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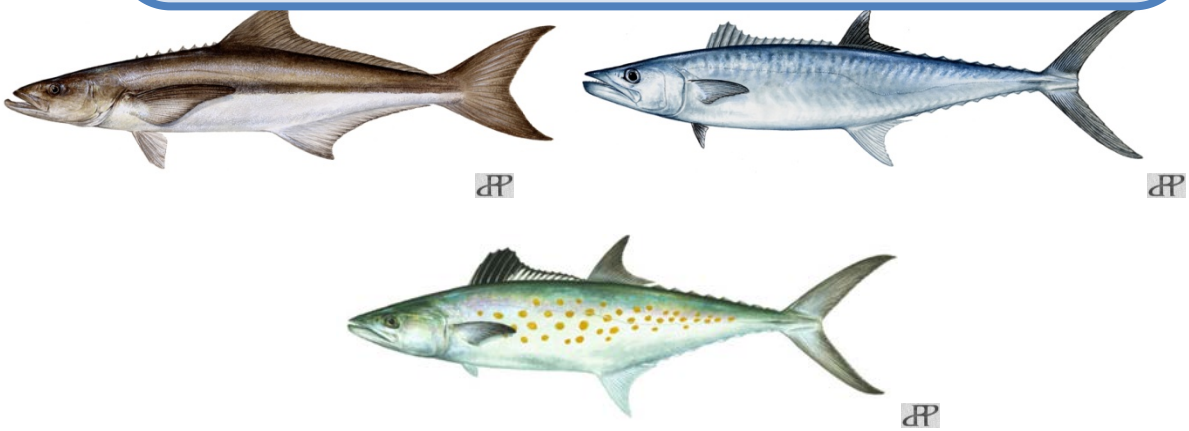
Modifications to the Coastal Migratory Pelagics Zone Management



Final Amendment 20B

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

Including Environmental Assessment, Fishery Impact Statement, Regulatory Impact Review, and Regulatory Flexibility Act Analysis

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MODIFICATIONS TO THE COASTAL MIGRATORY PELAGICS ZONE MANAGEMENT

Final Amendment 20B to Fishery Management Plan for Coastal Migratory Pelagic Resources in the Gulf of Mexico and South Atlantic Region addressing modifications to the coastal migratory pelagic zones, Including Environmental Assessment, Fishery Impact Statement, Regulatory Impact Review, and Regulatory Flexibility Act Analysis

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ABBREVIATIONS USED IN THIS DOCUMENT

ABC	acceptable biological catch
ACL	annual catch limit
ACT	annual catch target
ALS	Accumulated Landings System
AMs	accountability measures
AP	Advisory Panel
APA	Administrative Procedures Act
B	biomass
B_{MSY}	stock biomass level capable of producing an equilibrium yield of MSY
CFDBS	Commercial Fisheries Data Base System
CFL	coastal fisheries logbook
CLM	commercial landings monitoring system
CMP	coastal migratory pelagics
Council	Gulf of Mexico and South Atlantic Fishery Management Councils
CZMA	Coastal Zone Management Act
DQA	Data Quality Act
EA	environmental assessment
EEZ	exclusive economic zone
EFH	essential fish habitat
EIS	environmental impact statement
EJ	environmental justice
ESA	Endangered Species Act
F	instantaneous rate of fishing mortality
$F_{Current}$	current fishing mortality
FL	fork length
FLS	federal logbook system
F_{MSY}	fishing mortality rate corresponding to an equilibrium yield of MSY
F_{OY}	fishing mortality rate corresponding to an equilibrium yield of OY
FMP	Fishery Management Plan
FWRI	Florida Wildlife Research Institute
Gulf	Gulf of Mexico
Gulf Council	Gulf of Mexico Fishery Management Council
GMFMC	Gulf of Mexico Fishery Management Council
HAPC	habitat area of particular concern
HBS	NMFS Headboat Survey
IRFA	initial regulatory flexibility analysis
lq	location quotient
M	mortality
Magnuson-Stevens Act	Magnuson-Stevens Fishery Conservation and Management Act
MFMT	maximum fishing mortality threshold
Mid-Atlantic Council	Mid-Atlantic Fishery Management Council
MMPA	Marine Mammal Protection Act
mp	million pounds
MRFSS	Marine Recreational Fisheries Survey and Statistics

MRIP	Marine Recreational Information Program
MSST	minimum stock size threshold
MSY	maximum sustainable yield
NEFSC	New England Fisheries Science Center
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
nm	nautical mile
NOS	National Ocean Service
OFL	overfishing level
OY	optimum yield
RA	Regional Administrator
RFA	Regulatory Flexibility Act of 1980
RIR	Regulatory Impact Review
RQ	regional quotient
Secretary	Secretary of Commerce
SEDAR	Southeast Data, Assessment and Review
SEFSC	Southeast Fisheries Science Center
SERO	Southeast Regional Office
South Atlantic Council	South Atlantic Fishery Management Council
$SSB_{Current}$	current spawning stock potential
SSC	Scientific and Statistical Committee
SPR	spawning potential ratio
TAC	total allowable catch
TLR	trip limit reduction
TPWD	Texas Parks and Wildlife Department
USCG	United States Coast Guard
VMS	vessel monitoring system
ww	whole weight

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FISHERY IMPACT STATEMENT

The Magnuson-Stevens Fishery Conservation and Management Act requires that a fishery impact statement (FIS) be prepared for all amendments to fishery management plans. The FIS contains an assessment of the likely biological and socioeconomic effects of the conservation and management measures on fishery participants and their communities, participants in the fisheries conducted in adjacent areas under the authority of another Fishery Management Council, and the safety of human life at sea.

Amendment 20B to the Fishery Management Plan for the Coastal Migratory Pelagic (CMP) Resources in the Gulf of Mexico and South Atlantic Region (FMP) consists of six management actions jointly developed by the Gulf of Mexico and South Atlantic Fishery Management Councils (Councils). The first two actions would adjust trip limits and fishing seasons for zones and subzones of the Gulf of Mexico (Gulf) migratory group. The third action would allow transit of vessels with king mackerel through areas closed to king mackerel fishing. The fourth would divide the annual catch limit (ACL) for Atlantic migratory group king and Spanish mackerel into zones. The fifth is an administrative change to the framework procedure for the FMP. The sixth addresses the results of the most recent stock assessment for cobia and divides the ACL into zones.

Biological Effects

Action 1, Preferred Alternative 3, Option a, would maintain the Gulf migratory group king mackerel trip limit in the Gulf Western Zone at 3,000 pounds whole weight (lbs ww) with no step-down. Preferred Alternative 4, Option b, would retain the 1,250-lb ww trip limit for Gulf migratory group king mackerel in the Northern Subzone but remove the step-down (currently defined as a trip limit reduction to 500 lbs ww after 75% of the quota for the subzone is met). Preferred Alternative 4, Option c would retain the Gulf migratory group king mackerel 1,250-lb ww trip limit for the Southern Subzone but remove the step-down. None of the alternatives selected are expected to shorten the fishing season by more than approximately a few days to one week. Therefore, although the likelihood of catching the full ACL increases slightly with these changes, the impacts to the biological environment should be minimal.

Action 2, Preferred Alternative 2, Option a, and Preferred Alternative 3, Option b, would move the opening of the Gulf migratory group king mackerel fishing year for the Western Zone and the Eastern Zone, Northern Subzone into the fall. Some fishers have indicated that a later opening would allow them to harvest king mackerel from the Western Zone more efficiently because fish are present in larger numbers and closer to shore in the main fishing areas off south Louisiana in the fall as opposed to the summer. Conversely, if the season starts too late in the fall, fish may migrate south earlier in some years and may not be available for harvest. Such a move may result in decreased fishing pressure. However, “bad weather days” are not anticipated to be frequent enough to result in a subzone not catching its quota. All subzones are predicted to catch their respective annual quotas regardless of seasonal start dates. Consequently, no biological effects are anticipated from these alternatives because they merely address the shifting of harvest time to coincide with availability of the resource in different areas.

Current regulations prohibit fishing for or retaining Gulf migratory group king mackerel in or from a closed zone. Many fishermen live and work near a boundary between two zones, and may wish to fish in one zone, but land in another. When the landing zone is closed, those fishermen are forced to land away from their home port. Action 3, Preferred Alternative 4, would allow fishermen who legally harvest king mackerel from an open zone to transport and land their catch in other areas of the Gulf that are closed to king mackerel fishing. If these fishermen are more likely to fish for king mackerel if they can land at their home port, then effort could increase relative to Alternative 1 and the impacts to the physical and biological environments could increase. However, this action is expected to have more economic than biological impacts.

