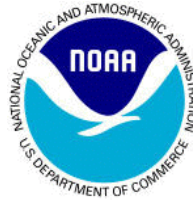




Framework Amendment 6 to the Fishery Management Plan for Coastal Migratory Pelagic Resources in the Gulf of Mexico and Atlantic Region

Atlantic King Mackerel Commercial Trip Limits



Regulatory Impact Review | Regulatory Flexibility Analysis

A publication of the South Atlantic Fishery Management Council pursuant to
National Oceanic and Atmospheric Administration (NOAA) Award Number FNA10NMF4410012

November 2018

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 6 to the Fishery Management Plan for Coastal Migratory Pelagic Resources in the Gulf of Mexico and Atlantic Region

Proposed action:	Modify commercial trip limits for Atlantic king mackerel.
Lead agency:	Framework Amendment – South Atlantic Fishery Management Council (South Atlantic Council) Assessment – National Marine Fisheries Service (NMFS) Southeast Regional Office
For Further Information Contact:	South Atlantic Fishery Management Council 4055 Faber Place, Suite 201 North Charleston, SC 29405 843-571-4366/ 866-SAFMC-10 www.safmc.net Christina Wiegand Christina.Wiegand@safmc.net NMFS, Southeast Region 263 13 th Avenue South St. Petersburg, FL 33701 727-824-5305 http://sero.nmfs.noaa.gov Karla Gore Karla.Gore@noaa.gov

Summary

The South Atlantic Fishery Management Council is proposing an action in Framework Amendment 6 to the Fishery Management Plan for Coastal Migratory Pelagic Resources in the Gulf of Mexico and Atlantic Region to modify the commercial trip limits in the Atlantic Southern Zone for Atlantic migratory group king mackerel.

The Atlantic migratory group of king mackerel is divided into a northern zone and a southern zone. The trip limit system for the Atlantic Southern Zone (the exclusive economic zone from the North Carolina/South Carolina line to the Miami-Dade/Monroe county line (25°20'24"N)) was implemented on May 11, 2017, through Amendment 26 to the Fishery Management Plan for Coastal Migratory Pelagic Resources in the Gulf of Mexico and South Atlantic Region. The fishing year for the commercial sector for Atlantic migratory group king mackerel is March 1 through the end of February. The Atlantic Southern Zone quota is separated into two seasonal quotas: 60% to March 1 through September 30 (Season 1) and 40% to October 1 through the end of February (Season 2). The remaining quota from Season 1 transfers to Season 2 and any remaining quota from Season 2 is not to be carried forward. When the quota for a season is met or expected to be met, commercial harvest of king mackerel in the Atlantic Southern Zone is prohibited for the remainder of the season.

The Atlantic Southern Zone is divided into two areas: the North Carolina/South Carolina line to the Flagler/Volusia County line (29°25'N) and the Flagler/Volusia County line to the Miami-Dade Monroe County line. North of the Flagler/Volusia County line, the trip limit is 3,500 pounds year-round. South of the Flagler/Volusia County line, the trip limit is 50-fish from March 1 through March 31. From April 1 through September 30, the trip limit is 75-fish, unless the National Marine Fisheries Service determines that 75% or more of the Season 1 quota has been landed, in which case the trip limit is reduced to 50-fish. From October 1 through January 31, the trip limit is 50-fish. From February 1 through the end of February, the trip limit is 50-fish, unless the National Marine Fisheries Service determines that less than 70% of the Season 2 quota has been landed, in which case the trip limit is raised to 75-fish (see **Appendix F** for maps).

Following South Atlantic Fishery Management Council final action on Amendment 26 in March 2016 (effective May 11, 2017), fishermen on the Florida east coast expressed concern about the new trip limits, especially the Season 1 (March 1 through September 30) trip limits in the exclusive economic zone from the Flagler/Volusia County line to the Volusia/Brevard County line (Volusia County). Comments from stakeholders indicated that fishermen operating out of Volusia County travel farther offshore to target king mackerel and often complete multiday trips, and the 50-fish trip limit in March makes it challenging for fishermen to earn enough money to pay for the cost of a trip, causing undue hardship to fishermen and communities. At their April 2017 meeting, the South Atlantic Fishery Management Council's Mackerel Cobia Advisory

Panel recommended that the South Atlantic Fishery Management Council review the March trip limit and consider a different trip limit for north of the Volusia/Brevard line.

The intent of this framework amendment is to provide a commercial trip limit sufficient to support fishing activity while constraining harvest to the annual catch limit and providing for year-round access. Framework Amendment 6 was available for public review before and during each South Atlantic Fishery Management Council meeting and will be made available for public comment during the proposed rule phase.

Table of Contents

Summary	III
Table of Contents.....	V
List of Appendices.....	VII
List of Figures	VIII
List of Tables	IX
Chapter 1. Introduction	1
1.1 What Actions are Being Proposed?	1
1.2 Who is Proposing these Actions?.....	1
1.3 Why is the South Atlantic Council Considering Action?	1
1.3.1 Purpose and Need Statement	2
1.4 Which species and areas would be affected by the actions?	3
Chapter 2. Proposed Action and Alternatives	4
Action. Modify the commercial trip limit for Atlantic king mackerel in Season 1:	4
Chapter 3. Affected Environment	8
3.1 Habitat Environment.....	8
3.2 Biological and Ecological Environment	10
3.2.1 King Mackerel	10
3.2.2 Protected Species	11
3.2.3 Bycatch	12
3.3 Economic Environment	12
3.4 Social Environment	21
3.5 Administrative Environment.....	25
3.5.1 Federal Fishery Management	25
3.5.2 State Fishery Management	26
Chapter 4. Environmental Effects	27
Action. Modify the commercial trip limit for Atlantic king mackerel in Season 1.	27
4.1.1 Biological Effects.....	27
4.1.2 Economic Effects.....	29
4.1.3 Social Effects.....	30
4.1.4 Administrative Effects.....	32
Chapter 5. Council’s Choice for the Preferred Alternative.....	33
5.1 Action: Modify the commercial trip limit for Atlantic king mackerel in Season 1:.....	33
5.1.1 Mackerel Cobia Advisory Panel Comments and Recommendations..	33
5.1.2 Public Comments and Recommendations	33
5.1.3 South Atlantic Council’s Choice for Preferred Alternative.....	34
Chapter 6. List of Interdisciplinary Plan Team (IPT) Members.....	35
Chapter 7. Agencies Consulted	36
Chapter 8. References.....	37

Appendix A. Glossary	40
Appendix B. History of Management.....	43
Appendix C. Regulatory Impact Review.....	48
Appendix D. Regulatory Flexibility Analysis	51
Appendix E. Other Applicable Law.....	63
Appendix F. Atlantic King Mackerel Southern Zone Trip Limit Maps	70

List of Appendices

Appendix A. Glossary

Appendix B. History of Management

Appendix C. Regulatory Impact Review

Appendix D. Regulatory Flexibility Analysis

Appendix E. Other Applicable Law

Appendix F. Atlantic King Mackerel Southern Zone Trip Limit Maps

List of Figures

Figure 1.4.1. Boundary between Gulf and Atlantic king mackerel migratory groups.....	3
Figure 3.4.1. Sixteen South Atlantic communities ranked by 2016 pounds regional quotient (RQ) of king mackerel based on dealer landings.....	21
Figure 3.4.2. Commercial fishing engagement for South Atlantic communities with the top regional quotients for king mackerel.	22
Figure 3.4.3. Commercial fishing reliance for South Atlantic communities with the top regional quotients for king mackerel.	23
Figure 3.4.4. Commercial king mackerel permits for Florida and Georgia Counties 2012-2016.	24
Figure 3.4.5. Commercial king mackerel permits for North Carolina and South Carolina Counties 2012-2016.	24
Figure G.1. Alternative 1: Current seasonal king mackerel commercial trip limits for the Atlantic Southern Zone	70
Figure G.2. Alternative 2: Proposed seasonal king mackerel commercial trip limits in the Atlantic Southern Zone.	71
Figure G.3. Alternative 3: Proposed seasonal king mackerel commercial trip limits in the Atlantic Southern Zone	72
Figure G.4. Alternative 4: Proposed seasonal king mackerel commercial trip limits in the Atlantic Southern Zone.	73

List of Tables

Table 3.3.1. Economic impacts (2015 \$) from king mackerel landings.	13
Table 3.3.2. Number and percent of permitted vessels with king mackerel landings in South Atlantic.	14
Table 3.3.3. Annual commercial landings of king mackerel (KM) from South Atlantic by federally permitted vessels, 2012-2016.	14
Table 3.3.4. Pounds and percentage of all commercial landings by federally permitted vessels that landed South Atlantic king mackerel by state, 2012-2016.	15
Table 3.3.5. Landings revenue (2016 \$) from all species and percentage from king mackerel by state for federally permitted vessels that landed South Atlantic king mackerel, 2012-2016.	15
Table 3.3.6. Average annual economic impacts of South Atlantic king mackerel landings by federally permitted vessels by state, 2012-2016.	16
Table 3.3.7. Trips with South Atlantic king mackerel landings by federally permitted vessels by state, 2012-2016.	16
Table 3.3.8. Percent of average annual trips by landings (lbs gw) of South Atlantic king mackerel, 2012-2016.	16
Table 3.3.9. Commercial landings (lbs gw) of South Atlantic king mackerel by federally permitted vessels and percentage of those landings in Florida, 2012-2016.	17
Table 3.3.10. Trips by federally permitted vessels that landed South Atlantic king mackerel and percentage of those trips in Florida, 2012-2016.	17
Table 3.3.11. Average landings of king mackerel per trip and per vessel by federally permitted vessels that landed king mackerel and percentage of those trips in Florida, 2012-2016.	18
Table 3.3.12. Percent of average annual number of trips by landings (lbs gw) of king mackerel, 2012-2016.	18
Table 3.3.13. Percentage of total landings revenue from king mackerel by federally permitted vessels by county area, 2012-2016.	19
Table 3.3.14. Average dockside revenue (2016 \$) from king mackerel landings per vessel per year and per trip, 2012-2016.	19
Table 3.3.15. Average annual economic impacts of landings of king mackerel by federally permitted vessels.	20
Table 3.3.16. Average annual landings revenue (2016 \$) from all species per vessel per year and percentage of that revenue from king mackerel landings, 2012-2016.	20

Chapter 1. Introduction

1.1 What Actions are Being Proposed?

Framework Amendment 6 amends the Fishery Management Plan (FMP) for Coastal Migratory Pelagic Resources in the Gulf of Mexico and Atlantic Region (CMP FMP). Framework Amendment 6 includes one action to modify the commercial trip limit for Atlantic migratory group king mackerel (Atlantic king mackerel). This framework amendment applies to harvest of Atlantic king mackerel in the exclusive economic zone (EEZ) from the North Carolina/South Carolina line to the Miami-Dade/Monroe county line (Atlantic Southern Zone).

1.2 Who is Proposing these Actions?

The coastal migratory pelagics (CMP) fishery is managed jointly by the Gulf of Mexico Fishery Management Council (Gulf Council) and the South Atlantic Fishery Management Council (South Atlantic Council). Amendments to the CMP FMP (plan amendments) and framework amendments affecting both Gulf of Mexico (Gulf) and Atlantic king mackerel must be approved by both the Gulf Council and the South Atlantic Council. Because this framework amendment applies only to Atlantic king mackerel, the South Atlantic Council is proposing the action and will give final approval on the action. Following approval by the South Atlantic Council, this framework amendment would be submitted to the National Marine Fisheries Service (NMFS) for approval and implementation. NMFS is a line office in the National Oceanic and Atmospheric Administration.

Who's Who?

- **South Atlantic Fishery Management Council**– Engage in a process to determine a range of actions and alternatives and recommends action to the National Marine Fisheries Service.
- **National Marine Fisheries Service and Council staffs** – Develop alternatives based on guidance from the Council and analyze the environmental impacts of those alternatives. The National Marine Fisheries Service implements the action through rulemaking.

1.3 Why is the South Atlantic Council Considering Action?

The current regulations for king mackerel established in Amendment 26 to the CMP FMP (Amendment 26) became effective on May 11, 2017, including updated commercial trip limits for the Atlantic Southern zone. Each Atlantic Southern Zone season has a quota and specified trip limits:

North of the Flagler/Volusia line (29°25'N): 3,500 pounds year-round.

South of the Flagler/Volusia line (29°25'N) to the Miami-Dade/Monroe line (25°20'24"N):

- *March 1 – March 31 (Season 1):* 50-fish
- *April 1 – September 30 (Season 1):* 75-fish, unless NMFS determines that 75% or more of the Season 1 quota has been landed, then, 50-fish

- *October 1 – January 31 (Season 2): 50-fish*
- *February 1 – end of February (Season 2): 50-fish, unless NMFS determines that less than 70% of the Season 2 quota has been landed, then, 75-fish.*

Prior to the implementation of Amendment 26, the commercial king mackerel trip limits for the Atlantic Southern Zone were as follows:

North of the Flagler/Volusia line (29°25’N): 3,500 pounds year-round.

South of the Flagler/Volusia line (29°25’N) to the Volusia/Brevard line (28°47.8’N):

- *April 1 – October 31: 3,500 pounds*
- *November 1 – March 31: No trip limit*

South of the Volusia/Brevard line (28°47.8’N) to the Miami-Dade/Monroe line (25°20’24’N):

- *April 1 – October 31: 75-fish*
- *November – March 31: No trip limit*

The South Atlantic Council modified the commercial trip limit system for king mackerel in the Atlantic Southern Zone through Amendment 26 to try to ensure that the commercial sector was open year-round. Fishermen operating along the east coast of Florida indicated the importance of providing year-round access to king mackerel for fishermen and communities that harvest the fish at various times throughout the year. However, fishermen on the Florida east coast have expressed concern about the new trip limits, especially the Season 1 (March 1 through September 30) trip limits in the EEZ from the Flagler/Volusia County line to the Volusia/Brevard County line (Volusia County). Comments from stakeholders indicated that fishermen operating out of Volusia County travel farther offshore to target king mackerel and often complete trips lasting two or three days. The 50-fish trip limit in March makes it challenging for fishermen to make enough money to pay for a trip, causing undue hardship to fishermen and communities. Additionally, at their April 2017 meeting, the South Atlantic Council’s Mackerel Cobia Advisory Panel recommended that the South Atlantic Council review the March trip limit and consider a different trip limit for north of the Volusia/Brevard line that would support those multiday trips while still allowing year-round access to the king mackerel fishery. Further exacerbating the challenge of making trips far offshore, king mackerel trip limits are *daily* limits on the amount of king mackerel “that may be possessed on board, or landed, purchased, or sold from a vessel per day” (50 CFR §622.385).

1.3.1 Purpose and Need Statement

Purpose for Action

The purpose is to modify the commercial trip limit for Atlantic king mackerel in the Atlantic Southern Zone.

Need for Action

The need is to provide a commercial trip limit sufficient to support fishing activity (more revenue opportunity) while constraining harvest to the ACL and providing for year-round access.

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

Though king mackerel, Spanish mackerel, and cobia are included in the CMP FMP, king mackerel is the only species addressed in this framework amendment. King mackerel is managed as two migratory groups (Atlantic and Gulf) in the CMP FMP. The action in this framework amendment addresses management of Atlantic king mackerel only. In 2014, a stock assessment was completed for Gulf and Atlantic migratory group king mackerel (SEDAR 38 2014). Based on the results from the stock assessment, Amendment 26 established a year-round management boundary between the Gulf and South Atlantic Councils for king mackerel in the CMP FMP at the Dade/Monroe County, Florida, line (**Figure 1.4.1**). This boundary put the entire EEZ off the Florida Keys into the Gulf Council’s jurisdiction as part of the Gulf Southern Zone.

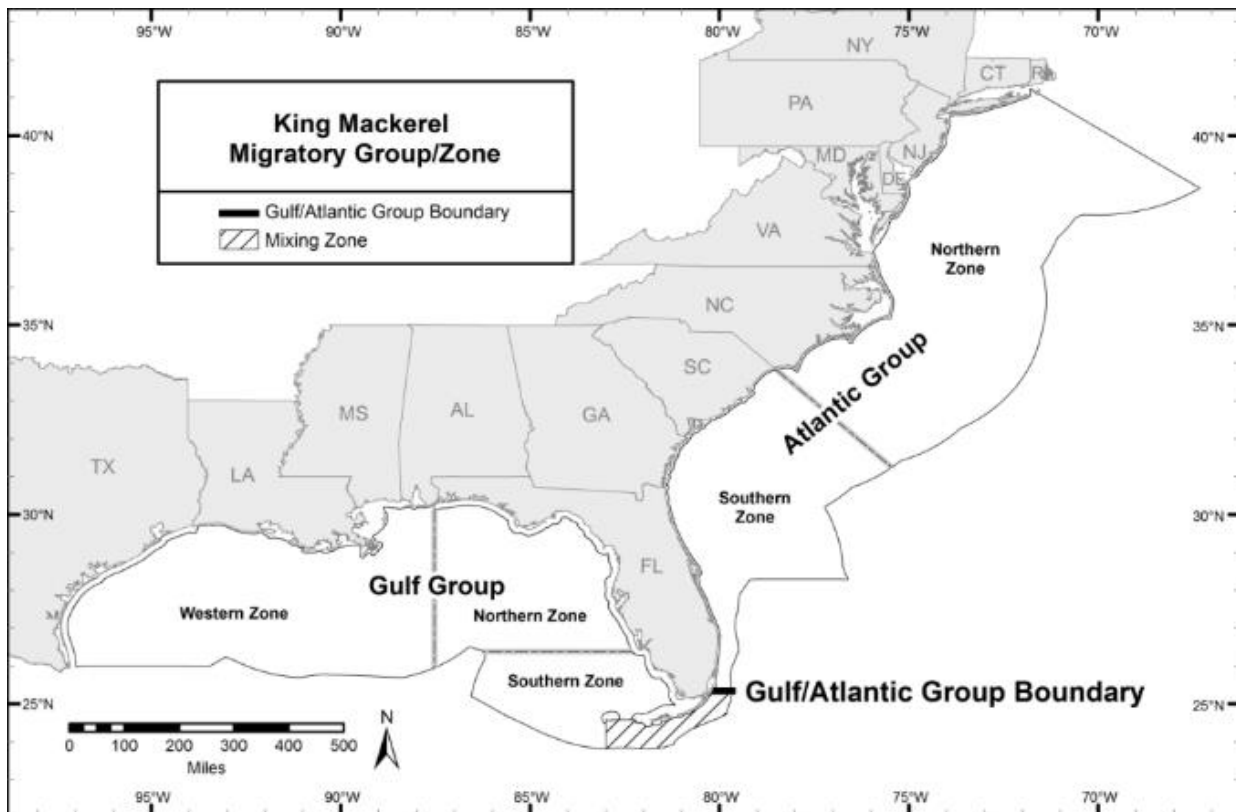


Figure 1.4.1. Boundary between Gulf and Atlantic king mackerel migratory groups.

Chapter 2. Proposed Action and Alternatives

Action. Modify the commercial trip limit for Atlantic king mackerel in Season 1:

Alternative 1 (No Action): The commercial trip limits for Atlantic king mackerel are:

North of the Flagler/Volusia line (29°25'N): 3,500 pounds year-round.

South of the Flagler/Volusia line (29°25'N) to the Miami-Dade/Monroe line (25°20'24"N):

- March 1 – March 31 (Season 1): 50-fish
- April 1 – September 30 (Season 1): 75-fish, unless NMFS determines that 75% or more of the Season 1 quota has been landed, then, 50-fish
- October 1 – January 31 (Season 2): 50-fish
- February 1 – end of February (Season 2): 50-fish, unless NMFS determines that less than 70% of the Season 2 quota has been landed, then, 75-fish.

Alternative 2: Adjust the commercial trip limits for Atlantic king mackerel in the Atlantic Southern Zone for Season 1:

North of the Flagler/Volusia line (29°25'N): 3,500 pounds year-round.

South of the Flagler/Volusia line (29°25'N) to the Volusia/Brevard line (28°47.8'N):

- March 1 – March 31 (Season 1): 50-fish
- April 1 – September 30 (Season 1): 3,500 pounds
- October 1 – January 31 (Season 2): 50-fish
- February 1 – end of February (Season 2): 50-fish, unless NMFS determines that less than 70% of the Season 2 quota has been landed, then, 75-fish.

South of the Volusia/Brevard line (28°47.8'N) to the Miami-Dade/Monroe line (25°20'24"N):

- March 1 – March 31 (Season 1): 50-fish
- April 1 – September 30 (Season 1): 75-fish, unless NMFS determines that 75% or more of the Season 1 quota has been landed, then, 50-fish
- October 1 – January 31 (Season 2): 50-fish
- February 1 – end of February (Season 2): 50-fish, unless NMFS determines that less than 70% of the Season 2 quota has been landed, then, 75-fish.

