

Framework Amendment 2 to the Fishery Management Plan for Coastal Migratory Pelagic Resources in the Gulf of Mexico and South Atlantic Region

Commercial trip limits for Atlantic Spanish mackerel
in the Florida EEZ



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DRAFT



Environmental Assessment Regulatory Impact Review Regulatory Flexibility Analysis

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Abbreviations and Acronyms Used in the FMP

| | | | |
|---------------------------|--|---------------|---|
| ABC | acceptable biological catch | FMP | fishery management plan |
| ACL | annual catch limits | FMU | fishery management unit |
| AM | accountability measures | HAPC | Habitat Area of Particular Concern |
| ACT | annual catch target | M | natural mortality rate |
| B | a measure of stock biomass in either weight or other appropriate unit | MARMAP | Marine Resources Monitoring Assessment and Prediction Program |
| B_{MSY} | the stock biomass expected to exist under equilibrium conditions when fishing at F _{MSY} | MFMT | maximum fishing mortality threshold |
| B_{OY} | the stock biomass expected to exist under equilibrium conditions when fishing at F _{OY} | MMPA | Marine Mammal Protection Act |
| B_{CURR} | The current stock biomass | MRFSS | Marine Recreational Fisheries Statistics Survey |
| CLM | Commercial Landings Monitoring System | MRIP | Marine Recreational Information Program |
| CMP | coastal migratory pelagics | MSFCMA | Magnuson-Stevens Fishery Conservation and Management Act |
| CPUE | catch per unit effort | MSST | minimum stock size threshold |
| EA | environmental assessment | MSY | maximum sustainable yield |
| EEZ | exclusive economic zone | NEPA | National Environmental Policy Act |
| EFH | essential fish habitat | NMFS | National Marine Fisheries Service |
| ESA | Endangered Species Act | NOAA | National Oceanic and Atmospheric Administration |
| F | a measure of the instantaneous rate of fishing mortality | NS | National Standard |
| F_{30%SPR} | fishing mortality that will produce a static SPR = 30% | OFL | overfishing limit |
| F_{CURR} | the current instantaneous rate of fishing mortality | OY | optimum yield |
| F_{MSY} | the rate of fishing mortality expected to achieve MSY under equilibrium conditions and a corresponding biomass of B _{MSY} | PSE | percent standard error |
| F_{OY} | the rate of fishing mortality expected to achieve OY under equilibrium conditions and a corresponding biomass of B _{OY} | RIR | regulatory impact review |
| FEIS | final environmental impact statement | SEDAR | Southeast Data Assessment and Review |
| | | SEFSC | Southeast Fisheries Science Center |
| | | SERO | Southeast Regional Office |
| | | SPR | spawning potential ratio |
| | | SRD | Science and Research Director |
| | | SSC | Scientific and Statistical Committee |

Framework Amendment 2 to the Fishery Management Plan for Coastal Migratory Pelagic Resources in the Gulf of Mexico and South Atlantic Region with Draft Environmental Assessment and Regulatory Impact Review

| | |
|---|---|
| Proposed action: | Modify the quota and trip limit system for commercial harvest of Atlantic migratory group Spanish mackerel. |
| Lead agency: | Framework Amendment – South Atlantic Fishery Management Council (South Atlantic Council) Environmental Assessment – National Marine Fisheries Service (NMFS) Southeast Regional Office |
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Summary

The South Atlantic Fishery Management Council (South Atlantic Council) is considering an action to reduce the complexity of current commercial trip limit system for commercial harvest of Atlantic migratory group Spanish mackerel in the federal waters of the exclusive economic zone (EEZ) off the coast Florida. A trip limit system for the Florida EEZ and an adjusted quota for Atlantic migratory group Spanish mackerel were implemented through Amendment 6 in 1992. The current system for Atlantic migratory group Spanish mackerel commercial trip limits and use of the 'adjusted quota' for the Florida EEZ was modified through the 2000 Framework Adjustment (SAFMC 2000). For the Florida EEZ, the trip limit is 3,500 pounds (lbs) starting March 1, and then starting December 1 trips are unlimited on weekdays and are 1,500 lbs on weekends. This trip limit remains unlimited until 75% of the adjusted quota is landed, after which the trip limit is 1,500 lbs every day. When 100% of the adjusted quota is reached, the trip limit is reduced to 500 lbs until the end of the fishing year or until the full quota is met or projected to be met. North of the Georgia/Florida boundary, the trip limit is 3,500 lbs year-round. The adjusted quota (250,000 lbs below the specific commercial annual catch limit (ACL)) was calculated based on the number of vessels and the catch rates at that time, and was intended to allow small vessels to catch 500 lbs after the adjusted quota was caught. However, both the number of vessels and the catch rates have changed in the past 20 years and may have reduced the effectiveness and necessity of the adjusted quota.

When the current trip limit system for the Florida EEZ was put in place, the total allowable catch (TAC) for commercial harvest of Atlantic Spanish mackerel was 3.87 million pounds (mp). The current commercial ACL, set in Amendment 18 (GMFMC/SAFMC 2011) is 3.13 mp, and the South Atlantic Council has proposed a commercial ACL of 3.33 mp in Framework Amendment 1. Both the current and proposed commercial ACLs are lower than the TAC that was in place when the trip limit system was implemented. Additionally, the lack of a Spanish mackerel trip limit in Florida waters on weekdays beginning December 1 may contribute to early closures in the spring under the 3.13 mp ACL.

In accordance with the provisions set forth in the Magnuson-Stevens Fishery Conservation and Management Act and regulations found at 50 CFR 622.389 (Adjustment of Management Measures), the intent of Framework Amendment 2 to the CMP FMP is to modify the current trip limit system for Atlantic migratory group Spanish mackerel to reduce regulatory complexity while increasing social and economic benefits of the CMP fishery. Framework Amendment 2, with the integrated Environmental Assessment, will be available for public review before and during each South Atlantic Council meeting where the action will be discussed, during the proposed rule phase of the rulemaking process, and online at www.safmc.net.

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Chapter 1. Introduction

1.1 What Action is Being Proposed?

Framework Amendment 2 includes one action to modify the quota and trip limit system for commercial harvest of Atlantic migratory group Spanish mackerel in the exclusive economic zone (EEZ) of Florida.

1.2 Who is Proposing the Action?

The South Atlantic Council is proposing the action. The South Atlantic Council develops the FMPs and amendments, and submits them to NMFS, an agency in the National Oceanic and Atmospheric Administration (NOAA). NMFS ultimately approves, disapproves, or partially approves, and implements the actions in the amendment on behalf of the Secretary of Commerce.

South Atlantic Fishery Management Council

- Responsible for conservation and management of fish stocks
- The South Atlantic Council consists of 13 voting members appointed by the Secretary of Commerce and 4 non-voting members. The management area is from 3 to 200 nautical miles (nm) off the coasts of North Carolina, South Carolina, Georgia, and Florida through the Atlantic side of Key West.
- Develop management plans/amendments and recommends regulations to NMFS for implementation

1.3 Why is the South Atlantic Council Considering Action?

Management Plan Objectives

The current management objectives in the joint Fishery Management Plan (FMP) for Coastal Migratory Pelagic (CMP) Resources in the Gulf and South Atlantic Region as amended are:

- 1) The primary objective of this FMP is to stabilize yield at the maximum sustainable yield (MSY), allow recovery of overfished populations, and maintain population levels sufficient to ensure adequate recruitment.
- 2) To provide a flexible management system for the resource which minimizes regulatory delay while retaining substantial Council and public input in management decisions and which can rapidly adapt to changes in resource abundance, new scientific information, and changes in fishing patterns among user groups or by areas.
- 3) To provide necessary information for effective management and establish a mandatory reporting system for monitoring catch.
- 4) To minimize gear and user group conflicts.
- 5) To distribute the total allowable catch of Atlantic migratory group Spanish mackerel between recreational and commercial user groups based on the catches that occurred during the early to mid-1970s, which is prior to the development of the deep water run-around gillnet fishery and when the resource was not overfished.
- 6) To minimize waste and bycatch in the fishery.
- 7) To provide appropriate management to address specific migratory groups of king mackerel.
- 8) To optimize the social and economic benefits of the CMP fisheries.

The action proposed in the amendment specifically help to meet FMP Objectives 2, 6, and 8.

Purpose for Actions

The purpose of this amendment is to modify the current trip limit system for commercial harvest of Atlantic migratory group Spanish mackerel in the Florida EEZ.

Need for Actions

The need for this amendment is to reduce complexity in the trip limit system while increasing social and economic benefits of the CMP fishery through sustainable and profitable harvest of Atlantic migratory group Spanish mackerel.

1.4 Which species and areas would be affected by the actions?

Three species—king mackerel, Spanish mackerel, and cobia—are included in the CMP FMP. Spanish mackerel is separated into Atlantic and Gulf migratory groups at the Miami-Dade/Monroe County line for management purposes (**Figure 1.4.1**). Atlantic migratory group Spanish mackerel is managed by the South Atlantic Council through the Mid-Atlantic region. The proposed action in this amendment would affect Atlantic migratory group Spanish mackerel, and primarily would affect commercial fishermen harvesting Spanish mackerel in the federal waters off the east coast of Florida.

Amendment 20B to the CMP FMP proposes a Northern Zone and a Southern Zone (as shown in **Figure 1.4.1**) that will have separate commercial quotas for Atlantic migratory group Spanish mackerel, which can be transferred from one zone to another annually. Amendment 20B is currently under Secretarial review.

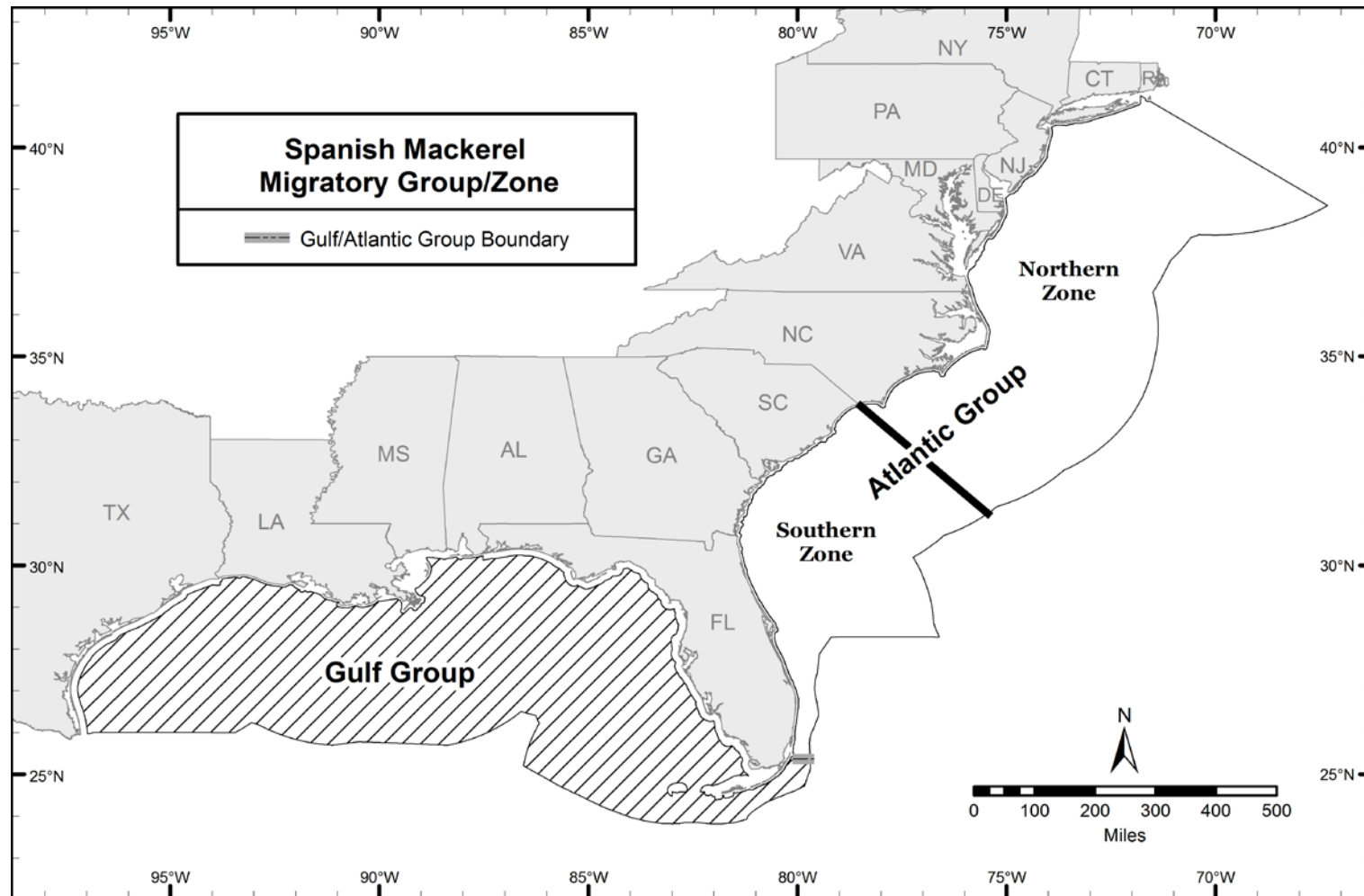


Figure 1.4.1. Fixed boundary between Atlantic and Gulf migratory groups of Spanish mackerel, with the proposed Northern and Southern Zones in the Atlantic Group (pending submission and approval of CMP Amendment 20B).

Chapter 2. Proposed Action and Alternatives

Action: Modify the system of quota and trip limit adjustments for Atlantic migratory group Spanish mackerel in the Florida Exclusive Economic Zone (EEZ)

Alternative 1 (No Action). Do not modify the current system of trip limits for Atlantic migratory group Spanish mackerel. The current trip limit regulations are included in the discussion section below.

| | Florida EEZ |
|-------------------|---|
| March 1- Nov 30 | 3,500 lbs |
| Dec 1- Feb 28(29) | No limit if 0-74% adjusted quota has been landed weekdays, 1,500 lbs weekends |
| | 1,500 lbs if 75-99% adjusted quota has been landed |
| | 500 lbs if 100% adjusted quota has been landed |
| | 0 lbs if 100% quota has been landed |

NOTE: For Alternatives 2-5, the South Atlantic Council will need to clarify that the proposed Southern Zone commercial quota (pending approval of Amendment 20B) will be used to trigger the step-downs, in-season AMs, and to calculate the adjusted quota *instead of the total Atlantic Spanish mackerel commercial ACL*.

Alternative 2. Establish a trip limit of 3,500 lbs for the Florida EEZ.

Alternative 3. Establish a trip limit of 3,500 lbs for the Florida EEZ. When 75% of [the proposed Southern Zone commercial quota] has been landed or projected to be landed, the trip limit would be reduced to 1,500 lbs.

Alternative 4. Establish a trip limit of 3,500 lbs for the Florida EEZ. When 75% of [the proposed Southern Zone commercial quota] has been landed or projected to be landed, the trip limit would be reduced to 500 lbs.

[AP recommendation] **Alternative 5.** Establish a trip limit of 3,500 lbs for the Florida EEZ. When 75% of [adjusted quota of the proposed Southern Zone quota] has been landed or projected to be landed, the trip limit would be reduced to 1,500 lbs. When 100% of [adjusted quota of the proposed Southern Zone quota] is reached, the trip limit is reduced to 500 lbs until the end of the fishing year or until [the proposed Southern Zone commercial quota] is met or projected to be met.

Discussion:

A trip limit system for the east Florida exclusive economic zone (EEZ) and an adjusted quota for Atlantic migratory group Spanish mackerel was implemented through Amendment 6 to the CMP FMP in 1992. The current system for Atlantic migratory group Spanish mackerel commercial trip limits for the Florida EEZ was established through the 2000 Framework Adjustment (SAFMC 2000) as a modification of similar systems in earlier years that used unlimited trips, step-downs, and adjusted quotas. The unlimited trips during the week between December 1 and February 28 allowed larger vessels to maximize efficiency on trips until 75% of the adjusted quota was reached, when the 1,500-lb trip limit went into place all days of the week. Currently, the adjusted quota is 250,000 lbs less than the full commercial quota (commercial ACL). The adjusted quota and 500-lb trip limit was expected to allow vessels to continue fishing for the remainder of the fishing season. Originally, no closure provision was in place for Atlantic migratory group Spanish mackerel, but a closure provision when the full commercial quota/ACL is met or projected to be met was implemented through Amendment 18 to the CMP FMP (GMFMC/SAFMC 2011). Therefore, the 500-lb trip limit after the adjust quota is met is only effective until the additional 250,000 lb are landed.

Some fishermen have expressed concern about the unlimited trips but wish to retain the adjusted quota so that the 500-lb trip limit can remain in place after the adjusted quota is met. However, the adjusted quota is 92% of the full quota. It is unlikely the National Marine Fisheries Service (NMFS) could implement the 500-lb trip limit reduction before the full quota is projected to be met, if landings rates are very high. In the Gulf of Mexico (Gulf), the Florida west coast subzones have a reduction to 500 lbs at 75% of the quota that in some years could not be implemented before the quota was projected to be met due to high catch rates; a trip limit reduction at 92% of the quota would be even less likely to be implemented.

When the current trip limit system for the Florida EEZ was put in place, the total allowable catch (TAC) for commercial harvest of Atlantic Spanish mackerel was 3.87 million pounds (mp). The current commercial ACL, set in Amendment 18 (GMFMC/SAFMC 2011), is 3.13 mp, and the South Atlantic Council has proposed a commercial ACL of 3.33 mp in Framework Amendment 1. Both the current and proposed commercial ACLs are lower than the TAC that was in place when the trip limit system was implemented. Additionally, in Amendment 18 included an in-season closure when the commercial ACL is met or projected to be met as the commercial accountability measure (AM) for Atlantic Spanish mackerel.

The lack of a Spanish mackerel trip limit in Florida waters on weekdays beginning December 1 may contribute to early closures in the spring under the 3.13 mp ACL. A trip limit reduction may help lengthen the commercial fishing season; however, since the allowable catch has been reduced since 1992, it may be more appropriate to base the trip limit reduction on the commercial ACL rather than the adjusted quota.

Alternative 1 (No Action) would not make any modifications to the current trip limit system for the Florida EEZ. For harvest of Atlantic migratory group Spanish mackerel in the Florida EEZ, the trip limit is 3,500 pounds (lbs) starting March 1, and then starting December 1 trips are not limited on week days and are 1,500 lbs on weekends. This trip limit remains unlimited until 75% of the adjusted quota is landed, after which the trip limit is 1,500 lbs every day. When 100% of the adjusted quota is reached, the trip limit is reduced to 500 lbs until the end of the fishing year or until the full quota is met or projected to be met. North of the Georgia-Florida boundary, the trip limit is 3,500 lb year-round.

Alternative 2 would establish a 3,500-lb trip limit for the Florida EEZ for the entire fishing year, which would be consistent with the trip limit for the rest of the states in the South Atlantic and Mid-Atlantic regions. **Alternatives 3 and 4** would also establish a 3,500-lb trip limit for the Florida EEZ, but also include step-down trip limits when 75% of the proposed Southern Zone quota has been met or is projected to be met. When triggered, **Alternative 3** would reduce the trip limit to 1,500 lbs, and **Alternative 4** would reduce the trip limit to 500 lbs.

Alternative 5 would also establish a 3,500-lb trip limit, but includes two step-down provisions using the adjusted quota. For this alternative, the ‘adjusted quota’ would be 2,417,330 lbs, which is 250,000 lbs less than the proposed Southern Zone quota. When 75% of the adjusted quota is met (1,812,998 lbs) has been landed, the trip limit will be reduced to 1,500 lbs. When the 100% of the adjusted quota is met, the trip limit will be reduced to 500 lbs. **Alternative 5** is based on input from the South Atlantic Mackerel Advisory Panel at their April 2012 meeting. Additionally, at the April 2014 meeting the Mackerel Advisory Panel recommended **Alternative 5** as the Preferred Alternative.

Table 2.1. Comparison of trip limits for Atlantic migratory group Spanish mackerel in Florida waters for each alternative.

| | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 |
|--------------------|---|-----------------|--|--|---|
| March 1- Nov 30 | 3,500 lb | | | | |
| Dec 1- Feb 28 | No limit if 0-74% adjusted quota has been landed weekdays, 1,500 lb weekends | 3,500 lb | 3,500 lb with step-down to 1,500 lb when 75% of ACL is met | 3,500 lb with step-down to 500 lb when 75% of ACL is met | 3,500 lb with step-down to 1,500 lb when 75% of adjusted quota is met; step-down to 500 lb when 100% of adjusted quota is met. |
| | 1,500 lb if 75-99% adjusted quota has been landed | | | | |
| | 500 lb if 100% adjusted quota has been landed | | | | |
| | 0 lb if 100% ACL has been landed | | | | |

Table 2.1 shows a comparison of the trip limits under each alternative. Under all alternatives, the existing accountability measures (AMs) would remain in place, in that commercial harvest will be prohibited when the commercial ACL is met or is projected to be met. Pending approval of Amendment 20B, the AMs for each zone will apply when the zone’s commercial quota is met or is projected to be met.

