South Atlantic and Gulf of Mexico Coastal Migratory Pelagics Joint Framework Actions 2014

DRAFT
November 2013

Environmental Assessment Regulatory Impact Review Regulatory Flexibility Analysis

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Abbreviations and Acronyms Used in the FMP

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

South Atlantic and Gulf of Mexico Coastal Migratory Pelagics Framework Action with Draft Environmental Assessment and Regulatory Impact Review

Proposed action:	Modify annual catch limits for Gulf migratory group and Atlantic migratory group Spanish mackerel
Lead agency:	FMP Amendment – South Atlantic Fishery Management Council Environmental 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 Kari MacLauchlin Kari.MacLauchlin@safmc.net Gulf of Mexico Fishery Management Council 2203 North Lois Avenue, Suite 1100 Tampa, Florida 33607 813-348-1630/ 888-833-1844 www.gulfcouncil.org Ryan Rindone Ryan.Rindone@gulfcouncil.org NMFS, Southeast Region 263 13th Avenue South St. Petersburg, FL 33701 727-824-5305 http://sero.nmfs.noaa.gov Karla Gore Karla.Gore@noaa.gov

Summary

A Southeast Data, Assessment, and Review (SEDAR) stock assessment for Gulf of Mexico (Gulf) and Atlantic Spanish mackerel and cobia was completed in 2012. The South Atlantic Fishery Management Council (South Atlantic Council)'s Scientific and Statistical Committee (SSC) reviewed the result of the stock assessment in April 2013 and requested projections from the Southeast Fisheries Science Center (SEFSC). In June 2013, the South Atlantic Council received the SSC's recommendations for the Atlantic Spanish mackerel acceptable biological catch (ABC)), but the South Atlantic Council requested that the SSC review the Spanish mackerel projections and revisit recommendations for the Overfishing Level (OFL) and the acceptable biological catch (ABC). In October 2013, the SSC reviewed the projections again and recommended an OFL value of 7.03 mp ww in 2014, 6.62 mp ww in 2015, and 6.519 mp ww in 2016, and a revised ABC value of 6.06 mp ww for 2014-2016.

The Gulf of Mexico Fishery Management Council's (Gulf Council's) SSC reviewed the results of the Gulf Spanish mackerel stock assessment in May 2013 and requested projections from the SEFSC. In August 2013, the Gulf Council received and accepted the SSC recommendations for the Gulf Spanish mackerel OFL and ABC for 2013-2016. OFL was set at 14.4 million pounds (mp) whole weight (ww) for 2013, 12.9 mp ww for 2014, 12.0 mp ww for 2015, and 11.5 mp ww for 2016. Likewise, using a P* value of 0.434, ABC was set at 14.2 mp ww for 2013, 12.7 mp ww for 2014, 11.8 mp ww for 2015, and 11.3 mp ww for 2016.

In accordance with the provisions set forth in the Magnuson-Stevens Fishery Conservation and Management Act and regulations found at 50 CFR 622.389 (Adjustment of Management Measures), the intent of the South Atlantic and Gulf of Mexico Coastal Migratory Pelagics Joint Framework Actions (Framework Actions) is to revise the and ACLs for Atlantic and Gulf migratory group Spanish mackerel based on the SSC recommendations. This The Framework Actions with the integrated Environmental Assessment will be available for public review before and during each Gulf Council and South Atlantic Council meeting, where the action will be discussed;;; at www.safmc.net and www.gulfcouncil.org during public hearings to be held in January 2014; and during the proposed rule phase of the rulemaking process.

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Chapter 1. Introduction

1.1 What Actions are Being Proposed?

The Framework Actions propose to modify the annual catch limit (ACLs) for Atlantic migratory group Spanish mackerel and Gulf migratory group Spanish mackerel based on the outcome of the stock assessment (SEDAR 28) and recommendations for the acceptable biological catch (ABC) value from each Council's Scientific and Statistical Committee (SSC).

The current ACL for Atlantic migratory group Spanish mackerel is 5.69 million pounds whole weight (mp ww). The recreational allocation is 2.56 mp ww (45%) with an ACT of 2.32 mp ww and the commercial allocation is 3.13 mp ww (55%). The current stock ACL for Gulf migratory group Spanish mackerel is 5.15 mp ww.

1.2 Who is Proposing the Actions?

The South Atlantic Fishery Management Council (South Atlantic Council) and the Gulf of Mexico Fishery Management Council (Gulf Council) are proposing the actions. The Councils develop the fishery management plans and amendments, and submit them to the National Marine Fisheries Service (NMFS) who ultimately approves, disapproves, or partially approves the actions in the amendment on behalf of the Secretary of Commerce. NMFS is an agency in the National Oceanic and Atmospheric Administration.

South Atlantic and Gulf of Mexico Fishery Management Councils

- Responsible for conservation and management of fish stocks
- The South Atlantic Council consists of 13 voting members who are appointed by the Secretary of Commerce and 4 non-voting members. The management area is from 3 to 200 nautical miles off the coasts of North Carolina, South Carolina, Georgia, and Florida through the Atlantic side of Key West.
- The Gulf Council consists of 17 voting members who are appointed by the Secretary of Commerce and 4 non-voting members. The management area is from 9 to 200 nautical miles off the coasts of West Florida and Texas, and from 3 to 200 nautical miles off the coasts of Alabama, Mississippi, and Louisiana.
- Develop management plans/amendments and recommends regulations to NMFS for implementation

1.3 Why are the South Atlantic and Gulf of Mexico Councils Considering Action?

The South Atlantic Council and Gulf Council are considering revised ACL values for Atlantic migratory group Spanish mackerel and Gulf migratory group Spanish mackerel, based on recommended ABC values from the SSCs, to incorporate information from the most recent stock assessments (SEDAR 28) completed in 2012.

Management Plan Objectives

The current management objectives in the joint Fishery Management Plan (FMP) for Coastal Migratory Pelagic Resources in the Gulf of Mexico and South Atlantic Region (CMP FMP; (GMFMC/SAFMC 1982) as amended are:

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

The actions proposed in the amendment specifically help to meet FMP Objectives 1, 2 and 8.

Purpose for Actions

The purpose of this amendment is to revise the ACLs for Atlantic migratory group Spanish mackerel and Gulf migratory group Spanish mackerel based on the results of the stock assessment completed in 2012.

Need for Actions

The need for this amendment is to ensure the annual catch limits are based on the best available and most recent information, and ensure overfishing does not occur in the coastal migratory pelagics fishery.

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

Three species—king mackerel, Spanish mackerel, and cobia—are included in the CMP FMP and are separated into an Atlantic migratory group and a Gulf migratory group. The proposed actions in this amendment would affect Atlantic and Gulf migratory groups of Spanish mackerel, and could affect anglers harvesting Spanish mackerel in the federal waters in the Gulf of Mexico, South Atlantic, and Mid-Atlantic regions.

The CMP FMP, approved in 1982 and implemented by regulations effective February 1983, treated Spanish mackerel as one U.S. stock. The present management regime for mackerel recognizes two migratory groups of Spanish mackerel, the Gulf migratory group and the Atlantic migratory group with the boundary fixed at the Miami-Dade/Monroe County border on Florida's southeast coast (**Figure 1.4.1**). Pending approval of Amendment 20B (GMFMC/SAFMC 2013), the Atlantic group will be separated into a Northern Zone and Southern Zone (as shown in **Figure 1.4.1**) that will have separate commercial ACLs. The designation of Northern Zone and Southern Zone will not affect the recreational sector.

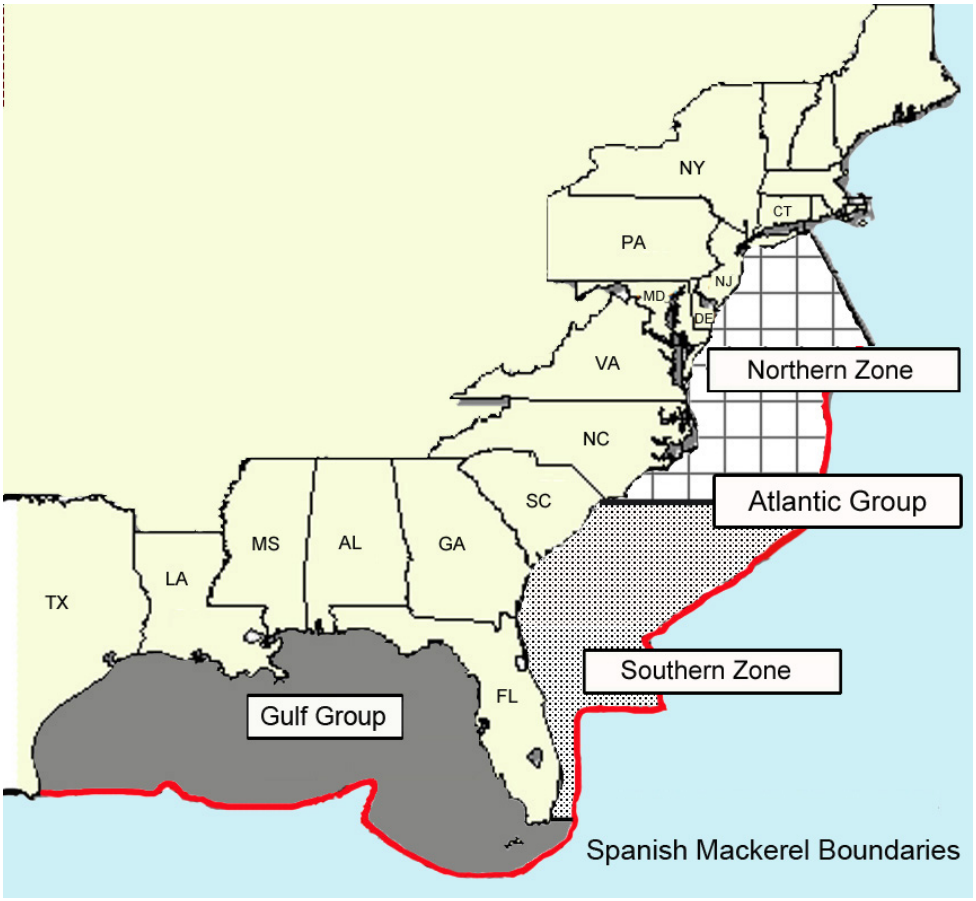

Figure 1.4.1. Boundaries for the Gulf and Atlantic migratory group Spanish mackerel. Establishment of the Northern and Southern Zones in the Atlantic group is pending submission and approval of Amendment 20B.

Chapter 2. Proposed Actions and Alternatives

Action 1. Modify the Annual Catch Limit (ACL) for Atlantic migratory group Spanish mackerel

Alternative 1 (No Action). Retain the ACL, OY and ACT for Atlantic migratory group Spanish mackerel:
Current ABC = 5,690,000 lbs ww, recommended by the SSC based on the third highest point over a ten-year period (equivalent to the 80th percentile) for the time series ranging from 1999-2008. The recreational ACT equals sector ACL[(1-PSE) or 0.5, whichever is greater. Where PSE is an average from MRFSS based on landings in weight from 2005-2009.

ACL = OY = ABC = 5,690,000 lbs ww
Commercial ACL (55%) = 3,130,000 lbs ww
Recreational ACL (45%) = 2,560,000 lbs ww
Recreational ACT = 2,320,000 lbs ww

Alternative 2. Revise the ACL (including sector ACLs) and ACT for Atlantic migratory group Spanish mackerel for 2014 and 2015. The ABC recommended by the SSC is 6,063,000 lbs (ww). Set ACL = ABC, and the recreational ACT = ACL[(1-PSE) or 0.5, whichever is greater. The ABC, ACL, and recreational ACT values are based on landed catch only; discards are accounted for in specifying the ABC in terms of landed catch and not total kill. The average PSE from MRIP for 2005-2009 is 13.34. The values would remain until modified.

ACL = OY = ABC = 6,063,000 lbs ww
Commercial ACL (55%) = 3,330,000 lbs ww
Recreational ACL (45%) = 2,727,000 lbs ww
Recreational ACT = 2,363,218 lbs ww

Alternative 3. Revise the ACL (including sector ACLs), OY and ACT for Atlantic migratory group Spanish mackerel for 2014 and 2015. The ABC recommended by the SSC is 6,060,000 lbs (ww). Set ACL = ABC, and the recreational ACT = ACL[(1-PSE) or 0.5, whichever is greater. The ABC, ACL, and recreational ACT values are based on landed catch only; discards are accounted for in specifying the ABC in terms of landed catch and not total kill. The average PSE from MRIP for 2005-2009 is 13.34. The values would remain until modified.

Option a. ACL = OY = 90% ABC = 5,450,000 lbs ww
Commercial ACL (55%) = 2,999,700 lbs ww
Recreational ACL (45%) = 2,454,300 lbs ww
Recreational ACT = 2,126,896 lbs ww

Option b. ACL = OY = 80% ABC = 4,848,000 lbs ww
Commercial ACL (55%) = 2,666,400 lbs ww
Recreational ACL (45%) = 2,181,600 lbs ww
Recreational ACT = 1,890,575 lbs ww

Discussion:

In Amendment 18 to the CMP FMP (GMFMC/SAFMC 2011), the ACL and optimum yield (OY) for Atlantic migratory group Spanish mackerel were set equal to the acceptable biological catch (ABC). Amendment 18 also established a recreational annual catch target (ACT) based on the recreational ACL. The ABC value was based on the recommendation by the South Atlantic Fishery Management Council's (South Atlantic Council) Scientific and Statistical Committee (SSC). When the SSC reviewed information for Atlantic migratory group Spanish mackerel during meetings in 2010 and 2011, the ABC value was based on landings data rather than assessment information. The SSC developed a new interim approach for determining ABC at their April 2011 meeting and recommended using the 80th percentile, or in this case the third highest point over a ten-year period for use as the ABC. The SSC determined the overfishing limit (OFL) for Atlantic migratory group Spanish mackerel to be unknown, and set the ABC at the 80th percentile for the time series ranging from 1999-2008.

SEDAR 28 included a benchmark assessment for Atlantic migratory group Spanish mackerel and was completed in 2012. In April 2013, the SSC reviewed the results. The SSC accepted the benchmark assessment as representing the best available scientific information on the status of Spanish mackerel in South Atlantic waters and considered it appropriate for south Atlantic Council management decisions.

The current stock status in the base run from the Beaufort Assessment Model (BAM) was estimated to be $SSB_{2011}/MSST=2.29$. The current level of fishing is $F_{2009\text{-}2011}/F_{MSY} = 0.526$, with $F_{2011}/F_{MSY} = 0.521$ [1]. The SSC concluded that the Atlantic migratory group Spanish mackerel stock is not overfished and is not undergoing overfishing. Since this assessment falls under Tier 1 of the SSC's ABC control rule, ABC was obtained according to a P-star value. A summary of results from applying the ABC control rule is presented below:

Assessment Information: Tier 2 (2.5%)
Uncertainty Characterization: Tier 2 (2.5%)
Stock Status: Tier 1 (0%)
Risk Analysis: Tier 2 (5%)
Total adjustment 10%
P-star value: 40%

[1] SSB_{2011} = Static Stock Biomass in fishing year 2011; MSST = Minimum Stock Size Threshold; $F_{2009\text{-}2011}$ = Fishing Mortality in fishing years 2009-2011; F_{MSY} = Fishing Mortality at Maximum Sustainable Yield. Results and additional details about the model are available in the SEDAR 28 report (http://www.sefsc.noaa.gov/sedar/).

At the June 2013 Council meeting, the SSC provided their recommendation to use 5-year projections at P*=50% for OFL and at P*=40% for ABC. When the South Atlantic Council received the projections from the Southeast Fisheries Science Center (SEFSC) at the June 2013 meeting, the South Atlantic Council approved the following motion to request the SSC review the Spanish mackerel projections and revisit the recommendations for OFL and ABC. The South Atlantic Council asked the SSC to consider basing OFL and ABC on equilibrium projections of Maximum Sustainable Yield (MSY), in light of effects of selectivity and recruitment patterns on short-term yield estimates. Additional language was added to provide guidance and clarification to the SSC: 'Considering the high degree of confidence that the stock is not only not overfished nor undergoing overfishing, but that current biomass is high (SSB/MSST = 2.29) and exploitation is low (F/F_{msy} = 0.53) and that the stock has not experienced overfishing over the assessment period, the Council believes that use of a less risk-averse reference point such as the equilibrium MSY, (6.063 mp) as OFL for 2013-2015 is justified. Due to the exploitation history and stock status, the Council believes such a reference point does not significantly increase the probability of overfishing during these years'.

In October 2013, the SSC reviewed projections and recommended the OFL and ABC values for Atlantic migratory group Spanish mackerel shown in **Table 2.1**.

Table 2.1. SSC recommendations for Atlantic migratory group Spanish mackerel, October 2013.

