested in commercial fishing include that they are too young, they have other interests, they are attending or planning to attend college, and that it is their choice.

Respondents were asked about their family work practices and the amount of time they and their spouses spend in a typical week on various activities. Table 6 provides a summary of the time spent by red crab fishermen and their spouses on activities related to the red crab fishery. Spouses appear to be primarily responsible for household finances and some record keeping. The fishermen themselves are primarily responsible for vessel operations, supervising crew, repairing and maintaining the vessel, and sales operations. No one reports any non-fishing related employment by either themselves or their spouses.

Activity	n	Average		Minimum		Maximum	
		Self	Spouse	Self	Spouse	Self	Spouse
Household finances	6	1.3	11	0	4	4	20
Vessel operations	6	60	0	0	0	128	0
Record keeping	6	9.3	1.1	0	3	40	5
Supervising crew	6	33.3	0	10	0	100	0
Sales	6	3.3	0	0	0	10	0
Repair / maintain vessel	6	16.5	0	0	0	35	0
Non-fishing employment	6	0	0	0	0	0	0

Table 6. Number of hours spent each week by fishermen and their spouses on typical activities.

Community interactions

When asked to identify the communities in which they live, the fishermen responding to the survey identified ten communities in Connecticut, Massachusetts, Maine, Rhode Island, and Washington as their hometowns (see Table 7) . On average, the red crab fishermen have lived in these communities for more than 17 years (see Table 8).

Community	State
Windsor Locks	CT
Fall River	MA
Gloucester	MA
Hamilton	MA
New Bedford	MA
South Dartmouth	MA
Westport	ME
Adamsville	RI
Tiverton	RI
Seattle	WA

Table 7. Home communities and states where red crab fishermen live.

Question	Minimum	Maximum	Average	Median	<i>n</i>
Time lived in hometown	2 years	44 years	17.2 years	14 years	9

Table 8. Number of years red crab fishermen have lived in their communities.

Table 9 summarizes results of questions on community dependence on fishing and the involvement of red crab fishermen with their communities. The majority of respondents do not consider the communities in which they live to be fishing communities and even fewer consider their communities to be significantly dependent on commercial fishing. In fact, only three respondents consider their communities to be significantly dependent on fishing. Those respondents reporting that their towns were not fishing communities suggested this was due to few fishermen living there, the town being located inshore, or the town being a bedroom community. Of respondents whose towns are considered fishing communities, they suggested this was due to the amount of fishing activities based there. Most respondents indicate that they would not have to move if fishing became more difficult with only two respondents reporting that they would have to move. When asked what they might be able to do to earn a living in the area in which they live (if they were no longer fishing for red crab), suggestions included employment in carpentry, some other boating-related activity, or lobster fishing. Two respondents report not knowing what they could do if they were not fishing and one reports that there would not be much that they could do.

Most respondents report belonging to at least one fishing-related organization and most of these individuals report active participation in the organizations. About half the respondents report that either they or members of their household participate in community organizations, including school and church groups. A majority of respondents report they would not advise young people to go into the fishing industry. Only two suggested that they would advise young people to enter the fishing industry.

Question	Yes	No	n
Consider hometown a fishing community	44%	56%	9
Hometown significantly dependent on fishing	33%	67%	9
Would have to move if fishing more difficult	25%	75%	8
Belong to fishing organizations	89%	11%	9
Participate regularly in fishing organization	75%	25%	8
Participate in community organizations	50%	50%	8
Advise young people to enter fishing industry	22%	78%	9

Table 9. Community dependence and involvement of red crab harvesters.

Section 3: Fishing / Vessel Operations

A specific set of questions in this section focused on the operational aspects of the red crab fishery, including fishing vessel characteristics, fishing practices, ports of operation, use of crew, and use of and relationship with processors. Collecting this information from several vessel owners and operators helps us understand what aspects of fishing operations are standard among the industry and what aspects are unique to each vessel. The answers to these questions are of particular importance to better understand how the directed red crab fishery is prosecuted and what aspects of the fishery are likely to change depending on the management measures selected in the FMP.

Vessel characteristics

Table 10 summarizes basic information on the characteristics of red crab fishing vessels. The average length of vessels in the red crab fishery is 105 feet, ranging from 72 to 150 feet in length. The hold capacity of these vessels is variable, ranging from 60,000 pounds to approximately 320,000 pounds, and averaging just over 122,000 pounds whole weight equivalent. For some vessels, hold capacity was reported in whole weight, but for other vessels the hold capacity was reported in section weight. To convert the section weight data into whole weight equivalents in order to average the hold capacities of all vessels, the recovery rate conversion formula of 58% provided by NMFS in the Secretarial Emergency Action for the Deep-Sea Red Crab Fishery was used (NMFS 2001).

Vessels in the red crab fishery range in age from 9 to 36 years old and average 23 years old. The number of crew reported to be employed by each vessel ranged from 5 to 20 and averaged 8.2 crew per vessel. At least two vessels reported the total number of

crewmembers employed by them, but a portion of the crew rotates their time off (i.e., one vessel reports employing 9 crewmembers but only takes 6 out on each fishing trip, allowing 3 a trip off). Most vessels report no seasonal differences in the number of crew they employ, although one respondent indicated that the number of crew varies with catch.

Question	Minimum	Maximum	Average	Median	<i>n</i>
Vessel Length (feet)	72	150	105.0	95	8
Hold Capacity (pounds)	60,000	320,000	122,312.5	70,000	8
Age of Vessel (years)	9	36	23.0	19	7
Number of Crew	5	20	8.2	7	8

Table 10. Vessel characteristics for red crab fishing vessels. Vessel hold capacity is provided in pounds of whole weight equivalent, converted where necessary from section weight into whole weight equivalent using the formula provided in the Secretarial Emergency Action for the Red Crab Fishery (NMFS 2001).

Other information collected on the characteristics of the red crab fishing vessels includes the construction and overall condition of the vessels participating in the red crab fishery. Table 11 summarizes information provided by the Red Crab Advisors on their fishing vessels. All but one vessel is reported to be constructed of a steel hull, the other constructed of a fiberglass hull. Half the vessels are reported to be in “good” condition (described in the survey as a vessel needing very little attention with a recent overhaul). One vessel was reported in “excellent” condition (described in the survey as a vessel new or very recently overhauled needing no attention). Three vessels were reported in “fair” condition (described in the survey as a vessel needing some attention and needing to be overhauled soon). No vessels were reported in “poor” condition (described in the survey as a vessel needing immediate attention including an overhaul).

Question	Percent	<i>n</i>
<u>Construction of Vessel</u>		8
Steel hull	87.5%	
Wood hull	0.0%	
Fiberglass hull	12.5%	
<u>Condition of Vessel</u>		8
Excellent	12.5%	
Good	50.0%	
Fair	37.5%	
Poor	0.0%	

Table 11. Construction and condition of vessels in the red crab fishery.

Red crab fishing trips

Table 12 summarizes information on red crab fishing trips. Most vessels report currently spending a significant portion of the year on the water. Days on the water for all fishing

activities ranges from 200 to 300 days annually, with an average for all vessels over 266 days per year. The total number of fishing trips taken in a year for all fishing activities was the same as the number of red crab fishing trips taken in a year, indicating that these vessels either fish only for red crab or only participate in other fisheries while on a red crab trip. All vessels report taking a significant number of fishing trips each year, ranging from 28 to 35 per year, averaging just under 32 trips per year per fishing vessel. All red crab fishing trips are reported to be at least a week in duration, ranging from 7 to 10 days and averaging 8.2 days per trip. Vessels report that a working day while on a red crab trip averages just under 18 hours, ranging from 17 hours to 20 hours per day.

Question	Minimum	Maximum	Average	Median	<i>n</i>
Annual days on water (all fishing)	200	300	266.7	260	7
Number of trips per year (all fishing)	28	35	31.8	33	6
Number of red crab fishing trips	28	35	31.8	33	7
Duration of red crab fishing trips (days)	7	10	8.5	8	6
Working hours per day	17	20	17.7	18	7

Table 12. Information on fishing trips for red crab fishing vessels.

Trap use

The Red Crab Advisors also provided information on the number of traps they use in their fishing operations. Table 13 summarizes this information for all respondents. The reports indicate that relatively few traps are used in the red crab fishery. The average for all vessels responding to the survey is 560 traps per vessel, ranging from only 480 to 600 traps. The number of traps used on a string varied considerably, from 75 traps per string to 180, with an average of just over 107 traps per string per vessel. All vessels report allowing their traps to soak between 18 and 36 hours prior to hauling, with an average of 22.5 hours of soak time. The combination of the number of traps used and the soak time provides a fairly wide range of total number of traps hauled by each vessel on a trip. The average number of traps hauled per red crab fishing trip is 2,900 ranging from 1,600 to 4,200 traps hauled per fishing trip.

All respondents report some amount of trap loss or damage on red crab fishing trips. On average, the respondents report 10.5 traps lost or damaged per trip. The range of lost or damaged traps was as small as zero to as many as 50 traps per trip.

Question	Minimum	Maximum	Average	Median	<i>n</i>
Number of traps used	480	600	560.0	550	7
Number of traps per string	75	180	107.2	95	7
Soak time between hauls (hours)	18	36	22.5	24	7
Total trap hauls per trip	1,600	4,200	2,900.0	3,000	6
Average trap loss/damage per trip	0	50	10.5	10	7

Table 13. Information on trap use in red crab fishery.

Bait use, fishing area and primary ports

All respondents report purchasing the bait they use in the red crab fishery. Five respondents indicate that they use herring as bait and two use pogies; one respondent reports using both herring and pogies as bait. The average price paid per pound for their bait is reported to be \$0.20, with a range from \$0.12 per pound to \$0.25 per pound.

Respondents were also asked how they determine which area to fish on a given trip and responses varied, including gauging effort on an area, areas where they have had the best fishing, traditional grounds, time of year and movement of other vessels, and prospecting.

Table 14 lists those ports reported to serve as the primary ports of operation and mooring for red crab vessels participating in the survey. Ports important to the red crab fishery are located in Maine, Massachusetts, and Rhode Island.

Port	State
Fall River	MA
Gloucester	MA
New Bedford	MA
Bristol	ME
Portsmouth	RI
Tiverton	RI

Table 14. Primary ports of operations and mooring.

Red crab processors

The survey for Red Crab Advisors also included questions on the use of processors by red crab fishing vessels. Respondents indicate that most use only a single processor, although one respondent did report occasionally using a second. Three respondents report that the processor they use is located in their community. Three report that the processor is not located in their community. One reports that they sometimes use a processor located in their community, but primarily use a processor outside of their community. Of the processors not located in the respondents' communities or primary ports, these processors are reported to be located in Portland, Maine, New Brunswick, Canada, and Prince Edward Island, Canada.

Five respondents report that they do not have any contracts with the processors they use, but three report that they do. Respondents indicate that their contracts include processing, marketing, off-loading, and moorage. Some contracts may also include annual and sometimes weekly landings commitments. The survey included a question as to why the red crab fishermen choose to use a particular processor. Table 15 summarizes the responses given to this question. Most respondents indicated that they choose to sell their red crab to a particular processor in large part out of loyalty to that processor. Offering the best price and developing the best markets were also reasons given for choosing to sell to a particular processor.

Question	Percent	<i>n</i>
<u>Why choose particular processor?</u>		6
Business partners	0%	
Best price	25%	
Long-term arrangement	0%	
Loyalty	62.5%	
Best markets	12.5%	

Table 15. Reasons given for choosing to sell to a particular red crab processor.

“Down time”

The Red Crab Advisors were asked about their time not fishing (“down time”) spent on fishing-related activities (gear repair, vessel maintenance, trip planning, attending meetings, etc.). As indicated in Table 16, all respondents indicate that they spend more than 10% of their down time on fishing-related activities. The largest percentage of respondents report spending more than half of their down time on fishing-related activities. Five respondents report that the amount of down time they spend on fishing-related activities has increased over time, while four report that this has not increased.

Question	Percent	<i>n</i>
<u>“Down time” spent on fishing-related activities</u>		9
< 10%	0.0%	
10 - 25%	33.3%	
26 - 50%	22.2%	
> 50%	44.4%	
<u>Has this increased over time?</u>		9
Yes	56%	
No	44%	

Table 16. How much “down time” is spent on fishing-related activities.

Section 4: Economic Aspects of Red Crab Fishery

Vessel owners and operators were also questioned about some economic aspects of their businesses, focusing on the fixed and variable costs associated with the red crab fishery. Owners and operators of four vessels responded to supplemental survey questions on the economics of the red crab fishery, and the results of these questions are summarized here. To protect the confidentiality of the responses to the maximum extent possible, only the mean of the responses to each question will be provided.

Catch and Revenue

Vessel owners and operators were asked to provide an average red crab catch and gross revenue per trip for the years 1998 - 2000, inclusive. On average, red crab vessels landed approximately 63,000 pounds of red crab per trip during these years. On average during this time, red crab vessels received an average of approximately \$42,000 per trip in gross revenue. Vessel owners and operators also reported their minimum gross revenue needed to break-even, with an average of approximately \$4,600 per day of fishing.

Trip Expenses

Vessel owners and operators were asked to provide information on their trip expenses for each fishing trip. Information was requested on costs of fuel, oil and lubrication, water, ice, bait, food and groceries, gear expenses and repairs, and any other trip expenses. On average, red crab fishing vessels spend approximately \$12,600 per trip on the above types of expenses.

Vessel owners and operators also provided information on the division of revenue between the vessel and the crew. All owners and operators reported calculating the boat and crew shares after deducting trip expenses from the gross ex-vessel revenue. On average, 48% of proceeds are paid out as crew shares of the revenue (including the captain's share).

Annual Expenses

In addition to the questions on trip expenses, vessel owners and operators were asked about their annual expenses to maintain their business, vessel, and participation in the fishery. Information was requested on such things as interest on any loans, insurance, docking fees, vessel permits and license fees, administrative overhead, association fees, employee benefits, other shore-side expenses, and the depreciation of their vessel and gear. Red crab vessel owners and operators report spending an average of approximately \$397,000 per year on these types of annual expenses.

Total Variable and Fixed Costs

The information summarized above was used to calculate the total variable and fixed costs for a fishing vessel in the red crab fishery. Variable costs include all per trip expenses, plus half of the annual vessel repair costs divided by the average number of fishing trips taken per year. Fixed costs include all annual expenses plus the other half of the annual vessel repair costs. For the red crab fishery, based on the responses summarized here, the variable costs average \$15,000 per trip and the fixed costs average \$470,000 per year.

Section 5: Vessel Crew

The individuals who serve as crew on commercial fishing vessels are often an overlooked component when analyzing potential impacts on the fishing industry and fishing

communities, but they can be affected by regulations and/or changing conditions. The survey included a section on the background and relevant characteristics of the people who serve as crew on board red crab fishing vessels. Because no vessel crew currently serve on the Red Crab Advisory Panel, we relied on vessel owners and operators to provide this information for the crew that they employ. The answers to these questions will help us identify patterns of similarity with other commercial fisheries or significant differences in the red crab fishery. This information will also be used to gauge the effects various management measures may have on this component of the fishery.

Demographic information

The information presented here on vessel crew summarizes responses across all fishing vessels. Table 17 provides a summary of demographic information on those individuals serving as crew on red crab vessels, as reported by vessel owners and operators. The overwhelming majority of crew are reported to be males. Most are or have been married, but a fair percentage (38%) have never been married. Most crew are reported to have children, with an average of just under 2 children per crew member with children. Level of education is somewhat varied, but the vast majority are reported to be high school graduates (over 70%). A significant, but smaller, percentage are reported to have attended some college, and only a small percentage have completed college.

Question	Percent	<i>n</i>
<u>Sex</u>		61
Male	98.4%	
Female	1.6%	
<u>Marital Status</u>		42
Single, never been married	38.0%	
Married	55.0%	
Married, but separated	5.0%	
Divorced	2.0%	
<u>Dependents</u>		51
Have children	57.0%	
Do not have children	43.0%	
<u>Education</u>		34
Some high school	3.0%	
High school graduate	70.6%	
Some college	20.6%	
College graduate	5.6%	
Post-graduate work	0.0%	

Table 17. Socio-demographic information on red crab vessel crew reported by vessel owners and operators.

Responses to the survey also provided information on the race and ethnicity of crew members employed by red crab vessels. All but one respondent report at least one minority crew member, including African-Americans, Hispanics, and Native Alaskans. Respondents also report that the ethnicity of their crew members varies and includes Hondurans, Irish, Mexicans, and Portuguese, as well as other unspecified ethnic groups.

Crew characteristics, history and dependence

Table 18 summarizes additional information on the characteristics, history, and dependence of vessel crew members in the red crab fishery, as reported by vessel owners and operators. The age of vessel crew is reported to range from 18 years old to 56 years old, with an average for all vessel crew members reported to be just over 28 years old. All vessel crew members are reported to have been involved in commercial fishing for several years, averaging over 10 years per crew member. Not all of this time has been in the red crab fishery, however, as the average time that vessel crew have been involved in the red crab fishery is reported to be only 3 ½ years. Most of the time these crew members have been involved in the red crab fishery has apparently been on the same vessels, as the average time that crew have been employed on their vessels is over 3 years (only slightly less time than they would have been involved in the red crab fishery). Some individual crew members have had fairly long tenure working on their vessels, as the longest that a crewman has been employed on a red crab vessel averages over 8 years.

Table 18 indicates that most of the vessel crew that are reported to be involved year-round in commercial fishing are also involved year-round in the red crab fishery. This is indicated by an average of 8.1 crew members per vessel involved year-round in the red crab fishery, and 8.7 involved year-round in commercial fishing.

Question	Minimum	Maximum	Average	Median	n
Age of crew (years old)	18	56	28.4	30	7
How long in commercial fishing (years)	5	15	10.3	11	6
How long in red crab fishery (years)	1	7	3.5	2.5	6
Average employment on vessel (years)	0.5	5	3.1	4	5
Longest employed on vessel (years)	2.5	15	8.3	6	6
Number year-round in fishing	6	12	8.7	9	7
Number year-round in red crab fishery	6	12	8.1	7	7
Percent income from fishing	80%	100%	97.1%	100%	7
Percent income from red crab fishery	10%	100%	72.9%	90%	7

Table 18. Characteristics and dependence of vessel crew reported by vessel owners and operators.

Dependence on commercial fishing and the red crab fishery in particular is varied. As Table 18 shows, crew members are reported to derive almost all of their annual income (over 97%) from some form of commercial fishing activity. On average, however, crew members are reported to derive less of their annual income (less than 73%) from the red

crab fishery. Although all but one vessel report that their crew members depend 100% on commercial fishing for their income, only three report that their crew members depend 100% on red crab fishing. The range of income dependence is much greater in the red crab fishery compared to commercial fishing in general.

Other fisheries

In addition to the basic characteristics information, vessel owners and operators were also asked about the other fisheries in which their crew members have participated. Responses include: lobster, groundfish, West Coast crab species, monkfish, scallops, and mussels. In response to a question about whether crew members relocate to another community to participate in the red crab fishery, two respondents report that their vessel's crew relocates from Alaska to fish and four report that their crew members do not relocate. One respondent reports that they do not know whether their vessel crew members relocate.

Family history

The survey included questions about crew members' family history in commercial fishing. Just under three crewmen per vessel, on average, are reported to have a mother and/or father also involved in commercial fishing. Two respondents indicated they did not know whether a current crew member has a mother and/or father also involved in commercial fishing. An average of three crewmen per vessel are reported to be a part of a multi-generational fishing family. Two respondents indicated they did not know whether a current crew member is part of a multi-generational fishing family. Of those individuals that are part of a multi-generational fishing family, respondents report that an average of 2.6 generations have been involved in commercial fishing. Respondents report an average of 2.2 of their crew members per vessel have other family members currently involved in the red crab fishery. One respondent reports that they do not know whether any of their crew members have other family members in the red crab fishery.

Future plans

Vessel owners and operators were asked whether any vessel crew members were interested in owning their own fishing vessel in the future. Four respondents report that at least one crew member is interested in owning their own vessel. One reports that no crew members are interested in owning their own vessel, and one reports that they do not know whether any of their crew are interested. Respondents either report that those who are interested in owning their own fishing vessel are interested in entering the lobster and crab fisheries, or they report not knowing what specific fisheries they plan to enter.

Section 6: Processors

The federal fishery management process is concerned with all aspects and sectors of each commercial fishing industry under management. The survey included questions directed at the processing sector because it is important to understand how the processing sector

operates, how dependent upon the red crab fishery this sector may be, and how different types of regulations are likely to affect the processing sector. These questions focused on the dependence of the processors on the red crab fishery, their employment, processing capacity, transportation requirements, and the types of products they sell.

Products processed

None of the respondents identified as processors report exclusively processing red crab. Other commercial fishery products processed include: clams, dogfish, Jonah crab, lobster, monkfish, mussels, rock crab, scallops, skates, snow crab, and squid. Processors report that they obtain red crab product from vessels from a variety of ports, including Fall River and New Bedford, Massachusetts, as well as other ports in Massachusetts and Rhode Island. The processors report obtaining red crab product from between one and four vessels, with an average of two vessels per processor. One respondent indicates that they contract with a third party to actually process red crab, although they do process other fishery-related products.

Characteristics of processors

Table 19 provides information on the characteristics of several red crab processors. Survey respondents report processing between 100,000 and 400,000 pounds of red crab each month, with an average for all of 233,000 pounds per month. Consistent with all processors reporting that they process other fishery products in addition to red crab, on average red crab accounts for 11.5% of their total fishery-related processing operations, and the most that red crab comprises their processing operations is 25%. This is again confirmed by responses regarding transportation of processing product, of which 17.3% on average is red crab. All processors have the capability to expand their red crab processing operations, as they report no more than 50% of their red crab processing capacity is currently utilized, with an average of 32.5% utilized capacity.

Question	Minimum	Maximum	Average	Median	n
Red crab processed per month (pounds)	100,000	400,000	233,000.0	250,000	4
Percent of total processing on red crab	0%	25%	11.5%	20%	4
Percent of total transported product that is red crab	1%	30%	17.3%	20%	4
Percent red crab capacity utilized	0%	50%	32.5%	40%	4
Total number of employees	5	1000	307.5	112.5	4
Number of seasonal employees	5	600	162.5	24	4
Number of year-round employees	5	400	146.5	90	4
Percent of employees that work exclusively on red crab processing	0%	30%	12.8%	10.5	4

Table 19. Characteristics of red crab processors.

Employees

The number of employees currently employed by the processors varies significantly, from 5 to 1000 with an average of over 300 employees per processor. According to the respondents, the majority of these employees are seasonal in nature, with an average of 146.5 year-round employees per processor. As would be expected given the responses summarized above, most processing employees work either on other fishery-related products or at least do not work exclusively on red crab. On average, less than 13% of processing employees work exclusively on red crab.

Transportation of product

Respondents were also asked about how they transport product either to or from their processing facility. One respondent indicated that their facility is dockside, so no transport is needed from the vessel; all other report that they use trucks for transport to their facility from the dock and fishing vessels. Three respondents report they use trucks for transport and one reports using both truck and air transport from their facility to their buyers. One respondent reports contracting for transport and one reports owning their own transport. Two others report using both contract and their own transport.

Red crab products sold

Three respondents report selling between 50 and 75% of their red crab to food service companies, three report selling between 10 and 30% to retail centers, one reports selling 40% to distributors, and one reports selling 100% of their red crab product to a wholesaler. Three respondents report selling only frozen red crab product, in a mixture of whole crabs, claws, sections, and picked meat. Of these, only one respondent reports selling whole crabs and the majority crab product of these respondents appears to be picked meat. A fourth respondent reports selling 100% of their red crab product in the form of fresh picked meat.

Section 7: Wholesalers and Retailers

The people and businesses that sell red crab product at the wholesale or retail level are an important component of the fishing industry and of fishing communities. These people and businesses may also be affected by regulations or when conditions change in the fishery. The questions in this section were an attempt to collect information on the dependence on the red crab fishery of the people and businesses in this sector of the industry. These questions focused on the dependence of wholesalers and retailers on the red crab fishery, their employment, and the types of products they sell.

Business operations

None of the respondents identified as wholesalers or retailers report selling red crab exclusively. Other commercial fishery products sold include: calamari, clams, dogfish, groundfish, Jonah, rock and snow crab, lobster, monkfish, mussels, scallops and skates.

Table 20 provides summary information on the characteristics of red crab wholesalers and retailers, based on the responses of those members of the Red Crab Advisory Panel who identify themselves as a wholesaler or retailer. Respondents report that although the majority of their business revenue is derived from commercial fishing-related products (averaging 90%), only a relatively small proportion of this business revenue is derived from the sale of red crab products. The percentage of their business revenue that comes from the sale of red crabs ranges from less than 1% to 33% and averages only slightly more than 25%. The number of employees retained by the respondent red crab wholesalers and retailers ranges from 2 to 150 and averages 32.8 per business operation.

Question	Minimum	Maximum	Average	Median	n
Percent revenue from fishing-related products	50%	100%	90.0%	100%	5
Percent revenue from red crab products	< 1%	33%	25.8%	25%	5
Total number of employees	2	150	32.8	3.5	5

Table 20. Characteristics of red crab wholesalers and retailers.

Red crab products sold

Three respondents report selling only frozen red crab product, in a mixture of whole crabs, claws, sections, and picked meat. Of these, only one respondent reported selling whole crabs and the majority of all crab product by these respondents appears to be picked meat. A fourth respondent reports selling 100% of their red crab product in the form of fresh picked meat. A fifth respondent reports selling a variety of fresh and frozen red crab. They report selling fresh crabs as whole, claws, sections, and picked meat. They also report selling frozen crabs whole, claws, and sections. Three respondents report selling between 60 and 100% of their red crab product to companies in the U.S. but not in New England; three report selling between 5 and 100% of their red crab product to companies in New England; and two report selling between 10 and 15% of their red crab product to foreign enterprises.

CONCLUSIONS

The results of this survey provide some baseline information on the operational, social, and economic characteristics of the red crab fishing industry. Information is provided on the harvesting (including crew), processing, and wholesale and retail components of the fishery. This information will be used in the development of the Red Crab FMP to understand how this fishery operates and how it is likely to be affected by any proposed management measures which may change how the fishery operates. This information will be used in the analysis of social and economic impacts required in the FMP. The information will also be used in the future to track changes in the fishery.

Appendix C

Draft Regulatory Text

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 648

[Docket No. ; I.D.]

RIN

Magnuson-Stevens Fishery Conservation and Management Act
Provisions; Fisheries of the Northeastern United States;
Atlantic Deep-Sea Red Crab Fishery; Atlantic Deep-Sea Red Crab
Fishery Management Plan

AGENCY: National Marine Fisheries Service (NMFS), National
Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Proposed rule; request for comments.