Comparison of Alternatives:

Biological Effects

The overall biological effects of **Alternatives 1 (No Action)-5** are expected to be neutral because under all circumstances, harvest is limited to the commercial ACL (zone quotas, if Amendment 20B is implemented), if necessary. **Alternative 1 (No Action)** would result in a 365-day fishing season in the Florida EEZ (**Table 2.2**), compared to slightly shorter fishing seasons under **Alternatives 2 and 3**, and a slightly longer fishing season under **Alternative 4**. The biological impacts on protected species from alternatives under **Action 1** are unclear. **Alternative 1 (No Action)** would perpetuate the existing level of risk for interactions between Endangered Species Act-listed species and the CMP fishery. **Alternatives 2-4** could perpetuate the existing amount of fishing effort, increase effort, or decrease effort. However, if these alternatives cause reductions in the overall amount of effort in the fishery, and do not simply shift effort elsewhere, the risk of interactions between protected species and the fishery may decrease. **Alternatives 1 (No Action), 3, 4 and 5** could lead to a longer season and therefore an increase in the number of fishing days. Increased effort provides the least amount of biological benefit for protected species. This action is not likely to significantly alter the way in which the fishery is prosecuted in terms of fishing areas, gear types, or fishing methods. Therefore, no adverse effects on essential fish habitat (EFH) or EFH areas of particular concern are anticipated.

Table 2.2. Projected fishing days and closure dates for Spanish mackerel in the southern zone for the 2014-2015 fishing season for each alternative under conditions that would exist if CMP Framework 1 and CMP Amendment 20B are implemented. The fishing year is March – February.

| Alternative | Alternative 1 | Alternative 2 | Alternative 3 | Alternative 4 | Alternative 5 |
|------------------------|---------------|---------------|---------------|---------------|---------------|
| Projected Closure Date | n/a | 02/21/15 | 02/28/15 | n/a | n/a |
| Projected Fishing Days | 365 | 357 | 364 | 365 | 365 |

Source: NMFS 2013

Economic Effects

The proposed action would not be expected to have any impact on the recreational sector or associated economic benefits. For the commercial sector, when compared to **Alternative 1 (No Action)**, **Alternative 2** would be expected result in the highest harvest and revenue, a gain of approximately \$78,000 (associated with an increase in harvest of approximately 70,500 lbs), assuming an average price of \$1.11 (2013 dollars) per pound, followed by **Alternative 3** (gain of \$67,300; 60,600 lbs), **Alternative 5** (gain of \$52,900; 47,700 lbs), and **Alternative 4** (gain of \$31,000; 27,900 lbs). Thus, all of the alternatives to **Alternative 1 (No Action)** would be

expected to result in more harvest, and associated economic benefits, than **Alternative 1 (No Action)**.

Longer seasons are generally expected to support more stable product supply to markets, higher or less variable prices, and greater operational flexibility (when to fish, cash flow management, etc.). Thus, from this perspective, **Alternative 4** would be expected to result in the highest economic benefits, followed by **Alternative 1 (No Action)** and **Alternative 5** (due to equivalent season lengths), **Alternative 3**, and **Alternative 2**.

Social Effects

Overall, the social effects would be associated with economic costs and benefits for the commercial vessels who harvest Spanish mackerel in the Florida EEZ, changes in fishing opportunities for vessels fishing in the Florida EEZ due to trip limit changes, and a reduced level of complexity from the current trip limit system for the Florida EEZ. Social effects associated with positive or negative biological effects that could affect the Spanish mackerel resource are expected to be minimal. Even if effort increased in the Florida EEZ, it is expected that the trip limit system under any of the alternatives would not contribute to a substantially longer season than any other alternative. As a result, the effects on fishermen and communities would be expected to be similar under all of all alternatives.

Changes in fishing opportunities and trip efficiency could be affected, however, by different trip limit systems. However, some fish houses may set a ‘fish house limit’ for vessels that the fish house regularly buys from, which could be lower than the allowable trip limit. The period that allows unlimited trips in **Alternative 1 (No Action)** would be removed under **Alternatives 2-5**, and this could affect some vessels taking advantage of maximized trip efficiency and profitability.

Alternatives 2-5 are less complex than **Alternative 1 (No Action)**, and reducing complexity would be expected to be beneficial for compliance and enforcement. **Alternative 2** is the least complex, setting one trip limit for the entire year that is the same as the trip limit in the rest of the region. **Alternatives 3** and **4** have similar complexity by incorporating a step-down, and **Alternative 5** would be more complex by maintaining a step-down and an adjusted quota. However, **Alternative 5** would be more tailored to the specific fishery conditions and dynamics in the Florida EEZ, and could be better suited for commercial vessels working under the trip limit system.

Administrative Effects

Alternatives 2, 3, and 4 represent a decreased administrative burden compared to the status quo because they remove the adjusted quota. The burden on law enforcement would not change under **Alternatives 1 (No Action), 3, 4** or **5**, since commercial quota closures implemented when the commercial ACLs or adjusted quota are projected to be met are currently enforced.

The administrative impacts under **Alternative 1 (No Action)**, would be the most complex and the least beneficial, followed by **Alternative 5, Alternative 4, Alternative 3, and Alternative 2**.

Alternative 2 would be the least complex and the most beneficial due to reducing the complexity of the quota and trip limit regulations. **Alternative 2** would result in the greatest administrative benefits because it would remove the use of the adjusted quota and remove the implementation of all trip limit reductions that are currently specified under **Alternative 1 (No Action)**. Maintaining a constant the trip limit through the entire fishing season would eliminate the need to develop outreach materials to inform fishery participants of a trip limit change, and ease the law enforcement burden.

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 environment** (Section 3.2)
- **Human environment** (Sections 3.3)
- **Administrative environment** (Section 3.4)

3.1 Habitat Environment

3.1.1 South Atlantic

The South Atlantic Council has management jurisdiction of the federal waters (3-200 nm) offshore of North Carolina, South Carolina, Georgia, and Florida. The continental shelf off the southeastern U.S., extending from the Dry Tortugas, Florida, to Cape Hatteras, North Carolina, encompasses an area in excess of 100,000 square km (Menzel 1993). Based on physical oceanography and geomorphology, this environment can be divided into two regions: Dry Tortugas, Florida, to Cape Canaveral, Florida, and Cape Canaveral, Florida, to Cape Hatteras, North Carolina. The continental shelf from the Dry Tortugas, Florida, to Miami, Florida, is approximately 25 kilometers (km) wide and narrows to approximately 5 km off Palm Beach, Florida. The shelf then broadens to approximately 120 km off Georgia and South Carolina before narrowing to 30 km off Cape Hatteras, North Carolina. The Florida Current/Gulf Stream flows along the shelf edge throughout the region. In the southern region, this boundary current dominates the physics of the entire shelf (Lee et al. 1994).

In the northern region, additional physical processes are important and the shelf environment can be subdivided into three oceanographic zones (Atkinson et al. 1985; Menzel 1993), the outer shelf, mid-shelf, and inner shelf. The outer shelf (40-75 meters (m)) is influenced primarily by the Gulf Stream and secondarily by winds and tides. On the mid-shelf (20-40 m), the water column is almost equally affected by the Gulf Stream, winds, and tides. Inner shelf waters (0-20 m) are influenced by freshwater runoff, winds, tides, and bottom friction. Water masses present from the Dry Tortugas, Florida, to Cape Canaveral, Florida, include Florida Current water,

waters originating in Florida Bay, and shelf water. From Cape Canaveral, Florida, to Cape Hatteras, North Carolina four water masses are found: Gulf Stream water; Carolina Capes water; Georgia water; and Virginia coastal water.

Spatial and temporal variation in the position of the western boundary current has dramatic effects on water column habitats. Variation in the path of the Florida Current near the Dry Tortugas induces formation of the Tortugas Gyre (Lee et al. 1992, 1994). This cyclonic eddy has horizontal dimensions of approximately 100 km and may persist near the Florida Keys for several months. The Pourtales Gyre, which has been found to the east, is formed when the Tortugas Gyres moves eastward along the shelf. Upwelling occurs in the center of these gyres, thereby adding nutrients to the near surface (<100 m) water column. Wind and input of Florida Bay water also influence the water column structure on the shelf off the Florida Keys (Smith 1994; Wang et al. 1994). Further, downstream, the Gulf Stream encounters the “Charleston Bump”, a topographic rise on the upper Blake Ridge where the current is often deflected offshore resulting in the formation of a cold, quasi-permanent cyclonic gyre and associated upwelling (Brooks and Bane 1978). On the continental shelf, offshore projecting shoals at Cape Fear, North Carolina, Cape Lookout, North Carolina, and Cape Hatteras, North Carolina affect longshore coastal currents and interact with Gulf Stream intrusions to produce local upwelling (Blanton et al. 1981; Janowitz and Pietrafesa 1982). Shoreward of the Gulf Stream, seasonal horizontal temperature and salinity gradients define the mid-shelf and inner-shelf fronts. In coastal waters, river discharge and estuarine tidal plumes contribute to the water column structure.

The water column from Dry Tortugas, Florida, to Cape Hatteras, North Carolina, serves as habitat for many marine fish and shellfish. Most marine fish and shellfish release pelagic eggs when spawning and thus, most species utilize the water column during some portion of their early life history (Leis 1991; Yeung and McGowan 1991). Many fish inhabit the water column as adults. Pelagic fishes include numerous clupeoids, flying fish, jacks, cobia, bluefish, dolphin, barracuda, and the mackerels (Schwartz 1989). Some pelagic species are associated with particular benthic habitats, while other species are truly pelagic.

3.2 Biological and Ecological Environment

3.2.1 Fish Populations Affected by this Amendment

A description of the biological environment for CMP species is provided in Amendment 18 (GMFMC/ SAFMC 2011), is incorporated herein by reference, and is summarized below.

The mackerel family, Scombridae, includes tunas, mackerels and bonitos, and are among the most important commercial and sport fishes. The adults in the coastal pelagic management unit utilize the coastal waters of the Atlantic Ocean out to the edge of the continental shelf as their primary habitat. Within the area, the occurrence of CMP species is governed by temperature and salinity. All species are seldom found in water temperatures less than 20°C. Salinity preference

varies, but these species generally prefer high salinity, less than 36 parts per thousand (ppt). The habitat for eggs and larvae of all species in the coastal pelagic management unit is the water column. Within the spawning area, eggs and larvae are concentrated in the surface waters.

The proposed action in this amendment specifically affect Spanish mackerel (*Scomberomorus maculatus*). Spanish mackerel are migratory and move into specific areas to spawn. Environmental factors, such as temperature, can change the timing and extent of their migratory patterns (Williams and Taylor 1980).

Spanish mackerel is also a pelagic species occurring in depths up to 75 m, but are primarily found in depths of 20 m or less. The species occurs throughout the coastal zones of the western Atlantic from southern New England to the Florida Keys and throughout the Gulf (Collette and Russo 1979). Adults are usually found from the low-tide line to the edge of the continental shelf, and along coastal areas. They inhabit estuarine areas, especially the higher salinity areas, during seasonal migrations, but are considered rare and infrequent in many Gulf estuaries.

Spawning occurs along the inner continental shelf from April to September (Powell 1975). Eggs and larvae occur most frequently offshore over the inner continental shelf, at temperatures between 20°C to 32°C, and salinities between 28 and 37 ppt. They are also most frequently found in water depths from 9 m to about 84 m, but are most common in < 50 m.

Juveniles are most often found in coastal and estuarine habitats, and at temperatures greater than 25° C and salinities greater than 10 ppt. Although they occur in waters of varying salinity, juveniles appear to prefer marine salinity levels and generally are not considered estuarine-dependent. Like king mackerel, adult Spanish mackerel are migratory, generally moving from wintering areas of south Florida and Mexico to more northern latitudes in spring and summer. Spanish mackerel generally mature at age 1 to 2 and have a maximum age of approximately 11 years (Powell 1975).

A Southeast Data, Assessment, and Review (SEDAR) assessment was recently completed for South Atlantic Spanish mackerel (SEDAR 28, 2012 revised May 2013). The assessment indicates the stock is not overfished and is not undergoing overfishing. Additional details of the stock status, including the current exploitation rate and biomass levels, may be found in SEDAR 28 (2013), and is hereby incorporated by reference.

3.2.2 Protected Species

There are 40 listed species protected by federal law that may occur in the exclusive economic zone (EEZ) of the South Atlantic and Gulf of Mexico Regions and are under the purview of NMFS. Thirty-one of these species are marine mammals protected under the Marine Mammal Protection Act (MMPA). Six of these marine mammal species (sperm, sei, fin, blue, humpback, and North Atlantic right whales) are also listed as endangered under the Endangered Species Act (ESA). In addition to those six marine mammals, five species of sea turtles (green, hawksbill, Kemp's ridley, leatherback, and loggerhead); the smalltooth sawfish; five distinct population

segments (DPSs) of Atlantic sturgeon; and two *Acropora* coral species (elkhorn [*Acropora palmata*] and staghorn [*A. cervicornis*]) are also protected under the ESA. Portions of designated critical habitat for North Atlantic right whales and *Acropora* corals occur within the South Atlantic Council's jurisdiction. Additionally, NMFS has proposed rules to uplist *Acropora* Corals, list 6 additional species of corals, and designate critical habitat for loggerhead sea turtles. The potential impacts from the continued authorization of the CMP Fishery on ESA-listed species have been considered in previous ESA Section 7 consultations or subsequent memoranda. Those consultations indicate that of the species listed above, sea turtles and smalltooth sawfish are the most likely to interact with these fisheries and are therefore discussed further below.

Turtles

Green, hawksbill, Kemp's ridley, leatherback, and loggerhead sea turtles are all highly migratory and travel widely throughout the South Atlantic. The following sections are a brief overview of the general life history characteristics of the sea turtles found in the South Atlantic region. Several volumes exist that cover the biology and ecology of these species more thoroughly (i.e., Lutz and Musick (eds.) 1997, Lutz et al. (eds.) 2003).

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

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

Kemp's ridley hatchlings are also pelagic during the early stages of life and feed in surface waters (Carr 1987, Ogren 1989). Once the juveniles reach approximately 20 cm carapace length they move to relatively shallow (less than 50m) benthic foraging habitat over unconsolidated substrates (Márquez-M. 1994). They have also been observed transiting long distances between foraging habitats (Ogren 1989). Kemp's ridleys feeding in these nearshore areas primarily prey on crabs, though they are also known to ingest mollusks, fish, marine vegetation, and shrimp (Shaver 1991). The fish and shrimp Kemp's ridleys ingest are not thought to be a primary prey item but instead may be scavenged opportunistically from bycatch discards or from discarded bait (Shaver 1991). Given their predilection for shallower water, Kemp's ridleys most routinely make dives of 50 m or less (Soma 1985, Byles 1988). Their maximum diving range is unknown. Depending on the life stage a Kemp's ridleys may be able to stay submerged anywhere from 167 minutes to 300 minutes, though dives of 12.7 minutes to 16.7 minutes are much more common (Soma 1985, Mendonca and Pritchard 1986, Byles 1988). Kemp's ridleys may also spend as much as 96% of their time underwater (Soma 1985, Byles 1988).

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

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

Fish

Historically the **smalltooth sawfish** in the U.S. ranged from New York to the Mexico border. Their current range is poorly understood but believed to have contracted from these historical areas. In the South Atlantic region, they are most commonly found in Florida, primarily off the Florida Keys (Simpfendorfer and Wiley 2004). Only two smalltooth sawfish have been recorded north of Florida since 1963 (the first was captured off North Carolina in 1963 and the other off Georgia in 2002 (National Smalltooth Sawfish Database, Florida Museum of Natural History)). Historical accounts and recent encounter data suggest that immature individuals are most common in shallow coastal waters less than 25 meters (Bigelow and Schroeder 1953, Adams and Wilson 1995), while mature animals occur in waters in excess of 100 meters (Simpfendorfer pers. comm. 2006). Smalltooth sawfish feed primarily on fish. Mullet, jacks, and ladyfish are believed to be their primary food resources (Simpfendorfer 2001). Smalltooth sawfish also prey on crustaceans (mostly shrimp and crabs) by disturbing bottom sediment with their saw (Norman and Fraser 1938, Bigelow and Schroeder 1953).

In a 2007 biological opinion, NMFS determined the continued existence of endangered green, leatherback, hawksbill, and Kemp's ridley sea turtles, and threatened loggerhead sea turtles was not likely to be jeopardized by fishing for CMP species in the Southeastern United States. Other listed species are not likely to be adversely affected, including Endangered Species Act-listed whales, Gulf sturgeon, and *Acropora* corals. NMFS determined that allowing the continued operation of the CMP fishery under the existing fishery management regulations during the reinitiating period will not violate section 7(a)(2) or 7(d) of the ESA. Since the completion of the 2007 consultation, five DPSs of Atlantic sturgeon became federally protected by the ESA. What affect the CMP fishery is likely to have on Atlantic sturgeon has never been analyzed in a Section 7 consultation; however, Atlantic sturgeon have been captured by fishermen fishing for CMP species in the past. Because of these past captures and the new protection for Atlantic sturgeon, ESA consultation was reinitiated in November 2012. Following the request for consultation the Sustainable Fisheries Division considered the effects of the fishery on Atlantic sturgeon and developed ESA 7(a)(2) and 7(d) determinations in a January 11, 2013, memorandum. The CMP fishery is currently operating under the 7(a)(2) and 7(d) determinations while consultation proceeds.

Marine Mammals

The Gulf and South Atlantic CMP hook-and-line fishery is classified in the 2014 Marine Mammal Protection Act List of Fisheries as a Category III fishery (79 FR 14418, March 14, 2014), meaning the annual mortality and serious injury of a marine mammal resulting from the fishery is less than or equal to 1% of the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population.

The Gulf and South Atlantic CMP gillnet fishery is classified as a Category II fishery. This classification indicates an occasional incidental mortality or serious injury of a marine mammal stock resulting from the fishery (1-50% annually of the potential biological removal). The

fishery has no documented interaction with marine mammals; NMFS classifies this fishery as Category II based on analogy (i.e., similar risk to marine mammals) with other gillnet fisheries.

3.3 Human Environment

3.3.1 Economic Environment

3.3.1.1 Economic Description of the Recreational Sector

A description of the recreational sector of the Spanish mackerel component of the coastal migratory pelagic CMP fishery is contained in Amendment 20A (GMFMC/SAFMC 2013) and is incorporated herein by reference. Because this proposed framework amendment would only change management of the commercial sector, summary and update of the information on the recreational sector is not provided in this assessment.

3.3.1.2 Economic Description of the Commercial Sector

A description of the commercial sector of the Spanish mackerel component of the CMP fishery is contained in Amendment 20A (GMFMC/SAFMC 2013) and is incorporated herein by reference. Because this proposed framework amendment would only change management of the Atlantic migratory group Spanish mackerel, only the available information on this stock is summarized in this assessment.

Number of Vessels and Ex-vessel Revenue

An economic description of the commercial sectors for Spanish mackerel is contained in Vondruska (2010) and is incorporated herein by reference. Updated select summary statistics are provided in **Table 3.3.1.1**. These estimates include the average number of vessels per fishing year that recorded harvesting of at least one pound of Atlantic migratory group Spanish mackerel over the 2007/2008 through 2011/2012 fishing years, the average ex-vessel revenue from Spanish mackerel, the average ex-vessel revenue from all other species harvested on all trips by these vessels (regardless of whether Spanish mackerel was harvested on the trip), and the average ex-vessel revenue per vessel.

Table 3.3.1.1. Average number of vessels, ex-vessel revenue from Atlantic migratory group Spanish mackerel, ex-vessel revenue from all species harvested by same vessels, and average ex-vessel revenue per vessel. All revenue estimates are in 2013 dollars.

| Species | Number of Vessels | Ex-vessel Revenue (millions) | Ex-vessel Revenue All Species (millions) | Average Ex-vessel Revenue per Vessel |
|---|-------------------|------------------------------|--|--------------------------------------|
| Atlantic migratory group Spanish mackerel | 387 | \$1.94 | \$12.42 | \$32,100 |

Notes: Each row should be interpreted individually, as there will be substantial double counting across rows in

columns 2 and 4, e.g., the same vessel might fish for different migratory groups of the same species. Five-year averages in column 3 are based on fishing years for Spanish mackerels (2007/2008, 2008/2009, 2011/2012). Five-year averages in column 4 are based on calendar years (2007-2011). Source: NMFS SEFSC Coastal Fisheries Logbook for landings and NMFS Accumulated Landings System for prices. Note that small amounts (1.95% of Spanish mackerel) are landed in the Northeast and are not counted here. Similar, landings and revenue from State waters by vessels without federal permits are not included.