Preferred Alternative 3: Adjust the commercial trip limits for Atlantic king mackerel in the Atlantic Southern Zone for Season 1:

North of the Flagler/Volusia line (29°25'N): 3,500 pounds year-round.

South of the Flagler/Volusia line (29°25'N) to the Volusia/Brevard line (28°47.8' N):

- March 1 – March 31 (Season 1): 75-fish
- April 1 – September 30 (Season 1): 3,500 pounds
- October 1 – January 31 (Season 2): 50-fish
- February 1 – end of February (Season 2): 50-fish, unless NMFS determines that less than 70% of the Season 2 quota has been landed, then, 75-fish.

South of the Volusia/Brevard line (28°47.8'N) to the Miami-Dade/Monroe line (25°20'24"N):

- March 1 – March 31 (Season 1): 75-fish
- April 1 – September 30 (Season 1): 75-fish, unless NMFS determines that 75% or more of the Season 1 quota has been landed, then, 50-fish
- October 1 – January 31 (Season 2): 50-fish
- February 1 – end of February (Season 2): 50-fish, unless NMFS determines that less than 70% of the Season 2 quota has been landed, then, 75-fish.

Alternative 4: Adjust the commercial trip limits for Atlantic king mackerel in the Atlantic Southern Zone for Season 1:

North of the Flagler/Volusia line (29°25'N): 3,500 pounds year-round.

South of the Flagler/Volusia line (29°25'N) to the Volusia/Brevard line (28°47.8'N):

- March 1 – September 30 (Season 1): 3,500 pounds
- October 1 – January 31 (Season 2): 50-fish
- February 1 – end of February (Season 2): 50-fish, unless NMFS determines that less than 70% of the Season 2 quota has been landed, then, 75-fish.

South of the Volusia/Brevard line (28°47.8'N) to the Miami-Dade/Monroe line (25°20'24"N):

- March 1 – March 31 (Season 1): 50-fish
- April 1 – September 30 (Season 1): 75-fish, unless NMFS determines that 75% or more of the Season 1 quota has been landed, then, 50-fish
- October 1 – January 31 (Season 2): 50-fish
- February 1 – end of February (Season 2): 50-fish, unless NMFS determines that less than 70% of the Season 2 quota has been landed, then, 75-fish.

Note: Underlined language identifies the difference between the proposed alternative and Alternative 1 (No Action).

Discussion:

Alternative 1 (No Action) would not revise the trip limit system in the exclusive economic zone (EEZ) for the Atlantic Southern Zone during Season 1 (March - September). North of the Flagler/Volusia County line the trip limit would remain 3,500 pounds year-round. South of the Flagler/Volusia County line, the commercial quota begins with a trip limit of 50-fish from March 1 through March 31. Starting April 1 through September 30, there is a trip limit of 75-fish unless the National Marine Fisheries Service (NMFS) determines that 75% or more of the Season 1 quota has been landed, then the trip limit is reduced to 50-fish. Beginning October 1 through January 31 (Season 2), the trip limit is 50-fish. From February 1 through the end of February, the trip limit is 50-fish unless NMFS determines that less than 70% of the Season 2 quota has been landed by February 1, then the trip limit is raised to 75-fish. Trip limits for Season 2 remain the same under all proposed alternatives.

Alternative 2, Preferred Alternative 3, and Alternative 4 propose a higher Season 1 trip limit in the EEZ off Volusia County, Florida, and would be expected to benefit fishermen who reside in that county by increasing their trip efficiency. Fishermen operating in this area have indicated that they travel far offshore to fish and often fish on multiday trips when targeting king mackerel early in the fishing year. Fishery stakeholders, as well as the South Atlantic Fishery Management Council's Mackerel Cobia Advisory Panel, have indicated that **Alternative 1 (No Action)** does not provide a large enough trip limit sufficient to support the cost of these longer trips, resulting in reduced beneficial economic and social effects.

Alternative 2 would allow commercial fishermen that harvest king mackerel in the EEZ off Volusia County access to a 3,500-pound trip limit from April 1 through September 30 by shifting the trip limit dividing county line from Flagler/Volusia to Volusia/Brevard. The proposed 3,500-pound trip limit matches the trip limit in place prior to implementation of Amendment 26 to the Fishery Management Plan (FMP) for Coastal Migratory Pelagic (CMP) Resources in the Gulf of Mexico and Atlantic Region (Amendment 26). Based on logbook data for 2014-2016, there were no trips that landed 3,500 pounds in Volusia County. The highest king mackerel landings per trip were approximately 1,400 pounds in Volusia County. Therefore, the proposed trip limit of 3,500 pounds from April 1 through September 30 under **Alternative 2** is not expected to be restrictive on fishery participants or result in a shortened Season 1. **Alternative 2** would allow commercial fishermen who harvest king mackerel in the EEZ off Volusia County to land more king mackerel during April 1 through September 30, which could provide increased positive economic and social effects through additional revenue on king mackerel trips and increased trip efficiency. No negative biological effects would be expected since annual catch limits (ACL) are in place and accountability measures would be triggered if the ACL was met or was expected to be met.

Preferred Alternative 3 most closely resembles the trip limit in place prior to implementation of Amendment 26 and would allow fishermen in the South Atlantic Southern Zone, south of the Volusia/Flagler County line access to 75-fish during the month of March. Additionally, the alternative would allow commercial fishermen who harvest king mackerel in the EEZ off Volusia County to land up to a 3,500-pounds per trip from April 1 through September 30 by shifting the trip limit dividing county line from Flagler/Volusia to Volusia/Brevard. Based on the Atlantic king mackerel trip limit analysis from Amendment 26

(Appendix G, GMFMC and SAMFC 2011) this increase in the trip limit from 50-fish to 75-fish would increase overall landings by about 2%. Therefore, increasing the trip limit from 50-fish to 75-fish under **Preferred Alternative 3** is not expected to result in a shorter season due to the Season 1 quota being reached. The increased trip limit in March would be beneficial for fishermen and seafood dealers through increased revenue per trip and increased sales of king mackerel. These positive economic effects may be mitigated if the ex-vessel and subsequent supply chain prices of king mackerel drop due to the increase in landings. Additionally, the increase is expected to have positive impact on fishing communities by maximizing trip efficiency. The biological, social, and economic effects of an increase to 3,500-pound trip limit from April-September for fishermen who harvest king mackerel in the EEZ off Volusia County are expected to be the same as under **Alternative 2**.

Alternative 4 would shift the trip limit dividing county line from Flagler/Volusia to Volusia/Brevard for all of Season 1 providing fishermen who harvest king mackerel in the EEZ off Volusia County access to a trip limit of 3,500-pounds from March 1 through September 30. Similar to the other alternatives, the proposed March trip limit under **Alternative 4** of 3,500 pounds, would do little to constrain the season. In reviewing logbook data from 2014-2016, there were no trips with harvests more than 3,500 pounds in Volusia County.

The biological, social, and economic effects of this alternative would be similar to those described in **Alternative 2**, but would be greater, as an additional month under the higher trip limit of 3,500 pounds would be available for vessels that harvest king mackerel in the EEZ off Volusia County. Fishery stakeholders have expressed concern that a high trip limit during the month of March could result in a lower market price for king mackerel.

Chapter 3. Affected Environment

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

- **Habitat environment** (Section 3.1)
- **Biological environment** (Section 3.2)
- **Economic environment** (Section 3.3)
- **Social environment** (Section 3.4)
- **Administrative environment** (Section 3.5)

3.1 Habitat Environment

The Fishery Management Plan (FMP) for Coastal Migratory Pelagic (CMP) Resources in the Gulf of Mexico and Atlantic Region (CMP FMP) is a joint FMP between the South Atlantic Fishery Management Council (South Atlantic Council) and the Gulf of Mexico Fishery Management Council. The action in this amendment only applies to the Atlantic king mackerel fishery. The South Atlantic Council has management jurisdiction of the federal waters (3-200 nm) offshore of North Carolina, South Carolina, Georgia, and East Florida. Management of CMP species extends through the Mid-Atlantic region, which is discussed below.

South Atlantic Region

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). North of Cape Canaveral, Florida, to Cape Hatteras, North Carolina, 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 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. 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. 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.

In the South Atlantic, areas of unique habitat exist such as the Oculina Bank and large expanses of deepwater coral; however, regulations are currently in place to protect these areas. Additionally, there are several notable shipwrecks along the South Atlantic coast in state and federal waters including Lofthus (eastern Florida), SS Copenhagen (southeast Florida), Half Moon (southeast Florida), Hebe (Myrtle Beach, South Carolina), Georgiana (Charleston, South Carolina), Monitor (Cape Hatteras, North Carolina), Huron (Nags Head, North Carolina), and Metropolis (Corolla, North Carolina). The South Atlantic coastline is also home to numerous marshes and wetland ecosystems; however, these sensitive ecological environments do not extend into federal waters of the South Atlantic. The proposed action is not expected to alter fishing practices in any manner that would affect any of the above listed habitats or historic resources, nor would it alter any regulations intended to protect them.

Mid-Atlantic Region

Information about the physical environment of the Mid-Atlantic region was provided by the Mid-Atlantic Fishery Management Council and adapted from the 2016 Mackerel, Squid, and

Butterfish Specifications Environmental Assessment, available at:
<http://www.greateratlantic.fisheries.noaa.gov/regs/2016/January/16msb2016specspr.html>.

Climate, physiographic, and hydrographic differences separate the Atlantic Ocean from Maine to Florida into the New England-Middle Atlantic Area and the South Atlantic Area (division/mixing at Cape Hatteras, North Carolina). The inshore New England-Middle Atlantic area is fairly uniform physically and is influenced by many large coastal rivers and estuarine areas. The continental shelf (characterized by water less than 650 ft. in depth) extends seaward approximately 120 miles off Cape Cod, narrows gradually to 70 miles off New Jersey, and is 20 miles wide at Cape Hatteras. Surface circulation is generally southwesterly on the continental shelf during all seasons of the year, although this may be interrupted by coastal indrafting and some reversal of flow at the northern and southern extremities of the area. Water temperatures range from less than 33°F from the New York Bight north in the winter to over 80 °F off Cape Hatteras in summer.

Within the New England-Middle Atlantic Area, the Northeast U.S. Continental Shelf Large Marine Ecosystem includes the area from the Gulf of Maine to Cape Hatteras, extending from the coast seaward to the edge of the continental shelf, including the slope sea offshore to the Gulf Stream. The Northeast U.S. Continental Shelf Large Marine Ecosystem is a dynamic, highly productive, and intensively studied system providing a broad spectrum of ecosystem goods and services. This region, encompassing the continental shelf area between Cape Hatteras and the Gulf of Maine, spans approximately 250,000 km² and supports some of the highest revenue fisheries in the U.S. The system historically underwent profound changes due to very heavy exploitation by distant-water and domestic fishing fleets. Further, the region is experiencing changes in climate and physical forcing that have contributed to large-scale alteration in ecosystem structure and function. Projections indicate continued future climate change related to both short and medium terms cyclic trends as well as non-cyclic climate change.

A number of distinct subsystems comprise the region. The Gulf of Maine is an enclosed coastal sea, characterized by relatively cold waters and deep basins, with various sediment types. Georges Bank is a relatively shallow coastal plateau that slopes gently from north to south and has steep submarine canyons on its eastern and southeastern edge. It is characterized by highly productive, well-mixed waters and fast-moving currents. The Mid-Atlantic Bight is comprised of the sandy, relatively flat, gently sloping continental shelf from southern New England to Cape Hatteras, North Carolina. Detailed information on the affected physical and biological environments inhabited by the managed resources is available in Stevenson et al. (2006).

3.2 Biological and Ecological Environment

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

3.2.1 King Mackerel

King mackerel is a marine pelagic species that is found throughout the western Atlantic from the Gulf of Maine to Brazil, including the Gulf and Caribbean Sea, and from the shore to 200 m (656 ft) depths. The habitat of adults is the coastal waters out to the edge of the continental shelf. Within the area, the occurrence of king mackerel is governed by temperature and salinity.

They are seldom found in water temperatures less than 20°C; salinity preference varies, but they generally prefer high salinity, less than 36 parts per thousand. Adults are migratory, and the CMP FMP recognizes two migratory groups (Gulf and Atlantic). Typically, adult king mackerel are found in the southern climates (south Florida and extreme south Texas/Mexico) in the winter and farther north in the summer; however, some king mackerel overwinter in deeper waters off the mouth of the Mississippi River, and off the coast of North Carolina. Food availability and water temperature are likely causes of these migratory patterns. King mackerel have longevities of 24 to 26 years for females and 23 years for males (GMFMC and SAFMC 1985; MSAP 1996; Brooks and Ortiz 2004). Adults are known to spawn in areas of low turbidity, with salinity and temperatures of approximately 30 ppt and 27°C, respectively. There are major spawning areas off Louisiana and Texas in the Gulf (McEachran and Finucane 1979); and off the Carolinas, Cape Canaveral, and Miami in the western Atlantic (Wollam 1970; Schekter 1971; Mayo 1973). Spawning occurs generally from May through October with peak spawning in September (McEachran and Finucane 1979). Eggs are believed to be released and fertilized continuously during these months. Fifty percent of females are sexually mature between 450 to 499 mm (17.7 to 19.6 inches) in length and most are mature by the time they are 800 mm (35.4 inches) in length, or by about age 4. Fifty percent of males are sexually mature at age 3, at a length of 718 mm (28.3 inches). Females in U.S. waters, between the sizes of 446-1,489 mm (17.6 to 58.6 inches) release 69,000-12,200,000 eggs. Larvae of king mackerel have been found in waters with temperatures between 26-31° C (79-88° F). This larval developmental stage has a short duration. King mackerel can grow up to 0.54- 1.33 mm (0.02 to 0.05 inches) per day. This shortened larval stage decreases the vulnerability of the larvae and is related to the increased metabolism of this fast-swimming species. Juveniles are generally found closer to shore than adults and occasionally in estuaries.

3.2.2 Protected Species

The National Marine Fisheries Service (NMFS) completed a biological opinion on June 18, 2015, evaluating the impacts of the CMP fishery on Endangered Species Act (ESA)-listed species. In the biological opinion, NMFS determined that the proposed continued authorization of the CMP fishery is not likely to adversely affect any ESA-listed whales, Gulf of Mexico sturgeon, or corals. NMFS also determined that the CMP fishery is not likely to adversely affect designated critical habitats for elkhorn and staghorn coral or the Northwest Atlantic distinct population segments (DPS) of loggerhead sea turtle and will have no effect on designated critical habitat for the North Atlantic right whale. The 2015 opinion concluded that the CMP fishery's continued authorization is likely to adversely affect, but is not likely to jeopardize, green, hawksbill, Kemp's ridley, leatherback, or the Northwest Atlantic DPS of loggerhead sea turtles, Atlantic sturgeon, or the smalltooth sawfish. An incidental take statement for sea turtles, smalltooth sawfish, and Atlantic sturgeon was issued. Reasonable and prudent measures to minimize the impact of these incidental takes were specified, along with terms and conditions to implement them.

On April 6, 2016, NMFS and the U.S. Fish and Wildlife Service published a final rule (81 FR 20057), effective May 6, 2016, listing eleven DPSs of green sea turtle. The final rule, which superseded the previous green sea turtle listing, listed eight DPS as threatened and three DPSs as endangered. On June 29, 2016, NMFS published a final rule (81 FR 42268) to list Nassau grouper as threatened under the ESA, effective July 29, 2016. Because the range of both the North Atlantic and South Atlantic DPSs of green sea turtles and the Nassau grouper occur within

the action area of the CMP fishery, NMFS reinitiated consultation on the CMP fishery in March 2017. NMFS completed an Amendment to the 2015 Opinion on November 13, 2017. The amended biological opinion concluded that the CMP fishery's continued authorization is not likely to adversely affect Nassau grouper and is likely to adversely affect, but is not likely to jeopardize, the North Atlantic and South Atlantic DPSs of green sea turtle. A revised incidental take statement was issued.

Since then, NMFS listed the giant manta ray (*Manta birostris*) as threatened under the ESA, effective February 21, 2018. On January 30, 2018, NMFS listed the oceanic whitetip shark (*Carcharinus longimanus*) as threatened under the ESA, effective March 1, 2018.

On June 11, 2018, NMFS requested reinitiation of ESA section 7 consultation on the continued authorization of the Atlantic CMP fisheries under the Magnuson-Stevens Act to address the listings of the giant manta ray and oceanic whitetip sharks. In the same consultation request memorandum, NMFS developed ESA section 7(a)(2) and section 7(d) analyses that considered allowing the CMP fishery to continue during the reinitiation period. As a result of those analyses, NMFS has determined that allowing the Atlantic CMP fisheries to continue during the reinitiation period is not likely to jeopardize any protected species, nor does it constitute an irreversible or irretrievable commitment of resources.

The actions contained in Framework Amendment 6 are not anticipated to modify the operation of the CMP fishery in a manner that would cause effects to listed species or critical habitat that were not considered in the 2015 and 2017 biological opinions or in the June 11, 2018, analyses.

The Gulf of Mexico and South Atlantic CMP hook-and-line sector is classified in the 2018 Marine Mammal Protection Act List of Fisheries as a Category III fishery (83 FR 5349), 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.

3.2.3 Bycatch

A bycatch practicability analysis for CMP species is provided in Amendment 26 (GMFMC and SAFMC 2017), is incorporated herein by reference, and is summarized below.

In the Atlantic (Florida through New York) regions, most king mackerel are harvested with hook and line gear, which tends to have a low level of bycatch. The action in this framework amendment is not expected to significantly increase or decrease the magnitude of bycatch or bycatch mortality in the CMP fishery king mackerel hook and line sector. This sector has a relatively low baseline levels of bycatch, and that is not expected to change as a result of implementation of this framework amendment.

3.3 Economic Environment

King mackerel is one of ten key species in the South Atlantic Region (NMFS 2017). From 2011 through 2015, it represented 3.3% of annual landings revenue and 2.2% of annual landings

by weight from all species in the region. It is also a key species in East Florida and North Carolina. It accounted for an average of 8.8% of annual landings revenue from all species in East Florida and 1.23% of annual landings revenue from all species in North Carolina from 2011 through 2015 (FEUS 2015). King mackerel is not a key species in either South Carolina or Georgia. Landings revenue from key mackerel represented an average of 0.1% of annual total landings revenue in South Carolina during the 5-year period, and less than 500 pounds or \$500 of king mackerel was landed annually in Georgia during that same time (NMFS ALS).

Commercial landings of king mackerel benefit the states' economies, especially Florida and North Carolina. In 2015, for example, landings of king mackerel in East Florida supported 213 jobs, \$5.31 million in income impacts, \$8.03 million in total value-added impacts, and \$19.36 million in sales impacts (2015 \$) (Table 3.3.1). In North Carolina, 2015 landings supported 52 jobs, \$1.17 million in income impacts, \$1.53 million in total value-added impacts, and \$2.75 million in sales impacts. In South Carolina, 2015 landings supported 2 jobs, \$46 thousand in income impacts, \$60 thousand in total value-added impacts and \$107 thousand in sales impacts (NMFS SERO using model developed for and applied in NMFS (2016)).

Table 3.3.1. Economic impacts (2015 \$) from king mackerel landings.

Industry Sector	Economic Impacts to Florida				Economic Impacts to North Carolina			
	Jobs	Income (000s)	Total Value Added (000s)	Sales (000s)	Jobs	Income (000s)	Total Value Added (000s)	Sales (000s)
Harvesters	143	\$3,147	\$4,123	\$9,449	23	\$574	\$770	\$1,348
Primary dealers/processors	11	\$399	\$784	\$2,060	4	\$119	\$154	\$307
Secondary wholesalers/distributors	9	\$467	\$580	\$1,188	1	\$54	\$71	\$154
Grocers	7	\$187	\$377	\$965	3	\$69	\$87	\$144
Restaurants	43	\$1,110	\$2,162	\$5,693	21	\$349	\$452	\$801
Harvesters and seafood industry	213	\$5,310	\$8,026	\$19,355	52	\$1,165	\$1,534	\$2,754

Source: economic impact results calculated by NMFS SERO using the model developed for and applied in NMFS (2016).

King mackerel are harvested in both state and federal waters of the South Atlantic; however, most are harvested in federal waters. In 2012, for example, approximately 89% of king mackerel landed on Florida's east coast and 100% of king mackerel landed in North and South Carolina were harvested in federal waters (NMFS Fisheries Statistics and Economics Division, April 2, 2018).

Any commercial fishing vessel that harvests king mackerel in the Gulf, mid-Atlantic, or South Atlantic exclusive economic zone (EEZ) must have a valid limited-access federal king mackerel permit on board.