SUMMARY: NMFS proposes regulations to implement the Atlantic
Deep-Sea Red Crab Fishery Management Plan (FMP). This
proposed rule would establish: A target total allowable catch
(TAC) level for the management area; a procedure for the
development and revision of annual specifications; a framework
adjustment process; a limited access program for the directed
fishery; trip limits and incidental harvest allowances;
permitting and reporting requirements, including an
Interactive Voice (IVR) Response system for limited access

vessels; a Days-at-Sea (DAS) allocation effort control program; gear restrictions and gear marking requirements; trap/pot limits; processing at sea restrictions; restrictions against retaining and landing female crabs in the directed fishery; and mutilation restrictions. This proposed rule would also implement other measures for administration and enforcement. The purpose of this proposed action is to manage the Atlantic deep-sea red crab (red crab)(Chaceon quinquedens) fishery pursuant to the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) and the FMP and to prevent overfishing of the red crab resource.

DATES: Comments must be received at the appropriate address or fax number, (See ADDRESSES), on or before 5:00 p.m., local time, on [insert date 33 days after date of publication in the FEDERAL REGISTER].

ADDRESSES: Written comments should be sent to Patricia A. Kurkul, Regional Administrator, NMFS, Northeast Regional Office, One Blackburn Drive, Gloucester, MA 01930. Mark the outside of the envelope, "Comments on Red Crab FMP." Comments also may be sent via facsimile (fax) to (978) 281-9135. Comments will not be accepted if submitted via e-mail or Internet.

Comments regarding the collection-of-information

requirements contained in this proposed rule should be sent to the Regional Administrator and to the Office of Information and Regulatory Affairs, Office of Management and Budget (OMB), Washington, DC 20503 (Attn: NOAA Desk Officer).

Copies of the FMP, its Regulatory Impact Review (RIR) and the Initial Regulatory Flexibility Analysis (IRFA), and the Final Environmental Impact Statement (FEIS) are available from Paul J. Howard, Executive Director, New England Fishery Management Council (Council), 50 Water Street, The Tannery - Mill 2, Newburyport, MA 01950.

FOR FURTHER INFORMATION CONTACT: E. Martin Jaffe, Fishery Policy Analyst, 978-281-9272, fax 978-281-9135.

SUPPLEMENTARY INFORMATION:

Background

The FMP was developed by the Council in response to concerns that the continued development and increased landings in the red crab fishery required implementation of management measures to prevent overfishing and to allow for the orderly development of the fishery.

Prior to 1970, there was no known fishery for Atlantic deep-sea red crab, although there was some incidental catch of red crab in other fisheries. In the early 1970s small markets opened up for the species, spurring one or two vessels to

attempt to fish for red crab directly. Markets for this species fluctuated over the next decade or so, as did attempts at new techniques to improve the harvest, preservation, and processing of the crabs.

Throughout the 1980s there was a fairly consistent fishery for red crab, with known landings averaging over 5.5 million lb annually. In the early 1990s landings fluctuated, but have been steadily increasing since about 1995. Industry reports suggest that landings exceeded 7 million lb in 2000.

In late 1999, faced with increasing landings and increased interest in the fishery from potential new entrants, a group of fishermen requested that the Council develop a red crab FMP. In November 1999, the Council voted to begin development of the FMP.

In January, 2000, at the recommendation of its Red Crab Committee, the Council voted to establish a control date for the red crab fishery, in case the Council chose to differentiate historic participants in the red crab fishery from new, speculative entrants. The Council also intended that a control date serve as a disincentive to any new vessels considering moving to New England to begin fishing for red crab.

In February, 2000, the Council published in the Federal Register a Notice of Intent to Prepare an Environmental Impact Statement (EIS), officially beginning the Council's FMP scoping process (65 FR 4941). The Council hosted two scoping meetings, well-attended by the red crab industry and other interested parties, at which there was general support for the development of a Red Crab FMP, including consideration of management measures establishing a limited entry program, a minimum allowable size, a male crabs only fishery, a processing at sea prohibition, and reasonable trap limits.

The Council established March 1, 2000, as the control date for the red crab fishery through publication in the Federal Register (65 FR 11029) on that date.

In November, 2000, the Council was notified that at least two new vessels had announced their intentions to relocate to New England from other parts of the country to fish for red crab. The existing members of the fishery and the Council became concerned that the additional fishing power and effort represented by these new entrants could jeopardize the sustainability of the resource before the FMP could be developed and implemented.

In January, 2001, faced with an increase in the number of

vessels targeting the red crab resource, the Council requested that the Secretary of Commerce (Secretary) take emergency action to prevent overfishing in the red crab fishery while the Council continued to develop an FMP. The Secretary determined that the current exploitation and the likelihood of substantive increases in total exploitation, in the area north of Cape Hatteras, NC, constituted an emergency situation presenting serious conservation problems necessitating emergency action to prevent overfishing.

On May 8, 2001, NMFS published in the Federal Register emergency regulations designed to prevent overfishing, effective May 18 through November 14, 2001 (66 FR 23182).

On July 23, 2001, NMFS amended the emergency regulations by announcing in the Federal Register a revision of the conversion factor used to determine the whole weight equivalent of partially-processed or butchered crabs (66 FR 38165).

The emergency regulations were extended for a second 180-day period, from November 15, 2001 through May 14, 2002 (66 FR 56781). On January 15, 2002, NMFS announced through publication in the Federal Register that the directed red crab fishery would close on January 18, 2002 (67 FR 1908) due to a NMFS projection that the quota would be reached or exceeded on

that date.

The threat of overfishing the red crab resource is the primary concern requiring management attention. Based on a comprehensive survey conducted when the fishable stock of this resource was considered to be in virgin condition, MSY was originally estimated at 5.5 million lb (2,495 mt)(Serchuk 1977). Commercial landings of red crab have exceeded this level several times since the development of the fishery. Now estimated at approximately 6.24 million lb (2,830.4 mt), four to six vessels fishing at existing levels of capacity represent the likely maximum amount of harvesting effort that can be sustained by the resource.

Overfishing this resource is of particular concern due to the nature of the species. Red crabs are typically slow-growing and major recruitment events are believed to occur rarely. All of the reviewed literature that discusses fishing potential for red crabs are unanimous in assessing that this resource cannot sustain significant fishing pressure, that this resource is particularly vulnerable to overfishing, and that strict management controls are needed to protect the sustainability of the fishery.

The number of vessels actively prosecuting this fishery is an important consideration because historically a small

number of vessels has been able to fish at or above MSY levels. In fact, in an attempt to frame the ideal capacity of this fishery, Holmsen and McAllister (1974) suggested that "if the NMFS assessment of the size of the resource is correct [MSY of five to six million lb (2,268 to 2,722 mt)], there would not be room for more than seven to eight efficient vessels . . . in the red crab fishery." However, this estimate of the number of vessels is based upon their description of an "average" crab vessel (for 1974). They describe the average vessel as 85 feet (25.9 m) in length, fishing 250 pots, and landing approximately 40,000 lb (18,144 kg) of whole crabs per trip. Holmsen and McAllister's estimate of seven to eight efficient vessels supported in the fishery should be revised downward to represent the fact that the vessels in the fishery since 1995 have greater fishing capacity than what they presumed in 1974.

The five vessels participating in the directed red crab fishery prior to 2000 average 96 feet (29.3 m) in length, fish an average of 544 pots, and have the capacity to land the equivalent of an average of approximately 78,000 lb (35,380 kg) of red crab per trip. The figures suggest that these five vessels alone can exceed the total fishing power suggested by Holmsen and McAllister as an upper bound on this fishery.

This proposed rule addresses the desire of additional fishing vessels to enter the directed red crab fishery and the increased fishing power they would add to the fleet.

The biological, economic, and social impacts of these measures and the cumulative impacts associated with other FMPs and regulations are discussed in the FMP and FEIS.

Status of the Stocks

In 1974, NMFS conducted a directed survey of the red crab resource using the R/V Albatross IV. Based on the data collected in this survey by Wigley, Theroux and Murray (1975), Wigley et al. estimated total commercial biomass at 59 million lb (26,762 mt). Since this time there have been no further directed surveys of the red crab resource along the U.S. coast from the mid-Atlantic northward.

In the only assessment ever done for this species, Serchuk (1977) utilized the data from the Wigley et al. (1975) survey. Because of the lack of any significant directed fishery for red crab prior to the 1974 Albatross IV survey, Serchuk assumed that the 59 million lb (26,762 mt) estimate of commercial biomass represented virgin biomass, from which he was able to derive an estimate for MSY. However, Wigley et al. (1975) assumed a minimum commercial size of 4½ inches (11.4 cm) in carapace width. Because of this assumption of

the size at which an adult red crab would recruit to the fishery, the proportion of crabs smaller than 4½ inches (11.4 cm) was not included in the estimate of commercial biomass.

The size of red crab assumed to be the minimum commercial size is an important factor in the determination of the overall commercial biomass, which then has an effect on the basis for the estimate of MSY. If the minimum commercial size had been assumed to be smaller than 4½ inches (11.4 cm), then the proportion of the total biomass represented by commercial sized crabs would have been more than that determined by Wigley et al (1975).

For the purposes of this proposed rule, it is assumed that the minimum size of crabs harvested in the red crab fishery could be 4 inches (10.2 cm). The industry indicates that the fishery currently retains and lands all male crabs larger than 4 inches (10.2 cm). Thus, the minimum size considered here would reflect current fishing practices and also would reflect an increase in the size of crabs retained.

The biomass of male crabs only was considered in the estimation of MSY. Assuming that adult red crabs recruit to the fishery when they reach 4 inches (10.2 cm) in carapace width; assuming a natural mortality rate estimated at 0.15; and considering the southern extent of the management unit,

MSY is calculated to be 6.24 million lb (2,830.4 mt). (A full discussion of the analytical process leading to this calculation may be found in Sections 3.4.1 through 3.4.3 of the FMP.)

Overfishing Definition

The overfishing definition would not establish a fixed measure against which to compare current fishing pressure, or exploitation. Rather, it would establish a ratio value against which several different measures or proxies could be compared. Choice of the particular measure or proxy to be used in an assessment would be left to the assessment team, based on a clearly identified set of criteria and conditions under which each type of measure or proxy could be used.

Overfishing would be defined as any rate of exploitation such that the ratio of current exploitation to an idealized exploitation under MSY conditions exceeds a value of 1.0. The actual measure of exploitation used would be determined by the availability of suitable data.

The red crab stock would be considered to be in an overfished condition if one of the following three conditions were met:

Condition 1 -- The current biomass of red crab is below $\frac{1}{2}$ Bmsy in the New England Council's management area.

Condition 2 -- The annual fleet average catch per unit effort (CPUE), measured as marketable crabs landed per trap haul, continues to decline below a baseline level for three or more consecutive years.

Condition 3 -- The annual fleet average CPUE, measured as marketable crabs landed per trap haul, falls below a minimum threshold level in any single year.

This overfishing definition would allow for the collection of different types of information, which could then be used for status determinations, depending upon the best information available. The proposed overfishing definition offers the most flexibility, guarantees that some information would be available to make a status determination, and incorporates the recommendation of the Council's Science and Statistical Committee.

Optimum Yield (OY)

OY would be specified at 95 percent of MSY, or 5.928 million lb (2,689 mt), based on adjustments to MSY that take into consideration economic, social and ecological factors. This approach would incorporate changes to MSY to account for any uncertainty about the status or vulnerability of the resource or the current levels of fishing effort.

Management Area

Although the range of this species includes the South Atlantic and the Gulf of Mexico, the boundaries of the management area, also called the management unit, would be limited to the waters north of 35° 15.3' north latitude, bounded by the coastline of the continental United States in the west and north and the Hague Line and seaward extent of the U.S. exclusive economic zone (EEZ) in the east.

Essential Fish Habitat (EFH)

The Council proposes to use depth zone affinities for EFH. For most life stages, there are at least two options for an appropriate depth range for the EFH designation. For example, juvenile EFH could be designated based on the full depth range occupied by the species, or it could be based on the known depth range for juveniles. Adult EFH could be designated based on the full depth range occupied by the species, the full known depth range for adults, or a more narrow depth band known to contain much higher concentrations of red crab adults. It is a little more complicated for eggs and larvae. Eggs remain attached to adult female red crabs for the duration of this life stage, so there may be no need to designate EFH for red crab eggs. Larvae are the only pelagic life stage for this species, and very little is known about their movement, behavior, and range. In situations with

other species for which there was very little or no information available on the egg and/or larval life stages, the Council assumed that the union of the adult and the juvenile ranges would serve as an acceptable proxy for the unknown life stage(s). The same could be done for red crab.

Permitting Requirements

The owner of any commercial vessel meeting certain eligibility requirements who wishes to fish for, catch, possess, transport, land, sell, trade, barter, butcher or partially process at sea red crab in or from the red crab management unit would be required to obtain a Federal red crab permit. Either of the following types of permits would be issued:

1. Limited access red crab permit for vessels qualified to participate in the limited access directed fishery; and
2. red crab incidental catch permit for all other vessels that land an incidental catch of red crabs up to 500 lb (226.8 kg) per fishing trip.

Vessels that qualify and are authorized to participate in the limited access directed fishery would also be allowed to fish under the red crab incidental catch rules when not fishing on a directed red crab trip (i.e., on a red crab DAS).

Owners of vessels authorized to receive a limited access red

crab permit would, on an annual basis, have to declare their intent to participate or not in the directed fishery for the next fishing year at least six months prior to the start of the fishing year. The initial issuance of a limited access permit would assume the intent to fish in the first year; the declaration requirement would only apply to permit renewals. The requirement for owners of vessels to declare their intent prior to each fishing year would be necessary in order to facilitate an adjustment of the annual allocation of DAS per vessel, which is based on the expected number of vessels that would actually participate in the fishery. A vessel owner who declared out of the fishery for the following year would have to wait until the next year's permit renewal application process to declare back into the fishery for the next full fishing year.

Owners of vessels would have 180 days from the effective date of the regulations to apply for their initial limited access permits. Owners who failed to renew their permit for a fishing year would be ineligible to renew their permits in subsequent years.

Owners of vessels authorized to receive a limited access red crab permit would, on their annual permit application, have to declare the maximum number of traps/pots they use per

string and the maximum number of strings employed, such that the product of the maximum number of traps/pots per string and the maximum number of strings declared is no more than 600 traps/pots.

Dealer permits would be required on an annual basis for all dealers who purchase red crab product from any vessel. Red crabs harvested from the red crab management unit could only be sold to Federally-permitted dealers. To be eligible for such permit, an applicant would have to have been issued a valid state wholesaler's license in the state where he or she operates.

Operators of vessels issued a red crab fishing permit would be required to obtain an operator permit. There would be no qualification or test for this permit.

Reporting Requirements

This proposed rule would extend the existing Vessel Trip Report (VTR) system to vessels with red crab permits. This would require the owner or operator of vessels with either a limited access or incidental catch permit to submit monthly reports on fishing effort, landings, and discards on forms supplied by the Regional Administrator. VTRs could be submitted on a monthly basis, postmarked not later than 15 days after the end of the reporting month. Both limited

access and incidental catch vessels would be required to complete and submit one or more VTRs for each fishing trip, regardless of whether they land any red crab on that trip.

In addition, an IVR system would be required to be used by the owner or operator of a vessel in the limited access fishery. Owners or operators of vessels participating in the limited access fishery would have to report their total landings within 24 hours of the termination of each fishing trip during which they landed any amount of red crab. The IVR system would be used to track near-real time landings in the fishery to ensure that the most complete and current data on the fishery is available.

Dealers with a red crab dealer permit would be required to submit a weekly dealer report on forms provided by or approved by the NMFS Regional Administrator. If authorized in writing by the Regional Administrator, the form(s) could be submitted electronically or through other media. The report would be provided weekly, and would have to be postmarked and received within 16 days after the end of each reporting week.

A negative report would be required if there were no crabs purchased.

A voluntary sub-sampling program would be established. Owners of vessels issued limited access red crab permits and

fishing under a red crab DAS would be eligible to participate in data collection activities and would be requested to report consistent with the protocol specified at § 648.7(b)(1)(iii).

Qualification Criteria for Limited Access

Vessels would qualify for red crab limited access based on a vessel's, or a replaced vessel's, historic participation during the three years prior to the March 1, 2000, control date (from March 1, 1997 through February 29, 2000). This period was selected because it would allow vessels with an established history in the fishery to continue, while preventing an increase in capacity above recent historic levels.

Subject to the restrictions defined in the proposed rule, all vessels would qualify for a limited access red crab permit if the vessel demonstrated that its average landings of red crabs during the 3-year period prior to the March 1, 2000, control date were >250,000 lb (113,398 kg). Vessels that qualify according to this criterion would receive a limited access red crab permit.

Incidental Catch Limit

An incidental catch limit of 500 lb (226.8 kg) per trip, in whole weight equivalent, would be implemented for all vessels holding a red crab incidental catch permit. This

incidental catch limit would also apply to vessels issued a limited access red crab permit when they are not fishing under a red crab DAS. There would be a prohibition against possession of any red crab by any person not issued a red crab vessel permit.

Female Red Crab Possession Restrictions

The retention and landing of female red crabs in the limited access red crab fishery would be prohibited, except for an incidental catch allowance equal to the amount necessary to fill one standard U.S. fish tote per vessel per trip (approximately 100 lb (45.4 kg)). This measure would not affect vessels issued a red crab incidental catch permit nor would it affect vessels issued a limited access red crab permit when not fishing under a red crab DAS. Such vessels would be excepted because it would provide a disincentive to seek more than the first 500 lb (226.8 kg) of red crab harvested incidentally.

Processing At Sea Restrictions

The rule would prohibit the full-processing of red crabs at sea but would allow partial processing and butchering. In the red crab fishery, full-processing would mean any processing activity (such as, but not limited to, splitting, sectioning, cleaning, freezing, cooking, and/or glazing),

provided it involves removal of meat from the body and/or legs of a red crab.

Partial processing would mean the splitting or cutting of crabs in half along the length of the carapace, removal of the carapace, and any processing activity that follows (such as, but not limited to, cleaning, freezing, cooking, and/or glazing). It would not involve removal of the meat from the body and/or legs of a red crab.

Butchering would mean the splitting or cutting of crabs in half along the length of the carapace, removal of the carapace, and storing of the crab sections on ice.

As this rule would require that red crabs be landed whole or in half sections with the claws and legs attached, partial processing and butchering would be allowed. The requirement to land crabs either whole or in half sections with the legs and claws intact would remove the incentive and prevent the harvesting of red crabs for their claws and/or legs alone. This measure would also facilitate the administration and enforcement of the male-only restriction in the directed fishery because the sex could be discerned either by the shape of the tail flap on whole crabs or by the outline of the tail flap on partially processed or butchered crabs.

Vessels issued a red crab incidental catch permit and

vessels issued a limited access red crab permit but not fishing under a red crab DAS could possess no more than two claws and eight legs per crab on board the vessel.

Vessels issued a limited access red crab permit and fishing under a red crab DAS would be allowed red crab claws and legs separate from crab bodies equal to the amount necessary to fill one standard U.S. fish tote per vessel per trip (approximately 100 lb (45.4 kg)). This allowance would be intended to account for incidental and unintended loss of claws and/or legs during normal fishing operations.

Gear Requirements and Restrictions

Vessels issued a limited access red crab permit and fishing under a red crab DAS would be subject to a maximum limit of 600 red crab traps/pots. The owners of each vessel would be required to declare, on their annual permit application, the maximum number of traps/pots they use per string and the maximum number of strings employed, such that the product of the maximum number of traps/pots per string and the maximum number of strings declared is no more than 600 traps/pots.

Vessels issued a limited access red crab permit and fishing under a red crab DAS would be prohibited from hauling any fishing gear other than red crab gear, marked as required

by § 648.264(a)(5).

The maximum allowable size of all traps/pots used in the limited access red crab fishery when under a red crab DAS would be 18 cubic feet (0.51 cubic meters) in volume. This was selected because it would allow for some margin in error in the traps/pots currently in use and, in conjunction with the trap/pot limit described above, would prevent a potential increase in the per day efficiency of fishing vessels fishing under a red crab DAS.

The use of parlor traps/pots or non-trap/pot gear by a vessel fishing in the limited access red crab fishery when under a red crab DAS would be prohibited. Vessels issued a red crab incidental catch permit or issued a limited access red crab permit and not fishing under a red crab DAS would not be prohibited from using parlor traps/pots or non-trap/pot gear.

Possession/Trip Limits During a Red Crab DAS

All vessels issued a limited access red crab permit would be subject to a baseline possession/trip limit of 75,000 lb (34,019.4 kg) of whole red crab or its equivalent. If a vessel could show documented proof of a trip with higher landings that occurred during the limited access qualification period, then that vessel would qualify for a possession/trip

limit equal to the larger trip, rounded to the nearest 5,000 lb (2,268 kg). Vessels that partially process or butcher their harvested red crabs would apply the more appropriate of two recovery rate formulas in accordance with § 648.263(a)(2).

Such proof would have to be received by NMFS within 30 days after receipt of a vessel owner's application for an initial limited access red crab vessel permit. A vessel owner would have to fish consistent with the 75,000 lb (34,019.4 kg) possession/trip limit until documented proof of a trip higher than 75,000 lb (34,019.4 kg) was verified by NMFS.

Total Allowable Catch

Each fishing year, the landings in the red crab fishery would be counted against a target TAC. The target TAC would be set annually through the annual specification process, equal to the most current estimate of OY for the fishery, and could be readjusted based on any projected overage or underage expected for the current fishing year. The target TAC for the first full fishing year would be 5,928,000 lb (2,689 mt) of whole red crab or its equivalent.

Allocations of Red Crab DAS

DAS would be allocated equally to all vessels issued a limited access red crab permit, based on the total number of DAS available to the fleet divided by the number of vessels

that indicated the intent to participate in the fishery for the fishing year. Any DAS allocated to a vessel in one fishing year could be carried over to the next fishing year, up to a maximum of 10 DAS or 10 percent of the total allocated DAS, whichever would be less.

In the first year of FMP implementation (through February 28, 2003), each vessel participating in the directed fishery would be allocated a percentage of 130 DAS. This baseline would be adjusted to account for estimated landings that occur between May 15, 2002 and the date the FMP is implemented.

From March 1, 2003 through February 29, 2004, each participating vessel would be allocated 156 DAS, unless this allocation was changed under the FMP specification process. The allocation of 156 DAS per participating vessel would remain the baseline until modified through the specification process.

A DAS would be counted as a whole day (24 hours). Any portion of a day on which a vessel is out of port would count as a full DAS. For example, if a vessel embarked on a fishing trip at 11:00 PM on June 1, that day of departure would count as one DAS. If it returned from the trip at 1:00 AM on June 10, that day of return would also count as one DAS. The vessel would have used 10 DAS during the fishing trip rather

than the 8.0833 DAS that would have been counted had an hourly clock been used.

Initial Implementation Year

During the initial year of implementation of the Red Crab FMP the Regional Administrator would calculate the amount of red crab landed during the hiatus period between the expiration of the red crab emergency regulations and implementation of the FMP. This landings total would be deducted from the target TAC and the remainder would represent the amount of target TAC available for the initial fishing year under the DAS program. The percentage of the target TAC remaining would be calculated and vessels participating in the DAS program would be allocated the calculated percentage of the initial baseline of DAS (i.e., a percentage of 130 DAS).

Annual Monitoring and Framework Adjustment Measures

The FMP would be monitored on an annual basis. The status of the resource and the fishery would be reviewed by the Council, the Red Crab Plan Development Team (PDT), and its Advisory Panel. The Council would prepare a biennial Stock Assessment and Fishery Evaluation (SAFE) Report for the red crab fishery and its resource. If the Council determined that an adjustment to the measures is needed, it would implement either an annual specification process or a framework

adjustment process.

The Red Crab PDT would meet at least annually to review the status of the stock and the fishery. The PDT would report any necessary adjustments to the measures and recommendations for the specifications and TACs to the Council's Red Crab Committee, which in turn could recommend appropriate changes to the Council. Specifications would be recommended to NMFS, and changes to management measures could be adopted through a framework adjustment or FMP amendment, as appropriate.

The framework adjustment process would be similar to that used in other Northeast Region fisheries. This process would allow changes to be made to the regulations in a timely manner without going through the plan amendment process, as appropriate. It would provide a formal opportunity for public comment that would substitute for the customary public comment period provided by publishing a proposed rule. If changes to the management measures were contemplated in the FMP and if sufficient opportunity for public comment on the framework action existed, NMFS could bypass the proposed rule stage and publish a final rule in the Federal Register. The management measures and/or changes to them that could be implemented and adjusted through the framework process include the following:

- (1) Optimum yield;
- (2) management unit;
- (3) technical

parameters for MSY; (4) incidental catch limits; (5) minimum size of landed crabs; (6) male crabs only; (7) butchering/processing restrictions; (8) trap/pot limits; (9) gear requirements/restrictions; (10) TAC; (11) trip limits; (12) controlled access; (13) DAS; and (14) any other measure currently included in the FMP.

Classification

The Regional Administrator determined that the FMP is necessary for the conservation and management of the Atlantic red crab fishery and that it is consistent with the Magnuson-Stevens Act and other applicable laws.

This action has been determined to be not significant for the purposes of E.O. 12866.

The Council prepared an FEIS for the FMP; a notice of availability was published on November 30, 2001 (66 FR 59787).

A copy of the FEIS may be obtained from the Council (see ADDRESSES).

The Council has reviewed the impacts of the Red Crab FMP on marine mammals and concluded that the management actions proposed are consistent with the provisions of the MMPA and will not alter existing measures to protect the species likely to inhabit the red crab management unit. The potential impacts on marine mammals resulting from fishing activities

conducted under this rule are discussed in the FEIS.

In compliance with the Regulatory Flexibility Act, the Council has prepared an IRFA that describes the economic impacts of the proposed measures on small entities. Reasons why the action is considered, as well as the objectives and legal basis of the rule, are described in the preamble to this rule and are not necessarily repeated here. The impacts on small entities attributable to the preferred management measures for approved measures and alternative management measures to the approved measures are discussed and analyzed in the FEIS, and are described in the preamble and below.

The proposed action would implement an incidental catch limit of 500 lb (226.8 kg) per trip. Other options were considered and analyzed for 50 lb (22.7 kg), 100 lb (45.4 kg), and 1,000 lb (453.6 kg). The Council selected as its preferred option 500 lb (226.8 kg) because it would allow a larger than average incidental catch and would not have affected nearly 75 percent of the trips taken during 1998-2000.

The Council considered a minimum size limit but decided to forego it, reserving the right to implement it in the future. It decided against it because it felt that implementing it would be redundant with existing market

constraints and would significantly complicate enforcement and increase the administrative burden on both NMFS and the fishing industry.

The proposed action would implement a restriction on the retention and landing of female red crabs in the directed fishery. This would put into regulation what is already a market requirement. This measure would protect the reproductive capacity of red crabs. The Council chose not to implement this restriction in the incidental catch fishery so as to provide a disincentive for vessels to harvest more than the first 500 lb (226.8 kg) of red crab taken.