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 Spanish mackerel 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. It should be clearly understood that, in the absence of the availability of a given species for purchase, consumers would spend their money on substitute goods and services. 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.

Estimates of the average annual business activity associated with the commercial harvest of Atlantic migratory group Spanish mackerel, and all species harvested by the vessels that harvested these Spanish mackerel, were derived using the model developed for and applied in NMFS (2011) and are provided in **Table 3.3.1.2**. This business activity is characterized as full-time equivalent jobs, income impacts (wages, salaries, and self-employed income), and output (sales) impacts (gross business sales). Income impacts should not be added to output (sales) impacts because this would result in double counting.

Table 3.3.1.2. Average annual business activity associated with the commercial harvest of Atlantic migratory group Spanish mackerel. All monetary estimates are in 2013 dollars.

| Species | Average Ex-vessel Value (millions) | Total Jobs | Harvester Jobs | Output (Sales) Impacts (millions) | Income Impacts (millions) |
|--|------------------------------------|------------|----------------|-----------------------------------|---------------------------|
| Atlantic migratory group Spanish mackerel | \$1.94 | 337 | 44 | \$25.50 | \$10.86 |
| - all species harvested on all trips by same vessels | \$12.42 | 2,163 | 282 | \$163.50 | \$69.68 |

3.3.2 Social Environment

A description of the social environment of the CMP fishery and associated coastal communities are contained in Amendment 20A (GMFMC/SAFMC 2013) and is incorporated herein by reference.

Because this framework amendment only proposes changes to the commercial regulations for Spanish mackerel, this section focuses on the communities that are the most likely to be affected by regulatory changes to the commercial fishery for Spanish mackerel. In addition, only South Atlantic communities are included in this description because the proposed action in this amendment would primarily affect commercial fishermen harvesting Spanish mackerel in the federal waters off the east coast of Florida. However, some Spanish mackerel commercial fishermen in the Gulf and Mid-Atlantic could also be affected. Therefore, the reader is directed to refer to Amendment 20A (GMFMC/SAFMC 2013) for a detailed description of the top commercial Spanish mackerel communities in the Gulf and Mid-Atlantic regions.

The descriptions in this section include information about the top communities based upon a regional quotient of commercial landings and ex-vessel value for Spanish mackerel. These communities are referred to as “Spanish mackerel communities” because these are the areas that would be most likely to experience the effects of the proposed actions that would change the Spanish mackerel commercial fishing regulations. Additionally, the descriptions in Amendment 20A (GMFMC/SAFMC 2013) also apply fishing reliance and engagement indices to the top Spanish mackerel communities. These indices provide information about a community’s overall involvement in commercial fishing, which provides information on how a community could experience effects from regulatory actions for any species. The indices were created using secondary data from permit and landings information for the commercial sector (Jepson and Colburn 2013; Jacob et al. 2013). Fishing engagement is primarily measured by the absolute number of permits, landings, and ex-vessel value. Fishing reliance uses the same variables as engagement, which are divided by population to provide an indication of the per capita influence of this activity. (see Amendment 20A for more details about the reliance and engagement indices and methodology).

Commercial Spanish Mackerel Communities in the South Atlantic

Using the regional quotient to identify Spanish mackerel communities, as detailed in Amendment 20A (GMFMC/SAFMC 2013), Fort Pierce, Florida, ranks highest, with almost 32% of the landings and over 25% of the ex-vessel value. Cocoa, Florida, is second with approximately 17% of landings and 17% of ex-vessel value. Other top Florida communities include Palm Beach Gardens, Stuart, Marathon, Miami, Mayport, and Sebastian. Although Hatteras, North Carolina ranked third for ex-vessel value, the community had lower landings than Palm Beach Gardens, Florida. Additional top North Carolina communities include Engelhard, Wanchese, Swan Quarter, Ocracoke, Avon, and Cedar Island. No South Carolina or Georgia communities are included in the top fifteen communities for Spanish mackerel.

Reliance on and Engagement with Commercial Fishing in the South Atlantic

The reliance and engagement indices provide information on how a community is involved overall with commercial fishing and could experience effects from regulatory actions for any species (see Amendment 20A for more details, GMFMC/SAFMC 2013). The primary communities in the Spanish mackerel fishery with substantial commercial fishing reliance and/or engagement (communities with engagement or reliance values above one standard deviation from the mean) include Fort Pierce, Florida; Marathon, Florida; Miami, Florida; Sebastian, Florida; Stuart, Florida; Ocracoke, North Carolina; and Wanchese, North Carolina. These communities are listed in alphabetical order by state.

3.3.3 Environmental Justice Considerations

Executive Order 12898 requires federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations. This executive order is generally referred to as environmental justice (EJ).

Only South Atlantic communities and counties are included in the following description because the proposed action in this amendment would primarily affect commercial fishermen harvesting Spanish mackerel in the federal waters off the east coast of Florida. However, some Spanish mackerel commercial fishermen in the Gulf and Mid-Atlantic could be affected by regulatory changes in the Atlantic EEZ off the coast of Florida. Therefore, the reader is directed to refer to Amendment 20A (GMFMC/SAFMC 2013) for a detailed description of coastal migratory pelagic EJ concerns for the Gulf and Mid-Atlantic regions.

To evaluate EJ considerations for the proposed action, information on poverty and minority rates is examined at the county level. Information on the race and income status for groups at the different participation levels (vessel owners, crew, dealers, processors, employees, employees of associated support industries, etc.) is not available. Because the proposed action would be expected to affect fishermen in several communities and not just those profiled, it is possible that other counties or communities have poverty or minority rates that exceed the EJ thresholds.

In order to identify the potential for EJ concern, the rates of minority populations (non-white, including Hispanic) and the percentage of the population that was below the poverty line were examined. The threshold for comparison that was used was 1.2 times the state average for minority population rate and percentage of the population below the poverty line. If the value for the community or county was greater than or equal to 1.2 times the state average, then the community or county was considered an area of potential EJ concern (EPA 1999). Census data for the year 2010 was used. Estimates of the state minority and poverty rates, associated thresholds, and community rates are provided in **Table 3.3.3.1**; note that only communities that exceed the minority threshold and/or the poverty threshold are included in the table.

Table 3.3.3.1. Environmental justice thresholds (2010 U.S. Census data) for counties in the South Atlantic region. Only coastal counties (east coast for Florida) with minority and/or poverty rates that exceed the state threshold are listed.

| State | County | Minority Rate | Minority Threshold* | Poverty Rate | Poverty Threshold* |
|-----------------------|---------------|---------------|---------------------|--------------|--------------------|
| Florida | | 47.4 | 56.88 | 13.18 | 15.81 |
| | Broward | 52.0 | -4.6 | 11.7 | 4.11 |
| | Miami-Dade | 81.9 | -34.5 | 16.9 | -1.09 |
| | Orange County | 50.3 | -2.9 | 12.7 | 3.11 |
| | Osceola | 54.1 | -6.7 | 13.3 | 2.51 |
| Georgia | | 50.0 | 60.0 | 15.0 | 18.0 |
| | Liberty | 53.2 | -3.2 | 17.5 | 0.5 |
| South Carolina | | 41.9 | 50.28 | 15.82 | 18.98 |
| | Colleton | 44.4 | -2.5 | 21.4 | -2.42 |
| | Georgetown | 37.6 | 4.3 | 19.3 | -0.32 |
| | Hampton | 59.0 | -17.1 | 20.2 | -1.22 |
| | Jasper | 61.8 | -19.9 | 9.9 | -0.92 |
| North Carolina | | 39.1 | 46.92 | 15.07 | 18.08 |
| | Bertie | 64.6 | -25.50 | 22.5 | -4.42 |
| | Chowan | 39.2 | -0.1 | 18.6 | -0.52 |
| | Gates | 38.8 | 0.3 | 18.3 | -0.22 |
| | Hertford | 65.3 | -26.2 | 23.5 | -5.42 |
| | Hyde | 44.5 | -5.4 | 16.2 | 1.88 |
| | Martin | 48.4 | -9.3 | 23.9 | -5.82 |
| | Pasquotank | 43.4 | -4.3 | 16.3 | 1.78 |
| | Perquimans | 27.7 | 11.4 | 18.6 | -0.52 |
| | Tyrrell | 43.3 | -4.2 | 19.9 | -1.82 |
| | Washington | 54.7 | -15.6 | 25.8 | -7.72 |

*The county minority and poverty thresholds are calculated by comparing the county minority rate and poverty estimate to 1.2 times the state minority and poverty rates. A negative value for a county indicates that the threshold has been exceeded.

Another type of analysis uses a suite of indices created to examine the social vulnerability of coastal communities and is depicted in **Figure 3.3.3.1**. 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; more households with children under the age of five; and disruptions like higher separation rates, higher crime rates, and unemployment all are signs of populations experiencing vulnerabilities. The data used to create these indices are from the 2005-2009 American Community Survey estimates at the U.S. Census Bureau. The thresholds of one and one-half standard deviation are the same for these standardized indices. For those communities that exceed the threshold for all indices it would be expected that they would exhibit vulnerabilities to sudden changes or social disruption that might accrue from regulatory change.

Similar to the reliance index discussed in **Section 3.3.2**, the vulnerability indices also use normalized factor scores. Comparison of vulnerability scores is relative, but the score is related to the percent of communities with similar attributes. The social vulnerability indices provide a way to gauge change over time with these communities but also provides a comparison of one community with another.

With regard to social vulnerabilities, the following South Atlantic communities exceed the threshold of 0.5 standard deviation for at least one of the social vulnerability indices (**Figure 3.3.3.1**): Cocoa, Fort Pierce, Miami and Stuart in Florida and Wanchese, North Carolina. The Florida communities of Cocoa, Fort Pierce and Miami all exceed the thresholds on all three social vulnerability indices. These communities are expressing substantial vulnerabilities and may be susceptible to further effects from any regulatory change depending upon the direction and extent of that change.

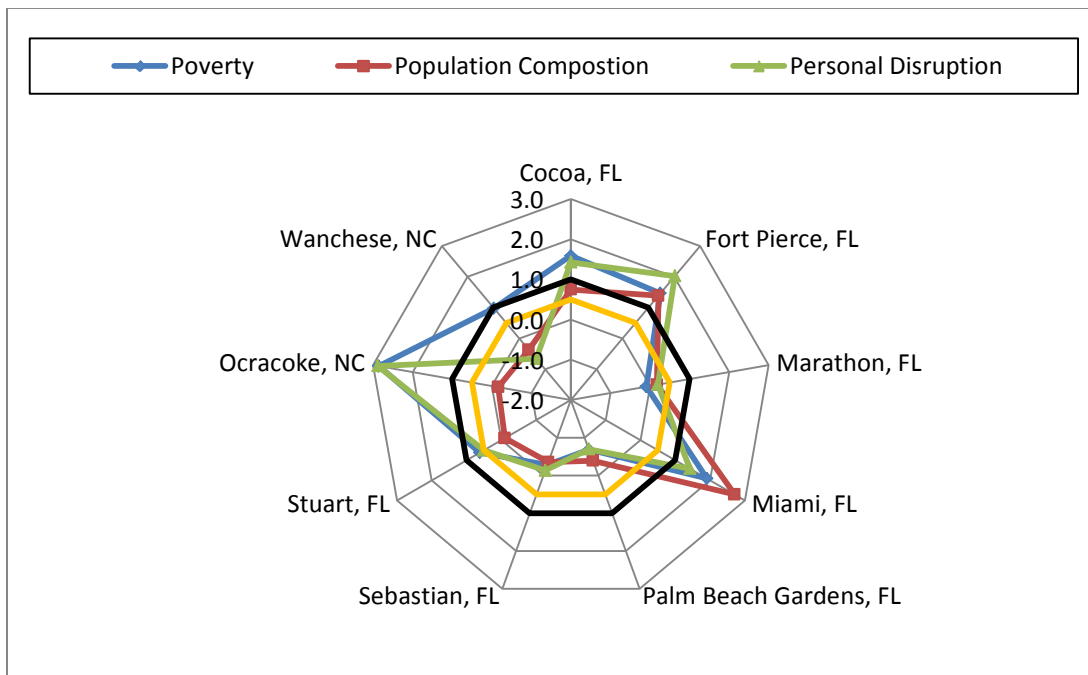


Figure 3.3.3.1. Social vulnerability indices for communities with the top regional quotients for Spanish mackerel in the South Atlantic.
Source: SERO Social Indicator Database 2013

Although some communities expected to be affected by this proposed action may have minority or economic profiles that exceed the EJ thresholds and, therefore, may constitute areas of concern, significant EJ issues are not expected to arise as a result of this proposed amendment. No adverse human health or environmental effects are expected to accrue to this proposed amendment, nor are these measures expected to result in an increased risk of exposure of affected individuals to adverse health hazards. The proposed management measures would apply to all participants in the affected area, regardless of minority status or income level, and

information is not available to suggest that minorities or lower income persons are, on average, more dependent on the affected species than non-minority or higher income persons.

Finally, the general participatory process used in the development of fishery management measures (e.g., public hearings, and open South Atlantic and Gulf Council meetings) is expected to provide sufficient opportunity for meaningful involvement by potentially affected individuals to participate in the development process of this action and have their concerns factored into the decision process. Public input from individuals who participate in the fishery has been considered and incorporated into management decisions throughout development of the action.

3.4 Administrative Environment

3.4.1 The Fishery Management Process and Applicable Laws

3.4.1.1 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 nautical miles (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 South Atlantic 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 nm offshore from the seaward boundary of the States of North Carolina, South Carolina, Georgia, and east Florida to Key West. The South Atlantic Council has 13 voting members: one from NMFS; one each from the state fishery agencies; and eight public members appointed by the Secretary. Non-voting members include representatives of the U.S. Fish and Wildlife Service, USCG, and Atlantic States Marine Fisheries Commission (ASMFC).

The Mid-Atlantic Fishery Management Council (Mid-Atlantic Council) has two voting seats on the South Atlantic Council's Mackerel Committee but does not vote during Council sessions. The Mid-Atlantic Council is responsible for fishery resources in federal waters off New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, and North Carolina.

The Councils use their respective Scientific and Statistical Committees (SSC) to review data and science used in assessments and fishery management plans/amendments. Regulations contained within FMPs are enforced through actions of the NMFS' Office for Law Enforcement (NOAA/OLE), the USCG, and various state authorities.

The public is involved in the fishery management process through participation at public meetings, on advisory panels and through council meetings that, with few exceptions for discussing personnel matters, are open to the public. The regulatory process is in accordance with the Administrative Procedures Act (APA), in the form of "notice and comment" rulemaking, which provides extensive opportunity for public scrutiny and comment, and requires consideration of and response to those comments.

3.4.1.2 State Fishery Management

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 state governments have the authority to manage their respective state fisheries including enforcement of fishing regulations. Each of the eight states exercises legislative and regulatory authority over their states' natural resources through discrete administrative units. Although each agency listed below is the primary administrative body with respect to the state's natural resources, all states cooperate with numerous state and federal regulatory agencies when managing marine resources.

The states are also involved through the Gulf States Marine Fisheries Commission and the Atlantic States Marine Fisheries Commission in management of marine fisheries. These commissions were created to coordinate state regulations and develop management plans for interstate fisheries.

NMFS' 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 commissions to develop and implement cooperative State-Federal fisheries regulations.

More information about these agencies can be found from the following web pages:

Texas Parks & Wildlife Department - <http://www.tpwd.state.tx.us>

Louisiana Department of Wildlife and Fisheries <http://www.wlf.state.la.us/>

Mississippi Department of Marine Resources <http://www.dmr.state.ms.us/>
Alabama Department of Conservation and Natural Resources <http://www.dcnr.state.al.us/>
Florida Fish and Wildlife Conservation Commission <http://www.myfwc.com>
Georgia Department of Natural Resources, Coastal Resources Division <http://crd.dnr.state.ga.us/>
South Carolina Department of Natural Resources <http://www.dnr.sc.gov/>
North Carolina Department of Environmental and Natural Resources
<http://portal.ncdenr.org/web/guest/>

3.4.1.3 Enforcement

Both the NOAA/OLE and the USCG have the authority and the responsibility to enforce 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.

NOAA General Counsel issued a revised Southeast Region Magnuson-Stevens Act Penalty Schedule in June 2003, which addresses all Magnuson-Stevens Act violations in the Southeast Region. In general, this penalty schedule increases the amount of civil administrative penalties that a violator may be subject to up to the current statutory maximum of \$120,000 per violation. The Final Penalty Policy was issued and announced on April 14, 2011 (76 FR 20959).

Chapter 4. Environmental Effects and Comparison of Alternatives

4.1 Action. Modify the system of quota and trip limit adjustments for Atlantic migratory group Spanish mackerel in the Florida EEZ

Alternative 1 (No Action). Do not modify the current system of trip limits for Atlantic migratory group Spanish mackerel.

Alternative 2. Establish a trip limit of 3,500 lbs for the Florida EEZ.

Alternative 3. Establish a trip limit of 3,500 lbs for the Florida EEZ. When 75% of [the proposed Southern Zone commercial quota] has been landed or projected to be landed, the trip limit would be reduced to 1,500 lbs.

Alternative 4. Establish a trip limit of 3,500 lbs for the Florida EEZ. When 75% of [the proposed Southern Zone commercial quota] has been landed or projected to be landed, the trip limit would be reduced to 500 lbs.

[AP recommendation] **Alternative 5.** Establish a trip limit of 3,500 lbs for the Florida EEZ. When 75% of [adjusted quota of the proposed Southern Zone quota] has been landed or projected to be landed, the trip limit would be reduced to 1,500 lbs. When 100% of [adjusted quota of the proposed Southern Zone quota] is reached, the trip limit is reduced to 500 lbs until the end of the fishing year or until [the proposed Southern Zone commercial quota] is met or projected to be met.

4.1.1 Biological Effects

The trip limit analysis for this action included landings data for the 2012/2013 fishing year, which were markedly reduced from previous fishing years (3.15 mp compared to 4 mp and 4.5 mp in the two previous fishing seasons). Including the 2012/2013 landings data caused the predictive model to forecast a declining landings trend and, thus indicated that under all the alternatives considered, there would be no in-season closure for the commercial sector in the southern zone (assuming Amendment 20B is implemented). Because the reason for the reduced landings in the 2012/2013 fishing season is not obvious, an additional forecast model was run without the 2012/2013 landings data. **Table 4.1.1.1** shows the projected fishing season lengths and approximate closure dates for the 2014/2015 fishing season under each of the alternatives considered using the alternate model projection in the absence of conditions that would exist if CMP Framework 1 and CMP Amendment 20B are implemented.

There is a reasonable expectation that Amendment 20B, which would establish northern and southern zones with their own transferable quotas; and Framework Amendment 1, which would increase the Atlantic Spanish mackerel ACL from 5.69 mp to 6.063 mp, will be implemented in 2014. These two actions, if implemented, would influence the effects of the trip limit modifications being considered in this amendment. Therefore, a prediction model was used to forecast the closing dates and number of fishing days under the conditions that would exist if Amendment 20B and Framework Amendment 1 are implemented. Similar to the previous model prediction, with the landings data from the 2012/2013 fishing season included in the model analysis, all alternatives in combination with the anticipated conditions created under Amendment 20B and Framework Amendment 1 would result a 365-day fishing year. The results of an alternate model, again removing the 2012/2013 landings data, are illustrated in **Table 4.1.1.2**. Further explanation of the data sources and calculations used to develop the projections presented in **Table 4.1.1.1** and **4.1.1.2** are included in **Appendix H** of this document.

