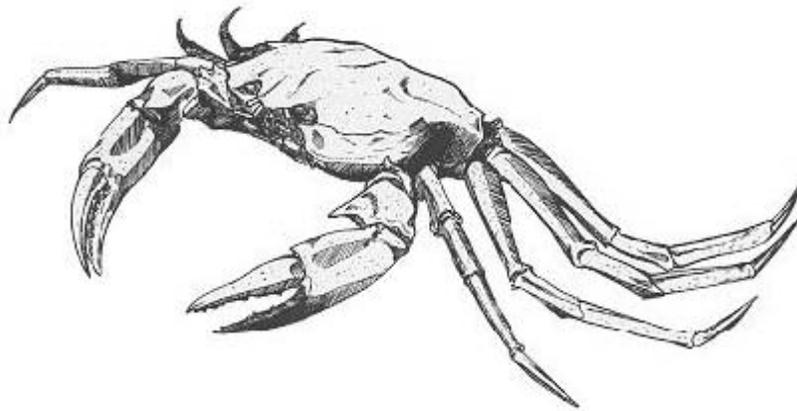


Atlantic Deep-Sea Red Crab  
Fishing Years 2017-2019 Specifications,  
Including a  
Supplemental Information Report (SIR) and  
Regulatory Flexibility Analysis (RFA)



Prepared by the New England Fishery Management Council

In consultation with:

United States Department of Commerce

National Oceanic and Atmospheric Administration

National Marine Fisheries Service

Greater Atlantic Regional Office

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## List of Acronyms

ABC	Acceptable Biological Catch
ACL	Annual Catch Limit
ALWTRP	Atlantic Large Whale Take Reduction Plan
AM	Accountability Measure
APA	Administrative Procedures Act
BRP	Biological Reference Point
CEQ	Council on Environmental Quality
CZMA	Coastal Zone Management Act
DAS	Days-at-Sea
DCAC	Depletion-Corrected Average Catch
DFO	Department of Fisheries and Oceans Canada
DPS	Distinct Population Segment
DPSWG	Data Poor Stocks Working Group
EA	Environmental Assessment
EEZ	Exclusive Economic Zone
EFH	Essential Fish Habitat
ESA	Endangered Species Act of 1973
FMP	Fishery Management Plan
FY	Fishing Year
GARFO	Greater Atlantic Regional Fisheries Office
IRFA	Initial Regulatory Flexibility Analysis
IQA	Information Quality Act
LCMA	Lobster Conservation Management Area
LPUE	Landings per Unit Effort
MMPA	Marine Mammal Protection Act
MSY	Maximum Sustainable Yield
NEFMC	New England Fishery Management Council
NEFSC	Northeast Fisheries Science Center
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
OHA2	Omnibus Habitat Amendment 2
OFL	Overfishing Limit
OY	Optimum Yield
PDT	Plan Development Team
PRA	Paperwork Reduction Act
RFA	Regulatory Flexibility Act
RIR	Regulatory Impact Review
SAFE	Stock Assessment and Fishery Evaluation
SBA	Small Business Administration
SIR	Supplemental Information Report
SSC	Science and Statistical Committee
TAC	Total Allowable Catch
TAL	Total Allowable Landings
VTR	Vessel Trip Reports

## Executive Summary

The proposed action, as described in Section 3.0, would establish specifications for the 2017-2019 fishing years (FY) for the Atlantic deep-sea red crab fishery. The action is needed to put new specifications in place for the start of FY 2017, on March 1, 2017. Under this action the New England Fishery Management Council (Council) is proposing a total allowable landings (TAL) limit for the red crab fleet that is the same as the level currently in effect under the FY 2014-2016 specifications and analyzed in Amendment 3 to the Atlantic Deep-Sea Red Crab Fishery Management Plan. The Council based its decision on the results of updated red crab fishery-dependent data, the most recent peer-reviewed assessment of the red crab resource carried out by the Data Poor Stocks Working Group in 2009, and recommendations from the Council's Science and Statistical Committee. The Council believes the TAL and discards are safely below an undetermined overfishing threshold and adequately accounts for scientific uncertainty. The Council has also determined that the Amendment 3 analyses remain valid for this action (NEFMC 2011a). A review of new information and circumstances (Section 5.0) did not change the conclusions or impacts described in Amendment 3.

The proposed action is summarized in Table Executive Summary (ES)-1.

**Table ES-1.** Red crab specifications for fishing years 2017-2019

	Proposed Action
Maximum Sustainable Yield (MSY)	Undetermined
Overfishing Limit (OFL)	Undetermined
Optimum Yield (OY)	Undetermined
Acceptable Biological Catch (ABC)	1,775 mt
Annual Catch Limit (ACL)	1,775 mt
Total Allowable Landings (TAL)	1,775 mt

## **1.0 INTRODUCTION**

The purpose of this action is to establish specifications for the Atlantic deep-sea red crab fishery for fishing years (FY) 2017-2019.

The action is needed to put new specifications in place for the start of FY 2017, on March 1, 2017. Under this action the New England Fishery Management Council (Council or NEFMC) is proposing a total allowable landings (TAL) limit for the red crab fleet that is the same as the level currently in effect under the FY 2014-2016 specifications and analyzed in Amendment 3 to the Atlantic Deep-Sea Red Crab Fishery Management Plan (Red Crab FMP).

## **2.0 PURPOSE OF THE SUPPLEMENTAL INFORMATION REPORT**

This Supplemental Information Report (SIR) is used to determine whether the proposed action will require the Council and the National Marine Fisheries Service (NMFS) to supplement the Environmental Assessment (EA) that was prepared for Amendment 3 to the Red Crab FMP in 2011 as required under the National Environmental Policy Act (NEPA).

In making a determination on the need for additional analysis under NEPA, NMFS has considered and has been guided by the Council on Environmental Quality (CEQ) NEPA regulations and applicable case law. The CEQ regulations state “[a]gencies shall prepare supplements to either draft or final environmental impact statements if: (i) the agency makes *substantial* changes in the proposed action that are relevant to environmental concerns; or (ii) there are *significant* new circumstances or information relevant to environmental concerns *and* bearing on the proposed action or its impacts.” 40 C.F.R. § 1502.09(c) (emphasis added). In addition, NMFS has considered CEQ’s “significance” criteria at 40 C.F.R. § 1508.27 to determine whether any new circumstances or information are “significant,” thereby requiring supplementation of the Amendment 3 EA.

This document describes the proposed action and compares it to the alternatives and analyses presented in the 2011 EA. It then considers whether there are any significant new circumstances or information that are relevant to environmental concerns and have a bearing on the proposed action or its impacts. For our consideration of new circumstances and information, we have consulted, among other sources, the Council’s Atlantic Deep-Sea Red Crab Plan Development Team (PDT), the Greater Atlantic Regional Fisheries Office’s (GARFO) Protected Resources and Sustainable Fisheries divisions, GARFO’s Environmental Analyses and NEPA Program, and Council habitat staff.

## **3.0 PROPOSED ACTION**

The proposed action is to establish specifications for the Atlantic deep-sea red crab fishery for FY 2017-2019.

Recent landings, landings per unit of effort (LPUE), port samples, discard information, and economic data suggest biological and economic stability in the size of the red crab stock since Amendment 3 was implemented in 2011. After reviewing this information presented by the PDT, the Council’s Science and Statistical Committee (SSC) recommended setting the Acceptable Biological Catch (ABC) equal to the long-term (1974-2008) average landings of the directed red crab fishery (1,775 mt) for FY 2017-2019 (Table 1). Maximum Sustainable Yield (MSY) and the

Overfishing Limit (OFL) remain unknown. These proposed specifications do not constitute a change from the FY 2014-2016 specifications.

**Table 1. Proposed red crab specifications for FY 2017-2019**

	Proposed Action
Maximum Sustainable Yield (MSY)	Undetermined
Overfishing Limit (OFL)	Undetermined
Optimum Yield (OY)	Undetermined
Acceptable Biological Catch (ABC)	1,775 mt
Annual Catch Limit (ACL)	1,775 mt
Total Allowable Landings (TAL)	1,775 mt

The Red Crab PDT reviewed all of the relevant data since the implementation of Amendment 3. This new information is summarized below in Section 5.0.

#### **4.0 BACKGROUND**

Deep-sea red crab is a data poor stock. The Data Poor Stocks Working Group (DPSWG) last assessed red crab in 2009, and there have been no updates to the assessment method or the specifications methods. The ABC, Annual Catch Limit (ACL), and TAL limit for FY 2014-2016 and FY 2011-2013 were based on average long-term (1974-2008) landings of the directed red crab fishery.

##### **4.1 Original Atlantic Deep-Sea Red Crab Fishery Management Plan and Modifications**

The Red Crab FMP was implemented in 2002. It originally included a target total allowable catch (TAC) limit, limited access permits and trip limits based on historical participation, days-at-sea (DAS) allocations for the limited access fleet, a prohibition on retaining more than 100 lbs of female red crab, as well as gear requirements and other restrictions. Framework Adjustment 1 to the Red Crab FMP modified the annual review process to allow specifications to be set for up to three years. Amendment 1 incorporated the Standardized Bycatch Reporting Methodology, and Amendment 2 is reserved for the Council’s Essential Fish Habitat Omnibus Amendment 2 (OHA2), which was near completion at the time this document was prepared. Amendment 3 to the Red Crab FMP ensured consistency with the ACL and accountability measure (AM) requirements of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), removed the trip limit restriction, and replaced the target TAC and DAS allocation with a TAL. Amendment 4 to the Red Crab FMP incorporated the revised Standardized Bycatch Reporting Methodology.

The specifications in Amendment 3 to the Red Crab FMP had positive or negligible impacts on the red crab stock, bycatch, protected resources, and habitat because the landings level was the same as the landings limit that was in place for the 2010 FY specifications (NEFMC, 2011). The long-term average landings were determined to be sustainable by the DPSWG and were recommended as the ABC for red crab by the SSC. Amendment 3 also included measures to eliminate DAS, eliminate trip limits, and modify the trap limit regulatory language. The

amendment had positive impacts on human communities by maintaining a sustainable red crab resource and by making it possible for the red crab fleet to increase efficiency and safety by not being pressured to maximize the productivity of each DAS.

#### **4.2 Data-Poor Stocks Working Group and Fishing Years 2011-2013 Specifications**

The management unit specified in the Red Crab FMP includes red crab (*Chaceon quinquegens*) in U.S. waters of the Atlantic Ocean from 35° 15.3' N. lat. (the approximate latitude of Cape Hatteras Light, North Carolina) northward to the U.S./Canada border. The most recent peer-reviewed scientific advice applicable to the red crab fishery was produced by the DPSWG and the associated Peer Review Panel, which met in December 2008 and issued its report on January 20, 2009. The DPSWG was tasked with recommending Biological Reference Points (BRPs), measurable BRPs and MSY proxies for several species, as well as advising on the scientific uncertainty and risks for the SSC to consider when recommending catch limits.

The methods used by the DPSWG are explained in a working paper that is available at <http://www.nefsc.noaa.gov/publications/crd/crd0902>. The DPSWG produced estimates of sustainable yield that approximated recent and long-term average annual landings, leading the DPSWG to “recommend a catch limit that mimics both recent and long term mean annual landings.” The Council’s Red Crab PDT further analyzed the methodology employed by the DPSWG and determined that estimates of sustainable yield from the Depletion Corrected Average Catch (DCAC) model are likely to be less than MSY. The SSC, therefore, concluded “the information available for red crab is insufficient to estimate MSY or OFL.” In lieu of an estimate of OFL, the SSC recommended an ABC based on the long-term average landings of male red crab. The SSC noted that the two survey estimates of abundance and their variance do not provide evidence of significant depletion of currently market-sized males from 1974 to 2003-2005. Further, the SSC determined that there is insufficient data to determine the historic level of discards and discard mortality that accompanied the historic landings that were used to establish the ABC. However, the SSC concluded that the historical landings of male red crab and historical discarding practices appear to be sustainable, and that an interim ABC based on long-term average landings (1,775 mt) is safely below an undetermined overfishing threshold and adequately accounts for scientific uncertainty. The TAL for FY 2011-2013 was set at 1,775 mt in Amendment 3 (76 FR 60379; September 29, 2011). All of the specification values assume a male-only directed fishery; regulations prohibit possession of female crabs.