The number of permitted vessels that land king mackerel annually is substantially less than the number that is permitted to do so. From 2012 through 2016, for example, an annual average of 703 or approximately 48% of the permitted vessels landed the species (**Table 3.3.2**).

Table 3.3.2. Number and percent of permitted vessels with king mackerel landings in South Atlantic.

Year	Number of vessels		Percent of vessels
	With king mackerel permit	With king mackerel landings	
2012	1,512	752	49.7%
2013	1,493	688	46.1%
2014	1,478	707	47.8%
2015	1,460	693	47.5%
2016	1,438	676	47.0%
Average	1,479	703	47.5%

Source: SERO for the number of vessels with permits, 2012-2015, NMFS SERO Online List of Current Permit Holders as of February 28, 2018, for 2016 vessels and SEFSC Online Economic Query System, April 4, 2018, for number with landings, 2012-2016.

From 2012 through 2016, all king mackerel harvested from the South Atlantic by federally permitted vessels were landed in one of the four South Atlantic states, except in 2012 (**Table 3.3.3**). The majority of South Atlantic king mackerel harvested by federally permitted vessels are landed in Florida, followed in turn by North Carolina, although it is a distant second. In 2012, there were landings of king mackerel in two Gulf of Mexico states by vessels that also landed in a South Atlantic state. Because there have been no landings outside the South Atlantic states since 2013, the following description of landings and revenues by federally permitted vessels is limited to those with landings in South Atlantic states.

Table 3.3.3. Annual commercial landings of king mackerel (KM) from South Atlantic by federally permitted vessels, 2012-2016.

Year	Landings (lbs gw) of King Mackerel					Percentage of Total KM Landings			
	FL	NC	GA & SC	Other	Total	FL	NC	GA & SC	Other
2012	2,035,278	220,007	18,411	48,761	2,322,457	87.6%	9.5%	0.8%	2.1%
2013	1,429,880	266,411	9,678	0	1,705,969	83.8%	15.6%	0.6%	0.0%
2014	1,681,723	437,445	17,227	0	2,136,395	78.7%	20.5%	0.8%	0.0%
2015	1,733,211	285,911	14,460	0	2,033,582	85.2%	14.1%	0.7%	0.0%
2016	1,999,683	308,138	30,452	0	2,338,273	85.5%	13.2%	1.3%	0.0%
Average	1,775,955	303,582	18,046	0	2,097,583	84.2%	14.6%	0.8%	0.4%

Source: SEFSC Online Economic Query System, April 4, 2018.

The relative importance of king mackerel to federally permitted vessels differs across the South Atlantic states where they make their landings. King mackerel landings from the South Atlantic represented an average of approximately 32% of all landings (lbs gw) by the vessels that landed the species in Florida as opposed to approximately 14% of all landings by those that landed in North Carolina and 3% for those that landed the species in Georgia and South Carolina (**Table 3.3.4**).

Table 3.3.4. Pounds and percentage of all commercial landings by federally permitted vessels that landed South Atlantic king mackerel by state, 2012-2016.

Year	Landings (lbs gw) of All Species				Percentage from King Mackerel		
	FL	NC	GA & SC	Total	FL	NC	GA & SC
2012	6,092,248	2,321,814	752,967	9,167,029	33.4%	9.5%	2.4%
2013	5,188,884	2,029,590	997,903	8,216,377	27.6%	13.1%	1.0%
2014	5,788,037	2,681,135	629,921	9,099,093	29.1%	16.3%	2.7%
2015	5,248,354	1,751,750	634,616	7,634,720	33.0%	16.3%	2.3%
2016	5,613,618	2,152,679	565,833	8,332,130	35.6%	14.3%	5.4%
Average	1,775,955	303,582	18,046	2,097,583	31.7%	13.9%	2.8%

Source: SEFSC Online Economic Query System, April 4, 2018.

King mackerel harvested from the South Atlantic represented an average of approximately 33% of all landings revenue (2016 \$) by the vessels that landed the species in Florida as opposed to approximately 17% of all landings revenue by those that landed in North Carolina and 2% for those that landed the species in Georgia and South Carolina (**Table 3.3.5**).

Table 3.3.5. Landings revenue (2016 \$) from all species and percentage from king mackerel by state for federally permitted vessels that landed South Atlantic king mackerel, 2012-2016.

Year	Landings Revenue (2016 \$) from All Species				Percentage from King Mackerel		
	FL	NC	GA & SC	Total	FL	NC	GA & SC
2012	\$13,122,781	\$5,230,735	\$2,432,118	\$20,785,635	36.6%	13.0%	2.3%
2013	\$12,973,852	\$4,694,745	\$3,322,623	\$20,991,221	32.2%	15.7%	0.8%
2014	\$14,053,037	\$4,908,780	\$2,165,368	\$21,127,185	28.8%	20.8%	1.9%
2015	\$12,874,354	\$3,264,381	\$2,202,784	\$18,341,519	30.0%	19.0%	1.4%
2016	\$12,700,672	\$4,062,655	\$2,078,396	\$18,841,723	35.2%	16.4%	3.2%
Average	\$13,144,939	\$4,432,259	\$2,440,258	\$20,017,457	32.6%	16.9%	1.9%

Source: SEFSC Online Economic Query System, April 4, 2018.

Landings of king mackerel by federally permitted vessels benefit the economy. For example, landings of king mackerel from the South Atlantic in Florida from 2012 through 2016 yielded an annual average landings revenue of approximately \$4.27 million (2016 \$), and those landings generated 187 full- and part-time jobs, income impacts of approximately \$4.7 million, total value-added impacts of \$7.1 million and \$17.2 million in sales (output) impacts (**Table 3.3.6**).

Table 3.3.6. Average annual economic impacts of South Atlantic king mackerel landings by federally permitted vessels by state, 2012-2016.

State	Average Annual Landings Revenue	Average Annual Impacts from King Mackerel Landings			
		Jobs	1000s of 2016 Dollars		
			Income	Value Added	Sales
Florida	\$4,273,196	187	\$4,723	\$7,141	\$17,220
North Carolina	\$743,655	48	\$1,080	\$1,424	\$2,553
Georgia & South Carolina	\$43,870	6	\$158	\$225	\$436

Source: economic impact results calculated by NMFS SERO using the model developed for and applied in NMFS (2016).

Approximately 87% of the trips by federally permitted vessels that harvested South Atlantic king mackerel made their landings in Florida (**Table 3.3.7**). Another 12% were made by vessels that landed the species in North Carolina.

Table 3.3.7. Trips with South Atlantic king mackerel landings by federally permitted vessels by state, 2012-2016.

Year	Trips with King Mackerel Landings				Percentage of Total		
	FL	NC	GA & SC	Total	FL	NC	GA & SC
2012	8,680	947	99	9,726	89.2%	9.7%	1.0%
2013	6,907	1,049	131	8,087	85.4%	13.0%	1.6%
2014	8,362	1,439	96	9,897	84.5%	14.5%	1.0%
2015	8,769	1,055	111	9,935	88.3%	10.6%	1.1%
2016	9,651	1,078	105	10,834	89.1%	10.0%	1.0%
Average	8,474	1,114	108	9,696	87.3%	11.6%	1.1%

Source: SEFSC Online Economic Query System, April 4, 2018.

The majority of trips by federally permitted vessels land no more than 500 lbs gw of king mackerel. In Florida, for example, an average 92.2% of annual trips land no more than 500 lbs and 99.4% no more than 1,000 lbs gw (**Table 3.3.8**). Ninety-nine percent of North Carolina trips land no more than 1,500 lbs gw.

Table 3.3.8. Percent of average annual trips by landings (lbs gw) of South Atlantic king mackerel, 2012-2016.

State	Percent of Average Annual Number of Trips by Landings (lbs gw) of King Mackerel									
	1 - 500	501 - 750	751 - 1,000	1,001 - 1,500	1,501 - 2,000	2,001 - 2,500	2,501 - 3,000	3,001 - 3,500	Over 3,500	Total
FL	92.2%	6.1%	1.1%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
NC	82.1%	9.2%	4.9%	2.9%	0.7%	0.1%	0.1%	0.1%	0.0%	100.0%
SC & GA	90.6%	2.6%	3.0%	1.8%	1.8%	0.0%	0.0%	0.2%	0.0%	100.0%

Source: SEFSC Online Economic Query System, April 4, 2018.

Because the proposed rule directly affects fishing for king mackerel in federal waters off Florida, specifically from the Flagler/Volusia line to the Dade/Monroe line, the remainder of this section focuses exclusively on landings of king mackerel within Florida by federally permitted vessels.

The majority of king mackerel landings occur on Florida’s east coast. From 2012 through 2016, the east coast counties accounted for an annual average of approximately 93% of landings (lbs gw) and 95% of trips that landed king mackerel (**Tables 3.3.9** and **3.3.10**). Note that landings and trips that landed king mackerel both in Volusia County and counties north of Volusia increased during those five years (**Table 3.3.10**).

Table 3.3.9. Commercial landings (lbs gw) of South Atlantic king mackerel by federally permitted vessels and percentage of those landings in Florida, 2012-2016.

Year	King Mackerel Landings (lbs gw)					Percentage of Total FL			
	East Coast Counties			Inland and West Coast Counties	Total FL	East Coast Counties			Inland and West Coast
	North of Volusia	Volusia	South of Volusia through Dade			North of Volusia	Volusia	South of Volusia through Dade	
2012	9,335	83,740	1,776,332	165,865	2,035,272	0.46%	4.11%	87.28%	8.15%
2013	20,191	78,952	1,231,537	99,194	1,429,874	1.41%	5.52%	86.13%	6.94%
2014	19,800	176,970	1,355,798	129,151	1,681,719	1.18%	10.52%	80.62%	7.68%
2015	16,671	151,580	1,472,636	92,319	1,733,206	0.96%	8.75%	84.97%	5.33%
2016	45,786	155,285	1,707,841	90,767	1,999,679	2.29%	7.77%	85.41%	4.54%
Average	22,357	129,305	1,508,829	115,459	1,775,950	1.26%	7.33%	84.88%	6.53%

Source: SEFSC Online Economic Query System, April 4, 2018.

Table 3.3.10. Trips by federally permitted vessels that landed South Atlantic king mackerel and percentage of those trips in Florida, 2012-2016.

Year	Number of Trips that Landed SA King Mackerel					Percentage of Total FL			
	East Coast Counties			Inland and West Coast Counties	Total FL	East Coast Counties			Inland and West Coast
	North of Volusia	Volusia	South of Volusia through Dade			North of Volusia	Volusia	South of Volusia through Dade	
2012	71	237	7,829	543	8,680	0.8%	2.7%	90.2%	6.3%
2013	143	232	6,110	422	6,907	2.1%	3.4%	88.5%	6.1%
2014	140	528	7,300	394	8,362	1.7%	6.3%	87.3%	4.7%
2015	132	589	7,721	327	8,769	1.5%	6.7%	88.0%	3.7%
2016	211	604	8,463	373	9,651	2.2%	6.3%	87.7%	3.9%
Average	139	438	7,485	412	8,474	1.7%	5.1%	88.3%	4.9%

Source: SEFSC Online Economic Query System, April 4, 2018.

Average landings of king mackerel per trip and average annual landings of the species per vessel vary considerably by county area: from 151 lbs gw to 309 lbs gw by trip and from 875 to 2,876 lbs per vessel (**Table 3.3.11**). In counties south of Volusia, average annual landings per vessel were greater than 2,000 lbs gw every year and exceeded 3,000 in 2016.

Table 3.3.11. Average landings of king mackerel per trip and per vessel by federally permitted vessels that landed king mackerel and percentage of those trips in Florida, 2012-2016.

Year	Average Landings of King Mackerel per Trip				Average Landings of King Mackerel per Vessel			
	East Coast Counties			Inland and West Coast Counties	East Coast Counties			Inland and West Coast Counties
	North of Volusia	Volusia	South of Volusia through Dade		North of Volusia	Volusia	South of Volusia through Dade	
2012	131	353	227	305	445	2,094	2,888	1,746
2013	141	340	202	235	918	2,134	2,368	1,167
2014	141	335	186	328	762	3,687	2,633	1,484
2015	126	257	191	282	617	2,972	2,827	1,126
2016	217	257	202	243	1,635	2,930	3,665	1,094
Average	151	309	201	279	875	2,763	2,876	1,323

Source: SEFSC Online Economic Query System, April 4, 2018.

Although the magnitude of landings (lbs gw) per trip varies considerably, the large majority of trips land no more than 500 lbs of king mackerel. Approximately 85% to 94% of trips landed no more than 500 lbs gw of king mackerel annually in the four county areas, and approximately 90% to 99% trips landed no more than 750 lbs gw during the 5-year period from 2012 through 2016 (**Table 3.3.12**).

Table 3.3.12. Percent of average annual number of trips by landings (lbs gw) of king mackerel, 2012-2016.

FL Counties	Percent of Average Annual Number of Trips by Landings (lbs gw) of King Mackerel									
	1 - 500	501 - 750	751 - 1,000	1,001 - 1,500	1,501 - 2,000	2,001 - 2,500	2,501 - 3,000	3,001 - 3,500	Over 3,500	Total
North of Volusia	93.8%	3.2%	0.9%	0.9%	1.0%	0.1%	0.0%	0.1%	0.0%	100.0%
Volusia	85.8%	12.0%	1.6%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
South of Volusia	92.9%	5.9%	0.9%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Inland & West	85.1%	4.5%	3.4%	6.4%	0.0%	0.0%	0.0%	0.0%	0.4%	100.0%

Source: SEFSC Online Economic Query System, April 4, 2018.

There were trips that landed over 3,500 lbs gw of king mackerel from 2012 through 2016 (**Table 3.3.12**). It is expected that any trips that landed over 3,500 lbs gw during that time harvested king mackerel in federal waters between the Flagler/Volusia and Dade/Monroe lines in March when there was no trip limit prior to May 2017.

From 2012 through 2016, the east coast counties south of Volusia collectively accounted for an annual average of approximately 86% of total landings revenue from the species (**Table 3.3.13**). Note the generally increasing share of landings revenue from king mackerel landings in counties north of Volusia during that 5-year period.

Table 3.3.13. Percentage of total landings revenue from king mackerel by federally permitted vessels by county area, 2012-2016.

Year	Percentage of Total Landings Revenue from King Mackerel			
	East Coast Counties			Inland and West Coast
	North of Volusia	Volusia	South of Volusia through Dade	
2012	0.43%	4.46%	89.11%	6.00%
2013	1.53%	5.43%	88.70%	4.35%
2014	1.13%	10.63%	80.76%	7.49%
2015	0.94%	8.61%	85.22%	5.22%
2016	2.27%	7.53%	85.66%	4.54%
Average	1.26%	7.33%	85.89%	5.52%

Source: SEFSC Online Economic Query System, April 5, 2018.

Average annual landings revenue per vessel varies considerably across the four county areas (**Table 3.3.14**). While the average vessel that landed the species in counties south of Volusia had the highest annual landings revenue from king mackerel, more pounds of king mackerel were landed per trip in Volusia County.

Table 3.3.14. Average dockside revenue (2016 \$) from king mackerel landings per vessel per year and per trip, 2012-2016.

Year	Average Dockside Revenue (2016 \$) from King Mackerel							
	Per Vessel per Year				Per Trip			
	East Coast Counties				East Coast Counties			
	North of Volusia	Volusia	South of Volusia through Dade	Inland and West Coast	North of Volusia	Volusia	South of Volusia through Dade	Inland and West Coast
2012	\$982	\$5,363	\$6,967	\$3,071	\$290	\$905	\$547	\$532
2013	\$2,905	\$6,136	\$7,132	\$2,137	\$447	\$979	\$607	\$430
2014	\$1,754	\$8,960	\$6,335	\$3,481	\$315	\$815	\$448	\$769
2015	\$2,397	\$6,511	\$6,307	\$2,457	\$490	\$564	\$426	\$616
2016	\$3,632	\$6,354	\$8,226	\$2,506	\$482	\$558	\$453	\$544
Average	\$2,334	\$6,665	\$6,993	\$2,731	\$405	\$764	\$496	\$578

Source: SEFSC Online Economic Query System, April 4, 2018.

Landings of king mackerel by federally permitted vessels benefit Florida’s economy by generating jobs, income, value-added and sales impacts. Collectively, average annual landings of South Atlantic king mackerel by federally permitted vessels generate 188 jobs and approximately \$4.7 million (2016 \$) in income impacts in Florida (**Table 3.3.15**). The largest impacts are from landings in east coast counties south of Volusia.

Table 3.3.15. Average annual economic impacts of landings of king mackerel by federally permitted vessels.

Florida Counties	From Average Annual King Mackerel Landings				
	Landings Revenue (2016 \$)	Jobs	Annual Impacts		
			1000s of 2016 Dollars		
			Income	Value Added	Sales
North of Volusia	\$53,621	3	\$65	\$98	\$236
Volusia	\$308,090	14	\$340	\$515	\$1,242
South of Volusia	\$3,675,937	161	\$4,063	\$6,143	\$14,814
Inland & West Coast	\$235,540	10	\$260	\$394	\$949
Total	\$4,273,188	188	\$4,728	\$7,150	\$17,241

Source: economic impact results calculated by NMFS SERO using the model developed for and applied in NMFS (2016).

Among the federally permitted vessels that land king mackerel in the four county areas, there are considerable differences in average annual dockside revenue (2016 \$) per vessel across the areas. While the average inland and west coast vessel had annual revenue of \$44,645 from all landings from 2012 through 2016, the average vessel in Volusia County had annual revenue of \$15,047 (**Table 3.3.16**). The relative importance of king mackerel for the average Volusia County vessel, however, is substantially greater than that for the average inland and west coast vessel as shown in the percentages of annual landings revenue that derive from king mackerel.

Table 3.3.16. Average annual landings revenue (2016 \$) from all species per vessel per year and percentage of that revenue from king mackerel landings, 2012-2016.

Year	Average Annual Landings Revenue (2016 \$) from All Species per Vessel				Average Percent from King Mackerel Landings				
	East Coast Counties			Inland and West Coast Counties	East Coast Counties			Inland and West Coast Counties	Total FL
	North of Volusia	Volusia	South of Volusia through Dade		North of Volusia	Volusia	South of Volusia through Dade		
2012	\$14,526	\$12,641	\$15,277	\$32,733	6.8%	42.4%	45.6%	9.4%	34.0%
2013	\$42,966	\$13,076	\$15,656	\$41,692	6.8%	46.9%	45.6%	5.1%	30.1%
2014	\$37,367	\$20,142	\$14,599	\$51,105	4.7%	44.5%	43.4%	6.8%	28.2%
2015	\$33,777	\$14,750	\$13,958	\$50,678	7.1%	44.1%	45.2%	4.8%	28.8%
2016	\$31,753	\$14,628	\$18,298	\$47,020	11.4%	43.4%	45.0%	5.3%	31.2%
Average	\$32,078	\$15,047	\$15,558	\$44,646	7.3%	44.3%	44.9%	6.3%	30.5%

Source: SEFSC Online Economic Query System, April 4, 2018.

3.4 Social Environment

This description of the social environment is limited to those communities along Florida’s east coast (excluding the Keys), Georgia, South Carolina and North Carolina. Most description is limited to those communities with high regional quotient of king mackerel landings.

The communities displayed below represent those based upon the community’s pounds of king mackerel commercial landings divided by the regional pounds of king mackerel landings referred to as a “regional quotient.” These data were assembled from the accumulated landings system with dealer addresses which includes species from both state and federal waters landed from 2012-2016.

The community of Cocoa, Florida has a regional quotient for king mackerel that is twice that of other South Atlantic fishing communities (**Figure 3.4.1**). Six North Carolina communities rank in the top fifteen, but no South Carolina or Georgia communities are included in the top 15. Palm Beach Gardens, Florida is included in **Figure 3.4.1** because in earlier years it was ranked in the top five communities in terms of its king mackerel regional quotient (RQ) but has dropped out of the top fifteen in the most recent years. Miami was also ranked in the top five previously but has dropped in rank more recently.