Participants are concerned that the commercial ACLs for Atlantic migratory group king or Spanish mackerel could be filled by fishermen in one state before fish are available to fishermen in other states, particularly North Carolina. In Action 4, Preferred Alternative 3, which establishes separate ACLs for a Northern Zone and Southern Zone, would not change the existing level of biological effects. The ACL and accountability measures (AMs) provide biological protection and prevent overfishing of Atlantic migratory group king and Spanish mackerel. The preferred alternatives would not change the level of catch of Atlantic migratory group king (Action 4.1) or Spanish (Action 4.2) mackerel, only how it is distributed.

The current framework procedure was implemented through Amendment 18 to the FMP. Preferred Alternative 2 would allow changes to management measures under the standard documentation process of the open framework procedure, including AMs. A section outlining each Council's responsibilities was in the previous CMP framework, but was inadvertently omitted when the new framework was developed in Amendment 18. Preferred Alternative 4 would reinstate that language, in addition to expanding the responsibilities to include those for Spanish mackerel and cobia. Preferred Alternative 5 would fix language in the framework that refers to the Socioeconomic Panel, which no longer exists under that name. A combination of Preferred Alternatives 2, 4, and 5 offers the greatest efficiency and effectiveness of management change and indirect benefit to the biological environment, by allowing timelier implementation of management measures.

In Amendment 18 to the FMP, the Councils established the acceptable biological catch for the separate migratory groups of cobia using the Councils' boundary in Monroe County. However, the determination in the most recent stock assessment was that the biological boundary should be at the Florida/Georgia line. To adjust for this difference between the Councils' jurisdictional areas and the areas used by the stock assessment, Preferred Alternative 3, Option d assigns the portion of the Gulf migratory group ACL attributable to the east coast of Florida and Atlantic side of the Florida Keys (i.e., the area within the South Atlantic Council's jurisdiction) to the South Atlantic Council. Creating zone-specific ACLs or annual catch targets (ACTs) potentially would have an impact on landings if harvest changes from current levels and AMs are triggered, because AMs could be more precisely applied to the area where landings have increased. The magnitude of the effects is expected to be proportional to the severity of the constraint imposed on fishery participants and the nature of corrective measures implemented in response to overages, if they occur.

Economic Effects

The trip limit increases in Action 1 for Gulf migratory group king mackerel are expected to grant additional flexibility in trip scheduling and in the selection of a catch composition, potentially resulting in increased net revenues. These direct economic benefits are expected to result in adverse market effects due to the shortened season and the associated increase in the supply of king mackerel during the season. Because about 80% of the trips in the Eastern Zone Southern Subzone land 1,000 lbs of king mackerel or less, economic effects that would be expected to result from Alternative 2, Preferred Option c are expected to be negligible. For the Western Zone, Alternative 3, Preferred Option a would implement the same trip limit as the status quo alternative, and economic effects are not expected. Effects that would result from Alternative 4, Preferred Option b are expected to be negligible because most commercial king mackerel trips in the Eastern Zone Northern Subzone land 1,000 lbs of king mackerel or less.

Changes in fishing years for Gulf migratory group king mackerel in Action 2 could have some economic impacts on the king mackerel portion of the CMP fishery. The implementation of Alternative 2, Preferred Option a would trigger substantial adjustments in monthly landings in the Western Zone if fishermen continue to harvest the total king mackerel ACL because king mackerel harvests during the months of July and August have accounted for more than 60% of total king mackerel harvested in the Western Zone, and a later start to the season would force fishermen to adjust their trip planning and catch composition over the course of the new fishing year. Increased king mackerel harvest in the fall (and winter if the quota is not harvested during the fall) may displace harvest, and associated revenue, from other species and a fall start to the fishing season may place added constraints to fishermen's attempts to maximize net revenues and could be expected to result in reduced direct economic benefits for many fishermen and the commercial sector as a whole.

The October 1-September 30 fishing season proposed in Alternative 3, Preferred Option b is expected to impact a small portion of the king mackerel annual landings in the Eastern Zone, Northern Subzone. Any disruptions to trip planning and catch composition as a result of Alternative 3, Preferred Option b are expected to be minimal, with negligible associated economic effects.

The economic effects expected to result from a relaxation of transit restrictions in Action 3 are anticipated to be positive because the potential increases in net revenues that would result from the added flexibility in selecting catch composition and from costs savings from lower fuel expenditures are assumed to outweigh potential adverse economic effects that could result from earlier closures. Preferred Alternative 3, which would allow transit through areas closed to king mackerel fishing for vessels possessing king mackerel that were legally harvested in the exclusive economic zone off areas open to king mackerel fishing, would be expected to result in greater economic benefits (though the opportunity for distributional effects increases).

Establishment of regional ACLs for Atlantic migratory group king mackerel and Spanish mackerel under Actions 4.1 and 4.2 are expected to have direct positive economic effects on the commercial sectors of the fisheries (Preferred Alternative 3, Option b). The transfer provision under Preferred Alternative 4 would enhance the probability the overall ACL would be reached, thus creating a higher chance for a direct positive economic effect.

The proposed changes to the framework procedure (Action 5) are not expected to result in any direct changes on the economic environment. However, the proposed changes to the framework procedure (Preferred Alternatives 2, 4, and 5) should result in a speedier implementation of management measures that may be beneficial to the stocks, with associated economic benefits, or otherwise result in increased economic benefits to fishermen and associated businesses. These would be indirect positive economic effects of the proposed changes.

In Action 6, the commercial ACL for cobia allocated to the Florida East Coast Zone under all options of Alternative 3 are likely to result in the commercial ACL for this zone being reached prior to the end of the fishing year, resulting in direct negative economic effects for the cobia portion of the CMP fishery. In the Florida East Coast Zone, preferred Option d would result in an estimated average annual reduction in ex-vessel landings value of $56,299; approximately 40,872 additional recreational trips, and an expected annual increase in net operating revenue (NOR) of $118,359. Alternative 3, preferred Option d, would increase ACLs and ACTs relative to the status quo for the Florida East Coast Zone, possibly increasing fishing opportunities for Gulf fishermen.

Social Effects

The social effects associated with changes in the for Gulf migratory group king mackerel trip limits under Action 1 would result from the trade-offs of removing the step-down limits. In the Gulf migratory group king mackerel Western Zone, no additional social impacts would be expected from Alternative 3, Preferred Option a because it is the same as the status quo. Alternative 4, Preferred Option b and Preferred Option c would benefit fishermen harvesting Gulf migratory group king mackerel in the Eastern Zone Northern and Southern Subzones by removing the trip limit reduction; however, the alternative could have negative impacts if the season is shorter due to rapid harvest without the step-down in place.

Under Action 2, the effects on the Gulf migratory group king mackerel fleet are associated with how closely the season opening date aligns with optimal fishing conditions in terms of weather, fish abundance, and fish availability. Changing the season opening dates under Alternative 2, Preferred Option a and Alternative 3, Preferred Option b is expected to benefit fishermen working in the Gulf migratory group king mackerel Western Zone and Northern Subzone by improving the opportunity that trip limits are more likely to be met on more trips, enabling greater profits on trips taken and requiring fewer trips be taken by fishermen. On the other hand, establishing the season during such optimal fishing conditions would be expected to contribute to indirect impacts if a shorter season results. Essentially, there may be a trade-off in expected impacts, where benefits from modifying the season start date to coincide with optimal fishing opportunities may, in turn, result in negative impacts from a shorter season as the fish are caught faster.

The transit provisions under Preferred Alternative 3 in Action 3 are expected to be beneficial to fishermen, dealers, and associated businesses. Allowing vessels to transit through closed areas to land Gulf migratory group king mackerel harvested in open areas, with specifications for gear stowing, could reduce potential negative effects of unnecessary travel just to avoid closed areas to offload legally caught fish. Transit provisions that enable a fishing trip to be shorter in

duration would allow fishermen to spend less time on the water due to the reduced travel time, thereby also supporting safety at sea. Also, harvest in an open zone or sub-zone could provide a supply of fish to areas that are closed by allowing vessels to land in the closed areas. There may be a trade-off in these expected benefits if effort increases due to reduced travel time, but in general the transit provisions are expected to be beneficial to the commercial king mackerel fleet.