#### **4.3 Fishing Years 2014-2016 Specifications**

In 2013, the Red Crab PDT analyzed updated landings, LPUE, port samples, discard information, and economic data in the process of setting the specifications for FY 2014-2016. The PDT analysis determined there was no significant change in the size of the red crab stock since Amendment 3 was implemented in 2011. Based on this analysis, the SSC recommended the status quo ABC for FY 2014-2016 of 1,775 mt for the directed fishery on August 21, 2013.

### **5.0 NEW INFORMATION AND CIRCUMSTANCES**

The proposed action analyzed in this document is the status quo TAL of 1,775 mt that has been in place since FY 2010, and thus does not constitute a change from the proposed action in

Amendment 3 or the FY 2014-2016 specifications. This section considers sources of new information and circumstances directly related to the proposed action for the following components: the red crab fishery, incidental landings and bycatch of red crab in other fisheries, social and economic, the Canadian red crab fishery, habitat, and protected resources.

## **5.1 Red Crab Fishery**

### ***5.1.1 Updated Red Crab Landings, LPUE and Port Samples***

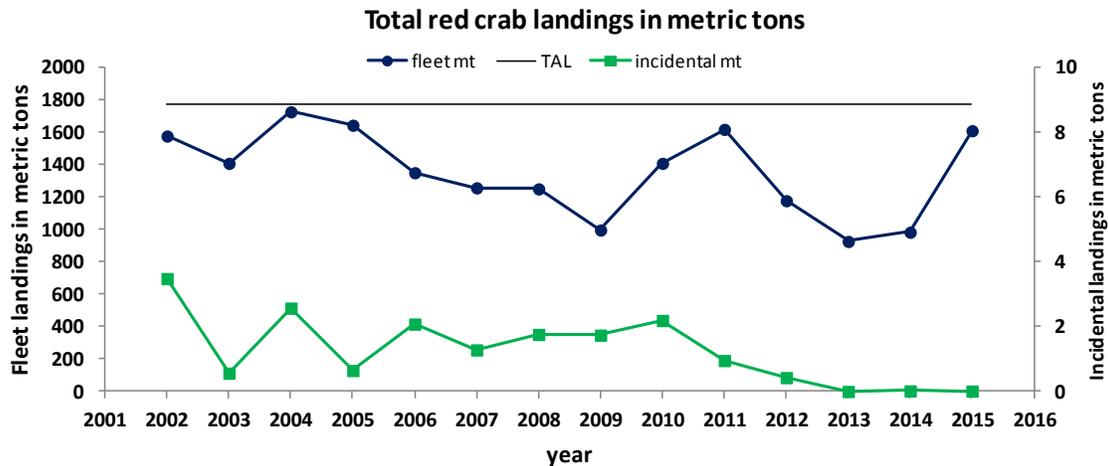
The Red Crab PDT reviewed red crab fishery information compiled by the Northeast Fisheries Science Center (NEFSC), including updated landings, LPUE and port sampling data. The updated information indicated landings have increased since 2013, and in 2015 the landings were among the highest since implementation of the Red Crab FMP in 2002 (Figure 1). Incidental landings by vessels not targeting red crabs were nearly zero. Based on Vessel Trip Report (VTR)-reported statistical area fished, landings were assigned to one of three fishing regions: Georges Bank/southern New England, New Jersey, and Delmarva (Figure 2). Annual landings by region are one measure of the spatial extent of the fishery over the year. Recent data indicate the fishery has been operating nearly equally in all regions in recent years compared with early years in the fishery when most of the landings were concentrated in the Georges Bank/southern New England region (Figure 3).

Average LPUE, estimated using VTR-reported haul and gear data, has fluctuated between 15 to 25 pounds per trap hauled since 2002 and has shown a generally increasing trend since 2007 (Figure 4). LPUE by region is similar for regions one and two but more variable in region three, perhaps due to different market conditions, and therefore trip types, in that region (Figure 5). There are some caveats with LPUE estimates due to variability in reports; however, the method used to estimate LPUE is consistent over all years and has been used since 2006. Landings per day absent are also calculated and are very similar in trend to landings per trap. However, since landings per day absent have varying steam times to account for, they are not as true an indicator of resource condition as landings per trap.

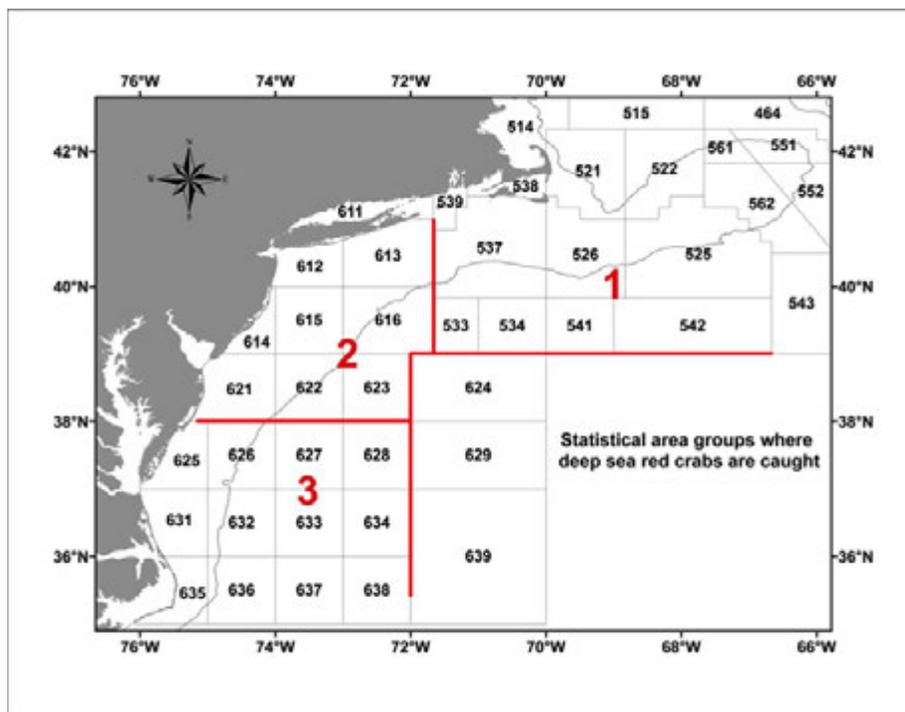
Port sampling data indicate that from 2013 to 2015 the mean size of landed males has increased, likely due to market demand (Figure 6). When port sampled length frequencies are plotted by year and region it is clear larger crabs are being targeted by the fishery in recent years (Figure 7).

The red crab fishery is a small, market-driven fishery, and landings are very closely tied to market demand. When landings are low, it is often because the demand for red crabs has decreased and the fleet has targeted other more profitable species.

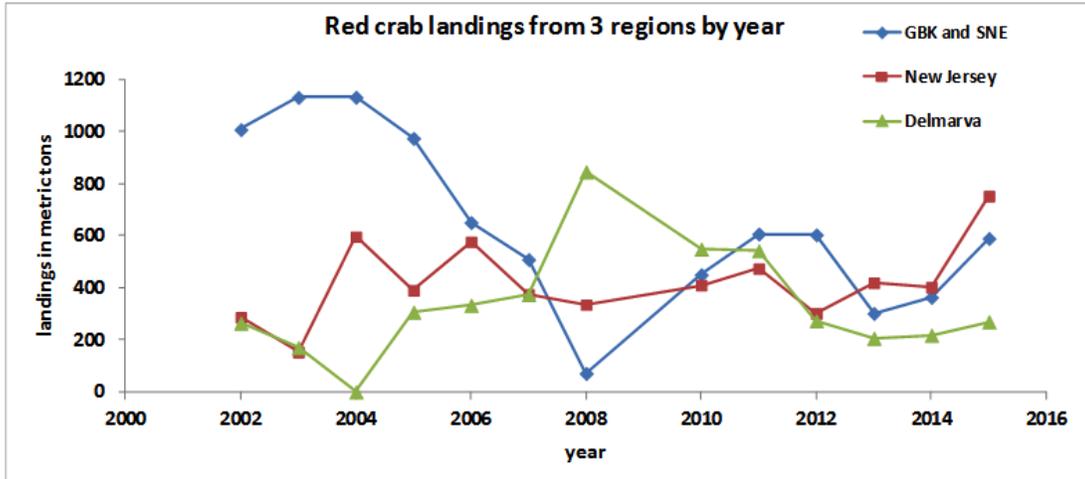
Based on the landings, LPUE, and port sampling information from recent fishing years, there is no evidence of a change in the overall red crab stock size. The fishery-dependent data available to us do not allow for a measure of recruitment, however, so there is no way to estimate this variable.



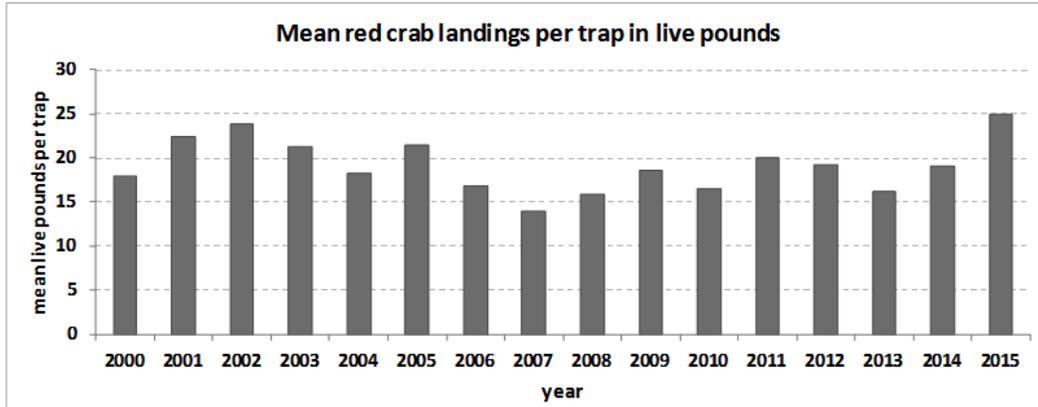
**Figure 1. Red crab landings 2002-2015.** The black line represents the TAL of 1,775 mt, the blue line is red crab permitted vessel landings, and the green line is incidental landings from other fisheries. The scale for the incidental landings is on the right. Landings data come from VTRs. There is a negligible difference between dealer and VTR landings in recent years.



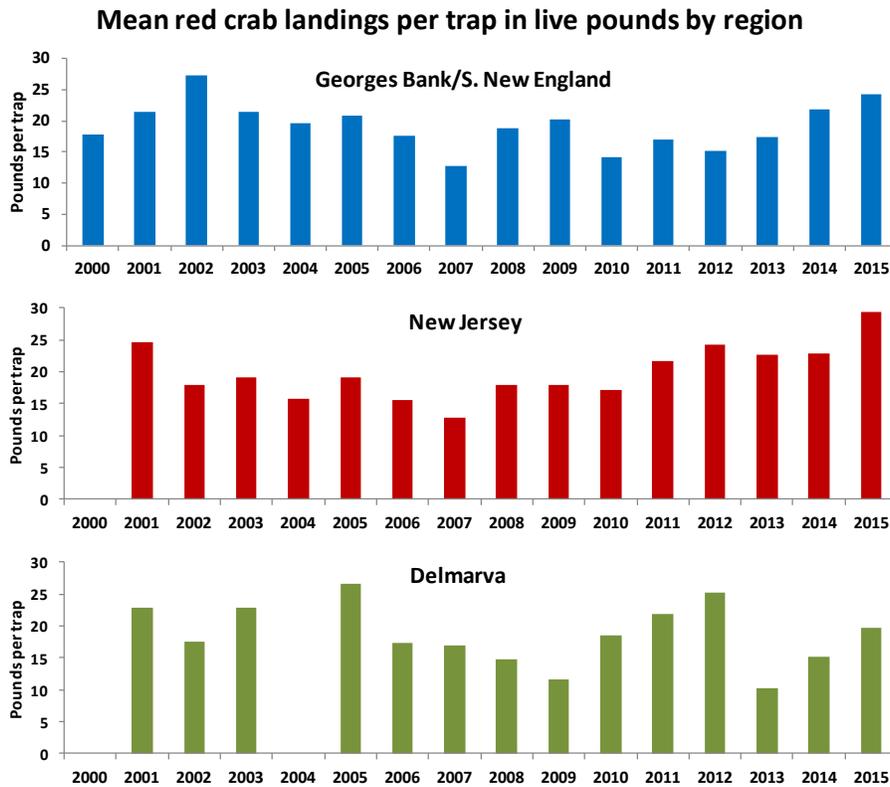
**Figure 2. Statistical area groups used to determine the region where red crabs are caught.** They cover roughly the Georges Bank/southern New England (1), New Jersey (2) and Delmarva (3) areas.