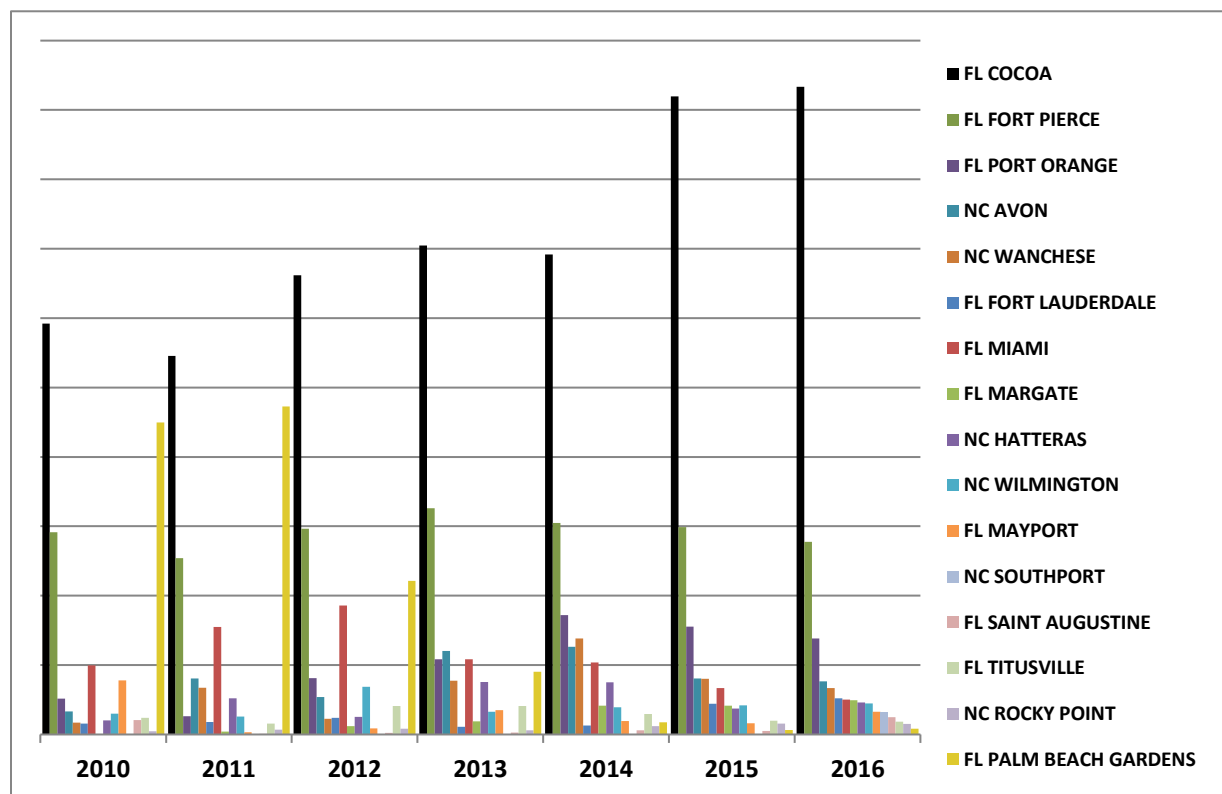


Figure 3.4.1. Sixteen South Atlantic communities ranked by 2016 pounds regional quotient (RQ) of king mackerel based on dealer landings.

Source: SERO Community ALS 2016.

Note: The actual RQ values (y-axis) are omitted from the figure to maintain confidentiality.

Engagement and Reliance on Commercial Fishing

For the communities with high king mackerel RQ (**Figure 3.4.2.**), those that demonstrate high levels of commercial fishing engagement in Florida include Cocoa, Ft. Lauderdale, Fort Pierce, Mayport, Miami, Palm Beach Gardens, Port Orange, and Saint Augustine. Communities with substantial commercial engagement in North Carolina include Hatteras, Southport, Wanchese and Wilmington. There were no communities in South Carolina or Georgia with high king mackerel RQs within the top fifteen. It should also be noted that this measure of commercial fishing engagement is an overall measure that includes all landings and permits within a community.

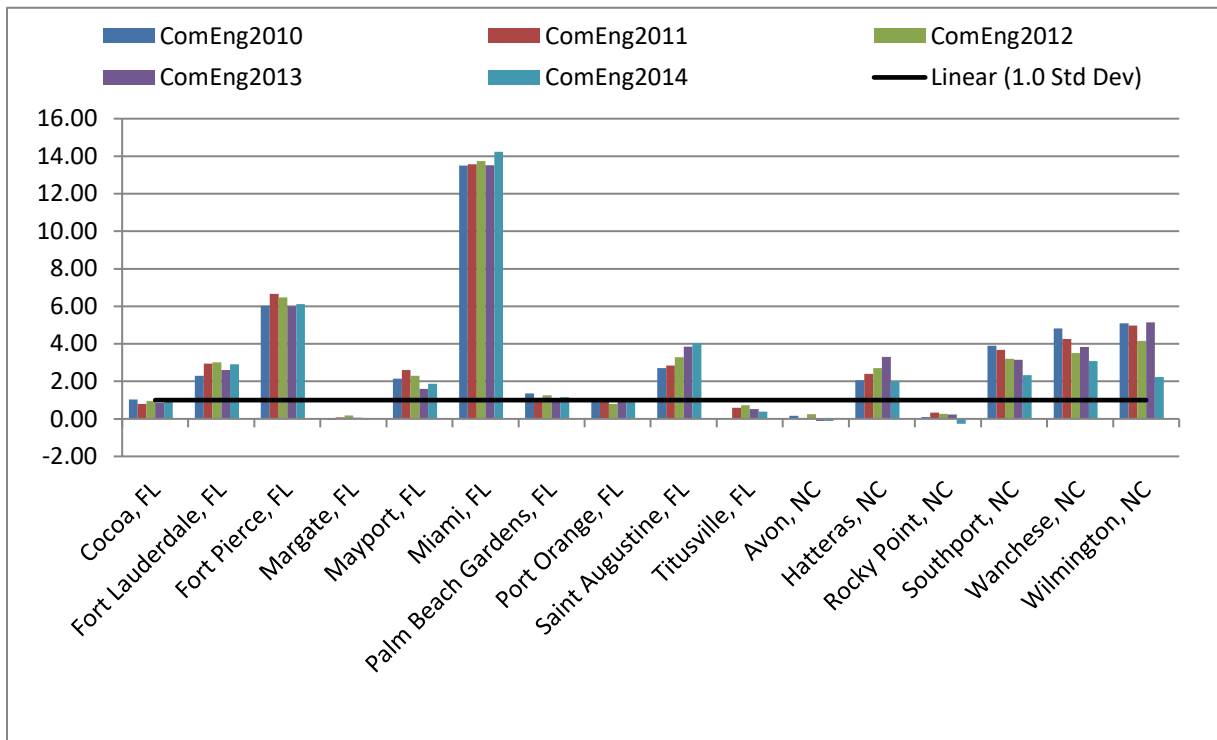


Figure 3.4.2. Commercial fishing engagement for South Atlantic communities with the top regional quotients for king mackerel.

Source: Southeast Regional Office, Social Indicator Database 2017.

Very few communities with high king mackerel RQ demonstrate high commercial fishing reliance (**Figure 3.4.3.**). Those that do demonstrate high commercial fishing reliance are Mayport, Florida; and Hatteras, Southport, and Wanchese, North Carolina. Most of the communities that have higher reliance on commercial fishing also have small populations. Mayport, Florida, for instance, has a population of less than thirty. At the time the indices were constructed, the community of Avon, North Carolina was not included in the American Community Survey by the Census Bureau and therefore did not have a population total to calculate fishing reliance and likely has a small population. It should be noted that several North Carolina communities (Hatteras, Southport and Wanchese) are both highly engaged and highly reliant. For those communities, the commercial fishing economy may play a larger role within the community overall.

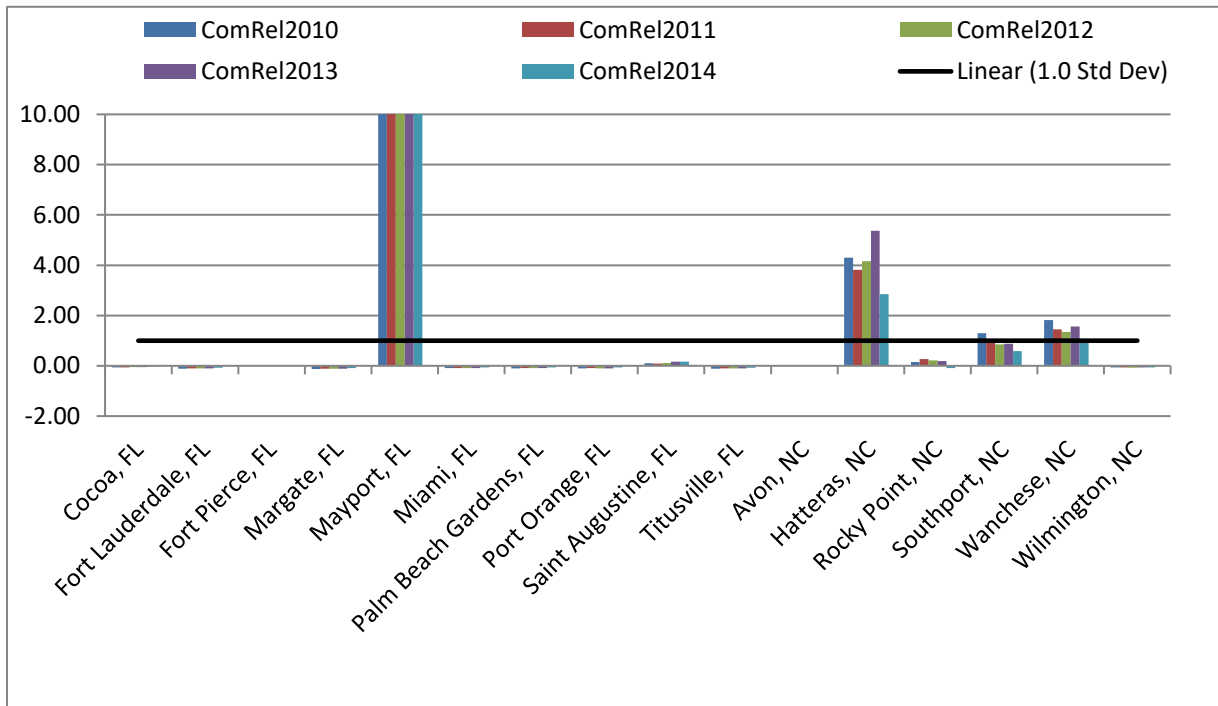


Figure 3.4.3. Commercial fishing reliance for South Atlantic communities with the top regional quotients for king mackerel.

Source: Southeast Regional Office, Social Indicator Database 2018.

King Mackerel Permits

The numbers of commercial king mackerel permits by county for Florida and Georgia are presented in **Figure 3.4.4**. Most counties show stable trends in their numbers, although Palm Beach and Broward Counties have seen a decline over the past five years; whereas Brevard County on the other had has seen a slight increase. Most Georgia counties have few permits and are stable or seen a slight decrease in terms of number of permits.

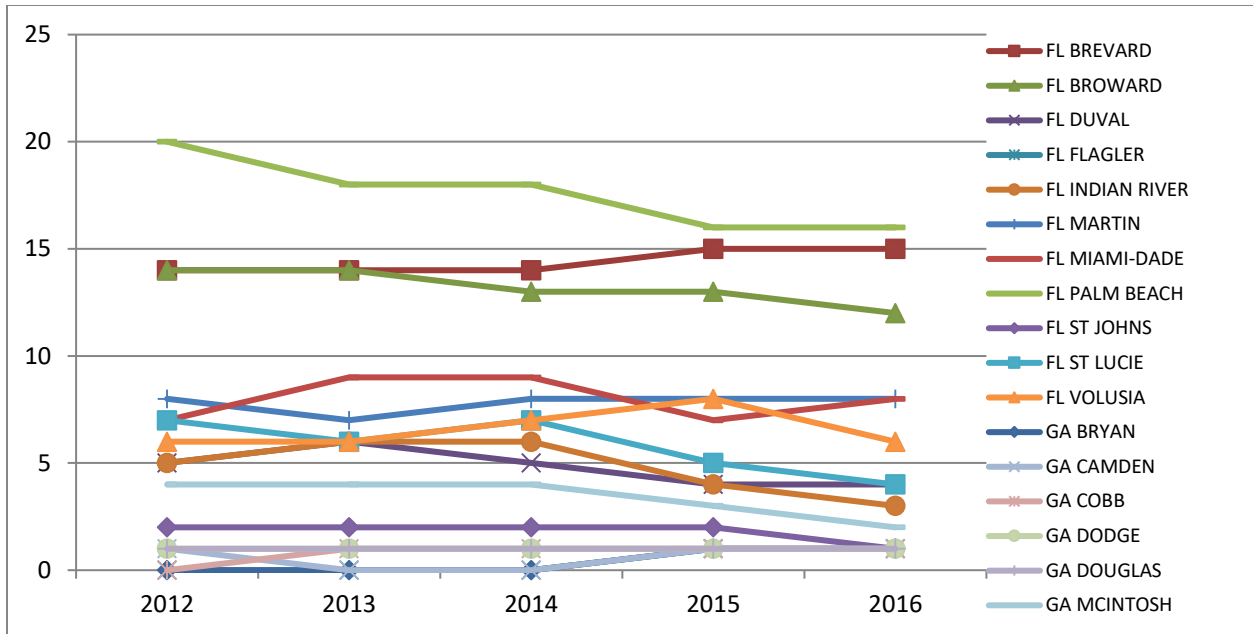


Figure 3.4.4. Commercial king mackerel permits for Florida and Georgia Counties 2012-2016.
 Source: Southeast Regional Office, Permits Database 2018.

For counties in North and South Carolina, trends have been fairly stable in terms number of king mackerel permits. Brunswick and Carteret counties have seen slight declines in their numbers while Carteret seems to have remained fairly stable over the past five years. Counties in South Carolina have relatively few permits, although Charleston County has seen a slight increase recently.

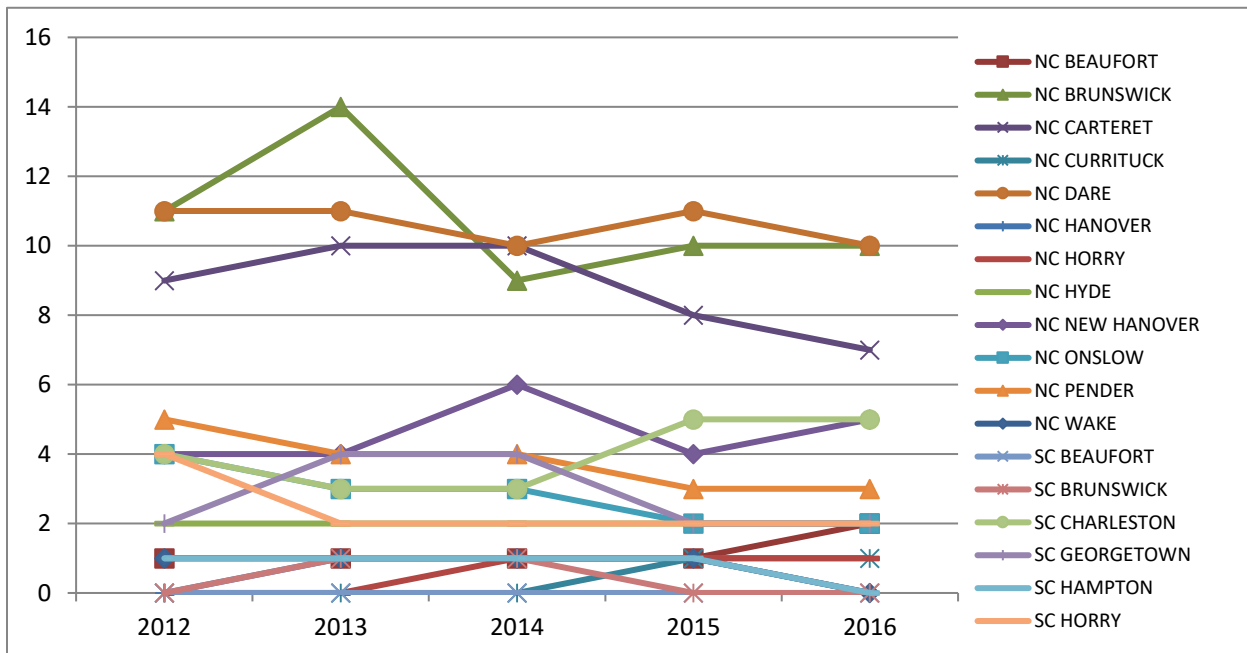


Figure 3.4.5. Commercial king mackerel permits for North Carolina and South Carolina Counties 2012-2016.
 Source: Southeast Regional Office, Permits Database 2018.

Overall, most king mackerel permitted fishermen reside in Florida counties with fishermen in North Carolina counties holding the second most number of permits by state.

3.5 Administrative Environment

3.5.1 Federal Fishery Management

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

Responsibility for federal fishery management decision-making is divided between the 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 promulgating regulations to implement proposed plans and amendments after ensuring that management measures are consistent with the Magnuson-Stevens Act, and with other applicable laws summarized in Appendix D. In most cases, the Secretary has delegated this authority to NMFS.

The Gulf Council is responsible for fishery resources in federal waters of the Gulf of Mexico. These waters extend to 200 nautical miles offshore from the nine-mile seaward boundary of the Florida and Texas, and the three-mile seaward boundary of the Alabama, Mississippi, and Louisiana; however, a bill signed by the U.S. President in December 2016 extended the seaward boundary of state waters for Alabama, Mississippi, and Louisiana to nine miles until October 2016. The Council consists of 17 voting members: 11 public members appointed by the Secretary; one each from the fishery agencies of Texas, Louisiana, Mississippi, Alabama, and Florida; and one from NOAA Fisheries.

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

The 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, but has delegated management of CMP species to the South Atlantic Council.

The Councils use Scientific and Statistical Committees to review the data and science being used in assessments and fishery management plans/amendments. Regulations contained within FMPs are enforced through actions of the NOAA's Office for Law Enforcement, 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, 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.

3.5.2 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 states natural resources, all states cooperate with numerous state and federal regulatory agencies when managing marine resources.

The states are also involved through the Gulf of Mexico Marine Fisheries Commission (GSMFC) and the ASMFC 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 Quality <http://deq.nc.gov/>

Chapter 4. Environmental Effects

Action. Modify the commercial trip limit for Atlantic king mackerel in Season 1.

4.1.1 Biological Effects

The trip limits described in **Alternative 1 (No Action)** were implemented and effective on May 11, 2017, through the final rule to implement Amendment 26 to the CMP FMP (GMFMC and SAMFC 2016) (82 FR 17387; April 11, 2017). Currently, a 3,500-pound trip limit is in effect for areas north of the Flagler/Volusia county line, during all of Season 1 (March 1-September 30). South of the Flagler/Volusia line, the trip limit changes throughout the year, beginning with a 50-fish trip limit for the month of March and then a trip limit of 75-fish for the rest of Season 1. During Season 2 (October 1- end of February), a 50-fish trip limit exists until January 31. If the National Marine Fisheries Service (NMFS) determines that less than 70% of the Season 2 quota has been landed the trip limit adjusts to 75-fish.

Under all the proposed action alternatives, the trip limit of 3,500 pounds in the exclusive economic zone (EEZ) north of the Flagler/Volusia county line would remain at 3,500 pounds, year-round. The trip limits in the EEZ between the Volusia/Brevard line (28°47.8'N) and the Miami-Dade/Monroe line (25°20'24"N) from April 1 through the end of February would remain as is currently in place under **Alternative 1 (No Action)**.

Alternatives*

1. The commercial trip limits for Atlantic king mackerel:
 - North of the Flagler/Volusia line (29°25'N): 3,500 pounds year-round.
 - South of the Flagler/Volusia line (29°25'N) to the Miami-Dade/Monroe line (25°20'24"N):
 - March 1 – March 31 (Season 1): 50-fish*
 - April 1 – September 30 (Season 1): 75-fish, unless NMFS determines that 75% or more of the Season 1 quota has been landed, then, 50-fish*
 - October 1 – January 31 (Season 2): 50-fish*
 - February 1 – end of February (Season 2): 50-fish, unless NMFS determines that less than 70% of the Season 2 quota has been landed, then, 75-fish.*
2. Adjust the commercial trip limits for Atlantic king mackerel in the Atlantic Southern Zone for Season 1:
 - South of the Flagler/Volusia line (29°25'N) to the Volusia/Brevard line (28°47.8'N):
 - April 1 – September 30 (Season 1): 3,500 pounds*
3. **Adjust the commercial trip limits for Atlantic king mackerel in the Atlantic Southern Zone for Season 1:**
 - South of the Flagler/Volusia line (29°25'N) to the Volusia/Brevard line (28°47.8' N):**
 - March 1 – March 31 (Season 1): 75-fish***
 - April 1 – September 30 (Season 1): 3,500 pounds***
 - South of the Volusia/Brevard line (28°47.8'N) to the Miami-Dade/Monroe line (25°20'24"N):**
 - March 1 – March 31 (Season 1): 75-fish***
4. Adjust the commercial trip limits for Atlantic king mackerel in the Atlantic Southern Zone for Season 1:
 - South of the Flagler/Volusia line (29°25'N) to the Volusia/Brevard line (28°47.8'N):
 - March 1 – September 30 (Season 1): 3,500 pounds*

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

The only changes proposed by this framework amendment are to modify trip limits in the EEZ between the Flagler/Volusia line (29°25'N) and the Miami-Dade/Monroe line (25°20'24"N). **Alternative 2** would establish an April 1-September 30 trip limit of 3,500 pounds in the EEZ off Volusia County. **Preferred Alternative 3** would establish a 75-fish trip limit for the month of March between the Flagler/Volusia line and the Miami-Dade/Monroe line (25°20'24"N) and a 3,500-pound trip limit for April 1-September 30 off Volusia County. **Alternative 4** would establish a 3,500-pound trip limit from March 1-September 30 off Volusia County.

