



## **AMENDMENT 20 TO THE SNAPPER GROUPER FISHERY MANAGEMENT PLAN OF THE SOUTH ATLANTIC REGION**

(INCLUDING A DEIS, IRFA, RIR & SIA/FIS)

**July 2009**

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## ABBREVIATIONS AND ACRONYMS

ABC	Acceptable Biological Catch
ACCSP	Atlantic Coastal Cooperative Statistics Program
ACL	Annual Catch Limits
AM	Accountability Measure
ACT	Annual Catch Target
APA	Administrative Procedures Act
ASMFC	Atlantic States Marine Fisheries Commission
B	A measure of stock biomass in either weight or other appropriate unit
$B_{MSY}$	The stock biomass expected to exist under equilibrium conditions when fishing at $F_{MSY}$
$B_{OY}$	The stock biomass expected to exist under equilibrium conditions when fishing at $F_{OY}$
$B_{CURR}$	The current stock biomass
CEA	Cumulative Effects Analysis
CEQ	Council on Environmental Quality
CFMC	Caribbean Fishery Management Council
CPUE	Catch per unit effort
CRP	Cooperative Research Program
CZMA	Coastal Zone Management Act
DEIS	Draft Environmental Impact Statement
EA	Environmental Assessment
EEZ	Exclusive Economic Zone
EFH	Essential Fish Habitat
EFH-HAPC	Essential Fish Habitat - Habitat Area of Particular Concern
EIS	Environmental Impact Statement
ESA	Endangered Species Act of 1973
F	A measure of the instantaneous rate of fishing mortality
$F_{30\%SPR}$	Fishing mortality that will produce a static SPR = 30%.
$F_{45\%SPR}$	Fishing mortality that will produce a static SPR = 45%.
$F_{CURR}$	The current instantaneous rate of fishing mortality
$F_{MSY}$	The rate of fishing mortality expected to achieve MSY under equilibrium conditions and a corresponding biomass of $B_{MSY}$
$F_{OY}$	The rate of fishing mortality expected to achieve OY under equilibrium conditions and a corresponding biomass of $B_{OY}$
FEIS	Final Environmental Impact Statement
FMP	Fishery management plan
FMU	Fishery management unit
FONSI	Finding of No Significant Impact
GFMC	Gulf of Mexico Fishery Management Council
IFQ	Individual fishing quota
M	Natural mortality rate
MARFIN	Marine Fisheries Initiative
MARMAP	Marine Resources Monitoring Assessment and Prediction Program
MBTA	Migratory Bird Treaty Act

MFMT	Maximum Fishing Mortality Threshold
MMPA	Marine Mammal Protection Act of 1972
MRFSS	Marine Recreational Fisheries Statistics Survey
MSFCMA	Magnuson-Stevens Fishery Conservation and Management Act
MSST	Minimum Stock Size Threshold
MSY	Maximum Sustainable Yield
NEPA	National Environmental Policy Act of 1969
NMFS	National Marine Fisheries Service
NMSA	National Marine Sanctuary Act
NOAA	National Oceanic and Atmospheric Administration
OFL	Overfishing Limit
OY	Optimum Yield
PQBM	Post Quota Bycatch Mortality
PSE	Percent Standard Error
R	Recruitment
RFA	Regulatory Flexibility Act
RIR	Regulatory Impact Review
SAFE Report	Stock Assessment and Fishery Evaluation Report
SAMFC	South Atlantic Fishery Management Council
SDDP	Supplementary Discard Data Program
SEDAR	Southeast Data Assessment and Review
SEFSC	Southeast Fisheries Science Center
SERO	Southeast Regional Office
SFA	Sustainable Fisheries Act
SIA	Social Impact Assessment
SSC	Scientific and Statistical Committee
TAC	Total allowable catch
TL	Total length
T <sub>MIN</sub>	The length of time in which a stock could rebuild to B <sub>MSY</sub> in the absence of fishing mortality
USCG	U.S. Coast Guard

**AMENDMENT 20 TO THE SNAPPER GROUPE FISHERY  
MANAGEMENT PLAN OF THE SOUTH ATLANTIC REGION**

**INCLUDING A DRAFT ENVIRONMENTAL IMPACT STATEMENT, INITIAL REGULATORY  
FLEXIBILITY ANALYSIS, DRAFT REGULATORY IMPACT REVIEW, AND DRAFT SOCIAL  
IMPACT ASSESSMENT/FISHERY IMPACT STATEMENT**

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## **ABSTRACT**

Amendment 20 to the Snapper Grouper Fishery Management Plan consists of regulatory actions that focus on modifications to the wreckfish ITQ to bring the program into compliance with the reauthorized MSA and make other administrative, monitoring, and enforcement changes. Amendment 20 also establishes a maximum sustainable yield (MSY), actual biological catch (ABC), overfishing limit (OFL), annual catch limit (ACL), annual catch target (ACT) and accountability measure (AM) for the wreckfish species. Species in the snapper grouper fishery management unit are assessed on a routine basis and stock status may change as new information regarding the wreckfish species becomes available.

Management actions proposed in this Amendment include:

The Draft Environmental Impact Statement (DEIS) analyzes the effects of implementing the proposed actions listed above. Comments on the DEIS will be accepted for 45 days from publication of the Notice of Availability (NOA) in the Federal Register.

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### **Purpose and Need**

The purpose of this amendment is to: 1) modify the Wreckfish ITQ Program to bring it into compliance with the reauthorized Magnuson Stevens Act (MSA) and 2) establish a Maximum Sustainable Yield (MSY), Acceptable Biological Catch (ABC), Overfishing Limit (OFL), Annual Catch Limit (ACL) and Accountability Measures (AMs), if needed, including management measures to reduce the probability that catches will exceed the stocks' ACLs pursuant to reauthorized Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) requirements. The Council will also consider the specification of Annual Catch Targets (ACT) for a recreational fishery if necessary. Previously implemented snapper grouper amendments may contain management measures for species undergoing overfishing that are comparable to ACLs and AMs. The SSC will meet in December 2009 to continue identifying a protocol for determining ABCs and make recommendations to the Council regarding a MSY, ABC, and OFL for the wreckfish fishery.

To summarize, actions proposed in Amendment 20 would:

- Modify the Wreckfish ITQ to bring it into compliance with the reauthorized MSA.
- Specify a MSY, ABC, OFL, ACL, ACT, if necessary, and AMs, if necessary, for South Atlantic wreckfish.

### **Alternatives Being Considered**

#### **Action 1. Changes to the Wreckfish ITQ**

**Alternative 1. No action.**

**Alternative 2. Eliminate the current wreckfish ITQ program and replace with alternate effort limiting criteria for participation.**

**Alternative 3. Eliminate the current wreckfish ITQ program and do not replace it with any effort or participation limiting criteria.**

**Preferred Alternative 4. Modify the wreckfish ITQ program to keep the wreckfish ITQ program and update it to meet the new requirements of MSA.**

#### **Action 2. Wreckfish MSY Options**

**Option 1. No action. There is no MSY specified for wreckfish, and this is a requirement of the MSA.**

**Option 2. MSY = 1.946 million pounds. This figure is the average landings from 1988-1994 which represent the years of high landings.**

**Option 3. MSY = 0.835 million pounds. This figure is the average landings from 1988-2007 which represent all years of landings with the exception of 2001 and 2003 when landings are confidential.**

**Option 4. Others?**

### **Action 3. Wreckfish OFL Options**

**Option 1. No action**

**Option 2. OFL = FMSY = F30%SPR = 0.25 based on M = 0.10 and combined indices (Vaughan et al., 2001; Table 6).**

**Option 3. OFL = FMSY = F40%SPR = 0.14 based on M = 0.10 and combined indices (Vaughan et al., 2001; Table 6).**

**Option 4. Others?**

### **Action 4. Wreckfish ABC Options**

**Option 1. No action. There is no ABC specified for wreckfish. The Total Allowable Catch (TAC) has been set at 2 million pounds since 1990 first through an emergency rule and then through Snapper Grouper Amendment 3 (1991).**

**Option 2. ABC = 1.75 million pounds. This is 197,000 pounds less than MSY Alternative 2 (1.946 million pounds).**

**Option 3. ABC = 1.5 million pounds. This is 447,000 pounds less than MSY Alternative 2 (1.946 million pounds).**

**Option 4. Others?**

### **Affected Environment**

The immediate impact area would be the federal 200-nautical mile (nm) limit of the Atlantic off the coasts of North Carolina, South Carolina, Georgia, and east Florida to Key West.

The biological environment is described in **Section 3.0**. A description of the human environment is provided in **Section X.X**.

### **Environmental Consequences**

***Action 1.***

Biological Effects

Economic Effects

Social Effects

***Action 2.***

*Biological Effects*

*Economic Effects*

*Social Effects*

***Action 3.***

*Biological Effects*

*Economic Effects*

*Social Effects*

***Action 4.***

*Biological Effects*

*Economic Effects*

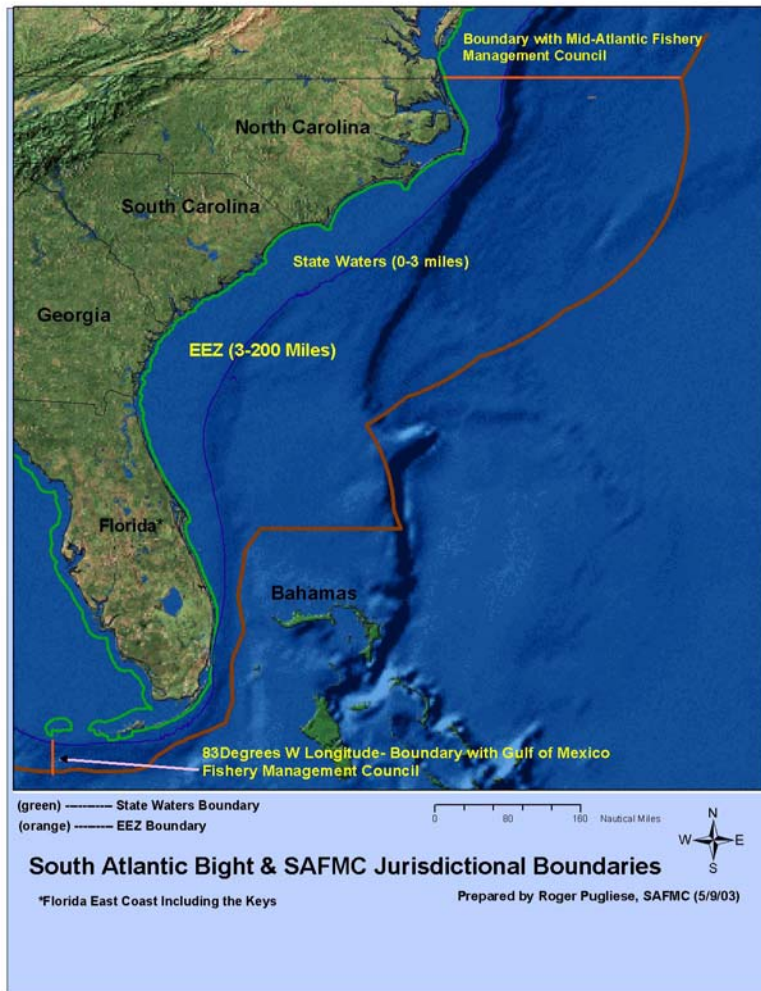
*Social Effects*



# 1 Introduction

## 1.1 Background

Management of the Federal snapper grouper fishery located off the South Atlantic in the 3-200 nautical mile (nm) U.S. Exclusive Economic Zone (EEZ) is conducted under the Fishery Management Plan for the snapper grouper Fishery (SAFMC 1983) (**Figure 1-1**). The fishery management plan (FMP) and its amendments are developed under the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), other applicable Federal laws, and executive orders (E.O.s) and affect the management of 73 species (**Table 1-1**). The purpose of the FMP, as amended, is to manage the snapper grouper fishery for optimum yield (OY) and specify ACLs, ACTs, and AMs as needed for species undergoing overfishing.



**Figure 1-1.** Jurisdictional boundaries of the South Atlantic Fishery Management Council.

**Table 1-1.** The South Atlantic Snapper Grouper Complex

Almaco jack, <i>Seriola rivoliana</i>	Ocean triggerfish, <i>Canthidermis sufflamen</i>
Atlantic spadefish, <i>Chaetodipterus faber</i>	Porkfish, <i>Anisotremus virginicus</i>
Banded rudderfish, <i>Seriola zonata</i>	Puddingwife, <i>Halichoeres radiatus</i>
Bank sea bass, <i>Centropristis ocyurus</i>	Queen snapper, <i>Etelis oculatus</i>
Bar jack, <i>Carangoides ruber</i>	Queen triggerfish, <i>Balistes vetula</i>
Black grouper, <i>Mycteroperca bonaci</i>	Red grouper, <i>Epinephelus morio</i>
Black margate, <i>Anisotremus surinamensis</i>	Red hind, <i>Epinephelus guttatus</i>
Black sea bass, <i>Centropristis striata</i>	Red porgy, <i>Pagrus pagrus</i>
Black snapper, <i>Apsilus dentatus</i>	Red snapper, <i>Lutjanus campechanus</i>
Blackfin snapper, <i>Lutjanus buccanella</i>	Rock hind, <i>Epinephelus adscensionis</i>
Blue runner, <i>Caranx crysos</i>	Rock Sea Bass, <i>Centropristis philadelphica</i>
Blueline tilefish, <i>Caulolatilus microps</i>	Sailors choice, <i>Haemulon parra</i>
Bluestriped grunt, <i>Haemulon sciurus</i>	Sand tilefish, <i>Malacanthus plumieri</i>
Coney, <i>Cephalopholis fulva</i>	Saucereye porgy, <i>Calamus calamus</i>
Cottonwick, <i>Haemulon melanurum</i>	Scamp, <i>Mycteroperca phenax</i>
Crevalle jack, <i>Caranx hippos</i>	Schoolmaster, <i>Lutjanus apodus</i>
Cubera snapper, <i>Lutjanus cyanopterus</i>	Scup, <i>Stenotomus chrysops</i>
Dog snapper, <i>Lutjanus jocu</i>	Sheepshead, <i>Archosargus probatocephalus</i>
French grunt, <i>Haemulon flavolineatum</i>	Silk snapper, <i>Lutjanus vivanus</i>
Gag, <i>Mycteroperca microlepis</i>	Smallmouth grunt, <i>Haemulon chrysargyreum</i>
Golden tilefish, <i>Lopholatilus chamaeleonticeps</i>	Snowy grouper, <i>Epinephelus niveatus</i>
Goliath grouper, <i>Epinephelus itajara</i>	Spanish grunt, <i>Haemulon macrostomum</i>
Grass porgy, <i>Calamus arctifrons</i>	Speckled hind, <i>Epinephelus drummondhayi</i>
Gray (mangrove) snapper, <i>Lutjanus griseus</i>	Tiger grouper, <i>Mycteroperca tigris</i>
Gray triggerfish, <i>Balistes capriscus</i>	Tomtate, <i>Haemulon aurolineatum</i>
Graysby, <i>Cephalopholis cruentata</i>	Yellow jack, <i>Carangoides bartholomaei</i>
Greater amberjack, <i>Seriola dumerili</i>	Yellowedge grouper, <i>Epinephelus flavolimbatus</i>
Hogfish, <i>Lachnolaimus maximus</i>	Yellowfin grouper, <i>Mycteroperca venenosa</i>
Jolthead porgy, <i>Calamus bajonado</i>	Yellowmouth grouper, <i>Mycteroperca interstitialis</i>
Knobbed porgy, <i>Calamus nodosus</i>	Yellowtail snapper, <i>Ocyurus chrysurus</i>
Lane snapper, <i>Lutjanus synagris</i>	Vermilion snapper, <i>Rhomboplites aurorubens</i>
Lesser amberjack, <i>Seriola fasciata</i>	Warsaw grouper, <i>Epinephelus nigritus</i>
Longspine porgy, <i>Stenotomus caprinus</i>	White grunt, <i>Haemulon plumierii</i>
Mahogany snapper, <i>Lutjanus mahogoni</i>	Whitebone porgy, <i>Calamus leucosteus</i>
Margate, <i>Haemulon album</i>	Wreckfish, <i>Polyprion americanus</i>
Misty grouper, <i>Epinephelus mystacinus</i>	
Mutton snapper, <i>Lutjanus analis</i>	
Nassau grouper, <i>Epinephelus striatus</i>	

Stock assessments, through the evaluation of biological and statistical information, provide an evaluation of stock health and directionality of overall stock health under the current management regime and other potential future harvest conditions. More specifically, the assessments provide an estimation of the maximum sustainable yield (MSY) and a determination of the stock status (whether overfishing is occurring and whether the stock is overfished). Following the assessment, the Council's Scientific and Statistical Committee (SSC) reviews the stock assessment information and advises the

Council on whether the stock assessment was performed utilizing the best available data and whether the outcome of the assessment is suitable for management purposes.

A stock assessment can range from simple (evaluation of trends in catch, average fish length, and catch-per-unit-effort) to complex (statistical catch-at-age models). The type of assessment varies based on available data and available resources used to conduct an assessment. In 1998, 2001, and 2003, the Council evaluated annual reports on major snapper grouper species compiled by the NOAA/NMFS Laboratory in Beaufort, NC. These reports outlined trends in catch data and estimated spawning potential ratio (SPR) values for species in the snapper grouper fishery management unit (FMU). In addition, the Council received a report on stock status and control rule alternatives in 2001 (Powers 2001). More recent stock assessments have been performed through the Southeast Data, Assessment, and Review (SEDAR) program. Stock assessments have determined that 10 species in the snapper grouper fishery management unit (FMU) are undergoing overfishing (**Table 1-2**).