The proposed action would allow partial processing and butchering at sea but prohibit full-processing. Other options considered included no processing or butchering at sea, no processing but butchering allowed, and all processing and butchering allowed. The Council selected the preferred option because it would allow the current practices of vessels involved in the red crab fishery to continue, while prohibiting any expansion of processing at sea activities.

The proposed action would implement a trap/pot limit of 600 red crab traps/pots. Other options considered included 400 traps/pots and 1,000 traps/pots. The Council selected the preferred option because it reflects current fishing practices

and would be consistent with the NMFS emergency regulations.

The proposed action would implement a suite of measures under the preferred gear requirements/restrictions measure. The following options were considered: escape vents, trap size, trap materials, trap tags and/or gear markings, trap configuration and deployment, ghost panel, and a prohibition on the use of other gear types. The Council selected the following preferred options from the above suite of measures: a maximum trap size of 18 cubic feet (0.51 cubic meters) in volume because it would constrain trap efficiency to current levels and allow for some margin of error in the traps currently being used; gear markings, which would be consistent with current practices and facilitate the administration and enforcement of the trap/pot limit; trap configuration because the Regional Administrator would be required to approve and assure that new configurations did not exceed the limits established by the Council; prohibition of parlor traps/pots because of their improved ability to retain crabs over a longer period of time, thereby increasing fishing effort; and a prohibition of non-trap gear when fishing under a red crab DAS because it would protect the resource and habitat and reduce potential gear conflicts.

The proposed action would implement a target TAC equal to

OY. Other options considered were a TAC set equal to MSY, a TAC based on the average landings over the last ten years, a TAC based on economic considerations, and an option for a vessel-based cap on landings, rather than an overall TAC. The Council selected the preferred option because it reflects the OY provisions of the Magnuson-Stevens Act and would provide a conservative approach to the fishery. It did not select a hard TAC because it felt that, in conjunction with a DAS program, it would provide incentive for a derby fishery.

The proposed action would implement a differential possession/trip limit with a 75,000 lb (34,019.4 kg) baseline.

Other options considered included possession/trip limits of 10,000 lb (4,535.9 kg), 50,000 lb (22,679.6 kg), 65,000 lb (29,483.5 kg), and 200,000 lb (90,718.5 kg). The Council selected the preferred alternative because it would maintain the approximate capacity of the fishery fleet as it was prior to the control date, increase the potential for fishing vessels to operate efficiently, and recognize some of the inherent differences among the fishing operations and capacities of the vessels operating in the fishery prior to the control date.

The proposed action would implement a limited access program for vessels that met certain requirements prior to the

control date. Other options considered included control date priority access, vessels with landings after the control date, and all currently active vessels. The Council selected the preferred alternative because it would allow vessels with an established history in the fishery to continue, while preventing an increase in capacity above recent historic levels. This measure is intended to prevent overcapacity in the fishery.

The proposed action would implement an equal allocation of DAS to vessels in the limited access directed fishery. Other options considered included allocation based on history and allocation based on landings. The Council selected the preferred alternative because of the small number of vessels likely to qualify for the fishery, which when allocated equal DAS could likely achieve OY on a continuing basis. In conjunction with this preferred alternative, the Council also considered a partial end-of-year carry-over of DAS as opposed to consideration of no end-of-year carryover. It selected a partial DAS carry-over option because it could ensure that at least some unused fishing effort would not be wasted, while providing a disincentive to hoard DAS. It would also limit the annual fishing capacity to 10 percent above the baseline.

The Council considered seasonal closures but rejected

them because it felt that market concerns suggested that seasonal closures would be inefficient and undesirable. Current markets require a consistent supply of red crab product, year-round.

The Council also considered no action. No action would likely assure that overfishing would occur in the red crab fishery.

Notwithstanding any other provision of law, no person is required to respond to nor shall any person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act (PRA) unless that collection-of-information displays a currently valid OMB control number.

This rule contains six collection-of-information requirements subject to the PRA. A request to collect this information has been submitted to OMB for approval. The public's reporting burden for the collection-of-information requirements includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection-of-information requirements.

The new reporting requirements and the estimated time for a response are as follows:

Vessel trip reports, OMB control number 0648-0212
(5 minutes/response).

Dealer purchase reports, OMB control number 0648-0229
(10 minutes/response).

Limited access vessel permits, OMB control number 0648-
0202 (5 minutes/response).

Incidental catch vessel permits, OMB control number 0648-
0202 (5 minutes/response).

Dealer permits, OMB control number 0648-0202
(5 minutes/response).

Operator permits, OMB control number 0648-0202
(60 minutes/response).

Observer deployments, OMB control number 0648-0202
(2 minutes/response).

Gear marking requirements, OMB control number 0648-0351
(36 minute/response).

The aforementioned response estimates include the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding these burden estimates, or any other aspect of the data requirements, including suggestions for reducing the burden, to NMFS and OMB (see ADDRESSES).

Comments are invited on: (a) Whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information shall have practical utility; (b) the accuracy of the agency's estimate of the burden (including hours and cost) of the proposed collection of information; (c) ways to enhance the quality, utility, and clarity of the information to be collected; and (d) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or other forms of information technology.

Comments submitted in response to this notice will be summarized and/or included in the request for OMB approval of this information collection; they also will become a matter of public record.

List of Subjects in 50 CFR Part 648

Fishing, Fisheries, Vessel permits, Reporting and recordkeeping requirements.

Dated:

For the reasons set out in the preamble, 50 CFR part 648 is proposed to be amended as follows:

PART 648--FISHERIES OF THE NORTHEASTERN UNITED STATES

1. The authority citation for part 648 continues to read as follows:

Authority: 16 U.S.C. 1801 et seq.

2. In § 648.1, the first sentence of paragraph (a) is revised to read as follows:

§ 648.1 Purpose and scope.

(a) This part implements the fishery management plans (FMPs) for the Atlantic mackerel, squid, and butterfish fisheries (Atlantic Mackerel, Squid, and Butterfish FMP); Atlantic salmon (Atlantic Salmon FMP); the Atlantic sea scallop fishery (Scallop FMP); the Atlantic surf clam and ocean quahog fisheries (Atlantic Surf Clam and Ocean Quahog FMP); the NE multispecies and monkfish fisheries ((NE Multispecies FMP) and (Monkfish FMP)); the summer flounder, scup, and black sea bass fisheries (Summer Flounder, Scup, and Black Sea Bass FMP); the Atlantic bluefish fishery (Atlantic

Bluefish FMP); the Atlantic herring fishery (Atlantic Herring FMP); the spiny dogfish fishery (Spiny Dogfish FMP); the Atlantic deep-sea red crab fishery (Deep-Sea Red Crab FMP); and the tilefish fishery (Tilefish FMP). * * *

* * * * *

3. In § 648.2, the definitions of "Council", "Day(s)-at-Sea", "Fishing year", "Processor", "Processing, or to process, in the Atlantic herring fishery", and "Sorting machine" are revised and new definitions for "Atlantic deep-sea red crab (red crab)", "Full-processing, with respect to the Atlantic deep-sea red crab fishery", "Parlor trap/pot", "Red Crab Management Unit", and "Red crab trap/pot" are added in alphabetical order to read as follows:

§ 648.2 Definitions.

* * * * *

Atlantic deep-sea red crab (red crab) means Chaceon quinquedens.

* * * * *

Council means the New England Fishery Management Council (NEFMC) for the Atlantic herring, Atlantic sea scallop, Atlantic deep-sea red crab, and NE multispecies and monkfish fisheries; or the Mid-Atlantic Fishery Management Council (MAFMC) for the Atlantic mackerel, squid, and butterfish;

Atlantic surf clam and ocean quahog; summer flounder, scup, and black sea bass; spiny dogfish; Atlantic bluefish; and tilefish fisheries.

* * * * *

Day(s)-at-Sea (DAS), with respect to the NE multispecies and monkfish fisheries (except as described in § 648.82(k)(1)(iv)), Atlantic sea scallop fishery, and Atlantic deep-sea red crab fishery, means the 24-hour periods of time or any part thereof during which a fishing vessel is absent from port to fish for, possess or land, or fishes for, possesses or lands, regulated species, monkfish, scallops, or red crabs. With respect to red crabs, any portion of a calendar day in which a vessel is out of port, after having declared into the DAS fishery, shall count as a full DAS.

* * * * *

Fishing year means: (1) For the Atlantic sea scallop and Atlantic deep-sea red crab fisheries, from March 1 through the last day of February of the following year. (2) For the NE multispecies and monkfish fisheries, from May 1 through April 30 of the following year. (3) For all other fisheries in this part, from January 1 through December 31.

* * * * *

Full-processing, with respect to the Atlantic deep-sea

red crab fishery, means any processing activity (such as, but not limited to, splitting, sectioning, cleaning, freezing, cooking, and/or glazing), provided it involves removal of meat from the body and/or legs of a red crab.

Parlor trap/pot means any structure or other device, other than a net, with two or more compartments within designed to impede escape, that is placed, or designed to be placed, on the ocean bottom and is designed for, or is capable of, catching lobsters and/or red crabs.

Processor, with respect to the Atlantic surf clam and ocean quahog fisheries, means a person who receives surf clams or ocean quahogs for a commercial purpose and removes them from a cage.

Processing, or to process, with respect to the Atlantic herring fishery, means the preparation of Atlantic herring to render it suitable for human consumption, bait, commercial uses, industrial uses, or long-term storage, including but not limited to cooking, canning, roe extraction, smoking, salting, drying, freezing, or rendering into meat or oil.

* * * * *

Red Crab Management Unit means an area of the Atlantic Ocean from 35°15.3' N. Lat., the approximate latitude of Cape Hatteras Light, NC, northward to the U.S.-Canada border,

extending eastward from the shore to the outer boundary of the exclusive economic zone and northward to the U.S.-Canada border in which the United States exercises exclusive jurisdiction over all Atlantic deep-sea red crab fished for, possessed, caught or retained in or from such area.

Red crab trap/pot means any structure or other device, other than a net, that is placed, or designed to be placed, on the ocean bottom and is designed for, or is capable of, catching red crabs.

* * * * *

Sorting machine, with respect to the Atlantic sea scallop fishery, means any mechanical device that automatically sorts whole scallops by shell height, size, or other physical characteristics.

* * * * *

4. In § 648.4, paragraph (a)(13) is added to read as follows:

§ 648.4 Vessel permits.

(a) * * *

(13) Red Crab vessels. Any vessel of the United States must have been issued and have on board a valid red crab vessel permit to fish for, catch, possess, transport, land, sell, trade, barter, butcher or partially process at sea any

red crab in or from the EEZ portion of the Red Crab Management Unit.

(i) Limited access red crab permit--(A) Eligibility. A vessel may be issued a limited access red crab permit if the vessel's total landings averaged greater than 250,000 lb (113,400 kg) of red crab per year for 3 years beginning March 1, 1997, through February 29, 2000. To calculate the average value, the total landings of whole red crab, or its equivalent by weight, between March 1, 1997, and February 29, 2000, inclusive, shall be divided by 3. If the quotient is greater than 250,000 lb (113,400 kg), the vessel meets the landings criteria. For example, if a vessel caught greater than 750,000 lb (340,200 kg) in the 3-year qualifying time span--even if it fished just 2 of those 3 years--the average would be greater than 250,000 lb (113,400 kg) for each of those 3 years.

(B) Application/renewal restriction--(1) Initial application. A vessel owner must apply for an initial limited access red crab permit before [insert date 180 days from the effective date of the final rule]. No one may apply for an initial limited access red crab permit after this date.

(2) Fishing years beyond the initial year. (i) For fishing years beyond the initial year, the provisions of

paragraph (a)(1)(i)(B) of this section apply.

(ii) A vessel owner may choose to declare out of the red crab fishery for the following fishing year by submitting a binding declaration on a form supplied by the Regional Administrator, which must be received by NMFS at least 180 days before the last day of the current fishing year. NMFS will presume that a vessel intends to fish during the next fishing year unless such binding declaration is received at least 180 days before the last day of the current fishing year.

(C) Qualification restrictions. The provisions of paragraph (a)(1)(i)(C) of this section apply.

(D) Change in ownership. The provisions of paragraph (a)(1)(i)(D) of this section apply.

(E) Replacement vessels. (1) To be eligible for a limited access permit under this section, the replacement vessel's length, GRT, and NT may not exceed by greater than 10 percent the length, GRT, and NT of the vessel's baseline specifications, if applicable. The replacement vessel must also meet any other applicable criteria under paragraph (a)(13)(i)(F) of this section.

(2) A vessel that lawfully replaced a vessel that meets the qualification criteria set forth in paragraph

(a)(13)(i)(A) of this section may qualify for and fish under the permit category for which the replaced vessel qualified.

(3) A vessel that replaced a vessel that fished for and landed red crab between March 1, 1997, and February 29, 2000, may use the replaced vessel's history in lieu of or in addition to such vessel's fishing history to meet the qualification criteria set forth in paragraph (a)(13)(i)(A) of this section, unless the owner of the replaced vessel retained the vessel's permit or fishing history, or such vessel no longer exists and was replaced by another vessel according to the provisions in paragraph (a)(1)(i)(D) of this section.

(F) Upgraded vessel. A vessel may be upgraded, whether through refitting or replacement, and be eligible to retain or renew a limited access permit, providing that the vessel's length, GRT, and NT is increased no more than once. Any increase in any of the aforementioned specifications of vessel size may not exceed 10 percent of the vessel's baseline specifications, as applicable. If any increase in any of the aforementioned specifications of vessel size occurs, any increase in the other specifications must be performed at the same time.

(G) Consolidation restriction. The provisions of paragraph (a)(1)(i)(G) of this section apply.

(H) Vessel baseline specifications. The vessel baseline specifications in this section are the respective specifications (length, GRT, and NT) of the vessel that was initially issued a limited access permit as of the date the initial vessel applied for such permit.

(I) Limited access permit restrictions. A vessel issued a limited access red crab permit may not be issued a red crab incidental catch permit during the same fishing year.

(J) Confirmation of permit history. Notwithstanding any other provisions of this part, a person who does not currently own a fishing vessel, but who has owned a qualifying vessel that has sunk, been destroyed, or transferred to another person, must apply for and receive a CPH if the fishing and permit history of such vessel has been retained lawfully by the applicant. To be eligible to obtain a CPH, the applicant must show that the qualifying vessel meets the eligibility requirements, as applicable, in this part. Issuance of a valid CPH preserves the eligibility of the applicant to apply for a limited access permit for a replacement vessel based on the qualifying vessel's fishing and permit history at a subsequent time, subject to the replacement provisions specified in this section. If fishing privileges have been

assigned or allocated previously under this part, based on the qualifying vessel's fishing and permit history, the CPH also preserves such fishing privileges. A CPH must be applied for in order for the applicant to preserve the fishing rights and limited access eligibility of the qualifying vessel. An application for a CPH must be received by the Regional Administrator no later than 30 days prior to the end of the first full fishing year in which a vessel permit cannot be issued. Failure to do so is considered abandonment of the permit as described in paragraph (a)(1)(i)(K) of this section.

A CPH issued under this part will remain valid until the fishing and permit history preserved by the CPH is used to qualify a replacement vessel for a limited access permit. Any decision regarding the issuance of a CPH for a qualifying vessel that has applied for or been issued previously a limited access permit is a final agency action subject to judicial review under 5 U.S.C. 704. Information requirements for the CPH application are the same as those for a limited access permit. Any request for information about the vessel on the CPH application form refers to the qualifying vessel that has been sunk, destroyed, or transferred. Vessel permit applicants who have been issued a CPH and who wish to obtain a vessel permit for a replacement vessel based upon the previous

vessel history may do so pursuant to paragraph (a)(13)(i)(E) of this section.

(K) Abandonment or voluntary relinquishment of permits. The provisions of paragraph (a)(1)(i)(K) of this section apply.

(L) Restriction on permit splitting. The provisions of paragraph (a)(1)(i)(L) of this section apply.

(M) Notification of eligibility for 2002. (1) NMFS will attempt to notify all owners of vessels for which NMFS has credible evidence available that they meet the qualification criteria described in paragraph (a)(13)(i)(A) of this section and that they qualify for a limited access red crab permit. Vessel owners must still apply by [insert date 180 days from the effective date of the final rule] to complete the qualification requirements.

(2) If the vessel owner has not been notified that the vessel is eligible to be issued a limited access red crab permit, and the vessel owner believes that there is credible evidence that the vessel does qualify under the pertinent criteria, the vessel owner may apply for a limited access red crab permit by [insert date 180 days from the effective date of the final rule] by submitting evidence that the vessel meets the requirements described in paragraph (a)(13)(i)(A) of

this section.

(N) Appeal of denial of a permit. (1) Any applicant denied a limited access red crab permit may appeal to the Regional Administrator within 30 days of the notice of denial.

Any such appeal shall be in writing. The only ground for appeal is that the Regional Administrator erred in concluding that the vessel did not meet the criteria in paragraph (a)(13)(i)(A) of this section. The appeal must set forth the basis for the applicant's belief that the decision of the Regional Administrator was made in error.

(2) The appeal may be presented, at the option of the applicant, at a hearing before an officer appointed by the Regional Administrator. The hearing officer shall make a recommendation to the Regional Administrator. The decision on the appeal by the Regional Administrator is the final decision of the Department of Commerce.

(3) Status of vessels pending appeal. A vessel denied a limited access red crab permit may fish, provided that the denial has been appealed, the appeal is pending, and the vessel has on board a letter from the Regional Administrator authorizing the vessel to fish. The Regional Administrator will issue such a letter for the pendency of any appeal. The decision on the appeal is the final administrative action of

the Department of Commerce. The letter of authorization must be carried on board the vessel. If the appeal is finally denied, the Regional Administrator shall send a notice of final denial to the vessel owner; the authorizing letter shall become invalid 5 days after receipt of the notice of denial.

(ii) Red crab incidental catch permit. A vessel of the United States that is subject to these regulations and that has not been issued a red crab limited access permit is eligible for and may be issued a red crab incidental catch permit to catch, possess, transport, land, sell, trade, barter, butcher or partially process at sea up to 500 lb (226.8 kg) of red crab, or its equivalent as specified at § 648.263(a)(2)(i) and (ii), per fishing trip in or from the Red Crab Management Unit. Such vessel is subject to the restrictions in § 648.263(b).

5. In § 648.5, the first sentence in paragraph (a) is revised to read as follows:

§ 648.5 Operator permits.

(a) * * *. Any operator of a vessel fishing for or possessing Atlantic sea scallops in excess of 40 lb (18.1 kg), NE multispecies, spiny dogfish, monkfish, Atlantic herring, Atlantic surf clam, ocean quahog, Atlantic mackerel, squid, butterfish, scup, black sea bass, or bluefish, harvested in or

from the EEZ, or tilefish harvested in or from the EEZ portion of the Tilefish Management Unit, or Atlantic deep-sea red crab harvested in or from the EEZ portion of the Red Crab Management Unit, issued a permit, including carrier and processing permits, for these species under this part, must have been issued under this section, and carry on board, a valid operator permit. * * *

* * * * *

6. In § 648.6, paragraph (a)(1) is revised to read as follows:

§ 648.6 Dealer/processor permits.

(a) * * *

(1) All dealers of NE multispecies, monkfish, Atlantic herring, Atlantic sea scallop, Atlantic deep-sea red crab, spiny dogfish, summer flounder, Atlantic surf clam, ocean quahog, Atlantic mackerel, squid, butterfish, scup, bluefish, tilefish, and black sea bass; Atlantic surf clam and ocean quahog processors; and Atlantic herring processors or dealers, as described in § 648.2; must have been issued under this section, and have in their possession, a valid permit or permits for these species. A person who meets the requirements of both the dealer and processor definitions of any of the aforementioned species' fishery regulations may

need to obtain both a dealer and a processor permit, consistent with the requirements of that particular species' fishery regulations. Persons aboard vessels receiving small-mesh multispecies and/or Atlantic herring at sea for their own use exclusively as bait are deemed not to be dealers, and are not required to possess a valid dealer permit under this section, for purposes of receiving such small-mesh multispecies and/or Atlantic herring, provided the vessel complies with the provisions of § 648.13.

* * * * *

7. In 648.7, paragraph (b)(1)(iii) is revised, paragraph (b)(1)(iv) is removed and paragraph (b)(2) is added to read as follows:

§ 648.7 Recordkeeping and reporting requirements.

* * * * *

(b) * * *

(1) * * *

(iii) Red crab sub-sampling protocol. The owner of any vessel issued a limited access permit for red crab may volunteer to participate in a data collection program for the purpose of counting and recording the complete catch, including juveniles of both sexes, of at least one trap per trap trawl. The report, to be submitted on specially designed

forms that can be obtained from the Regional Administrator, which shall be separate and apart from other recordkeeping and reporting requirements of this section, shall include at least the following information: Vessel identification; date, time and location; number of males; number of females; carapace width in millimeters of each crab, by sex; and species, numbers and sizes of all other organisms collected.

(2) IVR system reports. (i) Atlantic herring owners or operators. The owner or operator of a vessel described here must report catches (retained and discarded) of herring each week to an IVR system. The report shall include at least the following information, and any other information required by the Regional Administrator: Vessel identification, reporting week in which species are caught, pounds retained, pounds discarded, management area fished, and pounds of herring caught in each management area for the previous week. Weekly Atlantic herring catch reports must be submitted via the IVR system by midnight, Eastern time, each Tuesday for the previous week. Reports are required even if herring caught during the week has not yet been landed. This report does not exempt the owner or operator from other applicable reporting requirements of § 648.7.

(A) The owner or operator of any vessel issued a permit

for Atlantic herring subject to the requirements specified by § 648.4(c)(2)(vi)(C) that is required by § 648.205 to have a VMS unit on board must submit an Atlantic herring catch report via the IVR system each week (including weeks when no herring is caught), unless exempted from this requirement by the Regional Administrator.

(B) An owner or operator of any vessel issued a permit for Atlantic herring that is not required by § 648.205 to have a VMS unit on board and that catches \geq 2,000 lb (907.2 kg) of Atlantic herring on any trip in a week must submit an Atlantic herring catch report via the IVR system for that week as required by the Regional Administrator.

(C) An owner or operator of any vessel that catches \geq 2,000 lb (907.2 kg) of Atlantic herring, some or all of which is caught in or from the EEZ, on any trip in a week, must submit an Atlantic herring catch report via the IVR system for that week as required by the Regional Administrator.

(D) Atlantic herring IVR reports are not required from Atlantic herring carrier vessels.

(ii) Tilefish vessel owners or operators. The owner or operator of any vessel issued a limited access permit for tilefish must submit a tilefish catch report via the IVR system within 24 hours after returning to port and offloading

as required by the Regional Administrator. The report shall include at least the following information, and any other information required by the Regional Administrator: Vessel identification, trip during which species are caught, and pounds landed. IVR reporting does not exempt the owner or operator from other applicable reporting requirements of § 648.7.

(iii) Red crab vessel owners and operators. The owner or operator of any vessel issued a limited access permit for red crab must submit a red crab catch report via the IVR system within 24 hours after returning to port and offloading as required by the Regional Administrator. IVR reporting does not exempt the owner or operator from other applicable reporting requirements of § 648.7.

* * * * *

8. In § 648.10, the first sentence of the introductory text of paragraph (c) and paragraphs (c)(2) and (c)(5) are revised to read as follows:

§ 648.10 DAS notification requirements.

* * * * *

(c) * * *. Owners of vessels issued limited access multispecies, monkfish or red crab permits who are participating in a DAS program and who are not required to

provide notification using a VMS, scallop vessels qualifying for a DAS allocation under the occasional category and who have not elected to fish under the VMS notification requirements of paragraph (b) of this section, and vessels fishing pending an appeal as specified in § 648.4(a)(1)(i)(M)(3), (a)(9)(i)(N)(3) and (a)(13)(i)(N)(3) are subject to the following requirements:

* * * * *

(2) The vessel's confirmation numbers for the current and immediately prior multispecies, monkfish or red crab fishing trip must be maintained on board the vessel and provided to an authorized officer upon request.

* * * * *

(5) Any vessel that possesses or lands per trip greater than 400 lb (181 kg) of scallops, and any vessel issued a limited access multispecies permit subject to the multispecies DAS program and call-in requirement that possesses or lands regulated species, except as provided in §§ 648.17 and 648.89, any vessel issued a limited access monkfish permit subject to the monkfish DAS program and call-in requirement that possesses or lands monkfish above the incidental catch trip limits specified in § 648.94(c), and any vessel issued a limited access red crab permit subject to the red crab DAS

program and call-in requirement that possesses or lands red crab above the incidental catch trip limits specified in § 648.263(b)(1), shall be deemed in its respective DAS program for purposes of counting DAS, regardless of whether the vessel's owner or authorized representative provided adequate notification as required by paragraph (c) of this section.

* * * * *

9. In § 648.11, the first sentence of paragraph (a) and paragraph (e) are revised to read as follows:

§ 648.11 At-sea sampler/observer coverage.

(a) The Regional Administrator may request any vessel holding a permit for Atlantic sea scallops, NE multispecies, monkfish, Atlantic mackerel, squid, butterfish, scup, black sea bass, bluefish, spiny dogfish, Atlantic herring, tilefish, or Atlantic deep-sea red crab; or a moratorium permit for summer flounder; to carry a NMFS-approved sea sampler/observer. * * *

* * * * *

(e) The owner or operator of a vessel issued a summer flounder moratorium permit, a scup moratorium permit, a black sea bass moratorium permit, a bluefish permit, a spiny dogfish permit, an Atlantic herring permit, an Atlantic deep-sea red crab permit, or a tilefish permit, if requested by the sea

sampler/observer, also must:

(1) Notify the sea sampler/observer of any sea turtles, marine mammals, summer flounder, scup, black sea bass, bluefish, spiny dogfish, Atlantic herring, Atlantic deep-sea red crab, tilefish, or other specimens taken by the vessel.

(2) Provide the sea sampler/observer with sea turtles, marine mammals, summer flounder, scup, black sea bass, bluefish, spiny dogfish, Atlantic herring, Atlantic deep-sea red crab, tilefish, or other specimens taken by the vessel.

* * * * *

10. In § 648.12, the introductory text is revised to read as follows:

§ 648.12 Experimental fishing.

The Regional Administrator may exempt any person or vessel from the requirements of subparts A (General provisions), B (Atlantic mackerel, squid, and butterfish), D (Atlantic sea scallop), E (Atlantic surf clam and ocean quahog), F (NE multispecies and monkfish), G (summer flounder), H (scup), I (black sea bass), J (Atlantic bluefish), K (Atlantic herring), L (spiny dogfish), M (Atlantic deep-sea red crab), and N (tilefish) of this part for the conduct of experimental fishing beneficial to the management of the resources or fishery managed under that

subpart. The Regional Administrator shall consult with the Executive Director of the MAFMC regarding such exemptions for the Atlantic mackerel, squid, butterfish, summer flounder, scup, black sea bass, spiny dogfish, bluefish, and tilefish fisheries.