Prior to Amendment 26, which was implemented in 2017, the trip limit in the EEZ off Volusia County was 3,500 pounds from April 1-October 30. Due to the recent implementation of the trip limits under **Alternative 1 (No Action)**, there are limited data to analyze the proposed actions against the status quo. The current available logbook data have only 43 commercial trips for fishermen landing at least one pound of king mackerel in Volusia County. The lack of data makes the trip limit alternatives difficult to analyze. The most recent complete set of data is from logbooks from 2014-2016.

Landings of Atlantic king mackerel from April 1- September 30 were reviewed for trips that landed king mackerel in Volusia County. Based on logbook data for 2014-2016, there were no trips that landed 3,500 pounds in Volusia County. The highest king mackerel landings in Volusia County per trip was approximately 1,400 pounds. Therefore, the proposed trip limit of 3,500 pounds from April 1 to September 30 under **Alternative 2** and **Preferred Alternative 3** is not expected to constrain the overall harvest and would have little effect on extending the season.

Additionally, **Preferred Alternative 3** and **Alternative 4** propose to modify the trip limit from March 1 to March 31 for the area in the EEZ between the Flagler/Volusia and Miami-Dade/Monroe County lines and the Flagler/Volusia and Volusia/Brevard County lines, respectively. **Preferred Alternative 3** proposes an increase in the trip limit in March from 50-fish to 75-fish. Based on the Atlantic king mackerel trip limit analysis from Amendment 26 (Appendix G, GMFMC and SAMFC 2016), this increase in the trip limit would increase the overall landings by about 2%. Therefore, increasing the trip limit under **Preferred Alternative 3** is not expected to have a substantial impact on overall landings. Similarly, the proposed March trip limit under **Alternative 4** of 3,500 pounds would do little to constrain harvest. In reviewing logbook data from 2014-2016, there were no trips with harvests more than 3,500 pounds in Volusia County.

Atlantic king mackerel landings are highly variable from year to year. The recent Atlantic king mackerel landings for fishing years 2015/2016, 2016/2017, and 2017/2018 have been very low (Appendix D, Figure D2.) Therefore, assuming recent landings reflect future landings, no federal commercial closures of Atlantic king mackerel are expected as a result of these alternatives. The actions in this framework amendment only modify trip limits in the EEZ off Volusia County and these actions are not expected to have a large impact on overall landings. Generally, trip limits would slow the rate of harvest and may reduce the number of regulatory discards associated with Atlantic group king mackerel. However, regulatory discards may increase if the fishing season closes early, constituting a negative biological effect.

Because **Alternative 1 (No Action)** would not increase the trip limit, it could be expected to have the greatest biological benefit to the stock, followed by **Alternative 2, Preferred Alternative 3** and **Alternative 4**, which would each increase the trip limits. However, since the proposed trip limits under **Alternatives 2 - 4** are not expected to constrain the overall harvest and would have little effect on extending the season, the biological effects of all alternatives would be expected to be neutral. Furthermore, annual catch limits (ACL) are in place to prevent overharvesting, and accountability measures are in place to take action if ACLs are exceeded.

Establishing commercial trip limits would not be expected to have any impact on essential fish habitat, habitat areas of particular concern, protected species or bycatch. In a 2015 biological opinion, NMFS determined the gillnet gear used in the federal CMP fisheries of the Atlantic and Gulf of Mexico may have adversely affected sea turtles, smalltooth sawfish, and Atlantic sturgeon in the past via entanglement and, in the case of sea turtles, via forced submergence. Commercial and recreational hook-and-line gear and commercial cast net gear, regularly used to target king mackerel, are not likely adversely affected these species. The 2015 biological opinion provides an incidental take statement for species which may interact with coastal migratory pelagic fisheries.

4.1.2 Economic Effects

Trip limits, especially those that restrict larger landings per trip, can introduce economic inefficiencies by increasing the number of trips and associated trip costs to harvest the same overall poundage of fish and/or forcing them to modify their catch mix, potentially towards lower valued species. Particularly successful trips might have to end earlier than they otherwise would because the trip limit has been reached.

In general, positive aspects of trip limits could be that the season would stay open longer; reduce catches while fish are spawning; and/or reduce the number of dead discards that could occur after a closure. Dead discards are fish that cannot otherwise be sold and, depending on the number of dead discards, could have an effect on future stock status, as well as reduce direct positive economic effects on some trips. Another potential positive aspect of trip limits may occur should the limits restrict the amount of fish coming to market, which may provide some positive support for ex-vessel prices.

The alternatives focus on commercial trip limits during Season 1 (March 1 to September 30) of the fishing year for Atlantic king mackerel since all the alternatives have the same provisions for Season 2 (October 1 to the end of February). **Alternative 1 (No Action)** maintains the current management options for both Season 1 and Season 2 implemented via Amendment 26 (GMFMC and SAMFC 2016).

Alternative 2 would add in the EEZ off Volusia County to the area managed by a 3,500-pound commercial trip limit for king mackerel instead of a 75-fish trip limit from April 1-September 30. This would allow fishery participants that harvest king mackerel in those waters access to a higher trip limit which would potentially provide positive economic through additional potential revenue on king mackerel trips during those months. Since all trips landing king mackerel in recent years have harvested well below 3,500 pounds of the species, this limit is

not expected to be restrictive on fishery participants. Approximately 5% of the commercial South Atlantic king mackerel effort in Florida and 7% of the commercial South Atlantic king mackerel landings in Florida in recent years have occurred onboard vessels offloading in Volusia County (**Table 3.3.10**). Therefore, the effects on total landings from the marginal increase in total landings from this action are most likely negligible. As such, the potential effects on ex-vessel price are likely negligible as well.

Preferred Alternative 3 would increase the commercial trip limit in the EEZ south of the Flagler County/Volusia County line to the Miami-Dade/Monroe County line during the month of March from 50 fish to 75 fish. The majority of commercial South Atlantic king mackerel effort and landings (93% and 92% respectively) in Florida has occurred in this general area. An increase of 50% in the trip limit for this region (Volusia through Dade County) may allow for a notable increase in landings for the month of March, which would likely be beneficial for fishery participants and seafood dealers through increased revenue per trip and increased sales of king mackerel. These positive economic effects may be mitigated if the ex-vessel and subsequent supply chain prices of king mackerel drop due to the increase in landings. Additionally, suppressed ex-vessel prices may have negative economic effects for commercial king mackerel participants operating in other areas such as the Northern Zone or the Gulf of Mexico Region. Regardless, the marginal economic effects (positive or negative) would only occur over one month (March) and would not likely affect the overall season length or the trip limit that may be triggered if 70% of the seasonal quota is landed, as the commercial sector ACL for the Southern Zone has been consistently under-harvested in recent years. **Preferred Alternative 3** would also include in the EEZ Volusia County in the area managed by a 3,500-pound commercial trip limit for king mackerel instead of a 75-fish trip limit from April 1- September 30. The economic effects of this portion of the alternative would be similar to those described in **Alternative 2**.

Alternative 4 would include the EEZ off Volusia County in the area managed by a 3,500-pound commercial trip limit for king mackerel during all of Season 1 instead of a 50-fish trip limit from March 1- March 31 and a 75-fish trip limit from April 1- September 30. The effects of this alternative would be similar to those described in **Alternative 2**, but would be more pronounced, as an additional month under the higher trip limit of 3,500 pounds would be available for vessels harvesting king mackerel in the EEZ off Volusia County.

In terms of potential positive economic effects for fishery participants in the Southern Zone, **Preferred Alternative 3** would likely provide the most positive economic effects followed by **Alternative 4**, **Alternative 2**, and **Alternative 1 (No Action)**.

4.1.3 Social Effects

This action proposes to modify the commercial trip limits for Atlantic king mackerel due to problems expressed by fishermen who travel long distances to reach fishing grounds. **Alternative 1 (No Action)** would not revise the trip limit system for the Atlantic Southern Zone during Season 1 (March - September), which could leave a decrease in trip efficiency and result in negative direct and indirect social effects for fishermen in communities that require longer travel time to fishing grounds, such as those in the EEZ off Volusia County, Florida.

Alternative 2, Preferred Alternative 3, and Alternative 4 propose a higher Season 1 trip limit for the EEZ off Volusia County, Florida, and would be expected to directly benefit fishermen operating in the EEZ off Volusia County by allowing for larger landings and thereby increasing trip efficiency. Fishermen operating in these communities have indicated that they travel far offshore and often on multiday trips when targeting king mackerel early in the fishing year. Fishery stakeholders, as well as the South Atlantic Fishery Management Council's Mackerel Cobia Advisory Panel, have indicated that **Alternative 1 (No Action)** does not provide large enough trip limit to pay for these trips. Low trip limits that result in decreased earnings could have negative indirect effects on coastal communities such lower job opportunities for crew in addition to lowering the supply of king 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 proposed trip limits under **Alternative 2, Preferred Alternative 3, and Alternative 4**.

In general, the potential social effects of a higher trip limit would depend on how fishermen are affected by either higher trip limits and a shorter season, or lower trip limits and longer seasons. As discussed in **Section 4.1.1**, under the proposed Season 1 trip limits, when compared to landings in the past several fishing years, there would likely not be an early closure and communities would not experience negative social effects. Additionally, this action does not propose removal of the step-down currently in place from April-September. The step-down provides flexibility by helping to slow the rate of harvest later in the season while still allowing king mackerel fishing.

Alternative 2 would allow commercial fishermen in the EEZ off Volusia County easier access to a 3,500-pound trip limit from April-September. The average annual number of trips from commercial fishermen who landed their fish in Volusia County indicate that approximately 97.8% of trips land no more than 750 lbs gw of king mackerel (**Table 3.3.12**). Additionally, commercial fishermen who land their fish in Volusia County are responsible for approximately 7% of king mackerel landings in Eastern Florida (**Table 3.3.10**). Given these averages, the increased trip limit proposed in **Alternative 2** is not anticipated to result in negative social effects associated with the commercial king mackerel Season 1 quota being reached.

Preferred Alternative 3 most closely resembles the trip limit in place prior to implementation of Coastal Migratory Pelagics Amendment 26 and would give fishermen who operate in the South Atlantic Southern Zone south of the Volusia/Flagler County line easier access to 75-fish during the month of March. Additionally, it would provide commercial fishermen that fish in the EEZ off Volusia County easier access to a 3,500-pound trip limit from April 1 through September 30. Stakeholders have indicated that these alternatives most accurately reflects how the fishery was prosecuted prior to implementation of Amendment 26 to the CMP FMP and would be most beneficial for coastal communities. The increase to 75-fish per trip for the entire region south of the Flagler/Volusia County line is expected to have a positive effect on fishing communities in Volusia County by improving trip efficiency. Since this increased trip limit occurs for the month of March only, it is unlikely it would cause negative social effects resultant from a shorter season due to the Season 1 quota being reached. The social

effects of an increase to 3,500-pound trip limit from April-September for communities in Volusia County is expected to be the same as under **Alternative 2**.

Alternative 4 would give fishermen that harvest king mackerel in the EEZ off Volusia County easier access to a trip limit of 3,500 pounds for the entirety of Season 1 (March 1 through September 30). The direct and indirect social effects of this alternative are expected to be similar, but more pronounced, as those under **Alternative 2** with the inclusion of the month of March in the 3,500-pound trip limit. Fishery stakeholders have expressed concern that a high trip limit during the month of March could result in a lower market price for king mackerel and have a negative effect on coastal communities.

Given the role fishermen who reside in Volusia County play in the harvest of Atlantic king mackerel and comments from fishery stakeholders, **Preferred Alternative 3** would likely be the most beneficial to coastal communities followed by **Alternative 4**, **Alternative 2**, **Alternative 1 (No Action)**.

4.1.4 Administrative Effects

Alternative 2, **Preferred Alternative 3** and **Alternative 4** would have adverse administrative effects to by establishing a trip limit for Volusia County, in addition to the trip limits for the area north of Volusia County and south of Volusia County. **Alternative 1 (No Action)** provides the most simplified trip limit scenario compared to **Alternative 2**, **Preferred Alternative 3**, and **Alternative 4**. Of the proposed alternatives, **Alternative 4** would be the least administratively burdensome in that it proposes a March-September trip limit of 3,500 pounds in the EEZ off Volusia County. Under this alternative, there is no separate trip limit for March, as in **Preferred Alternative 3** and **Alternative 4**. However, none of the proposed alternatives are more administratively burdensome than the other. All the alternatives have step-downs in trip limits when certain percentages of the quota have been met. This step-down trip limit adds another layer of administrative burden associated with monitoring the quota and rulemaking. The administrative impacts associated with the alternatives would be associated with rulemaking, outreach, and enforcement.

Chapter 5. Council’s Choice for the Preferred Alternative

5.1 Action: Modify the commercial trip limit for Atlantic king mackerel in Season 1:

5.1.1 Mackerel Cobia (MC) Advisory Panel (AP) Comments and Recommendations

The South Atlantic Fishery Management Council’s (South Atlantic Council) **Mackerel Cobia Advisory Panel (MC AP) supported Preferred Alternative 3**. The MC AP noted that Amendment 26 was reviewed during their April 2016 meeting which was shorter than typical AP meetings. Due to the complexity of the amendment, the problem with the proposed trip limits for the Atlantic Southern Zone were not immediately identified. The MC AP also noted that in the wintertime fish are found in tight schools and are easy to catch. However, by April the fish split up and are not as easy to catch. As a result, it is highly unlikely that anyone is going to catch 3,500 pounds of fish. Fishermen from Sebastian, Florida, and Cape Canaveral, Florida, will often travel north and fish in the exclusive economic zone off Volusia County for multiple days and need a high daily trip limit to make those trips worthwhile.

5.1.2 Public Comments and Recommendations

Majority of commenters supported revising the commercial king mackerel trip limit for the Atlantic southern zone. Commenters requested a trip limit system that would mirror historical trip limits (those in place prior to the implementation Amendment 26 to the Fishery Management Plan for

Alternatives*
<p>1. The commercial trip limits for Atlantic king mackerel:</p> <p>North of the Flagler/Volusia line (29°25’N): 3,500 pounds year-round.</p> <p>South of the Flagler/Volusia line (29°25’N) to the Miami-Dade/Monroe line (25°20’24”N): <i>March 1 – March 31 (Season 1): 50-fish</i> <i>April 1 – September 30 (Season 1): 75-fish, unless NMFS determines that 75% or more of the Season 1 quota has been landed, then, 50-fish</i> <i>October 1 – January 31 (Season 2): 50-fish</i> <i>February 1 – end of February (Season 2): 50-fish, unless NMFS determines that less than 70% of the Season 2 quota has been landed, then, 75-fish.</i></p> <p>2. Adjust the commercial trip limits for Atlantic king mackerel in the Atlantic Southern Zone for Season 1:</p> <p>South of the Flagler/Volusia line (29°25’N) to the Volusia/Brevard line (28°47.8’N): <i>April 1 – September 30 (Season 1): 3,500 pounds</i></p> <p>3. Adjust the commercial trip limits for Atlantic king mackerel in the Atlantic Southern Zone for Season 1:</p> <p>South of the Flagler/Volusia line (29°25’N) to the Volusia/Brevard line (28°47.8’ N): <i>March 1 – March 31 (Season 1): 75-fish</i> <i>April 1 – September 30 (Season 1): 3,500 pounds</i></p> <p>South of the Volusia/Brevard line (28°47.8’N) to the Miami-Dade/Monroe line (25°20’24”N): <i>March 1 – March 31 (Season 1): 75-fish</i></p> <p>4. Adjust the commercial trip limits for Atlantic king mackerel in the Atlantic Southern Zone for Season 1:</p> <p>South of the Flagler/Volusia line (29°25’N) to the Volusia/Brevard line (28°47.8’N): <i>March 1 – September 30 (Season 1): 3,500 pounds</i></p> <p>* Preferred indicated in bold. Refer to Chapter 2 for detailed language of alternatives.</p>

Coastal Migratory Pelagic Resources in the Gulf of Mexico and Atlantic Regions). Commenters stated the 3,500-pound trip limit off Volusia County was needed to support multi-day trips taken by the fleet during the summer months. Additionally, several commenters requested a year-round trip limit of 75-fish south of the Volusia/Brevard County line.

5.1.3 South Atlantic Council's Choice for Preferred Alternative

Trip limits are effective measures used to slow the rate of harvest to keep landings from exceeding the annual catch limit (ACL) and trigger accountability measures that would restrict or prohibit access to the king mackerel resources. However, trip limits that are too restrictive can introduce economic inefficiencies by increasing the number of trips and associated trip costs to harvest the same overall poundage of fish. Additionally, low trip limits can cause multiday fishing trips to become cost prohibitive, resulting in negative social and economic effects in communities that require longer travel time to fishing grounds.

Fishermen operating along the east coast of Florida indicated the importance of providing year-round access to king mackerel for fishermen and communities that harvest the fish at various times throughout the year. Additionally, stakeholders indicated that fishermen operating out of Volusia County travel farther offshore to target king mackerel and often complete trips lasting two or three days during the summer months. Therefore, the South Atlantic Council chose a trip limit system that would allow fishermen in the South Atlantic Southern Zone, south of the Volusia/Flagler County line, access to 75-fish during the month of March and would allow commercial fishermen that harvest king mackerel in the EEZ off Volusia County to land up to 3,500-pounds per trip from April 1 through September 30 (**Preferred Alternative 3**). The proposed measures are expected to balance the need to provide for year-round access to the king mackerel resource with the need to provide a trip limit sufficient to support multiday trips.

At their October 2018 meeting, the South Atlantic Council concluded that **Preferred Alternative 3** best met the purpose and need to provide a commercial trip limit sufficient to support fishing activity (more revenue opportunity) while constraining harvest to the ACL and providing for year-round access. The preferred alternative also best meets the objectives of the CMP FMP, as amended, while complying with the requirements of the Magnuson-Stevens Act and other applicable law.

Chapter 6. List of Interdisciplinary Plan Team (IPT) Members

Name	Agency/Division	Title
Christina Wiegand	SAFMC	IPT Lead/Fishery Social Scientist
Karla Gore	SERO/SF	IPT Lead/ Fishery Biologist
Brian Chevront	SAFMC	Deputy Executive Director for Management
John Hadley	SAFMC	Fishery Economist
Mike Errigo	SAFMC	Data Analyst
Denise Johnson	SERO	Fishery Economist
Jennifer Lee	SERO/PR	Fishery Biologist
John Walter	SEFSC	Fishery Biologist
Juan Agar	SEFSC	Fishery Economist
Michael Jepson	SERO/SF	Fishery Social Scientist
Mike Larkin	SERO/LAPP	Biologist
Monica Smit-Brunello	NOAA GC	General Counsel
Rick DeVictor	SERO/SF	South Atlantic Branch Chief
Scott Sandorf	SERO	Technical Writer

NMFS = National Marine Fisheries Service, 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 7. Agencies Consulted

Responsible Agencies

South Atlantic Fishery Management Council (Administrative Lead)
4055 Faber Place Drive, Suite 201
N. Charleston, South Carolina 29405
843-571-4366/ 866-SAFMC-10 (TEL)
843-769-4520 (FAX)
www.safmc.net

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 Mackerel Cobia 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
National Marine Fisheries Service
- Washington Office
- Office of Ecology and Conservation
- Southeast Regional Office
- Southeast Fisheries Science Center

Chapter 8. References

Atkinson L. P., D. W. Menzel, and K. A. E. Bush. 1985. Oceanography of the southeastern U.S. continental shelf. American Geophysical Union, Washington, DC.

Blanton, J.O., L.P. Atkinson, L.J. Pietrafesa, and T.N. Lee. 1981. The intrusion of Gulf Stream water across the continental shelf due to topographically-induced upwelling. *Deep-Sea Research* 28: 393-405.

Brooks, D.A., and J.M. Bane. 1978. Gulf Stream deflection by a bottom feature off Charleston, South Carolina. *Science* 201: 1225-1226.