**Table 1-2.** Assessment information for 10 species in the snapper grouper fishery management unit undergoing overfishing.

Species	Most Recent Stock Assessment Source & Year Completed	Data Thru	Date SSC Approved	Overfishing?	Overfished?	Next Assessment Begins
Golden tilefish <sup>1</sup>	SEDAR 4 (2004)	2002		Yes	No	2010
Snowy grouper <sup>1</sup>	SEDAR 4 (2004)	2002		Yes	Yes	2010
Speckled hind	Potts and Brennan (2001)	1999	n/a	Yes	Unknown	2010
Warsaw grouper	Huntsman <i>et al.</i> (1992)	1990	n/a	Yes	Unknown	2012
Black grouper	Potts and Brennan (2001)	1999	10/21/05	Yes	Unknown	2009
Black sea bass <sup>1</sup>	SEDAR Update 1 (2005)	2003	5/12/05	Yes	Yes	2011
Gag	SEDAR 10 (2006)	2004	6/12/07	Yes	No	2011
Red grouper	Potts and Brennan (2001)	1999	10/21/05	Yes	Unknown	2009
Vermilion snapper	SEDAR Update #3 (2007)	2006	6/12/07	Yes	Unknown	Not scheduled
Red snapper	SEDAR 15 (2008)	2006	6/11/08	Yes	Yes	Not scheduled

<sup>1</sup> Actions were implemented to reduce fishing mortality to a level expected to end overfishing. These stocks will be declared undergoing overfishing until a stock assessment confirms otherwise.

## 1.2 Purpose and Need

The purpose of this amendment is to: 1) modify the Wreckfish ITQ Program to bring it into compliance with the reauthorized Magnuson Stevens Act (MSA) and 2) establish a Maximum Sustainable Yield (MSY), Acceptable Biological Catch (ABC), Overfishing Limit (OFL), Annual Catch Limit (ACL) and Accountability Measures (AMs), if needed, including management measures to reduce the probability that catches will exceed the stocks' ACLs pursuant to reauthorized Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) requirements. The Council will also consider the specification of Annual Catch Targets (ACT) for a recreational fishery if necessary. Previously implemented snapper grouper amendments may contain management measures for species undergoing overfishing that are comparable to ACLs and AMs. The SSC will meet in December 2009 to continue identifying a protocol for determining

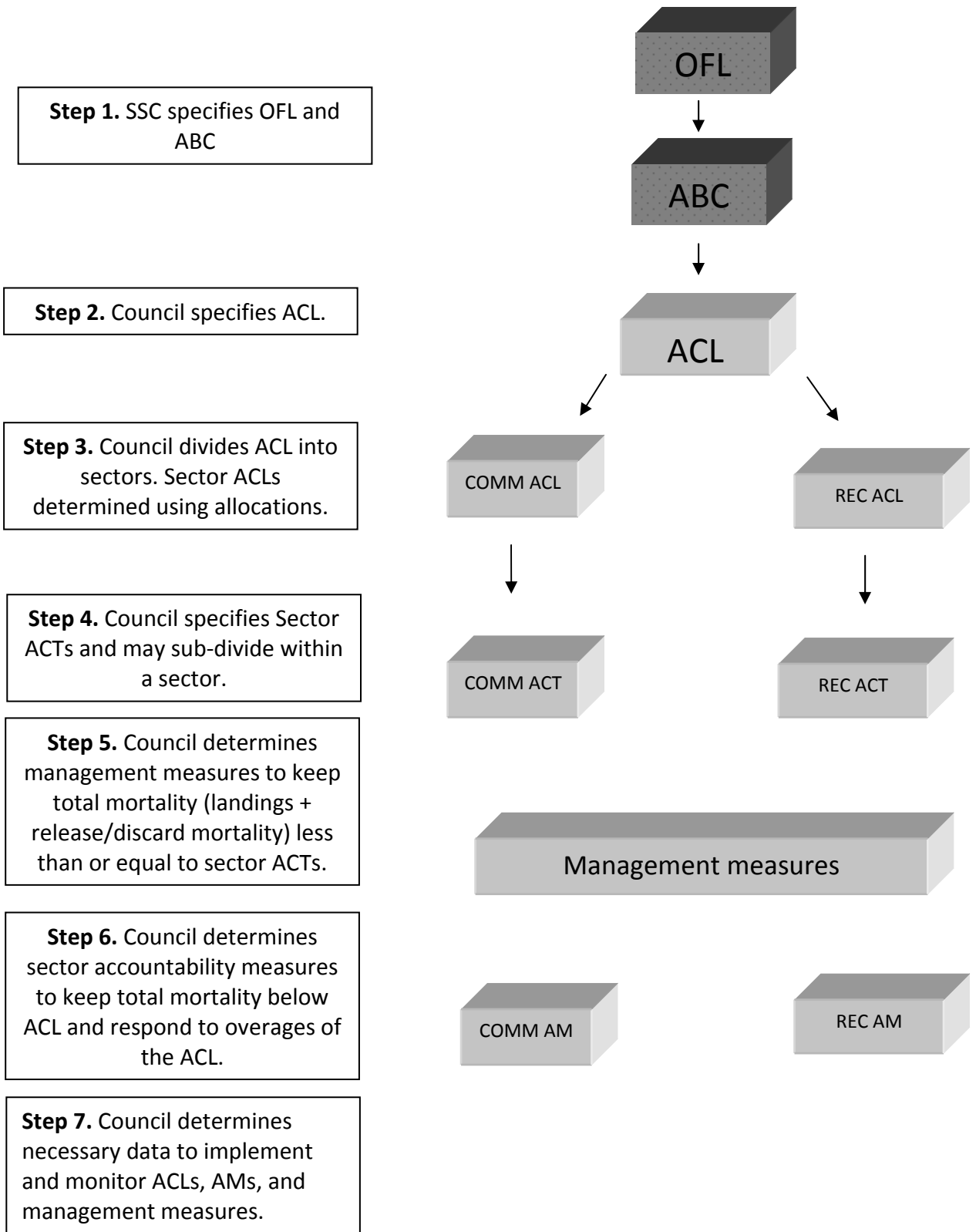
ABCs and make recommendations to the Council regarding a MSY, ABC, and OFL for the wreckfish fishery.

[insert info re ITQ program]

### **ACLs , ACTs, and AMs**

Revisions to the Magnuson-Stevens Act in 2006 require that by 2010, Fishery Management Plans (FMPs) for fisheries determined by the Secretary to be subject to overfishing must establish a mechanism for specifying ACLs at a level that prevents overfishing and does not exceed the recommendations of the respective Council's SSC or other established peer review processes. These FMPs also are required to establish within this time frame measures to ensure accountability. AMs are management controls that ensure that the ACLs are not exceeded; examples include corrective measures if overages occur and implementation of an in-season monitoring program. By 2011, FMPs for all other fisheries, except fisheries for species with annual life cycles, must meet these requirements.

The Council is employing a step-wise decision-making process in setting ACLs, ACTs, and management measures to ensure harvest is at or below the ACL (**Figure 1-2**). The SSC is expected to specify OFLs and ABC recommendations in the future based on criteria specific to levels of data availability. The ACL is the annual catch limit expressed in pounds or numbers of fish that serves as the basis for invoking accountability measures. Setting the ACL provides an opportunity to divide the total ACL into sector-specific ACLs but is not required. The ACT is the target specified in pounds or numbers of fish. Specifying an ACT is optional and up to the discretion of the Council. Catch includes fish that are retained for any purpose, as well dead discards. For fisheries where bycatch estimates are not available in a timely enough manner to manage annual catch, targets may be specified for landings, so long as an estimate of bycatch is accounted for such that total of landings and bycatch will not exceed the stock's ACL.



**Figure 1-2.** The tiering process employed in Snapper Grouper Amendment 20.

The final NS1 guidelines recognizes that existing FMPs may use terms and values that are similar to, associated with, or may be equivalent to OFL, ABC, ACL, ACT, and AM in many fisheries for which annual specifications are set for different stocks or stock complexes. In these situations the guidelines suggest that, as Councils revise their FMPs, they use the same terms as set forth in the NS1 guidelines. Therefore, Amendment 20 will include a discussion of existing harvest level designations which could be used by the Council to specify OFLs, ACLs, ACTs, ABCs, and AMs.

AMs are designed to provoke an action once either the ACL or ACT is reached during the course of a fishing season to reduce the risk overfishing will occur. However, depending on how timely the data are, it might not be realized that either the ACL and/or ACT has been reached until after a season has ended. Such AMs include prohibited retention of species once the sector ACT is met, shortening the length of the subsequent fishing season to account for overages of the ACL, and reducing the ACT in the subsequent fishing season to account for overages of the ACL.

To summarize, actions proposed in Amendment 20 would:

- Modify the Wreckfish ITQ to bring it into compliance with the reauthorized Magnuson-Stevens Act.
- Specify a MSY, ABC, OFL, ACL, ACT, if necessary, and AMs, if necessary, for South Atlantic wreckfish.

### **1.3 Management Objectives**

Objectives of the Snapper Grouper FMP, as modified by Amendment 8 (SAFMC 1996), are shown below. In addition, two new objectives proposed in Amendment 17 are also provided.

1. Prevent overfishing.
2. Collect necessary data.
3. Promote orderly utilization of the resource.
4. Provide for a flexible management system.
5. Minimize habitat damage.
6. Promote public compliance and enforcement.
7. Mechanism to vest participants.
8. Promote stability and facilitate long-run planning.
9. Create market-driven harvest pace and increase product continuity.
10. Minimize gear and area conflicts among fishermen.
11. Decrease incentives for overcapitalization.
12. Prevent continual dissipation of returns from fishing through open access.
13. Evaluate and minimize localized depletion.
14. End overfishing of snapper grouper stocks undergoing overfishing.
15. Rebuild stocks declared overfished.

## 1.4 History of Management

The snapper grouper fishery is highly regulated; some of the species included in this amendment have been regulated since 1983. The following table summarises actions in each of the amendments to the original FMP, as well as some events not covered in amendment actions.

Document	All Actions Effective By:	Proposed Rule Final Rule	Major Actions. Note that not all details are provided here. Please refer to Proposed and Final Rules for all impacts of listed documents.
FMP (1983)	08/31/83	PR: 48 FR 26843 FR: 48 FR 39463	-12" limit – red snapper, yellowtail snapper, red grouper, Nassau grouper -8" limit – black sea bass -4" trawl mesh size -Gear limitations – poisons, explosives, fish traps, trawls -Designated modified habitats or artificial reefs as Special Management Zones (SMZs)
Regulatory Amendment #1 (1986)	03/27/87	PR: 51 FR 43937 FR: 52 FR 9864	-Prohibited fishing in SMZs except with hand-held hook-and-line and spearfishing gear. -Prohibited harvest of goliath grouper in SMZs.
Amendment #1 (1988)	01/12/89	PR: 53 FR 42985 FR: 54 FR 1720	-Prohibited trawl gear to harvest fish south of Cape Hatteras, NC and north of Cape Canaveral, FL. -Directed fishery defined as vessel with trawl gear and ≥200 lbs s-g on board. -Established rebuttable assumption that vessel with s-g on board had harvested such fish in EEZ.
Regulatory Amendment #2 (1988)	03/30/89	PR: 53 FR 32412 FR: 54 FR 8342	-Established 2 artificial reefs off Ft. Pierce, FL as SMZs.
Notice of Control Date	09/24/90	55 FR 39039	-Anyone entering federal wreckfish fishery in the EEZ off S. Atlantic states after 09/24/90 was not assured of future access if limited entry program developed.
Regulatory Amendment #3 (1989)	11/02/90	PR: 55 FR 28066 FR: 55 FR 40394	-Established artificial reef at Key Biscayne, FL as SMZ. Fish trapping, bottom longlining, spear fishing, and harvesting of Goliath grouper prohibited in SMZ.
Amendment #2 (1990)	10/30/90	PR: 55 FR 31406 FR: 55 FR 46213	-Prohibited harvest/possession of goliath grouper in or from the EEZ -Defined overfishing for goliath grouper and other species
Document	All Actions Effective By:	Proposed Rule Final Rule	Major Actions. Note that not all details are provided here. Please refer to Proposed and Final Rules for all impacts of listed documents.
Emergency Rule	8/3/90	55 FR 32257	-Added wreckfish to the FMU -Fishing year beginning 4/16/90 -Commercial quota of 2 million pounds -Commercial trip limit of 10,000 pounds per trip
Fishery Closure Notice	8/8/90	55 FR 32635	- Fishery closed because the commercial quota of 2 million pounds was reached
Emergency Rule Extension	11/1/90	55 FR 40181	-extended the measures implemented via emergency rule on 8/3/90

Document	All Actions Effective By:	Proposed Rule Final Rule	Major Actions. Note that not all details are provided here. Please refer to Proposed and Final Rules for all impacts of listed documents.
Amendment #3 (1990)	01/31/91	PR: 55 FR 39023 FR: 56 FR 2443	<ul style="list-style-type: none"> <li>-Added wreckfish to the FMU;</li> <li>-Defined optimum yield and overfishing</li> <li>-Required permit to fish for, land or sell wreckfish;</li> <li>-Required catch and effort reports from selected, permitted vessels;</li> <li>-Established control date of 03/28/90;</li> <li>-Established a fishing year for wreckfish starting April 16;</li> <li>-Established a process to set annual quota, with initial quota of 2 million pounds; provisions for closure;</li> <li>-Established 10,000 pound trip limit;</li> <li>-Established a spawning season closure for wreckfish from January 15 to April 15; and</li> <li>-Provided for annual adjustments of wreckfish management measures;</li> </ul>
Notice of Control Date	07/30/91	56 FR 36052	<ul style="list-style-type: none"> <li>-Anyone entering federal snapper grouper fishery (other than for wreckfish) in the EEZ off S. Atlantic states after 07/30/91 was not assured of future access if limited entry program developed.</li> </ul>
Amendment #4 (1991)	01/01/92	PR: 56 FR 29922 FR: 56 FR 56016	<ul style="list-style-type: none"> <li>-Prohibited gear: fish traps except black sea bass traps north of Cape Canaveral, FL; entanglement nets; longline gear inside 50 fathoms; bottom longlines to harvest wreckfish**; powerheads and bangsticks in designated SMZs off S. Carolina.</li> <li>-defined overfishing/overfished and established rebuilding timeframe: red snapper and groupers ≤ 15 years (year 1 = 1991); other snappers, greater amberjack, black sea bass, red porgy ≤ 10 years (year 1 = 1991)</li> <li>-Required permits (commercial &amp; for-hire) and specified data collection regulations</li> <li>-Established an assessment group and annual adjustment procedure (framework)</li> <li>-Permit, gear, and vessel id requirements specified for black sea bass traps.</li> <li>-No retention of snapper grouper spp. caught in other fisheries with gear prohibited in snapper grouper fishery if captured snapper grouper had no bag limit or harvest was prohibited. If had a bag limit, could retain only the bag limit.</li> <li>-8" limit – lane snapper</li> <li>-10" limit – vermilion snapper (recreational only)</li> <li>-12" limit – red porgy, vermilion snapper (commercial only), gray, yellowtail, mutton, schoolmaster, queen, blackfin, cubera, dog, mahogany, and silk snappers</li> <li>-20" limit – red snapper, gag, and red, black, scamp, yellowfin, and yellowmouth groupers.</li> <li>-28" FL limit – greater amberjack (recreational only)</li> <li>-36" FL or 28" core length – greater amberjack (commercial only)</li> <li>-bag limits – 10 vermilion snapper, 3 greater amberjack</li> <li>-aggregate snapper bag limit – 10/person/day,</li> </ul>



Document	All Actions Effective By:	Proposed Rule Final Rule	Major Actions. Note that not all details are provided here. Please refer to Proposed and Final Rules for all impacts of listed documents.
			<p>excluding vermilion snapper and allowing no more than 2 red snappers</p> <ul style="list-style-type: none"> <li>-aggregate grouper bag limit – 5/person/day, excluding Nassau and goliath grouper, for which no retention (recreational &amp; commercial) is allowed</li> <li>-spawning season closure – commercial harvest greater amberjack &gt; 3 fish bag prohibited in April south of Cape Canaveral, FL</li> <li>-spawning season closure – commercial harvest mutton snapper &gt; snapper aggregate prohibited during May and June</li> <li>-charter/headboats and excursion boat possession limits extended</li> </ul>
Amendment #5 (1991)	04/06/92	PR: 56 FR 57302 FR: 57 FR 7886	-Wreckfish: established limited entry system with ITQs; required dealer to have permit; rescinded 10,000 lb. trip limit; required off-loading between 8 am and 5 pm; reduced occasions when 24-hour advance notice of offloading required for off-loading; established procedure for initial distribution of percentage shares of TAC
Emergency Rule	8/31/92	57 FR 39365	-Black Sea Bass (bsb): modified definition of bsb pot; allowed multi-gear trips for bsb; allowed retention of incidentally-caught fish on bsb trips
Emergency Rule Extension	11/30/92	57 FR 56522	-Black Sea Bass: modified definition of bsb pot; allowed multi-gear trips for bsb; allowed retention of incidentally-caught fish on bsb trips
Regulatory Amendment #4 (1992)	07/06/93	FR: 58 FR 36155	-Black Sea Bass: modified definition of bsb pot; allowed multi-gear trips for bsb; allowed retention of incidentally-caught fish on bsb trips
Regulatory Amendment #5 (1992)	07/31/93	PR: 58 FR 13732 FR: 58 FR 35895	-Established 8 SMZs off S. Carolina, where only hand-held, hook-and-line gear and spearfishing (excluding powerheads) was allowed.
Amendment #6 (1993)	07/27/94	PR: 59 FR 9721 FR: 59 FR 27242	<ul style="list-style-type: none"> <li>-commercial quotas for snowy grouper, golden tilefish</li> <li>-commercial trip limits for snowy grouper, golden tilefish, speckled hind, and warsaw grouper</li> <li>-include golden tilefish in grouper recreational aggregate bag limits</li> <li>-prohibited sale of warsaw grouper and speckled hind</li> <li>-100% logbook coverage upon renewal of permit</li> <li>-creation of the Oculina Experimental Closed Area</li> <li>-data collection needs specified for evaluation of possible future IFQ system</li> </ul>
Amendment #7 (1994)	01/23/95	PR: 59 FR 47833 FR: 59 FR 66270	<ul style="list-style-type: none"> <li>-12" FL – hogfish</li> <li>-16" TL – mutton snapper</li> <li>-required dealer, charter and headboat federal permits</li> <li>-allowed sale under specified conditions</li> <li>-specified allowable gear and made allowance for experimental gear</li> <li>-allowed multi-gear trips in N. Carolina</li> <li>-added localized overfishing to list of problems and</li> </ul>