Table 4.1.1.1. Projected fishing days and closure dates for Spanish mackerel in the Atlantic for the 2014-2015 fishing season for each alternative in the absence of conditions that would exist if CMP Framework 1 and CMP Amendment 20B are implemented. The fishing year is March – February.

| Alternative | Alternative 1 | Alternative 2 | Alternative 3 | Alternative 4 | Alternative 5 |
|------------------------|---------------|---------------|---------------|---------------|---------------|
| Projected Closure Date | 12/31/14 | 12/20/14 | 12/25/14 | 01/09/15 | 12/31/14 |
| Projected Fishing Days | 305 | 294 | 299 | 314 | 305 |

Source: NMFS 2013

Table 4.1.1.2. Projected fishing days and closure dates for Spanish mackerel in the southern zone for the 2014-2015 fishing season for each alternative under conditions that would exist if CMP Framework 1 and CMP Amendment 20B are implemented. The fishing year is March – February.

| Alternative | Alternative 1 | Alternative 2 | Alternative 3 | Alternative 4 | Alternative 5 |
|------------------------|---------------|---------------|---------------|---------------|---------------|
| Projected Closure Date | n/a | 02/21/15 | 02/28/15 | n/a | n/a |
| Projected Fishing Days | 365 | 357 | 364 | 365 | 365 |

Source: NMFS 2013

Alternative 1 (No Action) would perpetuate the current level of complexity for the management of Atlantic migratory group Spanish mackerel. Under this alternative the adjusted quota would continue to be used, although it may no longer be necessary for controlling harvest since there is now an effective system of annual catch limits (ACLs) and accountability measures (AMs) for this segment of the coastal migratory pelagics (CMP) fishery. Currently the adjusted quota is 250,000 pounds (lbs) less than the full quota (commercial ACL). The adjusted quota was originally intended to allow vessels to continue fishing for the remainder of the fishing season, after the adjusted quota was met. Originally, no closure provision was in place for Atlantic migratory group Spanish mackerel, but a closure provision when the full quota is met or projected to be met was implemented through Amendment 18 to the CMP FMP (GMFMC/SAFMC 2011); if Amendment 20B is implemented, each zone would have a separate quota and closure. Therefore, the 500-lb trip limit, which is triggered when the adjusted quota is met, is only effective until the additional 250,000 lbs are landed. Since the establishment of the

current adjusted quota/trip limit system for Atlantic migratory group Spanish mackerel, ACLs and AMs have been implemented for the species and are now used to control harvest and prevent overfishing.

Alternative 1 (No Action) would result in a 305-day fishing season in the Florida EEZ (**Table 4.1.1.1**), compared to slightly shorter fishing seasons under **Alternatives 2** and **3**, and a slightly longer fishing season under **Alternative 4**. However, the projected season lengths for each of the alternatives are all very similar and differ by only several days. Under all the alternatives, the fishing season would close in late December or early January. If the ACL is projected to be met, commercial harvest of Spanish mackerel is closed for the duration of the fishing season, which prevents overfishing from occurring. Amendment 20B would create northern and southern zone quota that could be transferred from one zone to another. It is not possible to predict the overall effect quota transfers would have on the biological environment when combined with the trip limit modifications proposed in this framework action. However, commercial harvest is limited to the commercial ACL, and harvest in the proposed southern zone specifically would be limited to the southern zone quota if Amendment 20B is implemented, regardless of what trip limit or quota transfers are selected in Framework Amendment 2. Therefore, the biological impacts of **Alternative 1 (No Action)** are expected to be neutral.

Alternatives 2-4 would remove the use of the adjusted quota, which is no longer biologically necessary for maintaining harvest at sustainable levels given the newly implemented system of ACLs and AMs. **Alternative 2** would eliminate the unlimited trip period for east Florida EEZ starting December 1 until 75% of the adjusted quota met, as well as the weekend trip limit of 1,500 lb during the same time. Furthermore, there would be no trip limit reduction to 1,500 lb when 75% of the adjusted quota is met or 500 lb when 100% of the adjusted quota is met. The east Florida EEZ trip limit under **Alternative 2** would remain 3,500 lb for the entire fishing year, and the current AM, which closes commercial harvest when the full ACL (or southern zone quota, if Amendment 20B is implemented) is met or projected to be met would be maintained. By removing the trip limit step-downs under **Alternative 2** there may be a greater chance the total ACL (**Table 4.1.1.1**), or commercial quota in southern zone (**Table 4.1.1.2**), may be met in-season and the commercial sector could close earlier in the season than in previous years. However, it is likely that the use of the 3,500 lb trip limit year-round would balance the removal of the unlimited trip starting December 1, and the rate of harvest could remain relatively unchanged from the status quo.

According to projections provided in **Tables 4.1.1.1** and **4.1.1.2**, under **Alternative 2**, the quota or quota for southern zone would be met sometime between late December or mid-February for the 2014/2015 fishing season; therefore, the commercial Spanish mackerel harvest would be likely to be closed prior to Lent, the most profitable time of year for fishermen and dealers. This option could result in the shortest fishing season of all the alternatives under consideration. As mentioned previously, Amendment 20B, if implemented, would allow proposed northern and southern zone quota to be transferred from one zone to another. The influence quota transfers may have on the intended effects of modifications to the Spanish mackerel trip limit are unknown. The overall biological effects of **Alternatives 1 (No Action)-5** are expected to be

neutral because under all circumstances, harvest is limited to the commercial ACL (zone quotas, if Amendment 20B is implemented), if necessary.

Alternative 3 would also remove the period of unlimited trips beginning on December 1 each year. This alternative would keep the current trip limit of 3,500 lb for the east Florida EEZ, but would reduce the trip limit to 1,500 lb when 75% of the quota is harvested. An in-season closure under this alternative could be expected to occur between late December and late February of the 2014/2015 fishing season (**Tables 4.1.1.1 and 4.1.1.2**), which would extend fishing opportunities further into the fishing season as desired. Slowing the rate of harvest when the ACL (southern zone quota if Amendment 20B is implemented) is close to being met, helps support in-season monitoring efforts, which often include a lag time between the time when fish are reported as landed and when fishery managers are able to process the data to determine what percentage of the quota has been harvested. A slower rate of harvest triggered by the meeting the 75% threshold level may be biologically beneficial if it allows fishery managers to more accurately predict when the ACL or proposed southern zone quota would be met.

Like **Alternatives 2 and 3**, **Alternative 4** would remove the unlimited trip off east Florida starting December 1. This alternative would also maintain the current initial east Florida EEZ trip limit of 3,500 lb starting March 1 each year; however, **Alternative 4** would reduce the trip limit to 500 lb when 75% of the actual ACL or proposed southern zone quota is harvested or projected to be met. This alternative represents a substantial trip limit reduction at the 75% threshold, and would significantly slow the rate of harvest after that threshold has been reached. Depending upon fishing effort for Spanish mackerel, which can fluctuate since the commercial permit for Spanish mackerel is open access is available to anyone with a fishing vessel, such a low trip limit at the end of the season may result in the commercial sector staying open for the entire duration of the 2014/2015 fishing season (**Table 4.1.1.2**). Additionally, reducing the trip limit by such a significant amount would allow fishery managers to carefully track landings in-season to ensure that commercial harvest of Atlantic migratory group Spanish mackerel is closed when needed to avoid exceeding the ACL or quota for the proposed southern zone, which may be more biologically beneficial than options that would remove the trip limit reduction.

Alternative 5 is most similar to **Alternative 1 (No Action)** since it would retain the adjusted commercial quota for Atlantic migratory group Spanish mackerel fishery, and would specify two trip limit reductions for the east Florida EEZ. **Alternatives 5** would eliminate the east Florida EEZ unlimited trip limit that begins December 1 each year. Instead, this alternative would specify an east Florida EEZ trip limit of 3,500 lb that would be reduced to 1,500 lb when 75% of the adjusted quota is met; then when 100% of the adjusted quota is harvested the southern zone trip limit would be reduced again from 1,500 lb to 500 lb until the ACL, or southern zone quota if Amendment 20B is implemented, is met or projected to be met. This alternative does little to simplify the current management regime for Atlantic migratory group Spanish mackerel, other than removing the unlimited trip limit after December 1. Furthermore, it retains the use of an adjusted quota, which may no longer be biologically necessary to maintain harvest at or below the sector ACL. **Alternative 5** is expected to result in an in-season closure in late December when analyzed in the absence of expected effects of Amendment 20B and Framework

Amendment 1, if approved (**Table 4.1.1.1**). When combined with the anticipated effects of Amendment 20B and Framework Amendment 1, if implemented, there would be no projected in-season closure under **Alternative 5**. Biological effects under this alternative are likely to be neutral since overall harvest is limited by the commercial ACL and AMs.

The biological impacts on protected species from alternatives under **Action 1** are unclear. **Alternative 1 (No Action)** would perpetuate the existing level of risk for interactions between Endangered Species Act-listed species and the CMP fishery. **Alternatives 2-4** could perpetuate the existing amount of fishing effort, increase effort, or decrease effort. Any change in effort could change the likelihood of interactions between protected species (turtles and smalltooth sawfish). Increases in effort provide the least amount of biological benefits. However, if these alternatives cause reductions in the overall amount of effort in the fishery, and do not simply shift effort elsewhere, the risk of interactions between protected species and the fishery may decrease. **Alternatives 1(No Action), 3, 4 and 5** could lead to a longer season and therefore an increase in the number of fishing days. Increased effort provides the least amount of biological benefit for protected species. This action is not likely to significantly alter the way in which the fishery is prosecuted in terms of fishing areas, gear types, or fishing methods. Therefore, no adverse effects on essential fish habitat (EFH) or EFH areas of particular concern are anticipated.

4.1.2 Economic Effects

The proposed action would apply only to the commercial harvest of the Atlantic migratory group Spanish mackerel. As a result, this action would not be expected to have any impact on the recreational sector or associated economic benefits.

The analysis of the effects of the proposed action on the expected season length and economic effects was conducted with and without 2012/2013 harvest data, which is the most recent final data available. The commercial harvest of Atlantic migratory group Spanish mackerel in 2012-2013 was approximately 3.15 mp, compared to harvests in excess of 4 mp in the previous three fishing years (see **Table 3.3.1**). Perhaps more importantly, Atlantic migratory group Spanish mackerel commercial harvests have shown a cyclical harvest pattern of high, medium, and low harvests on approximately a three-year cycle. As a result, removal of the low harvest in 2012-2013 from the analysis may help capture the potential effects under higher and lower harvest rates.

Based on data from the 2003/2004 through 2012/2013 fishing years, none of the proposed alternatives would be expected to result in less than a 365-day fishing year; no closure would be expected to occur. However, although the commercial fishery for Atlantic migratory group Spanish mackerel would not be projected to close under any of the alternatives considered, differences in economic performance may still occur. In addition to projecting that the commercial season for Atlantic migratory group Spanish mackerel would not be expected to close, the model projects that the quota would not be expected to be harvested under any of the alternatives, with quota underages ranging from approximately 640,000 lbs (**Alternative 2**) to 711,000 lbs (**Alternative 1 (No Action)**). The quota underages for the other alternatives are not provided because the difference in underage with respect to **Alternative 1 (No Action)** is the

more important economic statistic. These differences are provided below. The total underage can be calculated by subtracting the increases in harvest expected to occur the alternatives to **Alternative 1 (No Action)** from the underage for **Alternative 1 (No Action)**, (711,000 lbs) Although these projections may exaggerate actual performance, they suggest that the alternatives may differ in their effect on the ability of the industry to harvest the quota, which would result in forgone revenue to vessels, and associated economic effects on shoreside businesses. From this perspective, compared to **Alternative 1 (No Action)**, **Alternative 2** would be expected result in the highest harvest and revenue, a gain of approximately \$78,000 (associated with an increase in harvest of approximately 70,500 lbs), assuming an average price of \$1.11 (2013 dollars) per pound, followed by **Alternative 3** (gain of \$67,300; 60,600 lbs), **Alternative 5** (gain of \$52,900; 47,700 lbs), and **Alternative 4** (gain of \$31,000; 27,900 lbs). Thus, all of the alternatives to **Alternative 1 (No Action)** would be expected to result in more harvest, and associated economic benefits, than **Alternative 1 (No Action)**.

If data from the 2012/2013 fishing year are excluded from the analysis, the assessment results change. Under this scenario, none of the alternatives considered, including **Alternative 1 (No Action)**, would be expected to allow the fishing year to remain open a full year (365 days; see **Table 4.1.1.1**). The open fishing season would be expected to range from 294 days (**Alternative 2**) to 314 days (**Alternative 4**). However, closure would only occur if the quota is harvested, or is projected to be harvested. As a result, unlike the results discussed above where the primary economic differences may be associated with the amount of the quota harvested, the economic differences under the current perspective would be associated with the potential effects of shorter seasons. **Alternative 2** would be expected to result in 11 fewer days than **Alternative 1 (No Action)**, followed by **Alternative 3** (6 fewer days), **Alternative 5** (an equivalent season), and **Alternative 4** (9 more days). Longer seasons are generally expected to support more stable product supply to markets, higher or less variable prices, and greater operational flexibility (when to fish, cash flow management, etc.). Thus, from this perspective, **Alternative 4** would be expected to result in the highest economic benefits, followed by **Alternative 1 (No Action)** and **Alternative 5** (due to equivalent season lengths), **Alternative 3**, and **Alternative 2**.

If it is assumed that these two analytical perspectives may reasonably bracket the actual economic effects, comparing the rankings does not provide clear identification of the alternative that would be expected to result in the highest economic benefits. Under the first perspective (including 2012/2013 data), the rankings are (best to worst): **Alternative 2-Alternative 3-Alternative 5-Alternative 4-Alternative 1 (No Action)**. Under the second perspective (excluding 2012-2013 data), the rankings are (best to worst): **Alternative 4-Alternative 1 (No Action)** and **Alternative 5-Alternative 3-Alternative 2**. Across the two perspectives, **Alternatives 2** and **3** reverse their position (from best to worst, to second best to next to worst), only **Alternative 5** “holds” its ranking (third best under the first scenario, and tied for second/third position in the second scenario), and **Alternatives 4** and **1 (No Action)** maintain their order relative to each other, but shift from the “end” (next to worst and worst) to the “front” (best and second best). From the perspective of the average ranking, **Alternative 4** and **5** share the best average ranking (2.5), **Alternatives 2** and **3** are tied (3), and **Alternative 1 (No Action)** has the worst average ranking (3.5).

NOTE: the following paragraphs assume the Council clarifies – as per IPT comments - that the proposed alternatives would only apply to the Southern Zone. If this is not the case, the analytical model must be adjusted and re-run, and the following discussion revised, accordingly.

Although not part of this proposed action, as discussed in Section 2, two other actions have been proposed that would apply to the Atlantic migratory group Spanish mackerel commercial sector. These actions are a proposed increase in the quota to 3.33 mp, and the establishment of a Northern Zone (the EEZ off North Carolina through New York) and a Southern Zone (the EEZ off east Florida, Georgia, and South Carolina), quotas for each zone, and closure of each zone when the quota is harvested, or is projected to be harvested. Because these actions would have an effect on the expected economic effects of the action proposed in this amendment, they have been combined to form an alternative baseline for the examination of the expected effects of this proposed action. This analysis, similar to the analysis already discussed, compares results with and without the 2012/2013 harvest data. Although the current action would only affect the Southern Zone, discussion of the effects of these combined actions on the Northern Zone are included in the following discussion in order to provide a comprehensive discussion of the effects of these actions. However, because the current action would only affect the Southern Zone, discussion of the effects on each zone are separated to reduce possible confusion.

Southern Zone Effects

Based on data from the 2003/2004 through 2012/2013 fishing years, none of the proposed alternatives would be expected to result in less than a 365-day fishing year; no closure would be expected to occur in the Southern Zone. Similar to the original results, however, none of the alternatives would be expected to result in the harvest of the quota in either zone. However, because the trip limit reduction would not be triggered under any of **Alternatives 2-5**, each would be expected to result in the same harvest, approximately 944,000 lbs less than the quota, or approximately 60,400 lbs more than **Alternative 1 (No Action)**, which is projected to result in approximately 1,004,600 lbs less than the quota. As a result, compared to **Alternative 1 (No Action)**, each of these alternatives would be expected result in a gain in revenue of approximately \$67,000; 2013 dollars) in the Southern Zone.

If data from the 2012/2013 fishing year are excluded from the analysis, closures would be expected for the Southern Zone for **Alternative 2** (357-day season) and **Alternative 3** (364-day season), but no closure would be expected for the other alternatives. Because a closure would be expected to occur under some, but not all of the alternatives, comparison of the alternatives is more complicated. From the perspective of season length, **Alternatives 1 (No Action), 4, and 5** would all be expected to result in the longest season, 365 days, followed by **Alternative 3** (1 fewer day), and **Alternative 2** (8 fewer days). Because longer seasons are generally expected to result in more economic benefits than short seasons, **Alternatives 1 (No Action), 4, and 5** would be expected to result in the highest economic benefits, followed by **Alternative 3**, and **Alternative 2**. From the perspective of revenue changes, **Alternatives 2 and 3** would be expected to result in the same revenue (because quota closure would be expected to occur under each alternative) and the most revenue, followed by **Alternative 5, Alternative 1 (No Action)**,

and **Alternative 4**. Combining the considerations of season length and revenue, **Alternative 5** would be expected to result in the best economic effects (highest average ranking, 2), followed by **Alternatives 3** and **1 (No Action)** (tied, 2.5), **Alternative 4** (3), and **Alternative 2** (3.5).

To summarize, under the first perspective (including 2012/2013 data), the rankings are (best to worst): **Alternative 2-Alternative 3-Alternative 4-Alternative 5** (tied), followed by **Alternative 1 (No Action)**. Under the second perspective (excluding 2012-2013 data), the rankings are (best to worst): **Alternative 5-Alternative 1 (No Action)** and **Alternative 3** (tied)-**Alternative 4-Alternative 2**. From the perspective of the average ranking across both perspectives, **Alternative 5** has the best average ranking (1), followed by **Alternative 4** (1.5), **Alternative 3** (2.5), **Alternative 2** (3), and **Alternative 1 (No Action)** (3.5) (Note: to generate this average, the average scores from the previous paragraph that discussed the effects if 2012-2013 data are excluded from the analysis have been reset to normalized scores. For example, although the average ranking for **Alternative 5** was 2, because this was the best average ranking, it was re-set to 1, the rankings for **Alternatives 3** and **1 (No Action)**, the next best alternatives were re-set to 2, etc.)

Northern Zone Effects

Based on data from the 2003/2004 through 2012/2013 fishing years, the Northern Zone would not be expected to close under the combined effects of all three actions. However, the harvest projection in the Northern Zone is expected to be less than the quota, leaving approximately 372,000 lbs, with an ex-vessel value of approximately \$413,000 (2013 dollars), unharvested.

If 2012/2013 data are excluded from the analysis, the Northern Zone would be expected to remain open only 135 days but, the entire Northern Zone Atlantic migratory group Spanish mackerel quota would be expected to be harvested.

Attempting to identify the best alternative for the Northern Zone under the current action is not relevant. Regardless of whether the actual outcome is closer to a 365-day season, but the quota not harvested, or the quota is harvested and a closure occurs, neither outcome would be affected by the alternative chosen under the current action because the alternatives would only apply to the Southern Zone.

4.1.3 Social Effects

Overall, the social effects would be associated with economic costs and benefits for the commercial vessels who harvest Spanish mackerel in the Florida EEZ, changes in fishing opportunities for vessels fishing in the Florida EEZ due to trip limit changes, and a reduced level of complexity from the current trip limit system for the Florida EEZ. Social effects associated with positive or negative biological effects that could affect the Spanish mackerel resource are expected to be minimal. The primary communities that would be affected by changes in the Atlantic migratory group Spanish mackerel quota and trip limit system are discussed in Section 3.3.2 and include the Florida communities of Fort Pierce, Cocoa Beach, Palm Beach, and Stuart. However, Spanish mackerel is not the only economically important species in these communities

and while changes may affect fishermen and individual fish houses or dealers, the impact at the community level is expected to be minimal.

An earlier closure date for Spanish mackerel commercial harvest could have some impact on the commercial fleet and the supply of Spanish mackerel in the market. However, as shown in **Tables 4.1.1.1** and **4.1.1.2**, the projected closure dates under both the current ACL and proposed ACL for the and southern zone quota that would be established under Amendment 20B have minimal variation. Even if effort increased in the Florida EEZ, it is expected that the trip limit system under any of the alternatives would not contribute to a substantially longer season than any other alternative. As a result, the effects on fishermen and communities would be expected to be similar under all of all alternatives.

Changes in fishing opportunities and trip efficiency could be affected, however, by different trip limit systems. If a trip limit does not allow a vessel to make a profitable trip, the vessel would likely not make the trip. This could affect job opportunities for the crew in addition to supply of Spanish mackerel to fish houses in the area. However, some fish houses may set a ‘fish house limit’ for vessels that the fish house regularly buys from, which could be lower than the allowable trip limit. The period that allows unlimited trips in **Alternative 1 (No Action)** would be removed under **Alternatives 2-5**, and this could affect some vessels taking advantage of maximized trip efficiency and profitability.