GMFMC and SAFMC. 1985. Amendment 1 to the fishery management plan, environmental impact statement, for coastal migratory pelagic resources (mackerels). Gulf of Mexico Fishery Management Council, Tampa, Florida, and South Atlantic Fishery Management Council. Charleston, South Carolina. http://ftp.gulfcouncil.org/Web_Archive/Mackerel/MAC%20Amend-01%20Final%20Apr85.pdf

GMFMC and SAFMC. 2011. Amendment 18 to the fishery management plan for coastal migratory pelagic resources in the Gulf of Mexico and Atlantic regions. Gulf of Mexico Fishery Management Council. Tampa, Florida, and South Atlantic Fishery Management Council. Charleston, South Carolina. <http://www.gulfcouncil.org/docs/amendments/Final%20CMP%20Amendment%2018%20092311%20w-o%20appendices.pdf>

GMFMC and SAFMC. 2017. Amendment 26 to the fishery management plan for coastal migratory pelagic resources in the Gulf of Mexico and Atlantic regions. Gulf of Mexico Fishery Management Council. Tampa, Florida, and South Atlantic Fishery Management Council. Charleston, South Carolina.

Janowitz, G.S., and L.J. Pietrafesa. 1982. The effects of alongshore variation in bottom topography on a boundary current - topographically-induced upwelling. *Continental Shelf Research* 1: 123-141.

Lee, T. N., M. E. Clarke, E. Williams, A. F. Szmant, and T. Berger. 1994. Evolution of the Tortugas Gyre. *Bulletin of Marine Science* 54(3): 621-646.

Leis, J. M. 1991. The pelagic stage of reef fishes: the larval biology of coral reef fishes. Pages 183-230 in P. F. Sale editor. *The ecology of fishes on coral reefs*. Academic Press, New York, NY.

MSAP (Mackerel Stock Assessment Panel). 1996. Report of the Mackerel Stock Assessment Panel. Prepared by the Mackerel Stock Assessment Panel. Gulf of Mexico Fishery Management Council. Tampa, Florida.

Mayo C. A. 1973. Rearing, growth, and development of the eggs and larvae of seven scombrid fishes from the Straits of Florida. Doctoral dissertation. University of Miami, Miami, Florida.

McEachran, J. D., and J. H. Finucane. 1979. Distribution, seasonality and abundance of larval king and Spanish mackerel in the northwestern Gulf of Mexico. (Abstract). Gulf States Marine Fisheries Commission. Publication Number 4. Ocean Springs, Mississippi.

Menzel, D. W., editor. 1993. Ocean processes: U.S. southeast continental shelf. DOE/OSTI -- 11674. U.S. Department of Energy.

NMFS. 2015. Biological opinion on the continued authorization of Fishery Management Plan (FMP) for Coastal Migratory Pelagic Resources in the Atlantic and Gulf of Mexico. June 18, 2015. Available at:
http://sero.nmfs.noaa.gov/protected_resources/section_7/freq_biop/documents/fisheries_bo/2015_cmp_opinion.pdf

NMFS. 2017. Fisheries Economics of the United States, 2015. U.S. Dept. of Commerce, NOAA Tech. Memo. NMFS-F/SPO-170, 247p <https://repository.library.noaa.gov/view/noaa/16121>

Schekter, R. C. 1971. Food habits of some larval and juvenile fishes from the Florida current near Miami, Florida. MS Thesis, University of Miami, Coral Gables.

Schwartz, F. J. 1989. Zoogeography and ecology of fishes inhabiting North Carolina's marine waters to depths of 600 meters. 335-374. In R. Y. George, and A. W. Hulbert, editors. North Carolina coastal oceanography symposium. U.S. Dep. Commerce, NOAA-NURP Rep. 89-2.
Smith, N.P. 1994. Long-term Gulf-to-Atlantic transport through tidal channels in the Florida Keys. *Bulletin of Marine Science* 54: 602-609.

SEDAR 38. 2014. Stock assessment report for Gulf of Mexico king mackerel. Southeast Data, Assessment and Review. North Charleston, South Carolina.
http://sedarweb.org/docs/sar/SEDAR_38_SA_SAR.pdf

Wang, J.D., J. van de Kreeke, N. Krishnan, and D. Smith. 1994. Wind and tide response in Florida Bay. *Bulletin of Marine Science* 54: 579-601.

Wollam, M. B. 1970. Description and distribution of larvae and early juveniles of king mackerel, *Scomberomorus cavalla* (Cuvier), and Spanish mackerel, *S. maculatus* (Mitchill); (Pisces: Scombridae); in the Western North Atlantic. Florida Department of Natural Resources Laboratory Technical Service 61.

Yeung, C., and M. F. McGowan. 1991. Differences in inshore-offshore and vertical distribution of phyllosoma larvae of *Panulirus*, *Scyllarus*, and *Scyllarides* in the Florida Keys in May-June, 1989. *Bulletin of Marine Science* 49: 699-714.

Appendix A. Glossary

Allowable Biological Catch (ABC): Maximum amount of fish stock that 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.

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.

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

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

Discards: Fish captured, but released at sea.

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).

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.

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.

Gulf of Mexico Fishery Management Council (GMFMC): 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 GMFMC 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.

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

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

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.

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.

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.

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.

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

Appendix B. History of Management

The Fishery Management Plan for Coastal Migratory Pelagic Resources in the Gulf of Mexico and South Atlantic Region (CMP FMP; GMFMC/SAFMC 1982), with an environmental impact statement (EIS), was approved in 1982 and implemented by regulations effective in February 1983. Managed species included king mackerel, Spanish mackerel, and cobia. The CMP FMP treated king and Spanish mackerel as unit stocks in the Atlantic and Gulf (Gulf) of Mexico. The CMP 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.

CMP FMP Amendments

Amendment 1, with EIS, implemented in September 1985, provided a framework procedure for pre-season adjustment of total allowable catch (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 inches fork length (FL) or 14 inches total length (TL), and for cobia at 33 inches FL or 37 inches TL.

Amendment 2, with an environmental assessment (EA), implemented in July 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. Charter boat permits were established, and it was clarified that TAC must be set below the upper range of the acceptable biological catch. 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;

**Coastal Migratory Pelagics
Framework Amendment 6**

Appendix B. Management History

- 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 inches FL or 14 inches 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 inches 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 in 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 fishery management plans 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 (SPR) 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 inches 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 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 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 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 2006, established a limited access system on for-hire reef fish and coastal migratory pelagic 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, implemented in January 2012 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.

Amendment 20A, with EA, implemented July 2014 prohibits the sale of king and Spanish mackerel caught under the bag limit in each region except under limited circumstances. For the Gulf of Mexico, the amendment prohibits the sale of king and Spanish mackerel caught under the bag limit unless those fish are either caught on a for-hire trip and the vessel has both a for-hire and commercial vessel permit, or the fish are caught as part of a state-permitted tournament and the proceeds from the sale are donated to charity. For the Atlantic region, the amendment prohibits the sale of king and Spanish mackerel caught under the bag limit unless the fish are caught as part of a state-permitted tournament and the proceeds from the sale are donated to charity. In addition, the amendment removes the income qualification requirement for king and Spanish mackerel commercial permits.

Amendment 20B, with EA, implemented in March 2015 created a transit provision for areas closed to king mackerel and established Northern and Southern zones with separate commercial quotas for Atlantic king and Spanish mackerel.

Amendment 21, with EA, implemented in January 2012 addressed recreational fishing measures in South Carolina Special Management Zones (SMZs).

Amendment 22, with EA, implemented in January 2014 required weekly electronic reporting for headboats in the South Atlantic.

Amendment 23, with EA, implemented in August 2014 required Atlantic king mackerel and Spanish mackerel permit holders to sell to a federal dealer and required weekly electronic reporting for federal dealers.

Amendment 26, with EA, implemented in May 2017 updated the Gulf and Atlantic king mackerel ACLs based on SEDAR 30; modified the stock boundary between the Gulf and Atlantic migratory groups of king mackerel to be at the Dade/Monroe County Line in southeastern Florida, with the Gulf Council managing king mackerel to that line year-round; allowed bag limit sales on Atlantic king mackerel in the small coastal shark gillnet fishery; increased the recreational bag limit from 2-fish per person per day to 3-fish per person per day, other than off Florida and revised the commercial trip limits for Atlantic king mackerel.

Appendix C. Regulatory Impact Review

Introduction

The National Marine Fisheries Service (NMFS) requires a Regulatory Impact Review (RIR) for all regulatory actions that are of public interest. The RIR does three things: 1) it provides a comprehensive review of the level and incidence of impacts associated with a regulatory action; 2) it provides a review of the problems and policy objectives prompting the regulatory proposals and an evaluation of the major alternatives which could be used to solve the problem; and 3) it ensures that the regulatory agency systematically and comprehensively considers all available alternatives so that the public welfare can be enhanced in the most efficient and cost effective way. The RIR also serves as the basis for determining whether any proposed regulations are a "significant regulatory action" under certain criteria provided in Executive Order (E.O.) 12866.

Problems and Objectives

The problems and objectives for this action are presented in **Chapter 1** of this amendment and are incorporated herein by reference.

Description of Fisheries

A description of the king mackerel portion of the coastal migratory pelagics fishery of the South Atlantic region is provided in **Chapter 3** of this amendment and is incorporated herein by reference.

Effects of Management Measures

A detailed analysis and discussion of the expected economic effects of the proposed action is included in **Chapter 4**. The following discussion summarizes the expected economic effects of the action.

The action would increase the commercial trip limit in the EEZ south of the Flagler County/Volusia County line during the month of March from 50 fish to 75 fish. The majority of commercial South Atlantic king mackerel effort and landings (93% and 92% respectively) in Florida has occurred in this area (the EEZ from the Flagler County/Volusia County line to Miami-Dade/Monroe County line). An increase of 50% in the trip limit for commercial fishermen landing king mackerel in this area may allow for a notable increase in landings during the month of March, which would likely be beneficial for fishery participants and seafood dealers through increased revenue per trip and increased sales of king mackerel. These positive economic effects may be mitigated if the ex-vessel and subsequent supply chain prices of king

mackerel drop due to the increase in landings. Additionally, suppressed ex-vessel prices may have negative economic effects for commercial king mackerel participants operating in other areas such as the Northern Zone or the Gulf of Mexico Region. Regardless, the net economic effects (positive or negative) will only occur over one month (March) and will not likely affect the overall season length or the trip limit that may be triggered if 70% of the seasonal quota is landed, as the commercial sector ACL for the Southern Zone has been consistently under-harvested in recent years.

The action would also include the EEZ off Volusia County in the area managed by a 3,500 lbs ww commercial trip limit for king mackerel instead of a 75-fish trip limit from April 1-September 30. This would allow fishery participants who land king mackerel commercially in the county to have access to a higher trip limit, which would potentially provide positive economic effects for these participants through additional potential revenue on king mackerel trips. Since most trips landing king mackerel in recent years have harvested well below 3,500 lbs ww of the species, this limit is not expected to be restrictive on fishery participants. Approximately 5% of the commercial South Atlantic king mackerel effort in Florida and 7% of the commercial South Atlantic king mackerel landings in Florida in recent years have occurred onboard vessels offloading in Volusia County. Therefore, the effects on total landings due to the marginal increase in total landings from this action are most likely negligible. As such, the potential effects on ex-vessel price are likely negligible as well.

Cumulative Economic Effects Summary

Overall, this action would likely provide short-term, positive economic effects by increasing potentially harvest-constraining trip limits, thus increasing vessel revenue on some commercial king mackerel trips and providing related economic benefits. While some of these benefits may be mitigated if the ex-vessel and subsequent supply chain prices of king mackerel drop due to the increase in landings, the net increase in landings is expected to be minimal and any negative changes in price will likely be negligible.

Public and Private Costs of Regulations

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

Council costs of document preparation, meetings, public hearings, and information dissemination.....	\$10,000
NMFS administrative costs of document preparation, meetings and review.....	\$10,000
TOTAL	\$20,000

Law enforcement currently monitors regulatory compliance in effected fisheries under routine operations and does not allocate specific budgetary outlays to these fisheries, nor are increased enforcement budgets expected to be requested to address components of this action. In practice, some enhanced enforcement activity might initially occur while the fishery becomes familiar with the new regulations. However, the costs of such enhancements cannot be forecast. Thus, no specific law enforcement costs can be identified.

Determination of Significant Regulatory Action

Pursuant to E.O. 12866, a regulation is considered a “significant regulatory action” if it is likely to result in: 1) an annual effect of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities; 2) create a serious inconsistency or otherwise interfere with an action taken or planned by another agency; 3) materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights or obligations of recipients thereof; or 4) raise novel legal or policy issues arising out of legal mandates, the President’s priorities, or the principles set forth in this executive order. Based on the information provided above, these actions have been determined to not be economically significant for the purposes of E.O. 12866.

Appendix D. Regulatory Flexibility Analysis

Introduction

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

With certain exceptions, the RFA requires agencies to conduct a regulatory flexibility analysis for each proposed rule. The regulatory flexibility analysis is designed to assess the impacts various regulatory alternatives would have on small entities, including small businesses, and to determine ways to minimize those impacts. The following regulatory flexibility analysis was conducted to determine if the proposed rule would have a significant economic impact on a substantial number of small entities or not.

Statement of the Need for, Objective of, and Legal Basis for the Proposed Rule

The primary purpose and need, issues, problems, and objectives of the proposed action are presented in **Section 1.2** and are incorporated herein by reference.

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

No federal rules have been identified that duplicate, overlap or conflict with the proposed rule.

Description and Estimate of the Number of Small Entities to Which the Proposed Action Would Apply

The rule concerns commercial fishing for king mackerel in federal waters of the South Atlantic and would directly apply to businesses in the commercial fishing industry (NAICS 11411). Any vessel that harvests king mackerel in the Gulf, mid-Atlantic, or South Atlantic EEZ must have a valid limited-access federal king mackerel permit on board that vessel. Commercial fishing vessels that participate in the shark gillnet fishery and have both a valid shark direct

permit and valid king mackerel permit can retain and sell up to two incidentally caught king mackerel per crew member.

As of February 26, 2018, there are 1,438 vessels with a king mackerel permit (**Table 6.1**). The 1,438 vessels make up the federally permitted king mackerel fleet. Approximately 71% of the king mackerel permits are held by entities residing in Florida.

Table D.1. Number of king mackerel permits by residence of permit holder.

State	Number of permits	
	King Mackerel	Percent
AL	37	2.6%
FL	1,020	70.9%
GA	9	0.6%
LA	46	3.2%
NC	228	15.9%
NJ	13	0.9%
NY	4	0.3%
SC	25	1.7%
TX	35	2.4%
Other	21	1.5%
Total	1,438	100.0%

Source: NMFS SERO Online List of Current Permit Holders as of February 28, 2018.

It is estimated that a total of 1,237 businesses hold all of the king mackerel permits attached to the above 1,438 vessels. The individual businesses have from one to 16 of the permitted vessels (**Table 6.2**). Approximately 90% of the 1,237 businesses have only one king mackerel permitted vessel, and collectively these businesses account for approximately 78% of the permitted vessels. Approximately 7% of the businesses have two vessels with a king mackerel permit, and approximately 3% of the businesses collectively have approximately 10% of the permitted vessels. Approximately 69% of the businesses reside in Florida and 17% in North Carolina (**Table 6.3**).

A substantial number of the 1,237 businesses with at least one vessel with a king mackerel permit operate in industries beyond commercial fishing. Sixty-six of the businesses have a federal dealer permit, which indicates at least 66 operate in both the commercial fishing and fish/seafood merchant wholesalers (NAICS 424460) industries. Those 66 dealers have 128 of the 1,438 vessels with a king mackerel permit. Their individual fleets of vessels with a king mackerel permit vary from one to 16. Also, many of the 1,237 businesses have vessels with a for-hire fishing permit, so they also operate in the charter fishing industry (NAICS 487210) as evidenced by the 381 (26.5%) of the 1,438 vessels that have at least one Atlantic, Gulf, or South Atlantic for-hire fishing permit.

Table D.2. Estimates of number and percentage of businesses by number of vessels with a king mackerel permit in their individual fleets.

Number			Percentage	
Vessels with Permit in Individual Fleet	Businesses	Vessels with Permit	All Vessels with Permit	Businesses
1	1,118	1,118	77.7%	90.4%
2	87	174	12.1%	7.0%
3	18	28	3.8%	1.5%
4	7	28	1.9%	0.6%
5 to 7	3	18	1.3%	0.2%
8 to 16	4	46	3.2%	0.3%
Total	1,237	1,438	100.0%	100.0%

Source: NMFS SERO Online List of Current Permit Holders as of February 28, 2018.

Table 6.3. Estimates of number and percentage of businesses by state. Source: NMFS SERO Online List of Current Permit Holders as of February 28, 2018.

State	Number with King Mackerel Permit		Percent of Businesses
	Businesses	Vessels	
AL	36	37	2.9%
FL	857	1,020	69.3%
GA	6	9	0.5%
LA	43	46	3.5%
NC	209	228	16.9%
NJ	12	13	1.0%
NY	4	4	0.3%
SC	24	25	1.9%
TX	26	35	2.1%
Other	20	21	1.6%
Total	1,237	1,438	100.0%

Source: NMFS SERO Online List of Current Permit Holders as of February 28, 2018.

Florida, Georgia, North Carolina and South Carolina collectively account for an average of 99.6% of annual landings of king mackerel harvested from the South Atlantic by federally permitted vessels as shown in **Table 3.3.2**. Because this proposed rule would affect fishing for king mackerel in federal waters off Florida, the remainder of this section focuses on the businesses with federally permitted vessels that land king mackerel from the South Atlantic in one of those four states.

The number of vessels that land king mackerel from the South Atlantic annually is substantially less than the number that is federally permitted to do so. From 2012 through 2016, for example, an annual average of 702 or approximately 48% of the permitted vessels landed the species (**Table 6.4**). The ratio of 1,237 businesses to 1,438 permitted vessels would translate to 605 businesses that operate the 702 vessels that on average annually land king mackerel.

Table D.4. Number and percentage of federally permitted vessels and those that landed South Atlantic king mackerel permitted vessels, 2012-2016.

Year	Number of Vessels with		Percentage with Landings
	King Mackerel Permit	King Mackerel Landings	
2012	1,512	749	49.5%
2013	1,493	688	46.1%
2014	1,478	707	47.8%
2015	1,460	693	47.5%
2016	1,438	676	47.0%
Average	1,479	702	47.6%

Source: NMFS SERO for number of vessels with permit, 2012 – 2016, and SEFSC Online Economic Query System, April 4, 2018, for number with king mackerel landings.

Florida accounts for approximately 87% of annual trips with king mackerel landings and 85% of annual landings of the species (**Tables 6.5**). When Florida trips are combined with North Carolina, the two states account for an average of approximately 99% of annual trips by federally permitted vessels that land king mackerel from the South Atlantic. The two states also combine to account for approximately 99% of annual landings (**Tables 6.6**). The large majority (approximately 85%) of landings are in Florida.

Table D.5. Number and percentage of trips by federally permitted vessels that landed South Atlantic king mackerel permitted vessels by state, 2012-2016.

Year	Trips with South Atlantic KM Landed				Percentage of Trips			
	FL	NC	GA & SC	Total	FL	NC	SC & GA	Total
2012	8,680	947	99	9,726	89.2%	9.7%	1.0%	100.0%
2013	6,907	1,049	131	8,087	85.4%	13.0%	1.6%	100.0%
2014	8,362	1,439	96	9,897	84.5%	14.5%	1.0%	100.0%
2015	8,769	1,055	111	9,935	88.3%	10.6%	1.1%	100.0%
2016	9,651	1,078	105	10,834	89.1%	10.0%	1.0%	100.0%
Average	8,474	1,114	108	9,696	87.3%	11.6%	1.1%	100.0%

Source: SEFSC Online Economic Query System, April 4, 2018.

Table D.6. Landings (lbs gw) by federally permitted vessels that landed South Atlantic king mackerel permitted vessels by state, 2012-2016. Source: SEFSC Online Economic Query System, April 4, 2018.

Year	Landings (lbs gw of King Mackerel)				Percentage of Total Landings		
	FL	NC	GA & SC	Total	FL	NC	GA & SC
2012	2,035,272	220,007	18,411	2,273,690	89.5%	9.7%	0.8%
2013	1,429,874	266,411	9,678	1,705,963	83.8%	15.6%	0.6%
2014	1,681,719	437,445	17,227	2,136,391	78.7%	20.5%	0.8%
2015	1,733,206	285,911	14,460	2,033,577	85.2%	14.1%	0.7%
2016	1,999,679	308,138	30,452	2,338,269	85.5%	13.2%	1.3%
Average	1,775,950	303,582	18,046	2,097,578	84.6%	14.6%	0.8%

Source: SEFSC Online Economic Query System, April 4, 2018.