Year	OFL (Landings- lbs ww)	ABC (Landings- lbs ww)
2014	7,030,000	6,063,000
2015	6,620,000	6,063,000
2016	6,519,000	6,063,000

Comparison of Alternatives:

Alternative 1 (No Action) would not modify the Atlantic group Spanish mackerel ACL based on the results of the stock assessment. **Alternative 2** would modify the ACL by setting ACL = OY = ABC, which is the same formula for specifying the ACL in **Alternative 1 (No Action)**. Thus, the total ACL would be 6,063,000 pounds whole weight (lbs ww). The commercial ACL, recreational ACL, and recreational ACT would be adjusted accordingly, based on existing sector allocations and the formula used for the recreational ACT in Amendment 18 (GMFMC/SAFMC 2011). **Alternative 3** would set the ACL and OY equal to a percentage of the ABC to account for management uncertainty, if necessary. **Option a** would set ACL = OY = 90%ABC, which would result in a total ACL of 5,456,700 lbs ww, with sector ACLs and the recreational ACT adjusted accordingly. **Option b** would set ACL = OY = 80%ABC, which would modify the total ACL to 4,850,400 lbs ww, with sector ACLs and recreational ACT adjusted accordingly.

Because **Alternative 1 (No Action)** would constrain harvest to a lower level than **Alternative 2**, the biological benefits under **Alternative 1 (No Action)** would be expected to be greater than **Alternative 2**. **Alternative 3**, **Option a**, or **Option b**, would further restrain harvest and could also

provide positive biological benefits to the stock. However, results of the most recent assessment for the Atlantic migratory group of Spanish mackerel indicate the stock is not overfished or undergoing overfishing. Therefore, there is no biological need to constrain harvest at a level lower than that determined to be appropriate by the SSC.

In general, higher ACLs are better for both sectors as long as they are not exceeded and/or do not require overage paybacks in future seasons. **Alternative 2** would have the greatest positive direct economic effects. **Alternative 1 (No Action)** would maintain the status quo and is not expected to change economic effects. **Options a** and **b** of **Alternative 3** would be expected to have direct negative economic effects as the total ACL for both two options is lower than landings for recent years, especially landings by the commercial sector.

Changes in the ACL for any stock would not directly affect resource users unless the ACL is met or exceeded, in which case accountability, which restrict or close harvest, could negatively impact the commercial fleet, for-hire fleet, and private anglers. In general, the higher the ACL, the greater the short-term social and economic benefits that would be expected to accrue, assuming information is up-to-date and accurate to allow sustainable harvest. **Alternative 1** would not incorporate the results of the recent stock assessment and the current ACL may not best reflect the stock status at this time. **Alternative 2** would increase the ACL based on the best information available from a recent assessment, which would be beneficial to fishermen by allowing additional Spanish mackerel to be harvested but without negatively impacting the stock. **Options a** and **b** under **Alternative 3** would provide additional buffer from exceeding the ACL but could also limit the commercial and recreational sector's ability to meet OY by reducing fishing opportunities.

Administrative impacts of this action are likely to be minimal.

Figure 2.1 compares total landings of Atlantic migratory group Spanish mackerel with the ACLs proposed in the alternatives. **Figures 2.2-2.4** show the comparison of sector landings to the proposed sector ACLs and recreational ACT in the alternatives.

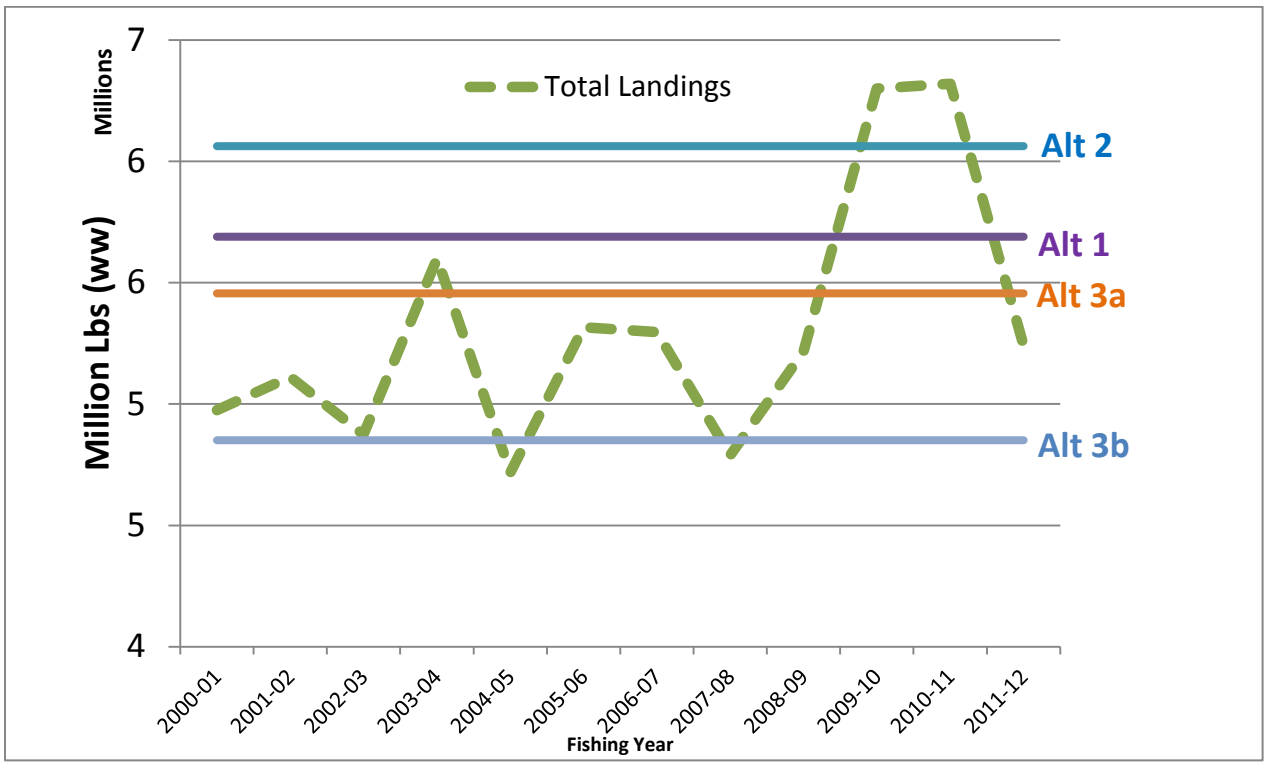

Figure 2.1. Total landings of Atlantic migratory group Spanish mackerel since 2000-01 compared to the proposed ACLs in **Alternatives 1-3**. Fishing seasons are March-February. Data source: SERO.

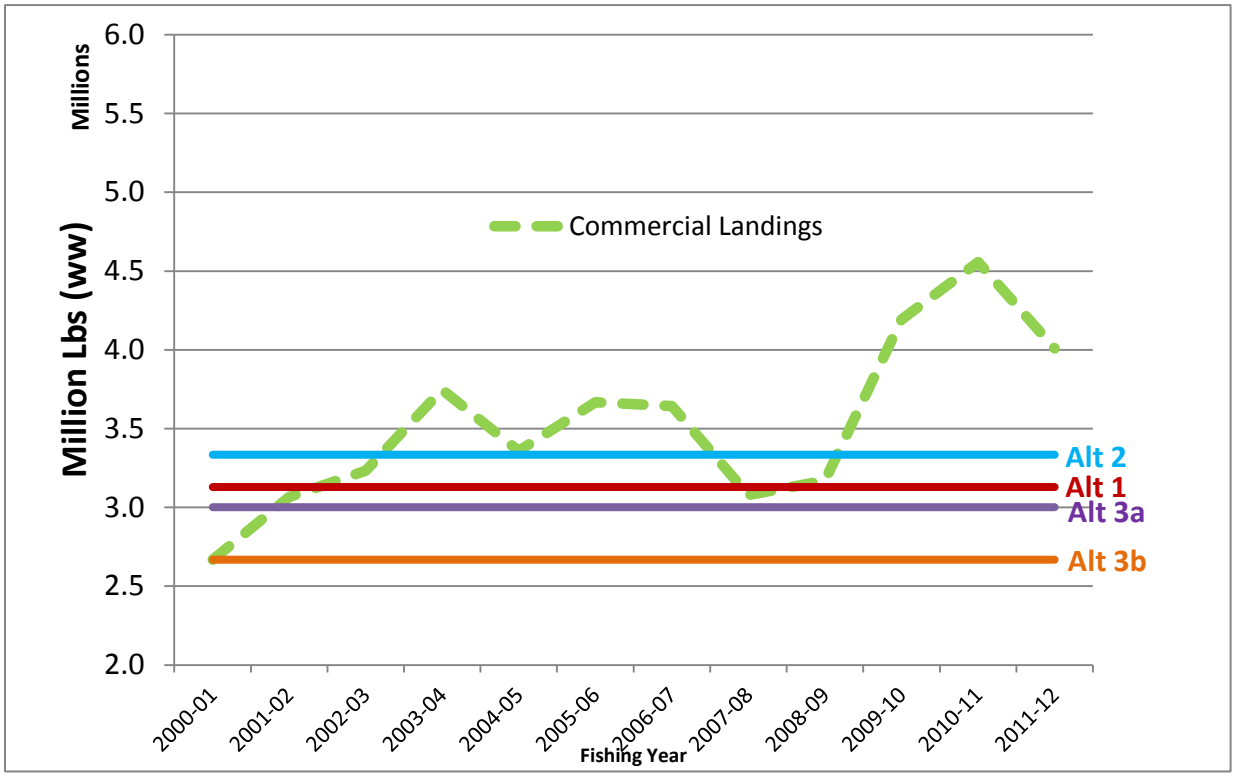

Figure 2.2. Commercial landings of Atlantic migratory group Spanish mackerel since 2000-01 compared to the proposed commercial ACLs in **Alternatives 1-3**. Fishing seasons are March-February. Data source: SERO.

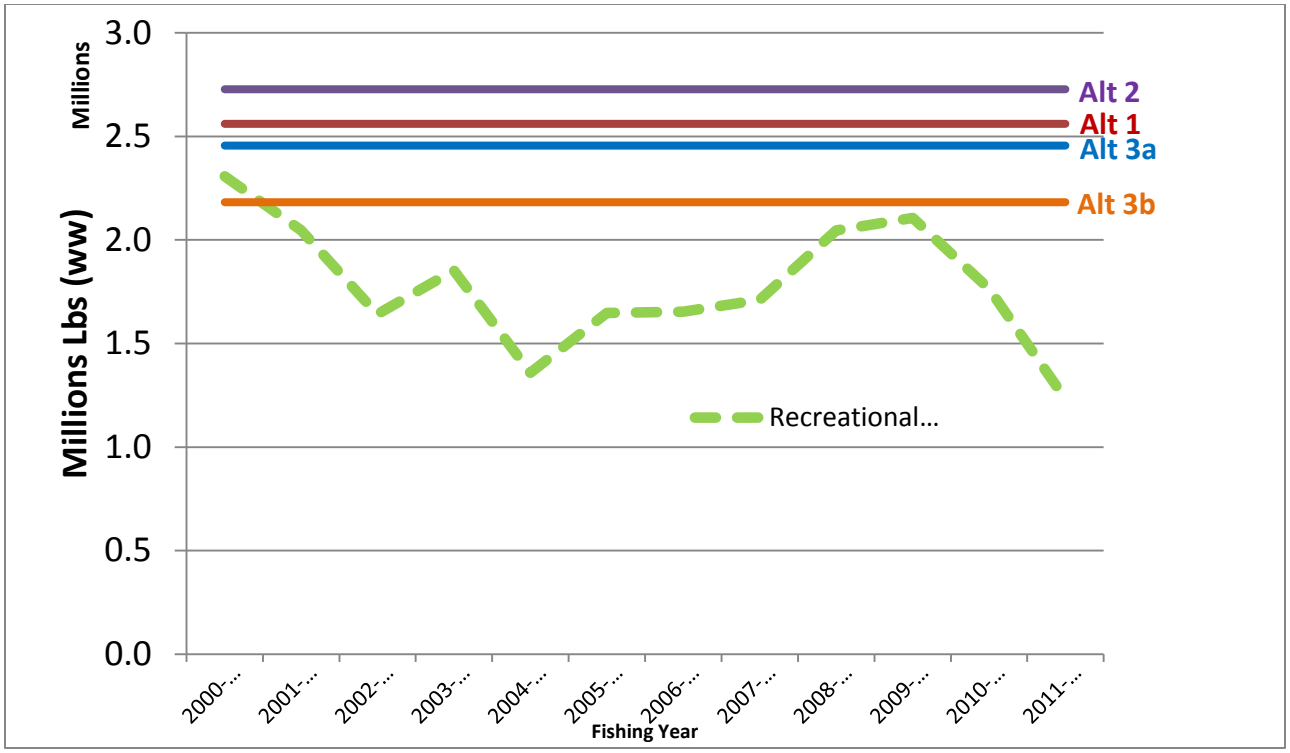

Figure 2.3. Recreational landings of Atlantic migratory group Spanish mackerel since 2000-01 compared to the proposed recreational ACLs in **Alternatives 1-3**. Fishing seasons are March-February. Data source: SERO.

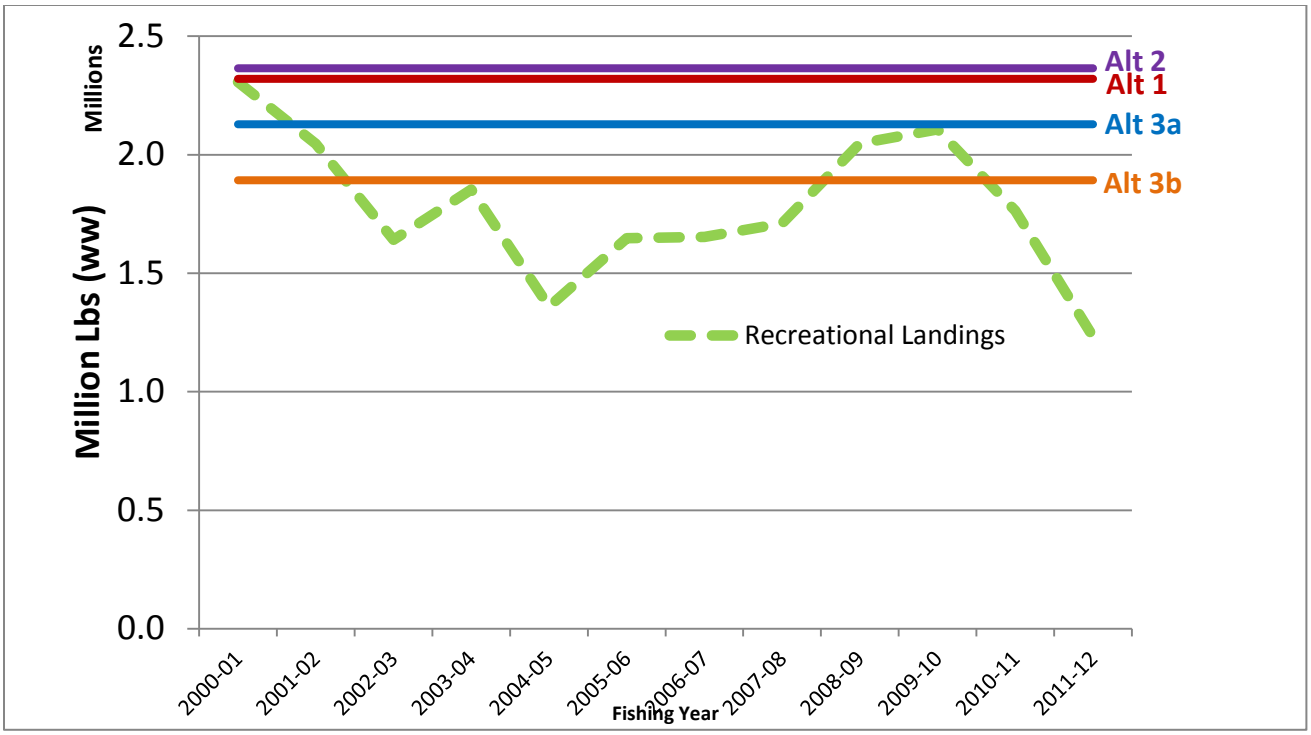

Figure 2.4. Recreational landings of Atlantic migratory group Spanish mackerel since 2000-01 compared to the proposed recreational ACTs in **Alternatives 1-3**. Fishing seasons are March-February. Data source: SERO

Action 2. Modify the Annual Catch Limit (ACL) for Gulf migratory group Spanish mackerel

Alternative 1 (No Action). Retain the current ACL for Gulf migratory group Spanish mackerel:

Current ABC = 5,150,000 lbs ww.

ACL= ABC =5,150,000 lbs ww (commercial and recreational sectors combined into a single Gulf-wide ACL in CMP Amendment 18 [GMFMC/SAFMC 2011])

Alternative 2. Revise ACL for Gulf migratory group Spanish mackerel for 2014 through 2016 as shown below, and set ACL = ABC = OY.

Table 2.2. ABCs and ACLs for 2014-2016 from the SEDAR 28 Gulf Spanish mackerel stock assessment and the Gulf Council/SSC-approved projections for Gulf migratory group Spanish mackerel. 'ww' = whole weight, and 'mp' = million pounds.

Year	ABC ww	Total ACL ww
2014	12.7 mp	12.7 mp
2015	11.8 mp	11.8 mp
2016	11.3 mp	11.3 mp

Alternative 3. Set the ACL for Gulf migratory group Spanish mackerel for 2014 through 2016 at a percentage of the ABC.