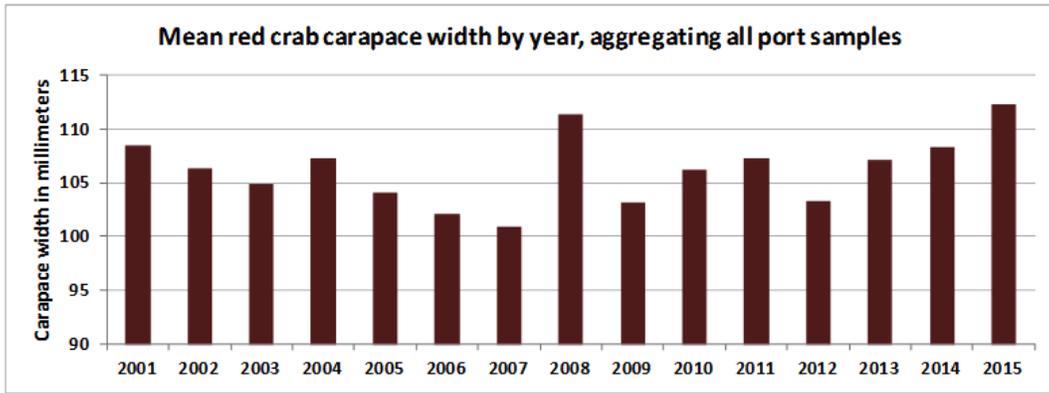
**Figure 3. Red crab landings 2002-2015 from each of three regions: Georges Bank/southern New England (1), New Jersey (2) and Delmarva (3).**



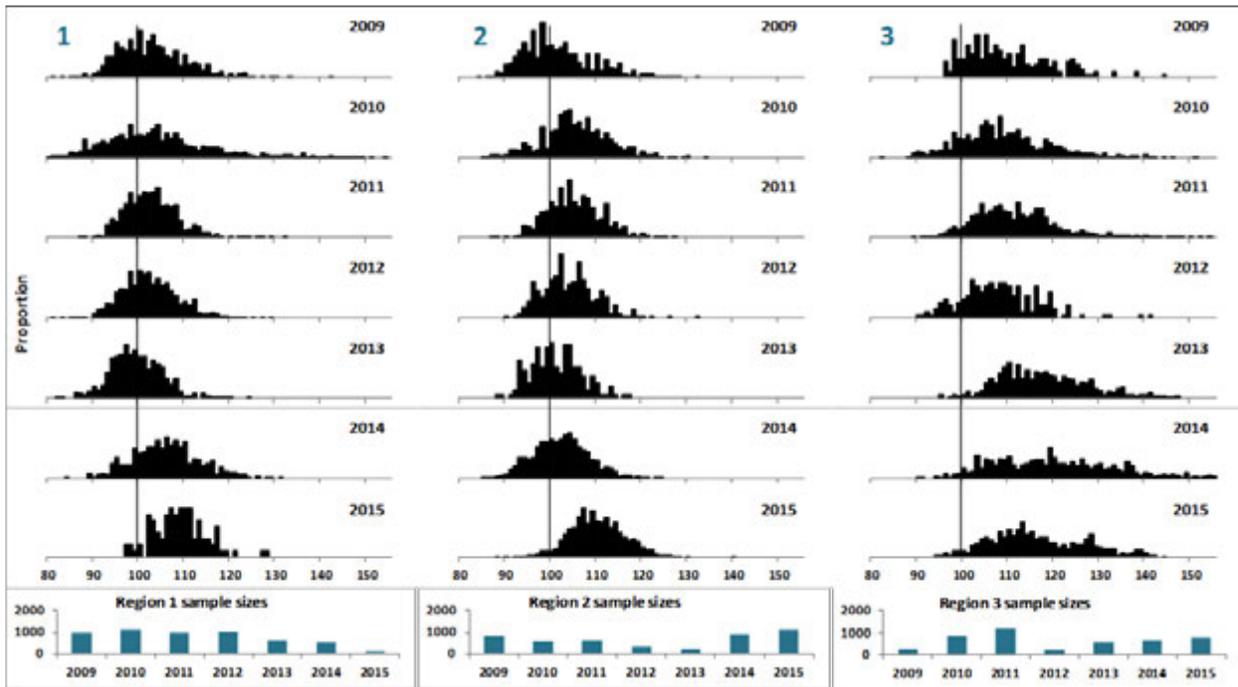
**Figure 4. Red crab LPUE in live pounds caught per trap hauled for all trips, estimated using VTR data following methods developed by A. Applegate in 2006.**



**Figure 5. Red crab LPUE in live pounds caught per trap hauled for all trips by region, estimated using VTR data following methods developed by A. Applegate in 2006.**



**Figure 6. Mean red crab port-sampled carapace widths by year.** The samples are aggregated by time of year and sex (some females were landed in 2010 and 2011 but the differences made when segregated by sex were minimal).



**Figure 7. Length frequencies of port-sampled red crabs 2009-2015,** divided into three fishing regions. Each column represents a region, and the bottom plots show the number of crabs measured per year for the region.

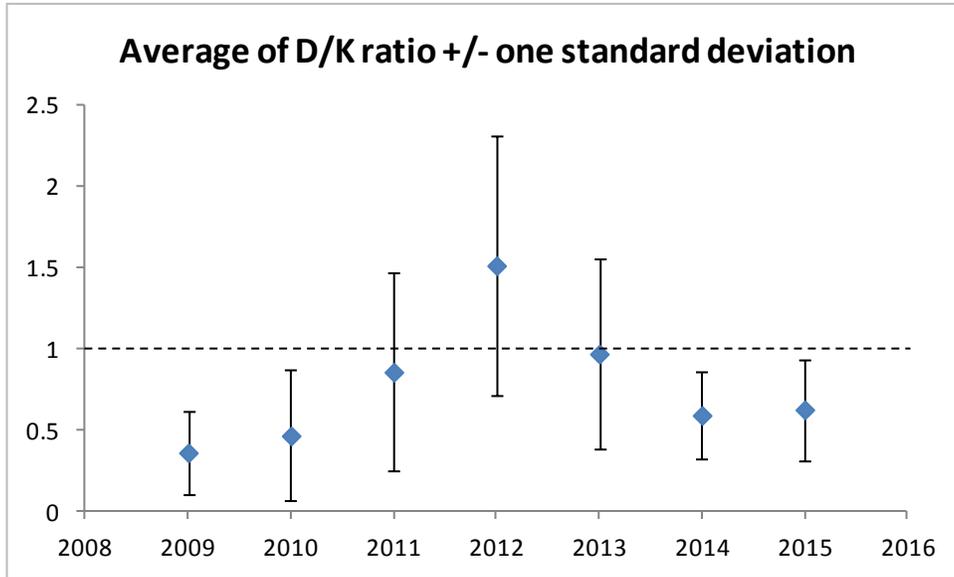
### 5.1.2 Red Crab Discards

The PDT reviewed VTR-reported red crab discard rates by the red crab fishery (culled crabs) and noted that there is a high level of uncertainty and variability in the amount of reported discards. There is little discard information from at-sea observers (there were five observed trips during 2007 and 2008 and none since then) and it is also highly variable. Variability is caused by culling for preferred market sizes, the depth and location of the gear, the time of year, and amount of attention given to discard estimation as the traps are handled on deck. In 2013 the SSC concluded that the available monitoring data on discards and research on discard mortality were inadequate to reliably estimate dead discards and the best scientific information available for deriving ABC was the time series of landings. Since this time, there have been no updates to calculating discard mortality rates or new research on discard mortality.

VTR reporting of discards has increased over time to 100 percent of red crab fleet trips reporting estimated red crab discard weights in 2014 and 2015 (Table 2), but not all estimates are reliable. The annual mean estimated discarded-to-kept ratios vary from 0.24 to 1.51. However, both the high and low extremes (20 trips) were removed from the 2002-2015 aggregated data before these calculations were made. Figure 8 shows the mean discard to kept ratio for 2009 through 2015, from a period when the number of trips reporting discards was over 50 percent. Discards likely vary between fishing regions and vessels. Theoretically, cull rates should have increased in 2014 and 2015 due to the fishery selecting for larger crabs. However, that is not reflected in the data, which underscores the uncertainty inherent in the VTR-reported discards.

**Table 2. The number of directed red crab trips and the percentage where the VTR log included both red crab landings and an estimate of red crab discards (2002-2015).**

	Number of red crab trips	Percentage of red crab trips reporting discards
2002	58	28
2003	58	28
2004	71	56
2005	63	44
2006	62	50
2007	53	34
2008	55	25
2009	43	56
2010	54	94
2011	55	89
2012	47	98
2013	44	89
2014	42	100
2015	57	100



**Figure 8. Mean annual VTR-reported discard weights as a fraction of VTR-reported landed weights (2009-2015). The blue line represents the one-to-one discard to kept ratio.**

## 5.2 Social and Economic Description of the Red Crab Fishery

Section 6.3 of Amendment 3 to the FMP contains a detailed economic description of the red crab fishery, including a community profile of New Bedford, MA, where the majority of red crab vessels are docked and crabs are regularly landed and processed. New business expansions have occurred in the Mid-Atlantic, with landings occurring in Newport News, Hampton, and Virginia Beach, VA. This small but growing percentage of crab is landed in Virginia and either trucked to the New Bedford facility for processing or sold as whole live crab to various wharf restaurants and Asian markets in the Virginia area. Updated information related to prices and revenue is included in Table 3 and Figure 9.

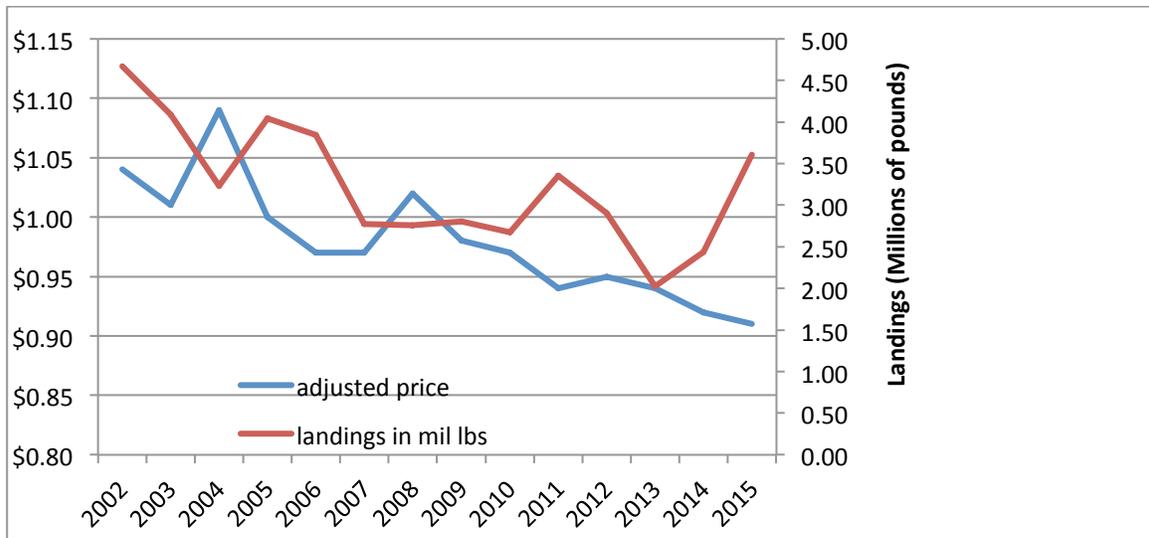
**Table 3. Red crab landings, estimated revenue, price per pound, and inflation adjusted price for FY 2002-2015.**

Fishing Year	Landings (live lbs) *	Landings (MT)	Revenue*	Nominal Price/lb	Inflation Adjusted**
2002	4,673,214	2,120	\$4,004,752	\$0.86	\$1.04
2003	4,091,659	1,856	\$3,491,683	\$0.85	\$1.01
2004	3,233,508	1,467	\$3,002,185	\$0.93	\$1.09
2005	4,046,364	1,835	\$3,633,550	\$0.90	\$1.00
2006	3,841,577	1,743	\$3,474,953	\$0.90	\$0.97
2007	2,773,721	1,258	\$2,564,081	\$0.92	\$0.97
2008	2,762,239	1,253	\$2,876,510	\$1.04	\$1.02
2009	2,804,735	1,272	\$2,685,393	\$0.96	\$0.98
2010	2,677,184	1,214	\$2,606,184	\$0.97	\$0.97
2011	3,358,517	1,523	\$3,262,627	\$0.97	\$0.94
2012	2,901,252	1,316	\$2,900,394	\$1.00	\$0.95
2013	2,024,420	918	\$2,024,420	\$1.00	\$0.94
2014	2,440,974	1,107	\$2,440,974	\$1.00	\$0.92
2015	3,609,774	1,637	\$3,586,613	\$0.99	\$0.91
Average	3,231,367	1,466	\$3,039,594	\$0.95	\$0.98

Notes:

\*Landings and revenue data are from the commercial dealer database, CFDERS. In earlier years, landings data from VTR and CFDRS did not agree, though these discrepancies have been minimized in recent years.