Alternatives 2-5 are less complex than **Alternative 1 (No Action)**, and reducing complexity would be expected to be beneficial for compliance and enforcement. **Alternative 2** is the least complex, setting one trip limit for the entire year that is the same as the trip limit in the rest of the region. **Alternatives 3** and **4** have similar complexity by incorporating a step-down, and **Alternative 5** would be more complex by maintaining a step-down and an adjusted quota. However, **Alternative 5** would be more tailored to the specific fishery conditions and dynamics in the Florida EEZ, and could be better suited for commercial vessels working under the trip limit system.

4.1.4 Administrative Effects

Alternatives 2, 3, and 4 represent a decreased administrative burden compared to the status quo because they remove the adjusted quota. **Alternatives 3** and **4** remove the unlimited trip limits and require the trip limit to be reduced to a specific level when 75% of the actual quota is harvested. However, **Alternative 4** would also be similar to **Alternative 5**, in that the 500-lb trip limit reduction could be difficult for the National Marine Fisheries Service (NMFS) to implement before a closure must be implemented. The burden on law enforcement would not change under **Alternatives 1 (No Action), 3, 4** or **5**, since commercial quota closures implemented when the commercial ACLs or adjusted quota are projected to be met are currently enforced.

Alternative 2 represents the least complex alternative, and would result in the greatest administrative benefits because it would remove the use of the adjusted quota and remove the implementation of all trip limit reductions that are currently specified under **Alternative 1 (No Action)**. Maintaining a constant the trip limit through the entire fishing season would eliminate the need to develop outreach materials to inform fishery participants of a trip limit change, and ease the law enforcement burden.

The administrative impacts under **Alternative 5** and **Alternative 1 (No Action)** would be very similar since they both retain the use of the adjusted quota and a series of trip limit reductions when certain harvest thresholds are met. **Alternative 5** removes the unlimited trip limit starting December 1 for Atlantic migratory group Spanish mackerel, and thus, would remove one layer of regulatory complexity from the current system of trip limits. However, because the adjusted quota is 92% of the current ACL, it could be difficult if catch rates are elevated for NMFS to implement the 500-lb trip limit reduction before the ACL is met and a harvest closure must be implemented. For example, in the Gulf of Mexico in some years, king mackerel have been caught at such a high rate that NMFS could not implement a reduction to 500 lb at 75% of the ACL before a zone needed to be closed. In addition, because the adjusted quota is a set number of pounds less than the ACL (250,000 lb) instead of a percentage, if the ACL increases as proposed in Framework Amendment 1, the adjusted quota would become greater than 92% of the ACL, creating even more difficulties. Therefore, no administrative impacts are expected for **Alternative 1 (No Action)** or **5** because there is currently a system of trip limits and trip limit reductions that are triggered when a certain amount of harvest has been verified. However, confusion due to the regulatory complexity of the existing system of trip limits would persist and public notification of each trip limit change throughout the year would continue to be required.

The administrative impacts under **Alternative 1 (No Action)**, would be the most complex and the least beneficial, followed by **Alternative 5**, **Alternative 4**, **Alternative 3**, and **Alternative 2**. **Alternative 2** would be the least complex and the most beneficial due to reducing the complexity of the quota and trip limit regulations.

Chapter 5. Council's Choice for the Preferred Alternatives

5.1 Action . Modify the system of quota and trip limit adjustments for Atlantic migratory group Spanish mackerel in the Florida EEZ

5.1.1 Public Comments and Recommendations

5.1.2 Council's Choice for Preferred Alternative

Chapter 6. Cumulative Effects

6.1 Affected Area

The immediate impact area would be the federal 200-mile limit of the Atlantic off the coasts of, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, and east Florida to Key West, which is also the South Atlantic Fishery Management Council's (South Atlantic Council) area of jurisdiction. The range of the affected species is described in **Section 3.2.1**. For this action, the cumulative effects analysis (CEA) includes an analysis of actions and events dating back to 2010, and through what is expected to take place in before or within 2015-2016.

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

Past Actions

The reader is referred to **Appendix C** for a list of all past regulatory activity for species in the CMP FMP. Recently implemented actions are listed below.

Amendment 18 to the CMP FMP (GMFMC/SAFMC 2011) established annual catch limits (ACL), annual catch targets (ACT), and accountability measures (AM) for king mackerel, Spanish mackerel, and cobia. The amendment also established both Atlantic and Gulf migratory groups for cobia; modified the framework procedures; and removed the following species from the Fishery Management Unit: cero, little tunny, dolphin and bluefish.

Generic amendments have been implemented requiring headboats in the South Atlantic and Gulf to report each week through electronic means. Regulations in the South Atlantic went into place on January 27, 2014, and regulations in the Gulf of Mexico (Gulf) went into place on March 5, 2014.

Present Actions

Currently, there exist five CMP FMP/regulatory amendments affecting Atlantic Spanish mackerel, including this framework action. None have been implemented, and all are in various stages of development and rulemaking. These actions include Amendment 20A, Amendment 20B, Framework Amendment 2013 to the CMP FMP (Framework Amendment 2013), Framework Amendment 1, and this action (Framework Amendment 2). Amendment 20A is under Secretarial review and would allow certain types of sale of recreationally caught fish in each region. For the Gulf region, the amendment would allow the sale of recreationally caught fish only from for-hire trips on dually permitted (for-hire and commercial) vessels and from state-permitted tournaments where the proceeds are donated to charity. For the Atlantic region, Amendment 20A would allow the sale of recreationally caught king and Spanish mackerel only from state-permitted tournaments where the proceeds are donated to charity. In addition, the

amendment removes the income requirement for king and Spanish mackerel commercial permits. This action would not affect the number of king mackerel permits, which are limited access, but could increase the number of Spanish mackerel permits, which are open access.

Amendment 20B, which has been approved by the Gulf of Mexico and South Atlantic Fishery Management Councils, would establish transit provisions for travel through areas that are closed to king mackerel fishing, establish regional quotas for Atlantic migratory group king and Atlantic migratory group Spanish mackerel, modify the CMP FMP framework procedures, and modify the Gulf and Atlantic migratory group cobia ACLs and ACTs.

Framework Amendment 2013 would allow transfer of a portion of a Spanish mackerel gillnet and its contents from a vessel that has met their trip limit to another federally permitted Spanish mackerel vessel that has not yet met their trip limit. This action is in under Secretarial review and is intended to reduce waste in the Spanish mackerel gillnet fishery.

Framework Amendment 1 would increase ACLs for Spanish mackerel in the Gulf and South Atlantic based on the results from recent assessments that indicates the stocks are neither overfished nor undergoing overfishing.

The Joint Dealer Reporting Amendment, which will be effective on August 7, 2014, is intended to improve the timeliness and accuracy of fisheries data reported by permitted dealers. The amendment will create one dealer permit for all federally-permitted dealers in the southeast region. Currently, no dealer permit is required for CMP species. Requiring dealers to report landings data electronically each week will improve in-season quota monitoring efforts, which will increase the likelihood that AMs could be implemented prior to commercial ACLs being exceeded.

Currently, a formal consultation is underway for the coastal migratory pelagics (CMP) fishery, triggered by the 2012 listing of five distinct population segments (Gulf of Maine, New York Bight, Chesapeake Bay, Carolina, and South Atlantic) of Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*) under the Endangered Species Act. Additionally, in December 2012, the National Marine Fisheries Service (NMFS) issued a proposal to list 82 coral species as threatened or endangered, including seven species found in the South Atlantic region, including a proposal to reclassify two *Acropora* species (elkhorn and staghorn coral) as endangered.

Additionally, recent increases in fishing effort and resultant management actions, particularly in the South Atlantic, have restricted access to other species that provide income for mackerel fishermen. In 2013, fishing for nine species or species groups in the South Atlantic was prohibited before the end of the year due to ACLs being met. Many commercial mackerel fishermen only fish for mackerel part time. With reduced income from other fishing, some fishermen that have not been very active in the CMP fishery may shift effort to fish for mackerel.

Reasonably Foreseeable Future Actions

Amendment 24 to the CMP FMP (Amendment 24) would consider re-allocating allowable catch between the commercial and recreational sector for Gulf group king mackerel and Atlantic group Spanish mackerel. Amendment 26 to the CMP FMP would consider establishing separate regional commercial permits for king and Spanish mackerel; currently, commercial permits are valid in both the Gulf of Mexico and South Atlantic regions.

A stock assessment for South Atlantic and Gulf king mackerel will be completed in 2014, and the results could increase or decrease the available fish for harvest.

Expected Impacts from Past, Present, and Future Actions

Framework Amendment 2 alone would not result in significant cumulative impacts on the human environment. When combined with the impacts of past, present, and future actions affecting the CMP fishery, specifically the Spanish mackerel portion of the CMP fishery, cumulative impacts are likely to accrue. The generic and South Atlantic Fishery Management Council (South Atlantic Council) specific amendments intended to increase the frequency of reporting by dealers and fishermen are likely to benefit the human environment through more timely biological protections and unnecessary delay in data availability, leading to more stable market conditions. Actions that would help the Spanish mackerel segment of the CMP fishery avoid waste (Framework Amendment 2013), increase the ACLs (Framework Amendment 1), allow flexibility in managing harvest limits among the fishing zones (Amendment 20B), and update the current method of sector allocations (Amendment 24), together or separately, are not expected to result in significant cumulative adverse biological or socioeconomic effects. All of the proposed, or recently implemented management actions affecting South Atlantic Spanish mackerel and the CMP fishery are intended to improve management of the CMP resource, while minimizing, to the maximum extent practicable adverse social and economic impacts.

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

Climate Change

The Environmental Protection Agency's climate change webpage (<http://www.epa.gov/climatechange/>) provides basic background information on measured or anticipated effects from global climate change. A compilation of scientific information on climate change can be found in the United Nations Intergovernmental Panel on Climate Change's Fourth Assessment Report (Solomon et al. 2007). Those findings are incorporated here by reference and are summarized. Global climate change can affect marine ecosystems through ocean warming by increased thermal stratification, reduced upwelling, sea level rise, and through increases in wave height and frequency, loss of sea ice, and increased risk of diseases in marine biota. Decreases in surface ocean pH due to absorption of anthropogenic carbon dioxide emissions may affect a wide range of organisms and ecosystems. These influences could affect biological factors such as migration, range, larval and juvenile survival, prey availability, and susceptibility to predators. Currently, the level of impacts cannot be quantified, nor is the time frame known in which these impacts would occur. These climate changes could have significant effects on southeastern fisheries; however, the extent of these effects is not known at this time (IPCC 2007).

In the southeast, general impacts of climate change have been predicted through modeling, with few studies on specific effects to species. 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). Mackerels and cobia are migratory species, and may shift their distribution over time to account for the changing temperature regime. However, no studies have shown such a change yet. Higher water temperatures may also allow invasive species to establish communities in areas they may not have been able to survive previously. An area of low oxygen, known as the dead zone, forms in the northern Gulf each summer, which has been increasing in recent years. Climate change may contribute to this increase by increasing rainfall that in turn increases nutrient input from rivers. This increased nutrient load causes algal blooms that, when decomposing, reduce oxygen in the water (Needham et al. 2012; Kennedy et al. 2002). Other potential impacts of climate change to the southeast include increases in hurricanes, decreases in salinity, altered circulation patterns, and sea level rise. 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). Actions from this amendment are not expected to significantly contribute to climate change through the increase or decrease in the carbon footprint from fishing.

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. However, 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. In addition, 1.84 million gallons of Corexit 9500A dispersant were applied as part of the effort to 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. The oil spill occurred during spawning months for every species in the CMP FMP; however, most species have a protracted spawning period that extends beyond the months of the oil spill. 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. If eggs and larvae were affected, impacts on harvestable-size coastal migratory pelagic fish would begin to be seen when the 2010 year class becomes large enough to enter the fishery and be retained. King mackerel and cobia mature at 2-3 years and Spanish mackerel mature at 1-2 years; therefore, a year class failure in 2010 could have been felt by the CMP fishery as early as 2011. Evidence of year class failure would be evidenced by reduced fishing success and reduced spawning potential. There is no evidence to suggest there was a year class failure in 2010 for the CMP fishery; however, the effects of the oil spill on CMP species would be taken into consideration in future SEDAR assessments.

Species in the CMP FMP are migratory and move into specific areas to spawn. King mackerel, for example, move from the southern portion of their range to more northern areas for the spawning season. In the Gulf of Mexico, that movement is from Mexico and south Florida to the northern Gulf (Godcharles and Murphy 1986). However, environmental factors, such as temperature can change the timing and extent of their migratory patterns (Williams and Taylor 1980). The possibility exists that CMP species would be able to detect environmental cues when moving toward the area of the oil spill that would prevent them from entering the area. These fish might then remain outside the area where oil was in high concentrations, but still spawn.

Indirect and inter-related effects on the biological and ecological environment of the CMP fishery 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. Impacts to mackerels and cobia from the oil spill may similarly impact other species that may be preyed upon by CMP species, or that might benefit from a reduced stock.

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

The proposed management actions are summarized in **Section 2** of this document. Detailed discussions of the magnitude and significance of the impacts of the preferred alternatives on the human environment appear in **Section 4** of this document. None of the impacts of the actions in

this framework, in combination with past, present, and future actions have been determined to be significant. Though Amendment 20A, Amendment 20B, Framework Amendment 1, Amendment 24, and Framework Amendment 2013, all supported by Environmental Assessments, contain actions that affect the species addressed in this framework action (Framework Amendment 2), the additive effects on the species and the fishery are not expected to result in a significant level of cumulative impacts.

The proposed action 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 Exclusive Economic Zone (EEZ). This action is 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.

6.5 Monitoring and Mitigation

The effects of the proposed action are, and will continue to be, monitored through collection of landings data by NMFS, stock assessments and stock assessment updates, life history studies, economic and social analyses, and other scientific observations. The proposed action relates to the harvest of an indigenous species in the Atlantic, and the activity being altered does not itself introduce non-indigenous species, and is not reasonably expected to facilitate the spread of such species through depressing the populations of native species. Additionally, it does 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.

None of the impacts from the proposed management actions (as summarized in **Chapter 2** of this document) have been determined to be significant. See **Chapter 4** for the detailed discussions of the magnitude of the impacts of the preferred alternatives on the human environment. The action in CMP Framework 2 would not have significant biological, social, or economic effects because even though the action could extend fishing opportunities, accountability measures are also considered, and are in place to ensure overfishing does not occur. Therefore, the cumulative effects of the action proposed in CMP Framework 2 are not expected to affect the magnitude bycatch, diversity and ecosystem structure of fish communities, or safety at sea of fishermen targeting CMP species, and other species managed by South Atlantic Council. Based on the cumulative effects analysis presented herein, the proposed action will not have any significant cumulative impacts compared to, or combined with, other past, present, and foreseeable future actions

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

| Name | Agency/Division | Title |
|------------------------|-----------------|-----------------------------------|
| Kari MacLauchlin | SAFMC | IPT Lead/Fishery Social Scientist |
| Kate Michie | SERO /SF | IPT Lead/Fishery Biologist |
| Adam Brame | SERO/PR | Protected Resources |
| Brian Chevront | SAFMC | Fishery Economist |
| Anik Clemens | SERO | Technical Writer and Editor |
| Mike Errigo | SAFMC | Fishery Biologist |
| Susan Gerhart | SERO/SF | Fishery Biologist |
| Stephen Holiman | SERO/SF | Economist |
| David Keys | SERO | Regional NEPA Coordinator |
| Noah Silverman | SERO | NEPA Specialist |
| Michael Larkin | SERO | Biologist |
| Christina Package-Ward | SERO/SF | Fishery Social Scientist |
| Jeff Radonski | NOAA/OLE | Special Agent |
| Kate Siegfried | SEFSC | Statistician |
| Brent Stoffle | SEFSC | Anthropologist |
| Monica Smit-Brunello | NOAA GC | General Counsel |
| Jack McGovern | SERO/SF | Fishery Biologist |
| Gregg Waugh | SAFMC | Deputy Director |
| Mary Vara | SERO/SF | Fishery Biologist |

NMFS = National Marine Fisheries Service, GMFMC = Gulf of Mexico Fishery Management Council, SAFMC = South Atlantic Fishery Management Council, SF = Sustainable Fisheries Division, PR = Protected Resources Division, SERO = Southeast Regional Office, HC = Habitat Conservation Division, GC = General Counsel, OLE= Office of Law Enforcement

Chapter 8. Agencies Consulted

Responsible Agencies

Coastal Migratory Pelagics Framework Amendment 2

South Atlantic Fishery Management Council (Administrative Lead)

4055 Faber Place Drive, Suite 201

Charleston, South Carolina 29405

843-571-4366/ 866-SAFMC-10 (TEL)

843-769-4520 (FAX)

www.safmc.net

Gulf of Mexico Fishery Management Council

2203 North Lois Avenue, Suite 1100

Tampa, Florida 33607

813-348-1630/ 888-833-1844 (TEL)

www.gulfcouncil.org

Environmental Assessment:

NMFS, Southeast Region

263 13th Avenue South

St. Petersburg, Florida 33701

727- 824-5301 (TEL)

727-824-5320 (FAX)

List of Agencies, Organizations, and Persons Consulted

SAFMC Law Enforcement Advisory Panel

SAFMC King and Spanish Mackerel 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

Atlantic States Marine Fisheries Commission

National Marine Fisheries Service

- Washington Office

- Office of Ecology and Conservation

- Southeast Regional Office

- Southeast Fisheries Science Center

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Appendix A. 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. (See year class.)

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 B_{MSY} 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 regulatory 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.

Head Boat: 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 Fisheries Statistics Survey (MRFSS): 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 B. **Actions and Alternatives Considered but Rejected**

Appendix C. History of Management

The FMP for CMP Resources in the Gulf and South Atlantic Region (GMFMC/SAFMC 1982), with EIS, was approved in 1982 and implemented by regulations effective in February 1983. Managed species included king mackerel, Spanish mackerel, and cobia. The FMP treated king and Spanish mackerel as unit stocks in the Atlantic and Gulf. The FMP established allocations for the recreational and commercial sectors harvesting these stocks, and the commercial allocations were divided between net and hook-and-line fishermen.

FMP Amendments

Amendment 1, with EIS, implemented in September of 1985, provided a framework procedure for pre-season adjustment of TAC, revised the estimate of king mackerel MSY downward, recognized separate Atlantic and Gulf migratory groups of king mackerel, and established fishing permits and bag limits for king mackerel. Commercial allocations among gear users, except purse seines, which were allowed 6% of the commercial allocation of TAC, were eliminated. The Gulf commercial allocation for king mackerel was divided into Eastern and Western Zones for the purpose of regional allocation, with 69% of the remaining allocation provided to the Eastern Zone and 31% to the Western Zone. Amendment 1 also established minimum size limits for Spanish mackerel at 12 in fork length (FL) or 14 in total length (TL), and for cobia at 33 in FL or 37 in TL.

Amendment 2, with EA, implemented in July of 1987, revised MSY for Spanish mackerel downward, recognized two migratory groups, established allocations of TAC for the commercial and recreational sectors, and set commercial quotas and bag limits. Charterboat permits were established, and it was clarified that TAC must be set below the upper range of ABC. The use of purse seines on overfished stocks was prohibited, and their allocation of TAC was redistributed under the 69%/31% split.

Amendment 3, with EA, was partially approved in August 1989, revised, resubmitted, and approved in April 1990. It prohibited drift gillnets for coastal pelagic species and purse seines for the overfished migratory groups of mackerels.

Amendment 4, with EA, implemented in October 1989, reallocated Atlantic migratory group Spanish mackerel equally between recreational and commercial fishermen.

Amendment 5, with EA, implemented in August 1990, made the following changes in the management regime:

- Extended the management area for Atlantic migratory groups of mackerels through the Mid-Atlantic Council's area of jurisdiction;
- Revised problems in the fishery and plan objectives;
- Revised the fishing year for Gulf Spanish mackerel from July-June to April-March;
- Revised the definition of "overfishing";
- Added cobia to the annual stock assessment procedure;

- Provided that the South Atlantic Council will be responsible for pre-season adjustments of TACs and bag limits for the Atlantic migratory groups of mackerels while the Gulf Council will be responsible for Gulf migratory groups;
- Continued to manage the two recognized Gulf migratory groups of king mackerel as one until management measures appropriate to the eastern and western migratory groups can be determined;
- Re-defined recreational bag limits as daily limits;
- Deleted a provision specifying that bag limit catch of mackerel may be sold;
- Provided guidelines for corporate commercial vessel permits;
- Specified that Gulf migratory group king mackerel may be taken only by hook-and-line and run-around gillnets;
- Imposed a bag and possession limit of two cobia per person per day;
- Established a minimum size of 12 in FL or 14 in TL for king mackerel and included a definition of "conflict" to provide guidance to the Secretary.