Allocations of the Atlantic migratory group king mackerel and Spanish mackerel to a Northern Zone and Southern Zone under Action 4 is expected to have similar social effects as sector allocations, in that there could likely be some changes in fishing behavior and impacts to fishermen, communities and businesses associated with the CMP fishery. However, the allocations to each zone for each species in Alternative 3, Preferred Option b would be expected to benefit the commercial fleets by improving opportunity to harvest when the fish are available and reducing the chance that another area will land most of the quota. Because Alternative 3, Preferred Option b considers the last ten years of landings history to designate the ACLs, the available quota to each zone is similar to recent landings and is not expected to hinder access to the resource. If one zone could not meet its ACL, the transfer provision in Preferred Alternative 4 would provide an avenue to adapt the available quota for each zone. In a fishing year, market or environmental conditions could result in one zone not meeting the zone's ACL and Preferred Alternative 4 could help to meet the full commercial ACL for Atlantic migratory group king mackerel.

Modification of the framework procedure of the CMP fisheries in Action 5 is not expected to result in any direct impacts of the fleet or communities but Preferred Alternatives 2, 4, and 5 will improve timeliness, contribute to improved management of the CMP stocks and would allow the Councils to respond to management needs.

The social effects of modifications to the cobia ACL in Action 6 are associated with two main factors: updated ACLs based on the most recent information from the stock assessment and any changes in access to the resource. The increase in the ACL under Preferred Alternative 3 is expected to benefit commercial and recreational cobia fishermen in addition to communities because the catch level recommendations are based on updated data used in the stock assessment. The allocation of an ACL to the Florida East Coast under Preferred Option d could limit some fishing opportunities for vessels and recreational anglers harvesting in the Gulf or on the Florida East Coast, but in general the status quo of landings in the Gulf and Florida East Coast should continue with minimal effects on the commercial and recreational sectors, and associated businesses and communities.

Safety at Sea

Modifications to the Gulf migratory group king mackerel fishing year for the Eastern and Western Zones under Action 2 may affect safety at sea if weather conditions make fishing more difficult and less safe if the season extends into winter months. The transit provisions under Preferred Alternative 3 in Action 3 may improve safety by allowing vessels to land king mackerel at a port closer to their fishing area. None of the other actions would force vessels to participate in the king mackerel portion of the CMP fishery under adverse weather or ocean conditions. Therefore, no additional safety-at-sea issues would be created.

CHAPTER 1. INTRODUCTION

What Actions Are Being Proposed?
Actions in this amendment will address issues associated with the boundaries between migratory groups, zones, and subzones; allocation of commercial annual catch limits (ACLs); and modification of the framework procedure for management of king mackerel, Spanish mackerel, and cobia.

Who Is Proposing the Action?
The Gulf of Mexico (Gulf) and South Atlantic Fishery Management Councils (Councils) are proposing the actions. The Councils develop the regulations 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.

Who's Who?

- ***Gulf of Mexico*** and ***South Atlantic Fishery Management Councils*** – Engage in a process to determine a range of actions and alternatives, and recommends action to the National Marine Fisheries Service.
- ***National Marine Fisheries Service*** and ***Council staffs*** – Develop alternatives based on guidance from the Council, and analyze the environmental impacts of those alternatives.
- ***Secretary of Commerce*** – Will approve, disapprove, or partially approve the amendment as recommended by the Councils.

Why Are The Councils Considering Action?
For king mackerel, conflicts have arisen due to early closures of zones and subzones. For Spanish mackerel and cobia, new stock assessments were completed in 2013 (SEDAR 28 2013a, 2013b, 2013c, 2013d). The actions in this amendment will address issues arising from the early closures of king mackerel zones and new data from the stock assessments.

1.1 Background

The Fishery Management Plan (FMP) for the Coastal Migratory Pelagic Resources (CMP) of the Gulf of Mexico and South Atlantic (GMFMC and SAFMC 1982), treated king mackerel, Spanish mackerel, and cobia each as one stock. The present management regime recognizes two migratory groups of each species, the Gulf migratory group and the Atlantic migratory group. Each migratory group is managed separately. The Gulf king mackerel migratory group and the Atlantic Spanish mackerel migratory group are also divided into zones or subzones for management purposes. This amendment will consider changes or additions to fishing regulations for these areas to allow for more targeted management.

King mackerel: The two migratory groups seasonally mix off the east coast of Florida and in Monroe County, Florida. For management and assessment purposes, a boundary between the migratory groups of king mackerel was specified at the Volusia/Flagler County border on the Florida east coast in the winter (November 1 - March 31) and the Monroe/Collier County border on the Florida southwest coast in the summer (April 1 - October 31) (Figure 1.1.1).

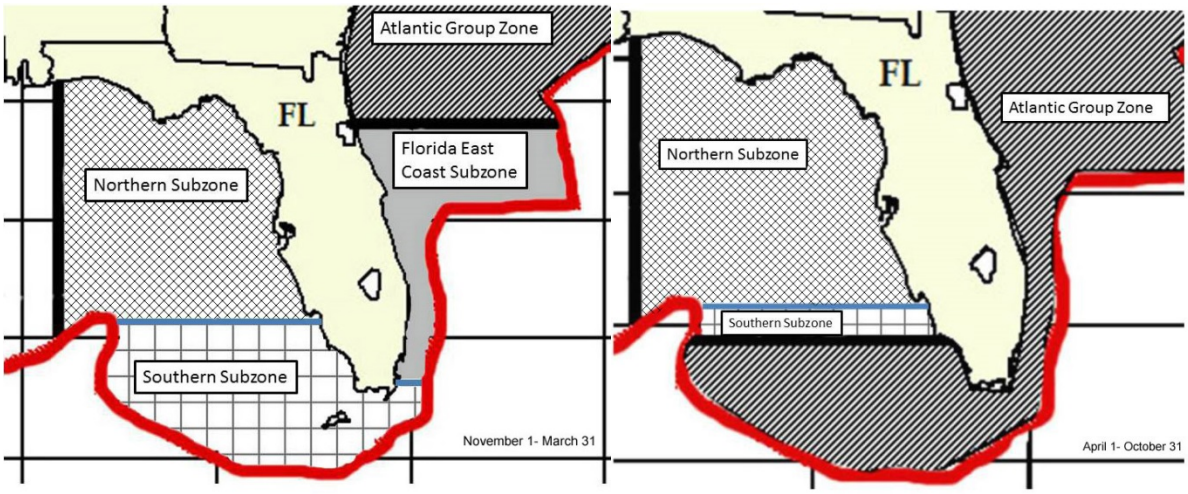

Figure 1.1.1. Seasonal boundary between Atlantic and Gulf migratory groups of king mackerel.

Amendment 1 (GMFMC and SAFMC 1985) established Eastern and Western Zones for the Gulf migratory group, divided at the Alabama/Florida border, each with a separate commercial allocation. Amendment 9 (GMFMC and SAFMC 2000) further subdivided the commercial hook-and-line king mackerel allocation for the Eastern Zone Florida west coast by establishing two subzones, North and South, with a dividing line between the two subzones at the Collier/Lee County line. These zones and subzones were established to ensure that fishermen throughout the Gulf had an opportunity to fish in their homeport area and that some of the allowable quota was available for those areas.

The commercial fishing year for the Gulf Western Zone and Eastern Zone, Northern and Southern Subzones is July 1- June 30. The trip limit is 3,000 lbs per day for the Western Zone. In general, the commercial quota in this zone is met in September to November of each year, and fishing is closed; in 2008/2009, the zone remained open until March, but in 2012/2013 the zone closed in August. Both the Northern and Southern Subzones have a 1,250-lb trip limit until 75% of the quota is reached, and then the trip limit is reduced to 500 lbs until the quota is taken, or the end of the fishing year. The Northern Subzone has closed in the past four years, but previously had not closed since 2003/2004. The quota for the Southern Subzone for hook-and-line gear generally is met in February or March, but occasionally the quota is not filled before the end of the fishing year. In the Southern Subzone, the gillnet season opens on the day after the Martin Luther King, Jr. holiday. The fishing year ends June 30, but the quota is usually reached within one to two weeks after opening.

The fishing year for the Atlantic migratory group is March 1 to the end of February. The northern boundary for this group is at the jurisdictional boundary between the Mid-Atlantic and New England Fishery Management Councils, which is at the intersection point of Connecticut, Rhode Island, and New York.