Document	All Actions Effective By:	Proposed Rule Final Rule	Major Actions. Note that not all details are provided here. Please refer to Proposed and Final Rules for all impacts of listed documents.
			objectives -adjusted bag limit and crew specs. for charter and head boats -modified management unit for scup to apply south of Cape Hatteras, NC -modified framework procedure
Regulatory Amendment #6 (1994)	05/22/95	PR: 60 FR 8620 FR: 60 FR 19683	Established actions which applied only to EEZ off Atlantic coast of FL: Bag limits – 5 hogfish/person/day (recreational only), 2 cubera snapper/person/day > 30” TL; 12” TL – gray triggerfish
Notice of Control Date	04/23/97	62 FR 22995	-Anyone entering federal bsb pot fishery off S. Atlantic states after 04/23/97 was not assured of future access if limited entry program developed.
Amendment #8 (1997)	12/14/98	PR: 63 FR 1813 FR: 63 FR 38298	-established program to limit initial eligibility for snapper grouper fishery: Must demonstrate landings of any species in SG FMU in 1993, 1994, 1995 or 1996; and have held valid SG permit between 02/11/96 and 02/11/97. -granted transferable permit with unlimited landings if vessel landed ≥ 1,000 lbs. of snapper grouper spp. in any of the years -granted non-transferable permit with 225 lb. trip limit to all other vessels -modified problems, objectives, OY, and overfishing definitions -expanded Council’s habitat responsibility -allowed retention of snapper grouper spp. in excess of bag limit on permitted vessel with a single bait net or cast nets on board -allowed permitted vessels to possess filleted fish harvested in the Bahamas under certain conditions.
Regulatory Amendment #7 (1998)	01/29/99	PR: 63 FR 43656 FR: 63 FR 71793	-Established 10 SMZs at artificial reefs off South Carolina.
Interim Rule Request	1/16/98		-Council requested all Amendment 9 measures except black sea bass pot construction changes be implemented as an interim request under MSA
Action Suspended	5/14/98		-NMFS informed the Council that action on the interim rule request was suspended
Emergency Rule Request	9/24/98		-Council requested Amendment 9 be implemented via emergency rule
Request not Implemented	1/22/99		-NMFS informed the Council that the final rule for Amendment 9 would be effective 2/24/99; therefore they did not implement the emergency rule
Amendment #9 (1998)	2/24/99	PR: 63 FR 63276 FR: 64 FR 3624	-Red porgy: 14” length (recreational and commercial); 5 fish rec. bag limit; no harvest or possession > bag limit, and no purchase or sale, in March and April. -Black sea bass: 10” length (recreational and commercial); 20 fish rec. bag limit; required escape vents and escape panels with degradable fasteners in

Document	All Actions Effective By:	Proposed Rule Final Rule	Major Actions. Note that not all details are provided here. Please refer to Proposed and Final Rules for all impacts of listed documents.
			<p>bsb pots</p> <p>-Greater amberjack: 1 fish rec. bag limit; no harvest or possession &gt; bag limit, and no purchase or sale, during April; quota = 1,169,931 lbs; began fishing year May 1; prohibited coring.</p> <p>-Vermilion snapper: 11" length (recreational) Gag: 24" length (recreational); no commercial harvest or possession &gt; bag limit, and no purchase or sale, during March and April</p> <p>-Black grouper: 24" length (recreational and commercial); no harvest or possession &gt; bag limit, and no purchase or sale, during March and April.</p> <p>-Gag and Black grouper: within 5 fish aggregate grouper bag limit, no more than 2 fish may be gag or black grouper (individually or in combination)</p> <p>-All SG without a bag limit: aggregate recreational bag limit 20 fish/person/day, excluding tomtate and blue runners</p> <p>-Vessels with longline gear aboard may only possess snowy, warsaw, yellowedge, and misty grouper, and golden, blueline and sand tilefish.</p>
Amendment #9 (1998) resubmitted	10/13/00	PR: 63 FR 63276 FR: 65 FR 55203	-Commercial trip limit for greater amberjack
Regulatory Amendment #8 (2000)	11/15/00	PR: 65 FR 41041 FR: 65 FR 61114	-Established 12 SMZs at artificial reefs off Georgia; revised boundaries of 7 existing SMZs off Georgia to meet CG permit specs; restricted fishing in new and revised SMZs
Emergency Interim Rule	09/08/99, expired 08/28/00	64 FR 48324 and 65 FR 10040	-Prohibited harvest or possession of red porgy.
Emergency Action	9/3/99	64 FR 48326	-Reopened the Amendment 8 permit application process
Amendment #10 (1998)	07/14/00	PR: 64 FR 37082 and 64 FR 59152 FR: 65 FR 37292	-Identified EFH and established HAPCs for species in the SG FMU.
Amendment #11 (1998d)	12/02/99	PR: 64 FR 27952 FR: 64 FR 59126	<p>-MSY proxy: goliath and Nassau grouper = 40% static SPR; all other species = 30% static SPR</p> <p>-OY: hermaphroditic groupers = 45% static SPR; goliath and Nassau grouper = 50% static SPR; all other species = 40% static SPR</p> <p>-Overfished/overfishing evaluations: BSB: overfished (MSST=3.72 mp, 1995 biomass=1.33 mp); undergoing overfishing (MFMT=0.72, F1991-1995=0.95) Vermilion snapper: overfished (static SPR = 21-27%). Red porgy: overfished (static SPR = 14-19%). Red snapper: overfished (static SPR = 24-32%) Gag: overfished (static SPR = 27%)</p>

Document	All Actions Effective By:	Proposed Rule Final Rule	Major Actions. Note that not all details are provided here. Please refer to Proposed and Final Rules for all impacts of listed documents.
			<p>Scamp: no longer overfished (static SPR = 35%)  Speckled hind: overfished (static SPR = 8-13%)  Warsaw grouper: overfished (static SPR = 6-14%)  Snowy grouper: overfished (static SPR = 5=15%)  White grunt: no longer overfished (static SPR = 29-39%)  Golden tilefish: overfished (couldn't estimate static SPR)  Nassau grouper: overfished (couldn't estimate static SPR)  Goliath grouper: overfished (couldn't estimate static SPR)  -overfishing level: goliath and Nassau grouper = F&gt;F40% static SPR; all other species: = F&gt;F30% static SPR  Approved definitions for overfished and overfishing.  MSST = [(1-M) or 0.5 whichever is greater]*BMSY.  MFMT = FMSY</p>
Amendment #12 (2000)	09/22/00	PR: 65 FR 35877 FR: 65 FR 51248	-Red porgy: MSY=4.38 mp; OY=45% static SPR; MFMT=0.43; MSST=7.34 mp; rebuilding timeframe=18 years (1999=year 1); no sale during Jan-April; 1 fish bag limit; 50 lb. bycatch comm. trip limit May-December; modified management options and list of possible framework actions.
Amendment #13A (2003)	04/26/04	PR: 68 FR 66069 FR: 69 FR 15731	-Extended for an indefinite period the regulation prohibiting fishing for and possessing snapper grouper spp. within the Oculina Experimental Closed Area.
Notice of Control Date	10/14/05	70 FR 60058	-The Council is considering management measures to further limit participation or effort in the commercial fishery for snapper grouper species (excluding Wreckfish).
Amendment #13C (2006)	10/23/06	PR: 71 FR 28841 FR: 71 FR 55096	<p>- End overfishing of snowy grouper, vermilion snapper, black sea bass, and golden tilefish. Increase allowable catch of red porgy. Year 1 = 2006.</p> <p>1. Snowy Grouper Commercial: Quota (gutted weight) = 151,000 lbs gw in year 1, 118,000 lbs gw in year 2, and 84,000 lbs gw in year 3 onwards. Trip limit = 275 lbs gw in year 1, 175 lbs gw in year 2, and 100 lbs gw in year 3 onwards.</p> <p>Recreational: Limit possession to one snowy grouper in 5 grouper per person/day aggregate bag limit.</p> <p>2. Golden Tilefish Commercial: Quota of 295,000 lbs gw, 4,000 lbs gw trip limit until 75% of the quota is taken when the trip limit is reduced to 300 lbs gw. Do not adjust the trip limit downwards unless 75% is</p>

Document	All Actions Effective By:	Proposed Rule Final Rule	Major Actions. Note that not all details are provided here. Please refer to Proposed and Final Rules for all impacts of listed documents.
			<p>captured on or before September 1.</p> <p>Recreational: Limit possession to 1 golden tilefish in 5 grouper per person/day aggregate bag limit.</p> <p>3. Vermilion Snapper Commercial: Quota of 1,100,000 lbs gw. Recreational: 12” size limit.</p> <p>4. Black Sea Bass Commercial: Commercial quota (gutted weight) of 477,000 lbs gw in year 1, 423,000 lbs gw in year 2, and 309,000 lbs gw in year 3 onwards. Require use of at least 2” mesh for the entire back panel of black sea bass pots effective 6 months after publication of the final rule. Require black sea bass pots be removed from the water when the quota is met. Change fishing year from calendar year to June 1 – May 31.</p> <p>Recreational: Recreational allocation of 633,000 lbs gw in year 1, 560,000 lbs gw in year 2, and 409,000 lbs gw in year 3 onwards. Increase minimum size limit from 10” to 11” in year 1 and to 12” in year 2. Reduce recreational bag limit from 20 to 15 per person per day. Change fishing year from the calendar year to June 1 through May 31.</p> <p>5. Red Porgy Commercial and recreational</p> <ol style="list-style-type: none"> <li>1. Retain 14” TL size limit and seasonal closure (retention limited to the bag limit);</li> <li>2. Specify a commercial quota of 127,000 lbs gw and prohibit sale/purchase and prohibit harvest and/or possession beyond the bag limit when quota is taken and/or during January through April;</li> <li>3. Increase commercial trip limit from 50 lbs ww to 120 red porgy (210 lbs gw) during May through December;</li> <li>4. Increase recreational bag limit from one to three red porgy per person per day.</li> </ol>
Notice of Control Date	3/8/07	72 FR 60794	-The Council may consider measures to limit participation in the snapper grouper for-hire fishery
Amendment #14 (2007) Sent to NMFS 7/18/07	2/12/09	PR: 73 FR 32281 FR: 74 FR 1621	-Establish eight deepwater Type II marine protected areas (MPAs) to protect a portion of the population and habitat of long-lived deepwater snapper grouper species.
Amendment #15A (2007)	3/14/08	73 FR 14942	- Establish rebuilding plans and SFA parameters for snowy grouper, black sea bass, and red porgy.
Amendment #15B (2008b)	TBD	TBD	<ul style="list-style-type: none"> <li>- Prohibit the sale of bag-limit caught snapper grouper species.</li> <li>-Reduce the effects of incidental hooking on sea turtles and smalltooth sawfish.</li> <li>- Adjust commercial renewal periods and transferability requirements.</li> <li>- Implement plan to monitor and assess bycatch,</li> </ul>

Document	All Actions Effective By:	Proposed Rule Final Rule	Major Actions. Note that not all details are provided here. Please refer to Proposed and Final Rules for all impacts of listed documents.
			<ul style="list-style-type: none"> <li>- Establish reference points for golden tilefish.</li> <li>- Establish allocations for snowy grouper (95% com &amp; 5% rec) and red porgy (50% com &amp; 50% rec).</li> </ul>
Amendment #16 (SAFMC 2008c)	TBD	TBD	<ul style="list-style-type: none"> <li>-Specify SFA parameters for gag and vermilion snapper</li> <li>-For gag grouper: Specify interim allocations 51%com &amp; 49%rec; rec &amp; com spawning closure January through April; directed com quota=348,440 pounds gutted weight; reduce 5-grouper aggregate to 3-grouper and 2 gag/black to 1 gag/black and exclude captain &amp; crew from possessing bag limit.</li> <li>-For vermilion snapper: Specify interim allocations 68%com &amp; 32%rec; directed com quota split Jan-June=168,501 pounds gutted weight and 155,501 pounds July-Dec; reduce bag limit from 10 to 4 and a rec closed season October through May 15. In addition, the NMFS RA will set new regulations based on new stock assessment.</li> <li>-Require dehooking tools.</li> </ul>
Amendment #17 (TBD)	TBD	TBD	<ul style="list-style-type: none"> <li>- Establish annual catch limits and accountability measures for snapper grouper species currently experiencing overfishing.</li> <li>- Establish a rebuilding plan (rebuilding timeframe and rebuilding strategy) for red snapper.</li> <li>- Implement management measures to end overfishing and rebuild red snapper.</li> <li>- Establish allocations for species experiencing overfishing.</li> <li>- Specify management reference points for red snapper.</li> </ul>
Notice of Control Date	December 4, 2008	TBD	Establishes a control date for the golden tilefish fishery of the South Atlantic
Notice of Control Date	December 4, 2008	TBD	Establishes control date for black sea bass pot fishery of the South Atlantic
Amendment 18 (TBD)	TBD	TBD	Extend the range of the snapper grouper FMP north and designate EFH in new areas; limit participation and effort in the golden tilefish fishery; limit participation and effort in the black sea bass pot fishery; separate snowy grouper quota into regions/states; separate the gag recreational allocation into regions/states; change the golden tilefish fishing year; improve the accuracy, timing, and quantity of fisheries statistics; and update wreckfish ITQ program

Document	All Actions Effective By:	Proposed Rule Final Rule	Major Actions. Note that not all details are provided here. Please refer to Proposed and Final Rules for all impacts of listed documents.
Comprehensive ACL Amendment	TBD	TBD	Establish ABC control rules, establish ABCs, ACTs, and AMs for species not undergoing overfishing; remove some species from South Atlantic FMUs; specify allocations among the commercial, recreational, and for-hire sectors for species not undergoing overfishing; limit the total mortality for federally managed species in the South Atlantic to the ACTs, and address spiny lobster issues.

## 2 Actions and Alternatives

This section outlines the proposed actions and alternatives considered by the Council. A complete analysis of these alternatives can be found in **Section 4.0**.

Alternatives the Council considered during the development of this amendment and/or presented at the first round of public hearings but eliminated from further detailed study are described in **Appendix x**.

### 2.1 Action 1.

#### Selection of Alternatives

##### 2.1.1 Comparison of Alternatives

**Table 2-1.** Summarized comparison of the impacts among alternatives for Action 1.

	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
<b>Biological</b>					
<b>Economic</b>					
<b>Social</b>					
<b>Administrative</b>					

##### 2.1.2 Conclusion

### 2.2 Action 2.

#### Selection of Alternatives

##### 2.2.1 Comparison of Alternatives

	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
<b>Biological</b>					
<b>Economic</b>					
<b>Social</b>					
<b>Administrative</b>					



### 2.2.2 Conclusion

## 2.3 Action 3.

### Selection of Alternatives

#### 2.3.1 Comparison of Alternatives

**Table 2-3.** Summarized comparison of the impacts among alternatives for Action 3.

	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
<b>Biological</b>					
<b>Economic</b>					
<b>Social</b>					
<b>Administrative</b>					

#### 2.3.2 Conclusion

## 2.4 Action 4.

**Table 2-4.** Summarized comparison of the impacts among alternatives for Action 4.

	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
<b>Biological</b>					
<b>Economic</b>					
<b>Social</b>					
<b>Administrative</b>					

#### 2.4.1 Conclusion

### **3 Affected Environment**

#### **3.1 Habitat**

##### **3.1.1 Description and distribution**

###### **3.1.1.1 Inshore/estuarine habitat**

Snapper grouper species utilize both pelagic (open ocean) and benthic (bottom) habitats during their life cycle. Free-swimming larval stages live in the water column and feed on zooplankton. Juveniles and adults are typically bottom dwellers and usually associate with hard structures on the continental shelf that have moderate to high relief; i.e., coral reefs, artificial reefs, rocky hard-bottom substrates, ledges and caves, sloping soft-bottom areas, and limestone outcroppings. More detail on these habitat types is found in **Section 3.0** of Volume II of the Fishery Ecosystem Plan (SAFMC, in review). However, juveniles of some species, such as mutton snapper, gray snapper, dog snapper, lane snapper, yellowtail snapper, goliath grouper, red grouper, gag, snowy grouper, yellowfin grouper, black sea bass, Atlantic spadefish, and hogfish may occur in inshore seagrass beds, mangrove estuaries, lagoons, oyster reefs, and bay systems. In many species, various combinations of these habitats may be utilized during daily feeding migrations or seasonal shifts in cross-shelf distributions.

