Regulatory Amendment 33

to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region

Modifications to red snapper season specifications

Including an Environmental Assessment, Regulatory Flexibility Act Analysis, and Regulatory Impact Review

November 6, 2019

South Atlantic Fishery Management Council
4055 Faber Place Drive; Suite 201
North Charleston, SC 29405

Award Number FNA15NMF4410010

Abbreviations and Acronyms Used in the FMP

ABC	acceptable biological catch
ACL	annual catch limit
AM	accountability measure
ACT	annual catch target
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
CPUE	catch per unit effort
DEIS	draft environmental impact statement
EA	environmental assessment
EEZ	exclusive economic zone
EFH	essential fish habitat
F	a measure of the instantaneous rate of fishing mortality
$F_{30\%SPR}$	fishing mortality that will produce a static SPR = 30%
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}
FMP	fishery management plan
FMU	fishery management unit
M	natural mortality rate
MARMAP	Marine Resources Monitoring Assessment and Prediction Program
MFMT	maximum fishing mortality threshold
MMPA	Marine Mammal Protection Act
MRFSS	Marine Recreational Fisheries Statistics Survey
MRIP	Marine Recreational Information Program
MSST	minimum stock size threshold
MSY	maximum sustainable yield
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
OFL	overfishing limit
OY	optimum yield
RFA	Regulatory Flexibility Act
RIR	Regulatory Impact Review
SAFMC	South Atlantic Fishery Management Council
SEDAR	Southeast Data Assessment and Review
SEFSC	Southeast Fisheries Science Center
SERO	Southeast Regional Office
SIA	social impact assessment
SPR	spawning potential ratio
SSC	Scientific and Statistical Committee
SMZ	special management zone
SPR	spawning potential ratio
SSB	stock spawning biomass
SSC	Scientific and Statistical Committee
TAC	total allowable catch

Regulatory Amendment 33 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region

Proposed actions:	Modify the South Atlantic red snapper season specifications.

Responsible Agencies and Contact Persons

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Why is the South Atlantic Fishery Management Council considering action?

In this framework amendment, the South Atlantic Fishery Management Council (Council) is proposing removing the minimum number of days (currently four) necessary to open commercial or recreational harvest in the South Atlantic region to increase access to red snapper. If this requirement is removed, red snapper harvest could be open for either recreational or commercial harvest for three days or fewer. Under both current and proposed regulations, red snapper recreational and commercial seasons operate independently of each other; that is, harvest for one sector can open without the other. The Council's stated intent with this action is to maximize socio-economic benefits. Additionally, the Council is proposing changing the start date for the commercial season from the second Monday in July to May 1 (unless otherwise specified), to optimize commercial fishing opportunities while minimizing discard mortality.

Purpose and Need

The purpose and need of this framework amendment is to remove the minimum number of days to allow commercial or recreational harvest of red snapper in the South Atlantic and modify the red snapper commercial season to increase the socio-economic benefits to fishermen and fishing communities while minimizing discard mortality.

What actions are being proposed in this framework amendment?

Regulatory Amendment 33 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region proposes the following:

Action 1. Remove the minimum number of days for the South Atlantic red snapper seasons

Currently: If the projected commercial or recreational fishing season is determined by the National Marine Fisheries Service to be three days or less, then the commercial or recreational fishing season will not open for that fishing year.

Preferred Alternative 2. Remove the requirement specifying the red snapper commercial and recreational seasons in the South Atlantic would not open if projections indicate the commercial or recreational season would be three days or fewer.

Action 2. Modify the red snapper commercial season

Currently: The commercial red snapper season begins on the second Monday in July, unless otherwise specified.

Preferred Alternative 2. Modify the commercial red snapper season start date to May 1, unless otherwise specified.

Alternative 3. Modify the commercial red snapper season start date to the second Monday in June, unless otherwise specified.

Chapter 1. Introduction

1.1 What actions are being proposed in this framework amendment?

This framework amendment proposes removing the requirement that if projections indicate the red snapper season (commercial or recreational) would be three days or fewer, the commercial and/or recreational seasons would not open for that fishing year; and modifying the start date of the commercial red snapper season.

South Atlantic Fishery Management Council

- Responsible for conservation and management of fish stocks in the South Atlantic Region
- Consists of 13 voting members who are appointed by the Secretary of Commerce, 1 representative from each of the 4 South Atlantic states, the Southeast Regional Administrator of NMFS, and 4 non-voting members
- Responsible for developing fishery management plans and amendments under the Magnuson-Stevens Act; recommends actions to NMFS for implementation
- Management area is from 3 to 200 nautical miles off the coasts of North Carolina, South Carolina, Georgia, and east Florida through Key West, with the exception of Mackerel which is from New York to Florida, and Dolphin-Wahoo, which is from Maine to Florida

1.2 Who is proposing the framework amendment?

The South Atlantic Fishery Management Council (Council) is responsible for managing fish stocks in the South Atlantic region. The Council develops the framework amendment and sends it to the National Marine Fisheries Service (NMFS) who determines whether to publish a rule to implement the framework amendment on behalf of the Secretary of Commerce. NMFS is an agency of the National Oceanic and Atmospheric Administration within the Department of Commerce. Guided by the Magnuson-Stevens Fishery Conservation and Management Act, the Council works with NMFS and other partners and stakeholders to assess and predict the status of fish stocks, establish annual catch limits, reduce bycatch, and ensure compliance with fisheries regulations.

The Council and NMFS are also responsible for making this document available for public comment. The draft environmental assessment (EA) was made available to the public during the scoping process, public hearings, and in Council meeting briefing books. The final EA/framework amendment will be made available for comment during the rulemaking process.

1.3 Where is the project located?

Management of the federal snapper grouper fishery located off the southeastern United States (South Atlantic) in the 3-200 nautical miles U.S. Exclusive Economic Zone (EEZ) is conducted under the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (Snapper Grouper FMP) (SAFMC 1983) (**Figure 1.3.1**). There are 55 species managed by the Council under the Snapper Grouper FMP.

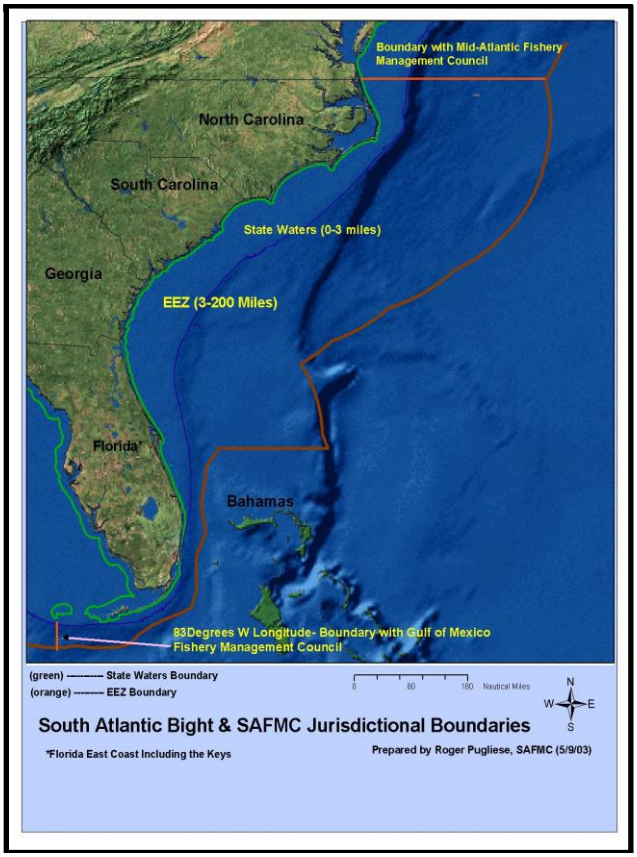

Figure 1.3.1. Jurisdictional boundaries of the Council.

1.4 Why is the Council considering action (Purpose and Need)

The purpose and need of this framework amendment is to remove the minimum number of days to allow commercial or recreational harvest of red snapper in the South Atlantic and modify the red snapper commercial season to increase the socio-economic benefits to fishermen and fishing communities while minimizing discard mortality.

1.5 What is the history of management for red snapper?

The snapper grouper fishery is highly regulated and regulations have been in place for red snapper since the initial development of the Snapper Grouper FMP in 1983. A detailed history of management for all species in the snapper grouper fishery management unit is in **Appendix C**. Below is an annotated list of fishery management plan/amendments to the Snapper Grouper FMP that contained actions specifically related to red snapper.

Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (1983)

The original Snapper Grouper FMP included provisions to prevent growth overfishing in thirteen species in the snapper grouper complex and established a procedure for preventing overfishing in other species; established minimum size limits for red snapper, yellowtail snapper, red grouper, Nassau grouper, and black sea bass; established a 4-inch trawl mesh size to achieve a 12-inch total length minimum size limit for vermilion snapper; and included additional harvest and gear limitations.

Amendment 4 (1991)

Amendment 4 prohibited the use of various gear, including fish traps, the use of bottom longlines for wreckfish, and powerheads in special management zones off South Carolina; established bag limits and minimum size limits for several species (20 inch total length minimum size limit and two fish bag limit for red snapper); required permits (commercial and for-hire) and specified data collection regulations; and required that all snapper grouper species possessed in the South Atlantic EEZ must have heads and fins intact through landing.

Amendment 11 (1998)

Amendment 11 amended the Snapper Grouper FMP to make definitions of maximum sustainable yield (MSY), optimum yield, overfishing, and overfished consistent with National Standard Guidelines. Amendment 11 also identified and defined fishing communities, addressed bycatch management measures, and defined the red snapper F_{MSY} proxy as $F_{30\%SPR}$.

Interim Rule for Red Snapper (2009)

In 2008, the Council received notification (letter dated July 8) that the South Atlantic red snapper stock was undergoing overfishing and was overfished. In March 2009, the Council requested that NMFS establish interim measures to reduce overfishing and fishing pressure on the red snapper stock. Interim measures became effective on January 4, 2010. The interim rule was effective until June 2, 2010, but was extended for an additional 186 days since the Council was developing long-term management measures in Amendment 17A to the Snapper Grouper FMP to end overfishing of red snapper and rebuild the stock.

Amendment 17A (2010)

Actions in Amendment 17A included a harvest prohibition for red snapper and an area closure for all snapper grouper species. The area closure was 4,827 square miles and extended from southern Georgia to northern Florida where harvest and possession of all snapper grouper species would be prohibited (except when fishing with black sea bass pots or spearfishing gear for species other than red snapper). The red snapper prohibition was effective on January 3, 2011; however, NMFS delayed the effective date of the area closure until June 1, 2011, via an **emergency rule**, to allow time to review the results of a new red snapper stock assessment (SEDAR 24 2010).

The results of SEDAR 24 showed red snapper to be overfished and undergoing overfishing; however, the rate of overfishing found in SEDAR 24 was less than the rate of overfishing found in the previous stock assessment (SEDAR 15 2009). Based on the results from SEDAR 24, evidence of decreased effort in the recreational sector, and recommendations from their Scientific and Statistical Committee, the Council determined that the area closure approved in Amendment 17A, in addition to the harvest prohibition, was more conservative than what was necessary to end overfishing of red snapper.

Amendment 17A also required the use of non-stainless steel circle hooks when fishing for snapper grouper species with hook-and-line gear and natural baits in the South Atlantic EEZ north of 28 degrees North latitude and specified a fishery-independent monitoring program for red snapper.

Regulatory Amendment 10 (2011)

In December 2010, the Council approved Regulatory Amendment 10 for review by the Secretary of Commerce by a unanimous vote. The action in Regulatory Amendment 10 eliminated the snapper grouper area closure approved in Amendment 17A.

Comprehensive Annual Catch Limits (ACL) Amendment (Amendment 25) (2011)

Among other actions, the Comprehensive ACL Amendment established sector allocations for many snapper grouper species, including red snapper, using an allocation formula based on historic and recent average landings. The commercial allocation for red snapper was set at 28.07% and the recreational allocation was set at 71.93%.

Emergency Rule (2012)

The rule established red snapper seasons for the commercial and recreational sectors in the South Atlantic EEZ in 2012.

Amendment 28 (2013)

The amendment set the commercial and recreational ACLs and seasons to allow limited harvest of red snapper in 2013. In addition, the amendment established a process to determine whether limited commercial and recreational fishing seasons in the South Atlantic EEZ could occur during a given fishing year, and specified management measures (no minimum size limit for either sector, recreational bag limit of one fish per person per day, and commercial trip limit of 75 lbs gutted weight) should limited harvest be allowed.

Regulatory Amendment 21 (2014)

The framework amendment changed the Minimum Stock Size Threshold (MSST) definition for eight snapper grouper species including red snapper from MSST = [(1-M) or 0.5 whichever is greater]*B_{MSY} to 0.75*B_{MSY}.

Emergency Rule (2017)

The rule established red snapper seasons for the commercial and recreational sectors in the South Atlantic EEZ in 2017.

Amendment 43 (2017)

The amendment removed the process and equation used to determine the red snapper ACL adopted in Amendment 28 and specified a total ACL of 42,510 fish. The commercial and recreational ACLs were set at 124,815 pounds (whole weight) and 29,656 fish, respectively, according to established sector allocations. The ACL was based on the highest observed landings of red snapper in a single year from 2012 through 2014. Management measures established in Amendment 28 (see above) were retained.

Chapter 2. Proposed Actions and Alternatives

2.1 Action 1. Remove the minimum number of days for the South Atlantic red snapper seasons

Alternative 1 (No Action). If the projected commercial or recreational fishing season is determined by the National Marine Fisheries Service to be three days or less then the commercial or recreational fishing season will not open for that fishing year.

Preferred Alternative 2. Remove the requirement specifying the red snapper recreational and commercial seasons in the South Atlantic would not open if projections indicate the recreational or commercial season would be three days or fewer.

Discussion: This action would remove the requirement that a red snapper season (commercial or recreational) be at least four days. If this requirement is removed, red snapper harvest could be open for either recreational or commercial harvest for fewer than four days. Under both current and proposed regulations, red snapper recreational and commercial seasons operate independently of each other; that is, harvest for one sector can open without the other.

2.1.1 Comparison of Alternatives:

This action is not expected to have measurable biological impacts, either, positive or negative, on the South Atlantic red snapper stock since total harvest will continue to be limited by the annual catch limit (ACL).

Under circumstances where the projected red snapper fishing season is determined to be more than three days, there would be no difference in the economic effects of **Preferred Alternative 2** relative to **Alternative 1 (No Action)** because the length of the fishing season would be the same between the two alternatives and overall harvest would continue to be limited to the ACL. If the recreational season were predicted to take place in three days or fewer, **Preferred Alternative 2** would result in economic benefits relative to **Alternative 1 (No Action)** through increased consumer surplus for recreational anglers, increased revenue for for-hire (charter and headboat) businesses, and increased business activity for recreational fishing related businesses. For the commercial sector, there are no expected direct or indirect economic benefits from **Preferred Alternative 2** relative to **Alternative 1 (No Action)** since commercial harvest of red snapper is expected to continue to occur as it has in recent years, over a period of several weeks.

Preferred Alternative 2 could exacerbate existing derby fishing conditions where fishermen feel pressure to complete fishing trips regardless of safety considerations placing vessels in direct competition in conditions that may be dangerous. In this respect, **Preferred Alternative 2** could result in negative social impacts relative to **Alternative 1 (No Action)**. However, while safety at sea considerations are important, allowing for the harvest of red snapper in South Atlantic waters, regardless of season length, is likely to be perceived as having positive social effects, as the past closures of this portion of the snapper grouper fishery have been highly controversial.

In terms of administrative effects, if the commercial or recreational red snapper fishing seasons are predicted to last more than three days, **Alternative 1 (No Action)** or **Preferred Alternative 2** would not create additional administrative effects. Since the commercial fishing season is anticipated to remain open for longer than three days, **Preferred Alternative 2** would not create an additional administrative burden relative to **Alternative 1 (No Action)**. Under **Alternative 1 (No Action)**, if the recreational red snapper fishing season were predicted to be three days or fewer, a recreational red snapper season would not occur thus reducing administrative effects since there would be no need for data monitoring, outreach and enforcement. Conversely, **Preferred Alternative 2** could incurr the administrative burden of data monitoring, outreach, and enforcement over a short fishing season if recreational harvest of red snapper were allowed to take place for fewer than four days. Overall, the expected administrative effects would be less under **Alternative 1 (No Action)** when compared with **Preferred Alternative 2**.

2.2 Action 2. Modify the red snapper commercial season

Alternative 1 (No Action). The commercial red snapper season begins on the second Monday in July, unless otherwise specified.

Preferred Alternative 2. Modify the commercial red snapper season start date to May 1, unless otherwise specified.

Alternative 3. Modify the commercial red snapper season start date to the second Monday in June, unless otherwise specified.

2.2.1 Comparison of Alternatives:

Preferred Alternative 2 and **Alternative 3** are expected to result in similar overall biological effects to the South Atlantic red snapper stock relative to **Alternative 1 (No Action)** since overall harvest would continue to be limited to the ACL. However, whereas **Preferred Alternative 2** could result in reduced red snapper discards in May, it could potentially increase the mortality of released fish later in the year. If commercial catch rates remain as they are, it is reasonable to expect that the commercial ACL would be met by early summer and commercial harvest would then be closed. Since higher water temperatures in the summer can affect the survivorship of discarded fish, **Preferred Alternative 2** could result in negative biological impacts to the red snapper stock relative to **Alternative 1 (No Action)** and **Alternative 3**. Hence, in terms of dicard mortality, negative biological impacts could be greatest under **Alternative 1 (No Action)**, followed by **Preferred Alternative 2** and **Alternative 3**.

Red snapper in the South Atlantic spawn from April through October with peaks in June through August (SEDAR 41 2017); hence, **Preferred Alternative 2** and **Alternative 3** would both allow commercial harvest during the spawning season and result in no measurable positive or negative biological impacts relative to **Alternative 1 (No Action)**.

The economic effects of Action 2 would likely be similar across the alternatives since commercial harvest would continue to be limited to the commercial ACL and landings and trip revenue would be similar among the alternatives. Since there are no anticipated measurable net positive or negative biological impacts, there would not be indirect economic effects resulting from future variations to harvest levels that would be an outcome of changes in the red snapper stock.

The commercial season start date in **Alternative 1 (No Action)** and proposed **Preferred Alternative 2** and **Alternative 3** are all anticipated to provide social benefits by allowing commercial fishermen to keep red snapper that would have otherwise been discarded. However, the alternative that offers the most positive social effects may depend on where a stakeholder resides with regard to a preferred opening date as red snapper are incidental catch in some areas and a targeted fishery in others. Additionally, **Preferred Alternative 2** could provide the longest season and result in social benefits to commercial fishermen. However, since data

indicate the abundance of red snapper has increased in recent years, **Preferred Alternative 2** may also result in an ACL closure earlier in the year than under **Alternative 1 (No Action)** and **Alternative 3**. Ensuring commercial harvest of red snapper remains open during the fall months would be most beneficial for fishermen targeting other species in the spring or operating in areas that experience inclement weather early in the year.

Neither **Preferred Alternative 2** nor **Alternative 3** are expected to result in changes to the administrative environment relative to **Alternative 1 (No Action)**.

Chapter 3. Affected Environment

This section describes the affected environment in the proposed project area. The affected environment is divided into four major components:

- **Habitat environment** (Section 3.1)
- **Biological and Ecological environment** (Section 3.2)
- **Economic and Social environment** (Sections 3.3)
- **Administrative environment** (Section 3.4)

3.1 Habitat Environment

3.1.1 Inshore/Estuarine Habitat

Many snapper grouper species utilize both pelagic and benthic habitats during several stages of their life histories; larval stages of these species live in the water column and feed on plankton. Most juveniles and adults are demersal (bottom dwellers) and associate with hard structures on the continental shelf that have moderate to high relief (e.g., coral reef systems and artificial reef structures, rocky hard-bottom substrates, ledges and caves, sloping soft-bottom areas, and limestone outcroppings). Juvenile stages of some snapper grouper species also utilize inshore seagrass beds, mangrove estuaries, lagoons, oyster reefs, and embayment systems. In many species, various combinations of these habitats may be utilized during daytime feeding migrations or seasonal shifts in cross-shelf distributions. Additional information on the habitat utilized by species in the Snapper Grouper Complex is included in Volume II of the Fishery Ecosystem Plan (FEP; SAFMC 2009)[1] and incorporated here by reference.

3.1.2 Offshore Habitat

Predominant snapper grouper offshore fishing areas are located in live bottom and shelf-edge habitats where water temperatures range from 11º to 27º C (52º to 81º F) due to the proximity of the Gulf Stream, with lower shelf habitat temperatures varying from 11º to 14º C (52º to 57º F). Water depths range from 16 to 55 meters (54 to 180 ft) or greater for live-bottom habitats, 55 to 110 meters (180 to 360 ft) for the shelf-edge habitat, and from 110 to 183 meters (360 to 600 ft) for lower-shelf habitat areas.

[1] http://safmc.net/ecosystem-management/fishery-ecosystem-plan/

The exact extent and distribution of productive snapper grouper habitat in South Atlantic continental shelf habitats is unknown. Current data suggest from 3% to 30% of the shelf is suitable habitat for these species. These live-bottom habitats may include low relief areas, supporting sparse to moderate growth of sessile (permanently attached) invertebrates, moderate relief reefs from 0.5 to 2 meters (1.6 to 6.6 ft), or high relief ridges at or near the shelf break consisting of outcrops of rock that are heavily encrusted with sessile invertebrates such as sponges and sea fan species. Live-bottom habitat is scattered irregularly over most of the shelf north of Cape Canaveral but is most abundant offshore from northeastern Florida. South of Cape Canaveral the continental shelf narrows from 56 to 16 kilometers (35 to 10 mi) wide 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 benthic characteristics of this area.

Rock outcroppings occur throughout the continental shelf from Cape Hatteras, North Carolina to Key West, Florida (MacIntyre and Milliman 1970; Miller and Richards 1979; Parker et al. 1983), which are principally composed of limestone and carbonate sandstone (Newton et al. 1971), and exhibit vertical relief ranging from less than 0.5 to over 10 meters (33 ft). Ledge systems formed by rock outcrops and piles of irregularly sized boulders are also common. Parker et al. (1983) estimated that 24% (9,443 km^2) of the area between the 27 and 101 meter (89 and 331 ft) depth contours from Cape Hatteras, North Carolina to Cape Canaveral, Florida is reef habitat. Although the bottom communities found in water depths between 100 and 300 meters (328 and 984 ft) from Cape Hatteras, North Carolina to Key West, Florida is relatively small compared to the whole shelf, this area, based upon landing information of fishers, constitutes prime reef fish habitat and probably significantly contributes to the total amount of reef habitat in this region.

Artificial reef structures are also utilized to attract fish and increase fish harvests; however, research on artificial reefs is limited and opinions differ as to whether or not these structures promote an increase of ecological biomass or merely concentrate fishes by attracting them from nearby, natural un-vegetated areas of little or no relief. There are several notable shipwrecks along the southeast coast in state and federal waters including *Lofthus* (eastern Florida), *SS Copenhagen* (southeast Florida), *Half Moon* (southeast Florida), *Hebe* (Myrtle Beach, South Carolina), *Georgiana* (Charleston, South Carolina), *U.S.S. Monitor* (Cape Hatteras, North Carolina), *Huron* (Nags Head, North Carolina), and *Metropolis* (Corolla, North Carolina).