Amendment 6, with EA, implemented in November of 1992, made the following changes:

- Identified additional problems and an objective in the fishery;
- Provided for rebuilding overfished stocks of mackerels within specific periods;
- Provided for biennial assessments and adjustments;
- Provided for more seasonal adjustment actions;
- Allowed for Gulf migratory group king mackerel stock identification and allocation when appropriate;
- Provided for commercial Atlantic migratory group Spanish mackerel possession limits;
- Changed commercial permit requirements to allow qualification in one of three preceding years;
- Discontinued the reversion of the bag limit to zero when the recreational quota is filled;
- Modified the recreational fishing year to the calendar year; and
- Changed the minimum size limit for king mackerel to 20 in FL, and changed all size limit measures to FL only.

Amendment 7, with EA, implemented in November 1994, equally divided the Gulf commercial allocation in the Eastern Zone at the Dade-Monroe County line in Florida. The sub-allocation for the area from Monroe County through Western Florida is equally divided between commercial hook-and-line and net gear users.

Amendment 8, with EA, implemented March 1998, made the following changes to the management regime:

- Clarified ambiguity about allowable gear specifications for the Gulf migratory group king mackerel fishery by allowing only hook-and-line and run-around gillnets. However, catch by permitted, multi-species vessels and bycatch allowances for purse seines were maintained;
- Established allowable gear in the South Atlantic and Mid-Atlantic areas as well as providing for the Regional Administrator to authorize the use of experimental gear;

- Established the Gulf and South Atlantic Councils' intent to evaluate the impacts of permanent jurisdictional boundaries between the Gulf and South Atlantic Councils and development of separate FMPs for coastal pelagic species in these areas;
- Established a moratorium on commercial king mackerel permits until no later than October 15, 2000, with a qualification date for initial participation of October 16, 1995;
- Increased the income requirement for a king or Spanish mackerel permit to 25% of earned income or \$10,000 from commercial sale of catch or charter or head boat fishing in one of the three previous calendar years, but allowed for a one-year grace period to qualify under permits that are transferred;
- Legalized retention of up to five cut-off (damaged) king mackerel on vessels with commercial trip limits;
- Set an optimum yield target at 30% static spawning potential ratio for the Gulf and 40% static SPR for the Atlantic;
- Provided the South Atlantic Council with authority to set vessel trip limits, closed seasons or areas, and gear restrictions for Gulf migratory group king mackerel in the North Area of the Eastern Zone (Dade/Monroe to Volusia/Flagler County lines);
- Established various data consideration and reporting requirements under the framework procedure;
- Modified the seasonal framework adjustment measures and specifications (see Appendix A);
- Expanded the management area for cobia through the Mid-Atlantic Council's area of jurisdiction (to New York).

Amendment 9, with EA, implemented in April 2000, made the following changes to the management regime:

- Reallocated the percentage of the commercial allocation of TAC for the North Area (Florida east coast) and South/West Area (Florida west coast) of the Eastern Zone to 46.15% North and 53.85% South/West and retained the recreational and commercial allocations of TAC at 68% recreational and 32% commercial;
- Subdivided the commercial hook-and-line king mackerel allocation for the Gulf migratory group, Eastern Zone, South/West Area (Florida west coast) by establishing two subzones with a dividing line between the two subzones at the Collier/Lee County line;
- Established regional allocations for the west coast of Florida based on the two subzones with 7.5% of the Eastern Zone allocation of TAC being allowed from Subzone 2 and the remaining 92.5% being allocated as follows:
 - 50% - Florida east coast
 - 50% - Florida west coast that is further subdivided:
 - 50% - Net Fishery
 - 50% - Hook-and-Line Fishery
- Established a trip limit of 3,000 pounds per vessel per trip for the Western Zone;
- Established a moratorium on the issuance of commercial king mackerel gillnet endorsements and allow re-issuance of gillnet endorsements to only those vessels that: 1) had a commercial mackerel permit with a gillnet endorsement on or before the

moratorium control date of October 16, 1995 (Amendment 8), and 2) had landings of king mackerel using a gillnet in one of the two fishing years, 1995-1996 or 1996-1997, as verified by the NMFS or trip tickets from Florida; allowed transfer of gillnet endorsements to immediate family members (son, daughter, father, mother, or spouse) only; and prohibited the use of gillnets or any other net gear for the harvest of Gulf migratory group king mackerel north of an east/west line at the Collier/Lee County line;

- Increased the minimum size limit for Gulf migratory group king mackerel from 20 in to 24 in FL;
- Allowed the retention and sale of cut-off (damaged), legal-sized king and Spanish mackerel within established trip limits.

Amendment 10, with Supplemental Environmental Impact Statement (SEIS), approved June 1999, incorporated essential fish habitat provisions for the South Atlantic.

Amendment 11, with SEIS, partially approved in December 1999, included proposals for mackerel in the South Atlantic Council's Comprehensive Amendment Addressing Sustainable Fishery Act Definitions and other Provisions in FMPs of the South Atlantic Region.

Amendment 12, with EA, implemented October 2000, extended the commercial king mackerel permit moratorium from its current expiration date of October 15, 2000, to October 15, 2005, or until replaced with a license limitation, limited access, and/or individual fishing quota or individual transferable quota system, whichever occurs earlier.

Amendment 13, with SEIS, implemented August 19, 2002, established two marine reserves in the EEZ of the Gulf in the vicinity of the Dry Tortugas, Florida known as Tortugas North and Tortugas South in which fishing for coastal migratory pelagic species is prohibited. This action complements previous actions taken under the National Marine Sanctuaries Act.

Amendment 14, with EA, implemented July 29, 2002, established a three-year moratorium on the issuance of charter vessel and head boat Gulf migratory group king mackerel permits in the Gulf unless sooner replaced by a comprehensive effort limitation system. The control date for eligibility was established as March 29, 2001. Also includes provisions for eligibility, application, appeals, and transferability.

Amendment 15, with EA, implemented August 8, 2005, established an indefinite limited access program for the commercial king mackerel fishery in the EEZ under the jurisdiction of the Gulf, South Atlantic Council, and Mid-Atlantic Council. It also changed the fishing season to March 1 through February 28/29 for the Atlantic migratory groups of king and Spanish mackerel.

Amendment 16, was not developed.

Amendment 17, with SEIS, implemented June 15, 2006, established a limited access system on for-hire reef fish and Coastal Migratory Pelagics permits. Permits are renewable and transferable in the same manner as currently prescribed for such permits. There will be a periodic review at

least every 10 years on the effectiveness of the limited access system.

Amendment 18, with EA, established ACLs, ACTs, and AMs for king mackerel, Spanish mackerel, and cobia. The amendment also established both Atlantic and Gulf migratory groups for cobia; modified the framework procedures; and removed the following species from the FMU: cero, little tunny, dolphin and bluefish. The South Atlantic and Gulf Councils approved the amendment for formal review in August, 2011. The amendment was approved by the Secretary of Commerce in December 2011.

Appendix D. Bycatch Practicability Analysis

1.1 Population Effects for the Bycatch Species

Background

Framework Amendment 2 to the Fishery Management Plan for Coastal Migratory Pelagic (CMP) Resources in the Gulf of Mexico and South Atlantic Region (Framework Amendment 2) includes an action intended to streamline and simplify the current system of trip limits for Atlantic group Spanish mackerel. According to the Fishery Management Plan (FMP) for CMP in the Gulf of Mexico and South Atlantic Region (CMP FMP), gillnets and castnets are the predominant gear type used to harvest Spanish mackerel.

Commercial Sector

Currently, discard data are collected using a supplemental form that is sent to a 20% stratified random sample of the active permit holders in CMP fishery. However, in the absence of any observer data, there are concerns about the accuracy of logbook data in collecting bycatch information. Biases associated with logbooks primarily result from inaccuracy in reporting of species that are caught in large numbers or are of little economic interest (particularly of bycatch species), and from low compliance rates. This action does not affect recreational harvest of CMP species.

Finfish Bycatch Mortality

Release mortality rates are unknown for most managed species. Recent Southeast Data Assessment and Review (SEDAR) assessments include estimates of release mortality rates based on published studies. Stock assessment reports can be found at www.sefsc.noaa.gov/sedar/.

SEDAR 16 (2009) provided a 20% estimate of release mortality of king mackerel for the private and charter sectors and 33% release mortality for the headboat sector. For Spanish mackerel, SEDAR 17 (2008) used the following discard mortality rates: gillnets 100%, shrimp trawls 100%, trolling 98%, hook and line 80%, and trolling/hook and line combined 88%. SEDAR 28 (2013) has been completed to assess Spanish mackerel and cobia stocks in the South Atlantic and the Gulf of Mexico. The stocks have been determined to be neither overfished nor undergoing overfishing.

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

Bycatch information is currently being collected in the CMP fishery. The anticipated effects on bycatch mortality of target and non-target species as a result of the action contained in Framework Amendment 2 are likely to be negligible. Trip limits for Atlantic Spanish mackerel

are currently in place and this amendment would only modify the system of trip limits to simplify the regulatory environment; thus, the action is largely administrative in nature.

According to the bycatch information for mackerel gill nets, menhaden, smooth dogfish sharks, and spiny dogfish sharks were the three most frequently discarded species (GMFMC/SAFMC 2004). There were no interactions of sea turtles or marine mammals reported (Poffenberger 2004). The South Atlantic Spanish mackerel portion of the CMP fishery has 51 species reported as bycatch with approximately 81% reported as released alive. For the South Atlantic king mackerel portion of the CMP fishery 92.7% are reported as released alive with 6% undetermined. Bycatch was not reported separately for gill nets and hook-and-line gear. Additionally, the supplementary discard program to the logbook reporting requirement shows no interactions of gill-net gear with marine mammals or birds. **Tables 2 and 3** list the species most often caught with Spanish mackerel in the South Atlantic region. There is very little bycatch in the Spanish mackerel fishery with gillnet gear. Framework Amendment 2 would not modify the gear types or fishing techniques in the Spanish mackerel segment of the CMP fishery. Therefore, bycatch and subsequent bycatch mortality in the CMP fishery is likely to remain very low if this framework amendment is implemented.

Table 2. Top 6 species caught on trips where at least one pound of Spanish mackerel was caught with gillnet gear in the South Atlantic for 2008 and 2012.

| Species | Percent Caught with Spanish Mackerel Gillnets |
|----------------------|---|
| Spanish mackerel | 91.16% |
| blue runner | 4.14% |
| king & cero mackerel | 3.91% |
| unclassified jacks | 0.58% |
| crevalle jack | 0.14% |
| black sea bass | 0.03% |
| sheepshead | 0.02% |

Source: Southeast Fisheries Science Center Commercial Logbook (June 2013)

Table 3. Top 3 species caught on trips where at least one pound of Spanish mackerel was caught with all gear types in the South Atlantic from 2008-2012.

| Species | Percent Caught with Spanish Mackerel All Gear Types |
|----------------------|---|
| Spanish mackerel | 88% |
| king & cero mackerel | 8% |

| | |
|---------------|----|
| blue runner | 2% |
| crevalle jack | 1% |

Source: Southeast Fisheries Science Center Commercial Logbook (June 2013)

Additional information on fishery related actions from the past, present, and future considerations can be found in **Chapter 6** (Cumulative effects) of the CMP Framework Action.

1.2 Ecological Effects Due to Changes in the Bycatch

The ecological effects of bycatch mortality are the same as fishing mortality from directed fishing efforts. If not properly managed and accounted for, either form of mortality could potentially reduce stock biomass to an unsustainable level. The South Atlantic Fishery Management Council (South Atlantic Council) and the National Marine Fisheries Service (NMFS) are in the process of developing actions that would improve bycatch monitoring in all fisheries including the CMP fishery. Better bycatch and discard data would provide a better understanding of the composition and magnitude of catch and bycatch, enhance the quality of data provided for stock assessments, increase the quality of assessment output, provide better estimates of interactions with protected species, and lead to better decisions regarding additional measures to reduce bycatch. Management measures that affect gear and effort for a target species can influence fishing mortality in other species. Therefore, enhanced catch and bycatch monitoring would provide better data that could be used in multi-species assessments.

Ecosystem interactions among CMP species in the marine environment is poorly known. Most species are migratory, interacting in various combinations of species groups at different levels on a seasonal basis. With the current state of knowledge, it is not possible to evaluate the potential ecosystem-wide impacts of these species interactions, or the ecosystem impacts from the limited mortality estimated to occur from mackerel fishing effort.

1.3 Changes in the Bycatch of Other Fish Species and Resulting Population and Ecosystem Effects

Framework Amendment 2 is not expected to affect bycatch of other, non-mackerel, fish species. The trip limit modifications proposed in the amendment are intended to simplify the current system of trip limits for Spanish mackerel. This action is not likely to alter the current level of bycatch or bycatch mortality of target and non-target species captured in the CMP fishery.

1.4 Effects on Marine Mammals and Birds

Under Section 118 of the Marine Mammal Protection Act (MMPA), NMFS must publish, at least annually, a List of Fisheries (LOF) that places all U.S. commercial fisheries into one of three categories based on the level of incidental serious injury and mortality of marine mammals that occurs in each fishery. The 2014 final List of Fisheries classifies the Gulf and South Atlantic coastal migratory pelagic hook-and-line fishery as a Category III fishery (79 FR 14418, March 14, 2014). Category III designates fisheries with a remote likelihood or no known serious

injuries or mortalities. The Gulf and South Atlantic coastal migratory pelagic gillnet portion of the CMP fishery is classified as Category II fishery. This classification indicates an occasional incidental mortality or serious injury of a marine mammal stock resulting from the fishery (1-50 % annually of the potential biological removal). The gillnet portion of the CMP fishery has no documented interaction with marine mammals; NMFS classifies gillnet portion of the CMP fishery as Category II based on analogy (similar risk to marine mammals) with other gillnet fisheries.

The Bermuda petrel and roseate tern occur within the action area. Bermuda petrels are occasionally seen in the waters of the Gulf Stream off the coasts of North Carolina and South Carolina during the summer. Sightings are considered rare and only occurring in low numbers (Alsop 2001). Roseate terns occur widely along the Atlantic coast during the summer but in the southeast region, they are found mainly off the Florida Keys (unpublished USFWS data). Interaction with fisheries has not been reported as a concern for either of these species.

The Bermuda petrel and roseate tern occur within the action area, these species are not commonly found and neither has been described as associating with vessels or having had interactions with the coastal migratory pelagics fishery. Thus, it is believed that the CMP fishery is not likely to negatively affect the Bermuda petrel and the roseate tern.

Spanish mackerel are among the species targeted with gillnet in North Carolina state waters. Observer coverage for gillnet is up to 10% and provided by the North Carolina Division of Marine Fisheries, primarily during the fall flounder fishery in Pamlico Sound. Gillnets are also used from the North Carolina/South Carolina border and south and east of the fishery management council demarcation line between the Atlantic Ocean and the Gulf of Mexico to target finfish including, but not limited to king mackerel, Spanish mackerel, whiting, bluefish, pompano, spot, croaker, little tunny, bonita, jack crevalle, cobia, and striped mullet. The majority of fishing effort occurs in federal waters because South Carolina, Georgia, and Florida prohibit the use of gillnets, with limited exceptions, in state waters.

The Shark Gillnet Observer Program Observer Program is mandated under the Atlantic Highly Migratory Species FMP, the Atlantic Large Whale Take Reduction Plan (ALWTRP) (50 CFR Part 229.32), and the Biological Opinion under Section 7 of the Endangered Species Act. Observers are deployed on any active fishing vessel reporting shark drift gillnet effort. In 2005, this program also began to observe sink gillnet fishing for sharks along the southeastern U.S. coast.

The shark gillnet observer program now covers all anchored (sink, stab, set), strike, or drift gillnet fishing by vessels that fish from Florida to North Carolina year-round. The observed fleet includes vessels with an active directed shark permit and fish with sink gillnet gear. There is some observer coverage of CMP targeted trips by vessels with an active directed shark permit.

1.5 Changes in Fishing, Processing, Disposal, and Marketing Costs

Framework Amendment 2 would simplify the system of trip limits in place for Atlantic Spanish mackerel in order to reduce regulatory complexity. This action is not expected to modify current fishing practices, processing methods, disposal techniques, or marketing costs. See **Chapter 4** of the amendment for a complete description of how the CMP fishery and the species would be impacted by the proposed actions.

1.6 Changes in Fishing Practices and Behavior of Fishermen

Framework Amendment 2 is not likely to significantly alter fishing practices or fishermen behavior. Streamlining the system of trip limits for Atlantic Spanish mackerel would reduce the regulatory burden placed on fishermen who must adapt and keep track of trip limit adjustments throughout the fishing season.

1.7 Changes in Research, Administration, and Enforcement Costs and Management Effectiveness

The action in Framework Amendment 2 is not expected to modify research needs, administration, or management effectiveness. A complex system of trip limits is currently in place for Atlantic Spanish mackerel. Under the proposed action, the trip limit would be simplified, which may benefit, to a small degree, the administrative environment and law enforcement efforts.

Research and monitoring is ongoing to document the effectiveness of proposed management measure and their effect on bycatch. In 1990, the Southeast Fisheries Science Center (SEFSC) initiated a logbook program for vessels with federal permits in the CMP fishery from the Gulf of Mexico and South Atlantic. In 1999, logbook reporting was initiated for vessels catching king and Spanish mackerel (Gulf of Mexico and South Atlantic Fishery Management Councils). The Fishery Management Plan for the Dolphin and Wahoo Fishery of the Atlantic required logbook reporting by fishermen with Commercial Atlantic Dolphin/Wahoo Permits. Approximately 20% of commercial fishermen from snapper grouper, dolphin wahoo, and CMP fisheries are asked to fill out discard information in logbooks; however, a greater percentage of fishermen could be selected with emphasis on individuals that dominate landings. Recreational discards are obtained from the Marine Recreational Information Program and logbooks from the NMFS headboat program.

The Charter/Headboat Amendment requires electronic reporting for headboats and increases the frequency of reporting to 7 days for the snapper grouper, dolphin wahoo, and CMP fisheries. The South Atlantic Council is also developing an amendment to improve commercial logbook reporting for these fisheries. Some observer information for the snapper grouper fishery has been provided by the SEFSC, Marine Fisheries Initiative, and Cooperative Research Programs (CRP), but more is desired for the snapper grouper, dolphin wahoo, and CMP fisheries. An observer program reporting is in place for the headboat sector in the southeast for the snapper

grouper, reef fish, dolphin wahoo, and CMP fisheries. Observers in the NMFS Headboat survey collect information about numbers and total weight of individual species caught, total number of passengers, total number of anglers, location fished (identified to a 10 mile by 10 mile grid), trip duration (half, ¾, full or multiday trip), species caught, and numbers of released fish with their disposition (dead or alive). The headboat survey does not collect information on encounters with protected species. Recreational snapper grouper fishermen do not participate in Category I or II fisheries; therefore, reporting interactions with marine mammals is not required, and these interactions are not expected to occur. At the September 2012 South Atlantic Council meeting, the SEFSC indicated that observers are placed on about 2% of the headboat trips out of South Carolina to Florida, and about 9% of the headboat trips out of North Carolina. More information and the draft document is available online at

http://sero.nmfs.noaa.gov/sustainable_fisheries/s_atl/2013/for_hire_reporting/index.html.

Cooperative research projects between science and industry are being used to a limited extent to collect bycatch information on the snapper grouper fishery in the South Atlantic. For example, Harris and Stephen (2005) characterized the entire (retained and discarded) catch of reef fishes from a selected commercial fisherman in the South Atlantic including total catch composition and disposition of fishes that were released. The Gulf and South Atlantic Fisheries Foundation, Inc. conducted a fishery observer program within the snapper grouper vertical hook-and-line (bandit rig) fishery of the South Atlantic United States. Through contractors they randomly placed observers on cooperating vessels to collect a variety of data quantifying the participation, gear, effort, catch, and discards within the fishery. In the spring 2010, Archipelago Marine Research Ltd. worked with North Carolina Sea Grant and several South Atlantic Unlimited Snapper Grouper Permit holders to test the effectiveness of electronic video monitoring to measure catch and bycatch. A total of 93 trips were monitored with video monitoring, 34 by self-reported fishing logbooks, and 5 by observers. Comparisons between electronic video monitoring data and observer data showed that video monitoring was a reliable source of catch and bycatch data. While these projects focus on the South Atlantic snapper grouper fishery, the results can be expanded into other fisheries in the future to improve monitoring.

Research funds for observer programs, as well as gear testing and testing of electronic devices are also available each year in the form of grants from the Foundation, Marine Fisheries Initiative, Saltonstall-Kennedy program, and the CRP. Efforts are made to emphasize the need for observer and logbook data in requests for proposals issued by granting agencies. A condition of funding for these projects is that data are made available to the Councils and NMFS upon completion of a study.