Option a: Set the ACT (including sector ACLs) for Gulf of Mexico migratory group Spanish mackerel for 2014 through 2016 at 90% of the ABC.
Option b: Set the ACT (including sector ACLs) for Gulf of Mexico migratory group Spanish mackerel for 2014 through 2016 at 75% of the ABC

Table 2.3. ABCABCs and ACLs for 2014-2016 from the SEDAR 28 Gulf Spanish mackerel stock assessment and the Gulf Council/SSC-approved projections for Gulf migratory group Spanish mackerel. 'WW' = whole weight, and 'mp' = million pounds.

Year	ABC (ww)	Option a: ACL = 90% of ABC (ww)	Option b: ACL = 75% of ABC (ww)
2014	12.7 mp	11.43 mp	9.525 mp
2015	11.8 mp	10.62 mp	8.85 mp
2016	11.3 mp	10.17 mp	8.475 mp

Discussion:

In Amendment 18 to the CMP FMP (GMFMC/SAFMC 2011), the ACL for Gulf (Gulf) migratory group Spanish mackerel was established. The ABC value was recommended by the Gulf of Mexico Fishery Management Council's (Gulf Council) SSC. Amendment 18 also discontinued the use of separate commercial and recreational ACLs in the Gulf, instead selecting a single Gulf-wide ACL to include both sectors.

SEDAR 28 included a benchmark assessment for Gulf migratory group Spanish mackerel and was completed in 2013 (SEDAR 28). In August 2013, the SSC reviewed the results. The SSC accepted the benchmark assessment as representing the best available scientific information on the current stock status of Spanish mackerel in Gulf of Mexico waters and considered it appropriate for Gulf Council management decisions.

The current stock status in the base run from the Stock Synthesis Model was estimated to be $SSB_{2011}/MSST=2.96$. The current level of fishing (the geometric mean of the 2009-2011 levels) is $F_{2009-2011}/F_{MSY} = 0.40$. The SSC concluded that the Gulf migratory group Spanish mackerel stock is not overfished and is not undergoing overfishing. Following the discussion regarding the ABC buffer, the SSC recommended an ABC yield stream using the base model and a probability of overfishing of P* = 0.434 applied to the OFL. Although the SSC voted to set ABC according to its control rule for years 2013 through 2016, the SSC thought that the Gulf Council should take into account the concerns raised regarding the OFL buffer and the equilibrium yield level when determining where to set ACL levels.

In August 2013, the SSC reviewed projections and recommended the OFL and ABC values for Gulf migratory group Spanish mackerel shown in **Table 2.2.3**. Although the values are higher than recent landings, the ABC would decrease in subsequent years toward equilibrium levels. This is because the current biomass level is estimated to be well above SSB_{MSY}. Consequently, catch levels above equilibrium ABC can occur, but will result in the stock being fished down to its equilibrium SSB_{MSY} level. At the August 2013 Gulf Council meeting, the SSC provided their recommendation to use four-year projections at P*=50% for OFL and at P*=43.4% for ABC. The Gulf Council subsequently approved the SSC's recommendations for OFL and ABC.

Table 2.4. SSC recommendations for OFL and ABC values for Gulf of Mexico migratory group Spanish mackerel, August 2013.

	ABC values		**OFL Values**	
Year	P*	Total Yield (landings + discards) in million pounds	P*	Total Yield (landings + discards) in million pounds
2013	0.434	14.2	0.5	14.4
2014	0.434	12.7	0.5	12.9
2015	0.434	11.8	0.5	12.0
2016	0.434	11.3	0.5	11.5

Spanish Mackerel Status and Fishing Level Recommendations

Note: mp = million pounds, ww = whole weight

Criteria	Deterministic
Overfished evaluation	No (SSB/MSST=2.96)
Overfishing evaluation	No ($F/_{MSY}F_{MSY}$=0.40)
MFMT	0.38
MSST	14,474,190 mp ww
MSY	23,345,467 mp ww
P-Star	43.4%

Comparison of Alternatives:

Alternative 1 would not update ACLs based on results from the recent stock assessment, and would therefore not result in a change to the current biological environment. **Alternatives 2** and **3** both propose to increase the ACL, which could lead to additional removals from the population. **Alternative 2** would employ the same formula as specified in the **Alternative 1 (No Action)**, and set the ACL = ABC. However, since **Options a** and **b** of **Alternative 3** both recommend ACLs equal to or less than the SSC-recommended ABC, there is little risk of any direct or indirect negative biological effects.

Alternative 1 (No Action) would maintain a Gulf migratory group Spanish mackerel ACL of 5.15 mp, and would not be expected to have economic effects. Between 2000 and 2011, Gulf Spanish mackerel landings averaged 3.93 mp annually. During the same time interval, maximum and minimum harvest levels were 4.88 and 2.48 mp, respectively. These values are all well below the 5.15 mp current ACL. It is therefore highly unlikely that economic benefits that could result from ACL increases under consideration in **Alternatives 2** and **3** would materialize. In the future, should commercial and recreational fishermen elect to take advantage of the additional fishing opportunities provided by **Alternatives 2** and **3,** direct economic benefits proportional to the ACL increases could be realized. Since current landings of Gulf migratory group Spanish mackerel usually do not meet the current ACL under **Alternative 1 (No Action)**, the proposed increase in the ACL under **Alternatives 2** or **3** is not expected to change fishing behavior or access to the resource, and would likely be beneficial to the fleet while maintaining sustainable harvest. Administrative impacts of this action are likely to be minimal.

Chapter 3. Affected Environment

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

- **Habitat environment** (Section 3.1)
- **Biological environment** (Section 3.2)
- **Human environment** (Sections 3.3)
- **Administrative environment** (Section 3.4)

3.1 Habitat Environment

3.1.1 South Atlantic

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

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

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

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

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

3.1.2 Gulf of Mexico

The Gulf of Mexico has a total area of approximately 600,000 square miles (1.5 million km^2), including state waters (Gore 1992). It is a semi-enclosed, oceanic basin connected to the Atlantic Ocean by the Straits of Florida and to the Caribbean Sea by the Yucatan Channel. Oceanic conditions are primarily affected by the Loop Current (**Figure 3.1.2.1**), the discharge of freshwater into the northern Gulf, and a semi-permanent, anti-cyclonic gyre in the western Gulf.

The Gulf is both a warm temperate and a tropical body of water (McEachran and Fechhelm 2005). Based on satellite derived measurements from 1982 through 2009, mean annual sea surface temperature ranged from 73 through 83º F (23-28º C) including bays and bayous (**Figure 3.1.2.1**). In general, mean sea surface temperature increases from north to south depending on time of year with large seasonal variations in shallow waters (NODC 2012: http://accession.nodc.noaa.gov/0072888).

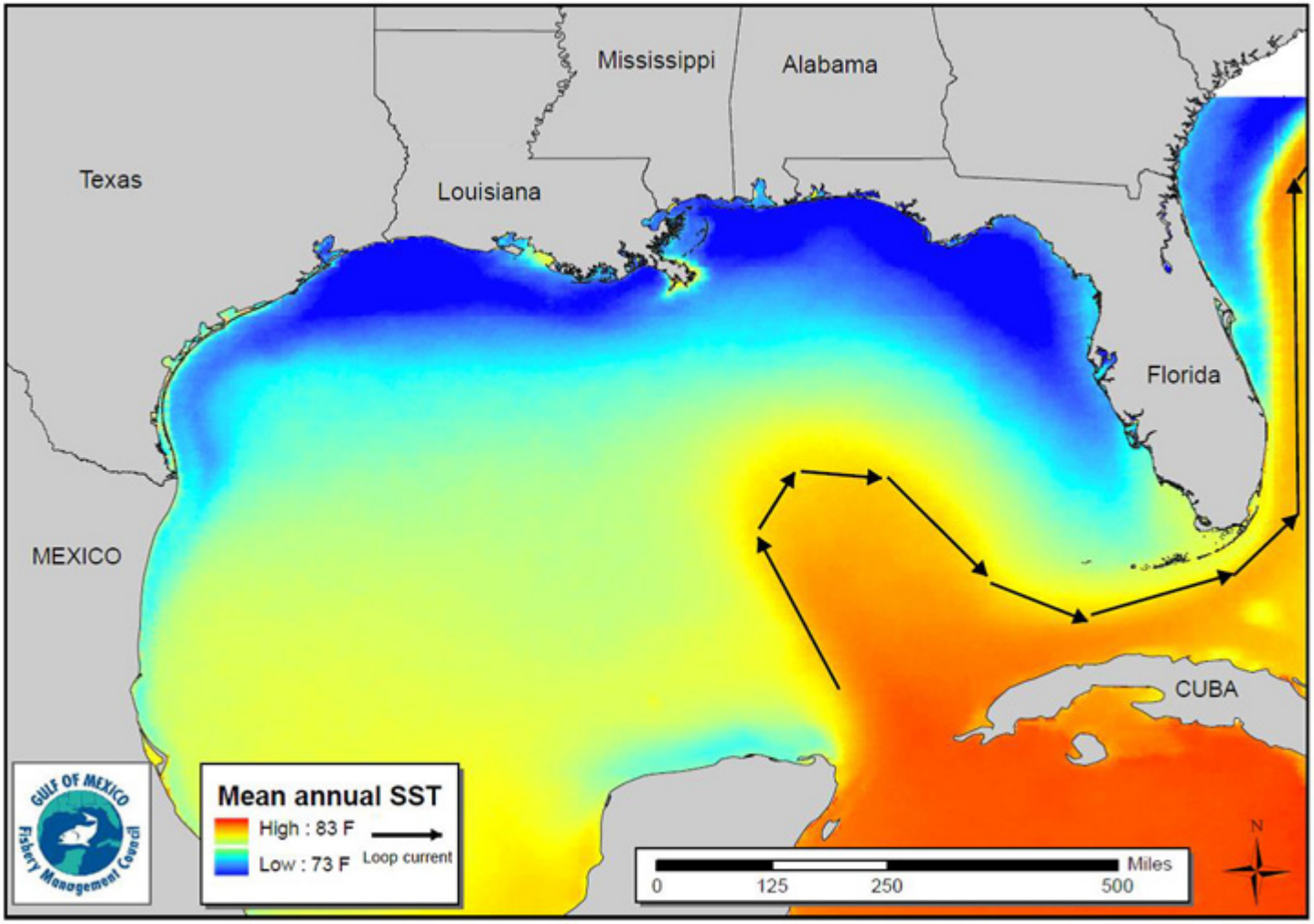

Figure 3.1.2.1. Mean annual sea surface temperature derived from the Advanced Very High Resolution Radiometer (AVHRR) Pathfinder Version 5 sea surface temperature data set (http://pathfinder.nodc.noaa.gov).

Several area closures include gear restrictions may affect targeted and incidental harvest of CMP species in the Gulf of Mexico. These are described in detail in Amendment 20B (GMFMC/SAFMC 2013) and incorporated by reference. The areas include

- Longline/Buoy Gear Area Closure
- Madison-Swanson and Steamboat Lumps Marine Reserves
- The Edges Marine Reserve
- Tortugas North and South Marine Reserves
- Alabama Special Management Zone

Reef and bank areas designated as Habitat Areas of Particular Concern (HAPCs) in the northwestern Gulf include East and West Flower Garden Banks, Stetson Bank, Sonnier Bank, MacNeil Bank, 29 Fathom, Rankin Bright Bank, Geyer Bank, McGrail Bank, Bouma Bank, Rezak Sidner Bank, Alderice Bank, and Jakkula Bank, Florida Middle Grounds HAPC and Pulley Ridge HAPC.

Deepwater Horizon Oil Spill

The Deepwater Horizon MC252 oil spill affected at least one-third of the Gulf from western Louisiana east to the Florida Panhandle and south to the Campeche Bank of Mexico. Oil flowed from the ruptured wellhead at a rate of 52,700 – 62,200 barrels/day for a total of 4,928,100 barrels (www.restorethegulf.gov 2010). The impacts of the Deepwater Horizon MC252 oil spill on the physical environment may be significant and long-term. Oil was dispersed on the surface, and because of the heavy use of dispersants (both at the surface and at the wellhead), oil was also documented as being suspended within the water column (Camilli et al. 2010; Kujawinski et al. 2011). Floating and suspended oil washed onto coastlines in several areas of the Gulf along with non-floating tar balls. Whereas suspended and floating oil degrades over time, tar balls are persistent in the environment and can be transported hundreds of miles (Goodman 2003).

Surface or submerged oil during the Deepwater Horizon MC252 oil spill event could have restricted the normal processes of atmospheric oxygen mixing into and replenishing oxygen concentrations in the water column, thus affecting the long-standing hypoxic zone located west of the Mississippi River on the Louisiana continental shelf (NOAA 2010). Research by Hazen et al. (2010), however, has indicated that microbial biodegradation of hydrocarbons in the water column may have occurred without substantial oxygen drawdown. Residence time of hydrocarbons in sediments is also a point of interest. Among the indices developed for past oil spills (Harper 2003) and oil spill scenarios (National Environmental Research Institute 2011) is the “oil residence index”; however, this index does not appear to have been utilized during the assessment of the Deepwater Horizon MC252 oil spill.

Most recently, the Associated Press reported on September 6, 2012 that researchers from Louisiana State University had linked oil discovered on Elmer’s Island and Grand Isle to the Deepwater Horizon MC252 oil spill after the landfall and dissipation of Hurricane Isaac (Burdeau and Reeves 2012).

3.2 Biological and Ecological Environment

3.2.1 Fish Populations Affected by this Amendment

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

The mackerel family, Scombridae, includes tunas, mackerels and bonitos are among the most important commercial and sport fishes. The habitat of adults in the coastal pelagic management unit is the coastal waters out to the edge of the continental shelf in the Atlantic Ocean. Within the area, the occurrence of coastal migratory pelagic species is governed by temperature and salinity. All species are seldom found in water temperatures less than 20°C. Salinity preference varies, but these species generally prefer high salinity, less than 36 ppt. The habitat for eggs and larvae of all species in the coastal pelagic management unit is the water column. Within the spawning area, eggs and larvae are concentrated in the surface waters.

The proposed actions in this amendment specific affect Spanish mackerel (*Scomberomorus maculatus*). Spanish mackerel are migratory and move into specific areas to spawn. Environmental factors, such as temperature can change the timing and extent of their migratory patterns (Williams and Taylor 1980) and Spanish mackerel mature at age 1-2 years.

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

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

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

3.2.2 Protected Species

The Gulf and South Atlantic coastal migratory pelagic hook-and-line fishery is classified in the 2012 MMPA List of Fisheries as a Category III fishery, 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 moralities, 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 coastal migratory pelagic gillnet fishery is classified as Category II fishery. This classification indicates an occasional incidental mortality or serious injury of a marine mammal stock resulting from the fishery (1-50% annually of the potential biological removal). The fishery has no documented interaction with marine mammals; NOAA Fisheries Service classifies this fishery as Category II based on analogy (i.e., similar risk to marine mammals) with other gillnet fisheries.

In a 2007 biological opinion, NOAA Fisheries Service determined the continued existence of endangered green, leatherback, hawksbill, and Kemp's ridley sea turtles, and threatened loggerhead sea turtles was not likely to be jeopardized by fishing for CMP species in the Southeastern United States. Other listed species are not likely to be adversely affected, including ESA-listed whales, Gulf sturgeon, and *Acropora* spp. corals.

3.3 Social and Economic Environment

Description of the fishery

A commercial Spanish mackerel permit is required for vessels fishing in the Gulf or Atlantic. This permit is open access. For-hire vessels must have a charter/headboat CMP permit for the area fished. The commercial permit has an income requirement of 25% of earned income or $10,000 from commercial or charter/headboat fishing activity in one of the previous three calendar years. As of April 4, 2013, there were 1,748 valid federal Spanish mackerel permits.

Gulf migratory group Spanish mackerel are considered a single stock throughout the Gulf from the southern border of Texas to the Miami-Dade/Monroe county border on the east coast of Florida. A single ACL for both commercial and recreational sectors was implemented through Amendment 18 (GMFMC/ SAFMC 2011) beginning with the 2012/2013 fishing year. Before that, the commercial and recreational sectors had separate quotas. The fishing year is April 1-March 31.

The area of the Atlantic migratory group of Spanish mackerel is divided into two zones: the Northern zone includes waters off New York through Georgia, and the Southern zone includes waters off the east coast of Florida to the Miami-Dade/Monroe county border. One commercial quota is set for both zones, which is adjusted for management purposes. The fishing year for Atlantic migratory group Spanish mackerel is March-February. This fishing year was implemented in August 2005; before then, the fishing year was April-March. Because of the change in fishing year, the 2005/2006 fishing year has only 11 months of landings and has been normalized for comparison with other years.

Landings compiled for the current Southeast Data, Assessment, and Review (SEDAR 28 2013) stock assessment divided the two migratory groups at the boundary between the South Atlantic and Gulf of Mexico Fishery Management Councils (Councils), which is the line of demarcation between the Atlantic Ocean and the Gulf of Mexico, although the management boundary is at the Dade/Monroe County line. Additionally, landings were compiled by calendar year rather than fishing year. For consistency with previous analyses, landings based on the correct management boundary and calendar year are included here.

Commercial landings over the past five years have averaged 1.3 mp annually in the Gulf and 3.7 mp annually in the Atlantic. Commercial landings of Spanish mackerel fell sharply in 1995 after Florida implemented a constitutional amendment banning certain types of nets, but average landings then increased back to near historical levels (**Table 3.3.1**).