The distribution of coral and live hard bottom habitat as presented in the Southeast Marine Assessment and Prediction Program (SEAMAP) bottom mapping project is a proxy for the distribution of the species within the snapper grouper complex. The method used to determine hard bottom habitat relied on the identification of reef obligate species including members of the snapper grouper complex. The Florida Fish and Wildlife Research Institute, using the best available information on the distribution of hard bottom habitat in the South Atlantic region, prepared ArcView maps for the four-state project. These maps, which consolidate known distribution of coral, hard/live bottom, and artificial reefs as hard bottom, are available on the

South Atlantic Fishery Management Council's (Council) online map services provided in the SAFMC Habitat and Ecosystem Atlas.[2]

Plots of the spatial distribution of offshore species were generated from the Marine Resources Monitoring, Assessment, and Prediction Program (MARMAP) data. The plots serve as point confirmation of the presence of each species within the scope of the sampling program. These plots, in combination with the hard bottom habitat distributions previously mentioned, can be employed as proxies for offshore snapper grouper complex distributions in the South Atlantic region. Maps of the distribution of snapper grouper species by gear type based on MARMAP data can also be generated through the Council's Internet Mapping System at the above address.

Additional information on the habitat utilized by snapper grouper species is included in Volume II of the Fishery Ecosystem Plan (FEP; SAFMC 2009).

3.1.3 Essential Fish Habitat

Essential fish habitat (EFH) is defined in the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens 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 ft (but to at least 2,000 ft 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 meter (100-ft) contour, such as attached macroalgae; 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.

[2] http://ocean.floridamarine.org/safmc_atlas/. An introduction to the system is found at: http://www.safmc.net/ecosystem-management/mapping-and-gis-data.

3.1.4 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; Council-designated Artificial Reef Special Management Zones; and deep-water Marine Protected Areas. Areas that meet the criteria for EFH-HAPCs include habitats required during each life stage (including egg, larval, postlarval, juvenile, and adult stages).

In addition to protecting habitat from fishing related degradation though fishery management plan regulations, the Council, in cooperation with National Marine Fisheries Service (NMFS), actively comments on non-fishing projects or policies that may impact essential fish habitat. With guidance from the Habitat Advisory Panel, the Council has developed and approved 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; alterations to riverine, estuarine and near shore flows; offshore aquaculture; and marine and estuarine invasive species.

The potential impacts the actions in this amendment may have on EFH, and EFH-HAPCs are discussed in **Chapter 4** of this document.

For more information on the Council's activities pertaining to habitat protection and ecosystem-based management, refer to **Appendix J** in Regulatory Amendment 30 (SAFMC under review).

3.2 Biological and Ecological Environment

The reef environment in the South Atlantic management area affected by actions in this environmental impact statement is defined by two components (**Figure 3.2.1**). Each component will be described in detail in the following sections.

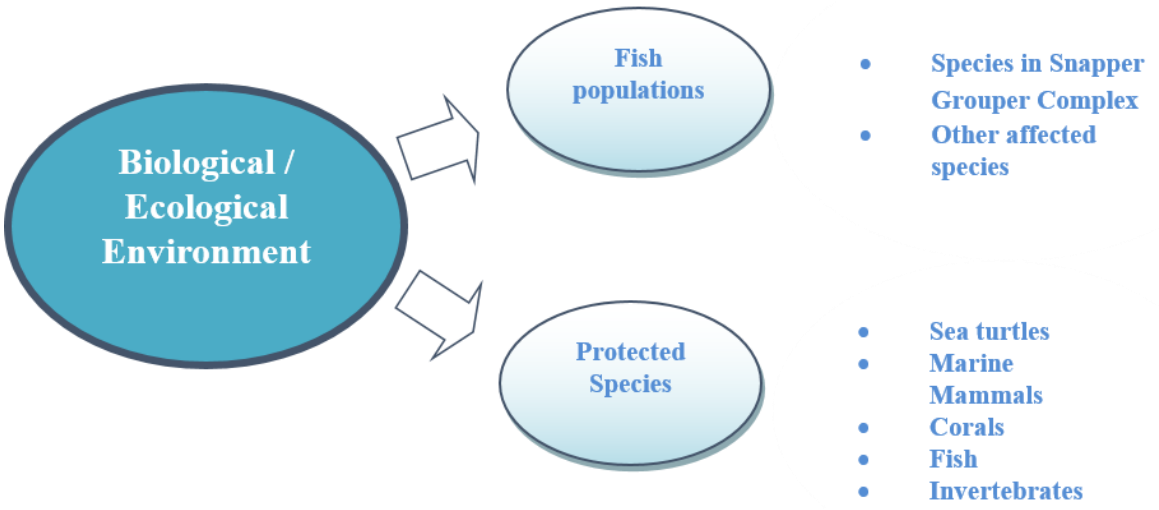

Figure 3.2.1. Two components of the biological environment described in this document.

The waters off the South Atlantic coast are home to a diverse population of fish. The snapper grouper fishery management unit contains 55 species of fish, many of them neither "snappers" nor "groupers." These species live in depths from a few feet (typically as juveniles) to hundreds of feet. As far as north/south distribution, the more temperate species tend to live in the upper reaches of the South Atlantic management area (e.g., black sea bass, red porgy) while the tropical variety's core residence is in the waters off south Florida, Caribbean Islands, and northern South America (e.g., black grouper, mutton snapper). These are reef-dwelling species that live amongst each other. These species rely on the reef environment for protection and food. There are several reef tracts that follow the southeastern coast. The fact that these fish populations congregate dictates the nature of the fishery (multi-species) and further forms the type of management regulations proposed in this document.

3.2.1 Fish Populations Affected by this Amendment

The species directly affected by actions proposed in this amendment is red snapper.

Life History

The red snapper is found from North Carolina to the Florida Keys and throughout the Gulf of Mexico to the Yucatan Peninsula (Robins and Ray 1986). It can be found at depths from 10 to 190 m (33-623 ft). Adults usually occur over rocky bottoms. Juveniles inhabit shallow waters and are common over sandy or muddy bottom habitat (Allen 1985).

Juvenile (Age 0) red snapper are rarely encountered in the U.S. South Atlantic. SEAMAPs fishery-independent trawling survey collected three in 1999, two in 2000, seven in 2013, and four in 2014 in nearshore (<30 ft deep) habitat. A headboat fisherman landed one age-0 red snapper during the 2012 mini-season. One age-0 fish was landed in the commercial fishery in 1980. Fishermen have reported observing juvenile red snapper on artificial reefs in shallow water. Estimates of juvenile red snapper mortality have been developed in the Gulf of Mexico; however, little information is available for the U.S. South Atlantic (SEDAR 41 2017).

The maximum size reported for this species is 100 cm (40 in) total length (TL) (Allen 1985; Robins and Ray 1986) and 22.8 kg (50 lbs) (Allen 1985). For samples collected from North Carolina to eastern Florida, maximum reported age is 45 years (White and Palmer 2004). The most recent maximum observed age for red snapper is 51 years. This fish was a 904 mm (36 in) TL female, and was caught in 2003 at 67 meters depth off Florida by a charter boat fisherman (SEDAR 41 2017).

Red snapper Life History
An Overview

- Extend from North Carolina to the Florida Keys, and throughout the Gulf of Mexico to the Yucatan Peninsula
- Waters ranging from 33-623 feet
- Red snapper do not migrate but can move long distances
- The spawning season extends from April to October, with peaks in June through August.
- Can live for at least 51 years

In the U.S. South Atlantic, recent analyses (SEDAR 41 2017) estimate that 50% of female red snapper are mature at 1.3 years old and 325 mm (12.8 in) TL. Fifty percent of male red snapper are mature at 166 mm (6.5 in) TL (SEDAR 41 2017). Grimes (1987) found that the spawning season of this species varies with location, but in most cases occurs nearly year round. According to research used in SEDAR 41 (2017), red snapper spawning along the Atlantic coast of the southeastern U.S. generally occurs from April through October with peaks during June through August based on the presence of females with spawning indicators. (i.e., the occurrence of hydrated oocytes and/or postovulatory follicles).

Red snapper eat fishes, shrimps, crabs, worms, cephalopods, and some planktonic items (Szedlemayer and Lee 2004).

Commercial Landings

In 2017, commercial harvest for red snapper opened on November 2 and closed on December 31. In 2018, the commercial fishery opened on July 26 and closed on November 7 because it was estimated that commercial landings would reach the ACL by that date. However, the fishery was re-opened during December 5-15 because new information indicated that the ACL had not been met (**Table 3.2.1.1**). In 2019, commercial harvest of red snapper began on July 8 and closed on August 30 as landings estimates indicated the commercial ACL would be met by that date.

Table 3.2.1.1. South Atlantic red snapper commercial landings, in pounds whole weight (lbs ww), and number of harvest days, 2017-2019.

	Commercial ACL	Commercial Landings	Number of days open
2017	124,815	87,127	60
2018	124,815	123,661	116
2019	124,815	120,022*	54

*2019 commercial landings are preliminary.
Source: NMFS SEFSC and SERO

Recreational Landings

Recreational landings of red snapper are obtained through a combination of Marine Recreational Information Program (MRIP) estimates and those obtained by the states (**Tables 3.2.1.2** and **3.2.1.3**). In 2017, red snapper recreational harvest opened on November 3-5 and 10-12 and re-opened on December 8-10. The recreational sector opened on August 10-12 and 17-19, in 2018. In 2019, red snapper harvest was allowed for 5 days, July 12-14 and 19-20. Estimates of recreational landings for the 2019 red snapper season are not yet available.

Table 3.2.1.2. South Atlantic red snapper recreational landings, in numbers of fish, and number of harvest days, 2017-2018.

	Recreational ACL	Recreational Landings	Number of days open
2017	29,656	14,270	10
2018	29,656	38,572	6

Source: NMFS SEFSC and SERO.

Table 3.2.1.3. South Atlantic red snapper recreational landings (numbers of fish) by mode, 2017-2018.

	Headboat	Charter	Private
2017	2,724	1,022	10,524
2018*	4,181	34,137	

*based on landings estimates as of March 2019
Source: NMFS SEFSC and SERO

Stock Status

Manooch et al. (1998) conducted the first formal assessment of red snapper in the South Atlantic. The authors concluded that the status of the stock was not ideal but seemed to be responding to management action. Potts and Brennan (2001) revisited the results of that assessment and suggested a broader range of reduction in fishing mortality (F), from 30% to 80%.

The red snapper stock in the South Atlantic was assessed through the Southeast Data, Assessment, and Review (SEDAR) process in 2007-2008. That assessment applied a statistical catch-age model using data through 2006 (SEDAR 15 2009). The assessment found that overfishing had been occurring since the 1960s and the red snapper stock was overfished. Although quantitative results varied, the qualitative results of overfishing a depleted stock were consistent across all catch-age model configurations examined during and after the assessment process (approximately 40 sensitivity runs), as well as with an alternative model formulation (surplus-production model).

In 2010, a benchmark assessment using the Beaufort Assessment Model (BAM) with data through 2009 was completed (SEDAR 24 2010). BAM is a statistical catch-age model developed by the analysts at the Beaufort, North Carolina, NMFS Southeast Fisheries Science Center (SEFSC) laboratory, and is customizable to the data available. A surplus production model called ASPIC (Prager 1994; Prager 2004) was used as a complement for comparison purposes. Based on the assessment provided from the BAM, the SEDAR Review Panel concluded that the red snapper stock was overfished and overfishing was occurring. Similar to SEDAR 15 (2009), more than 40 sensitivities were run, all of which resulted in the same status determinations.

A benchmark assessment was completed in 2016 (SEDAR 41 2017) with data through 2014. Although the SEDAR Review Panel concluded that assessment results represent the best scientific information available, the Panel identified several areas of uncertainty including the composition and magnitude of recreational discards, the stock-recruitment relationship, potential changes in catch per unit effort (CPUE) catchability, and the selectivities for the different fishery fleets. The Scientific and Statistical Committee (SSC) reviewed the assessment and provided fishing level recommendations at their May 2016 meeting based on $F_{30\%SPR}$ as a proxy for F_{MSY}. The base assessment run suggested that in the terminal year of 2014 the stock remained overfished. The SSC did not have confidence in the terminal fishing mortality estimates; however, they recommended that the assessment results suggested overfishing was likely occurring in the terminal years of the assessment (2012-2014) although the degree to which overfishing was occurring at that time could not be reliably quantified from the assessment results (see May 2016 Final SSC report).

The Southeast Reef Fish Survey has been conducted in the South Atlantic with fish traps and other methods since 1990. In 2015, the survey (using the time series recommended in SEDAR 41 (2017)) indicated that the red snapper stock increased by 35% compared to 2014. The population increased by another 12% in 2016 and, at that time, was at the highest observed point since 1990. At their April 2017 meeting, the SSC stated that, although estimates of discards may be highly uncertain, a continuing upward trend in the fishery-independent index has a high probability of reflecting increases in population size. Additionally, since the population size appears to be larger based on the fishery-independent index, the risk of overfishing is likely reduced if annual catch limits (ACL) are limited to recent harvest levels. Hence, Amendment 43 to the Snapper Grouper FMP (SAFMC 2017) implemented new fishing levels for red snapper based on highest observed landings of red snapper from 2012 through 2014.

3.2.2 Bycatch and Discards

The snapper grouper fishery is a multi-species fishery, which uses mostly hook-and-line gear although some trips use other gear such as pots/traps and spears. During the times of the year the red snapper component of the snapper grouper fishery has been closed, red snapper have been bycatch in the fishery. Bycatch of red snapper is commonly associated with catches of black sea bass, red grouper, gag, scamp, greater amberjack, vermilion snapper, and gray triggerfish. The actions in this amendment are not expected to result in significant changes in bycatch of red snapper (**Appendix D** in Amendment 43, SAFMC 2017). However, anecdotal evidence suggests that bycatch of red snapper may be reduced by opening commercial harvest at the same time as shallow-water grouper harvest (See **Section 4.2.1**). According to commercial logbook data from

2016 through 2018, gag were most often caught on trips that caught a red snapper in the South Atlantic (**Table 3.2.2.1**).

Table 3.2.2.1. Number of commercial trips that caught red snapper in 2016-2018 in the South Atlantic and percent co-occurrence with select snapper grouper and coastal migratory pelagic species.

Species	Trips	Percent co-occurrence
Red Snapper	2,765	100.0
Gag	722	26.1
Black Sea Bass	621	22.5
King Mackerel	604	22.0
Vermilion Snapper	510	18.4
Gray Triggerfish	482	17.4

Source: SEFSC Commercial Logbook.

3.2.3 The Stock Assessment Process

The SEDAR process is a cooperative Fishery Management Council initiative to improve the quality and reliability of fishery stock assessments in the South Atlantic, Gulf of Mexico, and U.S. Caribbean. The Caribbean, Gulf of Mexico, and South Atlantic Fishery Management Councils manage SEDAR in coordination with NMFS and the Atlantic and Gulf States Marine Fisheries Commissions. SEDAR seeks improvements in the scientific quality of stock assessments, constituent and stakeholder participation in assessment development, transparency in the assessment process, and a rigorous and independent scientific review of completed stock assessments.

SEDAR is organized around three workshops. First is the Data Workshop, during which fisheries monitoring and life history data are reviewed and compiled. Second is the Assessment Workshop, which may be conducted via a workshop and several webinars, during which assessment models are developed and population parameters are estimated using the information provided from the Data Workshop. Third and final is the Review Workshop, during which independent experts review the input data, assessment methods, and assessment products. The completed assessment, including the reports of all three workshops and all supporting documentation, are then forwarded to the Council's SSC. The SSC considers whether the assessment represents the best available science and develops fishing level recommendations for Council consideration.

SEDAR workshops are public meetings organized by SEDAR. Workshop participants appointed by the lead Council are drawn from state and federal agencies, non-government organizations, Council members, Council advisors, and the fishing industry with a goal of including a broad range of disciplines and perspectives. All participants are expected to contribute to this scientific process by preparing working papers, contributing data, providing assessment analyses, evaluating and discussing information presented, and completing the workshop report.

3.2.4 Protected Species

NMFS manages marine protected species in the Southeast region under the Endangered Species Act (ESA) and the Marine Mammal Protection Act (MMPA). There are 29 ESA-listed species or Distinct Population Segments (DPSs) of marine mammals, sea turtles, fish, and corals managed by NMFS that may occur in the EEZ of the South Atlantic or Gulf of Mexico. There are 91 stocks of marine mammals managed within the Southeast region plus the addition of the stocks such as North Atlantic right whales (NARW), and humpback, sei, fin, minke, and blue whales that regularly or sometimes occur in Southeast region managed waters for a portion of the year (Hayes et al. 2017). All marine mammals in U.S. waters are protected under the MMPA. The MMPA requires that each commercial fishery be classified by the number of marine mammals they seriously injure or kill. NMFS's List of Fisheries (LOF) classifies U.S. commercial fisheries into three categories based on the number of incidental mortality or serious injury they cause to marine mammals.[3]

Five of the marine mammal species (sperm, sei, fin, blue, and NARW) protected by the MMPA, are also listed as endangered under the ESA. In addition to those five marine mammals, six species or DPSs of sea turtles (green (the North Atlantic DPS and the South Atlantic DPS), hawksbill, Kemp's ridley, leatherback, and the Northwest Atlantic DPS of loggerhead); nine species or DPSs of fish (the smalltooth sawfish; five DPSs of Atlantic sturgeon; Nassau grouper; oceanic whitetip shark, and giant manta ray); and seven species of coral (elkhorn coral, staghorn coral, rough cactus coral, pillar coral, lobed star coral, mountainous star coral, and boulder coral) are also protected under the ESA and occur within the action area of the snapper grouper fishery. Portions of designated critical habitat for NARW, the Northwest Atlantic DPS of loggerhead sea turtles, and *Acropora* corals occur within the Council's jurisdiction.

NMFS has conducted specific analyses ("Section 7 consultations") to evaluate the potential effects from the South Atlantic snapper grouper fishery on species and critical habitat protected under the ESA. On December 1, 2016, NMFS completed its most recent biological opinion (2016 Opinion) on the snapper grouper fishery of the South Atlantic Region (NMFS 2016). In the 2016 Opinion, NMFS concluded that the snapper grouper fishery's continued authorization is likely to adversely affect but is not likely to jeopardize the continued existence of the NARW, loggerhead sea turtle Northwest Atlantic DPS, leatherback sea turtle, Kemp's ridley sea turtle, green sea turtle North Atlantic DPS, green sea turtle South Atlantic DPS, hawksbill sea turtle, smalltooth sawfish U.S. DPS, or Nassau grouper. NMFS also concluded that designated critical habitat and other ESA-listed species in the South Atlantic Region were not likely to be adversely affected.

Since publication of the 2016 Opinion, NMFS has published two additional final listing rules. On January 22, 2018, NMFS listed the giant manta ray (*Manta birostris*) as threatened under the ESA, effective February 21, 2018. On January 30, 2018, NMFS listed the oceanic whitetip shark (*Carcharinus longimanus*) as threatened under the ESA, effective March 1, 2018. Giant manta rays and oceanic whitetip sharks are found in the South Atlantic and may be affected by the subject fishery via incidental capture in snapper grouper fishing gear. In a June

[3] : https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-protection-act-list-fisheries

11, 2018, memorandum NMFS analyzed and documented ESA Section 7(a)(2) and Section 7(d) determinations for allowing the continued authorization of fishing managed by the Snapper Grouper FMP, during reinitiation of ESA consultation on this fishery, for its effects on the giant manta ray and the oceanic whitetip shark. Based on the analysis, NMFS determined that allowing the proposed action to continue during the reinitiation period will not violate Section 7(a)(2) or 7(d). This Section 7(a)(2) determination is only applicable to the proposed action during the reinitiation period and does not address the agency's long-term obligation to ensure its actions are not likely to jeopardize the continued existence of any listed species or destroy or adversely modify critical habitat.

For summary information on the protected species that may be adversely affected by the snapper grouper fishery and how they are affected refer to **Section 3.2.5** in Vision Blueprint Regulatory Amendment 27 (SAFMC under review).[4] The 2016 Opinion provides additional information on these species, how they are affected by the snapper grouper fishery, and the authorized incidental take levels of these species in the snapper grouper fishery.

[4] https://www.fisheries.noaa.gov/action/regulatory-amendment-27-vision-blueprint-commercial-measures

3.3 Economic Environment

Details on red snapper, and the South Atlantic snapper grouper fishery in general, can be found in Amendment 17A (SAFMC 2010a), Regulatory Amendment 10 (SAFMC 2010b), the Comprehensive ACL Amendment for the South Atlantic Region (SAFMC 2011), Amendment 28 (SAFMC 2013), Amendment 43 (SAFMC 2017), and Amendment 42 (SAFMC under review).

3.3.1 Economic Description of the Commercial Sector

The major sources of data summarized in this description are the NMFS SERO Permits Information Management System (PIMS) and the SEFSC Social Science Research Group (SSRG) Socioeconomic Panel[5] data set. Inflation adjusted revenues and prices are reported in 2018 dollars.

Permits

Any fishing vessel that harvests and sells any of the snapper grouper species from the South Atlantic EEZ must have a valid South Atlantic commercial snapper grouper permit, which is a limited access permit. As of August 12, 2019, there were 528 valid or renewable South Atlantic Snapper Grouper Unlimited Permits and 103 valid or renewable 225-lb Trip-limited Permits. After a permit expires, it can be renewed or transferred up to one year after the date of expiration. The number of valid or renewable snapper grouper permits declined steadily from 2014 through 2018 (**Table 3.3.1.1**).

Table 3.3.1.1. Number of valid or renewable South Atlantic commercial snapper grouper permits.

	Unlimited	225-lb Trip-limited
2014	584	125
2015	571	121
2016	565	116
2017	554	114
2018	549	110
Average	565	117

Source: NMFS SERO Permits Dataset, 2019.

[5] This data set is compiled by the SEFSC SSRG from Federal Logbook System (FLS) data, supplemented by average prices calculated from the Accumulated Landings System (ALS). Because these landings are self-reported, they may diverge slightly from dealer-reported landings presented elsewhere.

Landings, Value, and Effort

The number of federally permitted commercial vessels that landed South Atlantic red snapper dropped in 2015 and 2016, during which time there was no federal commercial red snapper season, and then increased sharply in 2017 and 2018 (**Table 3.3.1.2**). Landings of red snapper followed a similar pattern. The landings reported in 2015 and 2016 are either from state water catches or misreported/out-of-season harvests. On average (2014 through 2018), vessels that landed red snapper did so on approximately 20% of their South Atlantic trips and red snapper accounted for only 3% of their annual all species revenue, including revenue from Gulf trips (**Table 3.3.1.2** and **Table 3.3.1.3**). Average all species vessel-level revenue for these vessels rose in 2015 but fell steadily from 2016 through 2018. The 2014-2018 average vessel-level revenue was approximately $84,000 (2018 dollars). During this time period, the average annual price per pound gutted weight (gw) of red snapper was $5.49 (2018 dollars) and ranged from $4.28 in 2015 to $5.57 in 2018 (**Table 3.3.1.3**).