* * * * *

11. In § 648.13, paragraph (g) is added to read as follows:

§ 648.13 Transfers at sea.

* * * * *

(g) All persons are prohibited from transferring at sea, either directly or indirectly, or attempting to transfer at sea to any vessel, any red crab, or its equivalent as specified at § 648.263(a)(2)(i) and (ii), taken in or from the EEZ portion of the Red Crab Management Unit.

12. In § 648.14, paragraphs (x)(12) and (dd) are added to read as follows:

§ 648.14 Prohibitions.

* * * * *

(x) * * *

(12) Red crab. All red crab retained or possessed on a vessel issued any permit under § 648.4 are deemed to have been harvested in or from the Red Crab Management Unit, unless the

preponderance of all submitted evidence demonstrates that such red crab were harvested by a vessel fishing exclusively outside of the Red Crab Management Unit or in state waters.

* * * * *

(dd) In addition to the general prohibitions specified in § 600.725 of this chapter and in paragraph (a) of this section, it is unlawful for any person to do any of the following:

(1) Catch, possess, transport, land, sell, trade, barter, butcher or partially process at sea any red crab in or from the EEZ portion of the Red Crab Management Unit, unless in possession of a valid limited access red crab vessel permit or red crab incidental catch permit issued by the Northeast Regional Administrator under this subpart.

(2) Land, or possess on board a vessel, greater than the possession or landing limits specified in § 648.263.

(3) Fail to comply with the recordkeeping and reporting requirements of § 648.7.

(4) Transfer at sea, either directly or indirectly, or attempt to transfer at sea to any vessel, any red crab, or its equivalent as specified at § 648.263(a)(2)(i) and (ii), taken in or from the EEZ portion of the Red Crab Management Unit.

(5) Purchase, possess, or receive for a commercial

purpose, greater than 500 lb (226.8 kg) of whole red crab, or its equivalent as specified at § 648.263(a)(2)(i) and (ii), caught in the EEZ portion of the Red Crab Management Unit by a vessel that has not been issued a valid limited access red crab permit under this subpart.

(6) Fish for, catch, possess, transport, land, sell, trade, barter, butcher or partially process at sea greater than 500 lb (226.8 kg) of whole red crab, or its equivalent as specified at § 648.263(a)(2)(i) and (ii), per fishing trip, in or from the Red Crab Management Unit, unless in possession of a valid limited access red crab vessel permit issued by the Northeast Regional Administrator under this subpart and fishing under a red crab DAS.

(7) Fail to comply with the provisions of the DAS notification program specified in §§ 648.262(b)(5) and 648.10, if the vessel has been issued a valid limited access red crab permit.

(8) Fish in the Red Crab Management Unit under a red crab DAS if the vessel had declared out of the fishery at least 180 days prior to the start of the fishing year.

(9) Fish for, catch, possess, transport, land, sell, trade, barter, butcher or partially process at sea red crab in excess of a landing limit specified in § 648.263.

(10) Possess, deploy, fish with, haul, harvest red crab from, or carry on board a vessel, in excess of the trap/pot and/or string limit specified at § 648.264(a)(2) when fishing under a red crab DAS.

(11) Retain, possess or land female red crabs in excess of one standard U.S. fish tote if the vessel has been issued a valid limited access red crab permit and is fishing under a red crab DAS.

(12) Retain, possess or land red crab claws and legs separate from crab bodies in excess of one standard U.S. fish tote if the vessel has been issued a valid limited access red crab permit and is fishing under a red crab DAS.

(13) Retain, possess or land red crab claws and legs separate from crab bodies if the vessel has not been issued a valid limited access red crab permit or has been issued a valid limited access red crab permit and is not fishing under a red crab DAS.

(14) Retain, possess or land in excess of two claws and eight legs per crab if the vessel has been issued a valid red crab incidental catch permit or has been issued a valid limited access red crab permit and is not fishing under a red crab DAS. (15) Fully process red crabs at sea, i.e., any processing activity involving removal of meat from the body of

a red crab.

(16) Fail to comply with the gear marking requirements specified at § 648.264(a)(5).

(17) Possess, fish or deploy parlor traps/pots if the vessel has been issued a valid limited access red crab permit and is fishing under a red crab DAS.

(18) Possess, fish or deploy red crab traps/pots larger than the maximum size specified at § 648.263(a)(4), if the vessel has been issued a valid limited access red crab permit and is fishing under a red crab DAS.

13. Subpart M is revised to read as follows:

Subpart M--Management Measures for the Atlantic Deep-Sea Red Crab Fishery

§ 648.260 Annual specifications.

(a) Fishing year. The fishing year begins on March 1 of each year and ends on the last day of February of the following year.

(b) Total allowable landings. The TAL for each fishing year will be 5.928 million lb (2,688.9 mt), unless modified pursuant to paragraph (d) of this section.

(c) Adjustments to the quota. Any overage of the quota for the limited access category that occurs in a given fishing year will be subtracted from the quota for that category in

the following fishing year. Conversely, any underage of the quota for the limited access category that occurs in a given fishing year will be added to the quota for that category in the following fishing year.

(d) Process for setting annual specifications. The Council's Red Crab Plan Development Team (PDT) will meet at least annually to review the status of the stock and the fishery. (1) Based on this review, the PDT will report to the Council's Red Crab Committee, no later than 5 months prior to the start of the next fishing year, any necessary adjustments to the management measures and recommendations for the specifications and TACs. Specifications include the specification of OY, the setting of any hard or target TACs, allocation of DAS, and/or adjustments to trip/possession limits. The PDT will specifically recommend TACs for the following year and an estimated TAC for the year after. In developing these recommendations the PDT will review the following data, if available: Commercial catch data; current estimates of fishing mortality and catch-per-unit-effort (CPUE); stock status; recent estimates of recruitment; virtual population analysis results and other estimates of stock size; sea sampling, port sampling, and survey data or, if sea sampling data are unavailable, length frequency information

from port sampling and/or surveys; impact of other fisheries on the mortality of red crabs; and any other relevant information.

(2) Based on recommendations from the Council's Red Crab PDT or other appropriate technical group that reviewed the available information on the status of the stock and the fishery, the Red Crab Committee may recommend to the Council changes to the appropriate specifications and/or the annual TAC, as well as any measures necessary to assure that the specifications will not be exceeded.

(3) The Council shall review these recommendations and any public comment received and shall recommend to the Regional Administrator appropriate specifications and/or annual TAC, as well as any measures necessary to assure that the specifications will not be exceeded. Specifications, and/or TACs and other management measures, shall be implemented by the Regional Administrator, and may include the specification of OY, the setting of any hard or target TACs, allocation of DAS, and/or adjustments to trip/possession limits. Annual specifications and other measures shall be implemented through the framework adjustment process specified at § 648.261. The previous year's specifications/TACs and other measures shall remain effective unless changed by the

Regional Administrator. If the specifications are not changed, this will be announced through notification in the Federal Register.

§ 648.261 In-season adjustments and annual specification/framework adjustment process.

(a) In-season adjustments. The specifications and TACs established pursuant to this section may be adjusted by NMFS, after consulting with the Council, during the fishing year by publishing notification in the Federal Register stating the reasons for such action and providing an opportunity for prior public comment. Any adjustments must be consistent with the Atlantic Deep-Sea Red Crab FMP objectives and other FMP provisions.

(b) Annual specification/framework adjustment process. To implement annual specifications or a framework adjustment for the Red Crab FMP, the Council shall develop and analyze proposed actions over the span of at least two Council meetings and provide advance public notice of the availability of both the proposals and the analyses. Opportunity to provide written and oral comments shall be provided throughout the process before the Council submits its recommendations to the Regional Administrator.

(1) In response to an annual review of the status of the

fishery or the resource by the Red Crab PDT or at any other time, the Council may recommend adjustments to any of the measures proposed by the Red Crab FMP. The Red Crab Oversight Committee may request that the Council initiate a framework adjustment. Framework adjustments shall require one initial meeting (the agenda must include notification of the impending proposal for a framework adjustment) and one final Council meeting. After a management action has been initiated, the Council shall develop and analyze appropriate management actions within the scope identified below. The Council may refer the proposed adjustments to the Red Crab Committee for further deliberation and review. Upon receiving the recommendations of the Oversight Committee, the Council shall publish notice of its intent to take action and provide the public with any relevant analyses and opportunity to comment on any possible actions. After receiving public comment, the Council must take action (to approve, modify, disapprove, or table) on the recommendation at the Council meeting following the meeting at which it first received the recommendations. Documentation and analyses for the framework adjustment shall be available at least 2 weeks before the final meeting.

(2) After developing management actions and receiving public testimony, the Council may make a recommendation to the

Regional Administrator. The Council's recommendation shall include supporting rationale and, if management measures are proposed, an analysis of impacts and a recommendation to the Regional Administrator on whether to issue the management measures as a final rule. If the Council recommends that the management measures should be issued directly as a final rule, the Council shall consider at least the following factors and provide support and analysis for each factor considered:

(i) Whether the availability of data on which the recommended management measures are based allows for adequate time to publish a proposed rule, and whether regulations have to be in place for an entire harvest/fishing season;

(ii) Whether there has been adequate notice and opportunity for participation by the public and members of the affected industry in the development of the Council's recommended management measures;

(iii) Whether there is an immediate need to protect the resource or to impose management measures to resolve gear conflicts;

(iv) Whether there will be a continuing evaluation of management measures adopted following their implementation as a final rule.

(3) If the Regional Administrator concurs with the

Council's recommended management measures, they shall be published as either a final rule, based on the factors specified above, or as a proposed rule in the Federal Register. If the Council's recommendation is first published as a proposed rule and the Regional Administrator concurs with the Council's recommendation after receiving additional public comment, the measures shall then be published as a final rule in the Federal Register.

(4) If the Regional Administrator approves the Council's recommendations, the Secretary may, for good cause, waive the requirement for a proposed rule and opportunity for public comment in the Federal Register. The Secretary, in so doing, shall publish only the final rule. Submission of recommendations does not preclude the Secretary from deciding to provide additional opportunity for prior notice and comment in the Federal Register, but it contemplates that the Council process shall adequately satisfy that requirement.

(5) The Regional Administrator may approve, disapprove, or partially disapprove the Council's recommendation. If the Regional Administrator does not approve the Council's specific recommendation, the Regional Administrator must notify the Council in writing of the reasons for the action prior to the first Council meeting following publication of such decision.

§ 648.262 Effort-control program for red crab limited access vessels.

(a) General. A vessel issued a limited access red crab permit may not fish for, catch, possess, transport, land, sell, trade, barter, butcher or partially process at sea greater than 500 lb (226.8 kg) of red crab, or its equivalent as specified at § 648.263(a)(2)(i) and (ii), per fishing trip in or from the Red Crab Management Unit, except during a DAS as allocated under and in accordance with the applicable DAS program described in this section, unless otherwise provided elsewhere in this part.

(1) End-of-year carry-over. With the exception of vessels that held a Confirmation of Permit History as described in § 648.4(a)(13)(i)(J) for the entire fishing year preceding the carry-over year, limited access vessels that have unused DAS on the last day of February of any year may carry over a maximum of 10 unused DAS, or 10 percent of the total allocated DAS, whichever is less, into the next fishing year. Any DAS that have been forfeited due to an enforcement proceeding will be deducted from all other unused DAS in determining how many DAS may be carried over.

(2) [Reserved]

(b) DAS program. (1) For fishing year 2002. For the

fishing year beginning March 1, 2002, each limited access permit holder's allocation of DAS shall be based on a baseline of 130 DAS per vessel and, if necessary, adjusted as outlined below. Based upon the best available information, the Regional Administrator shall estimate the landings from May 15, 2002, the first day following the expiration of the red crab Secretarial interim rule, up to the implementation date of the red crab limited access program. These estimated total landings shall be deducted from the target TAC and the percentage of the TAC that remains available shall be used to reduce the initial baseline of DAS (i.e., a percentage of 130 DAS to an equivalent percentage). For example, if estimated landings equal 20 percent of the target TAC, thereby leaving 80 percent of the target TAC, the DAS allocation shall be reduced by 20 percent to 104 DAS. Each vessel shall be allocated the adjusted DAS for the remainder of the fishing year. The Regional Administrator shall publish in the Federal Register the adjusted DAS for the remainder of the fishing year.

(2) For fishing years 2003 and thereafter. Each limited access permit holder shall be allocated 156 DAS unless one or more vessels declares out of the fishery consistent with § 648.4(a)(13)(B)(2) or the quota is adjusted consistent with §

648.260(c).

(3) Accrual of DAS. Any portion of a day in which a vessel is out of port, after having declared into the DAS fishery, shall count as a full DAS. For example, if a vessel calls into the fishery at 11 p.m. on Thursday and calls out of the fishery at 10 p.m. on Friday, the next day, that vessel shall be assessed 2 full DAS for the fishing trip, even though the trip lasted only 23 hours.

(4) Good Samaritan credit. Same as § 648.53(f).

(5) Declaring red crab DAS. A vessel's owner or authorized representative shall notify the Regional Administrator of a vessel's participation in the red crab DAS program using the notification requirements specified in § 648.10.

(6) Adjustments in annual red crab DAS allocations. Adjustments to the annual red crab DAS allocation, if required to meet fishing mortality goals, may be implemented pursuant to § 648.260(c).

§ 648.263 Red crab possession and landing restrictions.

(a) Vessels issued limited access red crab permits. (1) Possession and landing restrictions. (i) A vessel or operator of a vessel that has been issued a valid limited access red crab permit under this subpart may fish for, catch, possess,

transport, land, sell, trade, barter, butcher or partially process at sea up to 75,000 lb (34,019.4 kg) per trip, unless adjusted consistent with paragraph (a)(1)(ii) of this section, of whole red crab, or its equivalent as specified at paragraphs (a)(2)(i) and (ii) of this section, per fishing trip when fishing under a red crab DAS.

(ii) A vessel owner or operator who showed documented proof during the limited access qualification period of a trip higher than 75,000 lb (34,019.4 kg) shall qualify for a larger trip limit, rounded to the nearest 5,000 lb (2,268 kg) of the higher trip landed. Such proof must be received by NMFS within 30 days after receipt of a vessel owner's application for an initial limited access red crab vessel permit. A vessel owner shall fish consistent with the provisions and trip limit specified at paragraph (a)(1)(i) of this section until documented proof of a trip higher than 75,000 lb (34,019.4 kg) is verified by NMFS.

(2) Conversion to whole crab weight. (i) For red crab that is butchered at sea, the recovery rate is 64 percent of whole to butchered red crab, which is equal to the weight of red crab sections with all or the majority of the gills retained multiplied by 1.56.

(ii) For red crab that is partially processed at sea, the

recovery rate is 58 percent of whole to partially processed red crab, which is equal to the weight of fully cleaned crab sections that have had the gills and other detritus removed multiplied by 1.72.

(3) Female red crab restriction. A vessel may not fish for, catch, possess, transport, land, sell, trade, barter, butcher or partially process at sea female red crabs in excess of one standard U.S. fish tote of incidentally caught female red crabs per trip when fishing under a red crab DAS.

(4) Full-processing prohibition. No person may land fully-processed red crab (i.e., the removal of meat from the body of a red crab is not permitted).

(5) Mutilation restriction. A vessel may not retain, possess or land red crab claws and legs separate from crab bodies in excess of one standard U.S. fish tote per trip when fishing under a red crab DAS.

(b) Vessels issued red crab incidental catch permits.

(1) Possession and landing restrictions. A vessel or operator of a vessel that has been issued a red crab incidental catch permit may catch, possess, transport, land, sell, trade, barter, butcher or partially process at sea up to 500 lb (226.8 kg) of red crab, or its equivalent as specified at § 648.262(a)(i) and (ii), per fishing trip in or from the Red

Crab Management Unit.

(2) Full-processing prohibition. No person may land fully-processed red crab (i.e., the removal of meat from the body of a red crab is not permitted).

(3) Mutilation restriction. A vessel may not retain, possess or land red crab claws and legs separate from crab bodies.

§ 648.264 Gear requirements/restrictions.

(a) Limited access red crab permitted vessels. (1) No vessel may haul any fishing gear other than red crab traps/pots, marked as specified by paragraph (a)(5) of this section, when on a red crab DAS.

(2) A vessel or operator of a vessel may fish with, deploy, possess, haul, harvest red crab from, or carry on board a vessel, up to a total of 600 traps/pots when fishing for, catching, or landing red crab when on a red crab DAS. A vessel owner is required to declare, on the annual permit application, the maximum number of traps/pots used per string and the maximum number of strings employed, such that the product of the maximum number of traps/pots per string and the maximum number of strings declared is no more than 600 traps/pots.

(3) The use of parlor traps/pots in the red crab fishery

is prohibited when fishing in the red crab fishery under a red crab DAS.

(4) Maximum trap/pot size. The maximum allowable trap/pot size of traps/pots used or deployed on a red crab DAS is 18 cubic feet (0.51 cubic meters) in volume. Traps/pots may be rectangular, trapezoidal or conical only, unless other new trap/pot designs whose volume does not exceed 18 cubic feet (0.51 cubic meters) are authorized by the Regional Administrator.

(5) Gear markings. The following is required on all buoys used at the end of each red crab trawl:

(i) The letters "RC" in letters at least 3 inches (7.62 cm) in height must be painted on top of each buoy.

(ii) The vessel's permit number in numerals at least 3 inches (7.62 cm) in height must be painted on the side of each buoy to clearly identify the vessel.

(iii) The number of each trap trawl relative to the total number of trawls used by the vessel (i.e., "3 of 6") must be painted in numerals at least 3 inches (7.62 cm) in height on the side of each buoy.

(iv) High flyers and radar reflectors are required on each trap trawl.

Appendix D

Paperwork Reduction Act Supporting Statements

PAPERWORK REDUCTION ACT SUBMISSION

Please read the instructions before completing this form. For additional forms or assistance in completing this form, contact your agency's Paperwork Clearance Officer. Send two copies of this form, the collection instrument to be reviewed, the supporting statement, and any additional documentation to: Office of Information and Regulatory Affairs, Office of Management and Budget, Docket Library, Room 10102, 725 17th Street NW, Washington, DC 20503.

1. Agency/Subagency originating request	2. OMB control number b. <input type="checkbox"/> None a. _____ - _____
3. Type of information collection (<i>check one</i>) a. <input type="checkbox"/> New Collection b. <input type="checkbox"/> Revision of a currently approved collection c. <input type="checkbox"/> Extension of a currently approved collection d. <input type="checkbox"/> Reinstatement, without change, of a previously approved collection for which approval has expired e. <input type="checkbox"/> Reinstatement, with change, of a previously approved collection for which approval has expired f. <input type="checkbox"/> Existing collection in use without an OMB control number For b-f, note Item A2 of Supporting Statement instructions	4. Type of review requested (<i>check one</i>) a. <input type="checkbox"/> Regular submission b. <input type="checkbox"/> Emergency - Approval requested by _____ / _____ / _____ c. <input type="checkbox"/> Delegated
7. Title	5. Small entities Will this information collection have a significant economic impact on a substantial number of small entities? <input type="checkbox"/> Yes <input type="checkbox"/> No
8. Agency form number(s) (<i>if applicable</i>)	6. Requested expiration date a. <input type="checkbox"/> Three years from approval date b. <input type="checkbox"/> Other Specify: _____ / _____
9. Keywords	10. Abstract
11. Affected public (<i>Mark primary with "P" and all others that apply with "x"</i>) a. ___ Individuals or households d. ___ Farms b. ___ Business or other for-profit e. ___ Federal Government c. ___ Not-for-profit institutions f. ___ State, Local or Tribal Government	12. Obligation to respond (<i>check one</i>) a. <input type="checkbox"/> Voluntary b. <input type="checkbox"/> Required to obtain or retain benefits c. <input type="checkbox"/> Mandatory
13. Annual recordkeeping and reporting burden a. Number of respondents _____ b. Total annual responses _____ 1. Percentage of these responses collected electronically _____ % c. Total annual hours requested _____ d. Current OMB inventory _____ e. Difference _____ f. Explanation of difference 1. Program change _____ 2. Adjustment _____	14. Annual reporting and recordkeeping cost burden (<i>in thousands of dollars</i>) a. Total annualized capital/startup costs _____ b. Total annual costs (O&M) _____ c. Total annualized cost requested _____ d. Current OMB inventory _____ e. Difference _____ f. Explanation of difference 1. Program change _____ 2. Adjustment _____
15. Purpose of information collection (<i>Mark primary with "P" and all others that apply with "X"</i>) a. ___ Application for benefits e. ___ Program planning or management b. ___ Program evaluation f. ___ Research c. ___ General purpose statistics g. ___ Regulatory or compliance d. ___ Audit	16. Frequency of recordkeeping or reporting (<i>check all that apply</i>) a. <input type="checkbox"/> Recordkeeping b. <input type="checkbox"/> Third party disclosure c. <input type="checkbox"/> Reporting 1. <input type="checkbox"/> On occasion 2. <input type="checkbox"/> Weekly 3. <input type="checkbox"/> Monthly 4. <input type="checkbox"/> Quarterly 5. <input type="checkbox"/> Semi-annually 6. <input type="checkbox"/> Annually 7. <input type="checkbox"/> Biennially 8. <input type="checkbox"/> Other (describe) _____
17. Statistical methods Does this information collection employ statistical methods <input type="checkbox"/> Yes <input type="checkbox"/> No	18. Agency Contact (person who can best answer questions regarding the content of this submission) Name: _____ Phone: _____

19. Certification for Paperwork Reduction Act Submissions

On behalf of this Federal Agency, I certify that the collection of information encompassed by this request complies with 5 CFR 1320.9

NOTE: The text of 5 CFR 1320.9, and the related provisions of 5 CFR 1320.8(b)(3), appear at the end of the instructions. *The certification is to be made with reference to those regulatory provisions as set forth in the instructions.*

The following is a summary of the topics, regarding the proposed collection of information, that the certification covers:

- (a) It is necessary for the proper performance of agency functions;
- (b) It avoids unnecessary duplication;
- (c) It reduces burden on small entities;
- (d) It used plain, coherent, and unambiguous terminology that is understandable to respondents;
- (e) Its implementation will be consistent and compatible with current reporting and recordkeeping practices;
- (f) It indicates the retention period for recordkeeping requirements;
- (g) It informs respondents of the information called for under 5 CFR 1320.8(b)(3):
 - (i) Why the information is being collected;
 - (ii) Use of information;
 - (iii) Burden estimate;
 - (iv) Nature of response (voluntary, required for a benefit, mandatory);
 - (v) Nature and extent of confidentiality; and
 - (vi) Need to display currently valid OMB control number;
- (h) It was developed by an office that has planned and allocated resources for the efficient and effective management and use of the information to be collected (see note in Item 19 of instructions);
- (i) It uses effective and efficient statistical survey methodology; and
- (j) It makes appropriate use of information technology.

If you are unable to certify compliance with any of the provisions, identify the item below and explain the reason in Item 18 of the Supporting Statement.

Signature of Senior Official or designee

Date

Agency Certification (signature of Assistant Administrator, Deputy Assistant Administrator, Line Office Chief Information Officer, head of MB staff for L.O.s, or of the Director of a Program or StaffOffice)

Signature

Date

Signature of NOAA Clearance Officer

Signature

Date

**SUPPORTING STATEMENT
NORTHEAST REGION RED CRAB AUTHORIZATION AND NOTIFICATION
OMB CONTROL NO. 0648-0202**

INTRODUCTION

The New England Fishery Management Council (NEFMC) is proposing management measures to be implemented for the deep-sea red crab (*Chaceon quinque-dens*) fishery to prevent overfishing. The proposed measures include four provisions for requiring participants in the deep-sea red crab fishery to obtain a Federal permit: (1) a controlled-access permit for vessels qualified to participate in the directed fishery for deep-sea red crab, based upon the criteria identified in the FMP; (2) an open-access incidental catch permit for all vessels intending to catch and retain up to 500 pounds of deep-sea red crab per trip; (3) a vessel operator permit for operators of all (controlled access and incidental catch) vessels intending to fish for red crab; and (4) a dealer permit for seafood dealers intending to receive deep-sea red crab. In addition, this submission extends observer requirements to the deep-sea red crab fishery.

A. JUSTIFICATION

1. Explain the circumstances that make the collection of information necessary.

Under the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) the Secretary of Commerce (Secretary) has responsibility for the conservation and management of marine fishery resources off the coast of the United States. The majority of this responsibility has been delegated to the Regional Fishery Management Councils and the National Oceanic and Atmospheric Administration (NOAA)/National Marine Fisheries Service (NMFS).

The Secretary was given certain regulatory authorities to ensure that these resources are utilized in the most beneficial manner. The requirement of a permit for users of these resources is one of the regulatory steps taken to carry out conservation and management objectives. Section 303 (b)(1) of the Magnuson-Stevens Act specifically addresses the need for permit issuance. In addition, almost every international, Federal, state and local fishery management authority recognizes the value and use of permits as part of their respective management systems. Thus, the Secretary has promulgated rules for the issuance of Federal Fisheries Permits.

The issuance of a permit is an essential part of managing fishery resources. The purpose and use of permits is to: (1) identify and register vessel owners, vessel operators, fishing vessels, fish dealers and processors; (2) list the characteristics of fishing vessels and/or dealer/processor operations; (3) exercise influence over compliance with regulations (e.g. withhold permit issuance pending collection of unpaid penalties); (4) provide a mailing list for the dissemination of important information to the industry; (5) register participants to be considered for limited entry; and (6) provide a universe for data collection samples.

The permit system is an integral part of the management of fisheries in the Northeast Region of NMFS. The proposed fishery management plan regulations for the deep-sea red crab fishery will include this new collection. It would not be possible to carry out the mandates of the Magnuson-Stevens Act and other laws if approval to issue this collection was to be denied.

Federal Permit Program

This collection will contain a requirement for any vessel of the United States to have been issued and have on board a valid Federal controlled access permit from the Northeast Regional Administrator to fish for, catch, possess, transport, land, or process at sea more than 500 pounds (whole weight equivalent) of red crab in or from the EEZ in U.S. waters of the western Atlantic Ocean from 35° 15.3' north latitude, the latitude of Cape Hatteras Light, North Carolina, northward to the U.S.-Canada border. For non-red crab directed trips, an incidental catch limit of 500 pounds of red crab will be established for vessels fishing without a controlled access permit. These vessels will be required to have been issued and have on board a valid Federal open access incidental catch permit. Operators of fishing vessels, whether the vessel obtains a controlled access permit or an open access incidental catch permit, will be required to obtain and have available on board a valid Federal vessel operator's permit. All seafood dealers who intend to receive deep-sea red crab will be required to obtain a Federal dealer permit.