Table 3.3.1. Annual commercial landings of Spanish mackerel.

Fishing Year	Landings (lbs)	
	Gulf	Atlantic
2000-2001	868,171	2,855,805
2001-2002	782,227	3,091,117
2002-2003	1,707,950	3,257,807
2003-2004	883,090	3,763,769
2004-2005	1,958,155	3,379,347
2005-2006	888,379	3,908,607
2006-2007	1,472,307	3,654,655
2007-2008	863,871	3,086,792
2008-2009	2,273,248	3,190,881
2009-2010	916,614	4,208,116
2010-2011	1,219,484	4,592,708

Source: SEFSC, ALS database; NEFSC, CFDBS database
*For 99/00-04/05, the Atlantic fishing year is Apr-Mar; for 06/07-09/10, the fishing year is Mar-Feb.

Recreational catches of Spanish mackerel in the Gulf have remained rather stable since the early 1990's at around 2.0 to 3.0 mp, despite increases in the bag limit from three fish in 1987 to 10 fish in 1992 to 15 fish in 2000. Recreational landings in the Atlantic also have remained fairly steady over time and averaged around 1.9 mp during the recent five years (**Table 3.3.2**).

Table 3.3.2. Annual recreational landings of Spanish mackerel.

Fishing Year	Landings (lbs)	
	Gulf	Atlantic
2000-2001	2,787,773	2,306,607
2001-2002	3,452,981	2,046,039
2002-2003	3,171,235	1,640,822
2003-2004	2,742,270	1,853,294
2004-2005	2,665,269	1,359,360
2005-2006	1,595,375	1,648,291
2006-2007	2,845,347	1,653,413
2007-2008	2,724,757	1,710,276
2008-2009	2,525,443	2,046,806
2009-2010	1,890,143	2,107,213
2010-2011	2,964,339	1,763,640

Source: SEFSC, ACL data sets; MRFSS, HBS, TPWD

Distribution of Fishing Activity

Jurisdiction of the CMP fishery is divided between the federal and state governments. However, Spanish mackerel most commonly occur in state jurisdictional waters, and the majority of the commercial king mackerel harvest also occurs in state waters (ASMFC Fishery Management

Report, Omnibus Amendment to the Interstate Fishery Management Plans for Spanish mackerel, Spot, and Spotted Trout, 2012).
For purposes of the following discussion, the level of activity in the CMP fishery is divided into two mutually exclusive groups: those that harvest quantities of Spanish mackerel greater than the bag limits and those that harvest quantities of these species under the bag limits. Vessels that take CMP in quantities under the bag limits are divided into three groups: commercial fishing vessels, charter vessels and headboats, and angler/recreational vessels.

Commercial fishermen who harvest Spanish mackerel in federal waters with a permit are limited by daily trip limits, except for those who harvest Spanish mackerel in federal waters of the Gulf where the daily catch is unlimited. Daily trip limits vary by location and gear and may be adjusted when landings reach 75% or another percent of the annual quota (**Table 3.3.3**).

Table 3.3.3. Commercial trip limits for Spanish mackerel.

Species	Migratory Group	Zone	Subzone	Gear/Fishery	Daily Trip Limit
Spanish Mackerel	Atlantic	Northern			3,500 lbs
		Southern			3,500 lbs[1]
	Gulf	-	-	-	Unlimited

1 The 3,500-lb trip limit begins Mar 1. Unlimited trip limits begin Dec 1 and continue until 75% of quota is harvested and trip limit is reduced to 1,500 lbs. Daily trip limits during the unlimited season: unlimited Mon-Fri and 1,500 lbs on Sat-Sun. In federal waters off Florida's east coast, the trip limit is reduced to 500 lbs through Mar 31 if 100% of the adjusted quota is harvested.

The quantities of CMP that can be harvested within the recreational bag limits are substantially less than those within the commercial trip limits. Any vessel in the EEZ without a federal Spanish mackerel commercial permit is restricted to a bag limit of 15 per person per day.

It is reasonable to expect that commercial vessels that target CMP species solely or mostly in state waters would not have a federal permit, unless the state where they fish requires a federal permit. Operating within state waters, these non-federally permitted vessels can land quantities above the federal bag limit provided the state does not have a more restrictive regulation. Consequently, a federal permit would be an unnecessary expense.

Another reason why a commercial vessel may not have a CMP permit is if it targets other species in the EEZ and retains CMP species only in small quantities as bycatch. For example, Spanish mackerel are known to be bycatch in the shrimp trawl fishery. If kept by a commercial vessel without a CMP permit, their quantities cannot exceed the bag limits, and when landed and sold, these quantities count against the respective commercial quotas.

However, other reasons for not having a federal Spanish mackerel permit may include the inability to satisfy the income or revenue requirement of obtaining the permit, and/or the cost of obtaining a transferred or new commercial permit may be greater than the economic benefit of having said permit. The cost of acquiring a new Spanish mackerel commercial permit is $25

plus time to complete the application, with its income requirement. As of February 5, 2013, there were 1,339 valid or renewable Gulf CMP charter/headboat permits and 1,449 Atlantic CMP charter/headboat permits.
For-hire fishing vessels must have either a Gulf or South Atlantic charter vessel/headboat CMP permit, depending on where they fish in the EEZ. The Gulf permit is a limited access permit, while the South Atlantic permit is an open access permit. Each charter/headboat permit allows the for-hire fishing vessel to be used to catch any CMP species in quantities no greater than the recreational bag/possession limits in federal waters. Some vessels may have both federal charter vessel/headboat and federal Spanish mackerel commercial permits. When a vessel is operating as a charter vessel or headboat, a person aboard must adhere to the recreational bag limit.

Private recreational fishing vessels must be registered in their state or documented by the U.S. Coast Guard. Saltwater anglers aboard these vessels must be registered with the National Saltwater Angler Registry or licensed in their exempted state in order to fish for CMP in the EEZ.

All states require a commercial fishing license to sell Spanish mackerel landed in their waters. Texas requires an additional permit beyond a commercial fishing license to bring any fish taken in the EEZ into state waters. Operators of commercial fishing vessels with a federal Spanish mackerel permit and who are commercially licensed in a state can land and sell quantities of these species greater than the respective bag limits (and under quota). At the same time, operators of fishing vessels without one of these federal permits, but who are licensed to fish commercially by a state, can also land and sell quantities of these species greater than the bag limits, provided any quantities of Spanish mackerel harvested over the bag limits are taken in state waters and the state where these species are landed does not require the corresponding federal permits. Alabama requires both the federal Spanish mackerel permits to possess and land quantities above the bag limits (**Table 3.3.4**). None of the other states requires a federal permit to land and sell quantities above the bag limits; however, they all require a state-issued commercial fishing license.

Table 3.3.4. State requirements to land and sell quantities of CMP above bag limits.

State	License/Permit Requirements to Land and Sell Quantities Above Bag Limits
Alabama	Federal Spanish mackerel permit, commercial fishing license
Florida	Commercial vessel registration, saltwater products license, restricted species endorsement
Georgia	Commercial fishing license and commercial boat license
Louisiana	Commercial fishing license and commercial boat license
Mississippi	Commercial fishing license and commercial boat license
North Carolina	Standard commercial fisherman license & commercial vessel registration or recreational fishing tournament license
South Carolina	Commercial saltwater fishing license
Texas	General commercial fishing license, commercial fishing boat license

Illegal sales of CMP have been found. In 2009, the Florida Fish and Wildlife Conservation Commission charged businesses that operated six charter fishing boats with illegally selling king mackerel (http://freerepublic.com/focus/f-news/2406062/posts). Boats were cited for not reporting the king mackerel that were sold and not having the necessary license and restricted species endorsement to sell the fish.

3.3.1 Economic Environment

3.3.1.1 Economic Description of the Commercial Fishery

Number of Vessels, Harvest, and Ex-vessel Value

An economic description of the commercial fisheries for the CMP species is contained in Vondruska (2010) and is incorporated herein by reference. Updated select summary statistics are provided in **Table 3.3.1.1**. Landings information is provided in Section 3.1.

Table 3.3.1.1. Five-year average performance statistics, including number of vessels landing each species, value of the species for those vessels, value of all species for those vessels, and the average value for those vessels.

Species	Number of Vessels	Ex-vessel Value (millions)	Ex-vessel Value All Species (millions)	Average Ex-vessel Value per Vessel
Spanish mackerel, Gulf migratory group	208	$0.28	$10.33	$49,700
Spanish mackerel, Atlantic migratory group	387	$1.87	$11.99	$31,000

Notes: Each row should be interpreted individually, as there will be substantial double counting across rows in columns 2 and 4, e.g., the same vessel might fish for different migratory groups of the same or different species.
Five-year averages in column 3 are based on fishing years for king and Spanish mackerels (2007/2008, 2008/2009,…, 2011/2012).
Five-year averages in column 4 are based on calendar years (2007-2011).
All value analyses account for inflation by adjusting dollar amounts reported from 2007-2012 (i.e., current dollars) to 2011 dollars (i.e., constant dollars) using price indices from the Bureau of Labor Statistics, specifically SERIES CUUR0000SA0, CPI-U, ALL ITEMS, NOT SEASONALLY ADJUSTED, BASE=1982-84.
Source: NMFS SEFSC Coastal Fisheries Logbook for landings and NMFS Accumulated Landings System for prices. Note that small amounts (0.03% of king mackerel, 1.95% of Spanish mackerel) are landed in the Northeast and are not counted here. Similar, landings and revenue from State waters by vessels without federal permits are not included.

Economic Activity

An alternative, regional perspective on the economics of the CMP fishery is an economic impact assessment or analysis. The desire to consume CMP species, and availability of these species generate economic activity as consumers spend their incomes on CMP-derived commodities (including services), such as king mackerel purchased at a local fish market and served during restaurant visits. This spurs additional economic activity in the

region(s) where CMP species are purchased and fishing occurs, such as jobs in local fish markets, restaurants and fishing supply establishments. It should be clearly noted that, in the absence of CMP species for purchase, consumers would spend their incomes on substitute proteins and other commodities. As such, the economic impact analysis presented below represents a distributional analysis only; that is, it only shows how economic effects can be distributed through regional markets.

Estimates of the average annual economic activity (impacts) associated with the commercial fisheries for CMP species addressed in the amendment were derived using the model developed for and applied in NMFS (2009a) and are provided in **Table 3.3.1.2**. Business activity for the commercial sector is characterized in the form of full-time equivalent jobs, income impacts (wages, salaries, and self-employed income), and output (sales) impacts (gross business sales). Income impacts should not be added to output (sales) impacts because this would result in double counting.

As noted in **Table 3.3.1.2**, the annual period refers to the fishing year, as appropriate to the management of the species. The estimates of economic activity include the direct effects (effects in the sector where an expenditure is actually made), indirect effects (effects in sectors providing goods and services to directly affected sectors), and induced effects (effects induced by the personal consumption expenditures of employees in the direct and indirectly affected sectors). Estimates are provided for the economic activity associated with the ex-vessel revenues from the individual CMP species as well as the revenues from all species harvested by these same vessels. The estimates of ex-vessel value in **Table 3.3.1.2** are replicated from **Table 3.3.1.1**.

Table 3.3.1.2. Average annual economic activity associated with the CMP fishery.

Species	Average Ex-vessel Value[1] (millions)	Total Jobs	Harvester Jobs	Output (Sales) Impacts (millions)	Income Impacts (millions)
Atlantic migratory group king mackerel	$4.90	884	115	$64.52	$27.50
- all species[2]	$27.24	4,914	641	$358.66	$152.86
Atlantic migratory group Spanish mackerel	$1.87	337	44	$24.62	$10.49
- all species	$11.99	2,163	282	$157.87	$67.28
Gulf migratory group king mackerel	$5.38	970	127	$70.84	$30.19
- all species	$32.06	5,783	755	$422.12	$179.90
Gulf migratory group Spanish mackerel	$0.28	51	7	$3.69	$1.57
- all species	$10.33	1,863	243	$136.01	$57.97

[1]2011 dollars.

[2]Includes ex-vessel revenues and economic activity associated with the average annual harvests of all species

harvested by vessels that harvested the subject CMP species.

Permits
The numbers of commercial permits associated with the CMP fishery on May 29, 2013, are provided in **Table 3.3.1.3**.

Table 3.3.1.3. Number of permits associated with the CMP fishery as of May 29, 2013.

	Valid[1]	Valid or Renewable
King Mackerel	1,401	1,486
King Mackerel Gillnet	22	23
Spanish Mackerel	1,813	Not applicable

[1]Non-expired. Expired permits may be renewed within one year of expiration.

3.3.1.2 Economic Description of the Recreational Fishery

The recreational fishery is comprised of the private sector and for-hire sector. The private sector includes anglers fishing from shore (all land-based structures) and private/rental boats. The for-hire sector is composed of the charter vessel and headboat (also called party boat) sectors. Charter vessels generally carry fewer passengers and charge a fee on an entire vessel basis, whereas headboats carry more passengers and payment is per person.

Effort
Extrapolated recreational effort derived from the MRFSS/MRIP database, which excludes Texas, can be characterized in terms of the number of trips as follows:

Target effort - The number of individual angler trips, regardless of trip duration, where the angler indicated that the species was targeted as either the first or the second primary target for the trip. The species did not have to be caught.

Catch effort - The number of individual angler trips, regardless of trip duration and target intent, where the individual species was caught. The fish caught did not have to be kept.

All recreational trips - The total estimated number of recreational trips taken, regardless of target intent or catch success.

Estimates of average annual recreational effort, 2007-2011, for the CMP species addressed in this amendment are provided in **Tables 3.3.1.5-8**. In each table, where appropriate, the "total" refers to the total number of target or catch trips, as appropriate, while "all trips" refers to the total number of trips across all species regardless of target intent of catch success. The estimates were evaluated by calendar year and not fishing year. As a result, while the results may not be fully reflective of effort associated with specific stocks (e.g., Gulf migratory group versus Atlantic migratory group for king or Spanish mackerel), the results are consistent with fishing

activity based on area fished.

Among the two species examined, Spanish mackerel is subject to more target and catch effort than king mackerel for the Gulf states (**Table 3.3.1.5**). Spanish mackerel is also subject to more catch effort than target effort, whereas more trips target than catch king mackerel.

The effort situation is somewhat different for the South Atlantic states (**Table 3.3.1.6**). While Spanish mackerel still records the highest average number of catch trips per year, the difference over king mackerel is not as pronounced as in the Gulf. Further, more trips target king mackerel than Spanish mackerel. Further, both species are subject to more target effort than catch effort. East Florida dominates for both species and effort type.

If examined by mode, in the Gulf, the private mode accounts for the most target and catch effort for king mackerel (**Table 3.3.1.7**). For Spanish mackerel, however, the shore mode dominates target effort, while the private mode accounts for the most catch trips. In the South Atlantic, the private mode leads for both species and effort type (**Table 3.3.1.8**).

Table 3.3.1.5. Average annual (calendar year) recreational effort (thousand trips) in the Gulf of Mexico, by species and by state, across all modes, 2007-2011.

	Target Trips					
Species	Alabama	W Florida	Louisiana	Mississippi	Total	All Trips
King Mackerel	84	385	1	1	472	23,600
Spanish Mackerel	68	762	0	1	830	
	Catch Trips					
King Mackerel	49	229	3	2	283	23,600
Spanish Mackerel	83	1,070	18	13	1,185	

Source: NMFS MRFSS/MRIP and SERO.

Table 3.3.1.6. Average annual (calendar year) recreational effort (thousand trips) in the South Atlantic, by species and by state, across all modes, 2007-2011.

	Target Trips					
	E Florida	Georgia	North Carolina	South Carolina	Total	All Trips
King Mackerel	365	11	166	86	629	19,842
Spanish Mackerel	186	4	258	64	512	
	Catch Trips					
King Mackerel	263	7	63	22	355	19,842
Spanish Mackerel	242	9	200	54	505	

Source: NMFS MRFSS/MRIP and SERO.

Table 3.3.1.7. Average annual (calendar year) recreational effort (thousand trips) in the Gulf of Mexico, by species and by mode, across all states, 2007-2011.

	Target Trips				
	Shore	Charter	Private	Total	All Trips

King Mackerel	210	30	231	472	23,600
Spanish Mackerel	534	17	280	830	
	Catch Trips				
King Mackerel	49	94	140	283	23,600
Spanish Mackerel	529	55	600	1,185	

Source: NMFS MRFSS/MRIP and SERO.

Table 3.3.1.8. Average annual (calendar year) recreational effort (thousand trips) in the South Atlantic, by species and by mode, across all states, 2007-2011.

	Target Trips				
	Shore	Charter	Private	Total	All Trips
King Mackerel	102	27	500	629	19,842
Spanish Mackerel	231	8	273	512	
	Catch Trips				
King Mackerel	7	49	298	355	19,842
Spanish Mackerel	189	22	294	505	

Source: NMFS MRFSS/MRIP and SERO.

Tables **Table 3.3.1.9-12** contain estimates of the average annual (2007-2011) target trips and catch trips, by species, for each state and mode.

Table 3.3.1.9. Average annual (calendar year) recreational effort (thousand trips), Alabama, by species and by mode, 2007-2011.