Table 3.3.1.2. Number of vessels, number of trips, and landings (lbs gw) by year for South Atlantic red snapper, 2014-2018.

Year	# of vessels that caught red snapper (> 0 lbs gw)	# of trips that caught red snapper	Red snapper landings (lbs gw)	Other species' landings jointly caught w/ red snapper (lbs gw)	# of South Atlantic trips that only caught other species	Other species' landings on South Atlantic trips w/o red snapper (lbs gw)	All species landings on Gulf trips (lbs gw)
2014	164	1,001	60,907	540,463	5,052	3,359,872	504,522
2015	25	31	4,832	46,857	958	468,358	244,482
2016	23	28	3,897	19,725	743	472,553	152,567
2017	163	1,138	75,895	266,338	4,526	2,679,207	414,802
2018*	188	1,597	99,839	657,003	4,362	2,728,893	300,006
Average	113	759	49,074	306,077	3,128	1,941,777	323,276

Data for 2018 is incomplete.
Source: SEFSC-SSRG Socioeconomic Panel v.8.2 July 2019

Table 3.3.1.3. Number of vessels and ex-vessel revenue by year (2018 dollars) for South Atlantic red snapper, 2014-2018.

Year	# of vessels that caught red snapper (> 0 lbs gw)	Dockside revenue from red snapper	Dockside revenue from 'other species' jointly caught w/ red snapper	Dockside revenue from 'other species' caught on South Atlantic trips w/o red snapper	Dockside revenue from 'all species' caught on Gulf trips	Total dockside revenue	Average total dockside revenue per vessel
2014	164	$335,397	$1,936,287	$10,384,761	$1,955,741	$14,612,186	$89,099
2015	25	$20,693	$185,527	$1,469,177	$974,815	$2,650,212	$106,008
2016	23	$16,907	$66,138	$1,484,923	$626,413	$2,194,381	$95,408
2017	163	$418,331	$839,701	$8,724,828	$1,097,955	$11,080,815	$67,980
2018	188	$556,134	$2,126,443	$7,968,123	$800,557	$11,451,257	$60,911
Avg	113	$269,492	$1,030,819	$6,006,362	$1,091,096	$8,397,770	$83,881

Data for 2018 is incomplete
Source: SEFSC-SSRG Socioeconomic Panel v.8.2 July 2019

Imports

Imports of seafood products compete in the domestic seafood market and have in fact dominated many segments of the seafood market. Imports aid in determining the price for domestic seafood products and tend to set the price in the market segments in which they dominate. Seafood imports have downstream effects on the local fish market. At the harvest level for snapper species, including red snapper, imports affect the returns to fishermen through the ex-vessel prices they receive for their landings. As substitutes to domestic production of snappers, imports tend to cushion the adverse economic effects on consumers resulting from a reduction in domestic landings. The following describes the imports of fish products that directly compete with domestic harvest of snappers, including red snapper, and groupers.

Information on the imports of all snapper and grouper species, either fresh or frozen, are available at the NOAA website.[6] Information on the imports of individual snapper or grouper species, including red snapper, is not available. In 2018, imports of all snapper and grouper species (fresh and frozen) were approximately 60.01 million pounds (mp) valued at approximately $191.16 million (2018 dollars). These amounts are contrasted with the harvest of snappers and groupers in the South Atlantic in 2017 of approximately 1.21 mp valued at approximately $4.57 million (2017 dollars; data available at the NOAA website[7]). Although the levels of domestic production and imports are not totally comparable for several reasons, including considerations of different product form such as fresh versus frozen, and possible product mislabeling, the difference in the magnitude of imports relative to the amount of domestic harvest is indicative of the dominance of imports in the domestic market. Final comparable data for more recent years are not currently available.

[6] https://www.st.nmfs.noaa.gov/commercial-fisheries/foreign-trade/applications/trade-by-product
[7] https://www.st.nmfs.noaa.gov/commercial-fisheries/publications/index.

Business Activity

The commercial harvest and subsequent sales and consumption of fish generates business activity as fishermen expend funds to harvest the fish and consumers spend money on goods and services, such as red snapper purchased at a local fish market and served during restaurant visits. These expenditures spur additional business activity in the region(s) where the harvest and purchases are made, such as jobs in local fish markets, grocers, restaurants, and fishing supply establishments. In the absence of the availability of a given species for purchase, consumers would likely spend their money on substitute goods, such as other finfish or seafood products, and services, such as visits to different food service establishments. As a result, the analysis presented below represents a distributional analysis only; that is, it only shows how economic effects may be distributed through regional markets and should not be interpreted to represent the impacts if these species are not available for harvest or purchase.

Estimates of the U.S. average annual business activity associated with the commercial harvest of red snapper, and all species harvested by the vessels that harvested these red snapper, were derived using the model[8] developed for and applied in NMFS (2017) and are provided in **Table 3.3.1.4**. This business activity is characterized as jobs (full- and part-time), income impacts (wages, salaries, and self-employed income), output (sales) impacts (gross business sales), and value-added impacts, which represent the contribution made to the U.S. Gross Domestic Product (GDP). These impacts should not be added together because this would result in double counting. It should be noted that the results provided should be interpreted with caution and demonstrate the limitations of these types of assessments. These results are based on average relationships developed through the analysis of many fishing operations that harvest many different species. Separate models to address individual species are not available. For example, the results provided here apply to a general reef fish category rather than just red snapper, and a harvester job is "generated" for approximately every $33,000 (2018 dollars) in ex-vessel revenue. These results contrast with the number of harvesters (vessels) with recorded landings of red snapper presented in **Table 3.3.1.2**.

[8] A detailed description of the input/output model is provided in NMFS (2011).

Table 3.3.1.4. Average annual business activity (2014 - 2018) associated with the commercial harvest of red snapper and the harvest of all species by vessels that landed red snapper. All monetary estimates are in 2018 dollars.

Species	Average Ex-vessel Value ($ thousands)	Total Jobs	Harvester Jobs	Output (Sales) Impacts ($ thousands)	Income Impacts ($ thousands)	Value Added ($ thousands)
Red snapper	$269	35	8	$2,673	$981	$1,387
All species harvested by vessels that landed red snapper.	$8,398	1,075	255	$83,279	$30,583	$43,210

Note: Converted to 2018 dollars using the annual, not seasonally adjusted GDP implicit price deflator (2009 base year) provided by the U.S. Bureau of Economic Analysis.
Source: Calculated by NMFS SERO using the model developed for and applied in NMFS (2017).

3.3.2 Economic Description of the Recreational Sector

The South Atlantic recreational sector is comprised of the private and for-hire modes. The private mode includes anglers fishing from shore (all land-based structures) and private/rental boats. The for-hire mode is composed of charter boats and headboats (also called partyboats). Charter boats generally carry fewer passengers and charge a fee on an entire vessel basis, whereas headboats carry more passengers and payment is per person. The type of service, from a vessel- or passenger-size perspective, affects the flexibility to search different fishing locations during the course of a trip and target different species since larger concentrations of fish are required to satisfy larger groups of anglers.

Angler Effort

Recreational effort derived from the Marine Recreational Information Program (MRIP) database can be characterized in terms of the number of trips as follows:

- Target effort - The number of individual angler trips, regardless of duration, where the intercepted angler indicated that the species or a species in the species group was targeted as either the first or the second primary target for the trip. The species did not have to be caught.
- Catch effort - The number of individual angler trips, regardless of duration and target intent, where the individual species or a species in the species group was caught. The fish did not have to be kept.
- Total recreational trips - The total estimated number of recreational trips in the South Atlantic, regardless of target intent or catch success.

A target trip may reveal an angler's preference for a certain species, and thus may carry more relevant information when assessing the economic effects of regulations on the subject species than the other two measures of recreational effort. The majority of red snapper target trips in the South Atlantic, as estimated by MRIP, were recorded in Florida on private vessels from 2014

through 2018 (**Table 3.3.2.1**). Estimates of red snapper target effort for additional years, and other measures of directed effort, are available online.[9]

During the short red snapper seasons that occurred in 2012, 2013, and 2014, both Florida and Georgia also collected some recreational effort data as part of their state-run survey programs.[10] Florida estimated the total number of private recreational boat trips that targeted red snapper and these estimates are incorporated herein by reference (Sauls et al. 2017). Direct comparison of these estimates to the MRIP estimates is not possible because MRIP data are recorded at the angler level rather than the vessel level. Georgia conducted telephone surveys of for-hire (charter vessel and headboat) captains to collect catch and effort data during the 2012-2014 recreational red snapper seasons and also administered a voluntary, private angler electronic catch survey during that time. These estimates are also incorporated herein by reference (Knowlton 2015). In 2014, the number of for-hire red snapper target trips recorded by Georgia was greater than what was estimated by MRIP, but the number of voluntarily reported private angler trips was significantly lower than the MRIP estimate (**Table 3.3.2.2**). North Carolina and South Carolina did not collect target red snapper effort data in 2012-2014.

[9] http://www.st.nmfs.noaa.gov/recreational-fisheries/access-data/run-a-data-query/queries/index.
[10] These survey programs were designed to maximize sampling opportunities during the mini-seasons.

Table 3.3.2.1. South Atlantic red snapper target trips, by mode and state, 2014-2018.

	Florida	Georgia	North Carolina	South Carolina	Total
	Charter Mode				
2014	4,221	0	0	0	4,221
2015	0	0	0	0	0
2016	0	0	0	0	0
2017	3,981	0	0	0	3,981
2018	2,336	196	380	0	2,912
Average	2,108	39	76	0	2,223
	Private/Rental Mode				
2014	164,657	23,326	0	3,766	191,749
2015	2,117	0	0	0	2,117
2016	2,221	0	0	0	2,221
2017	133,547	0	0	0	133,547
2018	1,022,123	4,475	0	2,478	1,029,076
Average	264,933	5,560	0	1,249	271,742
	All Modes				
2014	168,878	23,326	0	3,766	195,970
2015	2,117	0	0	0	2,117
2016	2,221	0	0	0	2,221
2017	137,528	0	0	0	137,528
2018	1,024,459	4,671	380	2,478	1,031,988
Average	267,041	5,599	76	1,249	273,965

Note: Headboat data are unavailable.
Source: MRIP database, SERO, NMFS.

Table 3.3.2.2. Georgia estimates of angler trips that targeted red snapper, 2012-2014.

Year	For-hire (charter and headboat) angler trips*	Private angler trips
2012	100	31
2013	70	53
2014	312	120

Note: There were 76, 47, and 180 charter angler trips targeting red snapper in 2012, 2013, and 2014, respectively.
Source: Knowlton (2015).

Similar analysis of recreational angler trips (with the exception of the Georgia-based telephone survey) is not possible for the headboat mode because headboat data are not collected at the angler level. Estimates of effort by the headboat mode are provided in terms of angler

days, or the total number of standardized full-day angler trips.[11] Headboat effort in the South Atlantic, in terms of angler days, remained relatively steady in Florida through Georgia from 2014 through 2016, and then fell substantially in 2017 and 2018. A similar pattern occurred in North Carolina and South Carolina during this time period (**Table 3.3.2.3**). Headboat effort was the highest, on average, during the summer months of June through August (**Table 3.3.2.4**).

Table 3.3.2.3. South Atlantic headboat angler days and percent distribution by state, 2014-2018.

	Angler Days			Percent Distribution		
	FL/GA*	**NC**	**SC**	**FL/GA**	**NC**	**SC**
2014	195,890	20,547	42,025	75.79%	7.95%	16.26%
2015	194,979	22,691	39,702	75.76%	8.82%	15.43%
2016	196,660	22,716	42,207	75.18%	8.68%	16.14%
2017	126,126	20,170	36,914	68.84%	11.01%	20.15%
2018	120,560	16,813	37,611	68.90%	9.61%	21.49%
Average	166,843	20,587	39,692	72.89%	9.21%	17.89%

Note: East Florida and Georgia are combined for confidentiality purposes.
Source: NMFS Southeast Region Headboat Survey (SRHS).

Table 3.3.2.4. South Atlantic headboat angler days and percent distribution by month, 2014-2018.

	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
	Headboat Angler Days											
2014	8,748	13,512	19,808	22,570	25,764	39,115	44,066	32,886	15,203	15,235	9,088	14,611
2015	12,661	11,148	21,842	25,128	25,172	36,907	42,558	30,772	15,649	13,375	9,623	12,562
2016	9,818	12,243	23,872	22,217	27,374	37,454	45,744	29,223	17,061	9,202	12,820	13,404
2017	7,693	10,066	13,382	17,448	19,377	27,050	33,356	21,037	6,684	8,928	8,929	9,260
2018	4,428	9,862	14,080	15,167	13,264	29,038	30,235	26,233	9,715	8,072	7,673	7,217
Avg	8,670	11,366	18,597	20,506	22,190	33,913	39,192	28,030	12,862	10,962	9,627	11,411
	Percent Distribution											
2014	3%	5%	8%	9%	10%	15%	17%	13%	6%	6%	3%	6%
2015	5%	4%	8%	10%	10%	14%	17%	12%	6%	5%	4%	5%
2016	4%	5%	9%	9%	11%	14%	18%	11%	7%	4%	5%	5%
2017	4%	5%	7%	10%	11%	15%	18%	11%	4%	5%	5%	5%
2018	3%	6%	8%	9%	8%	17%	17%	15%	6%	5%	4%	4%
Avg	5%	6%	11%	12%	13%	19%	22%	16%	7%	6%	6%	7%

Source: NMFS Southeast Region Headboat Survey (SRHS).

[11] Headboat trip categories include half-, three-quarter-, full-, and 2-day trips. A full-day trip equals one angler day, a half-day trip equals .5 angler days, etc. Angler days are not standardized to an hourly measure of effort and actual trip durations may vary within each category.

Permits

For-hire vessels are required to have a for-hire snapper grouper permit to fish for or possess snapper grouper species in the South Atlantic EEZ. As of August 12, 2019, there were 1,801 valid for-hire snapper grouper permits. This sector operates as an open access fishery and not all permitted vessels are necessarily active in the fishery. Some vessel owners may have obtained open access permits as insurance for uncertainties in the fisheries in which they currently operate. The number of for-hire vessel permits issued for the South Atlantic snapper grouper fishery reached a five-year high of 2,176 permits in 2018 (**Table 3.3.2.5**). The majority of snapper grouper for-hire permitted vessels were home-ported in Florida; a relatively high proportion of these permitted vessels were also home-ported in North Carolina and South Carolina. Many vessels with South Atlantic for-hire snapper grouper permits were home-ported in states outside of the SAFMC's area of jurisdiction. On average (2014 through 2018), these vessels accounted for approximately 11% of the total number of for-hire snapper grouper permits issued.

Table 3.3.2.5. Number of South Atlantic for-hire snapper grouper permits, by homeport state, 2014-2018.

Home Port	2014	2015	2016	2017	2018	Average
North Carolina	294	308	331	367	371	340
South Carolina	160	188	212	217	236	206
Georgia	34	45	53	65	70	54
Florida	1,062	1,071	1,100	1,153	1,285	1,102
Gulf (AL-TX)	81	73	69	70	65	75
Others	96	94	102	142	149	134
Total	1,727	1,779	1,867	2,014	2,176	1,912

Source: NMFS SERO Permits Dataset, 2019.

Although the for-hire permit application collects information on the primary method of operation, the permit itself does not identify the permitted vessel as either a headboat or a charter vessel and vessels may operate in both capacities. However, only federally permitted headboats are required to submit harvest and effort information to the NMFS Southeast Region Headboat Survey (SRHS). Participation in the SRHS is based on determination by the Southeast Fishery Science Center (SEFSC) that the vessel primarily operates as a headboat. As of June 11, 2018, 64 South Atlantic headboats were registered in the SRHS (K. Fitzpatrick, NMFS SEFSC, pers. comm.). The majority of these headboats were located in Florida/Georgia (39), followed by North Carolina (14) and South Carolina (11).

There are no specific permitting requirements for recreational anglers to harvest snapper grouper species. Instead, anglers are required to possess either a state recreational fishing permit that authorizes saltwater fishing in general, or be registered in the federal National Saltwater Angler Registry system, subject to appropriate exemptions. As a result, it is not possible to identify with available data how many individual anglers would be expected to be affected by this proposed amendment.

Economic Value

Participation, effort, and harvest are indicators of the value of saltwater recreational fishing. However, a more specific indicator of value is the satisfaction that anglers experience over and above their costs of fishing. The monetary value of this satisfaction is referred to as consumer surplus (CS). The value or benefit derived from the recreational experience is dependent on several quality determinants, which include fish size, catch success rate, and the number of fish kept. These variables help determine the value of a fishing trip and influence total demand for recreational fishing trips. The estimated value of the CS for catching and keeping a second red snapper on an angler trip is approximately $84 (values updated to 2018 dollars[12]), and decreases thereafter (approximately $56 for a third red snapper, $42 for a fourth red snapper, and $32 for a fifth red snapper in 2018 dollars) (Carter and Liese 2012).

The foregoing estimates of economic value should not be confused with economic impacts associated with recreational fishing expenditures. Although expenditures for a specific good or service may represent a proxy or lower bound of value (a person would not logically pay more for something than it was worth to them), they do not represent the net value (benefits minus cost), nor the change in value associated with a change in the fishing experience.

With regards to for-hire businesses, economic value can be measured by producer surplus (PS) per passenger trip (the amount of money that a vessel owner earns in excess of the cost of providing the trip). Estimates of the PS per for-hire passenger trip are not available. Instead, net operating revenue (NOR), which is the return used to pay all labor wages, returns to capital, and owner profits, is used as a proxy for PS. The estimated NOR value for an average South Atlantic charter angler trip is $172 (2018 dollars) and the estimated NOR value for a South Atlantic headboat angler trip is $47 (2018 dollars) (C. Liese, NMFS SEFSC, pers. comm.). Estimates of NOR per red snapper target trip are not available.

Business Activity

The desire for recreational fishing generates economic activity as consumers spend their income on various goods and services needed for recreational fishing. This spurs economic activity in the region where recreational fishing occurs. It should be clearly noted that, in the absence of the opportunity to fish, the income would presumably be spent on other goods and services and these expenditures would similarly generate economic activity in the region where the expenditure occurs. As such, the analysis below represents a distributional analysis only.

Estimates of the business activity (economic impacts) associated with recreational angling for South Atlantic red snapper were calculated using average trip-level impact coefficients derived from the 2015 Fisheries Economics of the U.S. report (NMFS 2017) and underlying data provided by the National Oceanic and Atmospheric Administration (NOAA) Office of Science and Technology. Economic impact estimates in 2015 dollars were adjusted to 2018 dollars using the annual, not seasonally adjusted GDP implicit price deflator provided by the U.S. Bureau of Economic Analysis.

[12] Converted to 2018 dollars using the annual, not seasonally adjusted GDP implicit price deflator provided by the U.S. Bureau of Economic Analysis.

Business activity (economic impacts) for the recreational sector is characterized in the form of jobs (full- and part-time), income impacts (wages, salaries, and self-employed income), output (sales) impacts (gross business sales), and value-added impacts (contribution to the GDP in a state or region). Estimates of the average annual economic impacts (2014-2018) resulting from South Atlantic red snapper target trips are provided in **Table 3.3.2.6**. These estimates are low due to the small number of estimated red snapper target trips that occurred during the mini-season in 2014 and during the subsequent closed seasons in 2015-2018. The average impact coefficients, or multipliers, used in the model are invariant to the "type" of effort and can therefore be directly used to measure the impact of other effort measures such as red snapper catch trips. To calculate the multipliers from **Table 3.3.2.6**, simply divide the desired impact measure (sales impact, value-added impact, income impact or employment) associated with a given state by the number of target trips for that state.

The estimates provided in **Table 3.3.2.6** only apply at the state-level. Addition of the state-level estimates to produce a regional (or national) total may underestimate the actual amount of total business activity, because state-level impact multipliers do not account for interstate and interregional trading. It is also important to note, that these economic impacts estimates are based on trip expenditures only and do not account for durable expenditures. Durable expenditures cannot be reasonably apportioned to individual species. As such, the estimates provided in **Table 3.3.2.6** may be considered a lower bound on the economic activity associated with those trips that targeted red snapper.

Estimates of the business activity associated with headboat effort are not available. Headboat vessels are not covered in MRIP, so, in addition to the absence of estimates of target effort, estimation of the appropriate business activity coefficients for headboat effort has not been conducted.

Table 3.3.2.6. Estimated annual average economic impacts (2014-2018) from South Atlantic recreational red snapper target trips, by state and mode, using state-level multipliers. All monetary estimates are in thousands, 2018 dollars.

	NC	SC	GA*	FL
	Charter Mode			
Target Trips	76	0	39	2,108
Value Added Impacts	$31	$0	$7	$485
Sales Impacts	$55	$0	$12	$814
Income Impacts	$18	$0	$4	$287
Employment (Jobs)	1	0	0	8
	Private/Rental Mode			
Target Trips	0	1,249	5,560	264,933
Value Added Impacts	0	$29	$135	$7,161
Sales Impacts	0	$44	$205	$10,684
Income Impacts	0	$13	$66	$3,538
Employment (Jobs)	0	1	3	105

Source: Effort data from MRIP; economic impact results calculated by NMFS SERO using NMFS (2017) and underlying data provided by the NOAA Office of Science and Technology.

3.4 Social Environment

This framework amendment affects commercial and recreational management of red snapper. This section provides the background for the proposed actions, which is evaluated in **Chapter 4**. Commercial and recreational landings by state are included to provide information on the geographic distribution of fishing involvement. Descriptions of the top communities involved in commercial red snapper are included along with the top recreational fishing communities based on recreational engagement. Community level data are presented in order to meet the requirements of National Standard 8 of the Magnuson-Stevens Act, which requires the consideration of the importance of fishery resources to human communities when changes to fishing regulations are considered. Lastly, social vulnerability data are presented to assess the potential for environmental justice concerns. Additional information on the South Atlantic recreational and commercial red snapper fishery is provided in the Economic Environment in **Section 3.3**.

3.4.1 Landings by State

The South Atlantic red snapper season was closed in 2010, 2011, 2015, and 2016 and was open for a short season during 2012, 2013, 2014, 2017, and 2018. Landings by state for the years of 2017 and 2018 are described below because these data represent the most recent years that red snapper was open in federal waters.

Commercial

The majority of commercial red snapper landings came from waters adjacent to Florida (83.7% on average for years 2017 and 2018, SERO and SEFSC ACL Files), followed by North Carolina (9.9%) and South Carolina (6.3%). There were no commercial landings of red snapper in Georgia in 2017 or 2018. Total commercial landings were 87,127 lbs ww in 2017 and 123,661 lbs ww in 2018 (SERO and SEFSC ACL Files).

Recreational

The majority of recreational red snapper landings come from waters adjacent to Florida (95.7% on average for years 2017 and 2018), followed by South Carolina (2.1%), North Carolina (1.3%), and Georgia (0.9%). Total recreational landings were 14,270 fish in 2017 and 38,572 fish in 2018. Recreational landings were derived from MRIP or red snapper state surveys done by the individual states of the South Atlantic region.