Many king mackerel fishermen will travel throughout the southeast region to fish under different quotas. For example, fishermen from the east coast of Florida may fish in the Western Zone in

the summer and early fall until that quota is filled. They will then move to the Florida Panhandle to fish under the Northern Subzone quota. When that quota is filled, they generally will travel back to their homeport to fish during the winter and spring.

Recently, some fishermen who do not travel have expressed discontent with fishermen from outside their area contributing to filling the quota. In particular, fishermen from Louisiana and the Florida Panhandle feel that their zone/subzone is closed too quickly each year, depriving those who do not travel of fishing opportunities. Additionally, because of the fall closures of the Northern Subzone, fishermen on the west central coast of Florida have fewer opportunities to fish for king mackerel; by the time the fish have migrated that far south, the subzone is closed. Proposed actions to address these problems include changing trip limits and the dates of the fishing year.

Another problem resulting from management by subzones is that in spring, the Eastern Zone subzones are often closed, but Monroe County is open (because starting April 1, that county is part of the Atlantic migratory group). Some fishermen from southwest Florida, particularly from Collier County, fish in waters of northern Monroe County on the Florida west coast. Currently, regulations prevent them from transiting the closed area (Collier County) with king mackerel to return to their homeport. Their only option is to travel to the Florida Keys, a considerable distance from the fishing area. A similar issue arises when the Northern Subzone is closed but the Southern Subzone is open, and other areas where boundaries occur. This amendment considers allowing transit through closed areas by vessels possessing king mackerel, provided gear is appropriately stowed.

The South Atlantic Fishery Management Council (South Atlantic Council) is concerned that the commercial ACLs for king mackerel could be filled by fishermen in one state before fish are available to fishermen in other states, particularly North Carolina. State representatives from North Carolina have expressed a desire to manage a separate quota for their state, to ensure fishermen in their area have the opportunity to fish. This amendment considers assigning a separate quota for North Carolina, or for a northern zone that includes North Carolina, versus the rest of the Atlantic region.

Spanish mackerel: Although the two migratory groups mix in south Florida, abundance trends along each coast of Florida are different, indicating sufficient isolation between the two migratory groups. Consequently, the boundary for Spanish mackerel was fixed at the Miami-Dade/Monroe County border on Florida's southeast coast (Figure 1.1.2). The Atlantic migratory group is divided into northern and southern zones at the Florida/Georgia border and the northern zone extends to the jurisdictional boundary between the Mid-Atlantic and New England Fishery Management Councils. Although only one quota is assigned to both zones, each zone has different trip limits and accountability measures. The fishing year for the Gulf migratory group is April 1 – March 30 and the fishing year for the Atlantic migratory group is March 1 – end of February.

Most Spanish mackerel are landed in Florida and North Carolina. The South Atlantic Council is concerned that the commercial ACLs for Spanish mackerel could be filled by fishermen in one state before fish are available to fishermen in other states, particularly North Carolina. State

representatives from North Carolina have expressed a desire to manage a separate quota for their state, to ensure fishermen in their area have the opportunity to fish. This amendment considers assigning a separate quota for North Carolina, or for a northern zone that includes North Carolina, versus the rest of the Atlantic region.

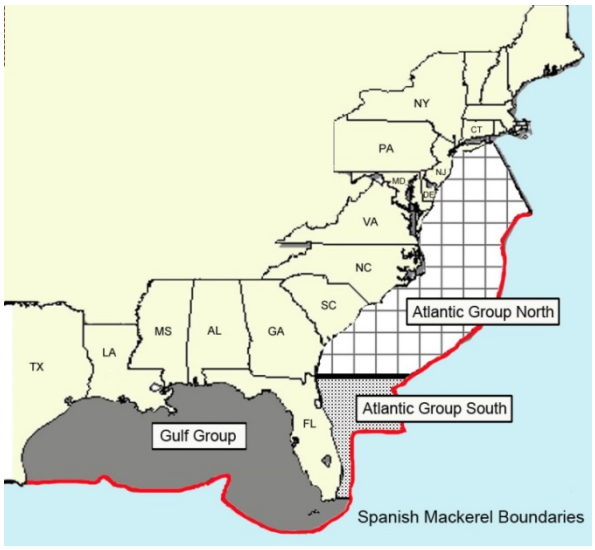

Figure 1.1.2. Fixed boundary between Atlantic and Gulf migratory groups of Spanish mackerel.

Cobia: Separate migratory groups of cobia were established in Amendment 18 (GMFMC and SAFMC 2011). The division between Gulf and Atlantic migratory groups was set at the Councils' jurisdictional boundary, off the Florida Keys. During the Data Workshop for Southeast Data, Assessment, and Review (SEDAR) 28, panelists determined the biological boundary between the Gulf and Atlantic migratory groups to be at the Florida/Georgia border. This decision was based on genetic and tagging data, and recommendations from the commercial and recreational statistics working groups. They determined that a mixing zone occurs around Brevard County, Florida, and potentially to the north. Although they did not find enough resolution in the data to specifically identify a biological boundary, the Florida/Georgia line did not conflict with life history information and would be easiest for management (SEDAR 28 2013a, 2013c). The northern boundary of the Atlantic migratory group is at the jurisdictional boundary between the Mid-Atlantic and New England Councils (Figure 1.1.3).

Because the biological boundary from the stock assessment differs from the management boundary, acceptable biological catch (ABC) would need to be allocated for the east coast of Florida. Further, the assessment produced new recommendations for ABC, which should result in new annual catch limits (ACLs) and annual catch targets (ACTs) for cobia.

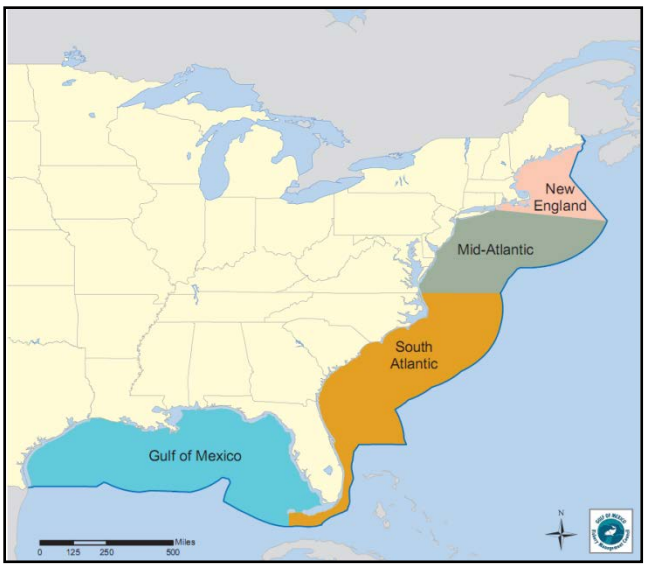

Figure 1.1.3. Jurisdictional boundaries of the Gulf (blue), South Atlantic (orange), Mid-Atlantic (green), and New England (peach) Fishery Management Councils. The South Atlantic Council manages cobia for the South Atlantic and Mid-Atlantic regions.

1.2 Purpose and Need

Purpose for Action

The purpose of this amendment is to determine if the current and proposed commercial trip limits, fishing seasons, and other regulations are necessary and appropriate and provide the greatest benefit to the coastal migratory pelagic fishery.

Need for Action

The need for the proposed actions is to achieve optimum yield while ensuring regulations are fair and equitable and fishery resources are utilized efficiently.

1.3 History of Management

The CMP FMP, with Environmental Impact Statement (EIS), was approved in 1982 and implemented by regulations effective in February 1983 (GMFMC and SAFCM 1982). The management unit includes king mackerel, Spanish mackerel, and cobia. The FMP treated king and Spanish mackerel as unit stocks in the Atlantic and Gulf. The FMP established allocations for the recreational and commercial sectors harvesting these stocks, and the commercial allocations were divided between net and hook-and-line fishermen. The following is a list of management changes relevant to CMP zonal issues. A full history of CMP management can be found in Amendment 18 (GMFMC and SAFMC 2011), and is incorporated here by reference.

Amendment 1, with EIS, implemented in September 1985, recognized separate Atlantic and Gulf migratory groups of king mackerel. The Gulf commercial allocation for king mackerel was divided into Eastern and Western Zones for the purpose of regional allocation, with 69% of the allocation provided to the Eastern Zone and 31% to the Western Zone.