###### **3.1.1.2 Offshore habitat**

The principal snapper grouper fishing areas are located in live bottom and shelf-edge habitats; depths range from 54 to 90 feet or greater for live-bottom habitats, 180 to 360 feet for the shelf-edge habitat, and 360 to 600 feet for the lower-shelf habitat. Temperatures range from 11° to 27°C over the continental shelf and shelf-edge due to the proximity of the Gulf Stream, with lower shelf habitat temperatures varying from 11° to 14°C. The SEAMAP Bottom Mapping Project using a variety of data sources has mapped the extent and distribution of productive snapper grouper habitat on the continental shelf north of Cape Canaveral. Current data suggest that from 3% to 30% of the shelf is suitable bottom. These hard, live-bottom habitats may be low relief areas supporting sparse to moderate growth of immobile invertebrates, moderate relief reefs from 1.6 to 6.6 feet, or high relief ridges at or near the shelf break consisting of outcrops of rock that are heavily encrusted with immobile invertebrates such as sponges and sea fans. Live-bottom habitat is scattered irregularly over most of the shelf north of Cape Canaveral, but is most abundant off northeastern Florida. South of Cape Canaveral, the continental shelf narrows from 35 to 10 miles and less off the southeast coast of Florida and the Florida Keys. The lack of a large shelf area, presence of extensive, rugged living fossil coral reefs, and dominance of a tropical Caribbean fauna are distinctive characteristics.

Rock outcroppings occur throughout the continental shelf from Cape Hatteras, NC to Key West, FL. Generally, the outcroppings are composed of eroded limestone and carbonate sandstone and exhibit vertical relief ranging from less than ½ meter to over 10 meters. Ledge systems formed by rock outcrops and piles of irregularly sized boulders are common. It has been estimated that 24% (9,443 square kilometers) of the area between the 27 and 101 meter depth contours from Cape Hatteras to Cape Canaveral is reef habitat. Although the area of bottom between 100 and 300 meter depths from Cape Hatteras to Key West is small relative

to the shelf as a whole, it constitutes prime reef fish habitat according to fishermen and probably contributes significantly to the total amount of reef habitat.

Man-made artificial reefs are also utilized to attract fish and increase fish harvests. Research on manmade reefs is limited and opinions differ as to whether or not artificial structures actually promote an increase of biomass or merely concentrate fishes by attracting them from nearby natural areas.

The distribution of coral and live hardbottom habitat as presented in the SEAMAP Bottom Mapping Project can be used as a proxy for the distribution of the species in the snapper grouper complex. These maps are available over the Council's Internet Mapping System under "Mapping/GIS" on the Habitat/Ecosystem section ([www.safmc.net](http://www.safmc.net)).

Additional information on use of offshore fish habitat by snapper grouper species has been obtained through the Marine Resources Monitoring, Assessment, and Prediction Program (MARMAP). This fishery-independent survey program has been collecting data in the South Atlantic Bight region since 1973. The program began as a larval fish and groundfish survey of shelf and upper slope waters from Cape Fear to Cape Canaveral. However, since 1978, efforts of the South Carolina MARMAP program have concentrated on fishery-independent assessments of reef fish abundance and life history. The spatial distribution of sampling effort has varied considerably by gear type. Maps portraying the distribution of offshore species were created with this temporal and spatial variability in fishing effort in mind (see the Council's Habitat Plan). Maps of the distribution of snapper grouper species by gear type based on MARMAP data can be generated through the Council's Internet Mapping System under "Mapping/GIS" on the Habitat/Ecosystem section ([www.safmc.net](http://www.safmc.net)).

### **3.1.1.3 Spawning habitat**

Along with habitat settlement patterns, spawning locations are a key demographic attribute of reef fish species. Protection of spawning habitats is an unquestionably logical component of managing essential fish habitat. Specific information on the spawning sites and component habitats for many snapper grouper species has been provided by the MARMAP Program (Sedberry et al. 2006). Several seasonal patterns are present: a) spawning is concentrated over one or two winter months (as in many groupers); b) spawning occurs at low levels year-round with one or two peaks in warmer months; and c) spawning occurs year-round with more than two significant peaks. In addition, spawning can occur in pairs or in various types of aggregations. Many species of groupers and snappers can form sizeable spawning aggregations. However, this may not be the case among all species in the snapper grouper management unit. In fact, some species that spawn in aggregations may also pair-spawn under certain conditions.

Species in the snapper grouper complex may form spawning aggregations in the same spawning locales for decades. One explanation for the choice of spawning sites has to do with the avoidance of egg predation. This assumes that the upward rush culminating the spawning act takes place at structural features positioned in such a manner that eggs will be immediately carried offshore and away from predators on the reef. However, this hypothesis suffers from limited and sometimes contradictory experimental evaluation.

Spawning sites within Council's jurisdiction have been identified for many grouper and snapper species (Sedberry et al. 2006) and available information for other species suggests that shelf edge environments of moderate to high structural relief are sites of spawning for many species, perhaps throughout the entire South Atlantic region. In addition, shallow areas may also be spawning sites for some snapper grouper species such as goliath grouper. As new information becomes available, maps of all documented spawning areas will be created. In addition to pinpointing existing spawning information, this approach will allow the assessment of the spawning value of similar habitat types within Council's jurisdiction

### **3.1.2 Essential Fish Habitat**

Essential fish habitat (EFH) is defined in the Magnuson-Stevens Fishery Conservation and Management Act as "those waters and substrates necessary to fish for spawning, breeding, feeding, or growth to maturity" (16 U.S. C. 1802(10)). Specific categories of EFH identified in the South Atlantic Bight, which are utilized by federally managed fish and invertebrate species, include both estuarine/inshore and marine/offshore areas. Specifically, estuarine/inshore EFH includes: Estuarine emergent and mangrove wetlands, submerged aquatic vegetation, oyster reefs and shell banks, intertidal flats, palustrine emergent and forested systems, aquatic beds, and estuarine water column. Additionally, marine/offshore EFH includes: Live/hard bottom habitats, coral and coral reefs, artificial and manmade reefs, *Sargassum* species, and marine water column.

EFH utilized by snapper grouper species in this region includes coral reefs, live/hard bottom, submerged aquatic vegetation, artificial reefs and medium to high profile outcroppings on and around the shelf break zone from shore to at least 183 meters [600 feet (but to at least 2,000 feet for wreckfish)] where the annual water temperature range is sufficiently warm to maintain adult populations of members of this largely tropical fish complex. EFH includes the spawning area in the water column above the adult habitat and the additional pelagic environment, including *Sargassum*, required for survival of larvae and growth up to and including settlement. In addition, the Gulf Stream is also EFH because it provides a mechanism to disperse snapper grouper larvae.

For specific life stages of estuarine dependent and near shore snapper grouper species, EFH includes areas inshore of the 30 meters (100-foot) contour, such as attached microalgae; submerged rooted vascular plants (seagrasses); estuarine emergent vegetated wetlands (saltmarshes, brackish marsh); tidal creeks; estuarine scrub/shrub (mangrove fringe); oyster reefs and shell banks; unconsolidated bottom (soft sediments); artificial reefs; and coral reefs and live/hard bottom habitats.

### **Essential Fish Habitat-Habitat Areas of Particular Concern**

Areas which meet the criteria for essential fish habitat-habitat areas of particular concern (EFH-HAPCs) for species in the snapper grouper management unit include medium to high profile offshore hard bottoms where spawning normally occurs; localities of known or likely periodic spawning aggregations; near shore hard bottom areas; The Point, The Ten Fathom Ledge, and Big Rock (North Carolina); The Charleston Bump (South Carolina); mangrove habitat; seagrass habitat; oyster/shell habitat; all coastal inlets; all state-designated nursery habitats of particular importance to snapper grouper (e.g., Primary and Secondary Nursery

Areas designated in North Carolina); pelagic and benthic *Sargassum*; Hoyt Hills for wreckfish; the *Oculina* Bank Habitat Area of Particular Concern; all hermatypic coral habitats and reefs; Manganese outcroppings on the Blake Plateau; and Council-designated Artificial Reef Special Management Zones (SMZs). Areas that meet the criteria for designating essential fish habitat-habitat areas of particular concern include habitats required during each life stage (including egg, larval, postlarval, juvenile, and adult stages).

In addition to protecting habitat from fishing related degradation through FMP regulations, the Council, in cooperation with NOAA Fisheries, actively comments on non-fishing projects or policies that may impact essential fish habitat. The Council adopted a habitat policy and procedure document that established a four-state Habitat Advisory Panel and adopted a comment and policy development process. With guidance from the Advisory Panel, the Council has developed and approved habitat policies on: Energy exploration, development, transportation and hydropower re-licensing; beach dredging and filling and large-scale coastal engineering; protection and enhancement of submerged aquatic vegetation; and alterations to riverine, estuarine and nearshore flows (Appendix C of Habitat Plan; SAFMC 1998e).

## **3.2 Biological/Ecological Environment**

### **3.2.1 Species Most Impacted by this Amendment**

#### **3.2.1.1 Wreckfish, *Polyprion americanus***

The wreckfish, *Polyprion americanus*, is a large grouper-like fish that has a global anti-tropical distribution, but it was rarely captured in the western North Atlantic until the late 1980s, when a bottom hook-and-line fishery that targets wreckfish developed on the Blake Plateau (Vaughan et al. 2001). Wreckfish occur in the Eastern and Western Atlantic Ocean, on the Mid-Atlantic Ridge, on Atlantic islands and seamounts, and in the Mediterranean Sea, southern Indian Ocean, and southwestern Pacific Ocean (Heemstra 1986; Sedberry et al. 1994; Sedberry 1995). In the western Atlantic, they occur from Grand Banks (44°50' N) off Newfoundland (Scott and Scott 1988) to the Valdes Peninsula (43°30' S) in Argentina (Menni et al. 1981). Genetic evidence suggests that the stock encompasses the entire North Atlantic (Sedberry et al. 1996). Active adult migration is also possible as the frequent occurrence of European fishhooks in western North Atlantic wreckfish suggests migration across great distances (Sedberry et al. 2001).

Wreckfish have supported substantial fisheries in the eastern North Atlantic, Mediterranean, Bermuda, and the western South Atlantic, but concentrations of wreckfish adequate to support a fishery off the southeastern United States were not discovered until 1987. The fishery off the southeastern United States occurs over a complex bottom feature that has over 100 m of topographic relief, known as the Charleston Bump, that is located 130-160 km southeast of Charleston, South Carolina, at 31°30'N and 79°00'W on the Blake Plateau (Sedberry et al. 2001). Fishing occurs at water depths of 450-600 m. Primary fishing grounds comprise an area of approximately 175-260 km<sup>2</sup>, characterized by a rocky ridge and trough feature with a slope greater than 15° (Sedberry et al. 1994; Sedberry et al. 1999; Sedberry et al. 2001).

Adults are demersal and attain lengths of 200 cm TL (79 in; Heemstra 1986) and 100 kg (221 lbs; Roberts 1986). Wreckfish landed in the southeastern United States average 15 kg (33 lbs) and 100 cm TL (39 inches TL) (Sedberry et al. 1994). Juvenile wreckfish (< 60 cm TL) are pelagic, and often associate with floating debris, which accounts for their common name. The absence of small pelagic and demersal wreckfish on the Blake Plateau has led to speculation that young wreckfish drift for an extended period, up to four years, in surface currents until reaching the eastern Atlantic, or perhaps that they make a complete circuit of the North Atlantic (Sedberry et al. 2001).

Vaughan et al. (2001) reported maximum ages of 35 years, however, off Brazil ages as great as 76 years have been reported for wreckfish (Peres and Haimovici 2004). In a recent MARMAP report, mature gonads were present in 60% of females at 751-800 mm, 57% at 801-850 mm, and 100% at larger sizes. The smallest mature female was 692 mm, and immature females were 576-831 mm. The estimate of length at 50% maturity was 790 mm (Gomperz model; 95% CI = 733-820). Mature gonads were present in 40% of males at 651-800 mm and 100% at larger sizes. The smallest mature male was 661 mm, and immature males were 518-883 mm. L50 was not estimated because transition to maturity was abrupt.

Wreckfish spawn from December through May, with a peak during February and March. The highest percentages of ripe males occurred during December through May, which corresponded with the female spawning season; however, males in spawning condition were collected throughout the year. The male spawning peak was also during February and March.

### 3.2.2 Other Affected Species

### 3.2.3 Endangered Species Act (ESA)-Listed Species

Species listed as endangered or threatened under the ESA, along with any designated critical habitat(s) in the action area, are listed below. A review of the species' biology, population status, distribution, and on-going threats is provided in order to evaluate potential effects of the fishery and proposed action(s) on the listed species, as required by Section 7 of the ESA.

Section 7(a)(2) requires federal agencies ensure any activity they authorize, fund, or carry out is not likely to jeopardize the continued existence of listed species or result in destruction or adverse modification of designated critical habitat.

### List of Species and Designated Critical Habitat in the Action Area

#### Endangered

Blue whale	<i>Balaenoptera musculus</i>
Humpback whale	<i>Megaptera novaeangliae</i>
Fin whale	<i>Balaenoptera physalus</i>
North Atlantic right whale	<i>Eubalaena glacialis</i>
Sei whale	<i>Balaenoptera borealis</i>
Sperm whale	<i>Physeter macrocephalus</i>
Leatherback sea turtle	<i>Dermochelys coriacea</i>
Hawksbill sea turtle	<i>Eretmochelys imbricata</i>
Kemp's Ridley turtle	<i>Lepidochelys kempii</i>

Green turtle\* *Chelonia mydas*  
Smalltooth sawfish\*\* *Pristis pectinata*

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

\*\*U.S. distinct population segment.

#### Threatened

Loggerhead turtle *Caretta caretta*  
Elkhorn coral *Acropora palmata*  
Staghorn coral *A. cervicornis*

#### Proposed Species

None

#### Right Whale Critical Habitat

North Atlantic right whale critical habitat has been designated in the U.S. Southeast Atlantic from the mouth of the Altamaha River, Georgia, to Jacksonville, Florida, out 27 kilometers (15 nautical miles) and from Jacksonville, Florida, to Sebastian Inlet, Florida, out 9 kilometers (5 nautical miles). A portion of this area lies within the EEZ.

#### Acropora sp. Critical Habitat

The physical feature essential to the conservation of elkhorn and staghorn corals is: substrate of suitable quality and availability to support larval settlement and recruitment, and re-attachment and recruitment of asexual fragments. “Substrate of suitable quality and availability” is defined as natural consolidated hard substrate or dead coral skeleton that is free from fleshy or turf macroalgae cover and sediment cover.

Critical habitat includes one specific area of the Atlantic Ocean offshore of Palm Beach, Broward, Miami-Dade, and Monroe counties, Florida, and three specific areas of the Atlantic Ocean and Caribbean Sea offshore of the U.S. Territories of Puerto Rico and the U.S. Virgin Islands. The boundaries of each specific critical habitat area are described below. Except as specified below, the seaward boundary is the 30-meter (98-foot) depth contour and the shoreward boundary is the line of mean low water (MLW; 33 CFR 2.20). Within these boundaries, discrete areas of water deeper than 30 meters (98 feet) are not included.

(1) Florida Area: The Florida area contains three sub-areas.

(i) The shoreward boundary for Florida sub-area A begins at the 1.8-meter (6-foot) contour at the south side of Boynton Inlet, Palm Beach County at 26° 32' 42.5" N; then runs due east to the point of intersection with the 30-meter (98-foot) contour; then follows the 30-meter (98-foot) contour to the point of intersection with latitude 25° 45' 55" N, Government Cut, Miami-Dade County; then runs due west to the point of intersection with the 6-foot (1.8-meter) contour, then follows the 1.8-meter (6-foot) contour to the beginning point.

(ii) The shoreward boundary of Florida sub-area B begins at the MLW line at 25° 45' 55" N, Government Cut, Miami-Dade County; then runs due east to the point of intersection with

the 30-meter (98-foot) contour; then follows the 30-meter (98-foot) contour to the point of intersection with longitude 82° W; then runs due north to the point of intersection with the South Atlantic Fishery Management Council boundary at 24° 31' 35.75" N; then follows this boundary to a point of intersection with the MLW line at Key West, Monroe County; then follows the MLW line, the Council boundary (see 50 CFR 600.105(c)), and the COLREGS line (see 33 CFR 80.727, 730, 735, and 740) to the beginning point.

(iii) The seaward boundary of Florida sub-area C (the Dry Tortugas) begins at the northern intersection of the 30-meter (98-foot) contour and longitude 82° 45' W; then follows the 30-meter (98-foot) contour west around the Dry Tortugas, to the southern point of intersection with longitude 82° 45' W; then runs due north to the beginning point.

(2) Puerto Rico Area: All areas surrounding the islands of the Commonwealth of Puerto Rico, 30-meter (98-foot) in depth and shallower, seaward of the COLREGS line (see 33 CFR 80.738).

(3) St. Thomas/St. John Area: All areas surrounding the islands of St. Thomas and St. John, U.S. Virgin Islands, and smaller surrounding islands, 30-meter (98-foot) in depth and shallower.