\*\*The Consumer Price Index was used to convert nominal dollars to 2010 equivalent dollars is from the Bureau of Economic Analysis Table 1.1.9 ([www.bea.gov/iTable/iTable.cfm?ReqID=9&step=1](http://www.bea.gov/iTable/iTable.cfm?ReqID=9&step=1)).



**Figure 9. Red Crab adjusted price per pound and total landings (FY 2002-2015).** Inflation adjusted red crab price per pound (blue line) plotted with total landings in millions of pounds (red line) using data from CFDRS.

### 5.3 Non-Target and Bycatch Species

#### 5.3.1 Incidental Landings and Bycatch of Red Crab in Other Fisheries

The incidental catch permit landings in the years leading up to 2010 were examined in Section 6.1.2.1 of Amendment 3 to the Red Crab FMP to determine whether they were significant in relation to the TAL. At that time incidental landings were less than 1% of the TAL. Analysis of vessels with incidental landing permits in the last six fishing years (FY 2010-2015) since the Amendment 3 analysis in 2011 showed consistent landings with the previous six years. The proposed TAL is not expected to change incidental landings.

Bycatch of red crab in other fisheries is detailed in Section 6.1.2.2 of Amendment 3 to the Red Crab FMP. Adult red crab inhabit water depths of 400-900 meters on the continental slope, and are found to 2000 meters on the seamounts. This depth range is beyond that in which most fishing activity takes place, and therefore bycatch in other fisheries is not a major concern. In recent years, discards of red crabs by other fisheries have been estimated annually using the NEFSC Standardized Bycatch Reporting Methodology, which is based on discard data gathered by at-sea observers from a variety of fleets (Wigley et al. 2016, 2015, 2014, 2013). For red crabs in their deep-water habitat, these estimates are also highly variable from year-to-year. The results from 2012 through 2015 suggest otter trawl fleets are responsible for most red crab discards in both the New England and mid-Atlantic regions, and that up to 334 mt of red crab could be discarded each year by other fisheries (Table 4). The proposed TAL is not expected to change bycatch or discarding of red crab in other fisheries.

**Table 4. Estimated red crab discards by other fisheries by year, in metric tons.** Data are from the 2013 through 2016 “Discard estimation, precision and sample size analyses for 14 federally managed species groups in the waters off the northeastern United States” reports (Wigley et al. 2016, 2015, 2014, 2013).

Gear	July 2011 - June 2012	July 2012 - June 2013	July 2013 - June 2014	July 2014 - June 2015
Mid-Atlantic small-mesh otter trawl	47	222	3	.0002
Mid-Atlantic large-mesh otter trawl		3	2	4
New England large-mesh otter trawl	94	107	37	25
Mid-Atlantic shrimp trawl				77
New England large-mesh gillnet	0.2	0.08	0.08	0.04
Scallop dredge	0.05	0.7	0.01	0.09
Lobster pots and traps		0.6	4	
Estimated red crab discards from other fleets as a percent of red crab fleet landings plus discards from other fleets	10	21	4	8
Estimated total discards by other fleets	141	334	46	108

### ***5.3.2 Bycatch of Other Species in the Red Crab Fishery***

Section 6.1.2.3 of Amendment 3 to the Red Crab FMP noted that there is very little bycatch of other species in the red crab fishery, and in general, the red crab fishery has little interaction with non-target species. One of these rare bycatch species is Jonah crab, which is now managed by an Interstate FMP that was implemented in 2015. Addendum 1 to the Jonah Crab FMP, approved in May 2016, establishes a bycatch limit of 1,000 crabs per trip for non-trap gear (e.g., otter trawls, gillnets) and non-lobster trap gear (e.g., fish, crab, and whelk pots) effective January 1, 2017.<sup>1</sup> While minimal, another bycatch species is lobster, which is managed by the American Lobster FMP. In 2012, the Atlantic States Marine Fisheries Commission approved Addendum XVIII to the Interstate American Lobster FMP, which included gear reductions in Lobster Conservation Management Areas (LCMA) 2 and 3.<sup>2</sup> There is overlap between the red crab Region 1 (Georges Bank/Southern New England) and LCMAs 2 and 3. Trap reductions were implemented at the start of FY 2016 (May 1, 2016). LCMA 2 had an initial trap reduction of 25%, and will undergo additional 5% annual reductions until 2021. LCMA 3 is currently going through a 25% reduction

<sup>1</sup> [http://www.asmfc.org/uploads/file/57336932JonahCrabAddendumI\\_May2016.pdf](http://www.asmfc.org/uploads/file/57336932JonahCrabAddendumI_May2016.pdf)

<sup>2</sup> <http://www.asmfc.org/uploads/file/amLobsterAddendumXVIII.pdf>

over a 5-year period (i.e., 5% reduction each year for five years). The first reduction took place in 2016. The proposed TAL will not change the bycatch of other species since there will be no increase in effort, change in gear, or change in distribution of fishing effort.

### **5.3.3 Canadian Red Crab Fishery**

Section 6.1.3 of Amendment 3 to the Red Crab FMP indicates that the Canadian red crab fishery was not active in the years leading up to that 2011 EA. However, there has been fishing activity in recent years. In 2014, four of the five red crab licenses were transferred to new owners. The quota for these licenses had been managed as an Enterprise Allocation. The new license holder fished red crab in 2015 and is currently fishing in 2016. The remaining fifth license has not been fished in many years although quota is allocated to the license annually. The TAC remains at 300 mt annually with 80% allocated to the Enterprise Allocation and 20% allocated to the remaining license (M. Butler, Fisheries and Oceans Canada, personal communication, August 25, 2016). Landings data were not available at the time of this draft.

Fisheries and Oceans (DFO) Canada has implemented conservation measures to protect coral and sponge habitats in their waters. In September 2016, DFO designated coral management zones that include regulations for the Canadian red crab fishery. The Corsair and Georges Canyons Conservation Area covers 9,106 square kilometers (extending 300 meters to the EEZ), and is adjacent to the broad zones being analyzed in the NEFMC's Deep-Sea Coral Amendment (see description in Section 5.4.2). Surveys in this Conservation Area document a variety of corals and other vulnerable deep-sea species. All bottom contact fishing is restricted in this Conservation Area, with the exception of two small 'limited fishing' zones located next to Georges Canyon which will allow red crab fishing. The Jordan Basin Conservation Area covers 49 square miles in the eastern portion of Jordan Basin. It provides protection for two prominent bedrock ridges, and contains high densities of seacorn corals and other sensitive filter feeding invertebrate communities, as well as providing habitat for other species of finfish and shellfish. This Conservation Area is closed to all bottom-contact fishing activity, including red crab fishing.<sup>3</sup> It has similar physical and biological features as the coral zones the NEFMC is considering in the western and central parts of Jordan Basin.

## **5.4 Habitat Actions Relevant to the Red Crab Resource**

### **5.4.1 Essential Fish Habitat**

Section 3.7.4 of the Red Crab FMP and Section 6.2.1.1 of Amendment 3 to the Red Crab FMP describe the Essential Fish Habitat (EFH) for red crab. The EFH designations for red crab eggs, larvae, juveniles, and adults were revised in OHA2, approved by the Council in April 2015. The proposed EFH designations (Table 5) are based on a re-evaluation of published size and sex-specific data collected during a 1974 NMFS deep-water trawl survey and on observations of red crabs on two seamounts during remotely operated vehicle surveys.

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<sup>3</sup> <http://www.dfo-mpo.gc.ca/oceans/ceccsr-cerceef/measures-mesures-eng.html>

**Table 5. Summary of red crab EFH designations as updated via OHA2**

<b>Lifestage</b>	<b>Text description</b>	<b>Notes</b>
Eggs	Red crab eggs are brooded attached to the underside of female crabs until they hatch into larvae and are released into the water column. The EFH designation for red crab eggs is the same as the known distribution of egg-bearing females (320 – 640 meters) along the outer continental shelf and slope	Depth range where catches of female crabs were higher
Larvae	Near-surface water habitats on the outer continental shelf and slope and over Bear and Retriever seamounts across the entire depth range identified for the species (320 - 1300 meters on the slope and down to 2000 meters on the seamounts)	Depth range where the juveniles and adults were most commonly caught
Juveniles	Bottom habitats with unconsolidated and consolidated silt-clay sediments at depths of 320 - 1300 meters in submarine canyons and on the continental slope, and to a maximum depth of 2000 meters on Bear and Retriever seamounts	Depth range where juveniles were most common
Adults	Bottom habitats with unconsolidated and consolidated silt-clay sediments at depths of 320 - 900 meters in submarine canyons and on the continental slope, and to a maximum depth of 2000 meters on Bear and Retriever seamounts. Red crabs generally spawn on the slope at depths of 320 – 640 meters.	Depth range where adults were most common

OHA2 includes a detailed assessment of fishing impacts to habitat by gear type. This vulnerability assessment (NEFMC 2011b) concluded that the impacts of trap gear on seafloor habitats are generally minimal and temporary, especially as compared to mobile bottom-tending gears, and are likely similar to other fixed gears such as longlines and gillnets. It should be noted that the fixed gear impact assessments, although peer-reviewed, were relatively data poor and informed in large part by professional judgment. The assessment also estimated that federally-reported trap gear fishing is responsible for only 1% of the overall bottom contact associated with bottom tending gears region-wide. The red crab trap fishery accounts for less than 1% of VTR-reported trips and less than 2% of trap days absent during the period 2008-2015.

Deep-sea habitats including those occupied by red crab can be particularly vulnerable to the effects of fishing due to the presence of cold water corals. Certain species of corals are highly susceptible to impacts from fishing gear, given their vertical relief off the seafloor and branching structure, and may take a long time to recover from damage given slow growth rates and low reproductive output. While more data are needed to fully evaluate the possible habitat impacts of the red crab fishery, based on currently available information, the fishery’s impact on seafloor habitats, including on designated EFH, appears to be minimal.

#### ***5.4.2 Deep-Sea Corals, Canyons and Seamounts***

As described above, the red crab fishery is prosecuted in relatively deep water along the entire northeast shelf edge, from eastern Georges Bank to Virginia. Within this region, the continental slope is incised by roughly forty named canyons, which are steeply sloped and have exposed hard substrates that provide suitable attachment sites for deep-sea corals. Many types of corals are vulnerable to anthropogenic impacts including fishing. Inter-canyon areas tend to be dominated by softer sediments and have different faunal associations. Red crabs are found in

canyons as well as inter-canyon areas of the slope. Seamounts, which are extinct underwater volcanoes formed along previously active subduction zones, also harbor corals and other deep-sea fauna. Four seamounts in the New England seamount chain lie within the U.S. Exclusive Economic Zone (EEZ).

In recent years, substantial scientific and policy efforts have been focused on these deep-sea habitats. The 2007 reauthorization of the Magnuson-Stevens Act grants fishery management councils discretionary authority to protect deep-sea coral habitats from the negative effects of fishing. In the northeast, the period from 2012-2015 saw significant advances in mapping and exploration of the canyons, slope, and seamounts, and deep-sea corals and various other fauna were documented using remotely operated vehicles, autonomous underwater vehicles, and towed camera systems in previously unexplored locations. All three Atlantic coast fishery management councils, in addition to numerous environmental non-governmental organizations, have active coral conservation initiatives.

The NEFMC began work on management approaches to protect deep-sea coral in 2010, and this work is ongoing. The Deep-Sea Coral Amendment includes management areas in the canyons, on the seamounts, and along the slope, as well as in the Gulf of Maine. A similar amendment by the Mid-Atlantic Fishery Management Council was passed last year and is undergoing final review by the Council and NMFS. The New England amendment covers areas from Alvin Canyon offshore Rhode Island east to the EEZ (red crab Region 1), and the Mid-Atlantic amendment covers areas west of Alvin canyon to southern Virginia (Regions 2 and 3). The red crab fishery is exempt from restrictions within the proposed Mid-Atlantic zones. There is an exemption alternative for the fishery in the New England amendment as well, but final Council action is pending. Figure 10 shows the coral management zones for both New England and the Mid-Atlantic.