For admittance into the controlled access permit program, the entrant will be required to provide documentation to NMFS, pursuant to the criteria identified in the FMP. A permit application will be required in addition to the required documentation of landings prior to the control date. If authorized to participate in the controlled access program, entrants will be required to renew their permits on an annual basis. As part of the annual permit renewal process, entrants will be required to declare whether or not they intend to participate actively in the red crab fishery during the next fishing year. Entrants also will be required to indicate, on their annual permit application or renewal form, the maximum number of red crab traps that they use on each string of traps (also known as a trap trawl) employed in their fishing operations. This requirement is consistent with the regulation limiting each vessel with a controlled access permit for the directed red crab fishery to fishing with a maximum of 600 red crab traps, calculated as the maximum number of traps per string multiplied by the number of trap strings used in the fishery.

For admittance into the open access incidental catch permit program, the entrant will be required to notify NMFS of intent to participate. The required information is generally collected verbally through either a telephone call or in person, and no physical application is actually completed. These permits are to be kept on board the vessel during the extent of program participation in order to verify enrollment in the program. The information collected for participation in the open access incidental catch permit program consists of vessel owner name, mailing address, vessel name, and participation period.

For admittance into the vessel operator permit program, the entrant will be required to complete an application and provide additional documentation in the form of two color passport-sized photos to NMFS. The information collected for participation in the vessel operator permit program consists of operator name, address, telephone number, and personal description information such as hair and eye color, height, and weight.

For admittance into the dealer permit program, the entrant will be required to notify NMFS of their intent to participate. To be eligible for the dealer permit, the applicant must hold a valid state wholesaler's license in the state where he or she operates.

Observer Requirements

Any vessel holding an permit for deep-sea red crab may be requested to carry a NMFS-approved observer or sea sampler. Such requests are made at the discretion of the Regional Administrator for the purpose of monitoring fishing activities, collection of data and compliance as stated under §648.11. Coverage is intermittent and generally occurs on less than one percent of all fishing trips. Owners of selected vessels are required to call to arrange deployment of observers on their vessels. Requests for observer coverage are made from the list of permit holders for those fishing for deep-sea red crab.

2. Explain how, by whom, how frequently, and for what purpose the information will be used.

The information will be used by several offices of NMFS and the U.S. Coast Guard.

The data collected through these programs will be incorporated into the NMFS databases. Aggregated summaries of the collected information will be used to evaluate the management program and future management proposals. Individual permit information will be required, however, for law enforcement or notification programs. Notification information will be used to assign vessel observers.

3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological techniques or other forms of information technology.

The controlled access, dealer and operator permit programs require written applications and supporting documentation to be prepared and submitted to NMFS by the entrant. The applications are available electronically for download from the NMFS Northeast Regional Office website. The controlled access permit application requires supporting documents substantiating the vessel's history in the red crab fishery and that it meets the controlled access criteria established in the FMP. The operator permit application requires photographs of the applicants be submitted with the application. The dealer permit applications requires supporting documentation in the form of copies of the dealer's certificate of incorporation, partnership

agreement, or other organizational papers, along with lists of corporate officers or partners. The dealer permit application also requires dealer reports for the purchases of regulated species made in the previous twelve months. The open access incidental catch permit application is made via an automated phone call.

4. Describe efforts to identify duplication.

NMFS is aware of all related fishery management activities, and these requirements do not duplicate any in existence.

5. If the collection of information involves small businesses or other small entities, describe the methods used to minimize burden

Most of the respondents qualify as small businesses. Only the minimum data needed to monitor compliance with regulations are requested from all respondents.

6. Describe the consequences to the Federal program or policy activities if the collection is not conducted or is conducted less frequently.

The consequences of not conducting the collection of information described above would be immense. This collection of information is necessary for a variety of reasons, from monitoring fishing effort to collecting valuable fishery information. Furthermore, reducing the frequency of collection would also compromise the ability to monitor vessel activities, in turn affecting the enforcement of management measures.

7. Explain any special circumstances that require the collection to be conducted in a manner inconsistent with OMB guidelines.

The data collection is consistent with OMB guidelines.

8. Provide a copy of the PRA Federal Register notice that solicited public comments on the information collection prior to this submission. Summarize the public comments received in response to that notice and describe the actions taken by the agency in response to those comments. Describe the efforts to consult with persons outside the agency to obtain their views on the availability of data, frequency of collection, the clarity of instructions and record keeping, disclosure, or reporting format (if any), and on the data elements to be recorded, disclosed, or reported

The New England Fishery Management Council held many Council and Red Crab Oversight Committee meetings during 2000 and 2001 at which there was a public discussion of monitoring requirements. The draft FMP and DEIS, which identified the proposed permitting and reporting requirements, was made available for public review on November 30, 2001. The NEFMC

held two public hearings on the proposed management program, one on December 14, 2001 in Gloucester, MA and one on December 17, 2001 in New Bedford, MA. The public had opportunity to provide written comments on the management program through January 7, 2002. Experience with various programs, some of which have been operating since 1981, provides continual feedback to NMFS on issues and concerns of the applicants.

A proposed rule will also solicit public comment on these requirements.

9. Explain any decisions to provide payments or gifts to respondents, other than remuneration of contractors or grantees.

No payment or gift will be made to respondents.

10. Describe any assurance or confidentiality provided to respondents and the basis for assurance in statute, regulation, or agency policy.

All data will be kept confidential as required by NOAA Administrative Order 216-100, Confidentiality of Fisheries Statistics, and will not be released for public use except in aggregate statistical form (and without identifying the source of data, i.e. vessel name, owner, etc.).

11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private.

There are no questions of a sensitive nature.

12. Provide an estimate in hours of the burden of the collection of information.

It is difficult to completely estimate the burden associated with the permit programs since the frequency of participation will be determined entirely by the vessel owner. Owners or operators of all vessels seeking to participate in the deep-sea red crab fishery must request a permit from the Regional Administrator.

Between 1997-2000, there were five vessels that reported landings of deep-sea red crab at directed fishing levels (> 100,000 pounds per year, on average), and these five vessels are expected to qualify for the controlled access permit. For the purpose of this analysis, the number of vessels reporting deep-sea red crab landings at directed levels is assumed to be five vessels. The estimated time required to request a controlled access permit is two hours per response, which includes time for reviewing instructions, searching existing data sources, gathering and maintaining data needed, including the records necessary to substantiate their involvement in the deep-sea red crab fishery prior to the control date, and completing and reviewing the information.

There were an additional 24 vessels that reported varying amounts of red crab during the time frame identified above. These vessels would likely request an open access incidental catch permit. The number of vessels reporting landings may increase with the addition of mandatory reporting requirements. The number of vessels reporting landings of red crab at incidental catch levels is assumed to double to 48; therefore approximately 48 vessels are estimated to request the open access incidental catch permit to participate in the deep-sea red crab fishery at incidental catch levels. The estimated time required to request an open access incidental catch permit is 5 minutes per response, which includes time for reviewing instructions, searching existing data sources, gathering and maintaining data needed, and completing and reviewing the information.

The number of vessel operators expected to request an operator permit is assumed to be equal to the total number of vessels expected to apply for either a controlled access permit or an open access incidental catch permit; therefore approximately 53 vessel operators are expected to request an operator's permit. The estimated time required to request a vessel operator permit is 1 hour per response, which includes time for reviewing instructions, searching existing data sources, gathering and maintaining data needed, and completing and reviewing the information.

Based on information made available to the NEFMC during the FMP-development process, approximately four dealers are estimated to request a dealer permit. The estimated time required to request a dealer permit is 5 minutes per response, which includes time for reviewing instructions, searching existing data sources, gathering and maintaining data needed, and completing and reviewing the information.

The cost calculations for the permit family of forms assume an average wage and overhead cost for respondents of \$15/hour.

Generally, there are approximately 150 observer deployments requested annually for all federally-permitted vessels in the Northeast Region. Owners of selected vessels are required to call and arrange deployment of observers on their vessels. Calls for observer deployments to deep-sea red crab vessels are estimated to take 2 minutes each. Availability of observers is considered the limiting factor in the extent of coverage for this program. If all controlled access deep-sea red crab vessels were required by NMFS to have observers, then there would be five observer deployments.

The burden hour estimates and costs for this collection of information are summarized in Table 1.

13. Provide an estimate of the total annual cost burden to the respondents or record-keepers resulting from the collection.

The only costs to the public are for the phone calls or to mail a permit request. The phone calls required for the open access incidental catch permit are to a toll-free number, so there are no

costs to the public for this permit. The dealer permits require a two-page written form to be mailed in for a total estimated cost of \$0.70 per applicant, including printing or copying costs plus postage. We expect four applicants, so the total costs for the public are expected to be \$2.80. The operator permits require a one-page application to be mailed in along with two passport-sized photos. The estimated costs for this application are \$10 per applicant, which includes the cost of printing or copying the application, the cost for the passport-sized photos, and the cost of the postage. We expect a total of 53 applicants, so the total costs to the public are expected to be \$530. The controlled access permit requires a one page application, with supporting documentation expected to be less than 10 pages. The estimated costs for the controlled access permit application are \$2.10 per applicant, which includes the cost of printing the application form, copying the supporting documentation, and postage. We expect five applicants, so the total costs for the public are expected to be \$10.50. Overall, the total costs to the public for this collection are estimated to be \$543.30.

14. Provide estimates of annualized cost to the Federal government.

The following information is summarized in Table 1.

Estimated annualized costs to the Federal Government assumes that the average cost for issuance of a permit reflects the time associated with filing and entry and exit notice. The costs associated with the permit program is estimated at \$25/hour to the government. Since there are 5 vessels estimated to participate in the controlled access red crab fishery, 48 vessels estimated to participate in the open access incidental catch red crab fishery, 53 vessel operators estimated to participate in the red crab fishery, and four dealers estimated to receive red crab, the costs for issuing the four types of permits will be \$1,676.03.

The cost calculations for observer deployment are based on \$25/wage and overhead value for the government.

15. Explain the reasons for any program changes or adjustments reported in Items 13 or 14 of the OMB 83-I.

These are new requirements and therefore a program change.

16. For collections whose results will be published, outline the plans for tabulation and publication.

Results from this collection may be used in scientific, management, technical or general informational publications such as Fisheries of the United States, which follow prescribed statistical tabulations and summary table formats. Data are available to the general public on request in summary form only. Data are available to NEFMC and NMFS employees in detailed form on a need-to-know basis only.

17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons why display would be inappropriate.

N/A.

18. Explain each exception to the certification statement identified in Item 19 of the OMB 83-I.

There are no exceptions.

B. COLLECTIONS OF INFORMATION EMPLOYING STATISTICAL METHODS

No statistical methods are employed in the information collection procedures; the requirements are mandatory for participants in the deep-sea red crab fishery.

Burden and Cost Estimates for the Public and the Government

Table 1: Permit Categories								
Requirement	Number of Entities	Items per Entity	Total Number of Items	Response Time (hours)	Total Burden (hours)	Material Costs	Cost to Public (1)	Cost to Government (2)
Controlled Access Permit	5	1	5	2.0	10.0	\$10.50	\$160.50	\$250.00
Open Access Incidental Catch Permit	48	1	48	0.083	3.984	\$0.00	\$59.76	\$99.60
Vessel Operator Permit	53	1	53	1.0	53.0	\$530.00	\$1,325.00	\$1,325.00
Dealer Permit	4	1	4	0.083	0.332	\$2.80	\$7.78	\$8.30
Observer Deployment	5	1	5	0.033	0.165	\$0.00	\$2.48	\$4.13
Total	110*		115		67.481		\$1,555.52	\$1,687.03

(1) Calculated by adding the material costs to the total burden hour costs (assumed to be \$15 per hour).

(2) Assumed to be \$25 per hour.

* Total excludes deployment respondents since they are already counted under permit applicants.

PAPERWORK REDUCTION ACT SUBMISSION

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1. Agency/Subagency originating request	2. OMB control number b. <input type="checkbox"/> None a. _____ - _____
3. Type of information collection (<i>check one</i>) a. <input type="checkbox"/> New Collection b. <input type="checkbox"/> Revision of a currently approved collection c. <input type="checkbox"/> Extension of a currently approved collection d. <input type="checkbox"/> Reinstatement, without change, of a previously approved collection for which approval has expired e. <input type="checkbox"/> Reinstatement, with change, of a previously approved collection for which approval has expired f. <input type="checkbox"/> Existing collection in use without an OMB control number For b-f, note Item A2 of Supporting Statement instructions	4. Type of review requested (<i>check one</i>) a. <input type="checkbox"/> Regular submission b. <input type="checkbox"/> Emergency - Approval requested by _____ / _____ / _____ c. <input type="checkbox"/> Delegated
	5. Small entities Will this information collection have a significant economic impact on a substantial number of small entities? <input type="checkbox"/> Yes <input type="checkbox"/> No
	6. Requested expiration date a. <input type="checkbox"/> Three years from approval date b. <input type="checkbox"/> Other Specify: _____ / _____
7. Title	
8. Agency form number(s) (<i>if applicable</i>)	
9. Keywords	
10. Abstract	
11. Affected public (<i>Mark primary with "P" and all others that apply with "x"</i>) a. ___ Individuals or households d. ___ Farms b. ___ Business or other for-profit e. ___ Federal Government c. ___ Not-for-profit institutions f. ___ State, Local or Tribal Government	12. Obligation to respond (<i>check one</i>) a. <input type="checkbox"/> Voluntary b. <input type="checkbox"/> Required to obtain or retain benefits c. <input type="checkbox"/> Mandatory
13. Annual recordkeeping and reporting burden a. Number of respondents _____ b. Total annual responses _____ 1. Percentage of these responses collected electronically _____ % c. Total annual hours requested _____ d. Current OMB inventory _____ e. Difference _____ f. Explanation of difference 1. Program change _____ 2. Adjustment _____	14. Annual reporting and recordkeeping cost burden (<i>in thousands of dollars</i>) a. Total annualized capital/startup costs _____ b. Total annual costs (O&M) _____ c. Total annualized cost requested _____ d. Current OMB inventory _____ e. Difference _____ f. Explanation of difference 1. Program change _____ 2. Adjustment _____
15. Purpose of information collection (<i>Mark primary with "P" and all others that apply with "X"</i>) a. ___ Application for benefits e. ___ Program planning or management b. ___ Program evaluation f. ___ Research c. ___ General purpose statistics g. ___ Regulatory or compliance d. ___ Audit	16. Frequency of recordkeeping or reporting (<i>check all that apply</i>) a. <input type="checkbox"/> Recordkeeping b. <input type="checkbox"/> Third party disclosure c. <input type="checkbox"/> Reporting 1. <input type="checkbox"/> On occasion 2. <input type="checkbox"/> Weekly 3. <input type="checkbox"/> Monthly 4. <input type="checkbox"/> Quarterly 5. <input type="checkbox"/> Semi-annually 6. <input type="checkbox"/> Annually 7. <input type="checkbox"/> Biennially 8. <input type="checkbox"/> Other (describe) _____
17. Statistical methods Does this information collection employ statistical methods <input type="checkbox"/> Yes <input type="checkbox"/> No	18. Agency Contact (person who can best answer questions regarding the content of this submission) Name: _____ Phone: _____

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On behalf of this Federal Agency, I certify that the collection of information encompassed by this request complies with 5 CFR 1320.9

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- (g) It informs respondents of the information called for under 5 CFR 1320.8(b)(3):
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 - (ii) Use of information;
 - (iii) Burden estimate;
 - (iv) Nature of response (voluntary, required for a benefit, mandatory);
 - (v) Nature and extent of confidentiality; and
 - (vi) Need to display currently valid OMB control number;
- (h) It was developed by an office that has planned and allocated resources for the efficient and effective management and use of the information to be collected (see note in Item 19 of instructions);
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Signature of Senior Official or designee

Date

Agency Certification (signature of Assistant Administrator, Deputy Assistant Administrator, Line Office Chief Information Officer, head of MB staff for L.O.s, or of the Director of a Program or StaffOffice)

Signature

Date

Signature of NOAA Clearance Officer

Signature

Date

**SUPPORTING STATEMENT
NORTHEAST REGION RED CRAB VESSEL TRIP REPORTS**

INTRODUCTION

This submission requests approval for requirements that will later be merged with the Office of Management and Budget (OMB) approval for Northeast Region Permits (OMB Control No. 0648-0212).

The New England Fishery Management Council (NEFMC) is proposing management measures to be implemented for the deep-sea red crab (*Chaceon quinque-dens*) fishery to prevent overfishing. The proposed measures include extensive reporting requirements on vessel owners and operators.

A. JUSTIFICATION

1. Explain the circumstances that make the collection of information necessary.

A comprehensive information system which identifies the participants and which monitors their activity levels and landings is necessary to enforce the management measures and prevent overfishing. An information system is also needed to measure the consequences of management controls. In general, information requirements for an effective monitoring and enforcement system include:

- identification of the participating vessels and operators and dealers;
- location of the fishing activity;
- activity levels; and
- catch and landings information.

Under the FMP for the deep-sea red crab fishery, the reporting requirements for vessel owners and operators will include vessel trip reports (VTR) for all participants in the open access incidental catch permit category.

Vessel trip reports

- Vessel owners or operators will be required to follow the reporting requirements in 50 CFR 648.10 to fish for deep-sea red crab.
- A vessel must complete a vessel trip report (VTR) for each trip taken by the vessel.

Justification

- Vessel trip reports are needed to monitor fishing effort and discards.

- These data are crucial to assessing the significance and impact of the incidental catch fishery relative to the controlled access directed fishery and monitoring the effectiveness of management measures to control fishing mortality in the incidental catch fishery.
- VTRs include much information that is important for management.

2. Explain how, by whom, how frequently, and for what purpose the information will be used.

The information will be used by several offices of NMFS and the U.S. Coast Guard.

The data collected through these programs will be incorporated into the NMFS databases. Aggregated summaries of the collected information will be used to evaluate the management program and future management proposals. This information is vital to develop an understanding of the level of red crab harvest and landings associated with the incidental catch sector of the red crab fishery. This information will provide us with knowledge of the total number of vessels landing incidental catch levels of red crab, the total number of trips taken by these vessels, and the percentage of the incidental catch limit taken on each trip.

VTRs for controlled access red crab permit holders are already approved under 0648-0212.

3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological techniques or other forms of information technology.

Vessel owners or operators are the only ones who can verify catch locations. VTRs for each trip are to be submitted on a monthly basis. The necessity to accurately predict future landings and DAS use make it imperative that the reports be received on a trip basis. VTRs include much information that is required for monitoring the effectiveness of the fishery management plan.

One alternative that would ease the burden for responders would be to allow the submittal of data in an electronic format. Such a system would reduce the burden for the vessel operator only if he was already using such a system to track catch. The Northeast Region is currently investigating the future use of electronic logbooks.

The NMFS Northeast Regional Office is also investigating the use of optical character recognition software to ease the burden of the reporting system on the government. Such a system would "read" the data directly from a form and enter it into the database, reducing the need for manual data entry. It would not, however, reduce the burden on the public.

4. Describe efforts to identify duplication.

NMFS is aware of all related fishery management activities, and these requirements do not duplicate any in existence. If a vessel is permitted in another fishery that also requires VTRs, they do not have to submit an additional report.

5. If the collection of information involves small businesses or other small entities, describe the methods used to minimize burden.

Most of the respondents qualify as small businesses. Only the minimum data needed to monitor compliance with regulations are requested from all respondents.

6. Describe the consequences to the Federal program or policy activities if the collection is not conducted or is conducted less frequently.

The monthly VTR provides confirmation of red crab landings and provides additional information on catch locations, gear type, discards, etc. necessary to manage the fishery. Monthly reporting provides a consistent source of data on the activity levels of incidental catch vessels. This level of reporting is consistent with all other requirements for VTRs in other fisheries in which the vessels affected by this collection may participate and be permitted.

7. Explain any special circumstances that require the collection to be conducted in a manner inconsistent with OMB guidelines.

The data collection is not consistent with OMB guidelines because respondents must submit information more often than quarterly. In addition, respondents must submit reports in less than 30 days after the end of a fishing trip. The necessity for the frequency and timeliness of the reports is explained in paragraph (6).

8. Provide a copy of the PRA Federal Register notice that solicited public comments on the information collection prior to this submission. Summarize the public comments received in response to that notice and describe the actions taken by the agency in response to those comments. Describe the efforts to consult with persons outside the agency to obtain their views on the availability of data, frequency of collection, the clarity of instructions and record keeping, disclosure, or reporting format (if any), and on the data elements to be recorded, disclosed, or reported.

The New England Fishery Management Council held many Council and Red Crab Oversight Committee meetings during 2000 and 2001 at which there was a public discussion of monitoring requirements. The draft FMP and DEIS, which identified the proposed permitting and reporting requirements, was made available for public review on November 30, 2001. The NEFMC held two public hearings on the proposed management program, one on December 14, 2001 in Gloucester, MA and one on December 17, 2001 in New Bedford, MA. The public had

opportunity to provide written comments on the management program through January 7, 2002. Experience with various programs, some of which have been operating since 1981, provides continual feedback to NMFS on issues and concerns of the applicants.

A proposed rule will also solicit public comment on this requirement.

9. Explain any decisions to provide payments or gifts to respondents, other than remuneration of contractors or grantees.

No payment or gift will be made to respondents.

10. Describe any assurance or confidentiality provided to respondents and the basis for assurance in statute, regulation, or agency policy.

All data will be kept confidential as required by NOAA Administrative Order 216-100, Confidentiality of Fisheries Statistics, and will not be released for public use except in aggregate statistical form (and without identifying the source of data, i.e. vessel name, owner, etc.).

11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private.

There are no questions of a sensitive nature.

12. Provide an estimate in hours of the burden of the collection of information.

Table 1 summarizes the burden hours, number of respondents, and total burden of the reporting requirements for the Deep-Sea Red Crab FMP. The burden hours are based on the number of participants expected in the deep-sea red crab fishery. Because this FMP will manage deep-sea red crab as both a controlled access directed fishery and an open access incidental catch fishery (anyone who wants an open access incidental catch permit can request one), the number of expected participants are estimates based on assumptions that are described below. The analysis is complicated by the fact there is no current requirement for a deep-sea red crab vessel permit. The exact number of participants is not known throughout the timeframe of the fishery.

All vessels with deep-sea red crab permits (controlled access and open access incidental catch) are required to submit a vessel trip report (VTR). An estimate of the number of vessels that may enter the open access incidental catch fishery is 48 vessels. Burden hour estimates include assume that respondents already collect basic catch and effort information as a normal part of their business process.

Between 1997-2000, there were 24 vessels that reported varying amounts of red crab at less than directed fishing levels during this time (< 100,000 pounds of red crab per year). These vessels would likely request an open access incidental catch permit. The number of vessels reporting landings may increase with the addition of mandatory reporting requirements. For the purpose of this analysis, the number of vessels reporting landings of red crab at incidental catch levels is assumed to double to 48.

The estimated time required to complete each vessel trip report is 5 minutes per response, or 10 minutes per submission, which includes time for reviewing instructions, gathering and maintaining data needed, and completing and reviewing the information. The burden hour estimates and costs for the VTR requirement are summarized in Table 1.

13. Provide an estimate of the total annual cost burden to the respondents or record-keepers resulting from the collection.

In addition to the cost in time to record information on a VTR, respondents will also be required to submit their logbook entries to NMFS by mail on a monthly basis. The 48 vessels are expected to fish up to two trips per month and will be required to report on a trip basis (unless exempted by the Regional Administrator), for a total of 576 vessel trip report submissions per year (assuming an average of two VTRs per submission).

If respondents are taking, on average, two trips per month, the cost of mailing two logbook sheets to NMFS will be about \$1.00 per month. A maximum of 48 new respondents are estimated to be subject to this requirement. The mailing costs will be \$12.00 annually for each respondent, resulting in a maximum additional cost burden of \$576.00. These costs are summarized in Table 1.

14. Provide estimates of annualized cost to the Federal government.

Costs associated with processing additional VTR (logbook) information could result from the potential submission of logbooks by up to 48 vessels that are not currently submitting these reports (many of the vessels that obtain an open access incidental catch permit may hold a Federal permit for another fishery and therefore already be required to comply with reporting requirements). However, these additional cost burdens are assumed to be insignificant when considering the current magnitude of the logbook program and the amount of time and personnel that are already required by the system. With 48 new respondents, there will be an additional 576 logbooks to process each year. By comparison, in 1997 the NMFS Northeast Region processed over 183,000 reports. This additional reporting required by the Deep-Sea Red Crab FMP is an increase of less than 0.32 percent. This information is summarized in Table 1.

15. Explain the reasons for any program changes or adjustments reported in Items 13 or 14 of the OMB 83-I.

This is a new requirement and therefore a program change.

16. For collections whose results will be published, outline the plans for tabulation and publication.

Results from this collection may be used in scientific, management, technical or general informational publications such as Fisheries of the United States, which follows prescribed statistical tabulations and summary table formats. Data are available to the general public on request in summary form only. Data are available to NEFMC and NMFS employees in detailed form on a need-to-know basis only.

17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons why display would be inappropriate.

N/A.

18. Explain each exception to the certification statement identified in Item 19 of the OMB 83-I.

There are no exceptions.

B. COLLECTIONS OF INFORMATION EMPLOYING STATISTICAL METHODS

No statistical methods are employed in the information collection procedures; the requirements are mandatory for participants in the deep-sea red crab fishery.

Burden and Cost Estimates for the Public and the Government

Table 1: Open Access Incidental Catch Fishery Reporting Requirements								
Requirement	Number of Entities	Items per Entity	Total Number of Items	Response Time (hours)	Total Burden (hours)	Material Costs	Cost to Public (1)	Cost to Government (2)
Vessel Trip Reports	48	12	576	0.083	47.808	\$576.00	\$1,293.12	N/A
Total	48		576		47.808		\$1,293.12	N/A

(1) Calculated by adding the material costs to the total burden hour costs (assumed to be \$15 per hour).

(2) Assumed to be \$25 per hour

PAPERWORK REDUCTION ACT SUBMISSION

Please read the instructions before completing this form. For additional forms or assistance in completing this form, contact your agency's Paperwork Clearance Officer. Send two copies of this form, the collection instrument to be reviewed, the supporting statement, and any additional documentation to: Office of Information and Regulatory Affairs, Office of Management and Budget, Docket Library, Room 10102, 725 17th Street NW, Washington, DC 20503.