3.4.2 Fishing Communities

The descriptions of South Atlantic communities include information about the top communities based on a "regional quotient" (RQ) of commercial landings and value for red snapper. The RQ is the proportion of landings and value out of the total landings and value of that species for that region, and is a relative measure. These communities would be most likely to experience the effects of the proposed actions that could change the red snapper fishery and impact participants, associated businesses, and communities within the region. If a community is identified as a red snapper community based on the RQ, this does not necessarily mean that the community would experience significant impacts due to changes in the fishery if a different species or number of species was also important to the local community and economy.

Additional detailed information about communities with the highest RQs can be found for South Atlantic communities at the Southeast Regional Office's Community Snapshots website.[13]

In addition to examining the RQs to understand how communities are engaged on fishing, indices were created using secondary data from permit and landings information for the commercial sector (Jacob et al. 2013; Jepson and Colburn 2013). Fishing engagement is primarily the absolute numbers of permits, landings, and value for all species. For commercial fishing, the analysis used the number of vessels designated commercial by homeport and owner address, value of landings, and total number of commercial permits for each community for all species.

Using a principal component and single solution factor analysis, each community receives a factor score for each index to compare to other communities. Factor scores of engagement were plotted for the communities with the highest RQs. Two thresholds of one and one-half standard deviation above the mean are plotted to help determine a threshold for significance. The factor scores are standardized; therefore, a score above a value of 1.0 is also above one standard deviation. A score above one-half standard deviation is considered engaged with anything above one standard deviation to be very engaged. The reliance index uses factor scores that are normalized. The factor score is similar to a z-score in that the mean is always zero, positive scores are above the mean, and negative scores are below the mean. Comparisons between scores are relative; however, like a z-score, the factor score puts the community on a point in the distribution. Objectively, that community will have a score related to the percent of communities with similar attributes. For example, a score of 2.0 means the community is two standard deviations above the mean and is among the 2.27% most vulnerable places in the study (normal distribution curve).

Landings for the recreational sector are not available by species at the community level; therefore, it is not possible with available information to identify communities as dependent on recreational fishing for red snapper. Because limited data are available concerning how recreational fishing communities are engaged and reliant on specific species, indices were created using secondary data from permit and infrastructure information for the southeast recreational fishing sector at the community level (Jacob et al. 2013; Jepson and Colburn 2013). Recreational fishing engagement is represented by the number of recreational permits and vessels designated as "recreational" by homeport and owners address. Fishing reliance includes the same variables as fishing engagement, divided by population. Factor scores of both engagement and reliance were plotted. **Figure 3.4.2.3** identifies the top communities that are engaged and reliant upon recreational fishing in general.

A description of the social environment, including analysis of communities engaged in red snapper fishing, was provided in Amendment 43 for snapper grouper (SAFMC 2017) and is incorporated herein by reference. The referenced description focuses on available geographic and demographic data to identify top commercial red snapper communities using 2014 Accumulated Landings System (ALS) data and engagement, reliance, and social vulnerability

[13] https://www.fisheries.noaa.gov/southeast/socioeconomics/snapshots-human-communities-and-fisheries-gulf-mexico-and-south-atlantic

indicators from 2014. This section has been updated using 2017 ALS data and 2016 community social vulnerability indicators data, the most recent year available.

Commercial Fishing Communities

Figure 3.4.2.1 includes the top red snapper communities by regional quotient landings and value during 2017. The majority of the top red snapper communities are located in Florida with one of the top communities located in North Carolina. About 50% of red snapper is landed in the top three communities (Sanford, Cocoa, and Port Orange, Florida), representing about 48% of the South Atlantic-wide ex-vessel value for the species. The remaining top communities collectively represent about 39% of South Atlantic red snapper landings and 40% of ex-vessel value.

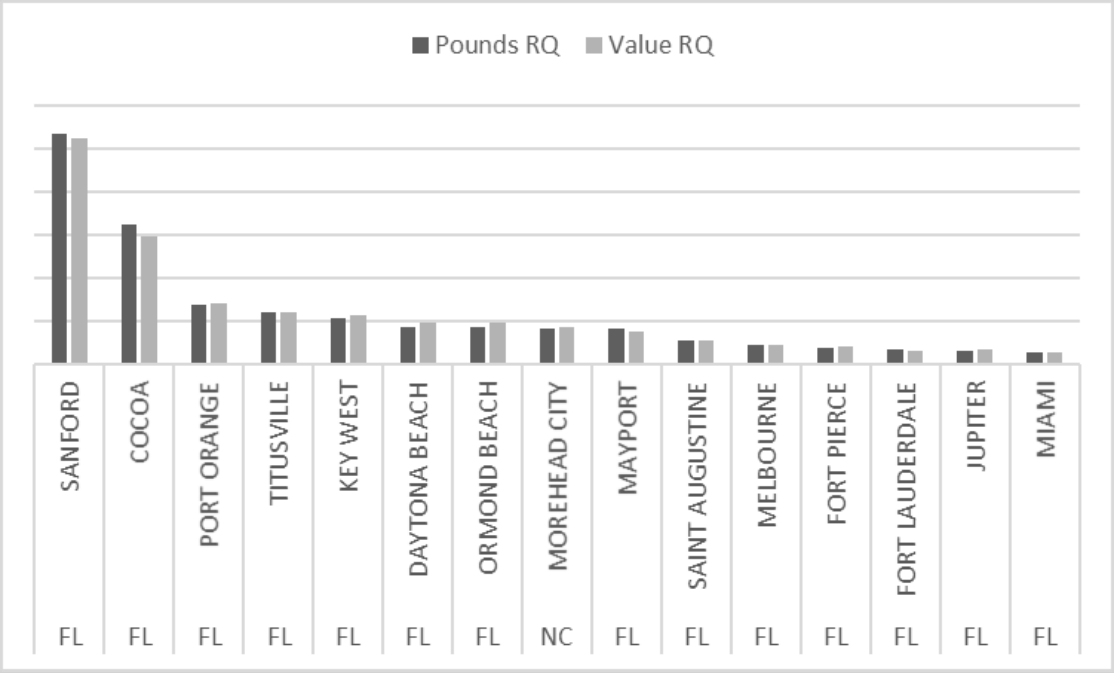

Figure 3.4.2.1. Top South Atlantic communities ranked by pounds and value regional of quotient (RQ) of red snapper. The actual RQ values (y-axis) are omitted from the figure to maintain confidentiality. Source: SERO, Community ALS 2017.

The commercial engagement indices of the top commercial red snapper communities are included in **Figure 3.4.2.2**. The details of how these indices are generated are explained at the beginning of the Fishing Communities section. Two thresholds of one and one-half standard deviation above the mean were plotted to help determine a threshold for significance. The primary communities that demonstrate high levels of commercial fishing engagement include Port Orange, Key West, Mayport, Saint Augustine, Fort Pierce, Fort Lauderdale, Jupiter, and Miami, Florida and Morehead City, North Carolina.

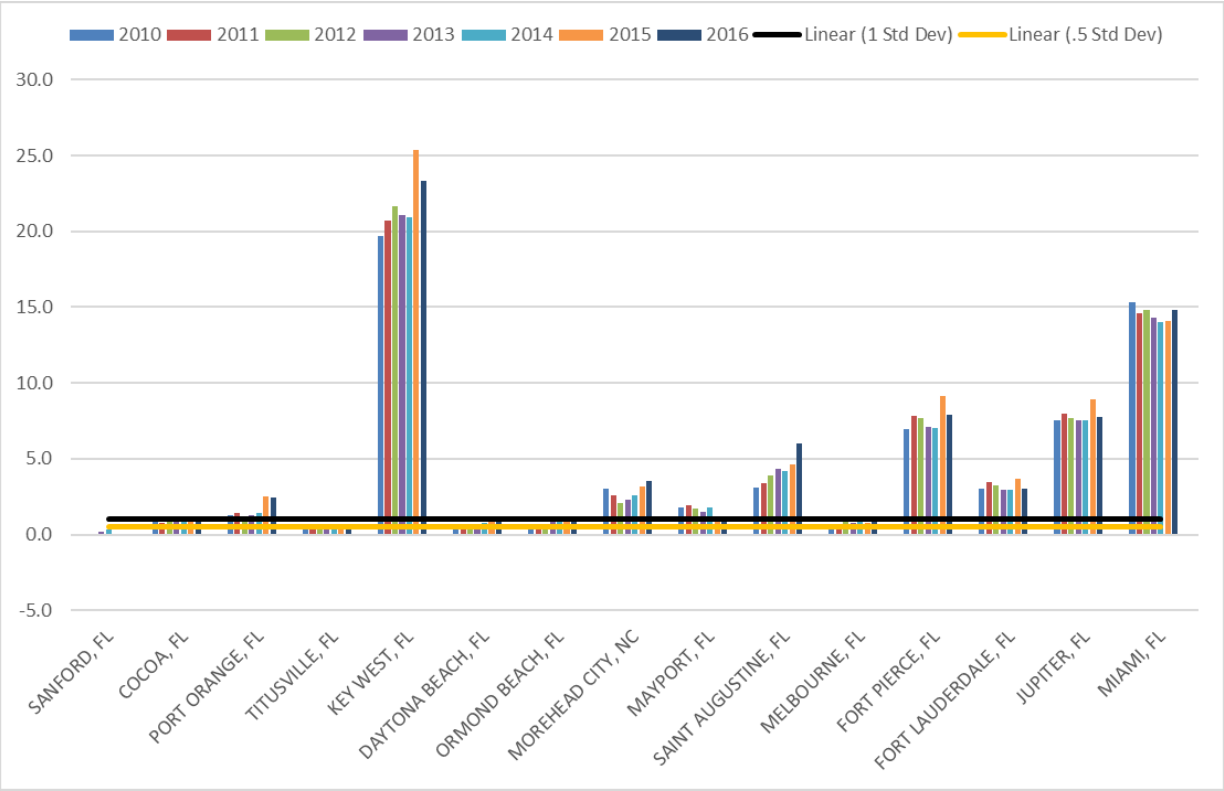

Figure 3.4.2.2. Top South Atlantic red snapper communities' commercial engagement, 2010-2016. Source: SERO, Community Social Vulnerability Indicators Database 2018 (American Community Survey 2012-2016).

Recreational Fishing Communities

Figure 3.4.2.3 identifies the top 20 recreational communities located in the South Atlantic that are the most engaged and reliant on recreational fishing, in general. All included communities demonstrate high levels of recreational engagement. Five communities (Marathon, Florida; Islamorada, Florida; Hatteras, North Carolina; Manteo, North Carolina; and Atlantic Beach, North Carolina) demonstrate high levels of recreational reliance.

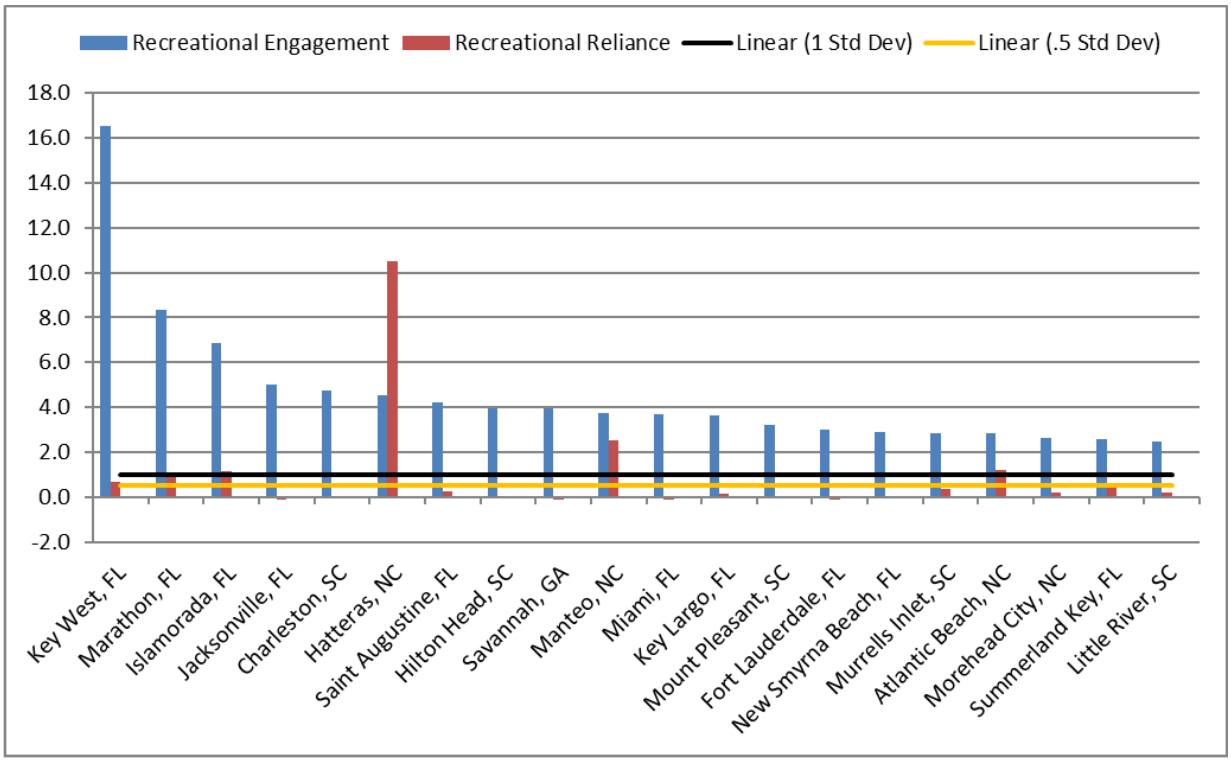

Figure 3.4.2.3. Top 20 recreational fishing communities' engagement and reliance.
Source: SERO, Community Social Vulnerability Indicators Database 2018 (American Community Survey 2012-2016).

3.4.3 Environmental Justice Considerations

Executive Order 12898 requires federal agencies conduct their programs, policies, and activities in a manner to ensure individuals or populations are not excluded from participation in, or denied the benefits of, or subjected to discrimination because of their race, color, or national origin. In addition, and specifically with respect to subsistence consumption of fish and wildlife, federal agencies are required to collect, maintain, and analyze information on the consumption patterns of populations who principally rely on fish and/or wildlife for subsistence. The main focus of Executive Order 12898 is to consider "the 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…" This executive order is generally referred to as environmental justice (EJ).

Commercial and recreational fishermen and associated industries could be impacted by the proposed actions. However, information on the race and income status for groups at the different participation levels (individual fishermen and crew) is not available. Although information is available concerning communities overall status with regard to minorities and poverty (e.g., census data), such information is not available specific to fishermen and those involved in the industries and activities, themselves. To help assess whether any environmental justice concerns arise from the actions in this amendment, a suite of indices were created to examine the social vulnerability of coastal communities. These indices rely on data from the U.S. Census ACS 2012 through 2016 five-year estimates. The three indices are poverty, population composition, and personal disruptions. The variables included in each of these indices have been identified through the literature as being important components that contribute to a community's

vulnerability. Indicators such as increased poverty rates for different groups, more single female-headed households and households with children under the age of five, disruptions such as higher separation rates, higher crime rates, and unemployment all are signs of populations experiencing vulnerabilities. Again, for those communities that exceed the threshold it would be expected that they would exhibit vulnerabilities to sudden changes or social disruption that might accrue from regulatory change.

Figure 3.4.3.1 and **Figure 3.4.3.2** provide the social vulnerability of the top commercial and recreational communities. Several South Atlantic communities exceed the threshold of one-half standard deviation for at least one of the social vulnerability indices: Cocoa, Daytona Beach, Fort Lauderdale, Fort Pierce, Marathon, and Miami, Florida; Savannah, Georgia; and Morehead City, North Carolina. The communities of Cocoa, Florida; Fort Pierce, Florida; Miami, Florida; and Savannah, Georgia exceed the threshold for all three social vulnerability indices. These communities have substantial vulnerabilities and may be susceptible to further effects from any regulatory changes depending upon the direction and extent of that change.

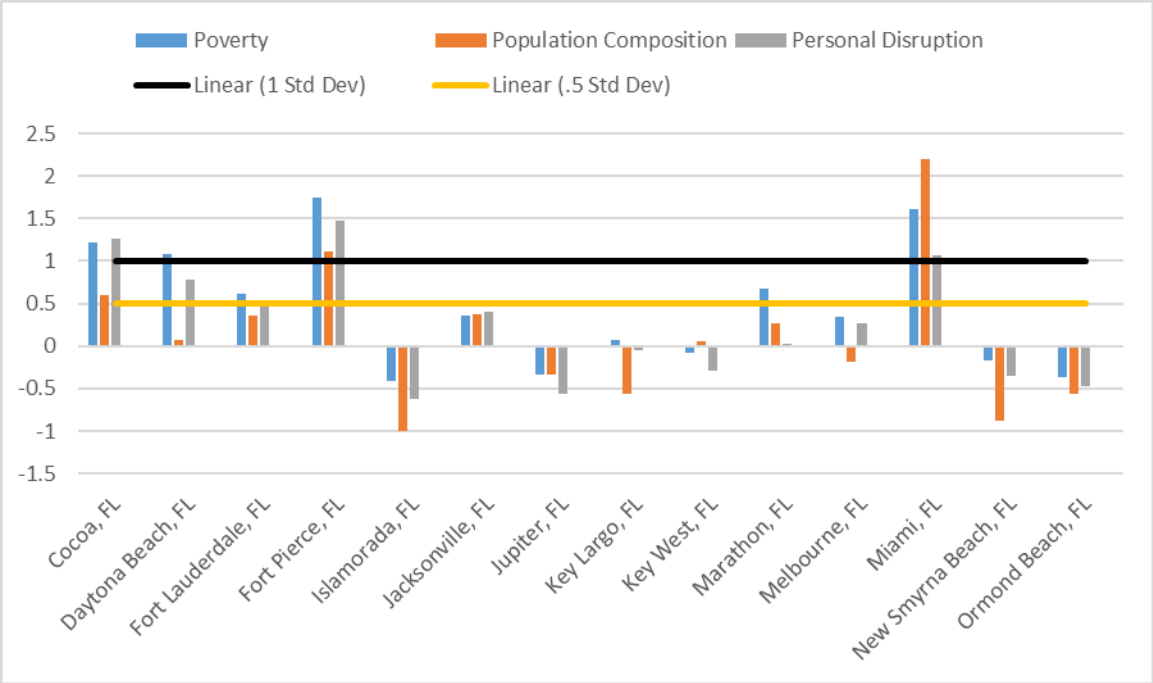

Figure 3.4.3.1. Social vulnerability indices for top commercial and recreational communities. Source: SERO, Community Social Vulnerability Indicators Database 2018 (American Community Survey 2012-2016).

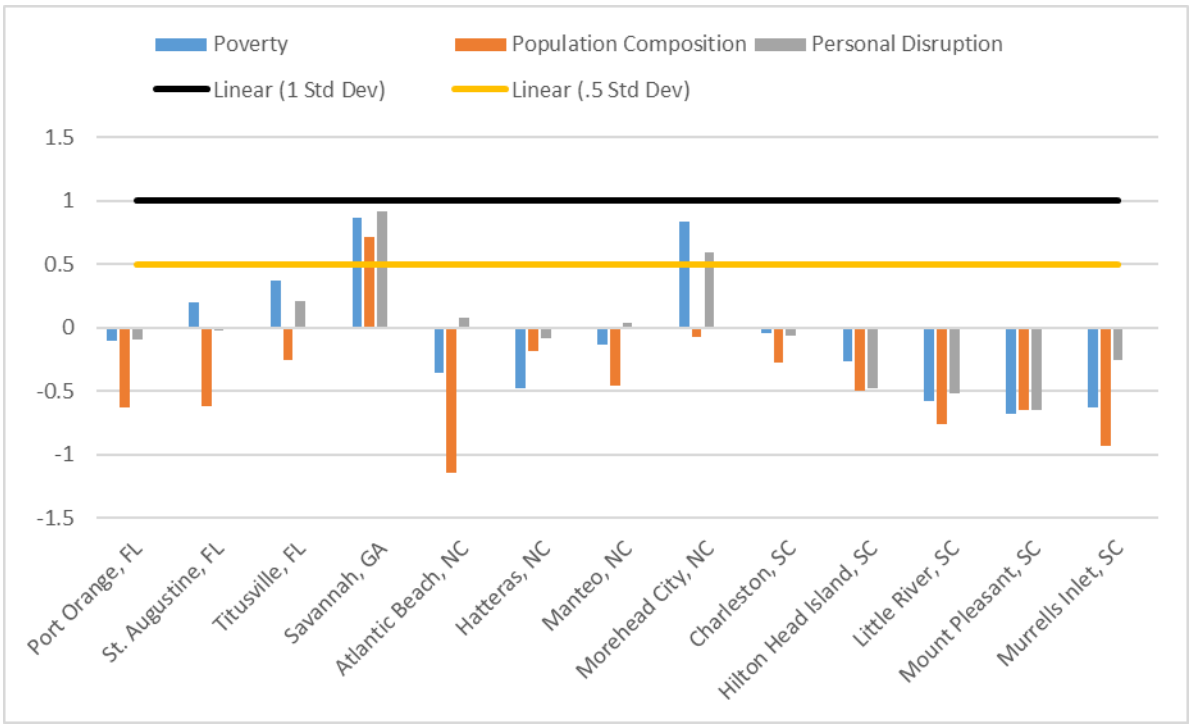

Figure 3.4.3.2. Social vulnerability indices for top commercial and recreational communities continued. Source: SERO, Community Social Vulnerability Indicators Database 2018 (American Community Survey 2012-2016).

People in these communities may be affected by fishing regulations in two ways: participation and employment. Although these communities may have the greatest potential for EJ concerns, no data are available on the race and income status for those involved in the local fishing industry (employment), or for their dependence on red snapper specifically (participation). Although no EJ issues have been identified, the absence of potential EJ concerns cannot be assumed.

3.5 Administrative Environment

3.5.1. Federal Fishery Management

Federal fishery management is conducted under the authority of the 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 EEZ, an area extending 200 nm 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. In most cases, the Secretary has delegated this authority to NMFS.

The 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 mi offshore from the seaward boundary of North Carolina, South Carolina, Georgia, and east Florida to Key West. The South Atlantic Council has thirteen voting members: one from NMFS; 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 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 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 South Atlantic Council level. The Council also established two voting seats for the Mid-Atlantic Council on the South Atlantic Mackerel Committee. Council members serve three-year terms and are recommended by state governors and appointed by the Secretary 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 and legal matters, are open to the public. The Council uses its SSC 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 Procedure Act, in the form of "notice and comment" rulemaking.

3.5.2 State Fishery Management

The state governments of North Carolina, South Carolina, Georgia, and Florida have the 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 Environmental Quality. 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 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 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 is also represented at the Council level, but does not have voting authority at the Council level.

NMFS's 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.

3.5.3 Enforcement

Both the NMFS Office for Law Enforcement (NOAA/OLE) and the United States Coast Guard (USCG) have the authority and the responsibility to enforce Council 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 fisheries mission.

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 all but one of the states in the Southeast Region (North 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.

The NOAA Office of General Counsel Penalty Policy and Penalty Schedule is available online at http://www.gc.noaa.gov/enforce-office3.html.