In addition to council actions protecting deep-sea habitats in New England, President Obama designated the Northeast Canyons and Seamounts Marine National Monument on September 15, 2016. This is the first National Monument in the Atlantic Ocean, which was designated using the President's authority under the Antiquities Act of 1906. The Monument includes two distinct areas, one covering three canyons (Oceanographer, Gilbert, and Lydonia) and the other covering four seamounts (Bear, Physalia, Retriever, and Mytilus). Figure 11 provides a map of the Monument and coordinates. This area overlaps with Region 1 of the red crab fishery. While the red crab and American lobster fishery may continue fishing within the Monument for up to seven years, all other commercial fisheries will be prohibited after a 60-day transition period.

Figure 10. Coral Management Zones in New England and the Mid-Atlantic

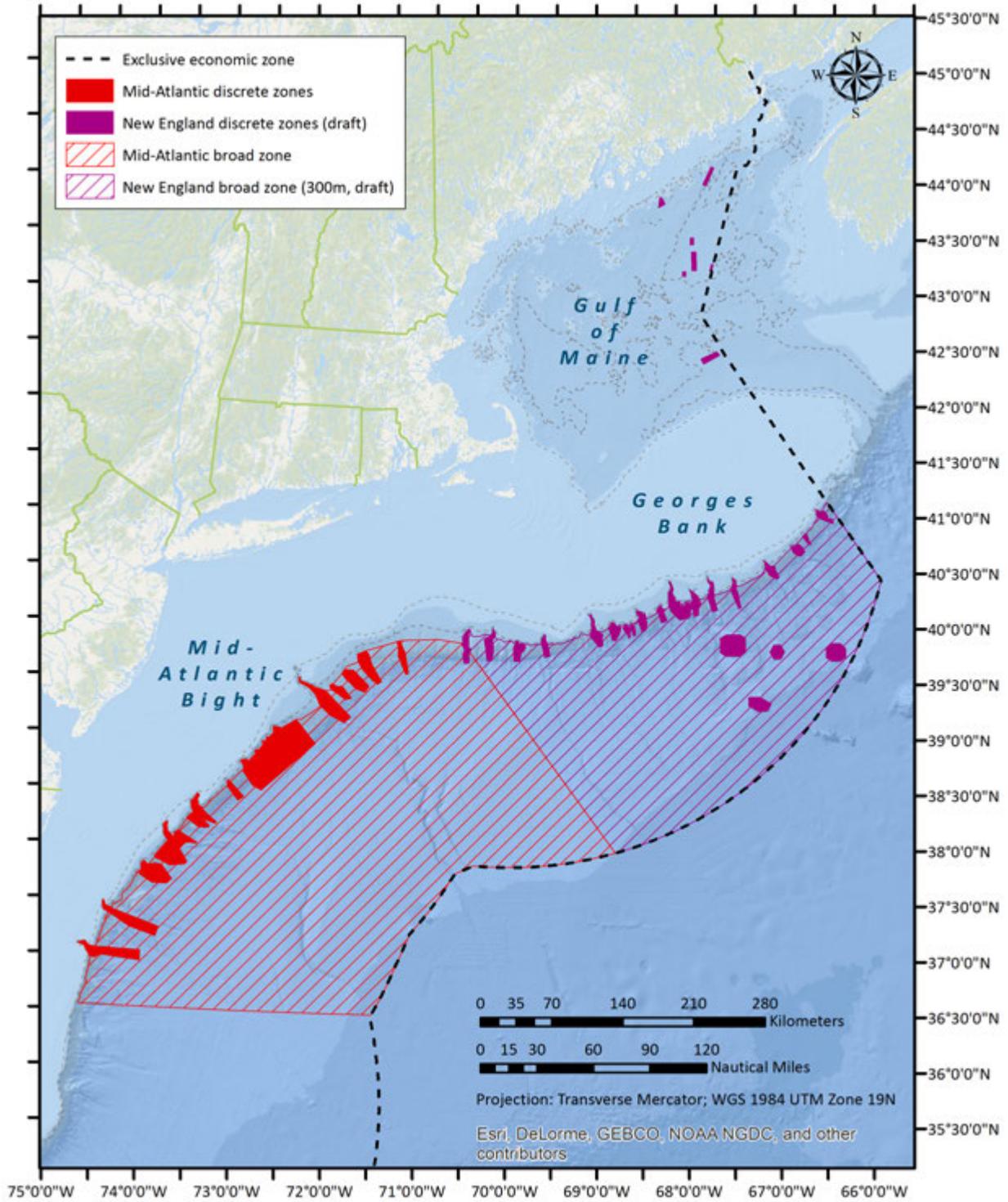
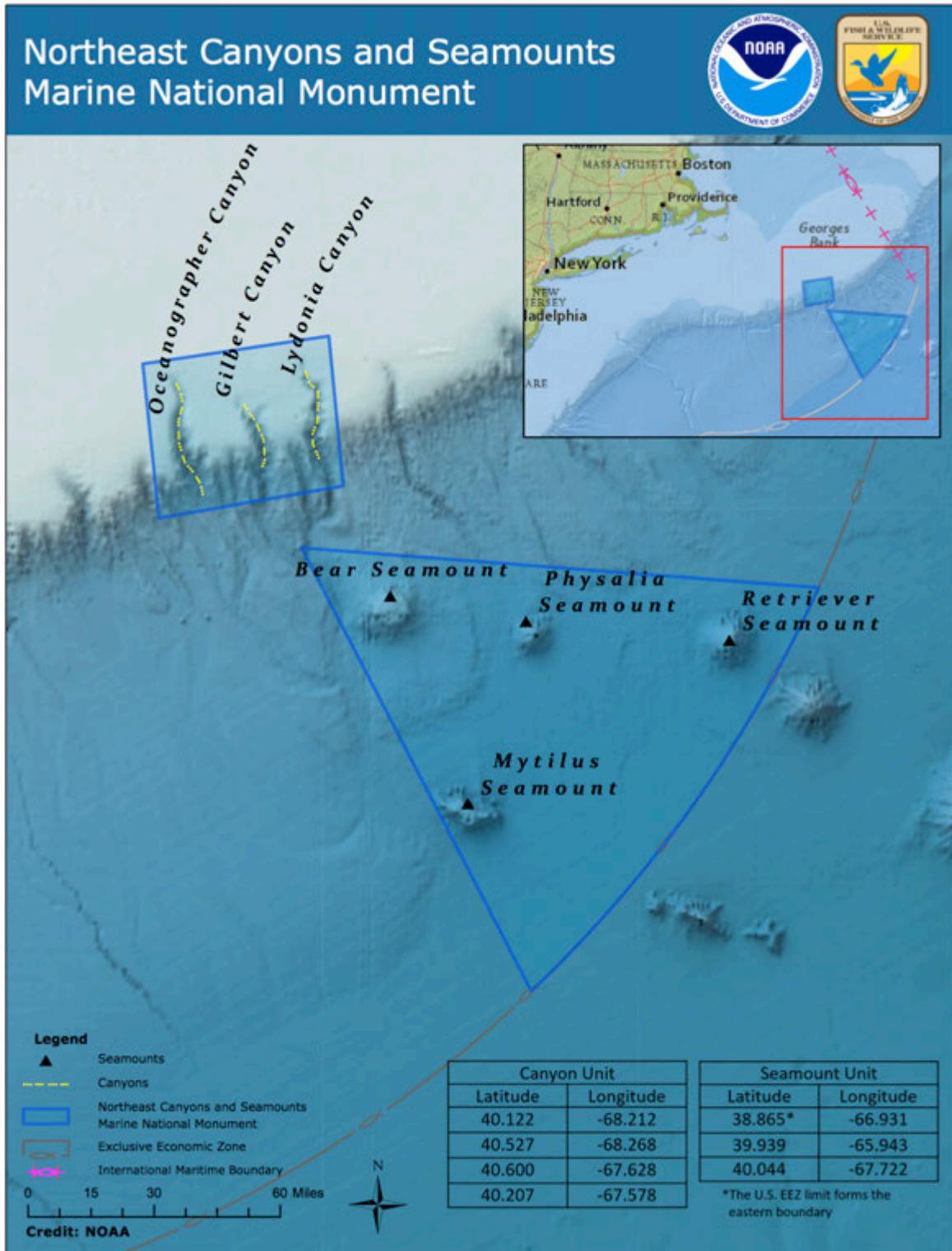


Figure 11. Northeast Canyons and Seamounts National Monument



## 5.5 Protected Resources

Section 8.7 of the Red Crab FMP (2002) and section 6.2.2 of the Amendment 3 EA (2011) provide a complete and comprehensive identification and description of all marine mammals and other protected species that may be found in the environment utilized by the red crab fishery. Before the 2011 EA, the most recent analysis of the protected species and marine mammals that may be found in the environment utilized by the red crab fishery is provided by the 2002 Biological Opinion on the Red Crab FMP issued by NMFS-GARFO (NMFS 2002). The analysis in the Biological Opinion determined that the preferred alternative (i.e., the effort controls and catch limits) is not likely to jeopardize the continued existence of the ESA-listed species analyzed (North Atlantic right, humpback, fin, sei, and sperm whales; loggerhead and leatherback sea turtles) or destroy/adversely modify designated critical habitat (i.e., North Atlantic right whale critical habitat). There are numerous species that inhabit the environment within the red crab management unit and are afforded protection under the Endangered Species Act of 1973 (ESA; i.e., for those designated as threatened or endangered) and/or the Marine Mammal Protection Act of 1972 (MMPA); see Amendment 3 EA (NEFMC 2011) and NMFS (2002) for a list of those species and additional information.

The following represents new information and circumstances for protected resources identified in the Amendment 3 EA (NEFMC, 2011); new information or circumstances for protected resources that do not occur in the affected environment of the Red Crab FMP will not be provided:

1. Listing of nine Distinct Population Segments (DPSs) (four DPSs=threatened; five DPS=endangered) of loggerhead sea turtles (76 FR 58868; September 22, 2011). The Northwest Atlantic Ocean DPS of loggerhead sea turtle (threatened) is the only DPS that occurs in the affected environment of the Red Crab FMP.
2. Listing of five DPSs (four DPSs=endangered; one DPS=threatened) of Atlantic sturgeon (77 FR 5914 and 77 FR 5880; February 6, 2012). All DPSs occur in the affected environment of the Red Crab FMP.
3. Designation of critical habitat for the Northwest Atlantic Ocean DPS of loggerhead sea turtles (79 FR 39856; July 10, 2014).
4. Adjustments to the Atlantic Large Whale Take Reduction Plan (ALWTRP) (79 FR 36586, June 27, 2014; 79 FR 73848, December 12, 2014; 80 FR 14345, March 19, 2015; and 80 FR 30367, May 28, 2015).
5. Expansion of North Atlantic right whale critical habitat (81 FR 4837, January 27, 2016); critical habitat was expanded to encompass approximately 29,763 square nautical miles of marine habitat in the Gulf of Maine and Georges Bank region and off the Southeast U.S. coast.
6. Listing 11 DPSs (eight DPSs= threatened; three DPSs=endangered) of green sea turtles (81 FR 20057, April 6, 2016). The North Atlantic DPS of green sea turtle (threatened) is the only DPS that occurs in the affected environment of the Red Crab FMP.

7. Listing of 14 DPSs of humpback whales (one=threatened; four =endangered; and nine= no listing warranted; [81 FR 62259, September 8, 2016]). The DPS found in U.S. Atlantic waters, the West Indies DPS, is delisted under the ESA; however, this DPS is still protected under the MMPA.

## **6.0 NEPA COMPLIANCE AND SUPPORTING ANALYSES**

This section evaluates if the new information and circumstances, presented in Section 5 above, have a bearing on the proposed action and it's impacts, which have previously been described in Amendment 3. The impacts are grouped into the following five categories: biological, social and economic, non-target/bycatch species, habitat, and protected resources.