(4) St. Croix Area: All areas surrounding the island of St. Croix, U.S. Virgin Islands, 30-meter (98-foot) in depth and shallower.



Species under U.S. Fish and Wildlife Service (USFWS) Jurisdiction:

Endangered

Bermuda Petrel	<i>Pterodroma cahow</i>
Roseate Tern***	<i>Sterna dougallii</i>

\*\*\* North American populations federally listed under the ESA: endangered on Atlantic coast south to NC, threatened elsewhere.

**ESA-Listed Sea Turtles**

Green, hawksbill, Kemp's ridley, leatherback, and loggerhead sea turtles are all highly migratory and travel widely throughout the South Atlantic. The following sections are a brief overview of the general life history characteristics of the sea turtles found in the South Atlantic region. Several volumes exist that cover more thoroughly the biology and ecology of these species (i.e., Lutz and Musick (eds.) 1997, Lutz *et al.* (eds.) 2002).

**Green** sea turtle hatchlings are thought to occupy pelagic areas of the open ocean and are often associated with *Sargassum* rafts (Carr 1987, Walker 1994). Pelagic stage green sea turtles are thought to be carnivorous. Stomach samples of these animals found ctenophores and pelagic snails (Frick 1976, Hughes 1974). At approximately 20 to 25 centimeters (8-10 inches) carapace length, juveniles migrate from pelagic habitats to benthic foraging areas (Bjorndal 1997). As juveniles move into benthic foraging areas a diet shift towards herbivory occurs. They consume primarily seagrasses and algae, but are also known to consume jellyfish, salps, and sponges (Bjorndal 1980, 1997; Paredes 1969; Mortimer 1981, 1982). The diving abilities of all sea turtles species vary by their life stages. The maximum diving range of green sea turtles is estimated at 110 meters (360 feet) (Frick 1976), but they are most frequently making dives of less than 20 meters (65 feet) (Walker 1994). The time of these dives also varies by life stage. The maximum dive length is estimated at 66 minutes with most dives lasting from 9 to 23 minutes (Walker 1994).

The **hawksbill's** pelagic stage lasts from the time they leave the nesting beach as hatchlings until they are approximately 22-25 centimeters (8-10 inches) in straight carapace length (Meylan 1988, Meylan and Donnelly 1999). The pelagic stage is followed by residency in developmental habitats (foraging areas where juveniles reside and grow) in coastal waters. Little is known about the diet of pelagic stage hawksbills. Adult foraging typically occurs over coral reefs, although other hard-bottom communities and mangrove-fringed areas are occupied occasionally. Hawksbills show fidelity to their foraging areas over several years (van Dam and Diéz 1998). The hawksbill's diet is highly specialized and consists primarily of sponges (Meylan 1988). Gravid females have been noted ingesting coralline substrate (Meylan 1984) and calcareous algae (Anderes Alvarez and Uchida 1994), which are believed to be possible sources of calcium to aid in eggshell production. The maximum diving depths of these animals are not known, but the maximum length of dives is estimated at 73.5 minutes. More routinely, dives last about 56 minutes (Hughes 1974).

**Kemp's ridley** hatchlings are also pelagic during the early stages of life and feed in surface waters (Carr 1987, Ogren 1989). Once the juveniles reach approximately 20 centimeters (8 inches) carapace length they move to relatively shallow (less than 50 meters; 164 feet.)

benthic foraging habitat over unconsolidated substrates (Márquez-M. 1994). They have also been observed transiting long distances between foraging habitats (Ogren 1989). Kemp's ridleys feeding in these nearshore areas primarily prey on crabs, though they are also known to ingest mollusks, fish, marine vegetation, and shrimp (Shaver 1991). The fish and shrimp Kemp's ridleys ingest are not thought to be a primary prey item but instead may be scavenged opportunistically from bycatch discards or from discarded bait (Shaver 1991). Given their predilection for shallower water, Kemp's ridleys most routinely make dives of 50 m or less (Soma 1985, Byles 1988). Their maximum diving range is unknown. Depending on the life stage Kemp's ridleys may be able to stay submerged anywhere from 167 minutes to 300 minutes, though dives of 12.7 minutes to 16.7 minutes are much more common (Soma 1985, Mendonca and Pritchard 1986, Byles 1988). Kemp's ridleys may also spend as much as 96% of their time underwater (Soma 1985, Byles 1988).

**Leatherbacks** are the most pelagic of all ESA-listed sea turtles and spend most of their time in the open ocean although they will enter coastal waters and are seen over the continental shelf on a seasonal basis to feed in areas where jellyfish are concentrated. Leatherbacks feed primarily on cnidarians (medusae, siphonophores) and tunicates. Unlike other sea turtles, leatherbacks' diets do not shift during their life cycles. Because leatherbacks' ability to capture and eat jellyfish is not constrained by size or age, they continue to feed on these species regardless of life stage (Bjorndal 1997). Leatherbacks are the deepest diving of all sea turtles. It is estimated that these species can dive in excess of 1000 meters (Eckert *et al.* 1989) but more frequently dive to depths of 50 to 84 meters (Eckert *et al.* 1986). Dive times range from a maximum of 37 minutes to more routine dives of 4 to 14.5 minutes (Standora *et al.* 1984, Eckert *et al.* 1986, Eckert *et al.* 1989, Keinath and Musick 1993). Leatherbacks may spend 74% to 91% of their time submerged (Standora *et al.* 1984).

**Loggerhead** hatchlings forage in the open ocean and are often associated with *Sargassum* rafts (Hughes 1974, Carr 1987, Walker 1994, Bolten and Balazs 1995). The pelagic stage of these sea turtles are known to eat a wide range of things including salps, jellyfish, amphipods, crabs, syngnathid fish, squid, and pelagic snails (Brongersma 1972). Stranding records indicate that when pelagic immature loggerheads reach 40-60 centimeters (16-23 inches) straight-line carapace length they begin to live in coastal inshore and nearshore waters of the continental shelf throughout the U.S. Atlantic (Witzell 2002). Here they forage over hard- and soft-bottom habitats (Carr 1986). Benthic foraging loggerheads eat a variety of invertebrates with crabs and mollusks being an important prey source (Burke *et al.* 1993). Estimates of the maximum diving depths of loggerheads range from 211 to 233 meters (692-764 feet.) (Thayer *et al.* 1984, Limpus and Nichols 1988). The lengths of loggerhead dives are frequently between 17 and 30 minutes (Thayer *et al.* 1984, Limpus and Nichols 1988, Limpus and Nichols 1994, Lanyan *et al.* 1989) and they may spend anywhere from 80 to 94% of their time submerged (Limpus and Nichols 1994, Lanyan *et al.* 1989).

### **ESA-Listed Marine Fish**

The historical range of the **smalltooth sawfish** in the U.S. ranged from New York to the Mexico border. Their current range is poorly understood but believed to have contracted from these historical areas. In the South Atlantic region, they are most commonly found in Florida, primarily off the Florida Keys (Simpfendorfer and Wiley 2004). Only two

smalltooth sawfish have been recorded north of Florida since 1963 (the first was captured off North Carolina in 1999 (Schwartz 2003) and the other off Georgia 2002 [Burgess unpublished data]). Historical accounts and recent encounter data suggest that immature individuals are most common in shallow coastal waters less than 25 meters (Bigelow and Schroeder 1953, Adams and Wilson 1995), while mature animals occur in waters in excess of 100 meters (Simpfendorfer pers. comm. 2006). Smalltooth sawfish feed primarily on fish. Mullet, jacks, and ladyfish are believed to be their primary food resources (Simpfendorfer 2001). Smalltooth sawfish also prey on crustaceans (mostly shrimp and crabs) by disturbing bottom sediment with their saw (Norman and Fraser 1938, Bigelow and Schroeder 1953).

NMFS convened the Smalltooth Sawfish Recovery Team, comprising sawfish scientists, managers, and environmental managers, to develop a plan to recover the U.S. distinct population segment (DPS) of smalltooth sawfish. The plan recommends specific steps to recover the DPS, focusing on reducing fishing impacts, protecting important habitats, and educating the public. The draft recovery plan was made available for public comment in August 2006 and can be found at [www.nmfs.noaa.gov](http://www.nmfs.noaa.gov). On May 1, 2009, the Southeast Regional Office, Sustainable Fisheries Division, requested reinitiation of the Endangered Species Act section 7 consultation on the South Atlantic shrimp fishery and its effects on smalltooth sawfish because the amount of authorized incidental take for smalltooth sawfish had been exceeded. The most recent biological opinion on shrimp fishing under the Shrimp Fishery Management Plan for the South Atlantic, completed on February 25, 2005, concluded the continued authorization of the South Atlantic shrimp fishery is not likely to jeopardize the continued existence of smalltooth sawfish. An incidental take statement was issued authorizing the annual incidental lethal take of up to one smalltooth sawfish. A smalltooth sawfish take was observed in a shrimp trawl in the South Atlantic exclusive economic zone (EEZ) on July 26, 2008. It was in poor condition and believed not to have survived the interaction. Three additional smalltooth sawfish were observed taken in a shrimp trawls in the South Atlantic EEZ during a fishing trip from March 5-9, 2009. One of the smalltooth sawfish is thought to have died from the interaction; the other two were released alive and assumed to have survived.

Under the Endangered Species Act (ESA), it is illegal to catch or harm an endangered sawfish. However, some fishermen catch sawfish incidentally while fishing for other species. NMFS and the Smalltooth Sawfish Recovery Team have developed guidelines to fishermen telling them how to safely handle and release any sawfish they catch.

#### **ESA-Listed Marine Invertebrates**

Elkhorn (*Acropora palmata*) and staghorn (*A. cervicornis*) coral were listed as threatened under the ESA on May 9, 2006. The Atlantic *Acropora* Status Review (*Acropora* Biological Review Team 2005) presents a summary of published literature and other currently available scientific information regarding the biology and status of both these species.

**Elkhorn** and **staghorn** corals are two of the major reef-building corals in the wider Caribbean. In the South Atlantic region, they are found most commonly in the Florida Keys; staghorn coral occurs the furthest north with colonies documented off Palm Beach, Florida (26°3'N). The depth range for these species ranges from <1 meter (3 feet) to 60 meters (197 feet). The

optimal depth range for elkhorn is considered to be 1 to 5 meters (3-16 feet) depth (Goreau and Wells 1967), while staghorn corals are found slightly deeper, 5 to 15 meters (16-49 feet) (Goreau and Goreau 1973).

All Atlantic *Acropora* species (including elkhorn and staghorn coral) are considered to be environmentally sensitive, requiring relatively clear, well-circulated water (Jaap *et al.* 1989). Optimal water temperatures for elkhorn and staghorn coral range from 25° to 29°C (77-84°F) (Ghiold and Smith 1990, Williams and Bunkley-Williams 1990). Both species are almost entirely dependent upon sunlight for nourishment, contrasting the massive, boulder-shaped species in the region (Porter 1976, Lewis 1977) that are more dependent on zooplankton. Thus, Atlantic *Acropora* species are much more susceptible to increases in water turbidity than some other coral species.

Fertilization and development of elkhorn and staghorn corals is exclusively external. Embryonic development culminates with the development of planktonic larvae called planulae (Bak *et al.* 1977, Sammarco 1980, Rylaarsdam 1983). Unlike most other coral larvae, elkhorn and staghorn planulae appear to prefer to settle on upper, exposed surfaces, rather than in dark or cryptic ones (Szmant and Miller 2006), at least in a laboratory setting. Studies of elkhorn and staghorn corals indicated that larger colonies of both species<sup>1</sup> had higher fertility rates than smaller colonies (Soong and Lang 1992).

### Species of Concern

NOAA Fisheries Service has created a list of Species of Concern as a publicly available list identifying other species of concern. These are species about which NOAA Fisheries Service has some concerns regarding status and threats, but for which insufficient information is available to indicate a need to list the species under the ESA. NOAA Fisheries Service uses the list to draw proactive attention and conservation action to these species. No federal mandate protects species of concern under the ESA although voluntary protection of these species is urged. To date, no incidental capture of any of these species has been reported in the shrimp fishery or golden crab fishery in the South Atlantic region.

#### List of Marine Species of Concern in the Southeastern U. S.

Dusky shark	<i>Carcharhinus obscurus</i>
Sand tiger shark	<i>Odontaspis taurus</i>
Night shark	<i>Carcharhinus signatus</i>
Atlantic sturgeon	<i>Acipenser oxyrhynchus oxyrhynchus</i>
Mangrove rivulus	<i>Rivulus marmoratus</i>
Oposum pipefish	<i>Micropphis barchyurus lineatus</i>
Key silverside	<i>Menidia conchorum</i>
Goliath grouper	<i>Epinephelus itajara</i>
Speckled hind	<i>Epinephelus drummondhayi</i>
Warsaw grouper	<i>Epinephelus nigritus</i>
Nassau grouper	<i>Epinephelus striatus</i>
Atlantic white marlin	<i>Tetrapturus albidus</i>
Ivory Tree Coral	<i>Oculina varicosa</i>

<sup>1</sup> As measured by surface area of the live colony

### 3.2.4 South Atlantic Snapper Grouper Fishery Interactions with ESA-Listed Species

**Sea turtles** are vulnerable to capture by bottom longline and vertical hook-and-line gear. The magnitude of the interactions between sea turtles and the South Atlantic snapper grouper fishery was evaluated in NMFS (2006) using data from the Supplementary Discard Data Program (SDDP). Three loggerheads and three unidentified sea turtles were caught on vertical lines; one leatherback and one loggerhead were caught on bottom longlines, all were released alive (**Table 3-1**). The effort reported program represented between approximately 5% and 14% of all South Atlantic snapper grouper fishing effort. These data were extrapolated in NMFS (2006) to better estimate the number of interactions between the entire snapper grouper fishery and ESA-listed sea turtles. The extrapolated estimate was used to project future interactions (**Table 3-2**).

The SDDP does not provide data on recreational fishing interactions with ESA-listed sea turtle species. However, anecdotal information indicates that recreational fishermen occasionally take sea turtles with hook-and-line gear. The biological opinion also used the extrapolated data from the SDDP to estimate the magnitude of recreational fishing on sea turtles (**Table 3-2**).

**Smalltooth sawfish** are also considered vulnerable to capture by bottom longline and vertical hook-and-line gear based on their capture in other southeast fisheries using such gear (Poulakis and Seitz 2004; Simpfendorfer and Wiley 2004). SDDP data does not include any reports of smalltooth sawfish being caught in the South Atlantic commercial snapper grouper fishery. There are no other documented interactions between smalltooth sawfish and the South Atlantic commercial snapper grouper fishery. However, the potential for interaction, led NOAA Fisheries Service to estimate future interactions between smalltooth sawfish and the snapper grouper fishery in the 2006 biological opinion (**Table 3-2**).

**Table 3-1.** Sea turtle incidental take data from the supplementary discard data program (SDDP) for the Southeast U.S. Atlantic.

Reporting Period	Month	Logbook Statistical Grid	Species Caught	Number Caught	Discard Condition
<i>Vertical Hook-and-Line Sea Turtle Catch Data</i>					
8/1/01-7/31/02	April	2482	Unidentified	1	Alive
8/1/01-7/31/02	November	3377	Loggerhead	1	Alive
8/1/02-7/31/03	February	2780	Loggerhead	1	Alive
8/1/02-7/31/03	November	3474	Loggerhead	1	Alive
8/1/02-7/31/03	November	3476	Unknown	1	Alive
8/1/02-7/31/03	December	3476	Unknown	1	Alive
<i>Bottom Longline Sea Turtle Catch Data</i>					
8/1/01-7/31/02	August	3674	Leatherback	1	Alive
8/1/03-7/31/04	January	3575	Loggerhead	1	Unknown

**Table 3-2.** Three year South Atlantic anticipated takes of ESA-Listed species for snapper grouper gear.

Species	Amount of Take	Total
Green	Total Take	39
	Lethal Take	14
Hawksbill	Total Take	4
	Lethal Take	3
Kemp's ridley	Total Take	19
	Lethal Take	8
Leatherback	Total Take	25
	Lethal Take	15
Loggerhead	Total Take	202
	Lethal Take	67
Smalltooth sawfish	Total Take	8
	Lethal Take	0

Source: NMFS 2006

### 3.3 Administrative Environment

#### 3.3.1 The Fishery Management Process and Applicable Laws

##### 3.3.1.1 Federal Fishery Management

Federal fishery management is conducted under the authority of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) (16 U.S.C. 1801 et seq.), originally enacted in 1976 as the Fishery Conservation and Management Act. The Magnuson-Stevens Act claims sovereign rights and exclusive fishery management authority over most fishery resources within the U.S. EEZ, an area extending 200 nautical miles from the seaward boundary of each of the coastal states, and authority over U.S. anadromous species and continental shelf resources that occur beyond the U.S. EEZ.

Responsibility for Federal fishery management decision-making is divided between the U.S. Secretary of Commerce (Secretary) and eight regional fishery management councils that represent the expertise and interests of constituent states. Regional councils are responsible for preparing, monitoring, and revising management plans for fisheries needing management within their jurisdiction. The Secretary is responsible for collecting and providing the data necessary for the councils to prepare fishery management plans and for promulgating regulations to implement proposed plans and amendments after ensuring that management measures are consistent with the Magnuson-Stevens Act and with other applicable laws summarized in **Section 8.0**. In most cases, the Secretary has delegated this authority to NOAA Fisheries Service.