Chapter 4. Environmental Effects and Comparison of Alternatives

4.1 Action 1. Remove the minimum number of days for the South Atlantic red snapper seasons

4.1.1 Biological Effects

Expected Effects to Snapper Grouper Species and Essential Fish Habitat

Preferred Alternative 2 is expected to result in neither positive nor negative biological effects to the South Atlantic red snapper stock relative to **Alternative 1 (No Action)** since overall harvest would continue to be limited to the respective annual catch limits (ACL). Since the commercial season for red snapper has remained open for several weeks during years when harvest of red snapper was allowed, it is expected that the commercial season would not be affected by **Preferred Alternative 2**.

Alternatives*

1 (No Action). If the projected commercial or recreational fishing season is determined by the National Marine Fisheries Service to be three days or less, then the commercial or recreational fishing season will not open for that fishing year.

2. Remove the requirement specifying the red snapper recreational and commercial seasons in the South Atlantic would not open if projections indicate the season would be three days or fewer.

*Preferred indicated in bold. Refer to Chapter 2 for detailed language of alternatives

Under **Preferred Alternative 2**, it is more likely that the recreational season could be opened if harvest is predicted to last fewer than four days whereas a season would not take place under **Alternative 1 (No Action)**. As such, **Preferred Alternative 2** could result in higher mortality for red snapper when compared to **Alternative 1 (No Action)** as a red snapper season would be open rather than closed. To date, red snapper fishing seasons have not been affected by the three days or less provision. However, as the red snapper population rebuilds, fishing effort increases, and the recreational red snapper ACL remains the same, it is possible **Preferred Alternative 2** could result in shorter fishing seasons in future years as compared to recent years.

The actions in this framework amendment are not expected to negatively impact snapper grouper essential fish habitat (EFH). Fishing effort is not expected to significantly increase as a result of this action, nor are changes in fishing techniques or behavior expected that would affect EFH.

Expected Effects to Protected Species

The actions in this framework amendment would not significantly modify the way in which the snapper grouper fishery is prosecuted in terms of gear types. Therefore, there are no additional impacts on Endangered Species Act (ESA) listed species or designated critical habitats

anticipated as a result of this action (see **Section 3.2.4** for a more detailed description of ESA-listed species and critical habitat in the action area).

4.1.2 Economic Effects

The potential economic effects of Action 1 are highly dependent upon the projected length of the red snapper fishing season. Under circumstances where the projected red snapper fishing season is determined to be more than three days, there would be no difference in the economic effects of **Preferred Alternative 2** in comparison to **Alternative 1 (No Action)** because the length of the fishing season would be the same between the two alternatives and overall harvest would continue to be limited to the ACL. Since the commercial season for red snapper has remained opened for several months in recent years when harvest of red snapper was allowed, it is reasonable to expect that the commercial season will continue to open in the foreseeable future and there are no expected direct or indirect economic effects from Action 1 for the commercial sector.

For the recreational sector, the season for red snapper has remained open for approximately 5 to 6 days when harvest of red snapper was allowed; therefore, if this trend continues, there would be no expected direct or indirect economic effects from Action 1 for the recreational sector as well. However, should the rate of recreational landings of red snapper increase, it is possible that projections could indicate a season of fewer than four days for that sector. If the projected recreational fishing season is determined to be three or fewer days, **Alternative 1 (No Action)** would result in forgone short-term economic benefits since there would be no recreational fishing season. In this scenario, **Preferred Alternative 2** would still allow the recreational red snapper season to occur. This would provide economic benefits through increased consumer surplus (CS) for recreational anglers, increased revenue for for-hire (charter and headboat) businesses, and increased business activity for recreational fishing related businesses.

The anticipated change in recreational CS for **Preferred Alternative 2** in comparison to **Alternative 1 (No Action)** under the scenarios of projected red snapper seasons of more than three days and three or fewer days is provided in **Table 4.1.2.1**. If the fishing season is opened for red snapper, it is assumed that the recreational sector will harvest its sector ACL (recreational ACL=29,656 fish). Overall, for **Preferred Alternative 2** it is estimated that CS would increase between $0 and approximately $2,491,000 (2018 dollars).

Table 4.1.2.1. Estimated change in recreational consumer surplus (CS) under **Preferred Alternative 2** of **Action 1** relative to the status quo (**current regulations**).

	If the season is greater than three days	**If the season is three days or less**
Estimated change in recreational landings (number of fish)	0	29,656
Estimated change in consumer surplus (2018 dollars)*	$0	$2,491,104

*Assumes a CS value of $84 (2018 dollars) per red snapper (Carter and Liese 2012).

Should **Preferred Alternative 2** allow for recreational red snapper harvest that otherwise would not occur, there is the potential that angler demand for for-hire trips would increase as

well, resulting in increased booking rates and for-hire business net operating revenue (NOR). Due to the complex nature of angler behavior and the for-hire industry, it is not possible to quantify these potential economic effects with available data.[14] As such, no estimates of the change in for-hire NOR are provided, although they may exist.

Additionally, recreational fishing for red snapper spurs business activity in the region in which it occurs. If **Preferred Alternative 2** allows a recreational season for red snapper when it would have not occurred otherwise, it may be reasonably expected to increase such business activity relative to the status quo, by increasing recreational expenditures on goods and services necessary for fishing. These potential economic benefits cannot be quantified with available data.

4.1.3 Social Effects

Alternative 1 (No Action) would retain current regulations, which do not allow any harvest if the fishing season for the red snapper commercial or recreational sector is determined to be three days or less. Such action would likely be perceived negatively by stakeholders in both the commercial and recreational sectors, as much of the public comment suggested that past closures have resulted in negative social and economic impacts.

However, under **Preferred Alternative 2** the limited fishing opportunity provided by such a small season could result in the development of derby fishing (also known as a race to fish) where fishermen feel pressure to complete fishing trips regardless of safety considerations. With many fishermen pursuing red snapper at the same time, vessels are placed in direct competition and may choose to fish in conditions that are dangerous. Input from stakeholders indicates that during the 2018 and 2019 red snapper recreational seasons (six days and five days, respectively) crowding at access points created conflict between fishermen. Additionally, some fishermen chose to fish in poor weather and overloaded vessels to ensure they had sufficient opportunity to harvest red snapper. Finally, fishermen reported that it was challenging for marinas and bait shops to keep up with the high level of demand during the short season. Additionally, research conducted by Powers and Anson (2018) illustrated that recreational fishing effort does change in response to fishing season length for the red snapper fishery in the northern Gulf of Mexico. The study illustrated that derby-style fisheries increase as fishing seasons are shortened and the highest daily effort rates were observed during the shortest Gulf of Mexico season (three days). Therefore, **Preferred Alternative 2** would have a higher safety at-sea concern compared to **Alternative 1 (No Action)**.

Safety at-sea considerations are important, but allowing for the harvest of red snapper in South Atlantic waters, regardless of season length, is likely to be perceived as having positive social effects, as the past closures of this portion of the snapper grouper fishery have been highly controversial.

[14] Anglers have heterogeneous preferences and may target and/or harvest a diverse mix of snapper grouper and other species on a trip. The absence of the opportunity to fish for any single species may or may not affect their overall desire to take/pay for trips.

4.1.4 Administrative Effects

If the commercial or recreational red snapper fishing season is predicted to be more than three days, **Alternative 1 (No Action)** or **Preferred Alternative 2** would not create additional administrative effects.

Since the commercial fishing season is anticipated to remain open for longer than three days, **Preferred Alternative 2** would not create additional administrative effects.

Under **Alternative 1 (No Action)**, if the recreational red snapper fishing season is predicted to be fewer than four days, not specifying a short fishing season would reduce administrative effects to the NMFS, the South Atlantic Fishery Management Council (Council), and the states. However, if the recreational red snapper fishing season is predicted to be less than four days, **Preferred Alternative 2** would include the administrative burden of data monitoring, outreach, and enforcement of a short fishing season. Therefore, for each scenario, the administrative effects would be less under **Alternative 1 (No Action)** when compared with **Preferred Alternative 2**.

4.2 Action 2. Modify the red snapper commercial season

4.2.1 Biological Effects

Expected Effects to Snapper Grouper Species and Essential Fish Habitat

Alternatives*

1 (No Action). The commercial red snapper season begins on the second Monday in July.

2. Modify the commercial season start date to May 1.

3. Modify the commercial season start date to the second Monday in June.

*Preferred indicated in bold. Refer to Chapter 2 for detailed language of alternatives

Preferred Alternative 2 and **Alternative 3** would move the start date for the commercial season earlier in the year. The commercial red snapper season has not been open during the time of year proposed in **Preferred Alternative 2** or **Alternative 3** since 2009, hence it is not possible to obtain catch rates to predict how long the season would last under the current commercial ACL. However, it is reasonable to expect that, since fishery-independent trends in red snapper abundance and anecdotal information from fishermen suggest that the red snapper stock has increased substantially since 2009 (Ballenger 2017; SAFMC 2017), **Preferred Alternative 2** could result in the commercial ACL being met earlier in the year relative to **Alternative 1 (No Action)** and **Alternative 3**. According to fishermen, red snapper are being targeted during the open season in some areas of the South Atlantic whereas it remains an incidental catch in others. Overall biological effects would be similar among all alternatives since harvest would continue to be limited by the ACL.

South Atlantic snapper grouper bycatch and discard information is collected through the commercial discard logbook. Discard logbooks are distributed to 20% of randomly selected commercial snapper grouper permit holders in the South Atlantic region. Since 2010, red snapper discards have been consistently highest in the month of May compared to other months of the year (**Table 4.2.1.1**). This suggests that high discard rates of red snapper coincide with the opening of Shallow-Water Grouper on May 1st of each year (see **Table 3.2.2.1**). If this sub-sample is representative of the fishery, **Preferred Alternative 2** could result in reduced discards of red snapper in May when fishermen begin targeting shallow-water grouper. **Alternative 3** (June opening) may result in slightly lower numbers of discarded red snapper as **Alternative 1 (No Action)**. On an annual basis, however, discards of red snapper have decreased in recent years from a peak in 2014 (**Figure 4.2.1.1**).

Table 4.2.1.1. Annual commercial red snapper discards (numbers of fish) from a sub-sample of the commercial fleet by month, 2007-2018.

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2007	146	78	216	71	173	522	426	149	123	128	255	326
2008	344	455	554	532	462	178	381	622	480	448	307	694
2009	200	103	198	167	273	236	192	82	217	51	40	34
2010	297	445	294	384	1,719	1,690	499	557	451	109	376	327
2011	1,162	899	615	287	1,895	1,466	1,981	876	651	433	543	338
2012	1,231	503	147	180	1,662	840	1,473	675	340	127	78	60
2013	706	506	236	59	1,264	1,249	1,183	623	133	947	474	403
2014	1,014	1,525	1,100	1,773	2,797	1,381	607	432	1,155	1,415	771	327
2015	1,256	776	1,231	2,168	2,234	665	1,038	987	468	416	371	515
2016	1,306	792	873	422	2,916	939	3,236	865	532	326	380	304
2017	701	366	400	615	1,264	1,026	932	1,584	726	508	188	109
2018	391	411	174	643	1,062	827	584	121	258	179	132	154
Total	**8,754**	**6,859**	**6,038**	**7,301**	**17,721**	**11,019**	**12,532**	**7,573**	**5,534**	**5,087**	**3,915**	**3,591**

Source: Commercial Discard Logbook (SEFSC).

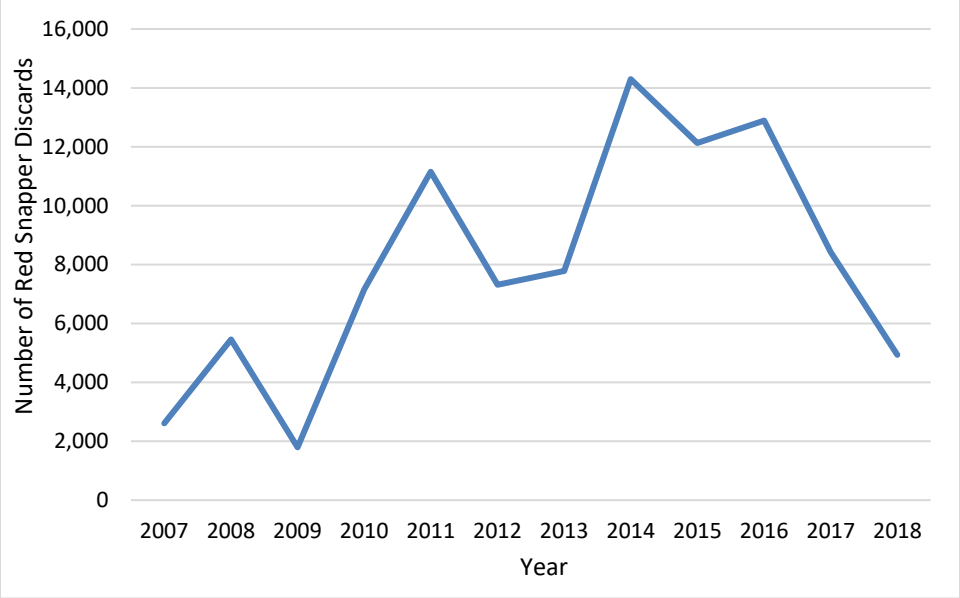

Figure 4.2.1.1. Red snapper discards (in numbers of fish) by year from 2007 to 2018. Source: Commercial Discard Logbook (SEFSC).

Whereas **Preferred Alternative 2** could result in reduced red snapper discards in May, it could potentially increase the mortality of released fish later in the year. If commercial catch rates remain as they are, it is reasonable to expect that the commercial ACL would be met by early summer, when increased water temperature can negatively affect the survivorship of discarded fish. Indeed, total discards of red snapper in the commercial fishery have been the second highest in July (**Table 4.2.1.1**). As such, in terms of discard mortality, negative biological impacts could be greatest under **Alternative 1 (No Action)**, followed by **Preferred Alternative 2** and **Alternative 3**.

Red snapper in the South Atlantic spawn from April through October with peaks in June through August (SEDAR 41 2017); hence, **Preferred Alternative 2** and **Alternative 3** would both allow commercial harvest during the spawning season. Under current regulations, red snapper that are caught incidentally to commercial fishing outside of the open season are discarded and approximately 38% of those fish do not survive (SEDAR 41 2017). Therefore, allowing harvest during a different portion of the red snapper spawning season under **Preferred Alternative 2** or **Alternative 3** would likely not have measurable positive or negative biological impacts relative to **Alternative 1 (No Action)** as harvest would continue to be limited to the commercial ACL.

Overall, the actions in this framework amendment are not expected to result in significant changes in bycatch of red snapper or co-occurring species (**Appendix D** in Amendment 43, SAFMC 2017).

Expected Effects to Protected Species

The actions in this framework amendment would not significantly modify the way in which the snapper grouper fishery is prosecuted in terms of gear types. Therefore, there are no additional impacts on Endangered Species Act (ESA) listed species or designated critical habitats anticipated as a result of this action (see **Section 3.2.4** for a more detailed description of ESA-listed species and critical habitat in the action area).

4.2.2 Economic Effects

The economic effects of Action 2 would likely be similar across all of the alternatives. Commercial harvest would continue to be limited to the commercial ACL, therefore commercial red snapper landings and the trip revenue generated from these landings would be similar between the alternatives. Additionally, since there are no anticipated measurable net positive or negative biological impacts, there would not be indirect economic effects resulting from future variations to harvest levels that would be an outcome of changes in the red snapper stock. As such measures of future commercial operating revenue would be similar and there would not be different indirect economic effects among the alternatives.

4.2.3 Social Effects

The commercial season start date in **Alternative 1 (No Action)** and proposed **Preferred Alternative 2** and **Alternative 3** are all anticipated to provide social benefits by allowing commercial fishermen to keep red snapper that would have otherwise been discarded. However, the alternative that offers the most positive social effects may depend on where a stakeholder resides with regard to a preferred opening date. If fishermen retain red snapper as incidental catch when targeting other snapper grouper species, aligning the season opening for red snapper with the seasons for other snapper grouper species is likely to provide the greatest social benefits to fishing communities. Alternatively, if commercial fishermen are making trips specifically targeting red snapper, fishing communities may benefit from having access to the red snapper portion of the snapper grouper fishery and associated revenue at a time when other snapper grouper species are unavailable. Whether fishermen are targeting red snapper or keeping them

as incidental catch likely varies based on individual business practices and relative abundance of red snapper over different fishing grounds.

Considering spawning season closures and ACL closures over the last seven years, the months of May, June, and July (**Preferred Alternative 2**, **Alternative 3**, and **Alternative 1 (No Action)**, respectively) consistently have the most other snapper grouper species open to harvest. **Preferred Alternative 2** would align the red snapper opening with the season opening for the shallow water grouper species, which experience a spawning season closure from January 1 through April 30. Additionally, **Preferred Alternative 2** could provide the longest season by allowing as much time as possible for the commercial sector to harvest the total ACL and experience the associated social benefits. However, fishermen indicate that the abundance of red snapper have increased, and thus **Preferred Alternative 2** may result in an ACL closure earlier in the year when compared to **Alternative 1 (No Action)** and **Alternative 3**. Ensuring commercial harvest of red snapper remains open during the fall months would be most beneficial for fishermen targeting other species in the spring or operating in areas that experience inclement weather early in the year.

4.2.4 Administrative Effects

None of the considered alternatives would change the administrative environment from its current condition. Currently, there is a commercial quota monitoring system in place for red snapper that is utilized to monitor landings against the commercial ACL. In each of the last two years, red snapper commercial harvest has closed early due to landings reaching the ACL prior to the end of the fishing year. If total effort for red snapper remains consistent, it is likely the ACL would be reached prior to the end of the fishing year. Therefore, NMFS would have to continue to prepare and issue closure notices and enforcement personnel would have to continue to monitor the closures. The timing of closure package preparation would be the only difference in effects for **Preferred Alternative 2** and **Alternative 3**. Also, with an in-season quota closure, there is potential for landings not to reach 100% of the ACL. In that circumstance, guidance from the Council to NMFS has recommended that harvest for snapper grouper species should reopen if landings are less than 95% of the ACL, and the projected number of days to meet the ACL is two or more days. Therefore, NMFS would have to monitor the landings and prepare a reopening notice. Outreach materials for in-season actions would take the form of fishery bulletins and updates to NMFS Southeast Regional Office's web site.

Chapter 5. South Atlantic Council's Rationale for the Preferred Alternatives (Draft)

5.1 Action 1. Remove the minimum number of days for the South Atlantic red snapper seasons

Alternatives**

1 (No Action). If the projected commercial or recreational fishing season is determined by the National Marine Fisheries Service to be three days or less, then the commercial or recreational fishing season will not open for that fishing year.

2. Remove the requirement specifying the red snapper recreational and commercial seasons in the South Atlantic would not open if projections indicate the season would be three days or fewer.

*Preferred indicated in bold. Refer to Chapter 2 for detailed language of alternatives

5.1.1 Snapper Grouper Advisory Panel Comments and Recommendations

The Snapper Grouper Advisory Panel (AP) received a briefing of the South Atlantic Fishery Management Council's (Council) intent at their April 24-26, 2019, meeting, before the Council reviewed the wording of possible actions and alternatives at their June 2019 meeting. Hence, the AP did not have specific recommendations for each action. The AP approved the motion below:

MOTION #1: RECOMMEND THAT THE COUNCIL CONSIDER NOT ALLOWING HARVEST OF RED SNAPPER DURING THEIR PEAK SPAWNING SEASON (JULY AND AUGUST). CONSIDER COMMERCIAL HARVEST IN THE SPRING (MAY-JUNE) AND ANOTHER SEASON IN SEPTEMBER-DECEMBER.

APPROVED BY AP (UNANIMOUS)

At their October 9-11, 2019, meeting, the AP discussed Regulatory Amendment 33 in more detail but did not offer specific recommendations on the proposed actions.

5.1.2 Law Enforcement Advisory Panel Comments and Recommendations

The Law Enforcement AP received a briefing of proposed changes at their May 23-24, 2019, meeting. The LE AP had no comments or recommendations on Regulatory Amendment 33.

5.1.3 Scientific and Statistical Committee Comments and Recommendations

The Scientific and Statistical Committee (SSC) convened on October 15-17, 2019, and received a summary of proposed changes in their briefing material. The SSC had no comments or recommendations on Regulatory Amendment 33.

5.1.4 Public Comments and Recommendations

Public hearings for Regulatory Amendment 33 were held August 12-15, 2019. Information and preliminary analyses of proposed changes were presented via webinar. Nine listening stations were held throughout the South Atlantic region to solicit public comment (two in North Carolina, two in South Carolina, one in Georgia, and four in Florida). A total of 17 comments were provided during webinar/listening stations. In addition, a comment form was available on the Council's website through August 19, 2019. Forty-six comments were submitted online. Overall, eleven comments were submitted in support of **Preferred Alternative 2**.

5.1.5 Council's Rationale

- Management has changed fishermen's behavior as it relates to red snapper. Even if the season were to be one day, people would likely behave in the same way. Ultimately, it is the individual's responsibility to decide whether it is safe to go fishing or not.
- Short-term fisheries like red snapper are necessarily going to create accessibility issues.
- It could be argued that safety-at-sea concerns (National Standard 10 – conservation and management measures shall, to the extent practicable, promote the safety of human life at sea) already exist under the current approach to open recreational harvest of red snapper but could also exist on any given Saturday when the weather is nice.
- Tournaments also create "derby" style fishing.

5.1.6 How is this Action Addressing the Vision Blueprint for the Snapper Grouper Fishery?

This action addresses Objective 3 in Appendix B: "Ensure that management decisions help maximize social and economic opportunity for all sectors" of the Vision Blueprint for the Snapper Grouper Fishery. Within that objective, this action would address strategy B to "consider predictability in for-hire business planning when making management decisions."

5.2 Action 2. Modify the red snapper commercial season

Alternatives**

1 (No Action). The commercial red snapper season begins on the second Monday in July.

2. Modify the commercial season start date to May 1.

3. Modify the commercial season start date to the second Monday in June.

***Preferred indicated in bold. Refer to Chapter 2 for detailed language of alternatives.

5.2.1 Snapper Grouper AP Comments and Recommendations

The AP received a briefing of the Council's intent at their April 24-26, 2019, meeting, before the Council reviewed the wording of possible actions and alternatives at their June 2019 meeting. Hence, the AP did not have specific recommendations for each action. The AP approved the motion below:
MOTION #1: RECOMMEND THAT THE COUNCIL CONSIDER NOT ALLOWING HARVEST OF RED SNAPPER DURING THEIR PEAK SPAWNING SEASON (JULY AND AUGUST). CONSIDER COMMERCIAL HARVEST IN THE SPRING (MAY-JUNE) AND ANOTHER SEASON IN SEPTEMBER-DECEMBER. APPROVED BY AP (UNANIMOUS)

At their October 9-11, 2019, meeting, the AP discussed Regulatory Amendment 33 in more detail but did not offer specific recommendations on the proposed actions.

5.2.2 Law Enforcement AP Comments and Recommendations

The Law Enforcement AP received a briefing of proposed changes at their May 23-24, 2019, meeting. The LE AP had no comments or recommendations on Regulatory Amendment 33.

5.2.3 Scientific and Statistical Committee Comments and Recommendations

The SSC convened on October 15-17, 2019, and received a summary of proposed changes in their briefing material. The SSC had no comments or recommendations on Regulatory Amendment 33.