### **6.1 Biological Impacts on the Red Crab Stock**

As described in Section 7.8.2.1 of Amendment 3, management actions on the red crab resource and fishery have been positive by maintaining a stable red crab population. The proposed action would maintain red crab effort at these sustainable levels based on the best available science. There has been a slight increase in LPUE in recent years (see Figure 4) and the updated fishery information in Section 5.1 does not show any evidence of a change in the overall red crab stock size. Landings have remained below the TAL. Further, this fishery has been, and continues to be a market driven fishery; therefore the market conditions are more of a driver for landings than the TAL, with the TAL serving as a ceiling. In the event of an overage, Amendment 3 established both proactive and reactive AMs to reconcile the amount of an overage. Additionally, no future actions have been identified that would change the Amendment 3 determination regarding the impacts of the fishery on the crab resource. Therefore, this review found that the Amendment 3 determination remains valid with respect to the red crab stock.

### **6.2 Social and Economic Impacts on Human Communities**

The recommended TAL for FY 2017-2019 is the same as the current TAL (1,775 mt); therefore, the short-term economic impacts are expected to be the same as those described in the Amendment 3 EA (NEFMC 2011). The proposed TAL is not expected to predictably change the current supply of red crab to the market or the ex-vessel price of red crab and wholesale or retail prices. Consequently, the proposed TAL is not expected to measurably or predictably change consumer surplus. Additionally, the few boats with limited access permits in the red crab fishery have overlapping ownership and operate as a voluntary cooperative. The cooperative relationship fosters a strong incentive to harvest red crab in a way that maximizes profits for the fleet as a whole. As a result, the vessels are not expected to compete to harvest the largest possible amounts of red crab per vessel as quickly as possible before the TAL is reached. In addition, the current market conditions, not the landings limit, constrain the catch of red crab, so there is no incentive for boats to land as much as they can before the TAL would be reached. A TAL of 1,775 mt is not expected to have any additional impacts on employment or on the income of crew members, or any other social impacts. As described in the Amendment 3 EA, the short-term impacts of a TAL of 1,775 mt are positive for the human community, and the new information provided in Section 5.2 does not change this determination.

Amendment 3 determined that actions implemented under the red crab fishery all have had or are expected to have a positive impact on human communities through the maintenance of a sustainable red crab fishery. Other Federal fishery management actions that affected human communities that depend on red crab are lobster management measures implemented under the Atlantic States Marine Fisheries Commission's Interstate American Lobster FMP. Current and expected lobster trap reductions (Section 5.3.2) are expected to ensure the sustainability of the lobster resource, which also is economically important to some of the participants in the red crab fishery. Actions under the American Lobster FMP, therefore, have and are expected to continue to have positive impacts on the human communities that depend on the red crab resource. The proposed action maintains the same quota level as was implemented in Amendment 3. Therefore, this review found that no actions have changed the Amendment 3 determination.

There are no social or economic impacts on human communities from the revised EFH determination in OHA2 (Section 5.4.1). There are potential social and economic impacts resulting from NEFMC's Deep-Sea Coral Omnibus Amendment (Section 5.4.2); however final Council action is pending, and impacts to the red crab fishery will be analyzed in that NEPA document. The red crab fishery is exempt from the Mid-Atlantic Council's coral amendment.

### **6.3 Non-Target/Bycatch Species Impacts**

#### ***6.3.1 Incidental Landings and Bycatch of Red Crab in Other Fisheries***

As indicated in Section 5.3.1, red crab landings by vessels with incidental permits are very low, and consistent with levels analyzed in the Amendment 3 EA. Bycatch of red crab in other fisheries fluctuates, and has been low in recent years (see Table 4). The proposed TAL is not expected to change bycatch or discarding of red crab in other fisheries from what has occurred since 2011.

#### ***6.3.2 Bycatch of Other Species in the Red Crab Fishery***

The Red Crab FMP explains that initial reports from industry members indicate that there is very little, if any, bycatch of other species in the directed red crab fishery. According to the 2004 Stock Assessment and Fishery Evaluation (SAFE) report, the only species reported to the VTR database as bycatch by the limited access red crab fleet are Jonah crab, and on rare occasion, lobster and blue crab. Tallack (2007) provides a more quantitative, if still limited, assessment of bycatch in the red crab fishery.

The proposed action is expected to have the same impacts on non-target species as described in Amendment 3 as it would maintain the same effort controls and limits. Since the catch of non-target and bycatch species is already very low in the red crab fishery, other actions have likely had positive but minimal impact on other species. The red crab specifications would not affect the new Jonah crab regulations that limit bycatch in other fisheries, including red crab (Section 5.3.2) as recorded Jonah crab bycatch is significantly lower than the 1,000 crab/trip limit and the specifications would not change bycatch. Additionally, recent management actions under the Lobster FMP (Section 5.3.2) have constrained fishing effort and are expected to have a positive impact on the lobster resource, and the red crab specifications would not alter lobster bycatch. Therefore, this review found that no actions have changed the Amendment 3 determination.

### **6.3.3 Canadian Red Crab Fishery**

The Canadian red crab fishery has been active since 2015; however, recent landings and area data from DFO are unavailable. The conservation areas described in Section 5.3.3 are likely to impact the Canadian red crab fishery as they prohibit fishing in the majority of both the Corsair and Georges Canyons conservation areas. While the Canadian red crab fishing area around Georges Bank is adjacent to the U.S. red crab Region 1, regulations prohibit Canadian vessels from fishing in the U.S. EEZ; therefore, these specifications would not affect the Canadian red crab fishery. Section 6.1.3 of Amendment 3 describes the Canadian red crab fishery; however the fishery was not active at the time that EA was prepared. As the proposed specifications do not change the TAL from the Amendment 3 levels or the location of the fishery, there are no impacts on the Canadian red crab fishery, which is consistent with the Amendment 3 determination.

## **6.4 Habitat Impacts**

### **6.4.1 Essential Fish Habitat**

The Council's OHA2 will update the EFH designations for red crab (see Section 5.4.1 for details) and for other species managed by the Council. Although the distribution of managed resources on the continental slope south of Georges Bank is somewhat uncertain given a lack of survey data, the following species occur on the slope, with the maximum depth of their updated OHA2 EFH designations as indicated in parentheses: Acadian redfish (600 m); halibut (700 m); offshore hake, red hake, barndoor skate (750 m); white hake, thorny skate, smooth skate (900 m); monkfish (1000 m); and witch flounder (1500 m). Most of these species are typically associated with mud and sand habitats, which are generally less vulnerable to the impacts of fishing gear than more highly structured habitat types. Recent evaluations of fishing gear impacts completed for OHA2 (summarized briefly in section 5.4.1) support previous conclusions that the traps used in the red crab fishery have limited impacts on habitat. This assessment relates both to the type of gear used in the fishery, which has minimal impacts per unit area, and the overall magnitude of effort, which is low relative to other fleets. While effort in the fishery may continue to shift between regions 1, 2, and 3 in response to market conditions, the TAL proposed via this specifications package maintains catch limits at current levels. Considering the above factors, the Amendment 3 determination regarding the minimal and temporary impacts of the red crab fishery on EFH remains valid.

### **6.4.2 Deep Sea Corals, Canyons and Seamounts**

As described in Section 5.4.2, both the Mid-Atlantic and New England Fishery Management Councils are developing management measures to protect deep-sea corals. The New England Council's coral amendment is not yet finalized, but could affect the red crab fishery through gear restrictions. The Mid-Atlantic amendment does not restrict the red crab fishery. Section 5.4.2 also describes the recently designated Northeast Canyons and Seamounts Marine National Monument. The Monument boundaries overlap with a portion of the red crab Region 1 (see Figure 11), and after seven years the red crab fishery will be prohibited from fishing in this area. The specifications for this action are for FY 2017-2019. The monument-related restrictions on red crab fishing will not take effect until 2023. However, the New England coral amendment will likely be implemented during this period, and if red crab fishing is restricted, effort could shift

into Regions 2 and 3. Regardless of any effort shifts, given the overall magnitude of effort in the fishery, the negligible impacts determination for habitat in Amendment 3 remains valid. In addition, if there are any changes or new actions that would affect the red crab fishery before the end of FY2019, those impacts would be analyzed in the relevant NEPA document(s).

## **6.5 Protected Resources Impacts**

Amendment 3 determined that fishery management actions have had negligible to slightly positive impacts on protected resources. The new circumstances described above in Section 5.5 will not change the impacts of the proposed action as previously described in the 2011 EA; the following provides support for this determination.

The final rule listing five DPSs of Atlantic sturgeon does not change the determination of effects previously made for this species in the 2011 EA. The Red Crab FMP is prosecuted with trap/pot gear. Atlantic sturgeon, regardless of DPS, are not vulnerable to interactions with this gear type and to date, there have been no observed interactions with this trap/pot gear (NMFS NEFSC FSB 2015). Based on this, although the listing of five DPSs of Atlantic sturgeon represents the designation of five new listed species, the new species designation (i.e., DPSs) does not introduce any changes to any impact analysis or effects determination done previously. Further, NMFS-GARFO excluded the red crab fishery from the May 2013 Biological Opinion for Continued Implementation of Management Measures for the Northeast Multispecies, Monkfish, Spiny Dogfish, Atlantic Bluefish, Northeast Skate Complex, Mackerel/Squid/Butterfish, and Summer Flounder/Scup/Black Sea Bass Fisheries because there were either no or negligible recorded interactions with Atlantic sturgeon (NMFS 2013).

The final rules listing DPSs of green or loggerhead sea turtles results in the removal of the current range-wide listing of green (i.e., endangered) or loggerhead sea turtles (i.e., threatened) and in its place, lists DPSs of green or loggerhead sea turtles that are considered endangered or threatened (see Section 5.5 for details). As provided above, the green sea turtle DPS and loggerhead sea turtle DPS located in the Northwest Atlantic are the North Atlantic DPS of green sea turtles and the Northwest Atlantic Ocean DPS of loggerhead sea turtles. Although the listing of these DPSs equates to new species being listed, the newly designated DPSs in the Northwest Atlantic represent the same population previously identified in the 2011 EA; the only change is that green or loggerhead sea turtles are no longer considered a single population with a range wide listing of endangered or threatened, respectively. As a result, the new species designation (i.e., DPSs) for either sea turtle species does not introduce any changes to any impact analyses or effects determinations done previously.

In regards to North Atlantic right whale critical habitat, the continued operation of the Red Crab FMP will not affect the essential physical or biological features of newly expanded North Atlantic right whale critical habitat (81 FR 4837). This is further supported by NMFS' determination that commercial fishing activities, as currently conducted, are not expected to destroy or adversely modify the essential physical and biological features of North Atlantic right whale critical habitat (81 FR 4837; NMFS 2015a,b). Based on this, the Red Crab FMP will not destroy or adversely modify North Atlantic right whale critical habitat as previously determined.

The designation of critical habitat for the Northwest Atlantic Ocean DPS of loggerhead sea turtles was not considered in the 2011 EA. However, the designation of critical habitat for

loggerhead sea turtles (Northwest Atlantic Ocean DPS) does not warrant further analysis of impacts. Similar to North Atlantic right whale critical habitat, the continued operation of the Red Crab FMP, as well as other commercial fisheries in the Northwest Atlantic, are not expected to destroy or adversely modify the essential physical and biological features of critical habitat for the Northwest Atlantic Ocean DPS of loggerheads; this conclusion is further supported by NMFS (79 FR 39856; NMFS 2014). Based on this, with no adverse impacts to loggerhead (Northwest Atlantic Ocean DPS) critical habitat expected, further assessment of impacts is not warranted.

In regards to the ALWTRP, adjustments to the plan occurred on June 27, 2014 (79 FR 36586), December 12, 2014 (79 FR 73848), March 19, 2015 (80 FR 14345), and May 28, 2015 (80 FR 30367). None of these adjustments introduced any new regulations to the red crab fishery that were not already part of the ALWTRP. The final rule listing 14 DPSs of humpback whales replaces the previous global listing of humpback whales. The West Indies DPS of humpback whale (not listed as threatened or endangered under the ESA) occurs in the Northwest Atlantic. Although the listing of this DPS equates to a new species being listed, the newly designated DPS in the Northwest Atlantic represents the same population previously identified in the 2011 EA; the only change is that this DPS of humpback whale is no longer listed under the ESA. As a result, the new species designation (i.e., DPS) for humpback whales in the Northwest Atlantic does not introduce any changes to any impact analyses or effects determinations done previously.

The proposed action will not increase fishing effort for red crab because it will not increase the ABC or TAL from previous management actions. Also it would not substantially change the way the fishery currently operates. As such, interaction risks between the red crab fishery and protected resources are not expected to change from those previously assessed in the Amendment 3 EA. Therefore, this review found that no actions have changed the Amendment 3 determination.