Amendment 2, with environmental assessment (EA), implemented in July 1987, recognized two migratory groups, established allocations of total allowable catch (TAC) for the commercial and recreational sectors, and set commercial quotas and recreational bag limits.

Amendment 5, with EA, implemented in August 1990, extended the management area for Atlantic migratory groups of mackerels through the Mid-Atlantic Council's area of jurisdiction; 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; and 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 could be determined.

Amendment 6, with EA, implemented in November 1992, allowed for Gulf migratory group king mackerel stock identification and allocation when appropriate.

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, 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); modified the seasonal framework adjustment measures; and 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, established a trip limit of 3,000 lbs per vessel per trip for the Western Zone.

Amendment 18, with EA, implemented in January 2012, established ACLs and accountability measures for Gulf and Atlantic migratory groups of cobia, king mackerel, and Spanish mackerel. It also separated cobia into Atlantic and Gulf migratory groups.

CHAPTER 2. MANAGEMENT ALTERNATIVES

2.1 Action 1 - Modify the Commercial Hook-and-Line Trip Limits for Gulf Migratory Group King Mackerel

Alternative 1: No Action – Retain the existing commercial hook-and-line trip limits.
Western Zone: 3,000 lbs with no reduction
Eastern Zone Northern Subzone: 1,250 lbs until 75% of the quota is taken, at which time the trip limit decreases to 500 lbs
Eastern Zone Southern Subzone: 1,250 lbs until 75% of the quota is taken, at which time the trip limit decreases to 500 lbs

Alternative 2: Set the commercial hook-and-line trip limit at 2,000 lbs with no reduction.
Option a: For the Western zone
Option b: For the Eastern Zone Northern Subzone
Option c: For the Eastern Zone Southern Subzone

Alternative 3: Set the commercial hook-and-line trip limit at 3,000 lbs with no reduction.
Preferred Option a: For the Western zone
Option b: For the Eastern Zone Northern Subzone
Option c: For the Eastern Zone Southern Subzone

Alternative 4: Set the commercial hook-and-line trip limit at 1,250 lbs with no reduction.
Option a: For the Western zone
Preferred Option b: For the Eastern Zone Northern Subzone
Preferred Option c: For the Eastern Zone Southern Subzone

Note: Only one alternative may be selected for each option.

Discussion:
*Western Zone (**Alternatives 2-4, Option a**)*
During the 1996/1997 – 2000/2001 fishing years, the Western Zone of the Gulf of Mexico (Gulf) opened July 1 and closed consistently in August. At the request of the Gulf of Mexico Fishery Management Council (Gulf Council), the National Marine Fisheries Service (NMFS) implemented a 3,000-pound whole weight (lb ww) trip limit for the Western Zone in 1999 to lengthen the fishing season. This action appears to have been partly successful in that, after the first year, the season has stayed open until at least September and usually until October or November. However, the Western Zone is still usually closed for more than half of the fishing year, and in the most recent season (2012/2013), the zone closed in August (Table 2.1.1). Maintaining the existing trip limit at 3,000 lbs ww will likely continue this closure pattern. All trip limits alternatives are in ww.

Table 2.1.1. Gulf migratory group king mackerel season closure dates in the Western Zone and Eastern Zone Subzones. TLR=Trip limit reduction, "x" denotes no closure.

		Years											
		2000-01	**2001-02**	**2002-03**	**2003-04**	**2004-05**	**2005-06**	**2006-07**	**2007-08**	**2008-09**	**2009-10**	**2010-11**	**2011-12**	**2012-13**
Western Zone	Close	26-Aug	19-Nov	25-Oct	24-Sep	20-Oct	17-Nov	6-Oct	3-Nov	27-Mar	4-Sep	11-Feb	16-Sept	22-Aug
Eastern Zone, Northern Subzone	TLR	12-Nov	x	30-Nov	30-Oct	x	x	27-Nov	27-Dec	x	x	26-Oct	x	30-Aug
	Close	19-Nov	10-Nov	5-Dec	13-Nov	x	x	x	x	x	24-Oct	4-Apr	7-Oct	5-Oct
Eastern Zone, Southern Subzone	TLR	20-Feb	11-Mar	5-Mar	20-Mar	25-Feb	25-Feb	3-Mar	22-Mar	28-Feb	7-Feb	8-Mar	x	17-Mar
	Close	2-Mar	23-Mar	x	9-Apr	x	12-Mar	10-Apr	x	x	15-Feb	23-Mar	26-Feb	12-Mar

Note: The 2010/2011 fishing season was impacted by the Deepwater Horizon MC252 oil spill.

Using catch rates from the 2005/2006 – 2011/2012 fishing seasons, landings with each proposed reduction of the trip limit were predicted (Appendix D). Each lowering of the trip limit with **Alternatives 2-4** would extend the season some amount, with **Alternative 4, Option a** providing the latest predicted closure date in February (Table 2.1.2). Lowering the trip limit may benefit fishers in that it could extend the fishing season by several months. It may also deter some of the transient fishing that has occurred in the past when vessels from the east coast of Florida, in particular, have traveled to the Western Zone, thereby increasing effort in this portion of the fishery. However, the economic return per trip versus the cost of the trip could decrease with a lower trip limit. In some cases, particularly when vessels must travel long distances to reach the fishing grounds, fishermen may not be able to recoup their costs with less fish.

Table 2.1.2. Predicted closure dates for king mackerel hook-and-line fishing in the Western Zone for the different proposed trip limits. The closure dates are based on landings rates from the 2011/2012 fishing season. **Alternative 1** and **Alternative 3, Preferred Option c** propose no change to the current trip limit of 3,000 lbs.

	Alternative 1	**Alternative 2**	**Alternative 3**	**Alternative 4**
Trip Limit	3,000 lbs ww	2,000 lbs ww	3,000 lbs ww	1,250 lbs ww
Closure Date	Sept 11*	Oct 28	Sept 11*	Feb 11

* Projected closure date is earlier than the 2011/2012 closure date of 16-Sep because landings exceeded the quota.

*Eastern Zone – Northern and Southern Subzones (**Alternatives 2-4, Options b** and **c**)*
The trip limits and trip limit reductions for the Northern and Southern Subzones of the Eastern Zone (**Alternative 1**) were intended to extend the fishing seasons. Particularly in the Southern Subzone, fishermen at times travel long distances to reach the fishing grounds. A trip limit of 1,250 lbs may not allow enough income on a trip to cover expenses. This problem is exacerbated when the trip limit is reduced to 500 lbs, leading to requests for removing the trip limit reduction. Additionally, in some years king mackerel have been caught at such a high rate that NMFS could not implement the reduction to 500 lbs before the zone needed to be closed (Table 2.1.1).

Using catch rates from the 2005/2006 – 2011/2012 fishing seasons, landings with each proposed increase of the trip limit were predicted (Appendix D). Each increase of the trip limit would shorten the season some amount; however, the differences among **Alternatives 1-4** are minimal (Table 2.1.3). Therefore increasing the trip limit could benefit fishers in that the economic return per trip versus the cost of the trip could increase with a higher trip limit without substantially reducing the season.

Table 2.1.3. Predicted closure dates for king mackerel hook-and-line fishing in the Eastern Zone, Northern and Southern Subzones for the different proposed trip limits. The closure dates are based on landings rates from the 2011/2012 fishing season. TLR = trip limit reduction.

	Alternative 1	**Alternative 2**	**Alternative 3**	**Alternative 4**
Trip Limit	1,250 lbs ww w/ TLR	2,000 lbs ww w/o TLR	3,000 lbs ww w/o TLR	1,250 lbs ww w/o TLR
Eastern Zone - Northern Subzone	Oct 1*	Sept 27	Sept 26	Sept 28
Eastern Zone - Southern Subzone	Mar 7**	Feb 15	Feb 9	Feb 21

* Projected closure date is earlier than the 2011/2012 closure date of October 7 because the quota was exceeded.
**Projected closure date is later than the 2011/2012 closure date of February 26 because the trip limit reduction did not get implemented before the quota was met.