Stranding networks have been established in the Southeast Region. The NMFS SEFSC is the base for the Southeast United States Marine Mammal Stranding Program (<http://sero.nmfs.noaa.gov/pr/strandings.htm>). NMFS authorizes organizations and volunteers under the MMPA to respond to marine mammal strandings throughout the United States. These organizations form the stranding network whose participants are trained to respond to, and collect samples from live and dead marine mammals that strand along southeastern United State beaches. The SEFSC is responsible for: coordinating stranding events; monitoring stranding

rates; monitoring human caused mortalities; maintaining a stranding database for the southeast region; and conducting investigations to determine the cause of unusual stranding events including mass strandings and mass mortalities (available online at: <http://www.sefsc.noaa.gov/species/mammals/strandings.htm>).

The Southeast Regional Office and the SEFSC participate in a wide range of training and outreach activities to communicate bycatch related issues. The NMFS Southeast Regional Office issues public announcements, Southeast Fishery Bulletins, or News Releases on different topics, including use of turtle exclusion devices, bycatch reduction devices, use of methods and devices to minimize harm to turtles and sawfish, information intended to reduce harm and interactions with marine mammals, and other methods to reduce bycatch for the convenience of constituents in the southern United States. These are mailed out to various organizations, government entities, commercial interests and recreational groups. This information is also included in newsletters and publications that are produced by NMFS and the various regional fishery management councils. Announcements and news released are also available on the internet and broadcast over NOAA weather radio.

Additional administrative and enforcement efforts would help to implement and enforce fishery regulations. NMFS established the South East Fishery-Independent Survey in 2010 to strengthen fishery-independent sampling efforts in southeast U.S. waters, addressing both immediate and long-term fishery-independent data needs, with an overarching goal of improving fishery-independent data utility for stock assessments. Meeting these data needs is critical to improving scientific advice to the management process, ensuring overfishing does not occur, and successfully rebuilding overfished stocks on schedule.

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

The proposed modifications to the Atlantic Spanish mackerel trip limit, and any changes in economic, social, or cultural values are discussed in **Chapter 4**. In summary, the social and economic impacts of both actions in the CMP Framework Action are expected to be positive.

1.9 Changes in the Distribution of Benefits and Costs

The distribution of benefits and costs expected from the action in the Framework Amendment are discussed in **Chapter 4**. The proposed action to simplify the Atlantic Spanish mackerel trip limit is not associated with negative impacts or costs since they would not reduce the ability to fish for the subject species.

1.10 Social Effects

The social effects of all the measures are described in **Chapter 4** of this document. In summary, the social environment would benefit from the action in Framework Amendment 2. The system

of trip limits would be simplified without negatively affecting the sustainability of target or non-species, and without adversely affecting fishing industry participants.

1.11 Conclusion

This section evaluates the practicability of taking additional action to minimize bycatch and bycatch mortality using the ten factors provided at 50 CFR §600.350(d)(3)(i). The Atlantic Spanish mackerel segment of the CMP fishery has relatively low baseline levels of bycatch, which are not expected to change as a result of implementation of this amendment.

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Appendix E. **Regulatory Impact Review**

Appendix F. **Regulatory Flexibility Analysis**

Appendix G. Other Applicable Law

The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) (16 U.S.C. 1801 et seq.) provides the authority for fishery management in federal waters of the Exclusive Economic Zone. However, fishery management decision-making is also affected by a number of other federal statutes designed to protect the biological and human components of U.S. fisheries, as well as the ecosystems that support those fisheries. Major laws affecting federal fishery management decision-making are summarized below.

Administrative Procedures Act

All federal rulemaking is governed under the provisions of the Administrative Procedure Act (APA) (5 U.S.C. Subchapter II), which establishes a “notice and comment” procedure to enable public participation in the rulemaking process. Under the APA, 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 waiting period from the time a final rule is published until it takes effect.

The proposed rule associated with this amendment will include a request for public comment, and if approved, upon publication of the final rule, there will be a 30-day wait period before the regulations are effective in compliance with the APA.

Coastal Zone Management Act

Section 307(c)(1) of the federal Coastal Zone Management Act of 1972 (CZMA), as amended, requires federal activities that directly affect any land or water use or natural resource of a state’s coastal zone be conducted in a manner consistent, to the maximum extent practicable, with approved state coastal management programs. The requirements for such a consistency determination are set forth in NOAA regulations at 15 C.F.R. part 930, subpart C. According to these regulations and CZMA Section 307(c)(1), when taking an action that affects any land or water use or natural resource of a state’s coastal zone, NMFS is required to provide a consistency determination to the relevant state agency at least 90 days before taking final action.

Upon submission to the Secretary of Commerce, NMFS will determine if this framework amendment is consistent with the Coastal Zone Management programs of the states of Florida, Georgia, South Carolina, North Carolina, Virginia, Maryland, Delaware, New Jersey, and New York to the maximum extent possible. Their determination will then be submitted to the responsible state agencies under Section 307 of the CZMA administering approved Coastal Zone Management programs for these states.

Information Quality Act

The Information Quality Act (IQA) (Public Law 106-443) effective October 1, 2002, requires the government to set standards for the quality of scientific information and statistics used and

disseminated by federal agencies. Information includes any communication or representation of knowledge such as facts or data, in any medium or form, including textual, numerical, cartographic, narrative, or audiovisual forms (includes web dissemination, but not hyperlinks to information that others disseminate; does not include clearly stated opinions).

Specifically, the IQA directs the Office of Management and Budget (OMB) to issue government wide guidelines that “provide policy and procedural guidance to federal agencies for ensuring and maximizing the quality, objectivity, utility, and integrity of information disseminated by federal agencies.” Such guidelines have been issued, directing all federal agencies to create and disseminate agency-specific standards to: 1) ensure information quality and develop a pre-dissemination review process; 2) establish administrative mechanisms allowing affected persons to seek and obtain correction of information; and 3) report periodically to OMB on the number and nature of complaints received.

Scientific information and data are key components of fishery management plans (FMPs) and amendments and the use of best available information is the second national standard under the Magnuson-Stevens Act. To be consistent with the IQA, FMPs and amendments must be based on the best information available. They should also properly reference all supporting materials and data, and be reviewed by technically competent individuals. With respect to original data generated for FMPs and amendments, it is important to ensure that the data are collected according to documented procedures or in a manner that reflects standard practices accepted by the relevant scientific and technical communities. Data will also undergo quality control prior to being used by the agency and a pre-dissemination review.

CMP Framework Amendment 2 uses the best available information and makes a broad presentation thereof. The Southeast Fisheries Science Center has reviewed the document, and has determined, in a memorandum dated [INSERT DATE], the information contained in this document was developed using best available scientific information. Therefore, this document is in compliance with the IQA.

Endangered Species Act (ESA)

The ESA of 1973 (16 U.S.C. Section 1531 et seq.) requires that federal agencies must ensure actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered species or the habitat designated as critical to their survival and recovery. The ESA requires NMFS to consult with the appropriate administrative agency (itself for most marine species, and the U.S. Fish and Wildlife Service for all remaining species) when proposing an action that may affect threatened or endangered species or adversely modify critical habitat. Consultations are necessary to determine the potential impacts of the proposed action. They conclude informally when proposed actions may affect but are “not likely to adversely affect” threatened or endangered species or designated critical habitat. Formal consultations, resulting in a biological opinion, are required when proposed actions may affect and are “likely to adversely affect” threatened or endangered species or adversely modify designated critical habitat.

NMFS completed a biological opinion, evaluating the impacts of the CMP fishery on ESA-listed species on August 13, 2007, (NMFS 2007). The opinion concluded the fishery would not affect ESA-listed marine mammals, *Acropora* corals, Gulf sturgeon, or listed critical habitat for North Atlantic right whales, and is not likely to jeopardize the continued existence or recovery of any listed sea turtle species or smalltooth sawfish. However, the opinion did state that the CMP fishery would adversely affect sea turtles and smalltooth sawfish and thus NMFS issued an Incidental Take Statement for these species. Reasonable and Prudent Measures to minimize the impact of these incidental takes were specified, along with Terms and Conditions to implement them.

Subsequent to the biological opinion, NMFS made several modifications to the list of protected species for which they are responsible. These changes included: (1) the designation of *Acropora* critical habitat, (2) the determination that the loggerhead sea turtle population consists of nine distinct population segments (DPSs; 76 FR 58868) and, (3) the listing of five DPSs of Atlantic sturgeon. Further, NMFS has proposed the listing of 66 additional coral species (6 of which are in the South Atlantic), the reclassification of *Acropora* from threatened to endangered (77 FR 73220), and the designation of critical habitat for the Northwest Atlantic DPS of loggerhead sea turtles.

NMFS addressed how the designation of *Acropora* critical habitat could impact the determinations of the 2007 biological opinion in a consultation memorandum. NMFS concluded the continued authorization of the CMP fishery, is not likely to adversely affect *Acropora* critical habitat (May 18, 2010).

The listing of five DPSs of Atlantic sturgeon triggered reinitiation of consultation under Section 7 of the ESA because the previous opinion did not consider what effects the CMP fishery is likely to have on this species. Atlantic sturgeon are known to be captured by fishermen fishing for CMP species, therefore NMFS Protected Resources must analyze the impacts of these potential interactions. The Sustainable Fisheries Division requested reinitiation of Section 7 consultation on November 26, 2012. Following the request for consultation the Sustainable Fisheries Division considered the effects of the fishery on Atlantic sturgeon and developed ESA 7(a)(2) and 7(d) determinations in a January 11, 2013, memorandum. The CMP fishery is currently operating under the 7(a)(2) and 7(d) determinations while consultation proceeds.

Marine Mammal Protection Act

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

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

In 1994, Congress amended the MMPA, to govern the taking of marine mammals incidental to commercial fishing operations. This amendment required the preparation of stock assessments for all marine mammal stocks in waters under U.S. jurisdiction; development and implementation of take-reduction plans for stocks that may be reduced or are being maintained below their optimum sustainable population levels due to interactions with commercial fisheries; and studies of pinniped-fishery interactions. The MMPA requires a commercial fishery to be placed in one of three categories, based on the relative frequency of incidental serious injuries and mortalities of marine mammals. Category I designates fisheries with frequent serious injuries and mortalities incidental to commercial fishing; Category II designates fisheries with occasional serious injuries and mortalities; and Category III designates fisheries with a remote likelihood or no known serious injuries or mortalities.

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

The 2014 Final LOF classifies the Gulf and South Atlantic coastal migratory pelagic hook-and-line fishery as a Category III fishery (79 FR 14418, March 14, 2014). Category III designates fisheries with a remote likelihood or no known serious injuries or mortalities. The Gulf and South Atlantic coastal migratory pelagic gillnet fishery is classified as Category II fishery. This classification indicates an occasional incidental mortality or serious injury of a marine mammal stock resulting from the fishery (1-50% annually of the potential biological removal). The fishery has no documented interaction with marine mammals; NMFS classifies this fishery as Category II based on analogy (similar risk to marine mammals) with other gillnet fisheries.

The action in this framework amendment are not expected to negatively impact marine mammals.

Executive Orders

E.O. 12630: Takings

The Executive Order on Government Actions and Interference with Constitutionally Protected Property Rights that became effective March 18, 1988, requires each federal agency prepare a Takings Implication Assessment for any of its administrative, regulatory, and legislative policies and actions that affect, or may affect, the use of any real or personal property. Clearance of a regulatory action must include a takings statement and, if appropriate, a Takings Implication

Assessment. The NOAA Office of General Counsel will determine whether a Taking Implication Assessment is necessary for this amendment.

E.O. 12866: Regulatory Planning and Review

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

On June 20, 2013, the Small Business Administration issued a final rule revising the small business size standards for several industries effective July 22, 2013 (78 FR 37398). The rule increased the size standard for Finfish Fishing from \$4.0 to \$19.0 million, Shellfish Fishing from \$4.0 to \$5.0 million, and Other Marine Fishing from \$4.0 to \$7.0 million.

In light of these new standards, NMFS has preliminarily determined that the proposed action would not have a significant economic impact on a substantial number of small entities.

E.O. 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations

This Executive Order mandates that each federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories and possessions. Federal agency responsibilities under this Executive Order include conducting their programs, policies, and activities that substantially affect human health or the environment, in a manner that ensures that such programs, policies, and activities do not have the effect of excluding persons from participation in, denying persons the benefit of, or subjecting persons to discrimination under, such, programs policies, and activities, because of their race, color, or national origin. Furthermore, each federal agency responsibility set forth under this Executive Order shall apply equally to Native American programs. Environmental justice considerations are discussed in detail in Section 3.3.4.

The action in this framework amendment are not expected to negatively impact minority or low-income populations.

E.O. 12962: Recreational Fisheries

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

The action in this framework amendment does not affect the recreational sector of the coastal migratory pelagic fishery.

E.O. 13132: Federalism

The Executive Order on Federalism requires agencies in formulating and implementing policies, to be guided by the fundamental federalism principles. The Order serves to guarantee the division of governmental responsibilities between the national government and the states that was intended by the framers of the Constitution. Federalism is rooted in the belief that issues not national in scope or significance are most appropriately addressed by the level of government closest to the people. This Order is relevant to FMPs and amendments given the overlapping authorities of NMFS, the states, and local authorities in managing coastal resources, including fisheries, and the need for a clear definition of responsibilities. It is important to recognize those components of the ecosystem over which fishery managers have no direct control and to develop strategies to address them in conjunction with appropriate state, tribes and local entities (international too).

No federalism issues have been identified relative to the actions proposed in this amendment.

Essential Fish Habitat

The amended Magnuson-Stevens Act included a new habitat conservation provision known as Essential Fish Habitat (EFH) that requires each existing and any new FMPs to describe and identify EFH for each federally managed species, minimize to the extent practicable impacts from fishing activities on EFH that are more than minimal and not temporary in nature, and identify other actions to encourage the conservation and enhancement of that EFH. To address

these requirements the South Atlantic Fishery Management Council has, under separate action, approved an environmental impact statement (SAFMC 1998) to address the new EFH requirements contained within the Magnuson-Stevens Act. Section 305(b)(2) requires federal agencies to obtain a consultation for any action that may adversely affect EFH.

An EFH consultation was completed on (INSERT DATE) for this action, and determined that no adverse impacts on EFH is expected.

Appendix H. Spanish Mackerel Quota and Trip Limit Analysis

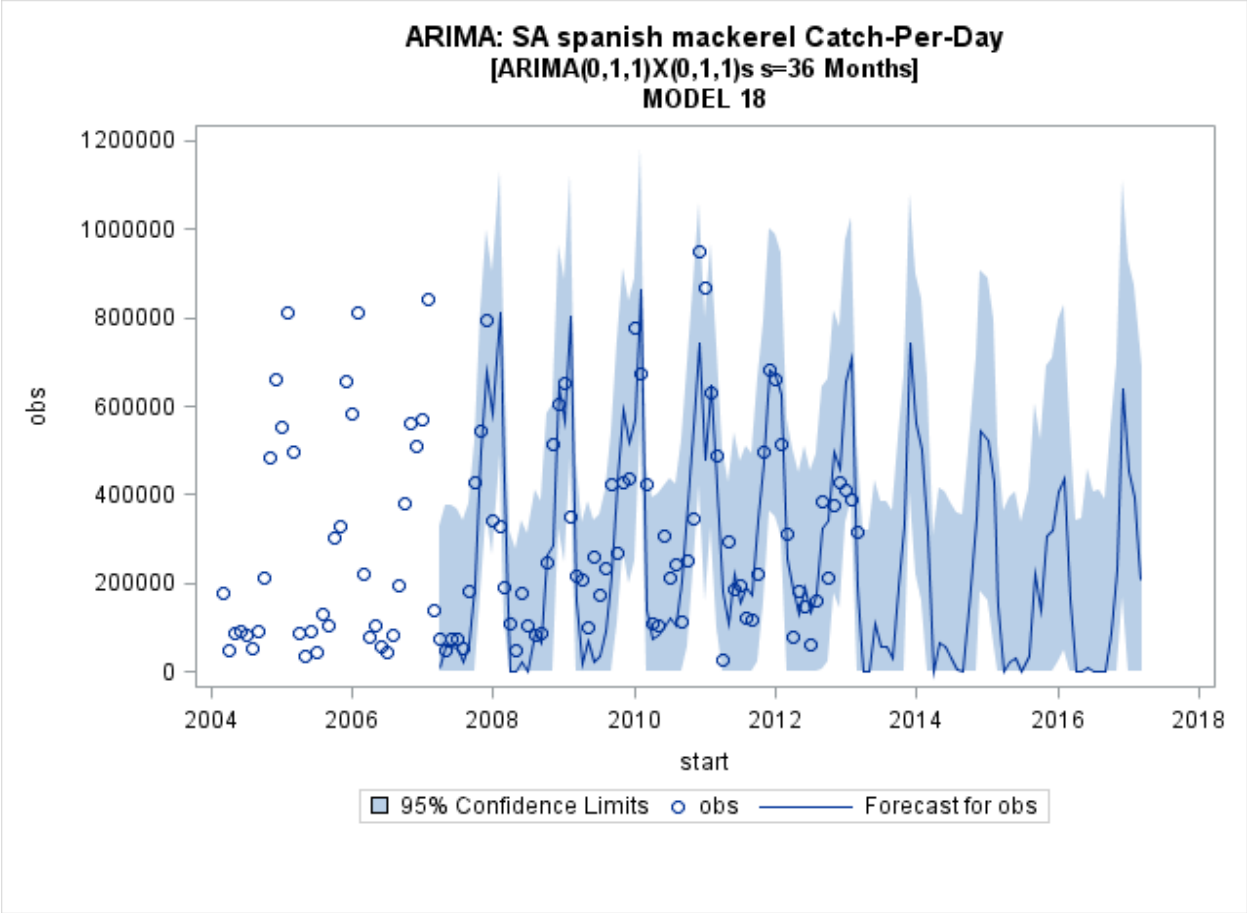
Table 1 shows projected South Atlantic spanish mackerel season lengths and quota closure dates under the various trip limit alternatives under Action 4, incorporating the 82.8% S/17.2% N allocation of the ACL from Table 2.4.3 in CMP Amendment 20B, where the Northern Zone is NC->NY, Southern Zone is FL (25 degrees N)->SC. The analysis also incorporates the CMP_FA1 ACL increase to 3.33 MP. .

Table 1. FORECAST FOR 2014-2015 SEASON

| SOUTHERN ZONE | | | | | NORTHERN ZONE |
|---------------------------------|-----|----------|----------|-----|---------------|
| MODEL 1: INCLUDE 2012/13 | | | | | |
| PROJECTED CLOSURE DATE--> | n/a | n/a | n/a | n/a | n/a |
| PROJECTED DAYS OPEN--> | 365 | 365 | 365 | 365 | 365 |
| MODEL 2: EXCLUDE 2012/13 | | | | | |
| PROJECTED CLOSURE DATE--> | n/a | 02/21/15 | 02/28/15 | n/a | 07/14/14 |
| PROJECTED DAYS OPEN--> | 365 | 357 | 364 | 365 | 135 |

These projections are based on a forecast of harvest from SEFSC ACL data, incorporating monthly catch rates (**Figure 1**). The best fitting projection model to the data including 2012/13 catches was a Seasonal Auto-Regressive Integrated Moving Average (SARIMA) model, with a 3-year time lag on the moving average term and a 1-month time lag on the autoregressive term. Twenty four SARIMA model permutations were considered, and this was the best fitting model, per the AIC, with significant parameter estimates. It explained 84% of the variability in Spanish mackerel monthly commercial harvest. The best fitting projection model to the data excluding 2012/13 catches was a Seasonal Auto-Regressive Integrated Moving Average (SARIMA) model, with a 3-year time lag and a 1-month time lag on the autoregressive term. Twenty-four SARIMA model permutations were considered, and this was the best fitting model, per the AIC, with significant parameter estimates. It explained 83% of the variability in Spanish mackerel monthly commercial harvest. Spanish mackerel harvest in the South Atlantic appears to have a 3-year cycle with the pattern of high harvest, mid-level harvest, and low harvest. Projected catch rates were partitioned out to Northern and Southern Zones, with trip limit impacts applying only to FL EEZ. Seasonal dynamics in zone of fishing were accounted for using mean percent harvest by zone, 2000-2012 (**Figure 2**). The impacts of trip limits were simulated using catch per trip data reported to the SEFSC Coastal Fisheries Logbook Program (**Figure 3**). The season length projections in Tables 1 and 2 assume that trip limit impacts to vessels reporting to SEFSC Coastal Fisheries Logbook Program are a reasonable proxy for impacts to vessels harvesting spanish mackerel that do not report to this program. This includes commercial vessels without

federal permits that harvest predominantly in state waters. If the concentrations of spanish mackerel encountered on a trip or the gears used to harvest them are substantially different between federally-licensed and state-licensed vessels, this assumption may be violated. If state-licensed vessels are less likely to encounter large concentrations of spanish mackerel, the trip limit impacts projected here would be reduced. If state-licensed vessels are more likely to encounter large concentrations of Spanish mackerel, the trip limit impacts projected here might be amplified. An examination of **Figure 4** suggests that Southern Zone harvest is predominantly in Federal waters, although state harvest does increase during the time period where the trip limit impacts would factor under the action (Dec-Feb mean harvest 2006-2012 = 26% ± 13% from state waters).