The South Atlantic Fishery Management Council is responsible for conservation and management of fishery resources in Federal waters of the U.S. South Atlantic. These waters extend from 3 to 200 miles offshore from the seaward boundary of the States of North Carolina, South Carolina, Georgia, and east Florida to Key West. The Council has thirteen

voting members: one from NOAA Fisheries Service; one each from the state fishery agencies of North Carolina, South Carolina, Georgia, and Florida; and eight public members appointed by the Secretary. On the South Atlantic Council there are two public members from each of the four South Atlantic States. Non-voting members include representatives of the U.S. Fish and Wildlife Service, U.S. Coast Guard, State Department, and Atlantic States Marine Fisheries Commission (ASMFC). The South Atlantic Council has adopted procedures whereby the non-voting members serving on the Council Committees have full voting rights at the Committee level but not at the full Council level. Council members serve three-year terms and are recommended by State Governors and appointed by the Secretary of Commerce from lists of nominees submitted by State governors. Appointed members may serve a maximum of three consecutive terms.

Public interests also are involved in the fishery management process through participation on Advisory Panels and through council meetings, which, with few exceptions for discussing personnel matters, are open to the public. The Council uses a Scientific and Statistical Committee to review the data and science being used in assessments and fishery management plans/amendments. In addition, the regulatory process is in accordance with the Administrative Procedures Act, in the form of “notice and comment” rulemaking.

### **3.3.1.2 State Fishery Management**

The state governments of North Carolina, South Carolina, Georgia, and Florida have authority to manage fisheries that occur in waters extending three nautical miles from their respective shorelines. North Carolina’s marine fisheries are managed by the Marine Fisheries Division of the North Carolina Department of Environment and Natural Resources. The Marine Resources Division of the South Carolina Department of Natural Resources regulates South Carolina’s marine fisheries. Georgia’s marine fisheries are managed by the Coastal Resources Division of the Department of Natural Resources. The Marine Fisheries Division of the Florida Fish and Wildlife Conservation Commission is responsible for managing Florida’s marine fisheries. Each state fishery management agency has a designated seat on the South Atlantic Council. The purpose of state representation at the council level is to ensure state participation in Federal fishery management decision-making and to promote the development of compatible regulations in state and Federal waters.

The South Atlantic states are also involved through the ASMFC in management of marine fisheries. This commission was created to coordinate state regulations and develop management plans for interstate fisheries. It has significant authority, through the Atlantic Striped Bass Conservation Act and the Atlantic Coastal Fisheries Cooperative Management Act, to compel adoption of consistent state regulations to conserve coastal species. The ASFMC also is represented at the Council level, but does not have voting authority at the Council level.

NOAA Fisheries Service’ State-Federal Fisheries Division is responsible for building cooperative partnerships to strengthen marine fisheries management and conservation at the state, inter-regional, and national levels. This division implements and oversees the distribution of grants for two national (Inter-jurisdictional Fisheries Act and Anadromous Fish Conservation Act) and two regional (Atlantic Coastal Fisheries Cooperative

Management Act and Atlantic Striped Bass Conservation Act) programs. Additionally, it works with the ASMFC to develop and implement cooperative State-Federal fisheries regulations.

### **3.3.2 Enforcement**

Both the NOAA Fisheries Service Office for Enforcement (NOAA/OLE) and the United States Coast Guard (USCG) have the authority and the responsibility to enforce NOAA Fisheries regulations. NOAA/OLE agents, who specialize in living marine resource violations, provide fisheries expertise and investigative support for the overall fisheries mission. The USCG is a multi-mission agency, which provides at-sea patrol services for the enforcement of fisheries regulations.

Neither NOAA/OLE nor the USCG can provide a continuous law enforcement presence in all areas due to the limited resources of NOAA/OLE and the priority tasking of the USCG. To supplement at-sea and dockside inspections of fishing vessels, NOAA entered into Cooperative Enforcement Agreements with Florida, Georgia, and South Carolina which granted authority to state officers to enforce the laws for which NOAA/OLE has jurisdiction. In recent years, the level of involvement by the states has increased through Joint Enforcement Agreements, whereby states conduct patrols that focus on Federal priorities and, in some circumstances, prosecute resultant violators through the state when a state violation has occurred.

NOAA General Counsel issued a revised Southeast Region Magnuson-Stevens Act Penalty Schedule in June 2003, which addresses all Magnuson-Stevens Act violations in the Southeast Region. In general, this Penalty Schedule increases the amount of civil administrative penalties that a violator may be subject to up to the current statutory maximum of \$120,000 per violation.

## **3.4 Human Environment**

### **3.4.1 Wreckfish Fishery**

#### **3.4.1.1 Description of Regulations, Harvest Methods and Gear**

#### **3.4.1.2 Landings, Ex-Vessel Value, Price, and Effort**

#### **3.4.1.3 The Wreckfish Fishery by State**

#### **3.4.1.4 Imports**



### **3.5 Social and Cultural Environment**

While studies on the general identification of fishing communities have been undertaken in the past few years, little social or cultural investigation into the nature of the Snapper Grouper fishery itself has occurred. A socioeconomic study by Waters *et al.* (1997) covered the general characteristics of the fishery in the South Atlantic, but those data are now almost 10 years old and do not capture important changes in the fishery. Chevront and Neal (2004) conducted survey work of the North Carolina commercial Snapper Grouper fishery south of Cape Hatteras, but did not include ethnographic examination of communities dependent upon fishing.

To help fill information gaps, members of the South Atlantic Council's Snapper Grouper Advisory Panel, Council members, Advisory Panel members, and representatives from the angling public identified communities they believed would be most impacted by the management measures proposed in Amendment 13C on the species addressed by this amendment. Details of their designation of particular communities, and the factors considered in this designation, can be found in Amendment 13C (SAFMC 2006).

Because so many communities in the South Atlantic benefit from Snapper Grouper fishing, the following discussion focuses on "indicator communities," defined as communities thought to be most heavily impacted by Snapper Grouper regulations.

#### **North Carolina**

Of the four states in the South Atlantic region, North Carolina (Figure 3-14) is often recognized as possessing the most "intact" commercial fishing industry; that is, it is more robust in terms of viable fishing communities and fishing industry activity than the other three states. The state offers a wide variety of fishing opportunities, including sound fishing, trolling for tuna, bottom fishing, and shrimping. Perhaps because of the wide variety of fishing opportunities, fishermen have been better able to weather regulations and coastal development pressures, adjusting their annual fishing patterns as times have changed.

#### *Commercial Fishing*

There has been a steady decline in the number of federal commercial snapper grouper permits North Carolina since 1999, with 194 unlimited commercial permits in 1999, but only 139 in 2004. Limited permits similarly declined from 36 to 16.

State license sale and use statistics for all types of licenses also indicate an overall decrease since 1994. While the overall number of state licenses to sell any species of fish or shellfish increased from 6,781 in 1994 to 9,712 in 2001/2002, the number of license holders actually reporting sales decreased from 6,710 in 1994/1995 to 5,509 in 2001/2002 (SAFMC 2006).

North Carolina fishermen demographics are detailed in Chevront and Neal (2004). Ninety eight percent of surveyed fishermen were white and 58 percent had completed some college

or had graduated from college. Of those who chose to answer the question, 27 percent of respondents reported a household income of less than \$30,000 per year, and 21 percent made at least \$75,000 per year. On average, respondents had been fishing for 18 years, and had lived in their communities for 27 years.

Chevront and Neal (2004) also provided an overview of how North Carolina commercial Snapper Grouper fishermen carry out their fishery. Approximately 65 percent of surveyed fishermen indicated year-round fishing. Gag is the fish most frequently targeted by these fishermen, with 61 percent of fishermen targeting gag at some point in the year, despite the prohibition of commercial sales and limit to the recreational bag limit in March and April. Vermillion snapper (36.3 percent) and black sea bass (46 percent) are the next most frequently targeted species. A significant number of fishermen land king mackerel during each month, with over 20 percent of fishermen targeting king mackerel between October and May. During the gag closed season, king mackerel are targeted by about 35 percent of the fishermen. Other snapper/grouper complex species landed by at least 5 percent of the fishermen in any given month were red grouper (39.5 percent), scamp (27.4 percent), snowy grouper (9.7 percent), grunts (14.5 percent), triggerfish (13.7 percent), and golden tilefish (5.6 percent). Non-snapper/grouper complex species landed by at least 5 percent of the fishermen in any given month included Atlantic croaker, yellowfin tuna, bluefin tuna, dolphin, and shrimp.

By looking at the commercial landings data on the snapper grouper complex it is possible to see which communities are involved with the commercial fisheries for these species (Table 3-62). Although rankings can fluctuate from year to year, this can give us a starting point for understanding some of the communities that would be impacted by more restrictive regulations.

**Table 3-59.** Top commercial cumulative landings for North Carolina for 2003-2007, listed by species, impacted by this amendment. Logbook data, SEFSC 2009.

	Location	Pounds	Location	Pounds	Location	Pounds
Gag	New Hanover County	675,714	Carteret County	640,750	Brunswick County	390,242
Vermillion Snapper	Brunswick County	2,317,534	Murrells Inlet	1,889,016	Carteret County	1,483,802
Black Sea Bass	Onslow County	2,100,034	Dare County	1,552,624	New Hanover County	1,165,877
Snowy Grouper	Dare County	439,301	Carteret County	387,333	New Hanover County	211,988
Golden tilefish	Murrells Inlet	154,082	Brunswick County	117,658	Dare County	13,526
Red snapper	Murrells Inlet	164,317	Carteret County	60,491	Brunswick County	31,007
Black	Murrells	642	Brunswick	518	Hyde	406

grouper	Inlet		County		County	
Red grouper	Brunswick County	636,262	New Hanover County	602,521	Carteret County	589,856
Warsaw grouper	Onslow County	15				
Speckled hind	Dare County	428	Hyde County	174		

*Recreational Fishing*

Recreational fishing is well developed in North Carolina and, due to natural geography, is not limited to areas along the coast. Data show that North Carolina is almost on par with east Florida for total recreational fishing participation effort (data not shown; see SAFMC 2006). A brief discussion of public boat ramps and local recreational fishing clubs, as well as sources of information used by these anglers, can be found in SAFMC (2006).

The North Carolina state legislature approved the creation of a state recreational saltwater fishing license in 2004. The license created controversy for both the recreational and commercial sectors, each believing that it will hurt or help their access to marine resources. Possession of the license, subject to exemptions, has been required as of January 1, 2007 (<http://www.ncdmf.net/recreational/NCCRFLfaq.htm>).

[insert discussion for relevant NC communities]

**South Carolina**

South Carolina communities with substantial fishing activity are less developed than those in North Carolina and, over the past 20 to 30 years, the state has seen much more tourist-oriented development along its coasts than Georgia or North Carolina. In Horry County, the urban area of Myrtle Beach has expanded greatly in the past few decades, and much of the coastal area has been developed as vacation homes, condominiums, and golf courses. The communities most impacted by this development are Little River, Murrells Inlet, Pawleys Island, and Georgetown, although the latter three are located in Georgetown County (Figure 3-20). The same is true of rapid developing Charleston County, and the cities and communities of McClellanville, Mt. Pleasant, Sullivans Island, Wadmalaw and Edisto Islands feel the impact of urban sprawl from the city of Charleston. Further south along the coast, the Hilton Head Island resort development has been the impetus for changing coastal landscapes in the small towns of Port Royal, Beaufort, St. Helena Island, and Bluffton.

For the purpose of this document, only Little River will be singled out as a community with a high concentration of both commercial and recreational fishing, along with other types of coastal oriented leisure pursuits. Other analyses will consider South Carolina as a whole.

**Commercial Fishing**

While pockets of commercial fishing activities remain in the state, most are being displaced by the development forces and associated changes in demographics. The number of

unlimited commercial permits, however, increased from 74 in 1999 to 87 in 2004, while the number of limited commercial permits decreased by 75 percent from 12 to 4 (SAFMC 2006).

### *Recreational Fishing*

Many areas that used to be dedicated to commercial fishing endeavors are now geared towards the private recreational angler and for hire sector. The number of federal charter/headboat permits held by South Carolina residents increased from 41 in 1999 to 111 in 2004. The majority of saltwater anglers fish for coastal pelagic species such as king mackerel, Spanish mackerel, tunas, dolphins, and billfish. A lesser number focus primarily on bottom fish such as snapper and groupers and often these species are the specialty of the headboats that run out of Little River, Murrells Inlet, and Charleston. There are 35 coastal marinas in the state and 34 sportfishing tournaments (SAFMC 2006).

### Little River, Georgetown County

A history of Little River detailing its settlement in the late 1600s, its popularity as a vacation destination in the 1920s, and the concurrent rise in charter fishing, can be found in SAFMC (2006). **Figure 3-20** shows Little River and the surrounding area. A detailed description of changes in land-use patterns in and near Little River can be found in SAFMC (2006).

Nearby Murrells Inlet is gradually transforming into a residential community for Myrtle Beach, and SAFMC (2006) argues this is also true for Little River.

Census data indicate the Little River population more than doubled from 1990 (3,470 persons) to 2000 (7,027 persons) and became more ethnically diverse with more people of American Indian or Alaskan Native, and Hispanic or Latino ethnicities. Median income increased by over 40 percent, from nearly \$29,000 to over \$40,000. Median home value also increased by over 40 percent, and median rent increased by nearly 35 percent. The percentage of those completing high school and those with a Bachelor's degree remained about the same. The poverty level decreased by nearly two-thirds to 4.7 percent, and the percentage of the population unemployed decreased from 6.6 percent to 3.4 percent. The percentage of residents employed in farming, fishing, and forestry decreased from 3.6 percent to 0.9 percent.

### *Commercial Fishing*

In 1998, 38 residents of Little River were employed in fishing related industry according to the U.S. Census, with 81 percent of those employed by the marina sector. The number of Snapper Grouper unlimited harvest commercial permits held by community residents remained about the same between 1999 and 2004, from 15 permits to 16 permits, and one resident still held a limited harvest commercial license. Twenty-four Little River residents held state permits, with the most being saltwater licenses (8 permits) or trawler licenses (5 permits) (SAFMC 2006).

**Table 3-60** below shows the commercial cumulative landings by pounds and ranking in the South Atlantic for Little River for the years 2005-2007 for major species in this amendment. Little River had little or no landings of black grouper, speckled hind, or warsaw grouper.

Table 3-60. Commercial cumulative landings by pounds and ranking in the South Atlantic for Little River for the years 2005-2007.

Species	Pounds	Ranking in South Atlantic
Gag	409,721	4th
Vermillion Snapper	1,035,287	5th
Black Sea Bass	549,944	6th
Snowy Grouper	289,128	3rd
Golden tilefish	615,373	4th
Red snapper	31,777	11th
Red grouper	21,535	20th

*Recreational Fishing*

As observed in other coastal communities described herein, the number of charter/headboat permits held by community residents increased from 9 in 1999 to 16 in 2004. Three headboats operated out of Little River, and this part of the for-hire industry has a long and storied past in the community. Recreational fishing, primarily as headboat effort, came about as a way for commercial fishermen to continue fishing in the summer months. A detailed account of how recreational fishing developed in Little River can be found in Burrell (2000). Most of the private recreational fishing effort in this area occurs out of marinas in North Myrtle Beach, Myrtle Beach, and Murrells Inlet.

Insert info on Florida communities?

**4 Environmental Consequences**

**4.1 Action 1.**

**Alternative 1. No action.**

**Alternative 2.**

Effects on Protected Species

**4.1.1 Economic Effects**

**4.1.2 Social Effects**

**4.1.3 Administrative Effects**

**4.1.4 Conclusion**

**4.2 Action 2.**

**4.2.1 Biological Effects**

Effects on Protected Species

**4.2.2 Economic Effects**

**4.2.3 Social Effects**

**4.2.4 Administrative Effects**

**4.2.5 Conclusion**

**4.3 Action 3.**

**4.3.1 Biological Effects**

Effects on Protected Species

**4.3.2 Economic Effects**

**4.3.3 Social Effects**

**4.3.4 Administrative Effects**

**4.3.5 Conclusion**

**4.4 Action 4.**

**4.4.1 Biological Effects**

Effects on Protected Species

**4.4.2 Economic Effects**

**4.4.3 Social Effects**

**4.4.4 Administrative Effects**

**4.4.5 Conclusion**

## 4.5 Cumulative Effects

As directed by the National Environmental Policy Act (NEPA), federal agencies are mandated to assess not only the indirect and direct impacts, but the cumulative impacts of proposed actions as well. NEPA defines a cumulative impact as “*the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time*” (40 CFR 1508.7). Cumulative effects can either be additive or synergistic. A synergistic effect is when the combined effects are greater than the sum of the individual effects.

The Council on Environmental Quality (CEQ) offers guidance on conducting a Cumulative Effects Analysis (CEA) in a report titled “Considering Cumulative Effects under the National Environmental Policy Act” (CEQ 1997). The report outlines 11 items for consideration in drafting a CEA for a proposed action.

1. Identify the significant cumulative effects issues associated with the proposed action and define the assessment goals.
2. Establish the geographic scope of the analysis.
3. Establish the timeframe for the analysis.
4. Identify the other actions affecting the resources, ecosystems, and human communities of concern.
5. Characterize the resources, ecosystem, and human communities identified in scoping in terms of their response to change and capacity to withstand stresses.
6. Characterize the stresses affecting these resources, ecosystems, and human communities and their relation to regulatory thresholds.
7. Define a baseline condition for the resources, ecosystems, and human communities.
8. Identify the important cause-and-effect relationships between human activities and resources, ecosystems, and human communities.
9. Determine the magnitude and significance of cumulative effects.
10. Modify or add alternatives to avoid, minimize, or mitigate significant cumulative effects.
11. Monitor the cumulative effects of the selected alternative and adapt management.