For RFA purposes only, NMFS has established a small business size standard for businesses, including their affiliated operations, whose primary industry is commercial fishing (see 50 CFR 200.2). A business primarily engaged in commercial fishing (NAICS code 11411) is classified as a small business if it is independently owned and operated, is not dominant in its field of operation (including its affiliates) and has combined annual receipts not in excess of \$11 million for all its affiliated operations worldwide. It is presumed here that all of the businesses with a federally permitted vessel that lands king mackerel from the South Atlantic are primarily engaged in commercial fishing.

Average annual landings revenue from all species by federally permitted vessel varies considerably by state. While the average Florida vessel had annual landings revenue of \$25,095, the average Georgia/South Carolina vessel had annual landings revenue of \$86,573 (**Table 6.7**). Although landings revenue is expected to vary considerably by vessel, the above averages indicate that up to all of the 605 businesses with federally permitted vessels that annually land king mackerel from the South Atlantic are small businesses.

The relative importance of king mackerel from the South Atlantic to the small businesses varies considerably across the states. King mackerel accounted for a third of average annual landings revenue for the average Florida vessel but less than 2% for the average Georgia/South Carolina vessel from 2012 through 2016 (**Table 6.7**).

Table D.7. Average annual landings revenue per federally permitted vessels that landed South Atlantic king mackerel by state, 2012-2016.

Year	Average Annual Landings Revenue (2016 \$) per Vessel			Percent from KM		
	FL	NC	GA & SC	FL	NC	GA & SC
2012	\$23,392	\$32,288	\$83,866	36.6%	13.0%	2.3%
2013	\$25,539	\$31,508	\$92,295	32.2%	15.7%	0.8%
2014	\$26,973	\$29,219	\$94,146	28.8%	20.8%	1.9%
2015	\$24,569	\$22,669	\$75,958	30.0%	19.0%	1.4%
2016	\$25,001	\$27,450	\$86,600	35.2%	16.4%	3.2%
Average	\$25,095	\$28,627	\$86,573	32.6%	16.9%	1.9%

Source: SEFSC Online Economic Query System, April 4, 2018.

Description of the Projected Reporting, Record-Keeping and Other Compliance Requirements of the Proposed Rule

Action 1 (Preferred Alternative 3) would increase the commercial trip limit in the South Atlantic EEZ off Florida. Specifically, the action would increase the limit from 50 to 75 king mackerel from March 1 through March 30 in federal waters between the Flagler/Volusia and Dade/Monroe lines and would increase the trip limit in federal waters off Volusia County (between the Flagler/Volusia and Volusia/Brevard lines) from April 1 through September 30 (**Table 6.8**).

Table D.8. Comparison of trips limits under No-Action and **Preferred Alternative 3**.

Zone	Sub-Zone	Commercial Trip Limit			
		March 1 - March 30		April 1 - September 30	
		No Action	Pref. Alt 3	No Action	Pref. Alt. 3
Northern: NC/SC line through NY	None	3,500 lbs	3,500 lbs	3,500 lbs	3,500 lbs
Southern: NC/SC border to Dade/Monroe line	NC/SC border to Flagler/Volusia line	3,500 lbs	3,500 lbs	3,500 lbs	3,500 lbs
	Off Volusia County: Between Flagler/Volusia & Volusia/Brevard Lines	50 fish	75 fish	75 fish until 75% or more of Season 1 quota reached, then 50	3,500 lbs
	Between Volusia/Brevard & Miami-Dade/Monroe Line	50 fish	75 fish	75 fish until 75% or more of Season 1 quota reached, then 50	75 fish until 75% or more of Season 1 quota reached, then 50

The proposed action will not affect any of the small businesses that only harvest or possess king mackerel in the South Atlantic EEZ north of the Flagler/Volusia Florida line. Hence, it is expected that this proposed rule would not affect small businesses with permitted vessels that land king mackerel in North Carolina and likely would not affect those small businesses and vessels that land the species in Georgia or South Carolina. It also will not affect any small commercial fishing businesses that only harvest or possess South Atlantic king mackerel from October 1 through the end of February. Therefore, the following analysis focuses exclusively on small businesses with federally permitted vessels that land king mackerel in Florida.

Prior to Amendment 26, which became effective on May 11, 2017, there were no commercial trip limits for king mackerel in federal waters between the Flagler/Volusia and Dade/Monroe lines from March 1 through March 30 (**Table 6.9**). **Preferred Alternative 3** would restore the commercial trip limit in federal waters off Volusia County (between Flagler/Volusia and Volusia/Brevard lines) to what it had been prior to Amendment 26, which was 3,500 lbs from April 1 through September 30 (**Tables 6.8** and **6.9**). Note that the trip limits imposed by Amendment 26 were expected to have relatively small adverse impacts and were not quantified (GMFMC 2016).

Table D.9. Comparison of commercial trips limits before and after Amendment 26, which became effective May 11, 2017.

Area	Sub-Area	Commercial Trip Limit for King Mackerel (May 11, 2017)					
		March 1 - March 30		April 1 – September 30		October 1 – End February	
		Before	After	Before	After	Before	After
North of Flagler/Volusia (FL) Line through New York		3,500 lbs	3,500 lbs	3,500 lbs	3,500 lbs	3,500 lbs	3,500 lbs
South of Flagler/Volusia Line to Miami-Dade/Monroe Line	Off Volusia County: Between Flagler/Volusia & Volusia/Brevard Lines	None	50 fish	3,500 lbs	75 fish until 75% or more of season 1 quota reached, then 50	75 fish	50 fish except in February would be 75 fish if less than 70% of season 2 quota is reached
	Between Volusia/Brevard & Dade/Monroe Line	None	50 fish	75 fish	75 fish until 75% or more of season 1 quota reached, then 50	75 fish	50 fish except in February would be 75 fish if less than 70% of season 2 quota is reached

In 2017, the trip limit was 3,500 lbs gw from April 1 through May 10, then 75 fish from May 11 (when Amendment 26 became effective) through September 30 in federal waters between the Flagler/Volusia and Dade/Monroe lines. To estimate the benefit of the increase back to the 3,500-lbs gw trip limit from April through September in federal waters from the Flagler/Volusia to Volusia/Brevard lines, the average weight of a commercially landed king mackerel is estimated to weight approximately 10 lbs gw. Hence, a 75-fish limit translates to a 750-lb limit, and **Preferred Alternative 3** would allow for an additional 2,750 lbs gw of king mackerel per trip in federal waters off Volusia County (between the Flagler/Volusia and Volusia/Brevard lines) from April 1 through September 30. At the average 2016 Florida dockside price of \$2.24 per lb gw, an additional 2,750 lbs would generate additional landings revenue of \$6,160 per trip.

From 2012 through 2016, an average of approximately 92% of the annual trips made by federally permitted vessels landed no more than 750 lbs gw of king mackerel from the South Atlantic in Florida (**Tables 6.10**). Among those that landed more than 750 lbs gw but less than 3,500 lbs gw, 61% of the trips landed no more than 1,000 lbs gw and another 30.6% landed no more than 1,250 lbs gw (**Table 6.11**).

Table D.10. Number and percentage of South Atlantic trips with king mackerel landings in Florida by federally permitted vessel in Florida by pounds landed, 2012-2016.

Year	Trips by Landings (lbs gw) of King Mackerel							
	Number					Percentage		
	1-500	501-750	750-3,500	Over 3,500	Total	1 - 750	751 - 3,500	Over 3,500
2012	7,691	775	212	2	8,680	88.6%	11.4%	0.0%
2013	6,320	439	146	2	6,907	91.5%	8.5%	0.0%
2014	7,750	462	148	2	8,362	92.7%	7.3%	0.0%
2015	8,341	345	81	2	8,769	95.1%	4.9%	0.0%
2016	8,943	554	153	1	9,651	92.7%	7.3%	0.0%
Average	7,809	515	148	2	8,474	92.1%	7.9%	0.0%

Source: SEFSC Online Economic Query System, April 4, 2018.

Table D.11. Percentage of Florida vessels with over 750 and less than 3,500 lbs gw of king mackerel, 2012-2016.

Year	Percentage of Trips by Landings (lbs gw) with 751 to 3,500 lbs gw of King Mackerel										
	751-1,000	1,001-1,250	1,251-1,500	1,501-1,750	1,751-2,000	2,001-2,250	2,251-2,500	2,501-2,750	2,751-3,000	2,751-3,250	3,251-3,500
2012	59.0%	34.0%	4.7%	0.0%	0.9%	0.5%	0.5%	0.5%	0.0%	0.0%	0.0%
2013	72.6%	21.2%	2.7%	2.7%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%
2014	63.5%	31.1%	5.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2015	51.9%	33.3%	12.3%	1.2%	0.0%	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%
2016	58.2%	33.3%	3.3%	2.6%	1.3%	0.7%	0.0%	0.0%	0.7%	0.0%	0.0%
Average	61.0%	30.6%	5.7%	1.3%	0.5%	0.2%	0.1%	0.5%	0.1%	0.0%	0.0%

SEFSC Online Economic Query System, April 4, 2018.

Consistent with regulation at the time, the average annual 2 trips with over 3,500 lbs gw would have occurred in federal waters between the Flagler/Volusia and Dade/Monroe lines during the month of March when there was no limit; and the average annual 148 trips with over 750 lbs gw (75 fish) and no more than 3,500 lbs gw would have occurred in waters north of the Flagler/Volusia line any time during the year and/or off Volusia County from April 1 through September 30 (**Table 6.10**). Those 148 trips are used to represent the baseline for estimating the economic impacts of increasing the trip limit in waters off Volusia County from April through September.

If all of the 148 trips that landed from 751 to 3,500 lbs gw of king mackerel harvested those fish in waters north of the Flagler/Volusia line, the increase in the trip limit to 3,500 lbs gw from April 1 through September 30 in waters between the Flagler/Volusia and Volusia/Brevard lines would have no beneficial impact. However, if all of the 148 trips were in federal waters between the Flagler/Volusia and Volusia/Brevard lines from April through September, the expected benefit would be an additional 385 lbs gw per trip (assuming maximum increase per range of landings and average annual percentage of trips by range) (**Table 6.12**), and that would generate additional landings revenue of approximately \$862 per trip at the average 2016 price of \$2.24 per

lb gw. The total benefit for 148 trips would be an additional 56,980 lbs gw of king mackerel with a value (2016 \$) of \$127,635. The 148 trips are expected to be made by 71 vessels, which represent approximately 10% of the 702 vessels that annually land king mackerel. The average annual benefit per vessel from the increase in the trip limit from April through September in federal waters off Volusia County would be expected to range from \$0 to \$1,798. These 71 vessels are estimated to be operated by 61 (10%) of the average 605 businesses that annually land king mackerel, and the average benefit to one of those 61 businesses would range from \$0 to \$2,092.

Table D.12. Estimate of expected maximum benefit per trip from increasing trip limit to 3,500 lbs gw in federal waters off Volusia County from April 1 through September 30.

	Lbs of King Mackerel Landed per Trip											Total
	751 to 1,000	1,001 to 1,250	1,251 to 1,500	1,501 to 1,750	1,751 to 2,000	2,001 to 2,250	2,251 to 2,500	2,501 to 2,750	2,751 to 3,000	3,000 to 3,250	3,250 to 3,501	
Maximum Increase	250	500	750	1,000	1,250	1,500	1,750	2,000	2,250	2,500	2,750	
Average Percent	61.0	30.6	5.7	1.3	0.5	0.2	0.1	0.5	0.1	0.0	0.0	100
Expected Increase	153	153	43	13	6	3	2	10	3	0	0	385

The significance of the above average benefit to a vessel and small business varies with the relative importance that king mackerel landings has to that vessel and small business and that varies considerably across the county areas. For example, among those federally permitted vessels that landed king mackerel from the South Atlantic in Volusia County and in the counties from Brevard through Dade (Miami-Dade) from 2012 through 2016, king mackerel accounted for more than 44% to 45% of the average vessel’s total landings revenue (**Table 6.13**). King mackerel landings represented from approximately 6% to 7% in the other county areas.

Table D.13. Average annual dockside revenue (2016 \$) per vessel and percentage from king mackerel, 2012-2016.

FL Counties Where Landed	Average Dockside Revenue (2016 \$) per Vessel		Percentage from King Mackerel
	From King Mackerel	From All Species	
North of Volusia	\$2,334	\$32,078	7.3%
Volusia	\$6,665	\$15,047	44.3%
Brevard through Dade	\$6,993	\$15,558	44.9%
Inland & West Coast	\$2,731	\$44,646	6.1%

Source: SEFSC Online Economic Query System, April 4, 2018, for nominal revenues and BEA for Implicit Price Deflator.

Approximately 63% (93) of the 148 trips with landings from 701 to 3,500 lbs gw made their landings in the counties from Brevard through Dade (**Table 6.14**). Those percentages and number of trips are used to compare the relative importance of the benefit across the county areas.

Table D.14. Average annual number of trips by federally permitted vessels with landings of South Atlantic king mackerel in Florida from 701 to 3,500 lbs gw, 2012-2016.

FL Counties Where Landed	Average Annual Trips		Percentage of 750- 3500
	750 - 3500 lbs gw	Total	
North of Volusia	4	139	2.8%
Volusia	10	438	6.5%
South of Volusia through Dade	93	7,485	63.1%
Inland and West Coast	41	412	27.6%
Total	148	8,474	100.0%

Source: SEFSC Online Economic Query System, April 10, 2018.

An average increase in dockside revenue from \$0 to \$1,798 per vessel resulting from **Preferred Alternative 3** would represent an increase in average annual revenue from 0% to over 11% for the average vessel that lands king mackerel in Volusia County or south of Volusia through Dade County (**Table 6.15**). The relative beneficial impact is less for the average vessel that lands king mackerel in counties north of Volusia or inland and on the west coast.

Table D.15. Estimate of percentage increase in average annual revenue per vessel due to **Preferred Alternative 3's** increase in trip limit in federal waters between Flagler/Volusia and Volusia/Brevard lines from April 1 through September 30.

FL Counties Where Landed	Average Number of Vessels with 751 - 3,500 lbs gw	Average Benefit per Vessel	Annual Revenue per Vessel	Average Increase in Annual Revenue per Vessel
North of Volusia	3	\$0 to \$1,798	\$32,078	0% to 5.6%
Volusia	6	\$0 to \$1,798	\$15,047	0% to 11.9%
South of Volusia through Dade	45	\$0 to \$1,798	\$15,558	0% to 11.6%
Inland and West Coast	16	\$0 to \$1,798	\$44,646	0% to 4.0%
Total	71			

Source: SEFSC Online Economic Query System, April 10, 2018, for number of vessels.

Preferred Alternative 3 would also increase the trip limit in March in federal waters between the Flagler/Volusia and Dade/Monroe lines from 50 fish to 75 fish, which represents an increase from 500 to 750 lbs gw per trip. Prior to May 11, 2017, there was no trip limit in those waters in March.

Landings and the number of trips that land king mackerel in Florida during a calendar year tend to peak during the 3-month period from December through February (**Figures 6.1 and 6.2**). The month of March accounted for an average of 8.9% of annual trips that landed king mackerel and 9.8% of the pounds landed of king mackerel from 2012 through 2016 (Florida Fish and Wildlife Conservation Commission, April 10, 2018). Those percentages are used to produce an estimate of the average number of trips that would benefit from the increase from 50 to 75 fish (500 to 750 lbs gw) in March.

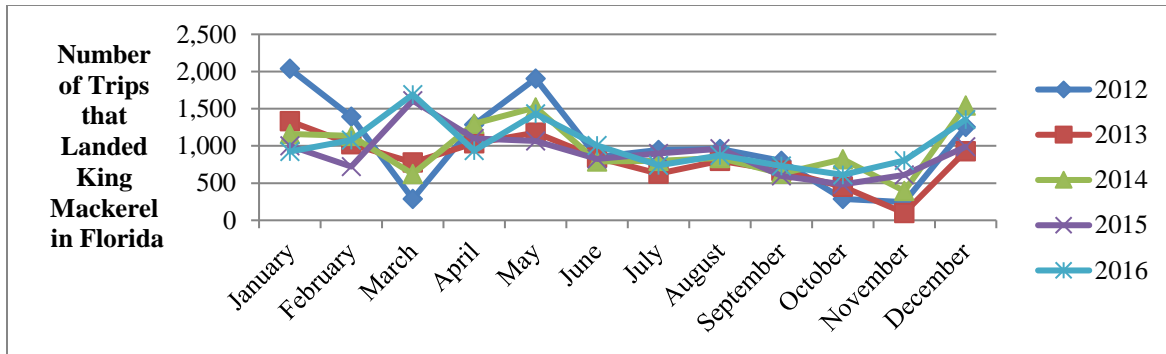


Figure D.1. Commercial trips that landed king mackerel in Florida from both Gulf and South Atlantic waters by month, 2012-2016.

Source: Florida Fish and Wildlife Conservation Commission, April 10, 2018.

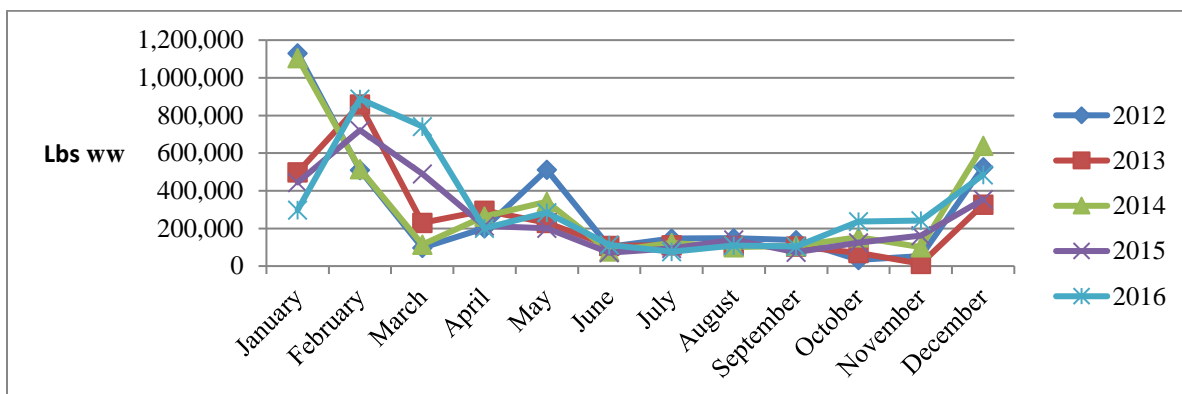


Figure D.2. Landings (lbs ww) of king mackerel in Florida from both Gulf and South Atlantic waters by month, 2012-2016.

Source: Florida Fish and Wildlife Conservation Commission, April 10, 2018.

It is estimated that an average of 754 trips land king mackerel in March annually. These trips are expected to include, but not be limited to, those that harvested king mackerel in waters north of the Flagler/Volusia line. From 2012 through 2016, approximately 92% of trips that landed king mackerel landed no more than 500 lbs gw. Consequently, it is estimated that 8% (60) of the average 754 trips that land king mackerel in March annually would benefit from **Preferred Alternative 3's** increase from 50 to 75 fish.

Preferred Alternative 3's increase from 50 fish (500 lbs gw) to 75 fish (750 lbs gw) per trip in March in federal waters off Volusia County would generate an additional 250 lbs gw and \$560 per trip (at the 2016 price of \$2.24 per lb gw) for 60 trips. The 60 trips are expected to be made by 60 vessels. It is initially assumed that the 60 vessels are equally represented across the county areas. The increase in the March trip limit in federal waters off Volusia County would increase average annual revenue for the average vessel from 1.3% to 3.7%, depending on county area landed (**Table 6.16**). This action would not impose additional reporting or record-keeping requirements on small businesses.

Table D.16. Estimate of percentage increase in average annual revenue per vessel due to **Preferred Alternative 3's** increase in trip limit from 25 to 50 fish in March in federal waters from Flagler/Volusia to Dade/Monroe lines.

FL Counties Where Landed	Average Vessel			Average Benefit Percentage of Annual Revenue
	March Trips	Average Benefit	Annual Revenue	
North of Volusia	15	\$560	\$32,078	1.70%
Volusia	15	\$560	\$15,047	3.70%
South of Volusia through Dade	15	\$560	\$15,558	3.60%
Inland and West Coast	15	\$560	\$44,646	1.30%
Total	60			

Significance of Economic Impacts on A Substantial Number of Small Entities

As summarized in Tables 6.15 and 6.15, this rule would have beneficial impacts on small businesses that operate vessels that harvest king mackerel from the South Atlantic. The average annual benefits are \$560 per vessel for the estimated 60 vessels that would land an additional 250 lbs gw of king mackerel in March. The 60 vessels represent approximately 9% of the 702 vessels that on average annually land king mackerel, and the \$560 increase represents up to 3.7% of annual revenue for the average vessel. Seventy-one vessels, which represent 10% of vessels, would benefit from an increase in average annual revenue from \$0 to \$1,798 annually (per vessel) resulting from the increase in the trip limit from April through September in federal waters off Volusia County. That increase would represent from 0% to 11.9% of annual revenue for the average vessel (**Table 6.15**).