The Southern Subzone encompasses Collier and Monroe Counties in Florida from November 1 through March 31. Beginning April 1, Monroe County (including the Florida Keys) becomes part of the Atlantic migratory group until October 31. Any change to the trip limit in the Southern Subzone would only apply to Monroe County when that area is considered part of the Atlantic. Therefore, the trip limit off Monroe County would remain 1,250 lbs annually with **Alternative 4, Preferred Option c.**

Establishing a single trip limit for the entire Gulf area by choosing the same options within **Alternatives 2, 3,** or **4** would simplify enforcement. Currently, vessels fishing off Alabama, Mississippi, Louisiana, and Texas can land 3,000 lbs, whereas vessels fishing off Florida can only land 1,250 lbs. However, fishermen in different areas may prefer lower trip limits and longer seasons to higher trip limits and shorter seasons, so the Gulf and South Atlantic Fishery Management Councils (Councils) could set different trip limits for the three areas based on their choice of preferred alternatives and preferred options above.

Council Conclusions:

The Councils chose to maintain the 3,000 lb trip limit for the Western Zone (**Alternative 3, Preferred Option a**) because this higher trip limit allows vessels that travel long distances to be more cost efficient. Although a lower trip limit could extend the fishing season, many of the fishers in this area fish in other areas or for other species during the rest of the year.

The Councils chose to maintain the 1,250-lb trip limit for the Eastern Zone Northern Subzone, (but eliminate the 500-lb trip limit reduction, **Alternative 4, Preferred Option b**) because a higher trip limit might reduce the length of the fishing season. This subzone has a small quota that could quickly be caught if vessels landed more fish on each trip. Although the trip limit reduction at 75% of the quota can extend the fishing season, it was removed because it is difficult to implement in a timely manner before the entire quota is landed. Also, many vessels cannot make a profit if they can only land 500 lbs per trip.

The Councils chose to maintain the trip limit in the Eastern Zone Southern Subzone to 1,250 lbs; however they chose to remove the trip limit reduction (**Alternative 4, Preferred Option c**). Testimony from fishermen in the Eastern Zone Southern Subzone was divided among those who wanted the trip limit to increase and those that wanted the trip limit to remain at 1,250 lbs. Fishermen from Monroe County generally wanted the higher trip limit because they expend a lot of fuel to reach the fishing grounds, and a higher trip limit would increase their profit margin. Fishermen from Collier County generally wanted the lower trip limit to extend the fishing season. The Council chose to maintain the current trip limit, while removing the trip limit reduction for the same reasons as for the Northern Subzone.

2.2 Action 2 - Change the Fishing Year for Gulf Migratory Group King Mackerel for the Eastern and Western Zone

Alternative 1: No Action - the fishing year remains July 1 – June 30**.**

Alternative 2: Change the fishing year for Gulf group king mackerel season to September 1 – August 31.

Gulf Preferred Option a: For the Western Zone
Option b: For the Eastern Zone Northern Subzone
Option c: For the Eastern Zone Southern Subzone

Alternative 3: Change the fishing year for Gulf group king mackerel season to October 1 – September 30.

Option a: For the Western Zone
Preferred Option b: For the Eastern Zone Northern Subzone
Option c: For the Eastern Zone Southern Subzone

Currently, the fishing year for Gulf group king mackerel in the Eastern and Western Zone begins on July 1 (**Alternative 1**). Some fishers have indicated that a later opening would allow them to harvest king mackerel from the Western Zone more efficiently because fish are present in larger numbers closer to shore in the main fishing areas off south Louisiana in the fall, as opposed to the summer. They also claim that fish can be kept in better condition due to cooler weather. A later opening, possibly combined with a lower trip limit, might also discourage movement of fishers from the Atlantic coast of Florida to Louisiana and into the Florida Panhandle as has been the case for several years. Such a change could extend the fishing season.

Alternative 1 would continue the current situation, where the Western Zone and the Northern Subzone generally close in the fall. For the Western Zone, the closures occur when fish are large and abundant in the area. However, the Western Zone quota is met each year generally within three to four months of the July 1 opening (Table 2.1.1); an opening during a time when more fish are available may result in a shorter fishing season if fishermen are not currently landing the maximum trip limit.

Alternative 2 and **Alternative 3** would move the opening of the fishing year into the fall. However, if the fishing year starts too late in the fall, fish may migrate south earlier in some years and may not be available. Also, weather conditions may make fishing more difficult and less safe if the season extends into winter months.

Annual catch limits (ACLs) and quotas for both the recreational and commercial sectors, respectively, are tracked by the commercial fishing year. Recreational data from the Marine Recreational Information Program are available by two-month waves, starting with January. An October opening (**Alternative 3**) would complicate monitoring of the recreational ACL because the opening would fall in the middle of a two-month wave.

Under **Alternative 2**, **Gulf Preferred Option a** would change the fishing season dates for the Western Zone to September 1-August 31; **Option b** would change the fishing season dates for the Northern Subzone of the Eastern Zone to September 1-August 31; and **Option c** would change the season dates for the Southern Subzone of the Eastern Zone to September 1-August 31. Under **Alternative 3**, **Option a** would change the fishing season dates for the Western Zone to October 1-September 30; **Alternative 3**, **Preferred Option b** would change the fishing season dates for the Northern Subzone of the Eastern Zone to October 1-September 30; and **Alternative 3**, **Option c** would change the fishing season dates for the Southern Subzone of the Eastern Zone to October 1-September 30. Choosing the same season dates for all zones in the Gulf would ease enforcement and lessen confusion among fishers. Charter captains in the Eastern Zone Northern Subzone have indicated that October corresponds to a time of year when the number of charter trips booked every week begins to decrease substantially, and typically coincides with the offshore arrival of larger and more numerous migratory king mackerel. **Alternative 3, Preferred Option b** would allow dual-permitted vessels in the Eastern Zone Northern Subzone the opportunity to commercially fish for king mackerel at a time when the charter-for-hire industry is slowing down, and do so more efficiently due to the typical increase in abundance of king mackerel during this time of year.

Because the Councils did not select a preferred alternative for the Eastern Zone Southern Subzone, the fishing year in that zone will remain July 1 – June 30. As of December 2013, the South Atlantic Fishery Management Council (South Atlantic Council) also did not select a preferred alternative for the Western Zone, which would maintain the current fishing season in the zone although the Gulf Council selected a preferred alternative to change the Western Zone fishing season to start on September 1 (**Alternative 2, Gulf Preferred Option a**).

Table 2.2.1. Gulf king mackerel landings by region and month. Landings (lbs ww) were calculated for the two zones *by county landed*: Eastern Gulf (Monroe* - Escambia County, FL) and Western Gulf (AL, MS, LA, TX) for the most recent fishing seasons.

Region	Fishing Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
Eastern Gulf	**2004-2005**	27,617	8,200	4,344	26,386	46,625	43,382	155,204	295,371	92,601	8,330	12,078	5,859	725,997
	2005-2006	6,425	4,181	2,718	7,493	12,317	149,942	187,852	257,988	95,259	51,614	17,278	10,316	803,383
	2006-2007	18,755	11,473	7,748	44,859	71,236	55,780	180,168	199,732	136,223	12,093	6,743	13,761	758,571
	2007-2008	18,739	9,275	1,964	20,960	93,544	104,029	113,629	160,615	199,784	26,558	4,784	14,610	768,491
	2008-2009	16,493	2,726	14,117	48,754	77,729	141,248	263,300	253,174	27,745	17,542	26,322	24,747	913,897
	2009-2010	48,119	16,432	72,229	153,119	5,687	53,231	338,919	137,854	4,022	94,366	237	1,474	925,689
	2010-2011	16,910	17,482	44,204	121,627	23,367	17,533	180,111	295,612	144,604	2,850	119	7	864,426
Western Gulf	**2004-2005**	501,571	244,049	79,459	175,347	0	0	30	32	0	83	0	235	1,000,806
	2005-2006	312,526	294,042	67,222	136,637	127,032	0	9	0	0	0	148	10,941	948,557
	2006-2007	358,757	346,873	249,701	61,047	0	0	0	0	0	0	0	361	1,016,739
	2007-2008	420,772	278,557	105,853	163,046	23,947	0	0	0	0	0	0	451	992,626
	2008-2009	267,623	171,136	64,587	197,220	166,728	3,671	6,507	12,196	21,692	0	202	170	911,732
	2009-2010	530,290	373,595	134,551	1,251	23	0	0	0	35	0	0	0	1,039,745
	2010-2011	58,129	101,710	42,499	222,334	329,332	71,245	119,994	24,718	0	93	0	0	970,054

*Monroe County is only part of the Eastern Zone from November to March
Source: Accumulated Landings System data file (7/12/2012)

Table 2.2.2. Gulf king mackerel landings by region and month. Landings (lbs ww) were calculated for the two zones *by reported area fished*: Eastern Gulf (areas 10-109* and 7480-7489**) and Western Gulf (areas 110-219) for the most recent fishing seasons.