5.2.4 Public Comments and Recommendations

Public hearings for Regulatory Amendment 33 were held August 12-15, 2019. Information and preliminary analyses of proposed changes was presented via webinar. Nine listening stations were held throughout the South Atlantic region to solicit public comment (two in North Carolina, two in South Carolina, one in Georgia, and four in Florida). A total of 17 comments were provided during webinar/listening stations. In addition, a comment form was available on the Council's website through August 19, 2019. Forty-six comments were submitted online.

- Three comments were in support of no change

- One comment was in support of Alternative 4 (May opening with no harvest in July-August). Note: This alternative was removed from consideration at the September 2019 Council meeting.
- Twelve comments requesting opening for commercial season in the beginning of August or make no change to the start date for the commercial red snapper season. An August start would provide white fish to the market when other species are no longer available.
- One comment suggested opening commercial harvest of red snapper in September-December. If the annual catch limit was not fully harvested during the fall opening, then harvest could be re-opened in May of the following year to fill the previous year's annual catch limit.

5.2.5 Council's Rationale

- The Council acknowledged the AP's concern about harvest during peak spawning. However, there are two studies (Brown-Peterson et al. 2008; White and Palmer 2004) that indicate red snapper peak spawning goes through September. Therefore, there is less of a concern about allowing harvest in July and August.
- The Council acknowledged they removed the language "to reduce mortality during the red snapper spawning season" from the Purpose and Need of this amendment (done in June 2019).
- Allowing commercial harvest of red snapper at the same time grouper harvest opens on May 1 would help reduce discards. Council emmbers stated that May and June are when most discards of red snapper occur.
- The Council acknowledged commercial season opening before the recreational season may result in conflict between the sectors; however, reducing discards is what is best for the resource.
- The trip limit reduction or closure for vermilion snapper, a staple fishery in the region, usually occurs in the spring of the year. Allowing red snapper retention when grouper harvest opens on May 1 would be beneficial to commercial fishermen. Later in the year, when vermilion snapper and triggerfish are available in July, it is a lot easier to fill the boat with other fish and make a trip.
- If commercial harvest was to be allowed beginning on May 1, and since commercial harvest of red snapper has lasted about 38 days in the past couple of years, the Council did not see the need to pause harvest during July and August (as the AP recommended).

5.2.6 How is this Action Addressing the Vision Blueprint for the Snapper Grouper Fishery?

This action addresses Objective 3 in Appendix B: "Ensure that management decisions help maximize social and economic opportunity for all sectors" of the Vision Blueprint for the Snapper Grouper Fishery. In addition, this action would address Objective 4 in Appendix B: "Develop management measures that reduce and mitigate discards."

Chapter 6. Cumulative Effects

6.1 Affected Area

The immediate impact area would be the federal exclusive economic zone (EEZ) of the Atlantic off the coasts of North Carolina, South Carolina, Georgia, and off the east coast of Florida to Key West, which is also the South Atlantic Fishery Management Council's (Council) area of jurisdiction. In light of the available information, the extent of the boundaries would depend upon the degree of fish immigration/emigration and larval transport, whichever has the greatest geographical range. The ranges of affected species are described in **Chapter 3**. For this action, the cumulative effects analysis includes an analysis of actions and events dating back to 1983 when the original Fishery Management Plan (FMP) for the Snapper Grouper Fishery of the South Atlantic Region (Snapper Grouper FMP) was implemented, and through what is expected to take place in the reasonably foreseeable future. For the actions found in Regulatory Amendment 33 to the Snapper Grouper FMP (Regulatory Amendment 33), the cumulative effects analysis includes an analysis of data from 2013 through 2018.

6.2 Past, Present, and Reasonably Foreseeable Actions Impacting the Affected Area

Fishery managers implemented the first significant regulations pertaining to snapper grouper species in 1983 through the Snapper Grouper FMP (Snapper Grouper FMP; SAFMC 1983). Listed below 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 and socio-economic environment. The complete history of management of the snapper grouper fishery can be found in **Appendix C (History of Management)**.

Past Actions

Amendment 28 to the Snapper Grouper FMP set the commercial and recreational ACLs and seasons to allow limited harvest of red snapper in 2013. In addition, the amendment established a process to determine whether limited commercial and recreational fishing seasons in the South Atlantic EEZ could occur during a given fishing year, and specified management measures (no minimum size limit for either sector, recreational bag limit of one fish per person per day, commercial trip limit of 75 lbs gw) should limited harvest be allowed. The regulations were effective on August 23, 2013.

The South Atlantic Headboat Reporting Amendment was implemented on January 27, 2014, and requires that all federally-permitted headboats on the South Atlantic report their landings information electronically, and on a weekly basis to improve the timeliness and accuracy of harvest data.

The Generic Dealer Reporting Amendment, which became effective on August 7, 2014, established one dealer permit for the Gulf of Mexico and South Atlantic regions and increased the reporting frequency requirements for species managed by the South Atlantic Council and Gulf of Mexico Fishery Management Council. This amendment is expected to improve fisheries

data collection, through more timely and accurate dealer reporting, and streamline the dealer permit system.

An emergency rule, which became effective on November 2, 2017, established red snapper seasons for the commercial and recreational sectors in the South Atlantic EEZ in 2017.

Amendment 43 to the Snapper Grouper FMP, which became effective on July 26, 2018, established red snapper seasons for the commercial and recreational sectors in the South Atlantic EEZ. The amendment removed the process and equation used to determine the red snapper annual catch limit adopted in Amendment 28 and specified a total ACL of 42,510 fish. The commercial and recreational ACLs were set at 124,815 pounds (whole weight) and 29,656 fish, respectively, according to established sector allocations. The catch limit was based on the highest observed landings of red snapper in a single year from 2012 through 2014. Management measures established through Amendment 28 (see above) were retained.

Present Actions

The Vision Blueprint Recreational Regulatory Amendment 26 to the Snapper Grouper FMP considers actions remove the recreational minimum size limit for deep-water species, modify the recreational minimum size limit for gray triggerfish off east Florida, and modify the bag limit for the 20-Fish aggregate. The Council approved the amendment for review by the Secretary of Commerce (Secretary) at their December 2018 Council meeting.

The Vision Blueprint Recreational Regulatory Amendment 27 to the Snapper Grouper FMP considers actions to modify commercial regulations for blueline tilefish, snowy grouper, greater amberjack, red porgy, vermilion snapper, almaco jack, other jacks complex, queen snapper, silk snapper, blackfin snapper, and gray triggerfish. Actions include modifying fishing seasons, trip limits, and minimum size limits. The Council approved the amendment for review by the Secretary at their September 2018 Council meeting.

Regulatory Amendment 29 to the Snapper Grouper FMP would add or modify regulations pertaining to best fishing practices (e.g., descending devices and circle hooks) and powerhead restrictions. The Council approved the framework amendment for review by the Secretary at the September 2019 Council meeting.

Regulatory Amendment 30 to the Snapper Grouper FMP would revise the rebuilding schedule for red grouper based on the most recent stock assessment and modify the spawning season closure of red grouper for the commercial and recreational sectors in the EEZ off North and South Carolina. The amendment also includes an action to establish a commercial trip limit for red grouper harvested in the South Atlantic EEZ. The Council approved the amendment for review by the Secretary at their June 2019 meeting.

Reasonably Foreseeable Future Actions

Comprehensive Acceptable Biological Catch (ABC) Control Rule Amendment (Amendment 45 to the Snapper Grouper FMP) would modify the ABC control rule, specify an approach for determining the acceptable risk of overfishing and the probability of rebuilding success for overfished stocks, allow phase-in of ABC changes, and allow carry-over of unharvested catch. This amendment will continue being developed in 2019.

Amendment 46 to the Snapper Grouper FMP proposes actions to focus on private recreational permit requirements and reporting. Development of this amendment is currently on hold.

Regulatory Amendment 31 to the Snapper Grouper FMP could include actions to revise recreational accountability measures to allow more flexibility in managing recreational fisheries.

Expected Impacts from Past, Present, and Future Actions

The proposed actions in Regulatory Amendment 33 are not expected to result in significant cumulative adverse biological or socio-economic effects (see **Chapter 4**). In recent years, participants in the recreational sector of the snapper grouper fishery and associated businesses have experienced some negative economic and social impacts due to changes in ACLs and early closures during the fishing years. Factors such as distance to fishing grounds, weather, and water temperature affect availability of species to the recreational fleets in different parts of the Council's jurisdiction. The proposed actions are intended to remove the minimum number of days to allow commercial or recreational harvest of red snapper in the South Atlantic and modify the red snapper commercial season to increase the socio-economic benefits to fishermen and fishing communities while minimizing discard mortality.

When combined with the impacts of past, present, and future actions affecting the snapper grouper fishery, specifically for red snapper, minor cumulative impacts are likely to accrue. For example, there could be beneficial cumulative effects from the actions in this framework amendment, in addition to future proposed actions to reduce overfishing of snapper grouper species, require the use of descending devices, and reducing bycatch. Also, there may be cumulative socio-economic effects by promoting access to the fishery which would improve recreational fishing opportunities and benefits to associated businesses and communities; however, the actions in this framework amendment are not expected to result in significant cumulative adverse biological or socio-economic effects to the snapper grouper fishery when combined with the impacts of past, present, and future actions (see **Chapter 4**).

6.3 Consideration of Climate Change and Other Non-Fishery Related Issues

Climate Change

Global climate changes could have significant effects on South Atlantic fisheries, though the extent of these effects on the snapper grouper fishery is not known at this time. The Environmental Protection Agency's climate change webpage[15], and NOAA's Office of Science and Technology climate webpage[16], provides background information on climate change, including indicators which measure or anticipate effects on oceans, weather and climate,

[15] https://www.epa.gov/climate-indicators/marine-species-distribution
[16] https://www.fisheries.noaa.gov/topic/climate

ecosystems, health and society, and greenhouse gases. The United Nations Intergovernmental Panel on Climate Change's Fifth Assessment Report (November 2, 2014), and the Fourth National Climate Assessment (November 2018)[17] provide a compilation of scientific information on climate change. Those findings are summarized below.

Ocean acidification, or a decrease in surface ocean pH due to absorption of anthropogenic carbon dioxide emissions, affects the chemistry and temperature of the water. Increased thermal stratification alters ocean circulation patterns, and causes a loss of sea ice, sea level rise, increased wave height and frequency, reduced upwelling, and changes in precipitation and wind patterns. Changes in coastal and marine ecosystems can influence organism metabolism and alter ecological processes such as productivity, species interactions, migration, range and distribution, larval and juvenile survival, prey availability, and susceptibility to predators. The "center of biomass," a geographical representation of each species' weight distribution, is being used to identify the shifting of fish populations. Warming sea temperature trends in the southeast have been documented, and animals must migrate to cooler waters, if possible, if water temperatures exceed survivable ranges (Needham et al. 2012). Harvesting and habitat changes also cause geographic population shifts. Changes in water temperatures may also affect the distribution of native and exotic species, allowing invasive species to establish communities in areas they may not have been able to survive previously. The combination of warmer water and expansion of salt marshes inland with sea-level rise may increase productivity of estuarine-dependent species in the short term. However, in the long term, this increased productivity may be temporary because of loss of fishery habitats due to wetland loss (Kennedy et al. 2002). The numerous changes to the marine ecosystem may cause an increased risk of disease in marina biota. An increase in the occurrence and intensity of toxic algae blooms will negatively influence the productivity of keystone animals, such as corals, and critical coastal ecosystems such as wetlands, estuaries, and coral reefs (Kennedy et al. 2002; IPCC 2014).

Climate change may impact snapper grouper species in the future, but the level of impacts cannot be quantified at this time, nor is the time frame known in which these impacts will occur. In the near term, it is unlikely that the management measures contained in Regulatory Amendment 33 would compound or exacerbate the ongoing effects of climate change on snapper grouper species.

Weather Variables

Hurricane season is from June 1 to November 30, and accounts for 97% of all tropical activity affecting the Atlantic basin. These storms, although unpredictable in their annual occurrence, can devastate areas when they occur. Although these effects may be temporary, those fishing-related businesses whose profitability is marginal may go out of business if a hurricane strikes.

Deepwater-Horizon Oil Spill

On April 20, 2010, an explosion occurred on the Deepwater Horizon MC252 oil rig, resulting in the release of an estimated 4.9 million barrels of oil into the Gulf of Mexico (Gulf). In addition, 1.84 million gallons of Corexit 9500A dispersant were applied as part of the effort to

[17] www.globalchange.gov/nca4

constrain the spill. The cumulative effects from the oil spill and response may not be known for several years. The oil spill affected more than one-third of the Gulf area from western Louisiana east to the panhandle of Florida and south to the Campeche Bank in Mexico. The impacts of the Deepwater Horizon MC252 oil spill on the physical environment are expected to be significant and may be long-term. Oil is dispersed on the surface, and because of the heavy use of dispersants, oil is also documented as being suspended within the water column, some even deeper than the location of the broken well head. Floating and suspended oil washed onto shore in several areas of the Gulf, as well as non-floating tar balls. Whereas suspended and floating oil degrades over time, tar balls are more persistent in the environment and can be transported hundreds of miles. Oil on the surface of the water could restrict the normal process of atmospheric oxygen mixing into and replenishing oxygen concentrations in the water column. In addition, microbes in the water that break down oil and dispersant also consume oxygen; this could lead to further oxygen depletion. Zooplankton that feed on algae could also be negatively impacted, thus allowing more of the hypoxia-fueling algae to grow.

The highest concern is that the oil spill may have impacted spawning success of species that spawn in the summer months, either by reducing spawning activity or by reducing survival of the eggs and larvae. Effects on the physical environment, such as low oxygen, could lead to impacts on the ability of larvae and post-larvae to survive, even if they never encounter oil. In addition, effects of oil exposure may create sub-lethal effects on the eggs, larva, and early life stages. The stressors could potentially be additive, and each stressor may increase the susceptibility to the harmful effects of the other. The oil from the spill site was not detected in the South Atlantic region and does not likely pose a threat to the South Atlantic species addressed in this amendment. However, the effects of the oil spill on fish species would be taken into consideration in future SEDAR assessments. Indirect and inter-related effects on the biological and ecological environment of the fisheries in concert with the Deepwater Horizon MC252 oil spill are not well understood. Changes in the population size structure could result from shifting fishing effort to specific geographic segments of populations, combined with any anthropogenically induced natural mortality that may occur from the impacts of the oil spill. The impacts on the food web from phytoplankton, to zooplankton, to mollusks, to top predators may be significant in the future.

6.4 Overall Impacts Expected from Past, Present, and Future Actions

The proposed management actions are summarized in **Chapter 2** of this document. Detailed discussions of the magnitude and significance of the impacts of the alternatives on the human environment appear in **Chapter 4** of this document. None of the impacts of the actions in this framework amendment, in combination with past, present, and future actions have been determined to be significant. Although several other management actions, in addition to this framework amendment, are expected to affect snapper grouper species, any additive effects, beneficial and adverse, are not expected to result in a significant level of cumulative impacts.

The proposed actions would not adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places as these are not in the South Atlantic EEZ. These actions are not likely to result in direct, indirect, or cumulative effects to unique areas, such as significant scientific, cultural, or historical resources, park land, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas as the proposed

action is not expected to substantially increase fishing effort or the spatial and/or temporal distribution of current fishing effort within the South Atlantic region. The U.S. Monitor, Gray's Reef, and Florida Keys National Marine Sanctuaries are within the boundaries of the South Atlantic EEZ. The proposed actions are not likely to cause loss or destruction of these national marine sanctuaries because the actions are not expected to result in appreciable changes to current fishing practices. Additionally, the proposed actions are not likely to change the way in which the snapper grouper fishery is prosecuted; therefore, the actions are not expected to result in adverse impacts on health or human safety beyond the status quo.

6.5 Monitoring and Mitigation

Fishery-independent and fishery-dependent data comprise a significant portion of information used in stock assessments. Fishery-independent data are being collected through the Southeast Fishery Information Survey and the Marine Resources Monitoring Assessment and Prediction Program. The effects of the proposed actions are, and would continue to be, monitored through collection of recreational landings data by all the four states in the South Atlantic region (Florida, Georgia, South Carolina, and North Carolina). The National Marine Fisheries Service would continue to monitor and collect information on snapper grouper species for stock assessments and stock assessment updates, life history studies, economic and social analyses, and other scientific observations. The proposed actions relate to the harvest of indigenous species in the Atlantic, and the activities/regulations being altered do not introduce non-indigenous species, and are not reasonably expected to facilitate the spread of such species through depressing the populations of native species. Additionally, these alternatives do not propose any activity, such as increased ballast water discharge from foreign vessels, which is associated with the introduction or spread on non-indigenous species.

Chapter 7. List of Interdisciplinary Plan Team (IPT) Members

Name	Agency/Division	Title
Brian Cheuvront	SAFMC	Deputy Executive Director for Management
Myra Brouwer	SAFMC	IPT Lead/Fishery Biologist
Chip Collier	SAFMC	Fishery Scientist/Data Analyst
Scott Crosson	SEFSC	Economist
Rick DeVictor	SERO/SF	South Atlantic Branch Chief
Mike Errigo	SAFMC	Data analyst
John Hadley	SAFMC	Economist
Frank Helies	SERO/SF	IPT Lead/Fishery Biologist
Tony Lamberte	SERO/SF	Economist
Michael Larkin	SERO/SF	Data Analyst
Jennifer Lee	SERO/PR	Biologist
Nikhil Mehta	SERO/SF	Fishery Biologist - NEPA
Christina Package-Ward	SERO/SF	Social Scientist
Roger Pugliese	SAFMC	Habitat/ EFH
Scott Sandorf	SERO/SF	Technical Writer and Editor
Kate Siegfried	SEFSC	Biologist
Monica Smit-Brunello	NOAA GC	General Counsel
Christina Wiegand	SAFMC	Social Scientist

NOAA=National Oceanic and Atmospheric Administration, NMFS = National Marine Fisheries Service, SERO = Southeast Regional Office, SF = Sustainable Fisheries Division, PR = Protected Resources Division, HC = Habitat Conservation Division, SEFSC=Southeast Fisheries Science Center, GC = General Counsel

Chapter 8. Agencies and Persons Consulted

Responsible Agency

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List of Agencies, Organizations, and Persons Consulted

SAFMC Law Enforcement Advisory Panel
SAFMC Snapper Grouper Advisory Panel
SAFMC Scientific and Statistical Committee
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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Appendix A. Considered But Rejected Alternatives

The South Atlantic Fishery Management Council (Council) initially discussed modifying the days of the week that are open to red snapper recreational harvest starting in 2020, should harvest be allowed, to maximize fishing opportunity in the event of bad weather. The Council was concerned that limiting the recreational season to consecutive "weekends" during the summer months could increase the chances of losing an entire weekend to fishing opportunities for red snapper because of poor weather conditions. The Council is no longer considering changes to the start date of the recreational season or the days of the week that recreational harvest of red snapper is allowed during an open season (see discussion below).

Action 2. Modify the start date for the recreational red snapper season

Alternative 1 (No Action). The recreational season, which consists of weekends only (Fridays, Saturdays, and Sundays), begins on the second Friday in July, unless otherwise specified.

Alternative 2. Modify the recreational red snapper season to start on May 1.
Sub-alternative 2a. First week
Sub-alternative 2b. Second week
Sub-alternative 2c. Third week
Sub-alternative 2d. Fourth week

Alternative 3. Modify the recreational red snapper season to start on June 1.
Sub-alternative 3a. First week
Sub-alternative 3b. Second week
Sub-alternative 3c. Third week
Sub-alternative 3d. Fourth week

Alternative 4. Modify the recreational red snapper season to start on September 1.
Sub-alternative 4a. First week
Sub-alternative 4b. Second week
Sub-alternative 4c. Third week
Sub-alternative 4d. Fourth week

Alternative 5. Modify the recreational season to start on May 1 for a portion of the projected allowable fishing days and resume harvest in the fall if National Marine Fisheries Service determines the entire recreational annual catch limit was not harvested.

Discussion:

The Council removed this action from further consideration at their September 2019 meeting. Council rationale for removal included:

- Action 2 and 3, as proposed, could result in unintended consequences that could make the situation worse. The actions are complex and result in scenarios that may be contrary to the intent of increasing socio-economic benefits. In addition, there will continue to be uncertainty from one year to the next as to the number of days the recreational harvest of red snapper will be allowed. What fishermen want is an increase in the number of days they are allowed to fish. However, such a change cannot take place until after the red snapper stock assessment is completed and annual catch limits (ACL) subsequently adjusted.
- Council members cited the need to maintain stability in when the fishery occurs. This allows more accurate predictions for the number of allowable harvest days each year. If season start dates are not consistent from year to year, the National Marine Fisheries Service would have less information to predict future seasons.
- Several Council members felt this amendment was not necessary but agreed there was merit in reviewing the approach, getting public input, and considering changes to the commercial season (Action 4) and increasing access to the recreational sector (Action 1).
- The Council acknowledged rationale on record for the current approach to managing red snapper.
- Council members expressed concern about moving forward with changes to the start date of the commercial season without changing the start date for the recreational season and acknowledged there could be negative perception amongst the recreational community.

Action 3. Revise the days of the week recreational harvest of red snapper would be allowed during an open season

Alternative 1 (No Action). If the National Marine Fisheries Service determines that recreational harvest of red snapper is allowed in a given fishing year, the recreational season consists of weekends only (Fridays, Saturdays, and Sundays).

NOTE: multiple preferred sub-alternatives could be chosen.
Alternative 2. When a red snapper recreational season is projected to take place, harvest would be allowed on consecutive Mondays.

Alternative 3. When a red snapper recreational season is projected to take place, harvest would be allowed on consecutive Fridays.

Alternative 4. When a red snapper recreational season is projected to take place, harvest would be allowed on consecutive Saturdays.

Alternative 5. When a red snapper recreational season is projected to take place, harvest would be allowed on consecutive Sundays.

Alternative 6. When a red snapper recreational season is projected to take place, and depending on the projected numbers of days, harvest would be allowed every other weekend.

Sub-alternative 6a. Weekend consists of Fridays and Saturdays

Sub-alternative 6b. Weekend consists of Saturdays and Sundays

Sub-alternative 6c. Weekend consists of Fridays, Saturdays, and Sundays

Alternative 7. When a red snapper recreational season is projected to take place, and depending on the projected number of days, harvest would be allowed the last weekend of each month.

Sub-alternative 7a. Weekend consists of Fridays and Saturdays

Sub-alternative 7b. Weekend consists of Saturdays and Sundays

Sub-alternative 7c. Weekend consists of Fridays, Saturdays, and Sundays

Alternative 8. When a red snapper recreational season is projected to take place, the National Marine Fisheries Service will present the season length to the South Atlantic Council at the annual March meeting, if the analysis and data are available, and the South Atlantic Council will provide recommendations to the National Marine Fisheries Service on what dates they want open. The National Marine Fisheries Service will announce the opening of the fishing season through the Federal Register and other methods deemed appropriate. The end of the recreational red snapper season will be pre-determined and announced before the start of the recreational season. The open days do not need to be consecutive.

Discussion:

The Council removed this action from further consideration at their September 2019 meeting. See discussion under Action 2 above for rationale.