1. Agency/Subagency originating request	2. OMB control number b. <input type="checkbox"/> None a. _____ - _____
3. Type of information collection (<i>check one</i>) a. <input type="checkbox"/> New Collection b. <input type="checkbox"/> Revision of a currently approved collection c. <input type="checkbox"/> Extension of a currently approved collection d. <input type="checkbox"/> Reinstatement, without change, of a previously approved collection for which approval has expired e. <input type="checkbox"/> Reinstatement, with change, of a previously approved collection for which approval has expired f. <input type="checkbox"/> Existing collection in use without an OMB control number For b-f, note Item A2 of Supporting Statement instructions	4. Type of review requested (<i>check one</i>) a. <input type="checkbox"/> Regular submission b. <input type="checkbox"/> Emergency - Approval requested by _____ / _____ / _____ c. <input type="checkbox"/> Delegated
7. Title	5. Small entities Will this information collection have a significant economic impact on a substantial number of small entities? <input type="checkbox"/> Yes <input type="checkbox"/> No
8. Agency form number(s) (<i>if applicable</i>)	6. Requested expiration date a. <input type="checkbox"/> Three years from approval date b. <input type="checkbox"/> Other Specify: _____ / _____
9. Keywords	
10. Abstract	
11. Affected public (<i>Mark primary with "P" and all others that apply with "x"</i>) a. ___ Individuals or households d. ___ Farms b. ___ Business or other for-profit e. ___ Federal Government c. ___ Not-for-profit institutions f. ___ State, Local or Tribal Government	12. Obligation to respond (<i>check one</i>) a. <input type="checkbox"/> Voluntary b. <input type="checkbox"/> Required to obtain or retain benefits c. <input type="checkbox"/> Mandatory
13. Annual recordkeeping and reporting burden a. Number of respondents _____ b. Total annual responses _____ 1. Percentage of these responses collected electronically _____ % c. Total annual hours requested _____ d. Current OMB inventory _____ e. Difference _____ f. Explanation of difference 1. Program change _____ 2. Adjustment _____	14. Annual reporting and recordkeeping cost burden (<i>in thousands of dollars</i>) a. Total annualized capital/startup costs _____ b. Total annual costs (O&M) _____ c. Total annualized cost requested _____ d. Current OMB inventory _____ e. Difference _____ f. Explanation of difference 1. Program change _____ 2. Adjustment _____
15. Purpose of information collection (<i>Mark primary with "P" and all others that apply with "X"</i>) a. ___ Application for benefits e. ___ Program planning or management b. ___ Program evaluation f. ___ Research c. ___ General purpose statistics g. ___ Regulatory or compliance d. ___ Audit	16. Frequency of recordkeeping or reporting (<i>check all that apply</i>) a. <input type="checkbox"/> Recordkeeping b. <input type="checkbox"/> Third party disclosure c. <input type="checkbox"/> Reporting 1. <input type="checkbox"/> On occasion 2. <input type="checkbox"/> Weekly 3. <input type="checkbox"/> Monthly 4. <input type="checkbox"/> Quarterly 5. <input type="checkbox"/> Semi-annually 6. <input type="checkbox"/> Annually 7. <input type="checkbox"/> Biennially 8. <input type="checkbox"/> Other (describe) _____
17. Statistical methods Does this information collection employ statistical methods <input type="checkbox"/> Yes <input type="checkbox"/> No	18. Agency Contact (person who can best answer questions regarding the content of this submission) Name: _____ Phone: _____

19. Certification for Paperwork Reduction Act Submissions

On behalf of this Federal Agency, I certify that the collection of information encompassed by this request complies with 5 CFR 1320.9

NOTE: The text of 5 CFR 1320.9, and the related provisions of 5 CFR 1320.8(b)(3), appear at the end of the instructions. *The certification is to be made with reference to those regulatory provisions as set forth in the instructions.*

The following is a summary of the topics, regarding the proposed collection of information, that the certification covers:

- (a) It is necessary for the proper performance of agency functions;
- (b) It avoids unnecessary duplication;
- (c) It reduces burden on small entities;
- (d) It used plain, coherent, and unambiguous terminology that is understandable to respondents;
- (e) Its implementation will be consistent and compatible with current reporting and recordkeeping practices;
- (f) It indicates the retention period for recordkeeping requirements;
- (g) It informs respondents of the information called for under 5 CFR 1320.8(b)(3):
 - (i) Why the information is being collected;
 - (ii) Use of information;
 - (iii) Burden estimate;
 - (iv) Nature of response (voluntary, required for a benefit, mandatory);
 - (v) Nature and extent of confidentiality; and
 - (vi) Need to display currently valid OMB control number;
- (h) It was developed by an office that has planned and allocated resources for the efficient and effective management and use of the information to be collected (see note in Item 19 of instructions);
- (i) It uses effective and efficient statistical survey methodology; and
- (j) It makes appropriate use of information technology.

If you are unable to certify compliance with any of the provisions, identify the item below and explain the reason in Item 18 of the Supporting Statement.

Signature of Senior Official or designee

Date

Agency Certification (signature of Assistant Administrator, Deputy Assistant Administrator, Line Office Chief Information Officer, head of MB staff for L.O.s, or of the Director of a Program or StaffOffice)

Signature

Date

Signature of NOAA Clearance Officer

Signature

Date

**SUPPORTING STATEMENT
NORTHEAST REGION RED CRAB DEALER PURCHASE REPORTS**

INTRODUCTION

This submission requests approval for requirements that will later be merged with the Office of Management and Budget (OMB) approval for Northeast Region Dealer Purchase Reports (OMB Control No. 0648-0229).

The New England Fishery Management Council (NEFMC) is proposing management measures to be implemented for the deep-sea red crab (*Chaceon quinque-dens*) fishery to prevent overfishing. The proposed measures include extensive reporting requirements on seafood dealers.

A. JUSTIFICATION

1. Explain the circumstances that make the collection of information necessary.

A comprehensive information system which identifies the participants and which monitors their activity levels and landings is necessary to enforce the management measures and prevent overfishing. An information system is also needed to measure the consequences of management controls. In general, information requirements for an effective monitoring and enforcement system include:

- identification of the participating vessels and operators and dealers;
- location of the fishing activity;
- activity levels; and
- catch and landings information.

Under the FMP for the deep-sea red crab fishery, the reporting requirements for dealers will include dealer weighout purchase reports.

Dealer weighout reports

- Seafood dealers will be required to report total purchases of deep-sea red crab on a trip basis from each vessel.
- Reports must include market categories of deep-sea red crab purchased, prices paid, and total landings.
- Reports must be submitted on a weekly basis.

Justification

- Dealer weighout reports are needed to monitor total landings of deep-sea red crab, monitor landings by market category, verify vessel landings reports, and track prices.
- These data are necessary to obtain first purchase information on landings to evaluate the biological, economic, and social implications of management measures.
- These data are crucial to assessing the future status of the deep-sea red crab resource and monitoring the effectiveness of management measures to control fishing mortality.

2. Explain how, by whom, how frequently, and for what purpose the information will be used.

The information will be used by several offices of NMFS and the U.S. Coast Guard.

The data collected through these programs will be incorporated into the NMFS databases. Aggregated summaries of the collected information will be used to evaluate the management program and future management proposals. The dealer reports are an essential tool for monitoring landings and sales of red crab by market category, verifying vessel landings reports, and providing economic information vital to understanding the effects of the regulations.

3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological techniques or other forms of information technology.

Currently, dealer weighout purchase reports are required to be submitted on forms provided by the Regional Administrator on a weekly basis. One alternative that would ease the burden for responders would be to allow the submittal of data in an electronic format. Such a system would reduce the burden for the vessel operator only if he was already using such a system to track catch. The Northeast Region is currently investigating the future use of electronic reporting technologies.

The NMFS Northeast Regional Office is also investigating the use of optical character recognition software to ease the burden of the reporting system on the government. Such a system would "read" the data directly from a form and enter it into the database, reducing the need for manual data entry. It would not, however, reduce the burden on the public.

4. Describe efforts to identify duplication.

NMFS is aware of all related fishery management activities, and these requirements do not duplicate any in existence.

5. If the collection of information involves small businesses or other small entities, describe the methods used to minimize burden.

Most of the respondents qualify as small businesses. Only the minimum data needed to monitor compliance with regulations are requested from all respondents.

6. Describe the consequences to the Federal program or policy activities if the collection is not conducted or is conducted less frequently.

The proposed dealer weighout purchase reports provide the only source of first purchase information by dealers and processors involved in the red crab fishery. The reports provide critical information on the prices paid for red crab products, the types of products being landed (by market category), and the number of dealers/processors involved in the fishery. Without this information, it will be impossible to understand and monitor the shoreside aspects of the fishery. Weekly reports are necessary to enable the NEFMC and NMFS to have access to timely information on which to base management decisions and verify vessel landings reports.

7. Explain any special circumstances that require the collection to be conducted in a manner inconsistent with OMB guidelines.

The data collection is not consistent with OMB guidelines because respondents must submit information more often than quarterly. The necessity for the frequency and timeliness of the reports is explained in paragraph (6).

8. Provide a copy of the PRA Federal Register notice that solicited public comments on the information collection prior to this submission. Summarize the public comments received in response to that notice and describe the actions taken by the agency in response to those comments. Describe the efforts to consult with persons outside the agency to obtain their views on the availability of data, frequency of collection, the clarity of instructions and record keeping, disclosure, or reporting format (if any), and on the data elements to be recorded, disclosed, or reported.

The New England Fishery Management Council held many Council and Red Crab Oversight Committee meetings during 2000 and 2001 at which there was a public discussion of monitoring requirements. The draft FMP and DEIS, which identified the proposed permitting and reporting requirements, was made available for public review on November 30, 2001. The NEFMC held two public hearings on the proposed management program, one on December 14, 2001 in Gloucester, MA and one on December 17, 2001 in New Bedford, MA. The public had opportunity to provide written comments on the management program through January 7, 2002.

Experience with various programs, some of which have been operating since 1981, provides continual feedback to NMFS on issues and concerns of the applicants. A proposed rule will solicit additional comments on this requirement.

9. Explain any decisions to provide payments or gifts to respondents, other than remuneration of contractors or grantees.

No payment or gift will be made to respondents.

10. Describe any assurance or confidentiality provided to respondents and the basis for assurance in statute, regulation, or agency policy.

All data will be kept confidential as required by NOAA Administrative Order 216-100, Confidentiality of Fisheries Statistics, and will not be released for public use except in aggregate statistical form (and without identifying the source of data, i.e. vessel name, owner, etc.).

11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private.

There are no questions of a sensitive nature.

12. Provide an estimate in hours of the burden of the collection of information.

Table 1 summarizes the burden hours, number of respondents, and total burden of the reporting requirements for the Deep-Sea Red Crab FMP. The burden hours are based on the number of participants expected in the deep-sea red crab fishery. The analysis is complicated by the fact there is no current requirement for a deep-sea red crab dealer permit. The exact number of participants is not known throughout the timeframe of the fishery.

In order to verify landings reported by vessels, track prices, and market categories of the red crabs being landed, seafood dealers receiving red crab will be required to report on a weekly basis all deep-sea red crab received. The number of dealers expected to participate in the red crab fishery is four, based on the number of dealers currently participating. These dealers will be required to report on a weekly basis, for a total of 208 dealer weighout reports per year. Each report is expected to take 10 minutes, which includes 5 minutes to summarize the information and 5 minutes to complete the dealer report form.

Burden hour estimates include assume that respondents already collect basic catch and effort information as a normal part of their business process. The burden hour estimates and costs for the dealer weighout reports are summarized in Table 1.

13. Provide an estimate of the total annual cost burden to the respondents or record-keepers resulting from the collection.

In addition to the costs in time identified in (12), there will be a cost associated with mailing the reports. Weekly reports should be no more than 10 pages in length, so printing/copying costs plus postage costs are expected to be \$2.00 per applicant per report, or \$104 annual costs per applicant. There are expected to be four dealers participating in the red crab fishery, so total costs to the public are expected to be \$416 per year.

14. Provide estimates of annualized cost to the Federal government.

Costs associated with process additional dealer weighout information could result from the potential submission of reports by up to four dealers. With four new respondents, this requires the government to process a maximum of an additional 208 reports per year. Assuming that it takes the government the same amount of time to process the reports as it takes the public to complete, then this works out to 34.67 hours per year. At \$25 per hour, the additional costs to the government are estimated to be \$866.67 per year. These costs are summarized in Table 1.

15. Explain the reasons for any program changes or adjustments reported in Items 13 or 14 of the OMB 83-I.

These is a new requirement and therefore a program change.

16. For collections whose results will be published, outline the plans for tabulation and publication.

Results from this collection may be used in scientific, management, technical or general informational publications such as Fisheries of the Untied States, which follows prescribed statistical tabulations and summary table formats. Data are available to the general public on request in summary form only. Data are available to NEFMC and NMFS employees in detailed form on a need-to-know basis only.

17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons why display would be inappropriate.

N/A.

18. Explain each exception to the certification statement identified in Item 19 of the OMB 83-I.

There are no exceptions.

B. COLLECTIONS OF INFORMATION EMPLOYING STATISTICAL METHODS

No statistical methods are employed in the information collection procedures; the requirements are mandatory for participants in the deep-sea red crab fishery.

Burden and Cost Estimates for the Public and the Government

Table 1: Reporting Requirements								
Requirement	Number of Entities	Items per Entity	Total Number of Items	Response Time (hours)	Total Burden (hours)	Material Costs	Cost to Public (1)	Cost to Government (2)
Dealer Weighout Purchase Reports	4	52	208	0.166	34.666	\$416.00	\$936.00	\$866.67
Total	4		208		34.666		\$936.00	\$866.67

(1) Calculated by adding the material costs to the total burden hour costs (assumed to be \$15 per hour).

(2) Assumed to be \$25 per hour

PAPERWORK REDUCTION ACT SUBMISSION

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1. Agency/Subagency originating request	2. OMB control number b. <input type="checkbox"/> None a. _____ - _____
3. Type of information collection (<i>check one</i>) a. <input type="checkbox"/> New Collection b. <input type="checkbox"/> Revision of a currently approved collection c. <input type="checkbox"/> Extension of a currently approved collection d. <input type="checkbox"/> Reinstatement, without change, of a previously approved collection for which approval has expired e. <input type="checkbox"/> Reinstatement, with change, of a previously approved collection for which approval has expired f. <input type="checkbox"/> Existing collection in use without an OMB control number For b-f, note Item A2 of Supporting Statement instructions	4. Type of review requested (<i>check one</i>) a. <input type="checkbox"/> Regular submission b. <input type="checkbox"/> Emergency - Approval requested by _____ / _____ / _____ c. <input type="checkbox"/> Delegated
7. Title	5. Small entities Will this information collection have a significant economic impact on a substantial number of small entities? <input type="checkbox"/> Yes <input type="checkbox"/> No
8. Agency form number(s) (<i>if applicable</i>)	6. Requested expiration date a. <input type="checkbox"/> Three years from approval date b. <input type="checkbox"/> Other Specify: _____ / _____
9. Keywords	
10. Abstract	
11. Affected public (<i>Mark primary with "P" and all others that apply with "x"</i>) a. ___ Individuals or households d. ___ Farms b. ___ Business or other for-profit e. ___ Federal Government c. ___ Not-for-profit institutions f. ___ State, Local or Tribal Government	12. Obligation to respond (<i>check one</i>) a. <input type="checkbox"/> Voluntary b. <input type="checkbox"/> Required to obtain or retain benefits c. <input type="checkbox"/> Mandatory
13. Annual recordkeeping and reporting burden a. Number of respondents _____ b. Total annual responses _____ 1. Percentage of these responses collected electronically _____ % c. Total annual hours requested _____ d. Current OMB inventory _____ e. Difference _____ f. Explanation of difference 1. Program change _____ 2. Adjustment _____	14. Annual reporting and recordkeeping cost burden (<i>in thousands of dollars</i>) a. Total annualized capital/startup costs _____ b. Total annual costs (O&M) _____ c. Total annualized cost requested _____ d. Current OMB inventory _____ e. Difference _____ f. Explanation of difference 1. Program change _____ 2. Adjustment _____
15. Purpose of information collection (<i>Mark primary with "P" and all others that apply with "X"</i>) a. ___ Application for benefits e. ___ Program planning or management b. ___ Program evaluation f. ___ Research c. ___ General purpose statistics g. ___ Regulatory or compliance d. ___ Audit	16. Frequency of recordkeeping or reporting (<i>check all that apply</i>) a. <input type="checkbox"/> Recordkeeping b. <input type="checkbox"/> Third party disclosure c. <input type="checkbox"/> Reporting 1. <input type="checkbox"/> On occasion 2. <input type="checkbox"/> Weekly 3. <input type="checkbox"/> Monthly 4. <input type="checkbox"/> Quarterly 5. <input type="checkbox"/> Semi-annually 6. <input type="checkbox"/> Annually 7. <input type="checkbox"/> Biennially 8. <input type="checkbox"/> Other (describe) _____
17. Statistical methods Does this information collection employ statistical methods <input type="checkbox"/> Yes <input type="checkbox"/> No	18. Agency Contact (person who can best answer questions regarding the content of this submission) Name: _____ Phone: _____

19. Certification for Paperwork Reduction Act Submissions

On behalf of this Federal Agency, I certify that the collection of information encompassed by this request complies with 5 CFR 1320.9

NOTE: The text of 5 CFR 1320.9, and the related provisions of 5 CFR 1320.8(b)(3), appear at the end of the instructions. *The certification is to be made with reference to those regulatory provisions as set forth in the instructions.*

The following is a summary of the topics, regarding the proposed collection of information, that the certification covers:

- (a) It is necessary for the proper performance of agency functions;
- (b) It avoids unnecessary duplication;
- (c) It reduces burden on small entities;
- (d) It used plain, coherent, and unambiguous terminology that is understandable to respondents;
- (e) Its implementation will be consistent and compatible with current reporting and recordkeeping practices;
- (f) It indicates the retention period for recordkeeping requirements;
- (g) It informs respondents of the information called for under 5 CFR 1320.8(b)(3):
 - (i) Why the information is being collected;
 - (ii) Use of information;
 - (iii) Burden estimate;
 - (iv) Nature of response (voluntary, required for a benefit, mandatory);
 - (v) Nature and extent of confidentiality; and
 - (vi) Need to display currently valid OMB control number;
- (h) It was developed by an office that has planned and allocated resources for the efficient and effective management and use of the information to be collected (see note in Item 19 of instructions);
- (i) It uses effective and efficient statistical survey methodology; and
- (j) It makes appropriate use of information technology.

If you are unable to certify compliance with any of the provisions, identify the item below and explain the reason in Item 18 of the Supporting Statement.

Signature of Senior Official or designee

Date

Agency Certification (signature of Assistant Administrator, Deputy Assistant Administrator, Line Office Chief Information Officer, head of MB staff for L.O.s, or of the Director of a Program or StaffOffice)

Signature

Date

Signature of NOAA Clearance Officer

Signature

Date

**SUPPORTING STATEMENT
NORTHEAST REGION RED CRAB GEAR MARKING REQUIREMENTS
OMB CONTROL NO. 0648-0351**

INTRODUCTION

The New England Fishery Management Council (NEFMC) is proposing management measures to be implemented for the deep-sea red crab (*Chaceon quinqueedens*) fishery to prevent overfishing. The proposed measures include four provisions for requiring participants in the deep-sea red crab fishery to mark their fishing gear:

1. each buoy used on the end of a string of red crab traps will be required to be marked with the letters “RC” in letters at least 3 inches in height to indicate that the gear is red crab fishing gear;
2. the permit number of the vessel will be required to be marked on each buoy used on the end of a string of red crab traps, in letters at least 3 inches in height, to identify the vessel;
3. the number of the trap trawl relative to the total number employed by the vessel will be required to be marked on each buoy used on the end of a string of red crab traps, in letters at least 3 inches in height (i.e., “3 of 6”); and
4. high flyers and radar reflectors will be required on the ends of each string of traps.

A. JUSTIFICATION

1. Explain the circumstances that make the collection of information necessary.

Under the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) the Secretary of Commerce (Secretary) has responsibility for the conservation and management of marine fishery resources off the coast of the United States. The majority of this responsibility has been delegated to the Regional Fishery Management Councils and the National Oceanic and Atmospheric Administration (NOAA)/National Marine Fisheries Service (NMFS).

This is a collection of information for the regulatory requirements for fishing gear identification under the authority of the Magnuson-Stevens Act. The regulations specify that Federal permit holders using specified fishing gear be marked with the vessels Federal permit number, the fact that it is red crab gear, and the number of the trap trawl. The regulations further specify how the gear is to be marked (e.g., size of letters and location). This information is used for enforcement purposes and for the identification of gear concerning damage loss or civil proceedings. The amount of time required to mark gear is estimated in this collection.

2. Explain how, by whom, how frequently, and for what purpose the information will be used.

The information will be used by several offices of NMFS and the U.S. Coast Guard.

The information will be used to ensure compliance with fishery regulations, i.e., ensure that red crab fishing gear complies with the restrictions and prohibitions implemented through the Red Crab FMP.

3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological techniques or other forms of information technology.

The information required of the participants includes only permanent markings made to the fishing gear they employ in the prosecution of the red crab fishery.

4. Describe efforts to identify duplication.

NMFS is aware of all related fishery management activities, and these requirements do not duplicate any in existence.

5. If the collection of information involves small businesses or other small entities, describe the methods used to minimize burden.

Most of the respondents qualify as small businesses. Only the minimum data needed to monitor compliance with regulations are requested from all respondents.

6. Describe the consequences to the Federal program or policy activities if the collection is not conducted or is conducted less frequently.

The consequences of not conducting the collection of information described above would be immense. This collection of information is necessary for a variety of reasons, from monitoring fishing effort and enforcing compliance with regulations. Enforcement will use the gear markings to identify red crab fishing gear, by vessel, and ensure that all vessels are fishing within the prescribed gear restrictions and provisions of the FMP. Furthermore, reducing the frequency of collection would also compromise the ability to monitor vessel activities, affecting the enforcement of management measures.

7. Explain any special circumstances that require the collection to be conducted in a manner inconsistent with OMB guidelines.

The data collection is consistent with OMB guidelines.

8. **Provide a copy of the PRA Federal Register notice that solicited public comments on the information collection prior to this submission. Summarize the public comments received in response to that notice and describe the actions taken by the agency in response to those comments. Describe the efforts to consult with persons outside the agency to obtain their views on the availability of data, frequency of collection, the clarity of instructions and record keeping, disclosure, or reporting format (if any), and on the data elements to be recorded, disclosed, or reported.**

The New England Fishery Management Council held many Council and Red Crab Oversight Committee meetings during 2000 and 2001 at which there was a public discussion of monitoring requirements. The draft FMP and DEIS, which identified the proposed permitting and reporting requirements, was made available for public review on November 30, 2001. The NEFMC held two public hearings on the proposed management program, one on December 14, 2001 in Gloucester, MA and one on December 17, 2001 in New Bedford, MA. The public had opportunity to provide written comments on the management program through January 7, 2002. Experience with various programs, some of which have been operating since 1981, provides continual feedback to NMFS on issues and concerns of the applicants.

Additional public comment will be solicited in a proposed rule.

9. **Explain any decisions to provide payments or gifts to respondents, other than remuneration of contractors or grantees.**

No payment or gift will be made to respondents.

10. **Describe any assurance or confidentiality provided to respondents and the basis for assurance in statute, regulation, or agency policy.**

No confidentiality is provided. The information required of participants is intended to visibly and clearly identify their fishing gear, as distinct from other participants of the red crab fishery and participants of other fisheries.

11. **Provide additional justification for any questions of a sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private.**

There are no questions of a sensitive nature.

12. **Provide an estimate in hours of the burden of the collection of information.**

Between 1997-2000, there were five vessels that reported landings of deep-sea red crab at directed fishing levels (> 100,000 pounds per year, on average), and these five vessels are expected to qualify for the controlled access permit. For the purpose of this analysis, the number of vessels expected to qualify for the controlled access program and therefore be subject to this collection is assumed to be five vessels. It is difficult to completely estimate the burden associated with the permit programs since the frequency of participation will be determined entirely by the vessel owner.

The estimated time required to make the required markings on their fishing gear is 36 minutes (this assumes 1 minute per buoy, 3 buoys per end, 2 ends per string, and an average of 6 strings per vessel). This is the time required to comply with the initial gear marking requirements. If a vessel loses one or more buoys during normal fishing operations, they will have to remark the replacement gear. Assuming that vessels replace an average of 5% of their gear on each fishing trip due to loss and/or damage during normal fishing operations, they would have to remark 2 buoys per trip. Assuming they make 2 fishing trips per month for each of 12 months, they would have to replace and therefore remark 48 buoys per year. Estimating that it takes 1 minute to mark a buoy, this is an additional 48 minutes per year. Since the 36 minutes required to comply with the initial gear marking requirements is a one-time expense, annualized over the three years of this request, the time required is 12 minutes per year, plus the 48 minutes per year for replacement gear, for a total of 1 hour per year.

The cost calculations for the permit family of forms assume an average wage and overhead cost for respondents of \$15/hour. The burden hour estimates and costs for this collection of information are summarized in Table 1.

13. Provide an estimate of the total annual cost burden to the respondents or record-keepers resulting from the collection.

The costs to fishermen are minimal. Materials needed are paint and paintbrush, or permanent ink applicator, and possibly a stencil. Annual costs are estimated to be \$100 to purchase paint, brushes, and possibly a stencil. Total estimated cost per vessel varies depending on the type and amount of gear used, due to fact that different vessels use different configurations of traps per trawl and it is the buoys on the end of each trawl that are required to be marked. Some vessels may use three trawls of up to 200 traps per trawl, requiring that six sets of markings (two ends per trawl multiplied by three trawls), and other vessels may elect to use six trawls of up to 100 traps per trawl, requiring twelve sets of markings. Given the adverse weather conditions and salt water, gear will need to be repainted, repaired or replaced annually. Table 1 provides a summary of annual costs.

14. Provide estimates of annualized cost to the Federal government.

This information is only requested of participants, it is not submitted to nor received by the Federal government. There would be no Federal costs associated with this collection, because it is a marking requirement from which no information is received to process.

15. Explain the reasons for any program changes or adjustments reported in Items 13 or 14 of the OMB 83-I.

These are new requirements and therefore a program change.

16. For collections whose results will be published, outline the plans for tabulation and publication.

Results from this collection may be used in scientific, management, technical or general informational publications such as Fisheries of the United States, which follow prescribed statistical tabulations and summary table formats. Data are available to the general public on request in summary form only. Data are available to NEFMC and NMFS employees in detailed form on a need-to-know basis only.

17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons why display would be inappropriate.

N/A.

18. Explain each exception to the certification statement identified in Item 19 of the OMB 83-I.

There are no exceptions.

B. COLLECTIONS OF INFORMATION EMPLOYING STATISTICAL METHODS

No statistical methods are employed in the information collection procedures; the requirements are mandatory for participants in the deep-sea red crab fishery.

Burden and Cost Estimates for the Public and the Government

Table 1: Gear Marking Requirements								
Requirement	Number of Entities	Items per Entity	Total Number of Items	Response Time (hours)	Total Burden (hours)	Material Costs	Cost to Public (1)	Cost to Government (2)
Gear Marking Requirements	5	60	300	0.1666	5.0	\$500.00	\$575.00	N/A
Total	5		300		5.0	\$500.00	\$575.00	N/A

(1) Calculated by adding the material costs to the total burden hour costs (assumed to be \$15 per hour).