Region	Fishing Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
Eastern Gulf	2004-2005	31,020	7,033	2,899	24,675	46,582	43,060	155,665	295,691	94,578	2,495	12,016	5,968	721,682
	2005-2006	8,929	9,211	2,590	6,936	11,658	150,750	187,567	255,920	93,783	50,919	17,367	11,212	806,842
	2006-2007	30,486	23,942	19,816	47,019	71,853	52,571	179,993	203,665	140,346	4,028	6,734	13,639	794,092
	2007-2008	42,750	25,148	4,720	21,588	93,690	104,464	114,036	161,206	199,267	8,050	4,738	14,484	794,141
	2008-2009	36,062	9,681	17,317	52,214	77,064	143,157	262,543	251,519	27,161	3,784	26,409	24,732	931,643
	2009-2010	79,614	38,043	75,634	154,229	5,270	52,430	352,255	139,206	2,298	47,289	237	1,474	947,979
	2010-2011	16,910	17,482	44,666	130,934	43,267	21,957	180,720	300,595	147,914	1,443	56	7	905,951
Western Gulf	2004-2005	498,168	245,216	80,837	176,991	0	0	30	32	0	225	0	126	1,001,625
	2005-2006	310,022	288,998	67,350	137,194	127,569	0	9	0	0	0	44	145	931,331
	2006-2007	346,962	334,388	237,633	58,887	37	6	0	0	0	0	9	476	978,398
	2007-2008	396,750	262,641	103,089	162,418	24,046	96	0	0	5	0	46	568	949,659
	2008-2009	248,054	164,181	61,387	190,933	166,606	3,704	6,507	12,196	21,750	0	115	185	875,618
	2009-2010	498,792	351,984	131,146	29	23	0	0	0	35	0	0	0	982,009
	2010-2011	58,129	101,710	42,037	210,240	300,313	49,141	105,367	24,718	0	93	0	0	891,748

* Area 109 includes the eastern coast of Alabama

**Areas 10-39 and 7480-7489 are only part of the Eastern Zone from November to March

Source: Accumulated Landings System data file (7/12/2012)

Council Conclusions:

Both Councils received public testimony concerning the proposed changes to the fishing seasons in the respective Gulf jurisdictional fishing zones. For the Western Zone, fishermen were somewhat divided on whether to retain the opening date for the commercial king mackerel season at July 1 or to move it to September 1. More Louisiana fishermen prefer the September 1 opening date. At the December 2013 meeting, the South Atlantic Council received public comments from several East Coast fishermen recommending that the Councils not change the fishing season for the Western Zone. Public comment was almost unanimous in support of changing the opening date for the commercial king mackerel fishing season in the Eastern Zone northern subzone to October 1, and retaining the July 1 opening date for the Eastern Zone southern subzone.

The Gulf Council concluded that **Alternative 2, Gulf Preferred Option a** would result in more cost effective fishing in the Western Zone, especially off Louisiana. At their December 2013 meeting, the South Atlantic Council de-selected **Alternative 2, Gulf Preferred Option a** as a South Atlantic preferred alternative. The South Atlantic Council record includes several reasons in support of status quo for the Western Zone: there could be a market glut and impact on prices if king mackerel from the western Gulf are not available until later in the year; migration patterns indicate that larger fish come through the western Gulf in the winter months and increased harvest of larger king mackerel could affect the stock; and weather in the Gulf of Mexico in the fall months could impede fishing.

The South Atlantic Council will need to reaffirm its selection of **Alternative 3, Preferred Option b** at its March 2014 meeting**.**

2.3 Action 3 – Establish a Transit Provision for Travel through Areas that are Closed to King Mackerel Fishing

Alternative 1: No Action – do not establish a transit provision.

Alternative 2: Establish a provision allowing transit through the Florida west coast Northern and Southern Subzones when those zones are closed for vessels possessing Atlantic migratory group king mackerel that were legally harvested in the exclusive economic zone (EEZ) off Monroe County.

Preferred Alternative 3: Establish a provision allowing transit through areas closed to king mackerel fishing for vessels possessing king mackerel that were legally harvested in the EEZ off areas open to king mackerel fishing.

Alternative 4: Establish a provision allowing transit through the Eastern Zone, Northern Subzone when that area is closed for vessels possessing king mackerel that were legally harvested in the EEZ off Collier County.

Note: For Alternatives 2-4, the following conditions apply:
Only for vessels in direct and continuous transit and with gear stowed
Only for fishermen holding a federal commercial king mackerel permit

Discussion:
Current regulations prohibit possessing king mackerel in or from a zone that has closed because the quota has been met. Therefore, **Alternative 1** would not allow transit through any closed area even if the fish were harvested from an open area, because possession of king mackerel in a closed area is prohibited. Fishermen must either forgo fishing opportunities or expend extra time and fuel to land fish in an open zone.

Often the Eastern Zone, Southern Subzone, comprised of Collier and Monroe Counties, closes in early spring when the quota is met (see Table 2.1.1). Beginning April 1 of each year, Monroe County is considered to contain Atlantic migratory group king mackerel and the Southern Subzone is comprised of only Collier County. Some fishermen fish in the northern portion of Monroe County, which is a sparsely populated area. To land Atlantic migratory group king mackerel, fishermen must travel to the Florida Keys where dealers in Monroe County are located. This trip could be up to 100 miles. **Alternative 2** would allow fishermen who legally harvest king mackerel from Monroe County after April 1 of each year to transport and land their catch in other areas of the Gulf that are closed to king mackerel fishing.

Preferred Alternative 3 would allow transit through any area in the Gulf or South Atlantic that is closed because the quota has been met. Many fishermen live and work near a boundary between two zones, and may wish to fish in one zone, but land in another. When the fisherman's home port is located in a closed zone, the fisherman must travel to another port within the open zone to land their catch. **Preferred Alternative 3** would give fishermen the option to transit through any closed zone and land at their preferred port.

This situation is particularly problematic for fishermen who might fish in Collier County but have their home port in Lee County. The Northern Subzone usually closes before the Southern Subzone, so transit into the Northern Subzone is not allowed. **Alternative 4** would allow transit through Lee County and northward when the Northern Subzone is closed.

Alternatives 2 and **4**, and **Preferred Alternative 3** would reduce the economic burden on fishermen by allowing them to return to the port of their choice after fishing. These alternatives would also promote safety at sea by reducing travel time for those fishermen whose home port is located within a closed zone where the quota has been met.

Transit under **Alternatives 2** and **4**, and **Preferred Alternative 3** would be allowed for vessels traveling through the closed area with fishing gear appropriately stowed. The term "transit" is defined as on a direct and continuous course through a closed area. The term "appropriately stowed" means:

1) A gillnet must be left on the drum. Any additional gillnets not attached to the drum must be stowed below deck.

2) All rods and reels must be removed from rod holders and stowed securely on or below deck. Terminal gear (i.e., hook, leader, sinker, flasher, or bait) must be disconnected and stowed separately from the rod and reel. Sinkers must be disconnected from down riggers and stowed separately.

Council Conclusions:

Fishermen expressed frustration to the Councils about having to land fish away from their home ports, often incurring substantial additional expenses. Allowing transit through closed zones from open zones was viewed by some as a major law enforcement concern, with the enforceability of such a regulation heralded as difficult. Ultimately, the Councils determined that **Preferred Alternative 3** would allow fishermen to operate their businesses more economically, and would promote greater safety at sea through decreased transit times.

2.4 Establish Regional Commercial Quotas for Atlantic Migratory Group King Mackerel and Spanish Mackerel

2.4.1 Action 4.1 – Establish Regional Commercial Quotas for Atlantic Migratory Group King Mackerel

Alternative 1: No Action - retain one commercial quota for the Atlantic migratory group king mackerel.

Alternative 2: Establish a separate commercial quota of Atlantic migratory group king mackerel for North Carolina based on **Options a-d** below. Monitoring and implementation would be based on **Options e-g** below.

Option a: The North Carolina quota would be the Atlantic migratory group ACL times the average of the proportion of landings in North Carolina from 2007/2008 through 2011/2012.