Action 4. Modify the red snapper commercial season

Alternative 4. Modify the commercial red snapper season start date to start May 1. Commercial harvest would not be allowed during July and August.

Discussion:

The Council removed Alternative 4 under Action 4 from further consideration at their September 2019 meeting. The Council reasoned that if commercial harvest was to be allowed beginning on May 1 (as the preferred alternative proposes) and since commercial harvest of red snapper has lasted less than two months in the past couple of years, there was no need to pause harvest during July and August (as the Snapper Grouper Advisory Panel recommended). It is unlikely that the entirety of the commercial ACL would not be harvested prior to July each year.

Appendix B. Glossary

Allowable Biological Catch (ABC): Maximum amount of fish stock than can be harvested without adversely affecting recruitment of other components of the stock. The ABC level is typically higher than the total allowable catch, leaving a buffer between the two.

ALS: Accumulative Landings System. NMFS database which contains commercial landings reported by dealers.

Biomass: Amount or mass of some organism, such as fish.

B_{MSY}: Biomass of population achieved in long-term by fishing at F_{MSY}.

Bycatch: Fish harvested in a fishery, but not sold or kept for personal use. Bycatch includes economic discards and regulatory discards, but not fish released alive under a recreational catch and release fishery management program.

Caribbean Fishery Management Council (CFMC): One of eight regional councils mandated in the Magnuson-Stevens Fishery Conservation and Management Act to develop management plans for fisheries in federal waters. The CFMC develops fishery management plans for fisheries off the coast of the U.S. Virgin Islands and the Commonwealth of Puerto Rico.

Catch Per Unit Effort (CPUE): The amount of fish captured with an amount of effort. CPUE can be expressed as weight of fish captured per fishing trip, per hour spent at sea, or through other standardized measures.

Charter Boat: A fishing boat available for hire by recreational anglers, normally by a group of anglers for a short time period.

Cohort: Fish born in a given year.

Control Date: Date established for defining the pool of potential participants in a given management program. Control dates can establish a range of years during which a potential participant must have been active in a fishery to qualify for a quota share.

Constant Catch Rebuilding Strategy: A rebuilding strategy where the allowable biological catch of an overfished species is held constant until stock biomass reaches B_{MSY} at the end of the rebuilding period.

Constant F Rebuilding Strategy: A rebuilding strategy where the fishing mortality of an overfished species is held constant until stock biomass reached BMSY at the end of the rebuilding period.

Directed Fishery: Fishing directed at a certain species or species group.

Discards: Fish captured, but released at sea.

Discard Mortality Rate: The % of total fish discarded that do not survive being captured and released at sea.

Derby: Fishery in which the TAC is fixed and participants in the fishery do not have individual quotas. The fishery is closed once the TAC is reached, and participants attempt to maximize their harvests as quickly as possible. Derby fisheries can result in capital stuffing and a race for fish.

Effort: The amount of time and fishing power (i.e., gear size, boat size, horsepower) used to harvest fish.

Exclusive Economic Zone (EEZ): Zone extending from the shoreline out to 200 nautical miles in which the country owning the shoreline has the exclusive right to conduct certain activities such as fishing. In the United States, the EEZ is split into state waters (typically from the shoreline out to 3 nautical miles) and federal waters (typically from 3 to 200 nautical miles).

Exploitation Rate: Amount of fish harvested from a stock relative to the size of the stock, often expressed as a percentage.

F: Fishing mortality.

Fecundity: A measurement of the egg-producing ability of fish at certain sizes and ages.

Fishery Dependent Data: Fishery data collected and reported by fishermen and dealers.

Fishery Independent Data: Fishery data collected and reported by scientists who catch the fish themselves.

Fishery Management Plan: Management plan for fisheries operating in the federal produced by regional fishery management councils and submitted to the Secretary of Commerce for approval.

Fishing Effort: Usually refers to the amount of fishing. May refer to the number of fishing vessels, amount of fishing gear (nets, traps, hooks), or total amount of time vessels and gear are actively engaged in fishing.

Fishing Mortality: A measurement of the rate at which fish are removed from a population by fishing. Fishing mortality can be reported as either annual or instantaneous. Annual mortality is the percentage of fish dying in one year. Instantaneous is that percentage of fish dying at any one time.

Fishing Power: Measure of the relative ability of a fishing vessel, its gear, and its crew to catch fishes, in reference to some standard vessel, given both vessels are under identical conditions.

$F_{30\%SPR}$: Fishing mortality that will produce a static SPR = 30%.

$F_{45\%SPR}$: Fishing mortality that will produce a static SPR = 45%.

F_{OY}: Fishing mortality that will produce OY under equilibrium conditions and a corresponding biomass of B_{OY}. Usually expressed as the yield at 85% of F_{MSY}, yield at 75% of F_{MSY}, or yield at 65% of F_{MSY}.

F_{MSY}: Fishing mortality that if applied constantly, would achieve MSY under equilibrium conditions and a corresponding biomass of B_{MSY}.

Fork Length (FL): The length of a fish as measured from the tip of its snout to the fork in its tail.

Framework: An established procedure within a fishery management plan that has been approved and implemented by NMFS, which allows specific management measures to be modified via framework amendment.

Gear restrictions: Limits placed on the type, amount, number, or techniques allowed for a given type of fishing gear.

Growth Overfishing: When fishing pressure on small fish prevents the fishery from producing the maximum poundage. Condition in which the total weight of the harvest from a fishery is improved when fishing effort is reduced, due to an increase in the average weight of fishes.

Gulf of Mexico Fishery Management Council (GFMC): One of eight regional councils mandated in the Magnuson-Stevens Fishery Conservation and Management Act to develop management plans for fisheries in federal waters. The GFMC develops fishery management plans for fisheries off the coast of Texas, Louisiana, Mississippi, Alabama, and the west coast of Florida.

Headboat: A fishing boat that charges individual fees per recreational angler onboard.

Highgrading: Form of selective sorting of fishes in which higher value, more marketable fishes are retained, and less marketable fishes, which could legally be retained are discarded.

Individual Fishing Quota (IFQ): Fishery management tool that allocates a certain portion of the TAC to individual vessels, fishermen, or other eligible recipients.

Longline: Fishing method using a horizontal mainline to which weights and baited hooks are attached at regular intervals. Gear is either fished on the bottom or in the water column.

Magnuson-Stevens Fishery Conservation and Management Act: Federal legislation responsible for establishing the fishery management councils and the mandatory and discretionary guidelines for federal fishery management plans.

Marine Recreational Information Program (MRIP): Survey operated by NMFS in cooperation with states that collects marine recreational data.

Maximum Fishing Mortality Threshold (MFMT): The rate of fishing mortality above which a stock's capacity to produce MSY would be jeopardized.

Maximum Sustainable Yield (MSY): The largest long-term average catch that can be taken continuously (sustained) from a stock or stock complex under average environmental conditions.

Minimum Stock Size Threshold (MSST): The biomass level below which a stock would be considered overfished.

Modified F Rebuilding Strategy: A rebuilding strategy where fishing mortality is changed as stock biomass increases during the rebuilding period.

Multispecies fishery: Fishery in which more than one species is caught at the same time and location with a particular gear type.

National Marine Fisheries Service (NMFS): Federal agency within NOAA responsible for overseeing fisheries science and regulation.

National Oceanic and Atmospheric Administration: Agency within the Department of Commerce responsible for ocean and coastal management.

Natural Mortality (M): A measurement of the rate at which fish are removed from a population by natural causes. Natural mortality can be reported as either annual or instantaneous. Annual mortality is the percentage of fish dying in one year. Instantaneous is that percentage of fish dying at any one time.

Optimum Yield (OY): The amount of catch that will provide the greatest overall benefit to the nation, particularly with respect to food production and recreational opportunities and taking into account the protection of marine ecosystems.

Overfished: A stock or stock complex is considered overfished when stock biomass falls below the minimum stock size threshold (MSST) (e.g., current biomass < MSST = overfished).

Overfishing: Overfishing occurs when a stock or stock complex is subjected to a rate of fishing mortality that exceeds the maximum fishing mortality threshold (e.g., current fishing mortality rate > MFMT = overfishing).

Quota: % or annual amount of fish that can be harvested.

Recruitment (R): Number or percentage of fish that survives from hatching to a specific size or age.

Recruitment Overfishing: The rate of fishing above which the recruitment to the exploitable stock becomes significantly reduced. This is characterized by a greatly reduced spawning stock, a decreasing proportion of older fish in the catch, and generally very low recruitment year after year.

Scientific and Statistical Committee (SSC): Fishery management advisory body composed of federal, state, and academic scientists, which provides scientific advice to a fishery management council.

Selectivity: The ability of a type of gear to catch a certain size or species of fish.

South Atlantic Fisheries Management Council (SAFMC): One of eight regional councils mandated in the Magnuson-Stevens Fishery Conservation and Management Act to develop management plans for fisheries in federal waters. The SAFMC develops fishery management plans for fisheries off North Carolina, South Carolina, Georgia, and the east coast of Florida.

Spawning Potential Ratio (Transitional SPR): Formerly used in overfished definition. The number of eggs that could be produced by an average recruit in a fished stock divided by the number of eggs that could be produced by an average recruit in an unfished stock. SPR can also be expressed as the spawning stock biomass per recruit (SSBR) of a fished stock divided by the SSBR of the stock before it was fished.

% Spawning Per Recruit (Static SPR): Formerly used in overfishing determination. The maximum spawning per recruit produced in a fished stock divided by the maximum spawning per recruit, which occurs under the conditions of no fishing. Commonly abbreviated as %SPR.

Spawning Stock Biomass (SSB): The total weight of those fish in a stock which are old enough to spawn.

Spawning Stock Biomass Per Recruit (SSBR): The spawning stock biomass divided by the number of recruits to the stock or how much spawning biomass an average recruit would be expected to produce.

Total Allowable Catch (TAC): The total amount of fish to be taken annually from a stock or stock complex. This may be a portion of the Allowable Biological Catch (ABC) that takes into consideration factors such as bycatch.

Total Length (TL): The length of a fish as measured from the tip of the snout to the tip of the tail.

Appendix C. History of Management

Updated: 10/29/2019

The snapper grouper fishery is highly regulated; some of the species included in this amendment have been regulated since 1983. The following table summarizes actions in each of the amendments to the original Snapper Grouper Fishery Management Plan (FMP), as well as some events not covered in amendment actions.

*Shaded rows indicate FMP Amendments

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" total length (TL) 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 (1987)	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 (1988a)	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 lb s-g on board; -Established rebuttable assumption that vessel with s-g on board had harvested such fish in the exclusive economic zone (EEZ).
Regulatory Amendment #2 (1988b)	03/30/89	PR: 53 FR 32412 FR: 54 FR 8342	-Established 2 artificial reefs off Ft. Pierce, FL as SMZs.
Emergency Rule	8/3/90	55 FR 32257	-Added wreckfish to the fishery management unit (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.
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

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			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 (1990a)	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.
Emergency Rule Extension	11/1/90	55 FR 40181	-Extended the measures implemented via emergency rule on 8/3/90.
Amendment #3 (1990b)	01/31/91	PR: 55 FR 39023 FR: 56 FR 2443	-Added wreckfish to the FMU; -Defined optimum yield (OY) and overfishing; -Required permit to fish for, land or sell wreckfish; -Required catch and effort reports from selected, permitted vessel; -Established control date of 03/28/90; -Established a fishing year for wreckfish starting April 16; -Established a process to set annual quota, with initial quota of 2 million pounds; provisions for closure; -Established 10,000 pound trip limit; -Established a spawning season closure for wreckfish from January 15 to April 15; -Provided for annual adjustments of wreckfish management measures.
Notice of Control Date	07/30/91	56 FR 36052	-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.
Amendment #4 (1991)	01/01/92	PR: 56 FR 29922 FR: 56 FR 56016	-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. -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); -Required permits (commercial & for-hire) and specified data collection regulations;

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			-Established an assessment group and annual adjustment procedure (framework); -Permit, gear, and vessel id requirements specified for black sea bass traps; -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; -8" TL limit – lane snapper; -10" TL limit – vermilion snapper (recreational only); -12" TL limit – red porgy, vermilion snapper (commercial only), gray, yellowtail, mutton, schoolmaster, queen, blackfin, cubera, dog, mahogany, and silk snappers; -20" TL limit – red snapper, gag, and red, black, scamp, yellowfin, and yellowmouth groupers; -28" fork length (FL) limit – greater amberjack (recreational only); -36" FL or 28" core length – greater amberjack (commercial only); -Bag limits – 10 vermilion snapper, 3 greater amberjack -Aggregate snapper bag limit – 10/person/day, excluding vermilion snapper and allowing no more than 2 red snappers; -Aggregate grouper bag limit – 5/person/day, excluding Nassau and goliath grouper, for which no retention (recreational & commercial) is allowed; -Spawning season closure – commercial harvest greater amberjack > 3 fish bag prohibited in April; -Spawning season closure – commercial harvest mutton snapper >snapper aggregate prohibited during May and June; -Charter/headboats and excursion boat possession limits extended.

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Amendment #5 (1992a)	04/06/92	PR: 56 FR 57302 FR: 57 FR 7886	For wreckfish: -Established limited entry system with individual transferable quotas (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 total allowable catch (TAC).
Emergency Rule	8/31/92	57 FR 39365	For 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	For 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 (1992b)	07/06/93	FR: 58 FR 36155	-For 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 (1992c)	07/31/93	PR: 58 FR 13732 FR: 58 FR 35895	-Established 8 SMZs off South Carolina, where only hand-held, hook-and-line gear and spearfishing (excluding powerheads) was allowed.
Amendment #6 (1993)	06/27/94	PR: 59 FR 9721 FR: 59 FR 27242	-Set up separate commercial TAC levels for golden tilefish and snowy grouper; -Established commercial trip limits for snowy grouper, golden tilefish, speckled hind, and warsaw grouper; -Included golden tilefish in grouper recreational aggregate bag limits; -Prohibited sale of warsaw grouper and speckled hind; -100% logbook coverage upon renewal of permit; -Creation of the Oculina Experimental Closed Area; -Data collection needs specified for evaluation of possible future individual fishing quota system.

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Amendment #7 (1994a)	01/23/95	PR: 59 FR 47833 FR: 59 FR 66270	-12" FL – hogfish; -16" TL – mutton snapper; -Required dealer, charter and headboat federal permits; -Allowed sale under specified conditions; -Specified allowable gear and made allowance for experimental gear; -Allowed multi-gear trips in NC; -Added localized overfishing to list of problems and 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 (1994b)	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 black sea bass pot fishery off South Atlantic states after 04/23/97 was not assured of future access if limited entry program developed.
Interim Rule Request	1/16/98		-The South Atlantic Fishery Management Council (Council) requested all Amendment 9 measures except black sea bass pot construction changes be implemented as an interim request under the Magnuson-Stevens Act.
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.
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 have demonstrated landings of any species in the snapper grouper FMU in 1993, 1994, 1995 or 1996; and have held valid snapper grouper permit between 02/11/96 and 02/11/97; -Granted transferable permit with unlimited landings if vessel landed ≥ 1,000 pounds (lb) of snapper grouper species 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;

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			-Expanded the Council's habitat responsibility; -Allowed retention of snapper grouper species 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.
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.
Regulatory Amendment #7 (1998a)	01/29/99	PR: 63 FR 43656 FR: 63 FR 71793	-Established 10 SMZs at artificial reefs off South Carolina.
Amendment #9 (1998b)	2/24/99	PR: 63 FR 63276 FR: 64 FR 3624	-Red porgy: 14" TL (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" TL (recreational and commercial); 20 fish rec. bag limit; required escape vents and escape panels with degradable fasteners in bsb pots; -Greater amberjack: 1 fish rec. bag limit; no harvest or possession > bag limit, and no purchase or sale, during April; quota = 1,169,931 lb; began fishing year May 1; prohibited coring; -Vermilion snapper: 11" TL (recreational), 12" TL commercial; -Gag: 24" TL (recreational); no commercial harvest or possession > bag limit, and no purchase or sale, during March and April; -Black grouper: 24" TL (recreational and commercial); no harvest or possession > bag limit, and no purchase or sale, during March and April; -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); -All snapper grouper without a bag limit: aggregate recreational bag limit 20 fish/person/day, excluding tomtate and blue runner; -Vessels with longline gear aboard may only possess snowy, warsaw, yellowedge, and misty grouper, and golden, blueline and sand tilefish.

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Emergency Action	9/3/99	64 FR 48326	-Reopened the Amendment 8 permit application process.
Emergency Interim Rule	09/08/99, expired 08/28/00	64 FR 48324 and 65 FR 10040	-Prohibited harvest or possession of red porgy.
Amendment #10 Comprehensive Essential Fish Habitat Amendment (1998c)	07/14/00	PR: 64 FR 37082 and 64 FR 59152 FR: 65 FR 37292	-Identified essential fish habitat (EFH) and established habitat areas of particular concern (HAPC) for species in the snapper grouper FMU.

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Amendment #11 Comprehensive Sustainable Fisheries Act Amendment (1998d)	12/02/99	PR: 64 FR 27952 FR: 64 FR 59126	-Maximum sustainable yield (MSY) proxy: goliath and Nassau grouper = 40% static spawning potential ratio (SPR); all other species = 30% static SPR; -OY: hermaphroditic groupers = 45% static SPR; goliath and Nassau grouper = 50% static SPR; all other species = 40% static SPR -Overfished/overfishing evaluations: BSB: overfished (minimum stock size threshold (MSST)=3.72 mp, 1995 biomass=1.33 mp); undergoing overfishing (maximum fishing mortality threshold (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%) -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>F40% static SPR; all other species: = F>F30% static SPR Approved definitions for overfished and overfishing. MSST = [(1-M) or 0.5 whichever is greater]*BMSY. MFMT = FMSY.

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Amendment #12 (2000a)	09/22/00	PR: 65 FR 35877 FR: 65 FR 51248	For 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 of red porgy during Jan-April; -1 fish bag limit; -50 lb. bycatch commercial trip limit May-December; -Modified management options and list of possible framework actions.
Regulatory Amendment #8 (2000b)	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.
Amendment #9 (1998b) resubmitted	10/13/00	PR: 63 FR 63276 FR: 65 FR 55203	-Commercial trip limit for greater amberjack.
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 species within the Oculina Experimental Closed Area.
Notice of Control Date	10/14/05	70 FR 60058	-Considered 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	-End overfishing of snowy grouper, vermilion snapper, black sea bass, and golden tilefish. Increase allowable catch of red porgy. Year 1 = 2006; 1. Snowy Grouper Commercial: -Quota = 151,000 lb gutted weight (gw) in year 1, 118,000 lb gw in year 2, and 84,000 lb gw in year 3 onwards. -Trip limit = 275 lb gw in year 1, 175 lb gw in year 2, and 100 lb gw in year 3 onwards; Recreational: -Limit possession to one snowy grouper in 5 grouper per person/day aggregate bag limit; 2. Golden Tilefish Commercial: Quota of 295,000 lb gw, 4,000 lb gw trip limit until 75% of the quota is taken when the trip limit is reduced to 300 lb gw. Do not

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			adjust the trip limit downwards unless 75% is captured on or before September 1; Recreational: Limited possession to 1 golden tilefish in 5 grouper per person/day aggregate bag limit; 3. Vermilion Snapper Commercial: Quota of 1,100,000 lb gw; Recreational: 12" TL size limit. 4. Black Sea Bass Commercial: Quota of 477,000 lb gw in year 1, 423,000 lb gw in year 2, and 309,000 lb gw in year 3 onwards; -Required 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; -Required black sea bass pots be removed from the water when the quota is met; -Changed fishing year from calendar year to June 1 – May 31; Recreational: Recreational allocation of 633,000 lb gw in year 1, 560,000 lb gw in year 2, and 409,000 lb gw in year 3 onwards. Increased the minimum size limit from 10" to 11" in year 1 and to 12" in year 2; -Reduced recreational bag limit from 20 to 15 per person per day; -Changed fishing year from the calendar year to June 1 through May 31. 5. Red Porgy Commercial and recreational: -Retained 14" TL size limit and seasonal closure (retention limited to the bag limit); -Specified a commercial quota of 127,000 lb 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; -Increased commercial trip limit from 50 lb ww to 120 red porgy (210 lb gw) during May through December; -Increased recreational bag limit from one to three red porgy per person per day.
Notice of Control Date	3/8/07	72 FR 60794	-Considered measures to limit participation in the snapper grouper for-hire sector.
Amendment #14	2/12/09	PR: 73 FR 32281	-Established eight deepwater Type II marine protected areas (MPAs) to protect a portion of the

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(2007)		FR: 74 FR 1621	population and habitat of long-lived deepwater snapper grouper species.
Amendment #15A (2008a)	3/14/08	73 FR 14942	- Established rebuilding plans and status determination criteria for snowy grouper, black sea bass, and red porgy.
Notice of Control Date	12/4/08	74 FR 7849	-Established a control date for the golden tilefish portion of the snapper grouper fishery in the South Atlantic.
Notice of Control Date	12/4/08	74 FR 7849	-Established control date for black sea bass pot sector in the South Atlantic.
Amendment #15B (2008b)	12/16/09, except for the amendments to § 622.18(c) was effective 11/16/2009; the amendment to § 622.10(c) was effective 2/16/2010; and §§ 622.5, 622.8, and 622.18(b)(1)(ii) required OMB approval.	PR: 74 FR 30569 FR: 74 FR 58902	-Prohibited the sale of snapper-grouper harvested or possessed in the EEZ under the bag limits and prohibited the sale of snapper-grouper harvested or possessed under the bag limits by vessels with a Federal charter vessel/headboat permit for South Atlantic snapper-grouper regardless of where harvested; -Reduced the effects of incidental hooking on sea turtles and smalltooth sawfish; -Adjusted commercial permit renewal periods and transferability requirements; -Revised the management reference points for golden tilefish; -Implemented plan to monitor and assess bycatch; -Required a vessel that fished in the EEZ, if selected by NMFS, to carry an observer and install electronic logbook and/or video monitoring equipment provided by NMFS; -Established allocations for snowy grouper (95% commercial & 5% recreational); -Established allocations for red porgy (50% commercial & 50% recreational).
Amendment #16 (2009a)	7/29/09	PR: 74 FR 6297 FR: 74 FR 30964	-Specified status determination criteria for gag and vermilion snapper; For gag: -Specified interim allocations 51% commercial & 49% recreational; -Recreational and commercial shallow water grouper spawning closure January through April; -Directed commercial quota= 352,940 lb gw; -Reduced 5-fish aggregate grouper bag limit, including tilefish species, to a 3-fish aggregate;

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			-Captain and crew on for-hire trips cannot retain the bag limit of vermilion snapper and species within the 3-fish grouper aggregate; For vermilion snapper: -Specified interim allocations 68% commercial & 32% recreational; -Directed commercial quota split Jan-June=315,523 lb gw and 302,523 lb gw July-Dec; -Reduced bag limit from 10 to 4 and a recreational closed season November through March; -Required possession of dehooking tools when catching snapper grouper species to reduce recreational and commercial bycatch mortality.
Amendment #19 Comprehensive Ecosystem-Based Amendment 1 (CE-BA1) (2009b)	7/22/10	PR: 75 FR 14548 FR: 75 FR 35330	-Amended coral, coral reefs, and live/hardbottom habitat FMP to establish deepwater coral HAPCs; -Created a "shrimp fishery access area" (SFAA) within the Stetson-Miami Terrace CHAPC boundaries; -Created allowable "golden crab fishing areas" with the Stetson-Miami Terrace CHAPC and Pourtales Terrace CHAPC boundaries.
Amendment #17A (2010a)	12/3/10 red snapper closure; circle hooks 3/3/2011	PR: 75 FR 49447 FR: 75 FR 76874	-Required use of non-stainless steel circle hooks when fishing for snapper grouper species with hook-and-line gear and natural bait north of 28 deg. N latitude in the South Atlantic EEZ; -Specified an annual catch limit (ACL) and an accountability measure (AM) for red snapper with management measures to reduce the probability that catches will exceed the stocks' ACL; -Specified a rebuilding plan for red snapper; -Specified status determination criteria for red snapper; -Specified a fishery-independent monitoring program for red snapper. -Implemented an area closure for snapper-grouper species.
Emergency Rule	12/3/10	75 FR 76890	-Delayed the effective date of the area closure for snapper grouper species implemented through Amendment 17A.