(2) Assumed to be \$25 per hour.

Appendix E

Coastal Zone Management Act Consistency Determination Transmittal Letters



New England Fishery Management Council

50 WATER STREET | NEWBURYPORT, MASSACHUSETTS 01950 | PHONE 978 465 0492 | FAX 978 465 3116

Thomas R. Hill, *Chairman* | Paul J. Howard, *Executive Director*

March 19, 2002

Mr. Charles Evans, Director
Office of Long Island Sound Programs
Department of Environmental Protection
79 Elm Street
Hartford, CT 06106

RE: Deep-Sea Red Crab FMP Consistency Determination

Dear Mr. Evans :

The New England Fishery Management Council is submitting the Deep-Sea Red Crab Fishery Management Plan (FMP) to the Secretary of Commerce for approval under Section 304 of the Magnuson-Stevens Fishery Conservation and Management Act. Enclosed is a copy of the plan that establishes measures to prevent overfishing and allows the development of a sustainable red crab fishery. The FMP controls fishing mortality by establishing a controlled access program for the directed fishery; gear limits, restrictions and prohibitions for the controlled access fishery; a prohibition on landing female red crabs; a prohibition on full processing at sea; a trip limit for the controlled access fishery; restrictions on the available days-at-sea for the controlled access fishery; and an incidental catch limit for non-controlled access vessels. The plan also establishes permit and reporting requirements for red crab vessels, operators, and dealers. The FMP manages the red crab fishery using a target total allowable catch (TAC) approach. Vessels that do not qualify for the controlled access program will be able to obtain an open access incidental catch permit.

Our approach in assessing the adverse impacts on offshore resources is described in Section 5.0 (Environmental Impacts of the Management Alternatives). The FMP was developed in concert with your Department of Environmental Protection, which is responsible for your appropriate core law. Based on information provided by your office in the past, it appears that the state reserves the responsibility to have its agencies review consistency determination vis-à-

vis the appropriate core laws. By way of this letter and the enclosed documents, we believe that we have fulfilled our obligation under your procedure.

Due to the deep-water nature of this species, the fishery only occurs well outside of state waters. We have reviewed the FMP in light of your Coastal Zone Management Plan and applicable regulations. The Connecticut Coastal Zone Management Program objective is to coordinate planning and regulatory activities of public agencies at all levels of government to ensure maximum protection of coastal resources while minimizing conflicts and disruption of economic development (Section 22(a)(9)). In Section 22(a)(9)(15)(G) that intention includes the prevention of degradation or destruction of marine fishery resources. This objective is consistent with the Red Crab FMP, because the FMP will conserve the resource and optimize yield while preventing overfishing.

To the best of our understanding, we believe the FMP will be consistent with your program. As noted in our letter dated November 21, 2001 accompanying the Draft Red Crab FMP, we are seeking an abbreviated concurrence schedule of 45 days instead of 60 days in order to expedite the review and implementation of this FMP. We would appreciate hearing from you as soon as possible regarding our determination.

Sincerely,

A handwritten signature in black ink that reads "Paul J. Howard". The signature is written in a cursive style with a large, prominent initial "P".

Paul J. Howard
Executive Director



New England Fishery Management Council

50 WATER STREET | NEWBURYPORT, MASSACHUSETTS 01950 | PHONE 978 465 0492 | FAX 978 465 3116

Thomas R. Hill, *Chairman* | Paul J. Howard, *Executive Director*

March 19, 2002

Ms. Sarah Cooksey
Delaware Coastal Management Program
Dept. of Natural Resources and Environmental Control
89 Kings Highway
Dover, DE 19901

RE: Deep-Sea Red Crab FMP Consistency Determination

Dear Ms. Cooksey:

The New England Fishery Management Council is submitting the Deep-Sea Red Crab Fishery Management Plan (FMP) to the Secretary of Commerce for approval under Section 304 of the Magnuson-Stevens Fishery Conservation and Management Act. Enclosed is a copy of the plan that establishes measures to prevent overfishing and allows the development of a sustainable red crab fishery. The FMP controls fishing mortality by establishing a controlled access program for the directed fishery; gear limits, restrictions and prohibitions for the controlled access fishery; a prohibition on landing female red crabs; a prohibition on full processing at sea; a trip limit for the controlled access fishery; restrictions on the available days-at-sea for the controlled access fishery; and an incidental catch limit for non-controlled access vessels. The plan also establishes permit and reporting requirements for red crab vessels, operators, and dealers. The FMP manages the red crab fishery using a target total allowable catch (TAC) approach. Vessels that do not qualify for the controlled access program will be able to obtain an open access incidental catch permit.

Our approach in assessing the adverse impacts on offshore resources is described in Section 5.0 (Environmental Impacts of the Management Alternatives). The FMP was developed in concert with your Division of Fish and Wildlife, which is responsible for your appropriate core law. Based on information provided by your office in the past, it appears that the state reserves the responsibility to have its agencies review consistency determination vis-à-vis the

appropriate core laws. By way of this letter and the enclosed documents, we believe that we have fulfilled our obligation under your procedure.

Due to the deep-water nature of this species, the fishery only occurs well outside of state waters. We have reviewed the FMP in light of your Coastal Zone Management Plan and applicable regulations. The Coastal Waters Policy is Section 5.A.3 of the Delaware Coastal Program Implementation Plan (CPIP). Among the "Specific CMP Policies for Coastal Waters Management," the state maintains and protects beneficial uses of the coastal waters *including boating and fishing*. Included within this policy is the objective to maintain water quality at a level to *support the propagation of fish species*. Section 5.C.3 of the Program Implementation Plan states that a *sustainable yield of fish* should be assured by establishing harvesting quotas, equipment and seasonal limitations, and licenses and other requirements. The Section also states that the wise use and enjoyment of fish is encouraged.

The Red Crab FMP establishes limits on days-at-sea and other controls in order to prevent overfishing and ensure the development of a sustainable fishery. Since a primary objective of the Red Crab FMP is to achieve optimum yield, to the best of our understanding, we believe the FMP will be consistent with your program. As noted in our letter dated November 21, 2001 accompanying the Draft Red Crab FMP, we are seeking an abbreviated concurrence schedule of 45 days instead of 60 days in order to expedite the review and implementation of this FMP. We would appreciate hearing from you as soon as possible regarding our determination.

Sincerely,

A handwritten signature in black ink that reads "Paul J. Howard". The signature is written in a cursive, slightly slanted style.

Paul J. Howard
Executive Director



New England Fishery Management Council

50 WATER STREET | NEWBURYPORT, MASSACHUSETTS 01950 | PHONE 978 465 0492 | FAX 978 465 3116
Thomas R. Hill, *Chairman* | Paul J. Howard, *Executive Director*

March 19, 2002

Mr. Tom Skinner, Director
Coastal Management Program
Executive Office of Environmental Affairs
100 Cambridge Street
Boston, MA 02202

RE: Deep-Sea Red Crab FMP Consistency Determination

Dear Mr. Skinner:

The New England Fishery Management Council is submitting the Deep-Sea Red Crab Fishery Management Plan (FMP) to the Secretary of Commerce for approval under Section 304 of the Magnuson-Stevens Fishery Conservation and Management Act. Enclosed is a copy of the plan that establishes measures to prevent overfishing and allows the development of a sustainable red crab fishery. The FMP controls fishing mortality by establishing a controlled access program for the directed fishery; gear limits, restrictions and prohibitions for the controlled access fishery; a prohibition on landing female red crabs; a prohibition on full processing at sea; a trip limit for the controlled access fishery; restrictions on the available days-at-sea for the controlled access fishery; and an incidental catch limit for non-controlled access vessels. The plan also establishes permit and reporting requirements for red crab vessels, operators, and dealers. The FMP manages the red crab fishery using a target total allowable catch (TAC) approach. Vessels that do not qualify for the controlled access program will be able to obtain an open access incidental catch permit.

Our approach in assessing the adverse impacts on offshore resources is described in Section 5.0 (Environmental Impacts of the Management Alternatives). The FMP was developed in concert with your Fish and Game Department, which is responsible for your appropriate core law. Based on information provided by your office in the past, it appears that the state reserves the responsibility to have its agencies review consistency determination vis-à-vis the appropriate core laws. By way of this letter and the enclosed documents, we believe that we have fulfilled our obligation under your procedure.

Due to the deep-water nature of this species, the fishery only occurs well outside of state waters. We have reviewed the FMP in light of your Coastal Zone Management Plan and applicable regulations. The Red Crab FMP appears to agree with the objectives in Massachusetts's 1997 Ocean Resources Policy #1 to support the development of environmentally sustainable aquaculture, for commercial and enhancement purposes, and to minimize adverse impacts upon the coastal and marine environment.

To the best of our understanding, we believe the FMP will be consistent with your program. As noted in our letter dated November 21, 2001 accompanying the Draft Red Crab FMP, we are seeking an abbreviated concurrence schedule of 45 days instead of 60 days in order to expedite the review and implementation of this FMP. We would appreciate hearing from you as soon as possible regarding our determination.

Sincerely,

A handwritten signature in black ink that reads "Paul J. Howard". The signature is written in a cursive style with a large initial "P" and "H".

Paul J. Howard
Executive Director



New England Fishery Management Council

50 WATER STREET | NEWBURYPORT, MASSACHUSETTS 01950 | PHONE 978 465 0492 | FAX 978 465 3116
Thomas R. Hill, *Chairman* | Paul J. Howard, *Executive Director*

March 19, 2002

Ms. Gwynne Schultz, Director
Coastal Zone Management Division
Maryland Department of Natural Resources
580 Taylor Ave., Tawes State Office Bldg, E-3
Annapolis, MD 21401

RE: Deep-Sea Red Crab FMP Consistency Determination

Dear Ms. Schultz:

The New England Fishery Management Council is submitting the Deep-Sea Red Crab Fishery Management Plan (FMP) to the Secretary of Commerce for approval under Section 304 of the Magnuson-Stevens Fishery Conservation and Management Act. Enclosed is a copy of the plan that establishes measures to prevent overfishing and allows the development of a sustainable red crab fishery. The FMP controls fishing mortality by establishing a controlled access program for the directed fishery; gear limits, restrictions and prohibitions for the controlled access fishery; a prohibition on landing female red crabs; a prohibition on full processing at sea; a trip limit for the controlled access fishery; restrictions on the available days-at-sea for the controlled access fishery; and an incidental catch limit for non-controlled access vessels. The plan also establishes permit and reporting requirements for red crab vessels, operators, and dealers. The FMP manages the red crab fishery using a target total allowable catch (TAC) approach. Vessels that do not qualify for the controlled access program will be able to obtain an open access incidental catch permit.

Our approach in assessing the adverse impacts on offshore resources is described in Section 5.0 (Environmental Impacts of the Management Alternatives). The FMP was developed in concert with your Department of Natural Resources, which is responsible for your appropriate core law. Based on information provided by your office in the past, it appears that the state reserves the responsibility to have its agencies review consistency determination vis-à-vis the appropriate core laws. By way of this letter and the enclosed documents, we believe that we have fulfilled our obligation under your procedure.

Due to the deep-water nature of this species, the fishery only occurs well outside of state waters. We have reviewed the FMP in light of your Coastal Zone Management Plan and applicable regulations. Maryland does not have a general fish conservation policy in its Coastal Zone Management Program, however the state has aggressive coastal zone regulations to manage fish stocks. Maryland law section 4-710 specifically restricts methods that can be used for fishing (types and sizes of nets, when and where trawls can be used, etc.). It may be more restrictive than the proposed FMP regulations, but this does not present a conflict because federal law can be less restrictive than state law. The law also prohibits fish less than specific minimum sizes, however red crab is not one of the stocks regulated by a minimum size limit.

The Red Crab FMP uses a variety of management measures to achieve optimum yield. To the best of our understanding, we believe the FMP will be consistent with your program. As noted in our letter dated November 21, 2001 accompanying the Draft Red Crab FMP, we are seeking an abbreviated concurrence schedule of 45 days instead of 60 days in order to expedite the review and implementation of this FMP. We would appreciate hearing from you as soon as possible regarding our determination.

Sincerely,

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Paul J. Howard
Executive Director



New England Fishery Management Council

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Thomas R. Hill, *Chairman* | Paul J. Howard, *Executive Director*

March 19, 2002

Ms. Kathleen Leydon
Coastal Program Manager
State Planning Office
State House Station #38
Augusta, ME 04333

RE: Deep-Sea Red Crab FMP Consistency Determination

Dear Ms. Leydon:

The New England Fishery Management Council is submitting the Deep-Sea Red Crab Fishery Management Plan (FMP) to the Secretary of Commerce for approval under Section 304 of the Magnuson-Stevens Fishery Conservation and Management Act. Enclosed is a copy of the plan that establishes measures to prevent overfishing and allows the development of a sustainable red crab fishery. The FMP controls fishing mortality by establishing a controlled access program for the directed fishery; gear limits, restrictions and prohibitions for the controlled access fishery; a prohibition on landing female red crabs; a prohibition on full processing at sea; a trip limit for the controlled access fishery; restrictions on the available days-at-sea for the controlled access fishery; and an incidental catch limit for non-controlled access vessels. The plan also establishes permit and reporting requirements for red crab vessels, operators, and dealers. The FMP manages the red crab fishery using a target total allowable catch (TAC) approach. Vessels that do not qualify for the controlled access program will be able to obtain an open access incidental catch permit.

Our approach in assessing the adverse impacts on offshore resources is described in Section 5.0 (Environmental Impacts of the Management Alternatives). The FMP was developed in concert with your Department of Marine Resources, which is responsible for your appropriate core law. Based on information provided by your office in the past, it appears that the state reserves the responsibility to have its agencies review consistency determination vis-à-vis the appropriate core laws. By way of this letter and the enclosed documents, we believe that we have fulfilled our obligation under your procedure.

Due to the deep-water nature of this species, the fishery only occurs well outside of state waters. We have reviewed the FMP in light of your Coastal Zone Management Plan and applicable regulations. Section 6.72(54) of Maine's Final EIS addresses *fisheries resources*. Maine's policy is to assure that activity in the coastal wetlands *conserve marine fisheries* through a permit procedure. Section 6.72(57) requires Maine to conserve marine resources in coastal waters. Maine's coastal zone management laws and policies mostly address on-shore activity and development that are not expected to experience major impacts from the Red Crab FMP. Since the Red Crab FMP aims to conserve the stock as does Maine's policy, no inconsistencies arise.

To the best of our understanding, we believe the FMP will be consistent with your program. As noted in our letter dated November 21, 2001 accompanying the Draft Red Crab FMP, we are seeking an abbreviated concurrence schedule of 45 days instead of 60 days in order to expedite the review and implementation of this FMP. We would appreciate hearing from you as soon as possible regarding our determination.

Sincerely,

A handwritten signature in black ink that reads "Paul J. Howard". The signature is written in a cursive style with a large, prominent initial "P".

Paul J. Howard
Executive Director



New England Fishery Management Council

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Thomas R. Hill, *Chairman* | Paul J. Howard, *Executive Director*

March 19, 2002

Ms. Donna D. Moffitt
North Carolina Division of Coastal Management
2728 Capital Boulevard
Raleigh, NC 27604

RE: Deep-Sea Red Crab FMP Consistency Determination

Dear Ms. Moffitt:

The New England Fishery Management Council is submitting the Deep-Sea Red Crab Fishery Management Plan (FMP) to the Secretary of Commerce for approval under Section 304 of the Magnuson-Stevens Fishery Conservation and Management Act. Enclosed is a copy of the plan that establishes measures to prevent overfishing and allows the development of a sustainable red crab fishery. The FMP controls fishing mortality by establishing a controlled access program for the directed fishery; gear limits, restrictions and prohibitions for the controlled access fishery; a prohibition on landing female red crabs; a prohibition on full processing at sea; a trip limit for the controlled access fishery; restrictions on the available days-at-sea for the controlled access fishery; and an incidental catch limit for non-controlled access vessels. The plan also establishes permit and reporting requirements for red crab vessels, operators, and dealers. The FMP manages the red crab fishery using a target total allowable catch (TAC) approach. Vessels that do not qualify for the controlled access program will be able to obtain an open access incidental catch permit.

Our approach in assessing the adverse impacts on offshore resources is described in Section 5.0 (Environmental Impacts of the Management Alternatives). The FMP was developed in concert with your Marine Resources Commission, which is responsible for your appropriate core law. Based on information provided by your office in the past, it appears that the state reserves the responsibility to have its agencies review consistency determination vis-à-vis the appropriate core laws. By way of this letter and the enclosed documents, we believe that we have fulfilled our obligation under your procedure.

Due to the deep-water nature of this species, the fishery only occurs well outside of state waters. We have reviewed the FMP in light of your Coastal Zone Management Plan and applicable regulations. The Coastal Zone Management Program designates fishery management to the North Carolina Marine Fisheries Commission (Fisheries Commission). Statue 143B-389.51 provides that the Fisheries Commission has the authority to implement law relating to *coastal fishing and coastal fisheries*. Among its duties, the Fishery Commission must manage, restore, develop, *conserve and regulate the marine resources; and implement management measures regarding marine fisheries consistent with authority conferred on North Carolina by the federal government*. Statue 113-134.1 further directs the Fishery Commission to exercise regulatory authority over the conservation of marine fisheries. Statue 113-228 permits the Fishery Commission to adopt federal laws that comply with state law and *exempts* the Fishery Commission from conflicting federal law.

The Red Crab FMP uses a variety of management measures to achieve optimum yield. To the best of our understanding, we believe the FMP will be consistent with your program. As noted in our letter dated November 21, 2001 accompanying the Draft Red Crab FMP, we are seeking an abbreviated concurrence schedule of 45 days instead of 60 days in order to expedite the review and implementation of this FMP. We would appreciate hearing from you as soon as possible regarding our determination.

Sincerely,

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Paul J. Howard
Executive Director



New England Fishery Management Council

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Thomas R. Hill, *Chairman* | Paul J. Howard, *Executive Director*

March 19, 2002

Mr. Brian Mazerski
New Hampshire Coastal Program
Office of State Planning
2-1/2 Beacon Street
Concord, NH 03301

RE: Deep-Sea Red Crab FMP Consistency Determination

Dear Mr. Mazerski:

The New England Fishery Management Council is submitting the Deep-Sea Red Crab Fishery Management Plan (FMP) to the Secretary of Commerce for approval under Section 304 of the Magnuson-Stevens Fishery Conservation and Management Act. Enclosed is a copy of the plan that establishes measures to prevent overfishing and allows the development of a sustainable red crab fishery. The FMP controls fishing mortality by establishing a controlled access program for the directed fishery; gear limits, restrictions and prohibitions for the controlled access fishery; a prohibition on landing female red crabs; a prohibition on full processing at sea; a trip limit for the controlled access fishery; restrictions on the available days-at-sea for the controlled access fishery; and an incidental catch limit for non-controlled access vessels. The plan also establishes permit and reporting requirements for red crab vessels, operators, and dealers. The FMP manages the red crab fishery using a target total allowable catch (TAC) approach. Vessels that do not qualify for the controlled access program will be able to obtain an open access incidental catch permit.

Our approach in assessing the adverse impacts on offshore resources is described in Section 5.0 (Environmental Impacts of the Management Alternatives). The FMP was developed in concert with your Fish and Game Department, which is responsible for your appropriate core law. Based on information provided by your office in the past, it appears that the state reserves the responsibility to have its agencies review consistency determination vis-à-vis the appropriate core laws. By way of this letter and the enclosed documents, we believe that we have fulfilled our obligation under your procedure.

Due to the deep-water nature of this species, the fishery only occurs well outside of state waters. We have reviewed the FMP in light of your Coastal Zone Management Plan and applicable regulations. New Hampshire's coastal program policy #7(2) aims to: *conserve, manage, maintain, restore and enhance the fish of the state's waters*. Also included in New Hampshire's coastal laws is Section 483-B:2(VII) which mandates the protection of commercial fishing. Because the Red Crab FMP aims to protect the stock's sustainability and future fishing rights, it is consistent with the policy and laws of New Hampshire.

To the best of our understanding, we believe the Red Crab FMP will be consistent with your program. As noted in our letter dated November 21, 2001 accompanying the Draft Red Crab FMP, we are seeking an abbreviated concurrence schedule of 45 days instead of 60 days in order to expedite the review and implementation of this FMP. We would appreciate hearing from you as soon as possible regarding our determination.

Sincerely,

A handwritten signature in black ink that reads "Paul J. Howard". The signature is written in a cursive style with a large initial "P" and "H".

Paul J. Howard
Executive Director



New England Fishery Management Council

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Thomas R. Hill, *Chairman* | Paul J. Howard, *Executive Director*

March 19, 2002

Mr. Richard H. Kropp, Director
Land Use Regulation Program
NJ Department of Environmental Protection
PO Box 439, 501 East State Street
Trenton, NJ 08625-0409

RE: Deep-Sea Red Crab FMP Consistency Determination

Dear Mr. Kropp:

The New England Fishery Management Council is submitting the Deep-Sea Red Crab Fishery Management Plan (FMP) to the Secretary of Commerce for approval under Section 304 of the Magnuson-Stevens Fishery Conservation and Management Act. Enclosed is a copy of the plan that establishes measures to prevent overfishing and allows the development of a sustainable red crab fishery. The FMP controls fishing mortality by establishing a controlled access program for the directed fishery; gear limits, restrictions and prohibitions for the controlled access fishery; a prohibition on landing female red crabs; a prohibition on full processing at sea; a trip limit for the controlled access fishery; restrictions on the available days-at-sea for the controlled access fishery; and an incidental catch limit for non-controlled access vessels. The plan also establishes permit and reporting requirements for red crab vessels, operators, and dealers. The FMP manages the red crab fishery using a target total allowable catch (TAC) approach. Vessels that do not qualify for the controlled access program will be able to obtain an open access incidental catch permit.

Our approach in assessing the adverse impacts on offshore resources is described in Section 5.0 (Environmental Impacts of the Management Alternatives). The FMP was developed in concert with your Department of Environmental Protection, which is responsible for your appropriate core law. Based on information provided by your office in the past, it appears that the state reserves the responsibility to have its agencies review consistency determination vis-à-vis the appropriate core laws. By way of this letter and the enclosed documents, we believe that we have fulfilled our obligation under your procedure.

Due to the deep-water nature of this species, the fishery only occurs well outside of state waters. We have reviewed the FMP in light of your Coastal Zone Management Plan and applicable regulations. New Jersey's state law N.J.S.A. 23:2B-6 regarding fish and wildlife authorizes the commissioner of fish and game to: prohibit, limit, condition, require or establish the use of specified types of fishing gear; regulate the size, number and quantity of specific [fish] species that may be taken; regulate the areas to be opened or closed to their taking, regulate the time and manner of their taking. The commissioner may also prescribe other limitations, conditions, or restrictions as is necessary and appropriate to the policy and purposes of state law; or establish and develop fisheries management areas and prescribe rules governing the use of such areas.

The Red Crab FMP uses a variety of management measures to achieve optimum yield. These measures are consistent with those that can be implemented under New Jersey state law. Your letter of January 11, 2002 indicated that the preferred alternative identified in the Draft Red Crab FMP was consistent with the New Jersey Coastal Zone Management Plan. There have been no substantive changes to the preferred alternative in the Final FMP. To the best of our understanding, we believe the FMP remains consistent with your program. As noted in our letter dated November 21, 2001 accompanying the Draft Red Crab FMP, we are seeking an abbreviated concurrence schedule of 45 days instead of 60 days in order to expedite the review and implementation of this FMP. We would appreciate hearing from you as soon as possible regarding our determination.

Sincerely,

A handwritten signature in black ink that reads "Paul J. Howard". The signature is written in a cursive style with a large, prominent initial "P".

Paul J. Howard
Executive Director



New England Fishery Management Council

50 WATER STREET | NEWBURYPORT, MASSACHUSETTS 01950 | PHONE 978 465 0492 | FAX 978 465 3116
Thomas R. Hill, *Chairman* | Paul J. Howard, *Executive Director*

March 19, 2002

Mr. George Stafford, Director
NY Division of Coastal Resources
41 State Street
Albany, NY 12231-0001

RE: Deep-Sea Red Crab FMP Consistency Determination

Dear Mr. Stafford:

The New England Fishery Management Council is submitting the Deep-Sea Red Crab Fishery Management Plan (FMP) to the Secretary of Commerce for approval under Section 304 of the Magnuson-Stevens Fishery Conservation and Management Act. Enclosed is a copy of the plan that establishes measures to prevent overfishing and allows the development of a sustainable red crab fishery. The FMP controls fishing mortality by establishing a controlled access program for the directed fishery; gear limits, restrictions and prohibitions for the controlled access fishery; a prohibition on landing female red crabs; a prohibition on full processing at sea; a trip limit for the controlled access fishery; restrictions on the available days-at-sea for the controlled access fishery; and an incidental catch limit for non-controlled access vessels. The plan also establishes permit and reporting requirements for red crab vessels, operators, and dealers. The FMP manages the red crab fishery using a target total allowable catch (TAC) approach. Vessels that do not qualify for the controlled access program will be able to obtain an open access incidental catch permit.

Our approach in assessing the adverse impacts on offshore resources is described in Section 5.0 (Environmental Impacts of the Management Alternatives). The FMP was developed in concert with your State Department of Environmental Conservation, which is responsible for your appropriate core law. Based on information provided by your office in the past, it appears that the state reserves the responsibility to have its agencies review consistency determination vis-à-vis the appropriate core laws. By way of this letter and the enclosed documents, we believe that we have fulfilled our obligation under your procedure.

Due to the deep-water nature of this species, the fishery only occurs well outside of state waters. We have reviewed the FMP in light of your Coastal Zone Management Plan and applicable regulations. Policy 9 of the New York Coastal Zone Management Program calls for efforts to *increase use of fish* in freshwater and marine areas. Among the considerations it provides are consideration as to whether an action will impede future utilization of the State's recreational fish resource; and consideration that efforts to increase access *should not lead to over-utilization of the fish resource*. Policy 10 provides for further development of commercial fish occurring within the context of *sound fishery management principles, including consideration of OSY (optimum sustainable yield) levels and harvest restrictions*. It also provides the following guidelines: whether an action will impede existing utilization of future development of the state's commercial fishing resources and ensuring that the fishery resources are renewable.

All of the above measures have consistent goals and intended results as the Red Crab FMP. To the best of our understanding, we believe the FMP will be consistent with your program. As noted in our letter dated November 21, 2001 accompanying the Draft Red Crab FMP, we are seeking an abbreviated concurrence schedule of 45 days instead of 60 days in order to expedite the review and implementation of this FMP. We would appreciate hearing from you as soon as possible regarding our determination.

Sincerely,

A handwritten signature in black ink that reads "Paul J. Howard". The signature is written in a cursive style with a large, stylized initial "P".