### 4.5.1 Biological

#### SCOPING FOR CUMULATIVE EFFECTS

##### **1. Identify the significant cumulative effects issues associated with the proposed action and define the assessment goals.**

The CEQ cumulative effects guidance states that this step is done through three activities. The three activities and the location in the document are as follows:

- I. The direct and indirect effects of the proposed action (**Section 4.0**);



- II. Which resources, ecosystems, and human communities are affected (**Section 3.0**). Which effects are important if from a cumulative effects perspective (information contained in this CEA).

**2. Establish the geographic scope of the analysis.**

The immediate impact area would be the federal 200-nautical mile limit of the Atlantic off the coasts of North Carolina, South Carolina, Georgia, and east Florida to Key West; specifically, deepwater ecosystems identified in **Section 3.0**.

**3. Establish the timeframe for the analysis.**

It would be advantageous to go back to a time when there was a natural, or some modified (but ecologically sustainable) condition. However, data collection for many fisheries began when species were already fully exploited. Therefore, the timeframe for any analysis should be initiated when data collection began for the subject fishery. In determining how far into the future to analyze cumulative effects, the length of the effects would depend on the species. This amendment would...

**4. Identify the other actions affecting the resources, ecosystems, and human communities of concern**

The cumulative effects to the human communities are discussed in **Section 4.0**. Listed are other past, present, and reasonably foreseeable actions occurring in the South Atlantic region. These actions, when added to the proposed management measures, may result in cumulative effects on the biophysical environment.

**I. Fishery-related actions affecting South Atlantic wreckfish.**

**A. Past**

The reader is referred to **Section 1.3** for past regulatory activity for snapper grouper.

**B. Present**

In this amendment the Council has recommended:

**B. Reasonably Foreseeable Future**

**II. Non-Council and other non-fishery related actions, including natural events affecting wreckfish.**

- A. Past
- B. Present
- C. Reasonably foreseeable future

AFFECTED ENVIRONMENT

**5. Characterize the resources, ecosystem, and human communities identified in scoping in terms of their response to change and capacity to withstand stresses.**

This step should identify the trends, existing conditions, and the ability to withstand stresses of the environmental components.

**6. Characterize the stresses affecting these resources, ecosystems, and human communities and their relation to regulatory thresholds.**

**7. Define a baseline condition for the resources, ecosystems, and human communities.**

The purpose of defining a baseline condition for the resource and ecosystems in the area of the proposed action is to establish a point of reference for evaluating the extent and significance of expected cumulative effects.

DETERMINING THE ENVIRONMENTAL CONSEQUENCES OF CUMULATIVE EFFECTS

**8. Identify the important cause-and-effect relationships between human activities and resources, ecosystems, and human communities.**

The relationship between human activities and biophysical ecosystems within the context of this amendment is solely related to extractive activities and the installment of regulations as outlined in **Table 4-X**.

**9. Determine the magnitude and significance of cumulative effects.**

**10. Modify or add alternatives to avoid, minimize, or mitigate significant cumulative effects.**

The cumulative effects on the biophysical environment are expected to be negligible. Therefore, avoidance, minimization, and mitigation are not necessary.

**11. Monitor the cumulative effects of the selected alternative and adapt management.**

The effects of the proposed action are, and will continue to be, monitored through collection of data by NOAA Fisheries Service, states, stock assessments, stock assessment updates, life history studies, and other scientific observations.

**4.5.1.1 Effects on protected species**

ESA-listed species that occur within areas where the action area would be located and that may be impacted by unrelated, future, non-federal activities reasonably certain to occur within the action area include:

Marine Mammals

Sea Turtles

Fish

#### **4.5.2 Socioeconomic**

A description of the human environment and associated key fishing communities is contained in **Section 3.4** and incorporated herein by reference.

#### **4.5.3 Administrative**

#### **4.6 Bycatch Practicability Analysis**

The Council is required by MSFCMA §303(a)(11) to establish a standardized bycatch reporting methodology for federal fisheries and to identify and implement conservation and management measures that, to the extent practicable and in the following order: (A) minimize bycatch and (B) minimize the mortality of bycatch that cannot be avoided. The MSFCMA defines bycatch as “fish which are harvested in a fishery, but which are not sold or kept for personal use, and includes economic discards and regulatory discards. Such term does not include fish released alive under a recreational catch-and-release fishery management program” (MSFCMA §3(2)). Economic discards are species that are discarded because they are undesirable to the harvester. This category of discards generally includes certain species, sizes, and/or sexes with low or no market value. Regulatory discards are species required by regulation to be discarded, but also include fish that may be retained but not sold.

NMFS outlines at 50 CFR §600.350(d)(3)(i) ten factors that should be considered in determining whether a management measure minimizes bycatch or bycatch mortality to the extent practicable. These are:

1. Population effects for the bycatch species;
2. Ecological effects due to changes in the bycatch of that species (effects on other species in the ecosystem);
3. Changes in the bycatch of other species of fish and the resulting population and ecosystem effects;
4. Effects on marine mammals and birds;
5. Changes in fishing, processing, disposal, and marketing costs;
6. Changes in fishing practices and behavior of fishermen;
7. Changes in research, administration, enforcement costs and management effectiveness;
8. Changes in the economic, social, or cultural value of fishing activities and non-consumptive uses of fishery resources;
9. Changes in the distribution of benefits and costs; and
10. Social effects.

Agency guidance provided at 50 CFR §600.350(d)(3)(ii) suggests the Councils adhere to the precautionary approach found in the Food and Agriculture Organization of the United Nations (FAO) Code of Conduct for Responsible Fisheries (Article 6.5) when faced with uncertainty concerning these ten practicability factors. According to Article 6.5 of the FAO Code of Conduct for Responsible Fisheries, using the absence of adequate scientific information as a reason for postponing or failing to take measures to conserve target species, associated or dependent species, and non-target species and their environment, would not be consistent with a precautionary approach.

#### **4.6.1 Population Effects for the Bycatch Species**

##### **4.6.1.1 Background**

##### **4.6.1.2 Practicability of Management Measures in Directed Fisheries Relative to their Impact on Bycatch and Bycatch Mortality**

#### **4.6.2 Ecological Effects Due to Changes in the Bycatch of the Species**

#### **4.6.3 Changes in Bycatch of Other Fish Species and Resulting Population and Ecosystem Effects**

#### **4.6.4 Effects on Marine Mammals and Birds**

#### **4.6.5 Changes in Fishing, Processing, Disposal, and Marketing Costs**

#### **4.6.6 Changes in Fishing Practices and Behavior of Fishermen**

#### **4.6.7 Changes in Research, Administration, and Enforcement Costs and Management Effectiveness**

#### **4.6.8 Changes in the Economic, Social, or Cultural Value of Fishing Activities and Non-Consumptive Uses of Fishery Resources**

#### **4.6.9 Changes in the Distribution of Benefits and Costs**

#### **4.6.10 Social Effects**

The Social Effects of the proposed management measures are described in **Section 4.0**.

#### **4.6.11 Conclusion**

#### **4.7 Unavoidable Adverse Effects**

#### **4.8 Effects of the Fishery on the Environment**

##### **4.8.1 Effects on Ocean and Coastal Habitats**

##### **4.8.2 Public Health and Safety**

The proposed actions are not expected to have any substantial adverse impact on public health or safety.

**4.8.3 Endangered Species and Marine Mammals**

**4.9 Relationship of Short-Term Uses and Long-Term Productivity**

**4.10 Irreversible and Irretrievable Commitments of Resources**

**4.11 Monitoring and Mitigation Measures**

## **5 Regulatory Impact Review**

### **5.1 Introduction**

The NOAA Fisheries Service (NMFS) requires a Regulatory Impact Review (RIR) for all regulatory actions that are of public interest. The RIR does three things: (1) it provides a comprehensive review of the level and incidence of impacts associated with a proposed or final regulatory action; (2) it provides a review of the problems and policy objectives prompting the regulatory proposals and an evaluation of the major alternatives that could be used to solve the problem; and (3) it ensures that the regulatory agency systematically and comprehensively considers all available alternatives so that the public welfare can be enhanced in the most efficient and cost-effective way. The RIR also serves as the basis for determining whether the proposed regulations are a ‘significant regulatory action’ under the criteria provided in Executive Order (E.O.) 12866 and provides information that may be used in conducting an analysis of impacts on small business entities pursuant to the Regulatory Flexibility Act (RFA). This RIR analyzes the expected impacts of this action on the golden crab fishery. Additional details on the expected economic effects of the various alternatives in this action are included in **Section 4.0** and are incorporated herein by reference.

### **5.2 Problems and Objectives**

The purpose and need, issues, problems, and objectives of the proposed amendment are presented in **Section 1.0** and are incorporated herein by reference. In summary, the purpose of this amendment includes

### **5.3 Methodology and Framework for Analysis**

This RIR assesses management measures from the standpoint of determining the resulting changes in costs and benefits to society. To the extent practicable, the net effects of the proposed measures are stated in terms of producer and consumer surplus, changes in profits, and participation by for-hire vessel fishermen and private anglers. In addition, the public and private costs associated with the process of developing and enforcing regulations of this amendment are provided.

### **5.4 Description of the Fishery**

### **5.5 Impacts of Management Measures**

Details on the economic impacts of all alternatives are included in **Section 4.0** and are included herein by reference. The following discussion provides a summary of the expected effects of the preferred alternatives.

### **5.6 Public and Private Costs of Regulations**

The preparation, implementation, enforcement, and monitoring of this or any Federal action involves the expenditure of public and private resources that can be expressed as costs associated with the regulations. Costs associated with this amendment include:

Council costs of document preparation, meetings, public hearings, and information dissemination .....	\$
NOAA Fisheries administrative costs of document preparation, meetings and review .....	\$
Annual law enforcement costs .....	unknown
TOTAL .....	\$

Law enforcement currently monitors regulatory compliance in these fisheries under routine operations and does not allocate specific budgetary outlays to these fisheries, nor are increased enforcement budgets expected to be requested to address any component of this action.

**5.7 Summary of Economic Impacts**

**5.8 Determination of Significant Regulatory Action**

## **6 Initial Regulatory Flexibility Analysis**

### **6.1 Introduction**

The purpose of the Regulatory Flexibility Act (RFA) is to establish a principle of regulatory issuance that agencies shall endeavor, consistent with the objectives of the rule and of applicable statutes, to fit regulatory and informational requirements to the scale of businesses, organizations, and governmental jurisdictions subject to regulation. To achieve this principle, agencies are required to solicit and consider flexible regulatory proposals and to explain the rationale for their actions to assure that such proposals are given serious consideration. The RFA does not contain any decision criteria; instead, the purpose of the RFA is to inform the agency, as well as the public, of the expected economic impacts of various alternatives contained in the FMP or amendment (including framework management measures and other regulatory actions) and to ensure that the agency considers alternatives that minimize the expected impacts while meeting the goals and objectives of the FMP and applicable statutes.

With certain exceptions, the RFA requires agencies to conduct a regulatory flexibility analysis for each proposed rule. The regulatory flexibility analysis is designed to assess the impacts various regulatory alternatives would have on small entities, including small businesses, and to determine ways to minimize those impacts. In addition to analyses conducted for the RIR, the regulatory flexibility analysis provides: (1) a statement of the reasons why action by the agency is being considered; (2) a succinct statement of the objectives of, and legal basis for the proposed rule; (3) a description and, where feasible, an estimate of the number of small entities to which the proposed rule will apply; (4) a description of the projected reporting, record-keeping, and other compliance requirements of the proposed rule, including an estimate of the classes of small entities which will be subject to the requirements of the report or record; (5) an identification, to the extent practical, of all relevant Federal rules which may duplicate, overlap, or conflict with the proposed rule; and (6) a description of any significant alternatives to the proposed rule which accomplish the stated objectives of applicable statutes and which minimize any significant economic impact of the proposed rule on small entities.

In addition to the information provided in this section, additional information on the expected economic impacts of the proposed action was presented in **Sections 4.0** and **5.0** and is included herein by reference.

### **6.2 Statement of Need for, Objectives of, and Legal Basis for the Rule**

The purpose and need, issues, problems, and objectives of the proposed rule are presented in **Section 1.0** and are incorporated herein by reference. The purpose and need, issues, problems, and objectives of the proposed amendment are presented in **Section 1.0** and are incorporated herein by reference. In summary, the purpose of this amendment includes



### **6.3 Identification of All Relevant Federal Rules Which May Duplicate, Overlap, or Conflict with the Proposed Rule**

No duplicative, overlapping, or conflicting Federal rules have been identified.

### **6.4 Description and Estimate of the Number of Small Entities to Which the Proposed Rule will Apply**

This proposed action is expected to directly impact commercial fishermen. The SBA has established size criteria for all major industry sectors in the U.S. including fish harvesters. A business involved in fish harvesting 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 \$4.0 million (NAICS code 114111 and 114112, finfish and shellfish fishing) for all its affiliated operations worldwide.

### **6.5 Description of the Projected Reporting, Record-keeping and Other Compliance Requirements of the Proposed Rule, Including an Estimate of the Classes of Small Entities Which will be Subject to the Requirement and the Type of Professional Skills Necessary for the Preparation of the Report or Records**

The proposed actions do not impose any new reporting, record-keeping or other compliance requirements.

### **6.6 Substantial Number of Small Entities Criterion**

#### **6.7 Significant Economic Impact Criterion**

The outcome of ‘significant economic impact’ can be ascertained by examining two issues: disproportionality and profitability.

Disproportionality: Do the regulations place a substantial number of small entities at a significant competitive disadvantage to large entities?

All entities that are expected to be affected by the proposed rule are considered small entities so the issue of disproportionality does not arise in the present case.

Profitability: Do the regulations significantly reduce profit for a substantial number of small entities?

#### **6.8 Description of Significant Alternatives**

The Council’s preferred alternatives are:

## **7 Fishery Impact Statement – Social Impact Assessment**

### **7.1 Summary of Biological Effects**

### **7.2 Summary of Economic Effects**

### **7.3 Summary of Social Effects**

### **7.4 Summary of Administrative Effects**

### **7.5 Note for CEQ Guidance to Section 1502.22**

In accordance with the CEQ Guidance for 40 CFR Section 1502.22 of the NEPA (1986), the Council has made “reasonable efforts, in the light of overall costs and state of the art, to obtain missing information which, in its judgment, is important to evaluating significant adverse impacts on the human environment”...At this time, the Council has made reasonable efforts in light of the costs, to obtain additional social and community information in order to analyze the social impacts of the proposed actions and alternatives. However, additional sociologists or anthropologists and funding are needed to conduct community surveys and needed ethnographies that would allow a comprehensive analysis.

### **7.6 E.O. 12898: Environmental Justice**

This Executive Order mandates that each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories and possessions. Federal agency responsibilities under this Executive Order include conducting their programs, policies, and activities that substantially affect human health or the environment, in a manner that ensures that such programs, policies, and activities do not have the effect of excluding persons from participation in, denying persons the benefit of, or subjecting persons to discrimination under, such programs, policies and activities, because of their race, color, or national origin. Furthermore, each federal agency responsibility set forth under this Executive Order shall apply equally to Native American programs.

Specifically, federal agencies shall, to the maximum extent practicable: conduct human health and environmental research and analysis; collect human health and environmental data; collect, maintain, and analyze information on the consumption patterns of those who principally rely on fish and/or wildlife for subsistence; allow for public participation and access to information relating to the incorporation of environmental justice principals in Federal agency programs or policies; and share information and eliminate unnecessary duplication of efforts through the use of existing data systems and cooperative agreements among Federal agencies and with State, local, and tribal governments.

The Council conducted XX scoping meetings for this amendment in which the public was invited to provide input on actions contained therein. Comments received were considered during the development of this amendment, and no environmental justice issues were raised during the scoping process. No Native American programs would be affected by actions contained within this amendment; therefore no tribal consultation has been initiated.

## **8 Other Applicable Law**

### **8.1 Administrative Procedures Act**

All federal rulemaking is governed under the provisions of the Administrative Procedures Act (APA) (5 U.S.C. Subchapter II), which establishes a “notice and comment” procedure to enable public participation in the rulemaking process. Under the APA, NMFS is required to publish notification of proposed rules in the Federal Register and to solicit, consider and respond to public comment on those rules before they are finalized. The APA also establishes a 30-day wait period from the time a final rule is published until it takes effect, with some exceptions. This amendment complies with the provisions of the APA through the Council’s extensive use of public meetings, requests for comments and consideration of comments. The proposed rule associated with this amendment will have request for public comments which complies with the APA.

### **8.2 Information Quality Act**

The Information Quality Act (Section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Public Law 106-443)) which took effect October 1, 2002, directed the Office of Management and Budget (OMB) to issue government-wide guidelines that “provide policy and procedural guidelines to federal agencies for ensuring and maximizing the quality, objectivity, utility, and integrity of information disseminated by federal agencies.” OMB directed each federal agency to issue its own guidelines, establish administrative mechanisms allowing affected persons to seek and obtain correction of information that does not comply with OMB guidelines, and report periodically to OMB on the number and nature of complaints.

The NOAA Section 515 Information Quality Guidelines require a series of actions for each new information product subject to the Information Quality Act. This document has used the best available information and made a broad presentation thereof. The process of public review of this document provides an opportunity for comment and challenge to this information, as well as for the provision of additional information.

The information contained in this document was developed using best available scientific information. Therefore, this Amendment and EIS are in compliance with the IQA.