## **7.0 SUMMARY OF PUBLIC INVOLVEMENT**

The Red Crab PDT held two webinars on July 1, 2016 and August 17, 2016, which were announced on the Council's website and the July webinar included participation from the NGO community. The SSC met to recommend an ABC for red crab FY 2017-2019 in Boston, MA on August 10, 2016, and heard public comments from a member of the red crab industry. The NEFMC reviewed updated information about red crab landings, LPUE port samples, discards, social and economic impacts, and other valued ecosystem components during the September 2016 meeting in Danvers, MA. A member of the red crab industry attended this Council meeting, and responded to questions from Council members.

## **8.0 CONCLUSION**

The analysis in the Amendment 3 EA determined there were no significant impacts of fishery actions on the red crab resource, non-target/bycatch species, habitat/EFH, protected resources, or human communities since the Red Crab FMP was implemented, or that were expected in the reasonably foreseeable future. The proposed specifications for FY 2017-2019 would have negligible to positive impacts on the physical and biological environment and on human communities. The sum of the effects from implementation of the proposed specifications on the

red crab stock, non-target/bycatch species, habitat/EFH, protected resources and human communities is expected to be negligible in the short-term and positive in the long-term.

The NEFMC has determined that the analyses conducted for Amendment 3 remain valid for this action. A review of new information and circumstances (Section 5.0) did not change the conclusions or impacts described in Amendment 3 and its accompanying EA. The proposed action is the same as the preferred alternative from Amendment 3, and because the conclusions reached in the Amendment 3 EA are determined to remain valid, those analyses apply to these specifications.

## **9.0 COMPLIANCE WITH APPLICABLE LAWS**

### **9.1 Magnuson-Stevens Fishery Conservation and Management Act**

#### ***9.1.1 Consistency with National Standards***

Section 301 of the Magnuson-Stevens Act requires that regulations implementing any fishery management plan or amendment be consistent with the ten National Standards listed below.

##### ***9.1.1.1 National Standard 1***

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

The proposed action is compliant with the Magnuson-Stevens Act National Standard 1 requirements for ABC and interim ABC control rule, ACL, and AMs. The proposed specifications for fishing years 2017-2019 are consistent with the interim ABC set through this process and will ensure that overfishing will not take place in the red crab fishery and the red crab resource will not become overfished.

##### ***9.1.1.2 National Standard 2***

*Conservation and management measures shall be based on the best scientific information available.*

The measures in this action are based on the best and most recent scientific information available including the Red Crab stock assessment from the Northeast Regional Data Poor Stock Assessment Workshop in 2008, which includes an independent peer review, updated analyses from the red crab PDT, and recommendations from the Council's SSC for setting an interim red crab ABC.

##### ***9.1.1.3 National Standard 3***

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

The red crab resource is managed as a single unit throughout its range in the U.S. EEZ.

##### ***9.1.1.4 National Standard 4***

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

The proposed measures are the same for all vessels in the red crab fishery regardless of the state of residence of the owner or operator of the vessels. Although any fishing mortality control (including possession limits and quotas) results in the allocation of fishery resources, the measures in the proposed action are reasonably expected to promote conservation by continuing to prevent overfishing and rebuild overfished stocks.

#### *9.1.1.5 National Standard 5*

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

The proposed action maintains the efficiency of vessel operations under the TAL. The TAL allows flexibility for business planning, operational safety and capability of the fleet to catch the ACL/TAL without exceeding it. None of the measures in this action directly allocates red crab and, therefore, none has economic allocation as its sole purpose.

#### *9.1.1.6 National Standard 6*

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

The proposed action, developed with input of red crab fishermen and processors, accounts for the market-driven nature of the fishery by maintaining the TAL and allowing flexibility to reach the TAL without exceeding it. Both proactive and reactive AMs are established to address variations that may occur within the FYs (2017-2019) covered by these specifications.

#### *9.1.1.7 National Standard 7*

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

The proposed action would simplify management regulations by maintaining the TAL value for FYs 2017-2019. The proposed action does not duplicate other fishing regulations or fishery management measures. The Red Crab FMP is the only management plan that sets harvest limits and fishing regulations for Atlantic deep-sea red crab.

#### *9.1.1.8 National Standard 8*

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

The proposed action was developed with the input of red crab vessel owners and processors that supported the measures because the TAL would assist them economically by making harvesting operations efficient. The TAL allows for flexibility to make fewer, longer fishing trips, particularly because the fishing grounds for red crab are distant. This flexibility would keep the red crab fishery economically viable and sustainable. Due to the small size of the red crab fishery, there are a limited number of participants, and consequently a limited number of communities. This action is not expected to change the individuals or communities affected by this fishery.

*9.1.1.9 National Standard 9*

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

The proposed action is not expected to have any impact on bycatch of red crab or other species (Section 5.3).

*9.1.1.10 National Standard 10*

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

The proposed action allows flexibility for vessels to harvest when conditions are optimal, reducing exposure to safety hazards at sea. This management action does not change any of the measures designed to promote the safety of human life at sea, and no measure in the proposed action reduces the flexibility of vessel operators to respond to hazardous conditions at sea.

**9.1.2 Magnuson-Stevens Act FMP Requirements**

Section 303 (a) of Magnuson-Stevens Act contains 15 required provisions for FMPs that are listed below. The requirement applies to the FMP, and in some cases, the FMP as amended, and not the submission document for the proposed action.

- (1) contain the conservation and management measures, applicable to foreign fishing and fishing by vessels of the United States;*

Foreign fishing is not allowed under this management plan or this action, so specific measures are not included to specify and control allowable foreign catch.

- (2) contain a description of the fishery;*

An updated description of the fishery is included in Section 5.0 of this document.

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

The Council's SSC determined that "the information available for red crab is insufficient to estimate MSY and OY" (Sections 3.0 and 4.0).

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

Due to the lack of scientific data, MSY and long-term OY have not been defined for the red crab fishery. However, U.S. fishing vessels are capable of, and expected to, harvest 100 percent of the ABC from this fishery, as specified in Section 4.0. U.S. processors are also expected to process or hold all landings from US fishing vessels. Therefore, there is no portion of the ABC from this fishery that can be made available to foreign fishing. Some of the bulk crab product is further processed overseas, and there is a developing live market to Asia, though both products undergo initial processing or holding in the U.S.

- (5) *specify the pertinent data which shall be submitted to the Secretary with respect to commercial, recreational, and charter fishing in the fishery, including, but not limited to, information regarding the type and quantity of fishing gear used;*

Red Crab vessels currently must submit VTRs for each fishing trip. Dealers are also required to submit reports on the purchases of red crab from permitted vessels. Current reporting requirements are detailed in 50 CFR 648.7.

- (6) *consider and provide for temporary adjustments, after consultation with the Coast Guard and persons utilizing the fishery, regarding access to the fishery for vessels otherwise prevented from harvesting because of weather or other ocean conditions affecting the safe conduct of the fishery;*

The proposed action does not contain any measures that would penalize vessels that were prevented from harvesting red crab because of weather or other ocean conditions. The proposed action will maintain vessels' flexibility to respond to adverse ocean conditions by enabling them to extend the length of their trips and fish fewer trips when they choose.

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

EFH for red crab was defined in the Red Crab FMP, which was implemented in 2002. This action does not change the EFH designations. The Council currently is updating

EFH designations for all NEFMC-managed species, including red crab, in a Habitat Omnibus Amendment that is expected to be implemented in 2017.

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

Scientific needs are continuously reviewed and revised by the Council's Research Steering Committee and the Northeast Stock Assessment Workshop, which consult with NMFS, the Council and its PDTs, SSC and species oversight committees about scientific data needs.

- (9) *include a fishery impact statement for the plan or amendment (in the case of a plan or amendment thereto submitted to or prepared by the Secretary after October 1, 1990) which shall assess, specify, and describe the likely effects, if any, of the conservation and management measures on – (A) participants in the fisheries and fishing communities affected by the plan or amendment; and (B) participants in the fisheries conducted in adjacent areas under the authority of another Council, after consultation with such Council and representatives of those participants;*

Impacts on fishing communities affected by this action can be found in Section 5.2, Social and Economic Description of the Red Crab Fishery, and Section 6.2, Social/Economic Impacts on Human Communities.

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

The Red Crab FMP/environmental impact statement (EIS) established criteria to determine whether the red crab stock was either in an overfished condition, subject to overfishing, or both. The previously approved overfishing and overfished definitions are as follows:

*Definition of Overfishing:* Overfishing is 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 measures of exploitation used will be determined by the availability of suitable data (CPUE data, landings, etc.).

*Definitions of Overfished:* The red crab stock will be considered to be in an overfished condition if one of the following three conditions is met:

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

Condition 2 – The annual fleet average CPUE, measured as marketable crabs landed per trap haul, continues to decline below a baseline level ( $\frac{1}{2}$  CPUE<sub>0</sub>) 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 ( $\frac{1}{4}$  CPUE<sub>0</sub>) in any single year.

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

This action does not include changes to the current Standardized Bycatch Reporting Methodology implemented in 2015 under the revised Standardized Bycatch Reporting Methodology Omnibus Amendment (Amendment 4 to the Red Crab FMP). This methodology is expected to assess the amount and type of bycatch in the red crab fishery and help identify ways the fishery can minimize bycatch and mortality of bycatch, which cannot be avoided.

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

There is no recreational fishing for Atlantic deep-sea red crab.

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

Section 5.1 provides a description of the commercial red crab fishery. There is no recreational or charter fishing for Atlantic deep-sea red crab.

- (14) *to the extent that rebuilding plans or other conservation and management measures which reduce the overall harvest in a fishery are necessary, allocate any harvest restrictions or recovery benefits fairly and equitably among the commercial, recreational, and charter fishing sectors in the fishery;*

The proposed action does not reduce the overall harvest to fishery participants.

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

The proposed action maintains an ABC, ACL, TAL, and AMs that would prevent overfishing and ensure accountability.

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

The Council has determined that the Red Crab Amendment 3 EA remains valid for this action. Thus, there is no need to supplement the Amendment 3 EA and Finding of No Significant Impact.

A review of new information and circumstances (Section 5.0) and their changes on the Amendment 3 findings (Section 6.0) did not change the conclusions or impacts described in the Amendment 3 EA. The proposed action is the same as the preferred alternative from the previous action, and because the conclusions reached in the Amendment 3 EA were determined to remain valid, those analyses apply to these specifications.

NMFS concurs with the Council's determination, thus the specifications package will be submitted as a Supplemental Information Report (SIR). The SIR documents NMFS' rationale for determining if new information, changed circumstances, or changes to the action would require additional NEPA analysis.

## **9.3 Marine Mammal Protection Act (MMPA)**

None of the specifications proposed in this document are expected to alter fishing methods or activities. Therefore, this action is not expected to affect marine mammals or critical habitat in any manner not considered in previous consultations on the fisheries.

For further information on the potential impacts of the fishery and the proposed management action on marine mammals, see Sections 5.5 and 6.5 of this document.

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

Section 7 of the ESA requires Federal agencies conducting, authorizing, or funding activities that affect threatened or endangered species to ensure that those effects do not jeopardize the continued existence of listed species. The proposed action will not increase fishing effort for red crab because it will not increase the ABC or TAL from previous management actions. Also, it would not substantially change the way the fishery currently operates. Based on the information available at this time (Sections 5.5 and 6.5), the Council believes that NMFS will concur that the action proposed for the red crab fishery will not change the 2002 Biological Opinion's determination of effects (NMFS 2002), and therefore, is not likely to jeopardize any ESA-listed species or alter or modify any critical habitat.

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

Section 307(c)(1) of the Coastal Zone Management Act (CZMA) of 1972, as amended, requires that all Federal activities that directly affect the coastal zone be consistent with approved state coastal zone management programs to the maximum extent practicable. The CZMA provides measures for ensuring stability of productive fishery habitat while striving to balance development pressures with social, economic, cultural, and other impacts on the coastal zone. It

is recognized that responsible management of both coastal zones and fish stocks must involve mutually supportive goals. The Council has developed this specification package and will submit it to NMFS; NMFS must determine whether this action is consistent to the maximum extent practicable with the CZM programs for each state (Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, and North Carolina). Letters documenting NMFS' determination will be sent to the coastal zone management program offices of each state.