	Shore		**Charter**		**Private**		**Total**	
	Target	Catch	Target	Catch	Target	Catch	Target	Catch
King Mackerel	38	10	5	10	42	29	84	49
Spanish Mackerel	38	36	2	7	28	40	68	83

Source: NMFS MRFSS/MRIP and SERO.

Table 3.3.1.10. Average annual (calendar year) recreational effort (thousand trips), West Florida, by species and by mode, 2007-2011.

	Shore		**Charter**		**Private**		**Total**	
	Target	Catch	Target	Catch	Target	Catch	Target	Catch
King Mackerel	172	38	25	83	188	108	385	229
Spanish Mackerel	495	491	15	40	252	539	762	1,070

Source: NMFS MRFSS/MRIP and SERO.

Table 3.3.1.11. Average annual (calendar year) recreational effort (thousand trips), Louisiana, by species and by mode, 2007-2011.

	Shore		**Charter**		**Private**		**Total**	
	Target	Catch	Target	Catch	Target	Catch	Target	Catch

King Mackerel	0	0	0	1	0	2	1	3
Spanish Mackerel	0	1	0	2	0	15	0	18

Source: NMFS MRFSS/MRIP and SERO.

Table 3.3.1.12. Average annual (calendar year) recreational effort (thousand trips), Mississippi, by species and by mode, 2007-2011.

	Shore		Charter		Private		Total	
	Target	Catch	Target	Catch	Target	Catch	Target	Catch
King Mackerel	0	0	0	1	1	1	1	2
Spanish Mackerel	0	1	0	6	0	6	1	13

Source: NMFS MRFSS/MRIP and SERO.

Table 3.3.1.13. Average annual (calendar year) recreational effort (thousand trips), East Florida, by species and by mode, 2007-2011.

	Shore		Charter		Private		Total	
	Target	Catch	Target	Catch	Target	Catch	Target	Catch
King Mackerel	18	5	19	35	328	223	365	263
Spanish Mackerel	119	116	1	3	67	123	186	242

Source: NMFS MRFSS/MRIP and SERO.

Table 3.3.1.14. Average annual (calendar year) recreational effort (thousand trips), Georgia, by species and by mode, 2007-2011.

	Shore		Charter		Private		Total	
	Target	Catch	Target	Catch	Target	Catch	Target	Catch
King Mackerel	0	0	0	0	11	7	11	7
Spanish Mackerel	2	2	0	1	2	7	4	9

Source: NMFS MRFSS/MRIP and SERO.

Table 3.3.1.15. Average annual (calendar year) recreational effort (thousand trips), North Carolina, by species and by mode, 2007-2011.

	Shore		Charter		Private		Total	
	Target	Catch	Target	Catch	Target	Catch	Target	Catch
King Mackerel	37	1	2	9	128	53	166	63
Spanish Mackerel	67	41	4	12	187	148	258	200

Source: NMFS MRFSS/MRIP and SERO.

Table 3.3.1.16. Average annual (calendar year) recreational effort (thousand trips), South Carolina, by species and by mode, 2007-2011.

	Shore		Charter		Private		Total	
	Target	Catch	Target	Catch	Target	Catch	Target	Catch
King Mackerel	47	1	5	5	33	16	86	22
Spanish Mackerel	43	31	3	7	17	16	64	54

Source: NMFS MRFSS/MRIP and SERO.

Similar analysis of recreational effort is not possible for the headboat sector because the headboat data are not collected at the angler level. Estimates of effort in the headboat sector are provided in terms of angler days, or the number of standardized 12-hour fishing days that account for the different half-, three-quarter-, and full-day fishing trips by headboats.

Headboat effort and harvest data, however, is collected through the NMFS Southeast Fisheries Science Center Headboat Survey (Headboat Survey) program. The average annual (2007-2011) number of headboat angler days is presented in **Table 3.3.1.17**. Due to confidentiality issues, Georgia estimates are combined with those of East Florida on the Atlantic, while Alabama is combined with West Florida as part of the summarization process for the Gulf (i.e., as part of the estimation process and not a result of confidentiality merging). As shown in **Table 3.3.1.17**, in both regions, Florida dominates, followed by Texas in the Gulf and South Carolina in the South Atlantic.

Table 3.3.1.17. Southeast headboat angler days, 2007-2011.

	Gulf of Mexico				
	Louisiana	**Mississippi**	**Texas**	**West Florida/ Alabama**	**Total**
2007	2,522	0	63,764	136,880	203,166
2008	2,945	0	41,188	130,176	174,309
2009	3,268	0	50,737	142,438	196,443
2010	217	*	47,154	111,018	158,389
2011	1,886	1,771	47,284	157,025	207,966
5-year Average	2,168	1,771**	50,025	135,507	189,471
	South Atlantic				
	East Florida/ Georgia	**North Carolina**	**South Carolina**	**Total**	
2007	157,150	29,002	60,729	246,881	
2008	124,119	16,982	47,287	188,388	
2009	136,420	19,468	40,919	196,807	

2010	123,662	21,071	44,951	189,684
2011	124,041	18,457	44,645	187,143
5-year Average	133,078	20,996	47,706	201,781

Source: Headboat Survey, NMFS, SEFSC, Beaufort Lab.
*Confidential.
**Because the average totals are used to represent expectations of future activity, the 2011 number of trips is provided as best representative of the emergent headboat sector in Mississippi.

Permits

The numbers of pelagic for-hire (charter or headboat) permits on March 21, 2013, are provided in **Table 3.3.1.18**. The for-hire permits do not distinguish between charter vessels and headboats, though information on the primary method of operation is collected on the permit application form. Some vessels may operate as both a charter vessel and a headboat, depending on the season or purpose of the trip. An estimated 70 headboats in the Gulf and an estimated 75 headboats in the South Atlantic participate in the Headboat Survey.

There are no specific federal permitting requirements for recreational anglers to harvest coastal migratory pelagic species. Instead, anglers are required to possess either a state recreational fishing permit that authorizes saltwater fishing in general, or be registered in the federal National Saltwater Angler Registry system, subject to appropriate exemptions.

Table 3.3.1.18. Number of pelagic for-hire (charter vessel/headboat) permits.

	Valid[1]	Valid or Renewable
Gulf of Mexico	1,210	1,337
Gulf Historical Captain	34	40
South Atlantic	1,475	Not applicable

[1]Non-expired. Expired permits may be renewed within one year of expiration.

Economic Value, Expenditures, and Economic Activity

Participation, effort, and harvest are indicators of the value of saltwater recreational fishing. However, a more specific indicator of value is the satisfaction that anglers experience over and above their costs of fishing. The monetary value of this satisfaction is referred to as consumer surplus. The value or benefit derived from the recreational experience is dependent on several quality determinants, which include fish size, catch success rate, and the number of fish kept. These variables help determine the value of a fishing trip and influence total demand for recreational fishing trips.

The estimated consumer surplus per fish kept for king mackerel to anglers in both the Gulf and South Atlantic, based on the estimated willingness-to-pay to avoid a reduction in the bag limit, is $7 (assumed 2006 dollars; Whitehead 2006). A comparable estimate has not been identified for Spanish mackerel.

While anglers receive economic value as measured by the consumer surplus associated with fishing, for-hire businesses receive value from the services they provide. Producer surplus is the measure of the economic value these operations receive. Producer surplus is the difference between the revenue a business receives for a good or service, such as a charter or headboat trip, and the cost the business incurs to provide that good or service. Estimates of the producer surplus associated with for-hire trips are not available. However, proxy values in the form of net operating revenues are available (D. Carter, NMFS SEFSC, personal communication, August 2010). These estimates were culled from several studies – Liese and Carter (2011), Dumas et al. (2009), Holland et al. (1999), and Sutton et al. (1999). Estimates of net operating revenue per angler trip (2009 dollars) on representative charter trips (average charter trip regardless of area fished) are $146 for Louisiana through east Florida, $135 for east Florida, $156 for northeast Florida, and $128 for North Carolina. For charter trips into the EEZ only, net operating revenues are $141 in east Florida and $148 in northeast Florida. For full-day and overnight trips only, net operating revenues are estimated to be $155-$160 in North Carolina. Comparable estimates are not available for Georgia, South Carolina, or Texas.

Net operating revenues per angler trip are lower for headboats than for charter boats. Net operating revenue estimates for a representative headboat trip are $48 in the Gulf (all states and all of Florida), and $63-$68 in North Carolina. For full-day and overnight headboat trips, net operating revenues are estimated to be $74-$77 in North Carolina. Comparable estimates are not available for Georgia and South Carolina.

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

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

Estimates of the regional economic activity (impacts) associated with the recreational fishery for king and Spanish mackerel were derived using average coefficients for recreational angling across all fisheries (species), as derived by an economic add-on to the MRFSS, and described and utilized in NMFS (2009a) and are provided in Tables 3.4.2.15-18. Business activity is characterized in the form of FTE jobs, income impacts (wages, salaries, and self-employed income), output impacts (gross business sales), and value-added impacts (difference between the value of goods and the cost of materials or supplies). Job and output (sales) impacts are equivalent metrics across both the commercial and recreational sectors. Income and value-added impacts are not equivalent, though similarity in the magnitude of multipliers may result in roughly equivalent values. Neither income nor value-added impacts should be added to output

(sales) impacts because this would result in double counting. Job and output (sales) impacts, however, may be added across sectors.

Estimates of the average expenditures by recreational anglers are provided in NMFS (2009b) and are incorporated herein by reference. Estimates of the average recreational effort (2007-2011) and associated economic impacts (2008 dollars) are provided in Table 3.4.2.15. Target trips were used as the measure of recreational effort. As previously discussed, more trips may catch some species than target the species. Where such occurs, estimates of the economic activity associated with the average number of catch trips can be calculated based on the ratio of catch trips to target trips because the average output impact and jobs per trip cannot be differentiated by trip intent. For example, if the number of catch trips is three times the number of target trips for a particular state and mode, the estimate of the associated activity would equal three times the estimate associated with target trips. **Table 3.3.1.19** contains estimates of the average annual (2007-2011) target trips, by species, for each state and mode.

It should be noted that output impacts and value added impacts are not additive and the impacts for each species should not be added because of possible duplication (some trips may target multiple species). Also, the estimates of economic activity should not be added across states to generate a regional total because state-level impacts reflect the economic activity expected to occur within the state before the revenues or expenditures "leak" outside the state, possibly to another state within the region. Under a regional model, economic activity that "leaks" from, for example, Alabama into Louisiana, would still occur within the region and continue to be tabulated. As a result, regional totals would be expected to be greater than the sum of the individual state totals. Regional estimates of the economic activity associated with the fisheries for these species are unavailable at this time.

The distribution of the estimates of economic activity by state and mode are consistent with the effort distribution with the exception that charter anglers, on average, spend considerably more money per trip than anglers in other modes. As a result, the number of charter trips can be a fraction of the number of private trips, yet generate similar estimates of the amount of economic activity. For example, as derived from **Table 3.3.1.20**, the average number of charter king mackerel target trips in West Florida (25,300 trips) was only approximately 13% of the number of private trips (187,979), whereas the estimated output (sales) impacts by the charter anglers (approximately $8.5 million) was approximately 93% of the output impacts of the private trips (approximately $9.1 million).

Table 3.3.1.19. Summary of king mackerel target trips (2007-2011 average) and associated economic activity (2012 dollars), Gulf states. Output and value added impacts are not additive.

	Alabama	West Florida	Louisiana	Mississippi	Texas
	Shore Mode				
Target Trips	37,876	171,848	0	0	unknown
Output Impact	$2,954,870	$12,418,993	$0	$0	

Value Added Impact	$1,589,549	$7,215,028	$0	$0	
Jobs	34	124	0	0	
	Private/Rental Mode				
Target Trips	41,782	187,979	347	1,341	unknown
Output Impact	$2,592,292	$9,100,990	$30,176	$40,782	
Value Added Impact	$1,419,221	$5,411,790	$14,841	$19,545	
Jobs	26	85	0	0	
	Charter Mode				
Target Trips	4,628	25,300	426	139	unknown
Output Impact	$2,569,513	$8,471,685	$216,259	$46,055	
Value Added Impact	$1,414,431	$5,022,837	$122,791	$25,951	
Jobs	32	82	2	0	
	All Modes				
Target Trips	84,286	385,127	773	1,480	unknown
Output Impact	$8,116,675	$29,991,669	$246,435	$86,836	
Value Added Impact	$4,423,200	$17,649,655	$137,633	$45,497	
Jobs	92	290	2	1	

Source: effort data from the NMFS MRFSS/MRIP, economic activity results calculated by NMFS SERO using the model developed for NMFS (2009a).

Table 3.3.1.20. Summary of king mackerel target trips (2007-2011 average) and associated economic activity (2012 dollars), South Atlantic states. Output and value added impacts are not additive.

	North Carolina	South Carolina	Georgia	East Florida
	Shore Mode			
Target Trips	37,113	47,408	0	17,947
Output Impact	$9,912,562	$5,147,891	$0	$546,734
Value Added Impact	$5,519,852	$2,866,467	$0	$317,409
Jobs	112	59	0	5
	Private/Rental Mode			
Target Trips	127,556	33,068	11,070	328,019
Output Impact	$7,424,590	$1,551,501	$184,435	$13,227,424
Value Added Impact	$4,186,496	$905,280	$111,875	$7,904,088
Jobs	75	17	2	130
	Charter Mode			
Target Trips	1,540	5,476	318	19,418

Output Impact	$639,289	$1,969,232	$21,318	$8,115,065
Value Added Impact	$358,770	$1,112,535	$12,442	$4,777,567
Jobs	8	24	0	78
	All Modes			
Target Trips	166,209	85,952	11,388	365,384
Output Impact	$17,976,441	$8,668,624	$205,752	$21,889,223
Value Added Impact	$10,065,119	$4,884,283	$124,317	$12,999,064
Jobs	195	99	2	214

Source: effort data from the NMFS MRFSS/MRIP, economic activity results calculated by NMFS SERO using the model developed for NMFS (2009a).

Table 3.3.1.21. Summary of Spanish mackerel target trips (2007-2011 average) and associated economic activity (2012 dollars), Gulf states. Output and value added impacts are not additive.

	Alabama	West Florida	Louisiana	Mississippi	Texas
	Shore Mode				
Target Trips	37,870	495,146	380	151	unknown
Output Impact	$2,954,402	$35,782,871	$28,628	$2,168	
Value Added Impact	$1,589,297	$20,788,675	$14,451	$1,081	
Jobs	34	356	0	0	
	Private/Rental Mode				
Target Trips	27,594	251,992	0	237	unknown
Output Impact	$1,712,022	$12,200,175	$0	$7,207	
Value Added Impact	$937,293	$7,254,682	$0	$3,454	
Jobs	17	114	0	0	
	Charter Mode				
Target Trips	2,153	14,793	0	165	unknown
Output Impact	$1,195,368	$4,953,425	$0	$54,669	
Value Added Impact	$658,010	$2,936,871	$0	$30,806	
Jobs	15	48	0	1	
	All Modes				
Target Trips	67,617	761,931	380	553	unknown
Output Impact	$5,861,791	$52,936,471	$28,628	$64,044	
Value Added Impact	$3,184,600	$30,980,228	$14,451	$35,341	
Jobs	66	518	0	1	

Source: effort data from the NMFS MRFSS/MRIP, economic activity results calculated by NMFS SERO using the model developed for NMFS (2009a).

Table 3.3.1.22. Summary of Spanish mackerel target trips (2007-2011 average) and associated economic activity (2012 dollars), South Atlantic states. Output and value added impacts are not additive.

	North Carolina	South Carolina	Georgia	East Florida
	Shore Mode			
Target Trips	66,917	43,394	1,623	118,706
Output Impact	$17,872,953	$4,712,022	$27,878	$3,616,236
Value Added Impact	$9,952,630	$2,623,766	$16,717	$2,099,424
Jobs	202	54	0	36
	Private/Rental Mode			
Target Trips	187,165	17,139	2,113	66,616
Output Impact	$10,894,222	$804,136	$35,204	$2,686,302
Value Added Impact	$6,142,915	$469,203	$21,354	$1,605,208
Jobs	110	9	0	26
	Charter Mode			
Target Trips	4,404	3,000	89	595
Output Impact	$1,828,200	$1,078,834	$5,966	$248,659
Value Added Impact	$1,025,990	$609,497	$3,482	$146,393
Jobs	22	13	0	2
	All Modes			
Target Trips	258,486	63,533	3,825	185,917
Output Impact	$30,595,375	$6,594,993	$69,049	$6,551,197
Value Added Impact	$17,121,534	$3,702,465	$41,553	$3,851,024
Jobs	334	76	1	65

Source: effort data from the NMFS MRFSS/MRIP, economic activity results calculated by NMFS SERO using the model developed for NMFS (2009a).

As previously noted, the values provided in Tables **Table 3.3.1.19-22** only reflect effort derived from the MRFSS/MRIP. Because the headboat sector in the Southeast Region is not covered by the MRFSS/MRIP, the results in Tables 3.4.2.15-18 do not include estimates of the economic activity associated with headboat anglers. While estimates of headboat effort are available (see Table 3.4.2.13), species target information is not collected in the Headboat Survey, which prevents the generation of estimates of the number of headboat target trips for individual species. Further, because the model developed for NMFS (2009a) was based on expenditure data collected through the MRFSS/MRIP, expenditure data from headboat anglers was not available and appropriate economic expenditure coefficients have not been estimated. As a result, estimates of the economic activity associated with the headboat sector comparable to those of the other recreational sector modes cannot be provided.