Description of Significant Alternatives

The non-selected alternatives to Action 1 include the No-Action Alternative and Alternatives 2 and 4. The 50-fish limit of the No-Action Alternative and Alternative 2 in waters south of the Flagler/Volusia line from March 1 through March 30 is lower than the 75-fish limits that would be implemented by **Preferred Alternative 3**. Alternative 4 would have a higher trip limit in federal waters off Volusia County in March than **Preferred Alternative 3**, but they have the same limit that month in waters south of Volusia County. Alternative 4 could generate a higher benefit to small businesses that operate vessels that harvest king mackerel in federal waters off Volusia County in March; however, higher landings in March could generate a higher likelihood of an early closure, which would adversely affect all small businesses that harvest king mackerel in the southern zone from April through September.

Appendix E. 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 Procedure 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 framework 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, 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.

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 on June 18, 2015, evaluating the impacts of the CMP fishery on ESA-listed species. In the biological opinion, NMFS determined that the proposed continued authorization of the CMP Fishery, is not likely to adversely affect any listed whales (i.e., blue, sei, sperm, fin, humpack, or North Atlantic right whales), Gulf sturgeon, or elkhorn and staghorn corals. NMFS also determined that CMP Fishery is not likely to adversely affect designated critical habitats for elkhorn and staghorn corals or loggerhead sea turtles, and will have no effect on designated critical habitat for North Atlantic right whale.

According to the 2015 Biological Opinion on the CMP fishery, green, hawksbill, Kemp's ridley, leatherback, and loggerhead sea turtles, Atlantic sturgeon, and the smalltooth sawfish are all likely to be adversely affected, but not likely to be jeopardized, by the CMP fishery. Green, hawksbill, Kemp's ridley, leatherback, and loggerhead sea turtles are all highly migratory, travel widely throughout the GOM and South Atlantic, and are known to occur in area of the fishery. The distribution of Atlantic sturgeon and smalltooth sawfish within the action area is more limited, but all of these species do overlap in certain regions of the action area and these species have the potential to be incidentally captured in CMP fisheries.

An incidental take statement for sea turtles, smalltooth sawfish, and Atlantic sturgeon was issued for incidental take coverage in the federal CMP fisheries throughout the action area. Reasonable and prudent measures to minimize the impact of these incidental takes were specified, along with terms and conditions to implement them.

On March 23, 2015, NMFS published a proposed rule (80 FR 15271) listing 11 distinct population segments (DPSs) for green sea turtles; the proposed North Atlantic DPS for green sea turtles is listed as threatened, and is the only DPS whose individuals can be expected to be encountered in the action area. On June 29, 2016, NMFS published a Final Rule in the Federal Register listing Nassau grouper as a threatened species under the ESA, effective July 29, 2016. Because the range of both the North Atlantic and South Atlantic DPSs of green sea turtles and the Nassau grouper occur within the action area of the CMP fishery, NMFS reinitiated consultation on the CMP fishery in March 2017. NMFS completed an Amendment to the 2015 Opinion on November 13, 2017. The amended biological opinion concluded that the CMP fishery's continued authorization is not likely to adversely affect Nassau grouper and is likely to adversely affect, but is not likely to jeopardize, the North Atlantic and South Atlantic DPSs of green sea turtle. A revised incidental take statement was issued.

Since then, NMFS listed the giant manta ray (*Manta birostris*) as threatened under the ESA, effective February 21, 2018, and on January 30, 2018, NMFS listed the oceanic whitetip shark (*Carcharhinus longimanus*) as threatened under the ESA, effective March 1, 2018.

On June 11, 2018, NMFS requested reinitiation of ESA section 7 consultation on the continued authorization of the Atlantic CMP fisheries under the Magnuson-Stevens Act to address the listings of the giant manta ray and oceanic whitetip sharks. In the same consultation request memorandum, NMFS developed ESA section 7(a)(2) and section 7(d) analyses that considered allowing the CMP fishery to continue during the reinitiation period. As a result of those analyses, NMFS has determined that allowing the Atlantic CMP fisheries to continue during the reinitiation period is not likely to jeopardize any protected species, nor does it constitute an irreversible or irretrievable commitment of resources.

The actions contained in Framework Amendment 6 are not anticipated to modify the operation of the CMP fishery in a manner that would cause effects to listed species or critical habitat that were not considered in the 2015 and 2017 biological opinions or in the June 11, 2018, analyses.

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 Gulf and South Atlantic CMP hook-and-line fishery is classified in the 2018 Marine Mammal Protection Act List of Fisheries as a Category III fishery (81 FR 54019), 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 Category II fishery in the 2018 Marine Mammal Protection Act List of Fisheries. 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.

Because of the nature of this fishery, the actions in this framework amendment are not expected to negatively impact marine mammals.

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.

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 July 1, 2016, the Small Business Administration final rule revising the small business size standards for several industries became effective (79 FR 33647). The rule increased the size standard for Finfish Fishing from \$19.0 to \$20.5 million, Shellfish Fishing from \$5.0 to \$5.5 million, and Other Marine Fishing from \$7.0 to \$7.5 million.

In light of these standards, NMFS has preliminarily determined that the proposed actions 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 3.4**.

The actions 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 actions in this framework are intended to improve recreational fishing opportunities in the CMP Fishery and are consistent with the provisions of E.O. 12962.

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 framework amendment.

References

National Marine Fisheries Service (NMFS). 2015. Biological Opinion, ESA Section 7 Consultation for the Continued Authorization of Fishing under the Fishery Management Plan (FMP) for Coastal Migratory Pelagic Resources in the Atlantic and Gulf of Mexico (CMPR FMP). NMFS Southeast Regional Office Protected Resources Division: St. Petersburg, FL.

South Atlantic Fishery Management Council (SAFMC). 1998. Comprehensive Amendment Addressing Essential Fish Habitat in Fishery Management Plans in the South Atlantic Region, including environmental assessment, regulatory impact review, and fishery impact statement. South Atlantic Fishery Management Council, Charleston, South Carolina. Available at: http://ocean.floridamarine.org/efh_coral/pdfs/Comp_Amend/EFHAmendCovTOC.pdf

Appendix F. Atlantic King Mackerel Southern Zone Trip Limit Maps

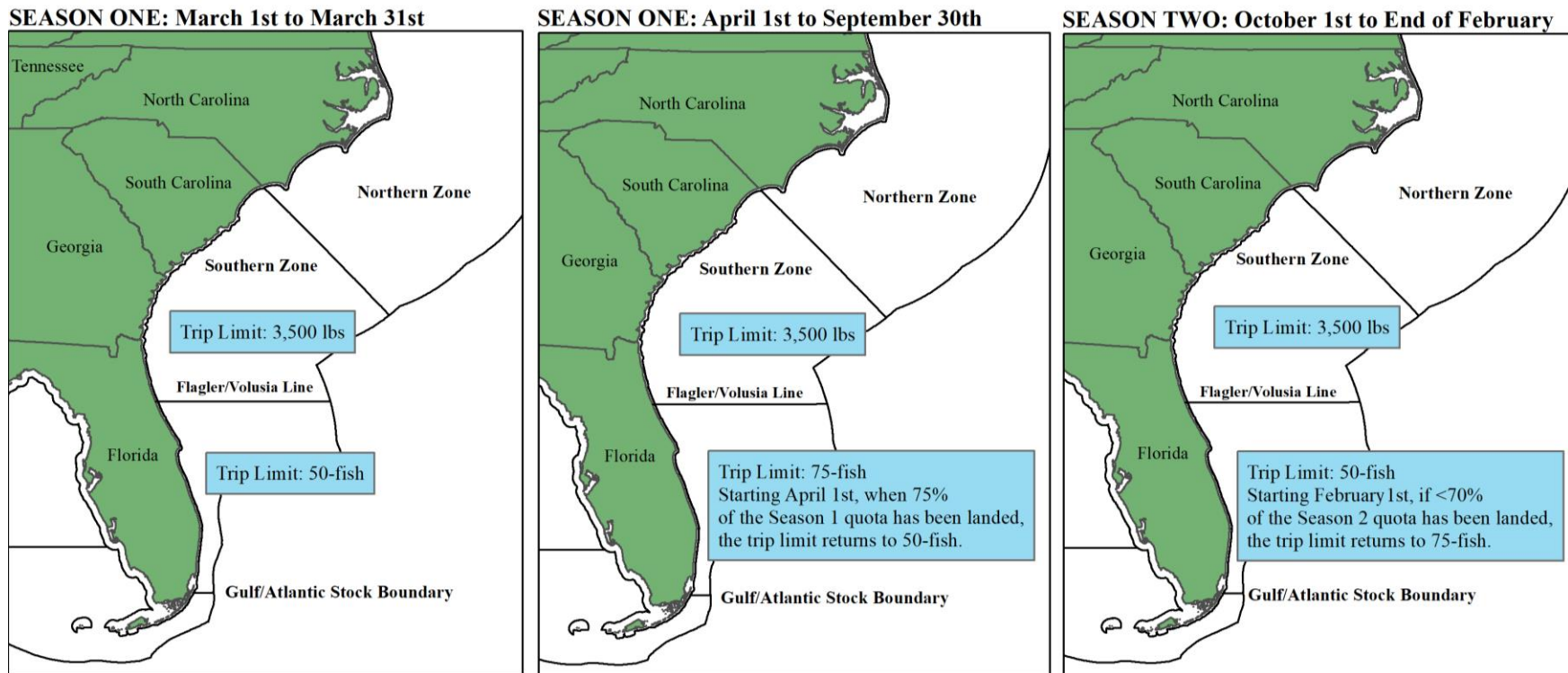


Figure F.1. Alternative 1: Current seasonal king mackerel commercial trip limits for the Atlantic Southern Zone

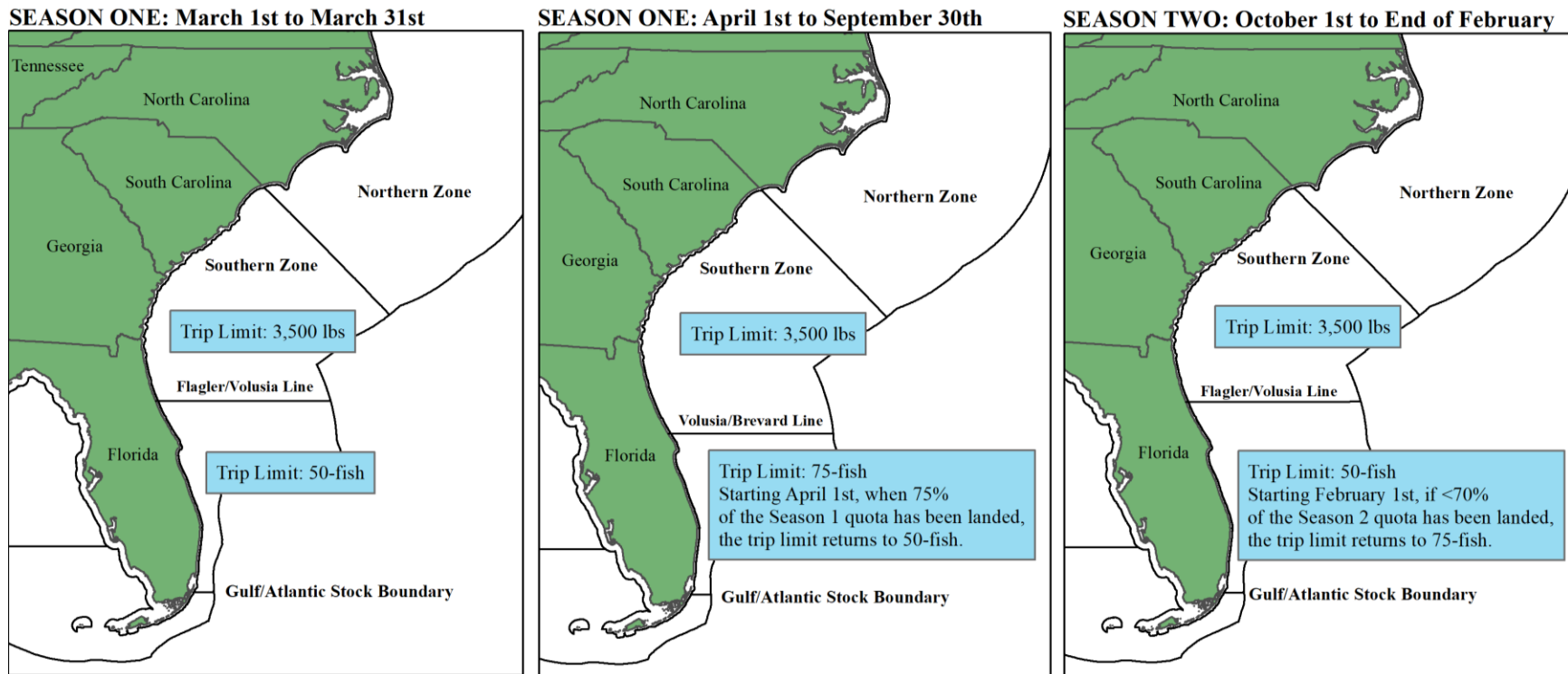


Figure F.2. Alternative 2: Proposed seasonal king mackerel commercial trip limits in the Atlantic Southern Zone.

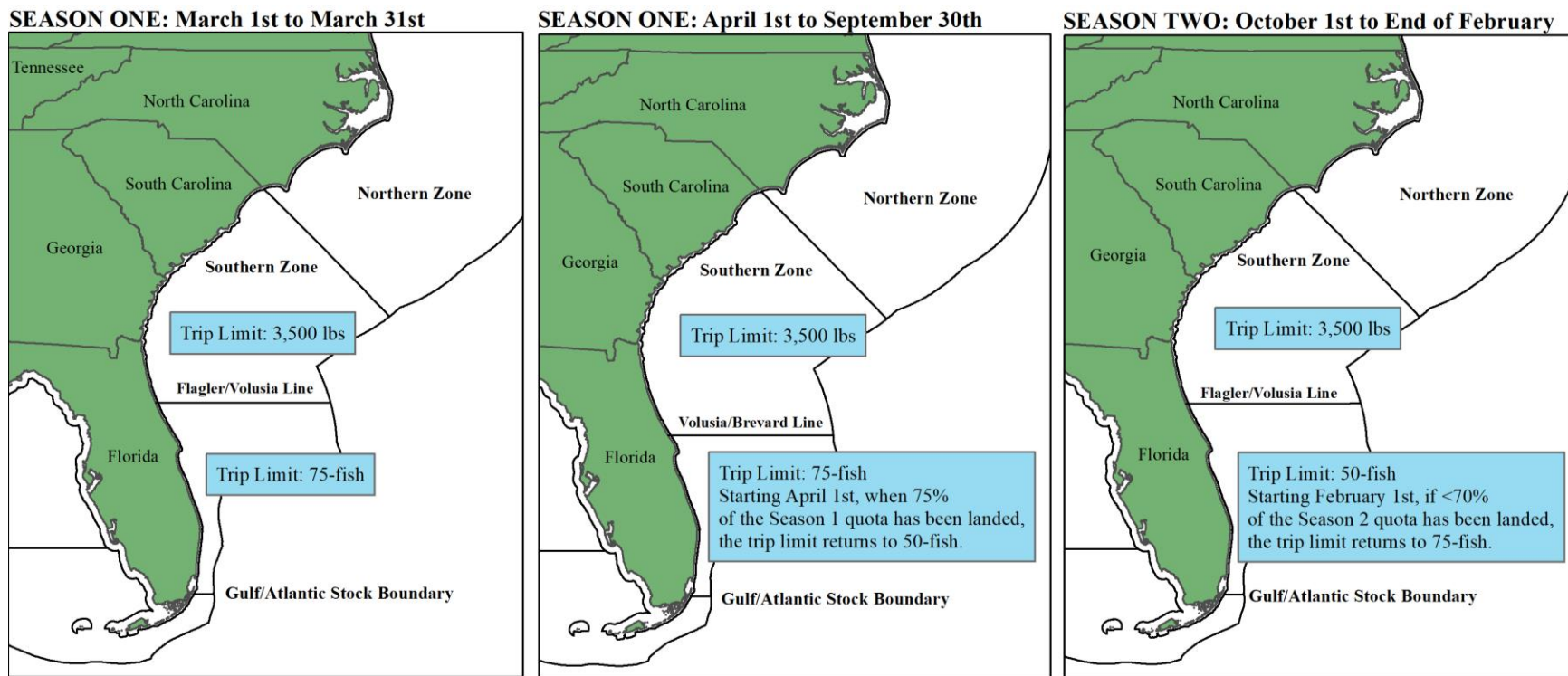


Figure F.3. Preferred Alternative 3: Proposed seasonal king mackerel commercial trip limits in the Atlantic Southern Zone

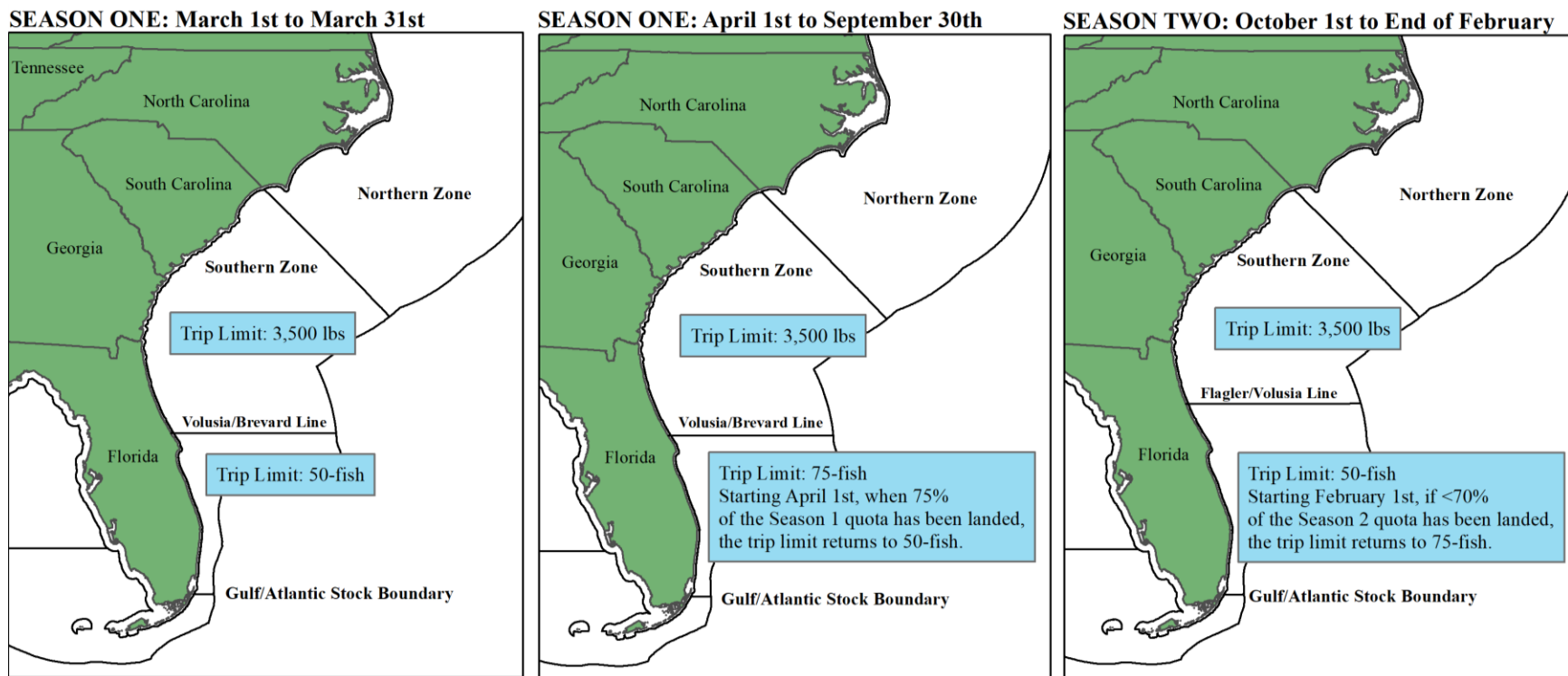


Figure F.4. Alternative 4: Proposed seasonal king mackerel commercial trip limits in the Atlantic Southern Zone.