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

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

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

### ***Utility of Information Product***

The information presented in this document is helpful to the intended users (the affected public) by presenting a clear description of the purpose and need of the proposed action, the measures proposed, and the impacts of those measures. A discussion of the reasons for selecting the proposed action is included so that intended users may have a full understanding of the proposed action and its implications. The intended users of the information contained in this document include individuals involved in the red crab fishery, (e.g., fishing vessels, crab processors, fishery managers), and other individuals interested in the management of the red crab fishery. The information contained in this document will be helpful and beneficial to owners of vessels holding limited access red crab permits since it will notify these individuals of the measures contained in this specification package. This information will enable these individuals to adjust their management practices and make appropriate business decisions. Until a proposed rule is prepared and published, this document is the principal means by which the information contained herein is available to the public. The information provided in this document is based on the most recent available information from the relevant data sources. The information contained in this document includes detailed and relatively recent information on the red crab resource and, therefore, represents an improvement over previously available information. This document will be subject to public comment through proposed rulemaking, as required under the Administrative Procedure Act and, therefore, may be improved based on comments received. This document is available in several formats, including printed publication, and online through the NEFMC's web page ([www.nefmc.org](http://www.nefmc.org)). The Federal Register notice that announces the proposed rule and the final rule and implementing regulations will be made available in printed publication, on the website for GARFO (<https://www.greateratlantic.fisheries.noaa.gov/>), and through the Regulations.gov website. The Federal Register documents will provide metric conversions for all measurements.

### ***Integrity of Information Product***

The information product meets the standards for integrity under the following types of documents:

Other/Discussion (e.g., Confidentiality of Statistics of the Magnuson-Stevens Fishery Conservation and Management Act; NOAA Administrative Order 216-100, Protection of Confidential Fisheries Statistics; 50 CFR 229.11, Confidentiality of information collected under the Marine Mammal Protection Act.)

Prior to dissemination, information associated with this action, independent of the specific intended distribution mechanism, is safeguarded from improper access, modification, or destruction, to a degree commensurate with the risk and magnitude of harm that could result from the loss, misuse, or unauthorized access to or modification of such information. All electronic information disseminated by NMFS adheres to the standards set out in Appendix III, “Security of Automated Information Resources,” of OMB Circular A-130; the Computer Security Act; and the Government Information Security Act. All confidential information (e.g., dealer purchase reports) is safeguarded pursuant to the Privacy Act; Titles 13, 15, and 22 of the U.S. Code (confidentiality of census, business, and financial information); the Confidentiality of Statistics provisions of the Magnuson-Stevens Act; and NOAA Administrative Order 216-100, Protection of Confidential Fisheries Statistics.

### ***Objectivity of Information Product***

For purposes of the Pre-Dissemination Review, this document is considered to be a “Natural Resource Plan.” Accordingly, the document adheres to the published standards of the Magnuson-Stevens Act; the Operational Guidelines, Fishery Management Plan Process; the Essential Fish Habitat Guidelines; the National Standard Guidelines; and NOAA Administrative Order 216-6, Environmental Review Procedures for Implementing the National Environmental Policy Act. This information product uses information of known quality from sources acceptable to the relevant scientific and technical communities. Several sources of data were used in the development of the specification package. These data sources included, but were not limited to, historical and current landings data from CFDRS, VTR data, and fisheries independent data collected through the NMFS bottom trawl surveys. The analyses contained in this document were prepared using data from accepted sources. These analyses have been reviewed by members of the Red Crab PDT and by the SSC where appropriate.

Despite current data limitations, the conservation and management measures considered for this action were selected based upon the best scientific information available. The analyses important to this decision used information from the most recent complete calendar years, generally through 2015. The data used in the analyses provide the best available information on the number of permits, both active and inactive, in the fishery, the catch (including landings and discards) by those vessels, the LPUE, and the revenue produced by the sale of those landings to dealers. Specialists (including professional members of PDTs, technical teams, committees, and Council staff) who worked with these data are familiar with the most current analytical techniques and with the available data and information relevant to the red crab fishery. The policy choice is clearly articulated in Sections 3.0 and 4.0 of this document that being the management alternative considered in this action. The supporting science and analyses, upon which the policy choice was based, are summarized and described in sections 5.0 and 6.0 of this document, and in the Amendment 3 EA. All supporting materials, information, data, and analyses within this document have been, to the maximum extent practicable, properly referenced according to commonly accepted standards for scientific literature to ensure

transparency. The review process used in preparation of this document involves the responsible Council, NEFSC, GARFO, and NOAA Fisheries Service Headquarters. NEFSC's technical review is conducted by senior level scientists with specialties in population dynamics, stock assessment methods, population biology, and the social sciences. The Council review process involves public meetings at which affected stakeholders have opportunity to provide comments on the document. Review by staff at GARFO is conducted by those with expertise in fisheries management and policy, habitat conservation, protected species, and compliance with the applicable law. Final approval of the action proposed in this document and clearance of any rules prepared to implement resulting regulations is conducted by staff at NOAA Fisheries Service Headquarters, the Department of Commerce, and the U.S. Office of Management and Budget. In preparing this action for the Red Crab FMP, NMFS must comply with the requirements of the Magnuson-Stevens Act, the National Environmental Policy Act, the Administrative Procedure Act, the Paperwork Reduction Act, the Coastal Zone Management Act, the Endangered Species Act, the Marine Mammal Protection Act, the Information Quality Act, and Executive Orders 12630 (Property Rights), 12866 (Regulatory Planning), 13132 (Federalism), and 13158 (Marine Protected Areas). The Council has determined that the proposed action is consistent with the National Standards of the Magnuson-Stevens Act and all other applicable laws and executive orders.

#### **9.8 Paperwork Reduction Act (PRA)**

The Paperwork Reduction Act (PRA) concerns the collection of information. The intent of the PRA is to minimize the Federal paperwork burden for individuals, small businesses, state and local governments, and other persons, as well as to maximize the usefulness of information collected by the Federal government. There are no changes to the existing reporting requirements previously approved under the Red Crab FMP for vessel permits, dealer reporting, or vessel logbooks. This action does not contain a collection-of-information requirement for purposes of PRA.

#### **9.9 Regulatory Flexibility Act (RFA) Analysis**

The objective of the Regulatory Flexibility Act (RFA) is to require consideration of the capacity of regulated small entities affected by regulations to bear the direct and indirect costs of regulation. If an action might have a significant impact on a substantial number of small entities, an Initial Regulatory Flexibility Analysis must be prepared. This would identify the need for action, alternatives, potential costs and benefits of the action, the distribution of these impacts, and a determination of whether the proposed action would have a significant economic impact on a substantial number of small entities. Depending on the nature of the proposed regulations, assessment of the economic impacts on small businesses, small organizations, and small governmental jurisdictions may be required. If an action is determined to affect a substantial number of small entities, the analysis must include:

- 1) A description and estimate of the number of regulated small entities and total number of entities in a particular affected sector, and the total number of small entities affected; and

- 2) Analysis of the economic impact on regulated small entities, including the direct and indirect compliance costs of completing paperwork or recordkeeping requirements, effect on the competitive position of small entities, effect on the small entity's cash flow and liquidity, and ability of small entities to remain in the market.

If it is clear that an action would not have a significant economic impact on a substantial number of small regulated entities, the RFA allows Federal agencies to certify the proposed action to that effect to the Small Business Administration (SBA). The decision on whether or not to certify is generally made after the final decision on the preferred alternatives for the action and may be documented at either the proposed rule or the final rule stage.

### ***Description and Number of Small Entities to which the Rule Applies***

The RFA recognizes three kinds of small entities: small businesses, small organizations, and small governmental jurisdictions. The proposed action would only affect small businesses engaged in the harvesting of red crab.

For RFA purposes only, NMFS has established a small business size standard for businesses, including their affiliates, whose primary industry is commercial fishing (see 50 CFR § 200.2). A business primarily engaged in commercial fishing (NAICS code 11411) is classified as a small business if it is independently owned and operated, is not dominant in its field of operation (including its affiliates), and has combined annual receipts not in excess of \$11 million for all its affiliated operations worldwide.

On December 29, 2015, NMFS issued a final rule establishing a small business size standard of \$11 million in annual gross receipts for all businesses primarily engaged in the commercial fishing industry (NAICS 11411) for RFA compliance purposes only (80 FR 81194, December 29, 2015). The single \$11 million standard became effective on July 1, 2016, and is to be used in place of the U.S. SBA's prior standards of \$20.5 million, \$5.5 million, and \$7.5 million for the finfish (NAICS 114111), shellfish (NAICS 114112), and other marine fishing (NAICS 114119) sectors of the U.S. commercial fishing industry in all NMFS rules subject to the RFA after July 1, 2016.

The objectives of the change in standards were to simplify the RFA analyses done in support of NMFS' rules, better meet the RFA's intent by more accurately representing expected disproportionate effects of NMFS' rules between small and large businesses, create a standard that more accurately reflects the size distribution of all businesses in the commercial fishing industry, and allow NMFS to determine when changes to the standard are necessary and appropriate.

Information about vessel ownership is available for all federal permit holders (since 2010), which allows for the identification of business entities that comprise multiple fishing vessels. Under this rule, there are two business entities and four vessels to which the rule applies. The new vessel ownership data, which has been added to the permit database, identifies all the individual people who own fishing vessels. With this information, vessels can be grouped together according to common owners. The resulting groupings can then be treated as a fishing

business, for purposes of RFA analyses. Revenues summed across all vessels in the group and the activities that generate those revenues form the basis for determining whether the entity is a large or small business. As there are only two business entities, the degree of ownership is not known, and data is confidential.

For RFA purposes, we must look at the total revenue of the business, which, in this case, includes the value of other shellfish and some finfish. The additional revenue obtained from other shellfish (lobsters and Jonah crab) and finfish (hagfish) are relatively minor amounts. The comparison of red crab versus all revenue is shown in Table 6. According to SBA’s regulations (CFR 121.104(c)), gross revenue from the most recent three years should be used for classifying marine fishing activity. The total value of landings from all sources over the last three years averaged \$3.69 million, so it is safe to assume that all business entities in the harvesting sector can be categorized as small businesses for purpose of the RFA.

**Table 6. Value of all landings and value of red crab landings, from red crab permitted vessels, 2013-2015**

	<b>Value of all landings (million \$)</b>	<b>Value of red crab landings (million \$)</b>
<b>2013</b>	3.733	2.046
<b>2014</b>	3.624	2.172
<b>2015</b>	3.715	3.534

The proposed action will affect all business entities and four vessels in the directed red crab fishery, but it is not expected to have any impact on the gross or average revenues for the fishery because it does not change the TAL limit, which is 3.913 million lb (1,775 mt). In addition, this level is substantially higher than landings in recent years (FY 2013 – 2015 landings averaged 2.692 million lb; Table 3). As a result, the proposed action is not expected to constrain landings markets for red crab substantially. Since revenues per business entity are confidential, Table 7 shows the average value per vessel over the most recent three years for all landings.

**Table 7. Average revenue per vessel from all species landed, 2013-2015**

<b>Number of Vessels</b>	4
<b>Average revenue from all species, 2013-2015</b>	\$ 3,690,620
<b>Average revenue/vessel from all species</b>	\$ 922,655

(Source: NMFS Annual Commercial Landings Statistics)

As discussed above (Section 5.1), recent landings have increased though remain below the TAL limit, with market conditions driving landings more than the TAL limit. Because the proposed

action will have no impact on gross revenues per vessel, it is not necessary to analyze impacts according to the dependence of each vessel in the red crab fishery.

### ***9.9.1 Criteria Used to Evaluate the Action***

#### *9.9.1.1 Significant Economic Impacts*

The RFA requires Federal agencies to consider two criteria to determine the significance of regulatory impacts: disproportionality and profitability. If either criterion is met for a substantial number of small entities, then the action should not be certified.

#### *9.9.1.2 Disproportionality*

Since all limited access red crab vessel owners were determined to be small entities (above) the disproportionality standard does not apply.

#### *9.9.1.3 Profitability*

As noted above, none of the elements of this proposed action are associated with economic impacts on small entities. This is the case for small regulated entities engaged in commercial red crab fishing. Since the proposed action would have no economic impact on small entities, there would be no change in expected profitability.

#### *9.9.1.4 Substantial Number of Small Entities*

While the action would apply to all of the limited access red crab vessels, no entity is expected to incur any economic impacts as a result of this action.

#### *9.9.1.5 Description of and Explanation of, the Basis for All Assumptions Used*

Because the proposed action maintains the existing overall catch levels, which are based on the best available scientific information, there are no direct economic impacts associated with this action. No assumptions are necessary to conduct the analyses in support of this conclusion.

## **10.0 PREPARERS AND PERSONS CONSULTED**

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