3.3.2 Social Environment

Descriptions of the social environment of the coastal migratory pelagics fishery and associated coastal communities are contained in Amendment 20A to the CMP FMP (GMFMC/SAFMC 2013) and is incorporated herein by reference where appropriate. The referenced description focuses on available geographic and demographic data to identify communities with strong relationships with harvest of coastal migratory pelagic species (i.e., significant landings and revenue). This section focuses on communities that are the most likely to experience positive or negative impacts from regulatory changes for Spanish mackerel.

The descriptions include information about the top communities based upon a regional quotient of commercial landings and value for Spanish mackerel. These top communities are referred to in this document as "Spanish mackerel communities" because these are the areas that would be most likely to experience the effects of proposed actions that could change the Spanish mackerel fishery and impact the participants and associated businesses and communities within the regions. Additionally, the descriptions in Amendment 20A (GMFMC/SAFMC 2013) for the Gulf and the South Atlantic and Mid-Atlantic regions also include reliance and engagement indices to identify other areas in which Spanish mackerel fishing is important, and provide information of how a community overall is involved with commercial and recreational fishing and could experience effects from regulatory actions for any species (see Amendment 20A for more details about the reliance and engagement indices). The identified communities in this section are referenced in Sections 4.1.3 and 4.2.3 in order to provide information on how the alternatives could affect specific areas.

Gulf of Mexico Region

Commercial Spanish Mackerel Communities

Using the regional quotient to identify Spanish mackerel communities, as detailed in Amendment 20A (GMFMC/SAFMC 2013), Destin, Florida, lands one quarter of all Spanish mackerel landings in the Gulf and those landings represent over 25% of the value. The second ranked community of Bayou La Batre, Alabama, includes about 20% of the landings and about 15% of the value of Spanish mackerel. Ten other Florida communities make up the top fifteen (including two Florida Keys communities), three additional Alabama communities, and one Louisiana community. No Texas or Mississippi communities are included in the top 15 for Spanish mackerel.

Reliance on and Engagement with Commercial and Recreational Fishing in the South Atlantic

The reliance and engagement indices provide information of how a community overall is involved with commercial and recreational fishing and could experience effects from regulatory actions for any species (see Amendment 20A for more details, GMFMC/SAFMC 2013). T The primary commercial communities that could be affected by change in the Spanish mackerel fishery include Bayou La Batre and Houma, LA. Florida communities include Destin, Everglades, Key West, Marathon, St. Petersburg, and Tarpon Springs. The primary recreational

communities in the Spanish mackerel fishery are all in Florida and include Destin, Key West, Marathon, Port St. Joe, St. Petersburg, and Tarpon Springs.

South Atlantic Region

Commercial Spanish Mackerel Communities in the South Atlantic

Using the regional quotient to identify Spanish mackerel communities, as detailed in Amendment 20A (GMFMC/SAFMC 2013), Fort Pierce, Florida, has almost 32% of the landings and over 25% of the value. Cocoa, Florida, is second with about 17% of landings and 17% of value. Although Hatteras, North Carolina ranked third for value, the community had lower landings than Palm Beach Gardens, Florida. No South Carolina or Georgia communities are included in the top fifteen for Spanish mackerel.

Reliance on and Engagement with Commercial and Recreational Fishing in the South Atlantic

The reliance and engagement indices provide information of how a community overall is involved with commercial and recreational fishing and could experience effects from regulatory actions for any species (see Amendment 20A for more details, GMFMC/SAFMC 2013). The primary commercial communities in the Spanish mackerel fishery include Fort Pierce, Florida; Marathon, Florida; Miami, Florida; Sebastian, Florida; Stuart, Florida; and Wanchese, North Carolina. The primary recreational communities in the Spanish mackerel fishery are Fort Pierce, Florida; Marathon, Florida; Miami, Florida; Sebastian, Florida; and Wanchese, North Carolina.

Mid-Atlantic Region

The South Atlantic Council manages Atlantic migratory groups of king mackerel, Spanish mackerel, and cobia through the Mid-Atlantic region as well as in the South Atlantic region. Overall, landings of these species in the Mid-Atlantic region are very low, and management actions by the South Atlantic Council likely have minimal impacts on Mid-Atlantic communities. More detailed information about these communities and how they were identified is described in Amendment 20A (GMFMC/SAFMC 2013).

Commercial Spanish Mackerel Communities in the Mid-Atlantic

For Spanish mackerel in the Mid-Atlantic the primary community with the relatively highest level of landings of at the regional level is Virginia Beach, Virginia. The Virginia counties of Gloucester, Northampton, and Northcumberland also include communities with higher levels of landings in the Mid-Atlantic region. Some communities in Maryland reported landings of Spanish mackerel (minimal), but no communities in New York, New Jersey, Pennsylvania, or Delaware are included in the top communities for Spanish mackerel.

Reliance on and Engagement with Commercial and Recreational Fishing in the Mid-Atlantic

The primary communities that demonstrate relatively high levels of commercial fishing engagement and reliance are Montauk, New York, and Hampton Bays, New York. Communities with relatively substantial recreational engagement and reliance include Montauk, New York; Virginia Beach, Virginia; Chincoteague, Virginia; and Freeport, New York.

3.3.3 Environmental Justice Considerations

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

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

In order to identify the potential for EJ concern, the rates of minority populations (non-white, including Hispanic) and the percentage of the population that was below the poverty line were examined. The threshold for comparison that was used was 1.2 times the state average for minority population rate and percentage of the population below the poverty line. If the value for the community or county was greater than or equal to 1.2 times the state average, then the community or county was considered an area of potential EJ concern. Census data for the year 2010 was used. Estimates of the state minority and poverty rates, associated thresholds, and community rates are provided in **Tables 3.3.3.1** and **3.3.3.2**; note that only communities that exceed the minority threshold and/or the poverty threshold are included in the table**.**

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

State	County/Parish	Minority Rate	Minority Threshold*	Poverty Rate	Poverty Threshold*
Florida		**47.4**	**56.88**	**13.18**	**15.81**
	Dixie	8.7	38.7	19.6	-3.79
	Franklin	19.2	28.2	23.8	-7.99
	Gulf	27	20.4	17.5	-1.69
	Jefferson	38.5	8.9	20.4	-4.59
	Levy	17.9	29.5	19.1	-3.29
	Taylor	26.2	21.2	22.9	-7.09
Alabama		**31.5**	**37.8**	**16.79**	**20.15**
	Mobile	39.5	-1.7	19.1	1.05
Mississippi		**41.9**	**50.28**	**15.82**	**18.98**

Louisiana		**39.1**	**46.92**	**15.07**	**18.08**
	Orleans	70.8	-25	23.4	-1.29
Texas		**39.1**	**46.92**	**15.07**	**18.08**
	Cameron	87.4	-24.7	35.7	-15.57
	Harris	63.5	-0.8	16.7	3.43
	Kenedy	71.7	-9	52.4	-32.27
	Kleberg	75	-12.3	26.1	-5.97
	Matagorda	51.9	10.8	21.9	-1.77
	Nueces	65.5	-2.8	19.7	0.43
	Willacy	89	-26.3	46.9	-26.77

*The county minority and poverty thresholds are calculated by comparing the county minority rate and poverty estimate to 1.2 times the state minority and poverty rates. A negative value for a county indicates that the threshold has been exceeded. No counties in Mississippi exceed the state minority or poverty thresholds.

Table 3.3.3.2. Environmental justice thresholds (2010 U.S. Census data) for counties in the South Atlantic region. Only coastal counties (east coast for Florida) with minority and/or poverty rates that exceed the state threshold are listed.

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

State	County	Minority Rate	Minority Threshold*	Poverty Rate	Poverty Threshold*
	Washington	54.7	-15.6	25.8	-7.72

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

Another type of analysis uses a suite of indices created to examine the social vulnerability of coastal communities and is depicted in **Figures 3.3.3.1** and **3.3.3.2.** The three indices are poverty, population composition, and personal disruptions. The variables included in each of these indices have been identified through the literature as being important components that contribute to a community's vulnerability. Indicators such as increased poverty rates for different groups; more single female-headed households; more households with children under the age of 5; and disruptions like higher separation rates, higher crime rates, and unemployment all are signs of populations experiencing vulnerabilities. The data used to create these indices are from the 2005-2009 American Community Survey estimates at the U.S. Census Bureau. The thresholds of 1 and ½ standard deviation are the same for these standardized indices. Again, for those communities that exceed the threshold for all indices it would be expected that they would exhibit vulnerabilities to sudden changes or social disruption that might accrue from regulatory change.

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

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

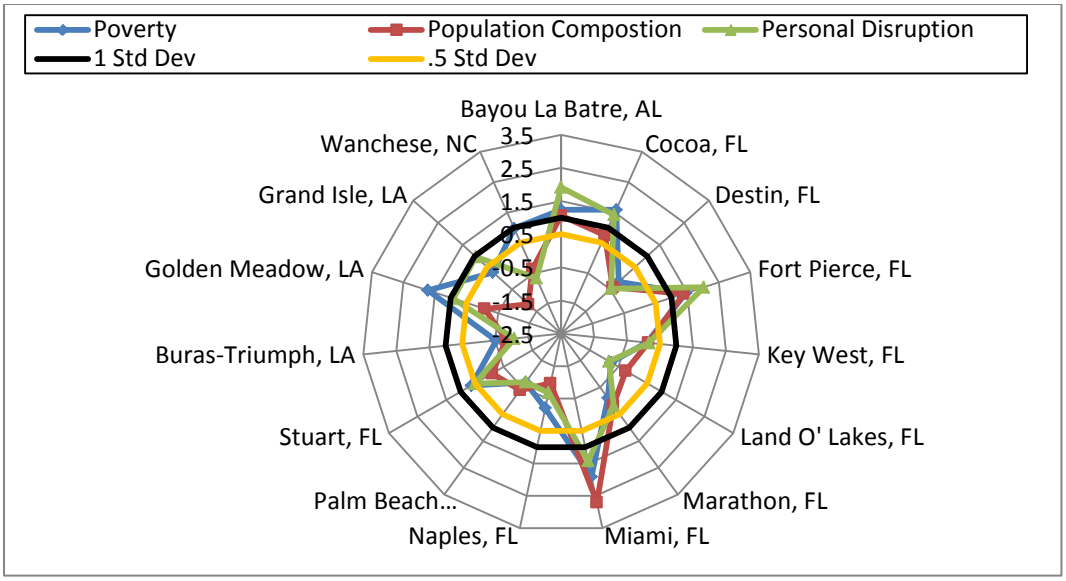

Figure 3.3.3.1. Social vulnerability indices for fifteen communities with the top regional quotients for coastal pelagics.
Source: SERO Social Indicator Database 2013

With regard to social vulnerabilities for the Mid-Atlantic Region, the following communities exceed the threshold of 0.5 standard deviation for at least one of the social vulnerability indices (**Figure 3.3.3.2**): Norfolk, VA; Hampton, VA; Chincoteague, VA; and Freeport, NY. The Virginia communities of Norfolk and Hampton exceed at least two thresholds on all three social vulnerability indices, but no communities exceed thresholds of all three indices. These communities are expressing substantial vulnerabilities and may be susceptible to further effects from any regulatory change depending upon the direction and extent of that change.

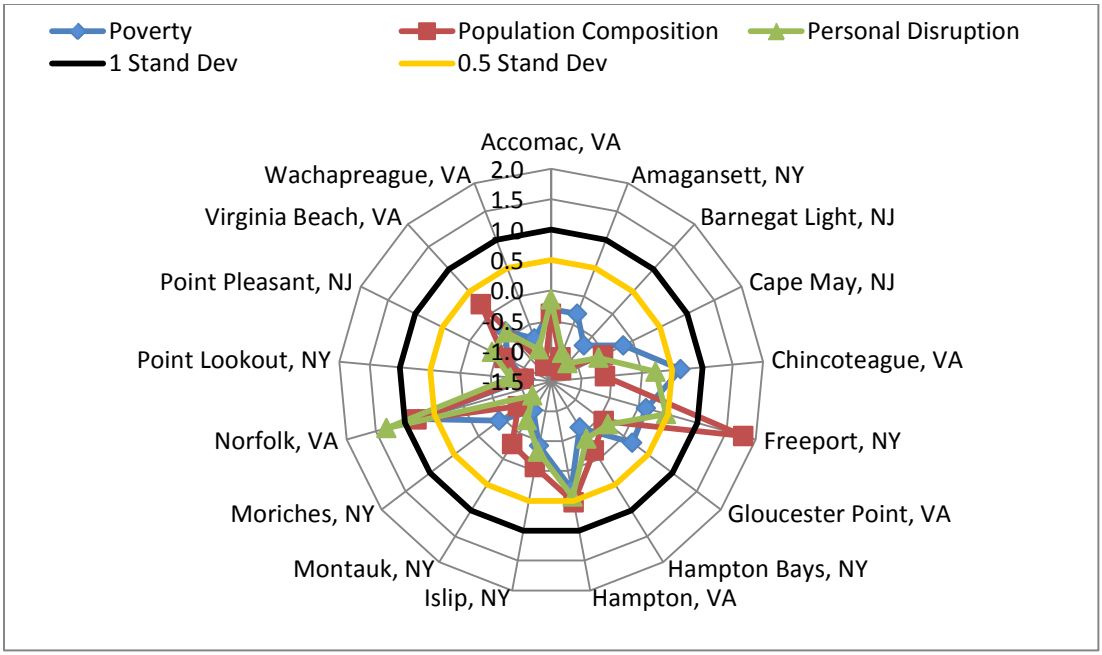

Figure 3.3.3.2. Social vulnerability indices for fifteen communities with the top regional quotients for coastal pelagics.
Source: SERO Social Indicator Database 2013

While some communities expected to be affected by this proposed amendment may have minority or economic profiles that exceed the EJ thresholds and, therefore, may constitute areas of concern, significant EJ issues are not expected to arise as a result of this proposed amendment. No adverse human health or environmental effects are expected to accrue to this proposed amendment, nor are these measures expected to result in increased risk of exposure of affected individuals to adverse health hazards. The proposed management measures would apply to all participants in the affected area, regardless of minority status or income level, and information is not available to suggest that minorities or lower income persons are, on average, more dependent on the affected species than non-minority or higher income persons.

King mackerel and Spanish mackerel are part of an important commercial fishery throughout the South Atlantic and Gulf regions, and specifically in Florida, and the fish are also targeted by recreational fishermen. The actions in this proposed amendment are expected to incur social and economic benefits to users and communities by implementing management measures that would contribute to conservation of the coastal pelagic stocks and to maintaining the commercial and recreational sectors of the fishery. Although there will be some short-term impacts due to some of the proposed management measures, the overall long-term benefits are expected to contribute to the social and economic health of South Atlantic and Gulf coastal communities. Impacts (positive and negative) are expected to be minimal for fishermen and communities in the Mid-Atlantic region.

Finally, the general participatory process used in the development of fishery management measures (e.g., scoping meetings, public hearings, and open South Atlantic and Gulf Council meetings) is expected to provide sufficient opportunity for meaningful involvement by potentially affected individuals to participate in the development process of this amendment and have their concerns factored into the decision process. Public input from individuals who participate in the fishery has been considered and incorporated into management decisions throughout development of the amendment. A public hearing will also be held in the Mid-Atlantic region prior to final approval by the Councils.

3.4 Administrative Environment

3.4.1 The Fishery Management Process and Applicable Laws

3.4.1.1 Federal Fishery Management

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

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

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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 states of Florida and Texas, and the three-mile seaward boundary of the states of Alabama, Mississippi, and Louisiana. The Gulf Council consists of 17 voting members, 11 of whom are

appointed by the members appointed by the Secretary, the National Marine Fisheries Service Regional Administrator, and one each from each of five Gulf states marine resource agencies. Non-voting members include representatives of the U.S. Fish and Wildlife Service, U.S. Coast Guard (USCG), and Gulf States Marine Fisheries Commission (GSMFC).

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 South Atlantic Council has 13 voting members: one from NMFS; one each from the state fishery agencies of North Carolina, South Carolina, Georgia, and Florida; and eight public members appointed by the Secretary. Non-voting members include representatives of the U.S. Fish and Wildlife Service, U.S. Coast Guard (USCG), and Atlantic States Marine Fisheries Commission (ASMFC).

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

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

3.4.1.2 State Fishery Management

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

participation in federal fishery management decision-making and to promote the development of compatible regulations in state and federal waters.

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

NMFS's State-Federal Fisheries Division is responsible for building cooperative partnerships to strengthen marine fisheries management and conservation at the state, inter-regional, and national levels. This division implements and oversees the distribution of grants for two national (Inter-jurisdictional Fisheries Act and Anadromous Fish Conservation Act) and two regional (Atlantic Coastal Fisheries Cooperative Management Act and Atlantic Striped Bass Conservation Act) programs. Additionally, it works with the ASMFC to develop and implement cooperative State-Federal fisheries regulations.

The purpose of state representation at the Council level is to ensure state participation in federal fishery management decision-making and to promote the development of compatible regulations in state and federal waters. The state governments have the authority to manage their respective state fisheries including enforcement of fishing regulations. Each of the eight states exercises legislative and regulatory authority over their states' natural resources through discrete administrative units. Although each agency listed below is the primary administrative body with respect to the state's natural resources, all states cooperate with numerous state and federal regulatory agencies when managing marine resources.