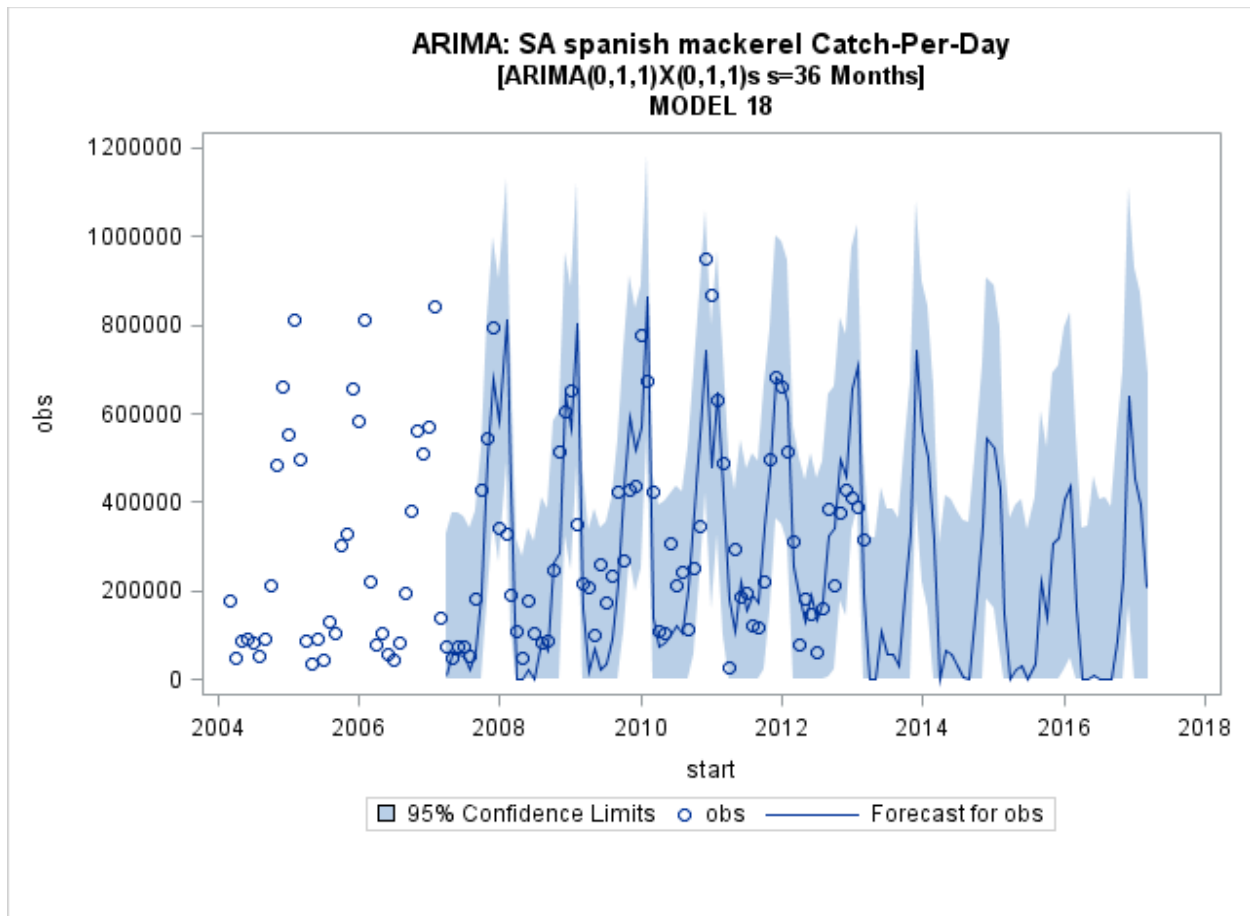
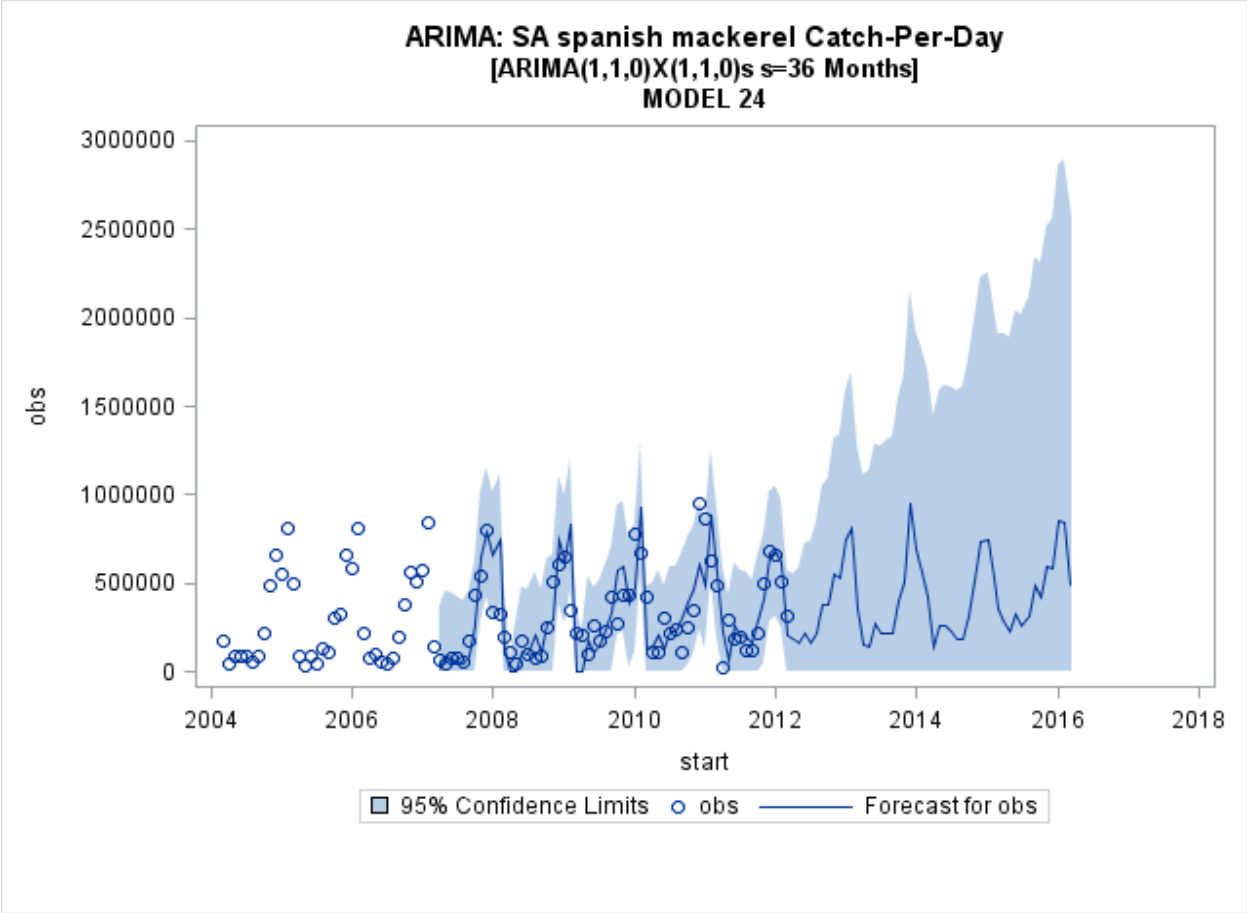


Figure 1A. Seasonal auto-regressive integrated moving average (SARIMA) model fit to Spanish mackerel catch per day, 2004-2013. Note that best fitting model was SARIMA(1,0,0)x(0,1,1)s model with 36-month lag (Source: SEFSC ACL Data Apr 2014)



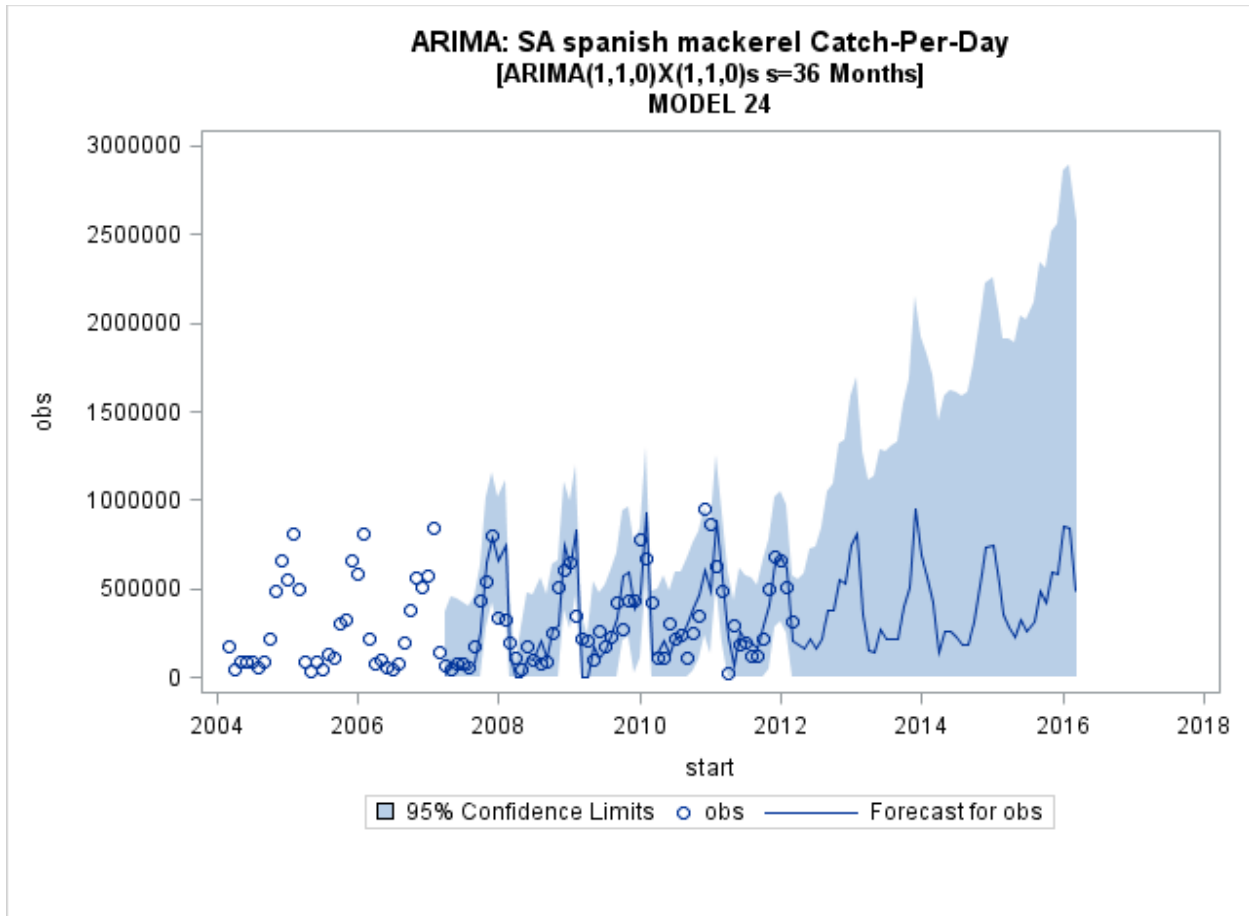


Figure 1B. Seasonal auto-regressive integrated moving average (SARIMA) model fit to Spanish mackerel catch per day, 2004-2012. Note that best fitting model was SARIMA(1,1,0)x(1,1,0)s model with 36-month lag (Source: SEFSC ACL Data Apr 2014)

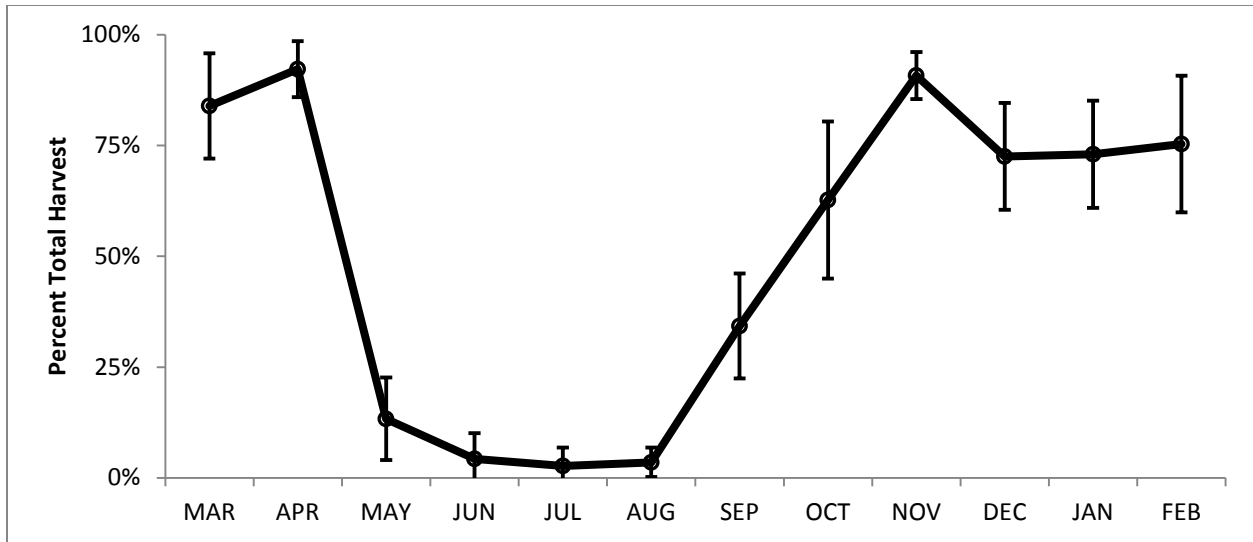


Figure 2. Mean (2006-2012) percent of monthly commercial spanish mackerel harvest in South Atlantic reported landed from Southern Zone (Florida). Source: SEFSC ACL Dataset (Apr 2014).

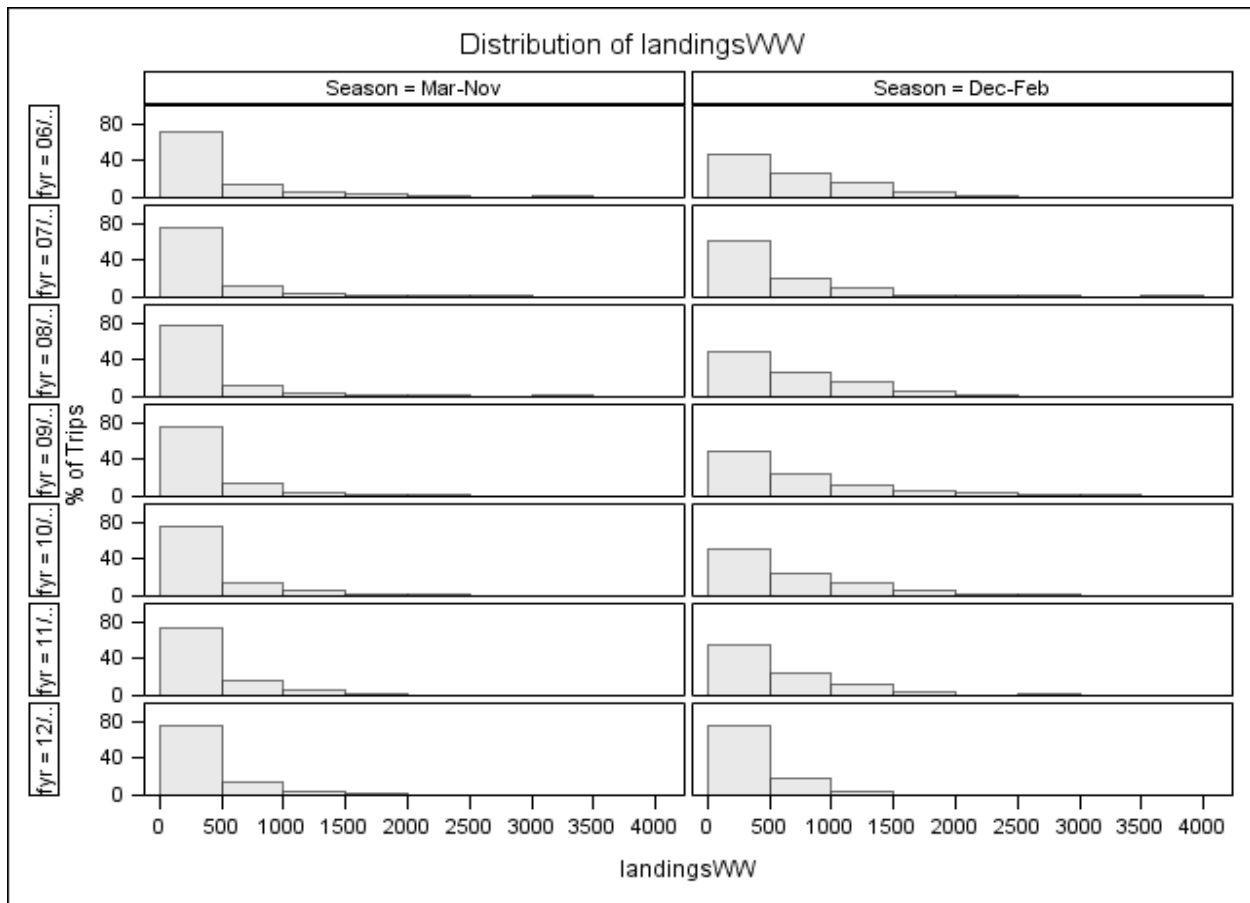


Figure 3. Histograms of South Atlantic commercial catch-per-trip (Source: SEFSC Coastal Fisheries Logbook Program 2014) by fishing year and season. Seasons are shown to illustrate possible impacts of late season trip limits.

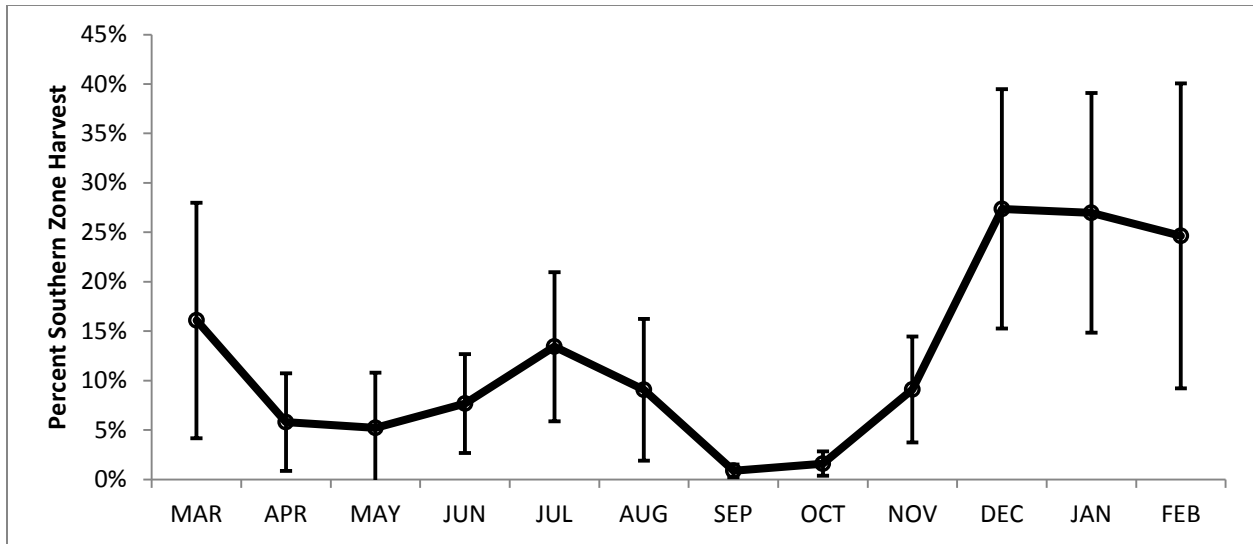


Figure 4. Mean (2006-2012) percent of monthly commercial spanish mackerel harvest in South Atlantic Southern Zone reported landed from state waters. Source: SEFSC ACL Dataset (2014).