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Amendment #17B (2010b)	1/31/11	PR: 75 FR 62488 FR: 75 FR 82280	-Specify ACL of 0 and prohibit fishing for speckled hind and warsaw grouper; -Prohibited harvest of 6 deepwater species seaward of 240 feet to curb bycatch of speckled hind and warsaw grouper (snowy grouper, blueline tilefish, yellowedge grouper, misty grouper, queen snapper, silk snapper). -Specify allocations (97% commercial, 3% recreational), ACLs and AMs for golden tilefish; -Modified management measures as needed to limit harvest to the ACL or ACT; -Updated the framework procedure for specification of total allowable catch; -Specified ACLs, ACTs, and AMs, where necessary, for 9 species undergoing overfishing (snowy grouper, black grouper, black sea bass, red grouper, vermilion snapper, gag, speckled hind, warsaw grouper, golden tilefish);
Notice of control date	1/31/11	76 FR 5325	Anyone entering federal snapper grouper fishery off S. Atlantic states after 09/17/10 was not assured of future access if limited entry program developed.
Regulatory Amendment #9 (2010a)	Bag limit: 6/22/11 Trip limits: 7/15/11	PR: 76 FR 23930 FR: 76 FR 34892	-Established trip limits for vermilion snapper and gag; -Increased trip limit for greater amberjack; - Set black sea bass recreational bag limit at 5 fish per person per day
Regulatory Amendment #10 (2010b)	5/31/11	PR: 76 FR 9530 FR: 76 FR 23728	-Eliminated closed area for snapper grouper species approved in Amendment 17A.
Regulatory Amendment #11 (2011c)	5/10/12	PR: 76 FR 78879 FR: 77 FR 27374	-Eliminated 240 ft harvest prohibition for six deepwater species (snowy grouper, blueline tilefish, yellowedge grouper, queen snapper, silk snapper, misty grouper);
Amendment # 25 Comprehensive Annual Catch Limit Amendment (2011d)	4/16/12	PR: 76 FR 74757 Amended PR: 76 FR 82264 FR: 77 FR 15916	-Reorganize FMUs to 6 complexes (deepwater, jacks, snappers, grunts, shallow-water groupers, porgies) (see final rule for species list); -Established acceptable biological catch (ABC) control rules and established ABCs, ACLs, and AMs for species not undergoing overfishing; -Established jurisdictional ABC allocations between the SAFMC and GMFMC for yellowtail snapper, mutton snapper, and black grouper; -Removed some species from South Atlantic FMU (Tiger grouper, black margate, blue-striped

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			grunt, French grunt, porkfish, smallmouth grunt, queen triggerfish, crevalle, yellow jack, grass porgy, sheepshead, puddingwife); -Designated species as ecosystem component species (schoolmaster, ocean triggerfish, bank triggerfish, rock triggerfish, longspine porgy); -Specified allocations between the commercial and, recreational sectors for species not undergoing overfishing; -Limited the total mortality for federally managed species in the South Atlantic to the ACLs.
Amendment #24 (2011e)	7/11/12	PR: 77 FR 19169 FR: 77 FR 34254	-Rebuilding plan (including MSY, ACLs, AMs, and OY, and allocations) for red grouper
Amendment #23 Comprehensive Ecosystem-based Amendment 2 (CE-BA2) (2011f)	1/30/12	PR: 76 FR 69230 FR: 76 FR 82183	-Designated the Deepwater MPAs as EFH-HAPCs; -Modify management measures for Octocoral; -Limit harvest of snapper grouper species in SC SMZs to the bag limit; -Modify sea turtle release gear; -Designated new EFP for pelagic Sargassum habitat.
Amendment #18A (2012a)	7/1/12	PR: 77 FR 16991 FR: 77FR3 2408	-Modified the rebuilding strategy, ABC , ACL, ACT for black sea bass; -Limited participation and effort in the black sea bass sector; -Modifications to management of the black sea bass pot sector; -Improved data reporting (accuracy, timing, and quantity of fisheries statistics).
Amendment #20A (2012b)	10/26/12	PR: 77 FR 19165 FR: 77 FR 59129	- Individual transfer quota (ITQ) program for wreckfish: -Defined and reverted inactive shares; -Redistributed reverted shares; -Established a share cap; -Established an appeals process.
Regulatory Amendment #12 (2012c)	10/9/12	PR: 77 FR 42688 FR: 77 FR 61295	-Revised the ACL and OY for golden tilefish; -Revised recreational AMs for golden tilefish;
Yellowtail snapper Emergency Rule	11/7/2012, through 5/6/2013	77 FR 66744	-Increased the commercial ACL for yellowtail snapper from 1,142,589 lb to 1,596,510 lb.

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 #18B (2013a)	5/23/13	PR: 77 FR 75093 FR: 77 FR 23858	For Golden Tilefish: -Limited participation and effort in the commercial sector through establishment of a longline endorsement; -Established eligibility requirements and allowed transferability of longline endorsement; -Established an appeals process; -Modified trip limits; -Specified allocations and ACLs for gear groups (longline:7 % and hook-and-line:25%);
Amendment #28 (2013b)	8/23/13	PR: 78 FR 25047 FR: 78 FR 44461	-Established regulations to allow harvest of red snapper in the South Atlantic (formula used to compute ACLs, AMs, fishing seasons).
Regulatory Amendment #13 (2013c)	7/17/13	PR: 78 FR 17336 FR: 78 FR 36113	-Revised the ABCs, ACLs (including sector ACLs), and ACTs for 37 species implemented by the Comprehensive ACL Amendment (see final rule for list of species). The revisions may prevent a disjunction between the established ACLs and the landings used to determine if AMs are triggered.
Regulatory Amendment #15 (2013d)	9/12/13	PR: 78 FR 31511 FR: 78 FR 49183	-Modified ACLs and OY for yellowtail snapper; -Modified the gag commercial ACL and AM to remove the requirement that all other shallow water groupers (black grouper, red grouper, scamp, red hind, rock hind, graysby, coney, yellowmouth grouper, and yellowfin grouper) are prohibited from harvest in the South Atlantic when the gag commercial ACL is met or projected to be met.
Regulatory Amendment #18 (2013e)	9/5/13	PR: 78 FR 26740 FR: 78 FR 47574	-Revised ACLs and OY for vermilion snapper; -Modified commercial trip limit for vermilion snapper; -Modified commercial fishing season and recreational closed season for vermilion snapper; -Revised ACLs and OY for red porgy.
Regulatory Amendment #19 (2013f)	ACL: 9/23/13 Pot closure: 10/23/13	PR: 78 FR 39700 FR: 78 FR 58249	-Specified ABC, and adjusted the ACL, recreational ACT and OY for black sea bass; -Implemented an annual closure on the use of black sea bass pots from November 1 to April 30.
Amendment #27 (2013g)	1/27/2014	PR:78 FR 78770 FR: 78 FR 57337	-Established the South Atlantic Council as the responsible entity for managing Nassau grouper throughout its range including federal waters of the Gulf of Mexico; -Modified the crew member limit on dual-permitted snapper grouper vessels;

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			-Modified the restriction on retention of bag limit quantities of some snapper grouper species by captain and crew of for-hire vessels; -Minimized regulatory delay when adjustments to snapper grouper species' ABC, ACLs, and ACTs are needed as a result of new stock assessments; -Removed blue runner from snapper grouper FMP; -Addressed harvest of blue runner by commercial fishermen who do not possess a South Atlantic Snapper Grouper Permit.
Amendment #31 Joint South Atlantic and Gulf of Mexico Generic Headboat Reporting Amendment (2013h)	1/27/2014	PR: 78 FR 59641 FR: 78 FR 78779	-Required electronic reporting for headboat vessels at weekly intervals.
Blueline Tilefish Emergency Rule	4/17/2014 through 10/10/2014 or 4/18/2015	PR: 79 FR 21636 FR:79 FR 61262	-Removed the blueline tilefish portion from the deep-water complex ACL; -Established separate commercial and recreational ACLs and AMs for blueline tilefish.
Generic Dealer Amendment (2013i)	8/7/2014	PR: 79 FR 81 FR: 79 FR 19490	- Modified permitting and reporting requirements for seafood dealers who first receive fish managed by the SA and Gulf through eight FMPs.
Regulatory Amendment #14 (2014a)	12/8/2014	PR: 79 FR 22936 FR: 79 FR 66316	-Modified the commercial and recreational fishing year for greater amberjack; -Modified the commercial and recreational sector fishing years for black sea bass; -Modified the recreational AM for black sea bass; -Modified the recreational AM for vermilion snapper; -Modify the commercial trip limit for gag.
Regulatory Amendment # 21 (2014b)	11/6/2014	PR: 79 FR 44735 FR: 79 FR 60379	-Modified the definition of the overfished threshold (MSST) for red snapper, blueline tilefish, gag, black grouper, yellowtail snapper, vermilion snapper, red porgy, and greater amberjack.

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Amendment #29 (2014c)	7/1/2015	NOA: 79 FR 69819 PR: 79 FR 72567 FR: 80 FR 30947	-Updated the ABC control rule to incorporate methodology for determining the ABC of unassessed species; -Adjusted the ABCs for fourteen unassessed snapper-grouper species (see final rule); -Adjusted the ACLs and ACTs for three species complexes and four snapper-grouper species based on revised ABCs; -Established ACLs for unassessed species; -Modified gray triggerfish minimum size limits; -Established a commercial split season and commercial trip limits for gray triggerfish.
Regulatory Amendment #20 (2014d)	8/20/2015	PR: 80 FR 18797 FR: 80 FR 43033	-Adjusted the recreational and commercial ACLs for snowy grouper; -Adjusted the rebuilding strategy; -Modified the commercial trip limit; -Modified recreational bag limit; -Modified the recreational fishing season.
Amendment #32 (2014e)	3/30/2015	PR: 80 FR 3207 FR: 80 FR 16583	-End overfishing of blueline tilefish; -Removed blueline tilefish from the deepwater complex; -Specified AMs, ACLs, recreational ACLs, commercial trip limit, adjust recreational bag limit for blueline tilefish; -Specified ACLs and revised the AMs for the recreational section of the deepwater complex (yellowedge grouper, silk snapper, misty grouper, queen snapper, sand tilefish, black snapper, and blackfin snapper)
Regulatory Amendment #22 (2015a)	9/11/2015, except for the amendments to §§ 622.190(b) and 622.193(r)(1) which were effective 8/12/2015	PR: 80 FR 31880 FR: 80 FR 48277	-Adjusted ACLs and OY for gag and wreckfish;
Amendment # 33	12/28/2015	NOA:80 FR 55819 PR:80 FR 60601 FR:80 FR 80686	-Allowed dolphin and wahoo fillets to enter the U.S. EEZ after lawful harvest in The Bahamas; -Specified the condition of any dolphin, wahoo, and snapper-grouper fillets;

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Dolphin Wahoo Amendment 7 and Snapper Grouper Amendment 33 (2015b)			-Described how the recreational bag limit is determined for any fillets; -Prohibited the sale or purchase of any dolphin, wahoo, or snapper-grouper recreationally harvested in The Bahamas; -Specified the required documentation to be onboard any vessels that have these fillets; -Specified transit and stowage provisions for any vessels with fillets.
Amendment #34 Generic Accountability Measures and Dolphin Allocation Amendment (2015c)	2/22/2016	NOA:80 FR 41472 PR:80 FR 58448 FR:81 FR 3731	-Modified AMs for snapper-grouper species (golden tilefish, snowy grouper, gag, red grouper, black grouper, scamp, the shallow-water grouper complex (SASWG: red hind, rock hind, yellowmouth grouper, yellowfin grouper, coney, and graysby), greater amberjack, the jacks complex (lesser amberjack, almaco jack, and banded rudderfish), bar jack, yellowtail snapper, mutton snapper, the snappers complex (cubera snapper, gray snapper, lane snapper, dog snapper, and mahogany snapper), gray triggerfish, wreckfish (recreational sector), Atlantic spadefish, hogfish, red porgy, the porgies complex (jolthead porgy, knobbed porgy, whitebone porgy, scup, and saucereye porgy); -Modified the AM for commercial golden crab fishery; -Adjusted sector allocations for dolphin.
Notice of Control Date	6/15/16	76 FR 66244	-Fishermen entering the federal for-hire recreational sector for the Snapper Grouper fishery after June 15, 2016, will not be assured of future access should a management regime that limits participation in the sector be prepared and implemented.
Amendment #35 (2015d)	6/22/2016	NOA:81 FR 6222 PR:81 FR 11502 FR:81 FR 32249	-Removed black snapper, dog snapper, mahogany snapper, and schoolmaster from the Snapper-Grouper FMP; -Clarified regulations governing the use of Golden Tilefish Longline Endorsements.
Regulatory Amendment #16 (2016a)	12/29/2016 (closure) 1/30/2017 (gear markings)	NOI: 78 FR 72868 PR: 81 FR 53109 FR: 81 FR 95893	-Revise the area where fishing with black sea bass pots is prohibited from Nov.1-April 30. -Add additional gear marking requirements for black sea bass pot gear.

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Regulatory Amendment #25 (2016b)	8/12/2016 except changes to blueline tilefish, effective 7/13/2016.	PR: 81 FR 34944 FR: 81 FR 45245	-Revised commercial and recreational ACL for blueline tilefish; -Revised the recreational bag limit for black sea bass; -Revised the commercial and recreational fishing year for yellowtail snapper.
Amendment #36 (2016d)	7/31/17	NOI: 82 FR 810 PR: 82 FR 5512 FR:82 FR 29772	-Established SMZs to enhance protection for snapper-grouper species in spawning condition including speckled hind and warsaw grouper.
Amendment #37 (2016c)	8/24/17	NOI: 80 FR 45641 NOA: 81 FR 69774 PR: 81 FR 91104 FR:82 FR 34584	-Modified the hogfish fishery management unit; -Specified fishing levels for the two South Atlantic hogfish stocks; -Established a rebuilding plan for the Florida Keys/East Florida stock; -Established/revised management measures for both hogfish stocks in the South Atlantic Region, such as size limits, recreational bag limits, and commercial trip limits.
Red Snapper Emergency Rule (2017a)	Effective 11/2/2017, through 11/31/2017. The recreational red snapper season opened on 11/3/2017, and closed on 11/6/2017; then reopened on 11/10/2017, and closed on 11/13/2017. The commercial red snapper season opened on 11/2/2017.	FR: 82 FR 50839	-Allowed for the limited harvest and possession of red snapper in 2017 by changing the process used to set the ACL, as requested by the Council; -These rules also announced the opening and closing dates of the 2017 recreational fishing season and the opening date for the 2017 commercial fishing season for red snapper

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Golden Tilefish Interim Rule (2017b)	1/2/2018 through 7/1/2018 and 7/2/2018 through 1/3/2019	PR: 82 FR 50101 FR: 83 FR 65 FR EXT: 83 FR 28387	-Reduced the golden tilefish total ACL, the commercial and recreational sector ACLs, and the quotas for the hook-and-line and longline components of the commercial sector.
Amendment #41 (2017c)	2/10/2018	NOA:82 FR 44756 PR:82 FR 49167 FR:83 FR 1305	-Updated the MSY, ABC, ACL, OY, MSST; -Designated spawning months of April through June for regulatory purposes; -Revised management measures for mutton snapper including the minimum size limit (18 inches total length), recreational bag limit (five mutton snapper per person per day within the ten-snapper aggregate), and commercial trip limit (500 pounds whole weight during January through March and July through December; and during the April through June spawning season, of five mutton snapper per person per day, or five mutton snapper per person per trip, whichever is more restrictive).
Amendment #43 (2017d)	7/26/2018	NOI:82 FR 1720 NOA: 83 FR 16282 PR:83 FR 22939 FR:83 FR35428	-Actions addressed overfishing of red snapper by specifying recreational and commercial ACLs beginning in 2018;
Amendment #39 (Generic For-Hire Reporting Amendment) (2017e)	TBD	NOA:83 FR 11164 PR:83 FR 14400	-Weekly electronic reporting for charter vessel operators with a federal for-hire permit; -Reduce the time allowed for headboat operators to complete electronic reports; -Requires location reporting by charter vessels with the same detail currently required for headboat vessels.
Abbreviated Framework 1: Red Grouper (2017f)	8/27/2018	PR:83 FR 14234 FR:83 FR35435	-Adjust the ACLs for South Atlantic red grouper in response to the results of the latest stock assessment.
Regulatory Amendment #28 (2018)	1/4/2019	PR: 83 FR 48788 FR: 83 FR 62508	-End overfishing of golden tilefish by reducing the ACL based on the most recent stock assessment.
Amendment #26	TBD	TBD	-Modify bycatch and discard reporting for commercial and for-hire vessels.

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.
(Bycatch Reporting Amendment)			
Regulatory Amendment #26 (Vision Blueprint Recreational) (2019b)	TBD	PR: 84 FR 57378	-modify 20-fish aggregate (no more than 10 fish of any one species), reduce the minimum size limit for gray triggerfish off east FL (recreational) & remove the minimum size limit (recreational) for deep-water snappers (silk, queen, blackfin)
Regulatory Amendment #27 (Vision Blueprint Commercial) (2019a)	TBD	PR: 84 FR 55531	-Commercial split seasons (snowy grouper, greater amberjack, red porgy), trip limit modifications (blueline tilefish, vermilion snapper), trip limit for Other Jacks Complex, minimum size limit (commercial only) for almaco jack; reduce minimum size limit (commercial) for gray triggerfish off east FL & remove the minimum size (commercial) limit for deep-water snappers (silk, queen, blackfin)
Regulatory Amendment #29	TBD	TBD	-Best fishing practices & powerheads
Regulatory Amendment #30 (2019d)	TBD	PR: 84 FR 57840	-Revise the rebuilding schedule for red grouper -Modify the seasonal prohibition on recreational and commercial harvest of red grouper in the Exclusive Economic Zone off South Carolina and North Carolina -Establish a commercial trip limit for red grouper
Regulatory Amendment #32	Not developed	N/A	-Revise accountability measures for yellowtail snapper to reduce the possibility of in-season closures.
Amendment #42	TBD	TBD	-Modification to sea turtle release gear and SG framework
Abbreviated Framework Amendment 2 (2019c)	5/9/2019	PR: 84 FR 4758 FR: 84 FR 14021	-Adjust the ACLs for South Atlantic vermilion snapper and black sea bass in response to the results of the latest stock assessments.
Amendment #45 ABC Control Rule	TBD	TBD	-Modify the ABC control rule; -Specify an approach for determining the acceptable risk of overfishing and the probability of rebuilding success for overfished stocks; -Allow phase-in of ABC changes; and -Allow carry-over of unharvested catch.

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.
Regulatory Amendment 31 (Recreational Accountability Measures)	TBD	TBD	-Modify the recreational AMs for the recreational sector.
Regulatory Amendment 33 (red snapper seasons)	TBD	TBD	-remove 3-day-minimum requirement to pen commercial or recreational harvest -modify start date of commercial red snapper season
Regulatory Amendment 34 (SMZs off NC & SC)	TBD	TBD	-designate 30 artificial reefs in the EEZ off NC as SMZs -designate 4 artificial reefs in the EEZ off SC as SMZs
Abbreviated Framework # 3 (adjust fishing levels for blueline tilefish)	TBD	TBD	-adjust ABC, ACLs, and recreational ACT for blueline tilefish

Appendix D. Regulatory Impact Review

To be completed after December Council meeting

Appendix E. Regulatory Flexibility Analysis

To be completed after December Council meeting

Appendix F. Other Applicable Laws

1.1 Administrative Procedure Act (APA)

All federal rulemaking is governed under the provisions of the APA (5 U.S.C. Subchapter II), which establishes a "notice and comment" procedure to enable public participation in the rulemaking process. Among other things under the APA, the National Marine Fisheries Service (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. Vision Blueprint Recreational Regulatory Amendment 26 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (Regulatory Amendment 26) complies with the provisions of the APA through the South Atlantic Fishery Management Council's (Council) extensive use of public meetings, requests for comments and consideration of comments. The proposed rule associated with this amendment will have a request for public comments, which complies with the APA, and upon publication of the final rule, unless the rule falls within an APA exception, there will be a 30-day wait period before the regulations are effective.

1.2 Information Quality Act (IQA)

The IQA (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 IQA. Regulatory Amendment 26 uses the best available information and made a broad presentation thereof. The information contained in this document was developed using best available scientific information. Therefore, this document is in compliance with the IQA.

1.3 Coastal Zone Management Act (CZMA)

Section 307(c)(1) of the federal 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 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. The Council believes the actions in this amendment are consistent to the maximum extent practicable with the Coastal Zone Management Plans of Florida, Georgia, South Carolina, and North Carolina. Pursuant to Section 307 of the

CZMA, this determination will be submitted to the responsible state agencies who administer the approved Coastal Zone Management Programs in the States of Florida, South Carolina, Georgia, and North Carolina.

1.4 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 document and associated regulations. Therefore, preparation of a Federalism assessment under E.O. 12612 is not necessary.

1.5 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. 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 National Recreational Fisheries Coordination 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 document are consistent with the directives of E.O. 12962.

1.6 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 document are consistent with the directives of E.O. 13089.

1.7 Executive Order 13158: Marine Protected Areas (MPAs)

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. 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 document are consistent with the directives of E.O. 13158.

1.8 National Marine Sanctuaries Act (NMSA)

Under the 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 NOAA. The NMSA 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 three sanctuaries in the South Atlantic exclusive economic zone are the USS Monitor, Gray's Reef, and Florida Keys National Marine Sanctuaries.

The alternatives considered in this document are not expected to have any adverse impacts on the resources managed by the National Marine Sanctuaries.

1.9 Paperwork Reduction Act (PRA)

The purpose of the PRA is to minimize the burden on the public. The PRA 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. Actions in this document are not expected to affect PRA.

1.10 Small Business Act (SBA)

Enacted in 1953, the SBA requires that agencies assist and protect small-business interests to the extent possible to preserve free competitive enterprise. The objectives of the SBA 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.

1.11 Public Law 99-659: Vessel Safety

Public Law 99-659 amended the Magnuson-Stevens Fishery Conservation and Management Act 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 condition.