Paul J. Howard
Executive Director



New England Fishery Management Council

50 WATER STREET | NEWBURYPORT, MASSACHUSETTS 01950 | PHONE 978 465 0492 | FAX 978 465 3116
Thomas R. Hill, *Chairman* | Paul J. Howard, *Executive Director*

March 19, 2002

Mr. E. James Tabor
Pennsylvania Coastal Zone
Department of Environmental Protection
Rachel Carson State Office Building
400 Market Street, 10th Floor
Harrisburg, PA 17105

RE: Deep-Sea Red Crab FMP Consistency Determination

Dear Mr. Tabor:

The New England Fishery Management Council is submitting the Deep-Sea Red Crab Fishery Management Plan (FMP) to the Secretary of Commerce for approval under Section 304 of the Magnuson-Stevens Fishery Conservation and Management Act. Enclosed is a copy of the plan that establishes measures to prevent overfishing and allows the development of a sustainable red crab fishery. The FMP controls fishing mortality by establishing a controlled access program for the directed fishery; gear limits, restrictions and prohibitions for the controlled access fishery; a prohibition on landing female red crabs; a prohibition on full processing at sea; a trip limit for the controlled access fishery; restrictions on the available days-at-sea for the controlled access fishery; and an incidental catch limit for non-controlled access vessels. The plan also establishes permit and reporting requirements for red crab vessels, operators, and dealers. The FMP manages the red crab fishery using a target total allowable catch (TAC) approach. Vessels that do not qualify for the controlled access program will be able to obtain an open access incidental catch permit.

Our approach in assessing the adverse impacts on offshore resources is described in Section 5.0 (Environmental Impacts of the Management Alternatives). The FMP was developed in concert with your Department of Marine Resources, which is responsible for your appropriate core law. Based on information provided by your office in the past, it appears that the state reserves the responsibility to have its agencies review consistency determination vis-à-vis the

appropriate core laws. By way of this letter and the enclosed documents, we believe that we have fulfilled our obligation under your procedure.

Due to the deep-water nature of this species, the fishery only occurs well outside of state waters. We have reviewed the FMP in light of your Coastal Zone Management Plan and applicable regulations. Chapter 57 of Pennsylvania Fishing and Boating Regulations addresses fisheries policy. The general policy of the state is to *protect, conserve, and enhance the quality and diversity of the fishery resources*. To achieve that objective, the State Fishing and Boating Commissioner is assigned to manage self-sustaining fish populations as a *renewable natural resource*. Because a primary objective of the Red Crab FMP is to achieve optimum yield, no inconsistency is anticipated. Although Pennsylvania specifically regulates some fish stocks and fishing gear in associated fisheries, red crab is not among them and there is therefore no conflict. The state also requires fishermen to have a license with the state and a permit to fish some species, but the Red Crab FMP will not interfere with this licensing provision.

To the best of our understanding, we believe the FMP will be consistent with your program. As noted in our letter dated November 21, 2001 accompanying the Draft Red Crab FMP, we are seeking an abbreviated concurrence schedule of 45 days instead of 60 days in order to expedite the review and implementation of this FMP. We would appreciate hearing from you as soon as possible regarding our determination.

Sincerely,

A handwritten signature in black ink that reads "Paul J. Howard". The signature is written in a cursive style with a large initial "P" and "H".

Paul J. Howard
Executive Director



New England Fishery Management Council

50 WATER STREET | NEWBURYPORT, MASSACHUSETTS 01950 | PHONE 978 465 0492 | FAX 978 465 3116
Thomas R. Hill, *Chairman* | Paul J. Howard, *Executive Director*

March 19, 2002

Mr. Grover Fugate, Executive Director
Rhode Island Coastal Resources Council
Oliver H. Stedman Office Building
4808 Tower Hill Road
Wakefield, RI 02879

RE: Deep-Sea Red Crab FMP Consistency Determination

Dear Mr. Fugate:

The New England Fishery Management Council is submitting the Deep-Sea Red Crab Fishery Management Plan (FMP) to the Secretary of Commerce for approval under Section 304 of the Magnuson-Stevens Fishery Conservation and Management Act. Enclosed is a copy of the plan that establishes measures to prevent overfishing and allows the development of a sustainable red crab fishery. The FMP controls fishing mortality by establishing a controlled access program for the directed fishery; gear limits, restrictions and prohibitions for the controlled access fishery; a prohibition on landing female red crabs; a prohibition on full processing at sea; a trip limit for the controlled access fishery; restrictions on the available days-at-sea for the controlled access fishery; and an incidental catch limit for non-controlled access vessels. The plan also establishes permit and reporting requirements for red crab vessels, operators, and dealers. The FMP manages the red crab fishery using a target total allowable catch (TAC) approach. Vessels that do not qualify for the controlled access program will be able to obtain an open access incidental catch permit.

Our approach in assessing the adverse impacts on offshore resources is described in Section 5.0 (Environmental Impacts of the Management Alternatives). The FMP was developed in concert with your Department of Environmental Management, which is responsible for your appropriate core law. Based on information provided by your office in the past, it appears that the state reserves the responsibility to have its agencies review consistency determination vis-à-vis the appropriate core laws. By way of this letter and the enclosed documents, we believe that we have fulfilled our obligation under your procedure.

Due to the deep-water nature of this species, the fishery only occurs well outside of state waters. We have reviewed the FMP in light of your Coastal Zone Management Plan and applicable regulations. Section 300.11 of Rhode Island's Coastal Resources Management Program is the only part of its policy that directly addresses fisheries. As a section that permits and regulates aquaculture, it does not overlap with the Red Crab FMP; thus, there is no inconsistency.

To the best of our understanding, we believe the FMP will be consistent with your program. As noted in our letter dated November 21, 2001 accompanying the Draft Red Crab FMP, we are seeking an abbreviated concurrence schedule of 45 days instead of 60 days in order to expedite the review and implementation of this FMP. We would appreciate hearing from you as soon as possible regarding our determination.

Sincerely,

A handwritten signature in black ink that reads "Paul J. Howard". The signature is written in a cursive style with a large, prominent initial "P".

Paul J. Howard
Executive Director



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Thomas R. Hill, *Chairman* | Paul J. Howard, *Executive Director*

March 19, 2002

Ms. Laura McKay, Environmental Program Manager
Virginia Coastal Resources Management Program
629 East Main Street, 6th Floor
Richmond, VA 23219

RE: Deep-Sea Red Crab FMP Consistency Determination

Dear Ms. McKay:

The New England Fishery Management Council is submitting the Deep-Sea Red Crab Fishery Management Plan (FMP) to the Secretary of Commerce for approval under Section 304 of the Magnuson-Stevens Fishery Conservation and Management Act. Enclosed is a copy of the plan that establishes measures to prevent overfishing and allows the development of a sustainable red crab fishery. The FMP controls fishing mortality by establishing a controlled access program for the directed fishery; gear limits, restrictions and prohibitions for the controlled access fishery; a prohibition on landing female red crabs; a prohibition on full processing at sea; a trip limit for the controlled access fishery; restrictions on the available days-at-sea for the controlled access fishery; and an incidental catch limit for non-controlled access vessels. The plan also establishes permit and reporting requirements for red crab vessels, operators, and dealers. The FMP manages the red crab fishery using a target total allowable catch (TAC) approach. Vessels that do not qualify for the controlled access program will be able to obtain an open access incidental catch permit.

Our approach in assessing the adverse impacts on offshore resources is described in Section 5.0 (Environmental Impacts of the Management Alternatives). The FMP was developed in concert with your Marine Resources Commission, which is responsible for your appropriate core law. Based on information provided by your office in the past, it appears that the state reserves the responsibility to have its agencies review consistency determination vis-à-vis the appropriate core laws. By way of this letter and the enclosed documents, we believe that we have fulfilled our obligation under your procedure.

Due to the deep-water nature of this species, the fishery only occurs well outside of state waters. We have reviewed the FMP in light of your Coastal Zone Management Plan and applicable regulations. As stated in Part I of the Coastal Resources Management Program Final EIS, Virginia has implemented *its own fisheries management program* that is implemented by the Marine Resources Commission and the Commission of Game and Inland Fisheries. The fishery management policy stresses the *conservation and enhancement of fish resources and the promotion of commercial and recreational fisheries to maximize food production and recreational opportunities, particularly for future generations*. Also included in Part II of the EIS are the goals to *minimize damage to productivity and diversity of the marine environment resulting from the disruption of fish population balances and to improve or maintain fisheries*. Virginia regulates the fishing of many species however red crab is not among them. Virginia Code 1950, sec 28.2-300 also requires fishermen to obtain a license from the state to fish and/or use a net, and requires fishermen to report their catch to the state as well. There appear to be no inconsistencies between Virginia regulations and the FMP.

The Red Crab FMP uses a variety of management measures to achieve optimum yield. Thank you for your review of the Draft Red Crab FMP. There have been no substantive changes to the preferred alternative identified in the draft, and so to the best of our understanding, we believe the FMP will be consistent with your program. As noted in our letter dated November 21, 2001 accompanying the Draft Red Crab FMP, we are seeking an abbreviated concurrence schedule of 45 days instead of 60 days in order to expedite the review and implementation of this FMP. We would appreciate hearing from you as soon as possible regarding our determination.

Sincerely,

A handwritten signature in black ink that reads "Paul J. Howard". The signature is written in a cursive, slightly slanted style.

Paul J. Howard
Executive Director

Appendix F

Summaries of the Public Hearings Written Public Comments on the Draft FMP/DEIS

New England Fishery Management Council

Public Hearing Summary Red Crab Fishery Management Plan

**Gloucester, MA
December 14, 2001**

Chair: Vito Calomo

Other Council Members: none

Council Staff: Michael Pentony, Anne Beaudreau

Attendance: 6 (5 signed)

Introduction:

Mr. Calomo welcomed those in attendance and introduced the purpose and structure of the Red Crab FMP public hearing. He announced that there will be another public hearing on Monday, December 17, 2001, in New Bedford, MA. Mr. Calomo explained the process for providing comments to the Council on the draft Red Crab FMP, either by commenting at the hearing or by providing written comments to the Council office. The comment period closes on January 7, 2002.

Mr. Pentony gave a short presentation on the purpose of the hearing, some background on the FMP development timeline and upcoming milestones, a summary of the Council's preferred alternatives, and several specific issues on which the Council is particularly interested in receiving comments.

Comments:

Jon Williams, Benthic Fishing Corporation, F/V Krystal James: I would like to thank the New England Council and staff for all the work they've done on this project. It's such a small fishery, but it certainly has been given an awful lot of attention over the last couple of years, which I feel very strongly was very important. The red crab resource was at stake here for awhile. My testimony won't be that difficult because I agree with the preferred alternatives. The red crab resource has needed this recognition for a long time. I agree with all the preferred alternatives identified by the Council, with the exception of the vessel upgrading restrictions. I believe that the vessel upgrading restrictions are not necessary if the differential trip limit option that uses the vessel's highest trip on record is adopted. If you have a 50,000 pound trip limit, it would not matter whether it was on a 300 foot boat or an 80 foot boat, based on the historical trip limit. This would eliminate problems in the future if you are trying to replace a boat and you have to worry about the horsepower requirements or the fish hold requirements. Next, I'll go through the measures one by one.

I support the choice of Cape Hatteras, North Carolina, as the southern extent for the management unit (Alternative 4). The fishing year be based on when the FMP is

implemented. If you set the fishing year based on the time that the FMP is implemented, vessels will be tied up for 4-5 months just prior to implementation of the FMP, unless there is a gray area between when the emergency regulations expire and when the FMP is implemented. I understand there may have to be some sort of adjustment in the first year of what was caught. I support the MSY calculated by the Council at 6.2 million pounds. I support the Council's choice of Alternative 2 for the overfishing definition. I also support Alternative 4 for optimum yield, $OY = MSY$. I support Alternative 3 for essential fish habitat, with EFH designations based on the species' depth affinities which was the Council's preferred alternative. I support the proposed permitting, reporting and record-keeping requirements. I support the Council's proposal related to annual specifications and framework adjustment process.

I support the proposed incidental catch limit of 500 pounds per trip for vessels not in the directed fishery. I obviously support the male-only restriction. I support the proposed restrictions on butchering and processing at sea that allow for butchering and some processing at sea and not extracting meat. I support the trap limit of 600 traps per vessel. I definitely support that the directed red crab fishery should definitely be a trap-only fishery. Limiting trap size based on trap volume would be the best way to control the size of the traps used in the fishery rather than dimensions. The Council should set a volume, in cubic feet, beyond which a trap volume cannot be exceeded. The industry's main concern is that some vessels wouldn't get into giant Alaskan king crab pots that weigh 700 pounds and are capable of catching huge amounts.

I definitely support the use of a target TAC instead of a hard TAC to prevent a derby fishery. We're dealing with this hard TAC now under the emergency which is definitely a derby fishery. The clock is ticking and the boats are turning around just as quick as they can. And this time of year with the weather and all it really is not a safe thing. A target TAC is far better in my opinion. I strongly support the differential trip limits. This may not sound great in the beginning, but it makes sense to base trip limits on historical landings -- historical landings being the largest trip that a vessel landed in the three year qualifying period. We operated full time for the last six years and never averaged this limit, but the opportunity every now and again to have a good trip is important. I think that the DAS covers the resource management. I would much prefer my vessel to be restricted to number of days that we're allowed to fish but let me operate at my maximum efficiency. Please manage us as easily as possible, with the ultimate goal to protect the red crab resource. I firmly believe this can be done with DAS. I would rather be given 100 days a year at a 60,000 pound limit than 200 days a year with a 30,000 pound limit. I strongly feel that the Preferred Alternative, Alternative 5, with differential trip limits is the way to go. If we go with this, we don't have to be extremely restrictive with vessel upgrading. Time doesn't need to be spent coming up with a process for vessel upgrading. If we weren't talking about the differential trip limits, then I would be saying immediately that we need upgrading requirements. Before I leave trip limits, if you have any other type of trip limit, you're going to impose restrictions on some people, you're going to help other people, and other people aren't going to be affected at all.

I support the controlled access program and the criteria and guidelines proposed by the Council for the 250,000 pounds and the three year average. I support the use of days-

at-sea -- I look at DAS as the best tool to protect the resource of this fishery. I'm sure the days will probably be adjusted from year to year, being most conservative in the first year just to make that it isn't harmed, but over a couple years we'll probably get a pretty good handle on where the days should be to stay within the MSY. DAS would absolutely assist safety -- you won't have to go out just because you feel the pressure of competition. In terms of gear markings, I don't think a gear tag will be very helpful because of the required use of breakaway buoys to protect whales. We'll lose a lot of ends in the winter and this will mean a lot of paperwork at NMFS looking for more tags. The gear markings should be self-enforced. We should record permit number on the buoys and number each buoy. Then it will be easy to see how much gear one guy is fishing. For example, mark each buoy with: "RC", the vessel's permit number, then "1" through however many you have. This will not result in any financial burden to the industry as we mark the buoys already.

Lastly, to be able to declare into or out of the fishery is a unique concept that makes a lot of sense in this fishery. It would allow NMFS to know who's going to be participating next year to keep DAS to an appropriate number. Because of the size of the fishery, it's a good idea -- if one vessel checks out, that leaves a large part of the fishery untouched. Thank you to the Council and staff, I think you guys have done a really good job.

Peter Cook, Ocean Ecosystems, owners of F/V Frank H. Wetmore: I want to reiterate everything that Jon Williams said. I support the Council's preferred alternatives for the FMP. We're in this fishery as the only boat that has historically butchered at sea, and supporting these differential trip limits means a lot to us. The 65,000 pound limit under the emergency has had an economic impact on us but we supported it because we knew we needed it to get from A to B. We have a larger vessel, so it might hurt us at first, but it will eventually get us back up to a better place economically. Regarding gear markings, we lose on average one end per week because we're putting in weak links for marine mammals, so the need for buoy tags could get complicated. I support vessels declaring the number of traps per string and the number of strings used. It will be easy to recognize how much gear each vessel is putting out because everyone is fishing in the same areas. I support the Council's preferred alternative (Alternative 5). Because we're a bigger vessel, we have butchered red crab on board. We have no other permits, it's an old vessel, and we don't have the flexibility to go into any other fishery or to put tanks in this vessel to hold live crab. It is essential to be able to butcher crabs on board - to take viscera out of crab and cut it in half. We don't have the flexibility to develop a tanking system. I should also mention that I've been involved in the red crab fishery for over 20 years, we employ nine people full-time and three part-time.

Clark Sandler, Cape Ann Harvesters, F/V Hannah Boden: I agree with just about everything that's been said already. A couple of specific issues. Gear marking leads to other questions for me. It is essential that gear be marked. It also needs to be clear if it's crab gear or lobster gear. I would like to see gear marked in a way that would distinguish between lobster/crab. The alternatives don't go into how this affects other fisheries using pots. With a 600 pot limit on crabbing, it wouldn't be possible to fish the crab fishery and lobster fishery at same time. This limit is set to deter people from fishing more than

600 crab pots, not to prevent fishing in another fishery. Yet it has turned out that this limit has included all types of traps. Geographic markings are a good way to distinguish this gear; lobsters and crabs are in different places, crabs are caught deeper than 150 fathoms, lobsters are caught in much shallower areas. It would work to say that lobster gear is not allowed beyond the 200 fathom line. Or mark gear distinctly -- "C" for crab vs. "L" for lobster, or something like that. If some other type of pot fishery comes in, it should be marked likewise. Prior to the emergency regulations, we fished both red crab and lobster and we would like to be able to continue to do so. The intent of a 600 pot limit was never to eliminate you from another fishery, but by the emergency action it has affected other fisheries. There are no conservation benefits by doing this.

Some of the alternatives range from 200 pounds to 1000 pounds as an incidental catch limit for the non-directed fishery. Any of those alternatives are fine, but the male-only restriction should apply to all vessels, whether it's in the directed fishery or not. The boats in the crab fishery are already fishing the same size trap whether it's a cone shape or rectangular. It is a good idea, then, to have a volume limit -- this is the time to set the size of the trap. To declare in fishery through some type of letter for 6 months or 12 months has good intent but someone could declare in the fishery to cover themselves but not fish; this won't necessarily accomplish anything. I wouldn't like to see butchering continue; I would like it to stay the way it is for the vessels that do but prevent new vessels from doing this. I am in favor of differential trip limits because it maintains effort prior to the control date. The vessel that landed the largest trip will not be able to land a trip larger than that, so differential trip limits maintain the fishery at its historical levels. Upgrading seems to be a good protective thing, even though this protection may not be realized for 4-5 years. I support vessel upgrading restrictions similar to those in the groundfish plan to protect against changes in the future.

Jon Williams: I want to stress that there is no downside to the red crab fishery from a red crab vessel participating in other fisheries. The 200 fathom curve would be a good boundary between red crab and lobster gear.

Peter Cook: I want to make clear that I support Option 2 for the butchering and processing at sea restrictions. This would allow butchering but no processing at sea. I also support the proposed vessel upgrading restrictions.

Conclusion:

There were no further comments on the proposed measures and the preferred alternatives selected by the Council and the public hearing was closed.

New England Fishery Management Council

Public Hearing Summary Red Crab Fishery Management Plan

**New Bedford, MA
December 17, 2001**

Chair: Eric Smith
Other Council Members: Jim Kendall
Council Staff: Michael Pentony
Attendance: 12 (9 signed)

Introduction:

Mr. Smith welcomed those in attendance and introduced the purpose and structure of the Red Crab FMP public hearing. There was also another public hearing on Friday, December 14, 2001, in Gloucester, MA. Mr. Smith explained the process for providing comments to the Council on the draft Red Crab FMP, either by commenting at the hearing or by providing written comments to the Council office. The comment period closes on January 7, 2002.

Mr. Pentony gave a short presentation on the purpose of the hearing, some background on the FMP development timeline and upcoming milestones, a summary of the Council's preferred alternatives, and several specific issues on which the Council is particularly interested in receiving comments. Following this presentation, there were a few technical questions to the staff for clarification purposes.

Comments:

Richard Allen, New England Red Crab Harvesters Association: The New England Red Crab Harvesters Association has presented comments at the hearing in Gloucester, so I will not repeat those, but I did want to express my personal opinion on this plan. I think it is probably going to turn out to be one of the most biologically effective and economically sensible of any of the plans that I'm familiar with that have been implemented in New England. The need for management was made clear by the experience during the emergency period when a 6-month TAC was taken in three months. I think the plan should have the effect of helping to spread out the fishery a little more, although there was already excess capacity in this fishery compared to the TAC that we're going to have.

On the management measures, I think the combination of uniform DAS, the target TAC, and an individual vessel trip limit established basis of the vessel's highest reported landing is really an ideal way to put a management plan together to achieve that combination of biological effectiveness and economic rationality. Implementing an individual vessel trip limit based on the vessel's highest trip on record accomplishes

several objectives to maintain capacity at historic levels, and maintain competition within the fleet. I think that the entire plan as it has been put together, with the Preferred Alternatives that the Council has chosen, will really be a good plan for this fishery.

Jeff Pike: I am speaking on behalf of the American Red Crab Coalition, and we will be submitting detailed comments on the draft Red Crab FMP next week in writing. Joining me today are Einar and John and they will look at some of the very specific management measures in Alternative #5. I will address the issues of controlled access and trip limits. I would first say that developing a plan that satisfies the Magnuson Act is extremely difficult in this situation due to the lack of scientific information and the absence of verifiable information on past fishing effort, capacity and landings. This fishery has been ignored for the last 30 years. Consequently, estimates of historical landings, vessel catches, and fishing effort are unreliable at best.

With respect to controlled access, we feel that efforts to manage this fishery only came about because of our participation in it. They have opposed our participation from the beginning. The Magnuson-Stevens Act is clear about how limited access may be developed legally. The Council made the Red Crab FMP a low priority and it took almost one year after the control date for the Council to take conservation action. We content that the March 1, 2000 control date is invalid because of the inaction taken by the Council after the control date was established. The Council effectively abandoned the control date and by abandoning efforts at conservation for this fishery, the Council gave up the right to use the control date.

We oppose Option 1 for the controlled access program and suggest that the Council support Option 4, which would grant access to the directed fishery to all currently involved vessels. Option 4 is fair and equitable to those vessels now involved in the fishery, and does not rely on unofficial data. Trip limits are not useful to minimize a derby fishery, and trip limits increase the inefficiency of vessels. There is very little scientific information on this resource. We recommend the Council consider a trip limit of 150,000 pounds live weight equivalent for catcher-processor vessels and 75,000 pounds live weight equivalent for catcher vessels.

John Boggs, Sanko Fisheries F/V Canyon Enterprise and F/V Canyon Explorer: The proposed incidental catch limit of 500 pounds is okay. We support the non-regulated minimum size option because the market controls the size of the crabs being landed. It should not be hard to use cluster weight to determine the size of the crabs being landed if this needs to be tracked. We support Option 3 for to allow partial processing at sea. We support Option 2 for a 600 pot limit, although we could fish more. We support the proposed escape vents, maximum trap size, and trap only requirements and restrictions. We support gear marking requirements, using a system of a declared number of traps per string, but we would not support individual trap tags. We would support the use of buoy tags or a gear identification on the buoys. We support the use of a target TAC, but believe that it should be higher than the 5 million pounds that's recommended. We have had trouble dealing with the existing trip limit. We've reduced the size of our crew to deal with the trip limit, and we're spending money going back and forth under the low trip limit, in spite of the fact that we could be much more efficient. We would prefer a

trip limit that is based on vessel size, but I can't really comment on the best approach.

Einar Gustafsson, Atlantic Coast Fisheries: I am a relative newcomer to this industry here on the east coast, but through this process gained a much deeper understanding of some of the issues and problems that the east coast fishing industry has, and I firmly believe that they are largely due to the Council and the fishery management plans of the east coast of the U.S. It is sad, depressing, and disappointing to see that you as the current Council continue to uphold the legacy by first failing to manage the resource and then putting in a management plan that appears largely on the surface to be driven by political and financial motivations and interests with not enough regard to scientific data, empirical analysis, or economic efficiency. I find that highly disturbing.

I think this plan will border on illegality and will certainly not achieve neither the biological nor economic objectives that these plans should be designed to achieve. Furthermore, we would like to add a U.S.-based processor priority for the product. It is obviously unlikely that this will happen at this point in the game, but we also find it highly disturbing that the plan effectively is being designed to exclude the suppliers to Atlantic Coast. Atlantic Coast is a U.S.-based company in New Bedford with about 150 people on its payroll, pays all of its taxes, does an awful lot of volume of scallops, crabs and other species, and one of the potential outcomes of these decisions may very well be to bankrupt the company to which I'll point the blame to the Council. This is about the third species that due to the Council's inability to manage, ends up punishing the processors and its suppliers.

Thorne Tasker, F/V Canyon Explorer: My vessel is the only one that delivers crabs on ice, and regarding differential trip limits, a trip limits based on history will harm my vessel. Regarding trap size, there are different trap designs being used in the fishery and the only fair method to establish a maximum trap size is a volume based control. When the science on escape vents is in, we may want to see more traps in the water to increase soak time and could reduce mortality by increasing trap escapement. I recommend the Council consider a type of trip limit that allows a floating overage from trip to trip. This would address enforcement issues and reduce waste and would function as a type of reverse carry-over.

Peter Cook, F/V Frank H. Wetmore: I made comments at the Gloucester hearing, and I won't repeat those, but I wanted to comment on a couple of points that have come up. It is important to understand that we cannot bring in all of our pots -- this would be dangerous for the vessel and our crew. Although we cannot bring all of our gear in at once, neither do we leave our gear in the water for prolonged periods. We use wood traps and if they soak too long, we have problems with worms. Also, I'm not sure how effective it would be to increase soak time. Relative to gear conflicts with other fisheries, in 20 years we have never been towed up by monkfish gear. We have never had a conflict with lobstermen.

Jeff Pike: Our catcher-processor vessels bring in all gear on each trip.

Einar Gustafsson: The Council should consider the potential negative impacts on

markets due to uncertainty related to the emergency regulations and the development of an FMP.

John Boggs: If the Council's preferred option for the control access program is selected, certain processors may not have a supplier making it difficult for them to plan ahead.

Richard Allen: The Red Crab Harvesters Association recommends the fishing year starts when the FMP is implemented.

Peter Cook: I support the 600 pot limit proposed by the Council.

Don Kenney, Downeast Specialty Products: One thing that has resulted from the Council's involvement in the development of the Red Crab FMP has been a positive response from our markets. Our markets like the process and look forward to the establishment of an annual TAC and the planned predictability of product availability.

Peter Cook: I have some concerns over the potential for trip limit overages. If this is going to be pursued, I suggest there be a percentage overage allowance or tolerance. There may be some merit for this approach.

Conclusion:

There were no further comments on the proposed measures and the preferred alternatives selected by the Council and the public hearing was closed.