The states are also involved through the GSMFC and the ASMFC in management of marine fisheries. These commissions were created to coordinate state regulations and develop management plans for interstate fisheries.

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More information about these agencies can be found from the following web pages:
Texas Parks & Wildlife Department - http://www.tpwd.state.tx.us
Louisiana Department of Wildlife and Fisheries http://www.wlf.state.la.us/
Mississippi Department of Marine Resources http://www.dmr.state.ms.us/
Alabama Department of Conservation and Natural Resources http://www.dcnr.state.al.us/
Florida Fish and Wildlife Conservation Commission http://www.myfwc.com
Georgia Department of Natural Resources, Coastal Resources Division http://crd.dnr.state.ga.us/
South Carolina Department of Natural Resources http://www.dnr.sc.gov/
North Carolina Department of Environmental and Natural Resources
http://portal.ncdenr.org/web/guest/

3.4.1.3 Enforcement

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

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

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

Chapter 4. Environmental Effects and Comparison of Alternatives

4.1 Action 1. Modify the ACL for Atlantic migratory group Spanish mackerel

Alternative 1 (No Action). Retain the ACL, OY and ACT for Atlantic migratory group Spanish mackerel:

ACL = OY = ABC = 5,690,000 lbs ww
Commercial ACL (55%) = 3,130,000 lbs ww
Recreational ACL (45%) = 2,560,000 lbs ww
Recreational ACT = 2,320,000 lbs ww

Alternative 2. Revise the ACL (including sector ACLs) and ACT for Atlantic migratory group Spanish mackerel for 2014 and 2015. The ABC recommended by the SSC is 6,063,000 lbs (ww). Set ACL = ABC, and the recreational ACT = ACL[(1-PSE) or 0.5, whichever is greater.

ACL = OY = ABC = 6,063,000 lbs ww
Commercial ACL (55%) = 3,330,000 lbs ww
Recreational ACL (45%) = 2,727,000 lbs ww
Recreational ACT = 2,363,218 lbs ww

Alternative 3. Revise the ACL (including sector ACLs), OY and ACT for Atlantic migratory group Spanish mackerel for 2014 and 2015. The ABC recommended by the SSC is 6,060,000 lbs (ww). Set ACL = ABC, and the recreational ACT = ACL[(1-PSE) or 0.5, whichever is greater.

Option a. ACL = OY = 90% ABC = 5,450,000 lbs ww
Commercial ACL (55%) = 2,999,700 lbs ww
Recreational ACL (45%) = 2,454,300 lbs ww
Recreational ACT = 2,126,896 lbs ww

Option b. ACL = OY = 80% ABC = 4,848,000 lbs ww
Commercial ACL (55%) = 2,666,400 lbs ww
Recreational ACL (45%) = 2,181,600 lbs ww
Recreational ACT = 1,890,575 lbs ww

4.1.1 Biological Effects

Amendment 18 to the CMP FMP established an acceptable biological catch (ABC) control rule for Atlantic group Spanish mackerel. In accordance with National Standard 1 guidelines, the control rule takes into account scientific and data uncertainty. The South Atlantic Fishery

Management Council's (South Atlantic Council) Scientific and Statistical Committee (SSC) reviewed the 2012 assessment in April 2013 and again in October 2013, and determined the Atlantic group Spanish mackerel stock is neither overfished nor undergoing overfishing.

The SSC is the responsible entity for recommending an ABC for managed species. Section 600.310(b)(2)(v)(B) of the National Standard 1 guidelines state that "each SSC shall provide its Regional Fishery Management Council recommendations for ABC as well as other scientific advice, as described in Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) section 302(g)(1)(B)." Because the ABC is recommended by the SSC based on the approved ABC control rule, and was accepted by the South Atlantic Council at their September 2013 meeting, no alternatives are presented for choosing an ABC. The ABC is an established value from which other management references points such as the ACL, optimum yield (OY), and annual catch target (ACT) are based. The new ABC recommendation and subsequent proposed annual ACLs are based on biologically sound principals and an ABC control rule accepted by the SSC and the South Atlantic Council. As the new ABC recommended by the SSC is larger than the ABC specified in **Alternative 1 (No Action)**, a corresponding increase in the ACLs may be justified.

Alternative 1 (No Action) would maintain the current harvest limit (the total ACL), which would cap total harvest at 5,690,000 pounds whole weight (lbs ww). **Alternative 1 (No Action)** would not update the ACL for Atlantic Spanish mackerel, and the total ACL and OY would remain. **Alternative 2** would update the ACL and OY based on the ABC recommended by the SSC resulting in the total ACL increasing to 6,063,000 lbs ww in 2013. **Alternative 2** would specify the ACL and OY using the **Alternative 1** status quota formula of ACL=ABC=OY, which was established in Amendment 18 to the CMP FMP. **Alternative 3** would set ACL to a portion of the acceptable biological catch (ABC) resulting in the total ACL decreasing to 5,450,000 at 90% ABC (**Option a**) or 4,488,000 at 80% of ABC (**Option b**).

Because **Alternative 1 (No Action)** would constrain harvest to a lower level than **Alternative 2**, the biological benefits under **Alternative 1 (No Action)** would be expected to be greater than **Alternative 2**. **Alternative 3**, **Option a**, or **Option b**, would further restrain harvest and could also provide positive biological benefits to the stock. However, results of the most recent assessment for the Atlantic migratory group of Spanish mackerel indicate the stock is not overfished or undergoing overfishing. Therefore, there is no biological need to constrain harvest at a level lower than that determined to be appropriate by the SSC.

The Magnuson-Stevens Act National Standard 1 establishes the relationship between conservation and management measures, preventing overfishing, and achieving OY from each stock, stock complex, or fishery. The National Standard 1 guidelines discuss the relationship of overfishing limit (OFL) to the maximum sustainable yield (MSY) and annual catch target (ACT) or ACL to OY. The OFL is an annual amount of catch that corresponds to the estimate of maximum fishing mortality threshold applied to a stock or complex's abundance; MSY is the long-term average of such catches. The ACL is the limit that triggers accountability measures

(AMs), and ACT, if specified, would be the management target for a species. Management measures for a species should, on an annual basis, prevent the ACL from being exceeded.

The long-term objective is to achieve OY through annual achievement of an ACL or ACT. Amendment 18 to the CMP FMP set OY equal to the ACL (**Alternative 1 No Action**). **Alternatives 2** and **3** would maintain this formula; thereby providing greater assurance that OY is achieved, overfishing is prevented.

The South Atlantic Council and their SSC have established an ABC control rule that takes into consideration scientific and management uncertainty to ensure catches are maintained below a MSY level. Setting the ACL equal to the ABC leaves no buffer between the two harvest parameters, which may increase risk that harvest could exceed the ABC. The South Atlantic Council considered alternatives in the Amendment 18 to the CMP FMP that would set the ACL below the ABC but selected ACL=ABC=OY as their preferred alternative.

The National Standard 1 Guidelines recommend a performance standard to measure the effectiveness of ACLs and AMs. According to the guidelines, if catch exceeds the ACL for a given stock or stock complex more than once in the last four years, the system of ACLs and AMs should be re-evaluated, and modified if necessary, to improve its performance and effectiveness (74 FR 3178). If the ACL is exceeded more than once over the course of four years, the South Atlantic Council would reassess the system of ACLs and AMs for Spanish mackerel.

With vastly improved commercial monitoring mechanisms recently implemented, it is unlikely that repeated commercial ACL overages would occur. The Commercial Landings Monitoring System (CLM) came online in June 2012 and is now being used to track commercial landings of federally-managed fish species. This system is able to track individual dealer reports, track compliance with reporting requirements, project harvest closures using five different methods, and analyze why ACLs are exceeded. The CLM performs these tasks by taking into account: (1) spatial boundaries for each stock based on fishing area; (2) variable quota periods such as overlapping years or multiple quota periods in one year; and (3) overlapping species groups for single species as well as aggregated species. Data sources for the CLM system include the Standard Atlantic Fisheries Information System for Georgia and South Carolina, and the Bluefin Data file upload system for Florida and North Carolina. The CLM system is also able to track dealer reporting compliance with a direct link to the permits database in NMFS Southeast Regional Office (SERO).

Additionally, the Southeast Fisheries Science Center (SEFSC) worked with SERO, the Gulf of Mexico Fishery Management Council (Gulf of Mexico Council), and South Atlantic Council to develop a Joint Dealer Reporting Amendment, which has been approved by both Councils and submitted for formal review. The Joint Dealer Reporting Amendment would increase required reporting frequency for dealers to once per week, and require a single dealer permit for all finfish dealers in the Southeast Region. The CLM and the new dealer reporting requirements constitute major improvements to how commercial fisheries are monitored, and go far beyond monitoring efforts that were in place when the National Standard 1 guidelines were developed.

The new CLM quota monitoring system and actions in the Joint Generic Dealer Reporting amendment are expected to provide more timely and accurate data reporting and would thus reduce the incidence of quota overages.

In early 2013, a new headboat electronic reporting system came online and headboats may report their landings electronically rather than through paper logbooks. Additionally, the Gulf of Mexico and South Atlantic Councils have developed generic amendments that would require all headboats to report their landings using the new electronic reporting system, and increase the reporting frequency. The SEFSC is also developing an electronic reporting system for charter boats operating the Southeast Region. Once the charterboat reporting system is close to being finalized, the Gulf of Mexico and South Atlantic Councils would develop a joint amendment that would require electronic reporting for charterboats with a set reporting frequency. These recreational harvest-monitoring efforts could substantially increase the accuracy and timeliness of in-season reporting and reduce the risk of recreational ACL overages, which would be biologically beneficial for the Spanish mackerel stock. Therefore, there is a low risk of exceeding the increased ACL.

Alternative 1 (No Action), and **Alternatives 2** and **3** are unlikely to result in any direct adverse impacts on protected species such as endangered or threatened whales, sea turtles, corals, or protected habitat areas of particular concern (HAPCs). Although **Alternative 2** would increase the ACL from the status quo, this option would not change current fishing practices for Spanish mackerel. An increase the ACL would increase fishing opportunities for Spanish mackerel without negatively impacting the Spanish mackerel stock. Total harvest would be restrained by the commercial and recreational ACLs, and AMs would still be used to help prevent overfishing. It is unlikely the action would result in significantly increased fishing effort for Spanish mackerel; therefore, no adverse biological impacts on protected species or HAPCs is expected under this action.

4.1.2 Economic Effects

Since the 2009-2010 fishing season the commercial sector has exceeded its ACL, however the recreational sector has not. Nor has the total ACL (or total allowable catch) for Atlantic Group Spanish mackerel been exceeded since before the 2000-2001 fishing year. Under **Alternative 1 (No Action)** the current total ACL of 5.69 mp ww has not been exceeded since the 2007-2008 fishing year. However, the current commercial ACL has been reached every fishing year since 2002-2003 except in 2007-2008. The current recreational ACL has not been exceeded since before the 2000-2001 fishing year. Any alternative or option that would increase the overall ACL such as **Alternative 2**, would have the potential to give direct positive economic benefit to the fishermen , particularly commercial fishermen should the commercial fishery be closed early prior to the end of the fishing year. **Alternative 3**, both **Option a** and **Option b** would reduce the ACL from what it currently is and as such increases the probability the fishery would be closed sooner. In general, higher ACLs are better for both sectors as long as they are not exceeded and/or do not require overage paybacks in future seasons. **Alternative 2** would have the greatest positive direct economic effects. **Alternative 1 (No Action)** would maintain the status quo and is not expected to change economic effects. Both **Option a** and **Option b** would

be expected to have direct negative economic effects as the total ACL for those two options is lower than landings for recent years, especially landings by the commercial sector.

4.1.3 Social Effects

Changes in the ACL for any stock will not directly affect resource users unless the ACL is met or exceeded, in which case accountability measures (AMs) that restrict or close harvest could negatively impact the commercial fleet, for-hire fleet, and private anglers. In general, the higher the ACL, the greater the short-term social and economic benefits that would be expected to accrue, assuming information is up-to-date and accurate in order to allow sustainable harvest. Adhering to harvest below the overfishing level designated by the SSC will result in net long-term positive social and economic benefits. Additionally, adjustments in an ACL based on updated information from a stock assessment would be the most beneficial in the long term to fishermen and communities, because catch limits would be based on the current conditions.

Alternative 1 would not incorporate the results of the recent stock assessment and the current ACL may not best reflect the stock status at this time. Additionally, this alternative could prohibit fish that could be harvested to not be landed, which would eliminate the social benefits associated with economic benefits of achieving optimum yield (OY). **Alternative 2** would increase the ACL and update the catch limit based on the best information available, which would be beneficial to fishermen by allowing additional Spanish mackerel to be harvested but without negatively impacting the stock. **Option a** and **b** under **Alternative 3** would provide additional buffer from exceeding the ACL but could also limit the commercial and recreational sector's ability to meet OY by reducing fishing opportunities.

Figure 2.2 shows that in the last few fishing years, commercial landings have exceeded the proposed commercial ACLs for all alternatives. However, **Figure 2.3** shows that recreational landings are lower than the proposed recreational ACLs for all alternatives in this action. Because the current accountability measures do not require a payback of any sector overages if the total ACL is not exceeded, no negative effects on the commercial fleet would be expected. However, in-season closures for the commercial fleet could affect some businesses and communities that depend on access to the Atlantic migratory group Spanish mackerel resource.

4.1.4 Administrative Effects

Administrative impacts of this action are likely to be minimal. **Alternative 1 (No Action)** and **Alternative 3** could result in slightly higher administrative impacts because the lower ACLs are more likely to cause AMs to be triggered in-season, which would require development of outreach materials and internal agency documents to close the commercial sector and assess whether or not the recreational ACL has been exceeded. **Alternative 2** would not result in significant administrative cost or time burdens other than notifying fishery participants of the increase in the sector ACLs and continued monitoring of the sector ACLs. The burden on law enforcement would not change under either alternative since commercial quota closures implemented when the commercial ACLs are projected to be met are currently enforced. The administrative impact associated with **Alternative 3** would be similar to those of **Alternative 1.**

4.2 Action 2. Modify the ACL for Gulf of Mexico migratory group Spanish mackerel

Alternative 1 (No Action). Retain the current ACL for Gulf migratory group Spanish mackerel:

Current ABC = 5,150,000 lbs ww.

ACL= ABC =5,150,000 lbs ww (commercial and recreational sectors combined into a single Gulf-wide ACL in CMP Amendment 18 [GMFMC/SAFMC 2011])

Alternative 2. Revise ACL for Gulf migratory group Spanish mackerel for 2014 through 2016 as shown below, and set ACL = ABC = OY.

Year	ABC ww	Total ACL ww
2014	12.7 mp	12.7 mp
2015	11.8 mp	11.8 mp
2016	11.3 mp	11.3 mp

Alternative 3. Set the ACL for Gulf migratory group Spanish mackerel for 2014 through 2016 at a percentage of the ABC.

Option a: Set the ACT (including sector ACLs) for Gulf of Mexico migratory group Spanish mackerel for 2014 through 2016 at 90% of the ABC.
Option b: Set the ACT (including sector ACLs) for Gulf of Mexico migratory group Spanish mackerel for 2014 through 2016 at 75% of the ABC

Year	ABC (ww)	Option a: ACL = 90% of ABC (ww)	Option b: ACL = 75% of ABC (ww)
2014	12.7 mp	11.43 mp	9.525 mp
2015	11.8 mp	10.62 mp	8.85 mp
2016	11.3 mp	10.17 mp	8.475 mp

4.2.1 Biological Effects

Spanish mackerel are typically caught at the ocean surface and therefore neither hook-and-line nor run-around gillnet gear typically encounter bottom habitat. Fishing gear still have the potential to snag and entangle bottom structures and cause tear-offs or abrasions (Barnette 2001). If gear is lost or improperly disposed of, it can entangle marine life. Entangled gear often becomes fouled with algal growth. If fouled gear becomes entangled on corals, the algae may

eventually overgrow and kill the coral. If an increase in the ACL for Gulf of Mexico (Gulf) migratory group Spanish mackerel results in an increase in overall fishing effort, the amount of fishing gear lost in pursuit of Spanish mackerel may also increase.

Amendment 18 to the CMP FMP established an ABC control rule for Gulf group Spanish mackerel. Because the ABC is recommended by the SSC based on the approved ABC control rule, and was accepted by the Gulf of Mexico Council, no alternatives are presented for choosing an ABC. The new ABC recommendation and subsequent proposed annual ACLs are based on biologically sound principals and an ABC control rule accepted by the SSC and the Gulf of Mexico Council. As the new ABC recommended by the SSC is larger than the ABC specified in **Alternative 1 (No Action)**, a corresponding increase in the ACLs may be justified.

Management actions that affect the biological environment mostly relate to the impacts of fishing on a species' population size, life history, and the role of the species within its habitat. Removal of fish from the population through fishing can reduce the overall population size if fishing mortality is not retained at sustainable levels. However, biomass is expected to remain stable is fishing effort restricts catch levels to the yield at F_{MSY}. **Alternative 1** would not update ACLs based on results from the recent stock assessment, and would therefore not result in a change to the current biological environment. **Alternatives 2** and **3** both propose to increase the ACL, which could lead to additional removals from the population. **Alternative 2** would employ the same formula as specified in the **Alternative 1 (No Action)**, and set the ACL = ABC. However, since **Options a** and **b** of **Alternative 3** both recommend ACLs equal to or less than the SSC-recommended ABC, there is little risk of any direct or indirect negative biological effects.