### **8.3 Coastal Zone Management Act**

Section 307(c)(1) of the federal Coastal Zone Management Act (CZMA) of 1972 requires that all federal activities that directly affect the coastal zone be consistent with approved state coastal zone management programs to the maximum extent practicable. While it is the goal of the South Atlantic Council to have management measures that complement those of the states, Federal and state administrative procedures vary and regulatory changes are unlikely to be fully instituted at the same time. Based on the analysis of the environmental consequences of the proposed action in Section 4.0, the Council has concluded this amendment would improve Federal management of deepwater coral ecosystems.

The Council believes this amendment is consistent to the maximum extent practicable with the Coastal Zone Management Plans of Florida, Georgia, South Carolina, and North Carolina. This determination will be submitted to the responsible state agencies under Section 307 of the CZMA administering approved Coastal Zone Management Programs in the States of Florida, South Carolina, Georgia, and North Carolina.

#### **8.4 Endangered Species Act**

The Endangered Species Act (ESA) of 1973 (16 U.S.C. Section 1531 et seq.) requires that federal agencies must ensure actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered species or the habitat designated as critical to their survival and recovery. The ESA requires NOAA Fisheries Service to consult with the appropriate administrative agency (itself for most marine species, and the U.S. Fish and Wildlife Service for all remaining species) when proposing an action that may affect threatened or endangered species or adversely modify critical habitat. Consultations are necessary to determine the potential impacts of the proposed action. They are concluded informally when proposed actions may affect but are “not likely to adversely affect” threatened or endangered species or designated critical habitat. Formal consultations, resulting in a biological opinion, are required when proposed actions may affect and are “likely to adversely affect” threatened or endangered species or adversely modify designated critical habitat. There have been no known interactions between the golden crab fishery and endangered species in the South Atlantic region and due to the nature of the fishing activity any interactions are expected to be minimal.

#### **8.5 Executive Order 12612: Federalism**

E.O. 12612 requires agencies to be guided by the fundamental federalism principles when formulating and implementing policies that have federalism implications. The purpose of the Order is to guarantee the division of governmental responsibilities between the Federal government and the States, as intended by the framers of the Constitution. No federalism issues have been identified relative to the actions proposed in this amendment and associated regulations. Therefore, preparation of a Federalism assessment under E.O. 13132 is not necessary.

#### **8.6 Executive Order 12866: Regulatory Planning and Review**

E.O. 12866, signed in 1993, requires federal agencies to assess the costs and benefits of their proposed regulations, including distributional impacts, and to select alternatives that maximize net benefits to society. To comply with E.O. 12866, NMFS prepares a Regulatory Impact Review (RIR) for all fishery regulatory actions that implement a new FMP or that significantly amend an existing plan. RIRs provide a comprehensive analysis of the costs and benefits to society associated with proposed regulatory actions, the problems and policy objectives prompting the regulatory proposals, and the major alternatives that could be used to solve the problems. The reviews also serve as the basis for the agency’s determinations as to whether proposed regulations are a “significant regulatory action” under the criteria provided in E.O. 12866 and whether proposed regulations will have a significant economic impact on a substantial number of small entities in compliance with the RFA. A regulation is

significant if it is likely to result in an annual effect on the economy of at least \$100,000,000 or if it has other major economic effects.

In accordance with E.O. 12866, the following is set forth by the Council: (1) this rule is not likely to have an annual effect on the economy of more than \$100 million or to adversely affect in a material way the economy, a sector of the economy, productivity, jobs, the environment, public health or safety, or state, local, or tribal governments or communities; (2) this rule is not likely to create any serious inconsistencies or otherwise interfere with any action take or planned by another agency; (3) this rule is not likely to materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights or obligations of recipients thereof; (4) this rule is not likely to raise novel or policy issues arising out of legal mandates, or the principles set forth in the Executive Order; (5) this rule is not controversial.

### **8.7 Executive Order 12898: Environmental Justice**

E.O. 12898 requires that “to the greatest extent practicable and permitted by law... each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies and activities on minority populations and low-income populations in the United States and its territories and possessions...”

The alternatives being considered in this amendment are not expected to result in any disproportionate adverse human health or environmental effects to minority populations or low-income populations of Florida, North Carolina, South Carolina or Georgia, rather the impacts would be spread across all participants in the golden crab and shrimp fisheries participants regardless of race or income.

### **8.8 Executive Order 12962: Recreational Fisheries**

E.O. 12962 requires Federal agencies, in cooperation with States and Tribes, to improve the quantity, function, sustainable productivity, and distribution of U.S. aquatic resources for increased recreational fishing opportunities through a variety of methods including, but not limited to, developing joint partnerships; promoting the restoration of recreational fishing areas that are limited by water quality and habitat degradation; fostering sound aquatic conservation and restoration endeavors; and evaluating the effects of Federally-funded, permitted, or authorized actions on aquatic systems and evaluating the effects of Federally-funded, permitted, or authorized actions on aquatic systems and recreational fisheries, and documenting those effects. Additionally, the order establishes a seven member National Recreational Fisheries Coordination Council responsible for, among other things, ensuring that social and economic values of healthy aquatic systems that support recreational fisheries are considered by Federal agencies in the course of their actions, sharing the latest resource information and management technologies, and reducing duplicative and cost-inefficient programs among Federal agencies involved in conserving or managing recreational fisheries. The Council also is responsible for developing, in cooperation with Federal agencies, States and Tribes, a Recreational Fishery Resource Conservation Plan - to include a five-year agenda. Finally, the Order requires NMFS and the U.S. Fish and Wildlife Service to develop a joint agency policy for administering the ESA.

The alternatives considered in this amendment are consistent with the directives of E.O. 12962.

### **8.9 Executive Order 13089: Coral Reef Protection**

E.O. 13089, signed by President William Clinton on June 11, 1998, recognizes the ecological, social, and economic values provided by the Nation's coral reefs and ensures that Federal agencies are protecting these ecosystems. More specifically, the Order requires Federal agencies to identify actions that may harm U.S. coral reef ecosystems, to utilize their program and authorities to protect and enhance the conditions of such ecosystems, and to ensure that their actions do not degrade the condition of the coral reef ecosystem.

The alternatives considered in this amendment are consistent with the directives of E.O. 13089.

### **8.10 Executive Order 13158: Marine Protected Areas**

E. O. 13158 was signed on May 26, 2000 to strengthen the protection of U.S. ocean and coastal resources through the use of Marine Protected Areas (MPAs). The E.O. defined MPAs as "any area of the marine environment that has been reserved by Federal, State, territorial, tribal, or local laws or regulations to provide lasting protection for part or all of the natural and cultural resources therein." It directs federal agencies to work closely with state, local and non-governmental partners to create a comprehensive network of MPAs "representing diverse U.S. marine ecosystems, and the Nation's natural and cultural resources".

The alternatives considered in this amendment are consistent with the directives of E.O. 13158.

### **8.11 Marine Mammal Protection Act**

The MMPA established a moratorium, with certain exceptions, on the taking of marine mammals in U.S. waters and by U.S. citizens on the high seas. It also prohibits the importing of marine mammals and marine mammal products into the United States. Under the MMPA, the Secretary of Commerce (authority delegated to NOAA Fisheries Service) is responsible for the conservation and management of cetaceans and pinnipeds (other than walruses). The Secretary of the Interior is responsible for walruses, sea otters, polar bears, manatees, and dugongs.

Part of the responsibility that NOAA Fisheries Service has under the MMPA involves monitoring populations of marine mammals to make sure that they stay at optimum levels. If a population falls below its optimum level, it is designated as "depleted." A conservation plan is then developed to guide research and management actions to restore the population to healthy levels.

In 1994, Congress amended the MMPA, to govern the taking of marine mammals incidental to commercial fishing operations. This amendment required the preparation of stock assessments for all marine mammal stocks in waters under U.S. jurisdiction; development

and implementation of take-reduction plans for stocks that may be reduced or are being maintained below their optimum sustainable population levels due to interactions with commercial fisheries; and studies of pinniped-fishery interactions. The MMPA requires a commercial fishery to be placed in one of three categories, based on the relative frequency of incidental serious injuries and mortalities of marine mammals. Category I designates fisheries with frequent serious injuries and mortalities incidental to commercial fishing; Category II designates fisheries with occasional serious injuries and mortalities; Category III designates fisheries with a remote likelihood or no known serious injuries or mortalities.

Under the MMPA, to legally fish in a Category I and/or II fishery, a fisherman must take certain steps. For example, owners of vessels or gear engaging in a Category I or II fishery, are required to obtain a marine mammal authorization by registering with the Marine Mammal Authorization Program (50 CFR 229.4). They are also required to accommodate an observer if requested (50 CFR 229.7(c)) and they must comply with any applicable take reduction plans.

The golden crab fishery in the South Atlantic is listed as a Category III fishery in the 2009 Proposed List of Fisheries (LOF)(73 FR 33760; June 13, 2008). No incidentally killed or injured marine mammal species has been documented in this fishery.

## **8.12 Migratory Bird Treaty Act and Executive Order 13186**

The Migratory Bird Treaty Act (MBTA) implemented several bilateral treaties for bird conservation between the United States and Great Britain, the United States and Mexico, the United States and Japan, and the United States and the former Union of Soviet Socialist Republics. Under the MBTA, it is unlawful to pursue, hunt, take, capture, kill, possess, trade, or transport any migratory bird, or any part, nest, or egg of a migratory bird, included in treaties between the, except as permitted by regulations issued by the Department of the Interior (16 U.S.C. 703-712). Violations of the MBTA carry criminal penalties. Any equipment and means of transportation used in activities in violation of the MBTA may be seized by the United States government and, upon conviction, must be forfeited to it.

Executive Order 13186 directs each federal agency taking actions that have, or are likely to have, a measurable negative effect on migratory bird populations to develop and implement a memorandum of understanding (MOU) with the U.S. Fish and Wildlife Service (USFWS) to conserve those bird populations. In the instance of unintentional take of migratory birds, NOAA Fisheries Service would develop and use principles, standards, and practices that will lessen the amount of unintentional take in cooperation with the USFWS. Additionally, the MOU would ensure that NEPA analyses evaluate the effects of actions and agency plans on migratory birds, with emphasis on species of concern.

An MOU is currently being developed, which will address the incidental take of migratory birds in commercial fisheries under the jurisdiction of NOAA Fisheries Service. NOAA Fisheries Service must monitor, report, and take steps to reduce the incidental take of seabirds that occurs in fishing operations. The United States has already developed the U.S.



National Plan of Action for Reducing Incidental Catch of Seabirds in Longline Fisheries. Under that plan many potential MOU components are already being implemented.

The alternatives considered in this amendment are consistent with the directives of E.O. 13186.

### **8.13 National Environmental Policy Act**

This amendment to the Councils' Golden Crab FMP has been written and organized in a manner that meets NEPA requirements, and thus is a consolidated NEPA document, including a draft Environmental Impact Statement, as described in NOAA Administrative Order (NAO) 216-6, Section 6.03.a.2.

#### Purpose and Need for Action

The purpose and need for this action are described in **Section 1.1**.

#### Alternatives

The alternatives for this action are described in **Section 2.0**.

#### Affected Environment

The affected environment is described in **Section 3.0**.

#### Impacts of the Alternatives

The impacts of the alternatives on the environment are described in **Section 4.0**.

### **8.14 National Marine Sanctuaries Act**

Under the National Marine Sanctuaries Act (NMSA) (also known as Title III of the Marine Protection, Research and Sanctuaries Act of 1972), as amended, the U.S. Secretary of Commerce is authorized to designate National Marine Sanctuaries to protect distinctive natural and cultural resources whose protection and beneficial use requires comprehensive planning and management. The National Marine Sanctuary Program is administered by the Sanctuaries and Reserves Division of the NOAA. The Act provides authority for comprehensive and coordinated conservation and management of these marine areas. The National Marine Sanctuary Program currently comprises 13 sanctuaries around the country, including sites in American Samoa and Hawaii. These sites include significant coral reef and kelp forest habitats, and breeding and feeding grounds of whales, sea lions, sharks, and sea turtles. The two main sanctuaries in the South Atlantic EEZ are Gray's Reef and Florida Keys National Marine Sanctuaries.

The alternatives considered by this document are not expected to have any adverse impacts on the resources managed by the Gray's Reef and Florida Keys National Marine Sanctuaries.

### **8.15 Paperwork Reduction Act**

The purpose of the Paperwork Reduction Act (PRA) is to minimize the burden on the public. The Act is intended to ensure that the information collected under the proposed action is needed and is collected in an efficient manner (44 U.S.C. 3501 (1)). The authority to manage information collection and record keeping requirements is vested with the Director of the

Office of Management and Budget (OMB). This authority encompasses establishment of guidelines and policies, approval of information collection requests, and reduction of paperwork burdens and duplications. The PRA requires NMFS to obtain approval from the OMB before requesting most types of fishery information from the public.

### **8.16 Regulatory Flexibility Act**

The Regulatory Flexibility Act (RFA) of 1980 (5 U.S.C. 601 et seq.) requires Federal agencies to assess the impacts of regulatory actions implemented through notice and comment rulemaking procedures on small businesses, small organizations, and small governmental entities, with the goal of minimizing adverse impacts of burdensome regulations and record-keeping requirements on those entities. Under the RFA, NMFS must determine whether a proposed fishery regulation would have a significant economic impact on a substantial number of small entities. If not, a certification to this effect must be prepared and submitted to the Chief Counsel for Advocacy of the Small Business Administration. Alternatively, if a regulation is determined to significantly impact a substantial number of small entities, the Act requires the agency to prepare an initial and final Regulatory Flexibility Analysis to accompany the proposed and final rule, respectively. These analyses, which describe the type and number of small businesses, affected, the nature and size of the impacts, and alternatives that minimize these impacts while accomplishing stated objectives, must be published in the Federal Register in full or in summary for public comment and submitted to the chief counsel for advocacy of the Small Business Administration. Changes to the RFA in June 1996 enable small entities to seek court review of an agency's compliance with the Act's provisions.

This amendment document includes an Initial Regulatory Flexibility Analysis (IRFA) in **Section 6.0**.

### **8.17 Small Business Act**

Enacted in 1953, the Small Business Act requires that agencies assist and protect small-business interests to the extent possible to preserve free competitive enterprise. The objectives of the act are to foster business ownership by individuals who are both socially and economically disadvantaged; and to promote the competitive viability of such firms by providing business development assistance including, but not limited to, management and technical assistance, access to capital and other forms of financial assistance, business training, and counseling, and access to sole source and limited competition federal contract opportunities, to help firms achieve competitive viability. Because most businesses associated with fishing are considered small businesses, NMFS, in implementing regulations, must make an assessment of how those regulations will affect small businesses.

### **8.18 Public Law 99-659: Vessel Safety**

Public Law 99-659 amended the MSFCMA to require that a FMP or FMP amendment must consider, and may provide for, temporary adjustments (after consultation with the U.S. Coast Guard and persons utilizing the fishery) regarding access to a fishery for vessels that would be otherwise prevented from participating in the fishery because of safety concerns related to weather or to other ocean conditions.

No vessel would be forced to participate in South Atlantic fisheries under adverse weather or ocean conditions as a result of the imposition of management regulations proposed in this amendment.

No concerns have been raised by South Atlantic fishermen or by the U.S. Coast Guard that the proposed management measures directly or indirectly pose a hazard to crew or vessel safety under adverse weather or ocean conditions. Therefore, this amendment proposes neither procedures for making management adjustments due to vessel safety problems nor procedures to monitor, evaluate, or report on the effects of management measures on vessel or crew safety under adverse weather or ocean conditions.



## **10 List of Agencies, Organizations, and Persons to Whom Copies of the Statement are Sent**

### Responsible Agency

#### **Amendment:**

South Atlantic Fishery Management Council  
4055 Faber Place Drive, Suite 201  
North Charleston, South Carolina 29405  
(843) 571-4366 (TEL)  
Toll Free: 866-SAFMC-10  
(843) 769-4520 (FAX)  
safmc@safmc.net

#### **Environmental Impact Statement:**

NMFS, Southeast Region  
263 13<sup>th</sup> Avenue South  
St. Petersburg, Florida 33701=  
(727) 824-5301 (TEL)  
(727) 824-5320 (FAX)

### List of Agencies, Organizations, and Persons Consulted

SAFMC Habitat and Environmental Protection Panel  
SAFMC Coral Advisory Panel  
SAFMC Scientific and Statistical Committee  
SAFMC Law Enforcement Advisory Panel  
SAFMC Snapper Grouper Advisory Panel  
SAFMC Golden Crab Advisory Panel  
SAFMC Shrimp Advisory Panel  
SAFMC Deepwater Shrimp Advisory Panel  
North Carolina Coastal Zone Management Program  
South Carolina Coastal Zone Management Program  
Georgia Coastal Zone Management Program  
Florida Coastal Zone Management Program  
Florida Fish and Wildlife Conservation Commission  
Georgia Department of Natural Resources  
South Carolina Department of Natural Resources  
North Carolina Division of Marine Fisheries  
North Carolina Sea Grant  
South Carolina Sea Grant  
Georgia Sea Grant  
Florida Sea Grant  
Atlantic States Marine Fisheries Commission  
Gulf and South Atlantic Fisheries Development Foundation  
Gulf of Mexico Fishery Management Council  
National Marine Fisheries Service  
- Washington Office  
- Office of Ecology and Conservation  
- Southeast Regional Office  
- Southeast Fisheries Science Center

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