The Gulf of Mexico Council and their SSC have established an ABC control rule that takes into consideration scientific and management uncertainty to ensure catches are maintained below a MSY level. Setting the ACL equal to the ABC leaves no buffer between the two harvest parameters, which may increase risk that harvest could exceed the ABC. The Gulf of Mexico Council considered alternatives in the Amendment 18 to the CMP FMP that would set the ACL below the ABC but selected ACL=ABC as their preferred alternative.

For Gulf Spanish mackerel, commercial and recreational sectors are combined into a single Gulf-wide ACL. With vastly improved commercial monitoring mechanisms recently implemented, it is unlikely that repeated overages of the total ACL would occur. The CLM system came online in June 2012 and is now being used to track commercial landings of federally-managed fish species. This system is able to track individual dealer reports, track compliance with reporting requirements, project harvest closures using five different methods, and analyze why ACLs are exceeded. Additionally, the SEFSC worked with SERO, the Gulf of Mexico Council, and South Atlantic Council to develop a Joint Dealer Reporting Amendment, which has been approved by both Councils and submitted for formal review. The Joint Dealer Reporting Amendment would increase required reporting frequency for dealers to once per week, and require a single dealer permit for all finfish dealers in the Southeast Region. The new CLM quota monitoring system

and actions in the Joint Generic Dealer Reporting amendment are expected to provide more timely and accurate data reporting and would thus reduce the incidence of quota overages.

In early 2013, a new headboat electronic reporting system came online and headboats may report their landings electronically rather than through paper logbooks. Additionally, the Gulf of Mexico and South Atlantic Councils have developed generic amendments that would require all headboats to report their landings using the new electronic reporting system, and increase the reporting frequency. The SEFSC is also developing an electronic reporting system for charter boats operating the Southeast Region. Once the charterboat reporting system is close to being finalized, the Gulf of Mexico and South Atlantic Councils would develop a joint amendment that would require electronic reporting for charterboats with a set reporting frequency. These recreational harvest-monitoring efforts could substantially increase the accuracy and timeliness of in-season reporting and reduce the risk of recreational ACL overages, which would be biologically beneficial for the Spanish mackerel stock. Therefore, there is a low risk of exceeding the increased ACL.

Alternative 1 (No Action), and **Alternatives 2** and **3** are unlikely to result in any direct adverse impacts on protected species such as endangered or threatened whales, sea turtles, corals, or protected HAPCs. Although **Alternatives 2** and **3** would increase the ACL from the status quo, this option would not change current fishing practices for Spanish mackerel. An increase the ACL would increase fishing opportunities for Spanish mackerel without negatively impacting the Spanish mackerel stock. Total harvest would be restrained by the commercial and recreational ACLs, and AMs would still be used to help prevent overfishing. It is unlikely the action would result in significantly increased fishing effort for Spanish mackerel; therefore, no adverse biological impacts on protected species or HAPCs is expected under this action.

4.2.2 Economic Effects

Alternative 1 would maintain a Gulf migratory group Spanish mackerel ACL of 5.15 mp. **Alternative 1** would not be expected to result in changes to the harvest or other customary uses of Gulf migratory group Spanish mackerel. Therefore, economic effects are not expected to result from Alternative 1. **Alternative 2** would increase the 2014 Gulf migratory group Spanish mackerel to 12.7 mp. In 2015 and 2016, **Alternative 2** would set the ACL to 11.8 mp and 11.3 mp, respectively. Although ACL increases are typically expected to result in direct economic benefits stemming from additional fishing opportunities, **Alternative 2** would not be expected to result in economic effects in the foreseeable future due to the relative magnitude of the recorded Gulf group Spanish mackerel ACL and observed landings. Between 2000 and 2011, Gulf Spanish mackerel landings averaged 3.93 mp annually. During the same time interval, maximum and minimum harvest levels were 4.88 and 2.48 mp, respectively. These values are all well below the 5.15 mp current ACL. It is therefore highly unlikely that economic benefits that could result from ACL increases under consideration in **Alternative 2** would materialize. **Alternative 3** would establish Gulf group Spanish mackerel ACLs equal to the ACLs considered in **Alternative 2**. However, **Alternative 3** would also establish ACTs equal to 90% of the ACL (**Option a**) or to 75% of the ACL (**Option b**). At a minimum, Alternative 3 would set a Gulf group Spanish mackerel quota of 8.475 mp (**Option b** in 2016). Therefore, as in **Alternative 2**,

potential economic benefits that could result from proposed quota increases are not likely to materialize given the relatively low level of landings compared to the current ACL of 5.15 mp. In the future, should commercial and recreational fishermen elect to take advantage of the additional fishing opportunities provided by **Alternatives 2** and **3,** direct economic benefits proportional to the ACL increases could be realized.

4.2.3 Social Effects

The general social effects of ACLs and associated accountability measures (AMs) are discussed in **Section 4.1.3**. **Alternative 1** would not incorporate the results of the recent stock assessment and under this alternatives, the current Gulf migratory group Spanish mackerel ACL may not best reflect the stock status at this time. Additionally, this alternative could prohibit fish that could be harvested to not be landed, which would eliminate the social benefits associated with economic benefits of achieving optimum yield (OY). **Alternative 2** would increase the ACL and update the catch limit based on the best information available, which would be beneficial to fishermen by allowing additional Spanish mackerel to be harvested but without negatively impacting the stock. **Option a** and **b** under **Alternative 3** would provide additional buffer from exceeding the ACL but could also limit the commercial and recreational sector's ability to meet OY by reducing fishing opportunities.

Overall, landings of Gulf migratory group Spanish mackerel usually do not meet the current ACL under **Alternative 1 (No Action)**. The proposed increase in the ACL under **Alternatives 2** or **3** is not expected to change fishing behavior or access to the resource, and will likely be beneficial to the fleet while maintaining sustainable harvest.

4.2.4 Administrative Effects

Administrative impacts of this action are likely to be minimal. **Alternative 1 (No Action)** could result in slightly higher administrative impacts because the lower ACLs are more likely to cause AMs to be triggered in-season, which would require development of outreach materials and internal agency documents to close the commercial sector and assess whether or not the recreational ACL has been exceeded. However, landings have been well below the current ACL and no closures have been implemented. Both **Alternative 2** and **Alternative 3** would increase the ACL and neither alternative would result in significant administrative cost or time burdens other than notifying fishery participants of the increase in the ACLs and continued monitoring of the ACLs. The burden on law enforcement would not change under either alternative since commercial quota closures implemented when the commercial ACLs are projected to be met are currently enforced.

Chapter 5. Councils' Choice for the Preferred Alternatives

5.1 Action 1. Modify the ABC and ACL for Atlantic migratory group Spanish mackerel

5.1.1 Public Comments and Recommendations

5.1.2 Councils' Choice for Preferred Alternative

5.2 Action 2. Modify the ABC and ACL for Gulf of Mexico migratory group Spanish mackerel

5.2.1 Public Comments and Recommendations

5.2.2 Councils' Choice for Preferred Alternative

Chapter 6. Cumulative Effects

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

Name	Agency/Division	Title
Kari MacLauchlin	SAFMC	IPT Lead/Fishery Social Scientist
Ryan Rindone	GMFMC	IPT Lead/Fishery Biologist
Karla Gore	SERO /SF	IPT Lead/Fishery Biologist
Brian Cheuvront	SAFMC	Fishery Economist
Anik Clemens	SERO	Technical Writer and Editor
David Dale	SERO /HC	EFH Specialist
Assane Diagne	GMFMC	Economist
Otha Easley	NMFS OLE	Law Enforcement
David Keys	NMFS/SER	Regional NEPA Coordinator
Michael Jepson	SERO/SF	Anthropologist
Tony Lamberte	SERO/SF	Economist
Michael Larkin	SERO	Biologist
Jennifer Lee	SERO/PR	Fishery Biologist
Christopher Liese	SEFSC	Economist
Anna Martin	SAFMC	Coral Biologist
Roger Pugliese	SAFMC	Biologist
Katie Siegfried	SEFSC	Statistician
Carrie Simmons	GMFMC	Deputy Director
Monica Smit-Brunello	NOAA GC	General Counsel
Jack McGovern	SERO/SF	Fishery Biologist
Gregg Waugh	SAFMC	Deputy Director

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

Chapter 8. Agencies Consulted

Responsible Agencies

Joint Coastal Migratory Pelagics Framework Action 2014

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

Gulf of Mexico Fishery Management Council
2203 North Lois Avenue, Suite 1100
Tampa, Florida 33607
813-348-1630/ 888-833-1844 (TEL)
www.gulfcouncil.org

Environmental Assessment:

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

List of Agencies, Organizations, and Persons Consulted

SAFMC Law Enforcement Advisory Panel
SAFMC Kind and Spanish Mackerel Advisory Panel
SAFMC Scientific and Statistical Committee
North Carolina Coastal Zone Management Program
South Carolina Coastal Zone Management Program
Georgia Coastal Zone Management Program
Florida Coastal Zone Management Program
Florida Fish and Wildlife Conservation Commission
Georgia Department of Natural Resources
South Carolina Department of Natural Resources
North Carolina Division of Marine Fisheries
Texas Parks and Wildlife Department
Alabama Department of Conservation and Natural Resources/Marine Resources Division
Louisiana Department of Wildlife and Fisheries
Mississippi Department of Marine Resources

Gulf States Marine Fisheries Commission
Atlantic States Marine Fisheries Commission
National Marine Fisheries Service
- Washington Office
- Office of Ecology and Conservation
- Southeast Regional Office
- Southeast Fisheries Science Center

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Appendix A. Glossary

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

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

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

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

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

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

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

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

Cohort: Fish born in a given year. (See year class.)

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

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

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

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

Discards: Fish captured, but released at sea.

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

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

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

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

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

F: Fishing mortality.

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

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

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

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

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

Fishing Mortality: A measurement of the rate at which fish are removed from a population by fishing. Fishing mortality can be reported as either annual or instantaneous. Annual mortality is

the percentage of fish dying in one year. Instantaneous is that percentage of fish dying at any one time.

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

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

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

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

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

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

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

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

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

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

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

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

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

Longline: Fishing method using a horizontal mainline to which weights and baited hooks are attached at regular intervals. Gear is either fished on the bottom or in the water column.
Magnuson-Stevens Fishery Conservation and Management Act: Federal legislation responsible for establishing the fishery management councils and the mandatory and discretionary guidelines for federal fishery management plans.

Marine Recreational Fisheries Statistics Survey (MRFSS): Survey operated by NMFS in cooperation with states that collects marine recreational data.

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

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

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

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

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

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

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

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

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

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

Overfishing: Overfishing occurs when a stock or stock complex is subjected to a rate of fishing mortality that exceeds the maximum fishing mortality threshold (e.g., current fishing mortality rate > MFMT = overfishing).
Quota: % or annual amount of fish that can be harvested.

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

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

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

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

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

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

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

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

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

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

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

Appendix B. Actions and Alternatives Considered but Rejected

Appendix C. History of Management

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

FMP Amendments

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

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

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

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

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

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

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

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

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

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

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

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

- Established the Councils' intent to evaluate the impacts of permanent jurisdictional boundaries between the Gulf and South Atlantic Councils and development of separate FMPs for coastal pelagic species in these areas;
- Established a moratorium on commercial king mackerel permits until no later than October 15, 2000, with a qualification date for initial participation of October 16, 1995;
- Increased the income requirement for a king or Spanish mackerel permit to 25% of earned income or $10,000 from commercial sale of catch or charter or head boat fishing in one of the three previous calendar years, but allowed for a one-year grace period to qualify under permits that are transferred;
- Legalized retention of up to five cut-off (damaged) king mackerel on vessels with commercial trip limits;
- Set an optimum yield (OY) 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 lb 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 National Marine Fisheries Service (NMFS) or trip tickets from Florida; allowed transfer of gillnet endorsements to immediate family members (son, daughter, father, mother, or spouse) only; and prohibited the use of gillnets or any other net gear for the harvest of Gulf migratory group king mackerel north of an east/west line at the Collier/Lee County line;

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

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

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

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

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

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

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

Amendment 16, was not developed.

Amendment 17, with SEIS, implemented June 15, 2006, established a limited access system on

for-hire reef fish and CMP permits. Permits are renewable and transferable in the same manner as currently prescribed for such permits. There will be a periodic review at least every 10 years on the effectiveness of the limited access system.

Amendment 18, with EA, established annual catch limits (ACL), annual catch targets (ACT) and accountability measures (AM) for king mackerel, Spanish mackerel and cobia. The amendment also established both Atlantic and Gulf migratory groups for cobia; modified the framework procedures; and removed the following species from the Fishery Management Unit: cero, little tunny, dolphin and bluefish. The South Atlantic and the Gulf councils approved the amendment for formal review in August, 2011. The amendment was approved by the Secretary of Commerce in December, 2011

Appendix D. Bycatch Practicability Analysis

Appendix E. Regulatory Impact Review

Appendix F. Regulatory Flexibility Analysis

Appendix G. Other Applicable Law

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

Administrative Procedures Act
All federal rulemaking is governed under the provisions of the Administrative Procedure Act (APA) (5 U.S.C. Subchapter II), which establishes a "notice and comment" procedure to enable public participation in the rulemaking process. Under the APA, National Marine Fisheries Service 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.

Coastal Zone Management Act
Section 307(c)(1) of the federal Coastal Zone Management Act of 1972 (CZMA), as amended, requires federal activities that 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, National Marine Fisheries Service 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, National Marine Fisheries Service (NMFS) will determine if this plan amendment is consistent with the Coastal Zone Management programs of the states of Florida, Georgia, South Carolina, North Carolina, Virginia, Maryland, Delaware, New Jersey, and New York to the maximum extent possible. Their determination will then be submitted to the responsible state agencies under Section 307 of the CZMA administering approved Coastal Zone Management programs for these states.

Data Quality Act
The Data Quality Act (DQA) (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 DQA 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 DQA, 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

The Endangered Species Act (ESA) of 1973, as amended, (16 U.S.C. Section 1531 et seq.) requires federal agencies use their authorities to conserve endangered and threatened species. The ESA requires NMFS, when proposing a fishery action that "may affect" critical habitat or endangered or threatened species, to consult with the appropriate administrative agency (itself for most marine species, the U.S. Fish and Wildlife Service for all remaining species) to determine the potential impacts of the proposed action. Consultations are concluded informally when proposed actions may affect but are "not likely to adversely affect" endangered or threatened species or designated critical habitat. Formal consultations, including a biological opinion, are required when proposed actions may affect and are "likely to adversely affect" endangered or threatened species or adversely modify designated critical habitat. If jeopardy or adverse modification is found, the consulting agency is required to suggest reasonable and prudent alternatives. National Marine Fisheries Service, as part of the Secretarial review process, will make a determination regarding the potential impacts of the proposed actions.

Marine Mammal Protection Act (MMPA)

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

Part of the responsibility that 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; 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 2013 proposed List of Fisheries classifies the Gulf and South Atlantic coastal migratory pelagic hook-and-line fishery as a Category III fishery (78 FR 23008, April 22, 2013). Category III designates fisheries with a remote likelihood or no known serious injuries or mortalities. The Gulf and South Atlantic coastal migratory pelagic gillnet fishery is classified as Category II fishery. This classification indicates an occasional incidental mortality or serious injury of a marine mammal stock resulting from the fishery (1-50 % annually of the potential biological removal). The fishery has no documented interaction with marine mammals; NMFS classifies this fishery as Category II based on analogy (similar risk to marine mammals) with other gillnet fisheries.

Executive Orders

E.O. 12630: Takings

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

E.O. 12866: Regulatory Planning and Review

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

On June 20, 2013, the Small Business Administration (SBA) issued a final rule revising the small business size standards for several industries effective July 22, 2013 (78 FR 37398). The rule increased the size standard for Finfish Fishing from $4.0 to $19.0 million, Shellfish Fishing from $4.0 to $5.0 million, and Other Marine Fishing from $4.0 to $7.0 million. In light of these new standards, NMFS has preliminarily determined that the proposed action would not have a significant economic impact on a substantial number of small entities.

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

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

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.

E.O. 13132: Federalism

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

No federalism issues have been identified relative to the actions proposed in this amendment. Therefore, consultation with state officials under Executive Order 12612 is not necessary.

Essential Fish Habitat

The amended Magnuson-Stevens Act included a new habitat conservation provision known as Essential Fish Habitat (EFH) that requires each existing and any new FMPs to describe and identify EFH for each federally managed species, minimize to the extent practicable impacts from fishing activities on EFH that are more than minimal and not temporary in nature, and identify other actions to encourage the conservation and enhancement of that EFH. To address these requirements the South Atlantic Fishery Management Council has, under separate action, approved an environmental impact statement (SAFMC 1998) to address the new EFH requirements contained within the Magnuson-Stevens Act. Section 305(b)(2) requires federal agencies to obtain a consultation for any action that may adversely affect EFH. An EFH consultation will be conducted for this action.