Option b: The North Carolina quota would be the Atlantic migratory group ACL times the average of the proportion of landings in North Carolina from 2002/2003 through 2011/2012.

Option c: The North Carolina quota would be the Atlantic migratory group ACL times (50% of the proportion of landings in North Carolina 2002/2003 through 2011/2012 and 50% of the proportion of landings in North Carolina 2007/2008 through 2011/2012).

Option d: The North Carolina quota would be the Atlantic migratory group ACL times the average of the proportion of landings in North Carolina from 1997/1998 through 2011/2012.

Option e: NMFS would monitor landings in both North Carolina and the rest of the states and close the EEZ of each area when the respective quota is met or expected to be met.

Option f: North Carolina would monitor landings in North Carolina and prohibit landings in North Carolina when the North Carolina quota is met or projected to be met. NMFS would monitor landings in the rest of the states and close the entire EEZ when the General Atlantic quota is reached.

Option g: North Carolina would monitor landings in North Carolina and inform NMFS when the North Carolina quota is met or expected to be met; NMFS would then close the EEZ off North Carolina. NMFS would monitor landings in the rest of the states and close the EEZ off those states when the quota is reached.

Note: One option from Options a-d and one option from Option e-g should be selected if this alternative is preferred.

Alternative 3: Establish quotas for Northern and Southern Zones for Atlantic migratory group king mackerel based on **Options a-d** below. The Northern Zone would include the EEZ off states from North Carolina north to New York. The Southern Zone would include the EEZ off South Carolina, Georgia, and the east coast of Florida. NMFS would monitor landings in both zones and close the EEZ of each zone when the respective quota is reached.

Option a: Each zone quota would be the Atlantic migratory group ACL times the average of the proportion of landings in that zone from 2007/2008 through 2011/2012.

Preferred Option b: Each zone quota would be the Atlantic migratory group ACL times the average of the proportion of landings in that zone from 2002/2003 through 2011/2012.

Option c: Each zone quota would be the Atlantic migratory group ACL times the average (50% of the proportion of landings from that zone 2002/2003 through 2011/2012 and 50% of the proportion of landings from that zone 2007/2008 through 2011/2012).

Option d: Each zone quota would be the Atlantic migratory group ACL times the average of the proportion of landings in that zone from 1997/1998 through 2011/2012.

Preferred Alternative 4: Allow for transfer of quota between regions. North Carolina and Florida would be designated as the coordinating states for any transfer request, in consultation with other states.

Process for Transfer under Alternative 2

Florida, in consultation with Georgia, South Carolina, and the Mid-Atlantic states, may request approval from the NMFS Regional Administrator to transfer part of the General Atlantic quota to the North Carolina quota for the remainder of the fishing year. Requests for transfer must be made by letter signed by the principal state official with marine fishery management responsibility and expertise, or his/her previously named designee, for Florida, after consultation with all other states. The letter must certify that all pertinent state requirements have been met and identify the amount of quota to be transferred.

North Carolina may request approval from the NMFS Regional Administrator to transfer part of the North Carolina quota to the General Atlantic quota for the remainder of the fishing year. Requests for transfer must be made by letter signed by the principal state official with marine fishery management responsibility and expertise, or his/her previously named designee, for North Carolina. The letter must certify that all pertinent state requirements have been met and identify the amount of quota to be transferred.

Process for Transfer under Alternative 3

Florida, in consultation with Georgia and South Carolina, may request approval from the NMFS Regional Administrator to transfer part of the Southern Zone quota to the Northern Zone quota for the remainder of the fishing year. Requests for transfer must be made by letter signed by the principal state official with marine fishery management responsibility and expertise, or his/her previously named designee, for Florida, after consultation with Georgia and South Carolina. The letter must certify that all pertinent state requirements have been met and identify the amount of quota to be transferred.

North Carolina, in consultation with all Mid-Atlantic states, may request approval from the NMFS Regional Administrator to transfer part of the Northern Zone quota to the Southern Zone quota for the remainder of the fishing year. Requests for transfer must be made by letter signed

by the principal state official with marine fishery management responsibility and expertise, or his/her previously named designee, for North Carolina, after consultation with the Mid-Atlantic states. The letter must certify that all pertinent state requirements have been met and identify the amount of quota to be transferred.

Discussion:

The South Atlantic Council is concerned that the commercial ACL for king mackerel could be filled by fishermen in one state before fish are available to fishermen in other states, particularly North Carolina. This could become more probable if ACLs are lowered due to changes in stock biomass of king mackerel. Allocation to a specific region would be similar to how commercial quotas are managed in the Mid-Atlantic and New England areas for some species, and fishermen and some state marine resource department representatives have expressed a desire to move in this direction. Separation of the Atlantic region for king mackerel into Northern and Southern Zones is similar to Gulf zones and subzones for king mackerel.

Alternative 1 would not allocate any portion of the Atlantic migratory group king mackerel commercial ACL to North Carolina and would not separate the Atlantic migratory group king mackerel ACL into a Northern quota and Southern quota.

Under **Alternative 2**, a portion of the Atlantic migratory group king mackerel commercial ACL would be allocated to North Carolina based on landings from various periods under **Options a-d**. Under **Option e**, NMFS would monitor landings in all states and close harvest in the EEZ of the area when the respective quota is met. Under **Option f**, the North Carolina quota would be tracked by North Carolina through dealer reports of fish landed in North Carolina. The North Carolina Division of Marine Fisheries would monitor landings and prohibit sale of king mackerel in North Carolina when the North Carolina quota is met or is expected to be met, but NMFS would not close the EEZ off North Carolina to king mackerel harvest unless the full ACL is met or expected to be met. **Option g** would designate responsibility of monitoring North Carolina landings and prohibiting sale in North Carolina to the state, but NMFS would also close the EEZ off North Carolina when the North Carolina quota is met or expected to be met. All current commercial accountability measures would remain in place. North Carolina currently monitors quotas and reports catches to the Atlantic Coastal Cooperative Statistics Program and to NMFS, including state-by-state quotas of some Mid-Atlantic species, and has expressed interest in using a similar monitoring program for allocation of king mackerel.

Table 2.4.1 shows the expected percentage of the Atlantic migratory group king mackerel commercial ACL that would be allocated to North Carolina and to the general king mackerel commercial quota for all other states for **Options a-d** under **Alternative 2**. **Option a**, which uses North Carolina's proportion of total Atlantic migratory group king mackerel landings over the past five years to determine the North Carolina allocation, would allocate the lowest percentage of the ACL to North Carolina. **Option d**, which uses North Carolina's proportion of total Atlantic migratory group king mackerel landings over the past 15 years, would allocate the largest percentage to North Carolina.

Table 2.4.1. Expected portion of Atlantic migratory group king mackerel ACL that would be allocated to North Carolina and the General Atlantic Group for each option under **Alternative 2.**

	North Carolina Commercial Allocation		**General Atlantic Group Commercial Allocation**	
	% of Quota	lbs under Current ACL[1]	% of Quota	lbs under Current ACL[1]
Option a NC proportion of total landings 2007/08-2011/12	24.8%	962,240	75.2%	2,917,760
Option b NC proportion of total landings 2002/03-2011/12	33.2%	1,288,160	66.8%	2,591,840
Option c Bowtie Law (a+b)/2	29.0%	1,125,200	71.0%	2,754,800
Option d NC proportion of total landings 1997/98-2011/12	37.2%	1,443,360	62.8%	2,436,640

[1] The current commercial ACL for Atlantic migratory group king mackerel is 3,880,000 lbs.

Alternative 3 would separate the Atlantic region into Northern and Southern Zones (Figure 2.4.2) and allocate the Atlantic migratory group king mackerel commercial ACL between each zone based on an allocation in **Options a-d**. The boundary between the zones would be a line extending from the South Carolina/North Carolina state line. The Northern Zone allocation would be calculated using combined landings from North Carolina, Virginia, Maryland, Delaware, Pennsylvania, New Jersey, and New York. The Southern Zone allocation would be calculated using combined landings of South Carolina, Georgia, and the Florida east coast and Florida Keys on the Atlantic side. NMFS would monitor the Northern Zone commercial quota and Southern Zone commercial quota, and close the EEZ in the zone when the respective quota is met or expected to be met. Table 2.4.2 shows the expected percentage of the Atlantic migratory group king mackerel commercial ACL that would be allocated to each zone under **Options a-d**. All current commercial accountability measures would remain in place.

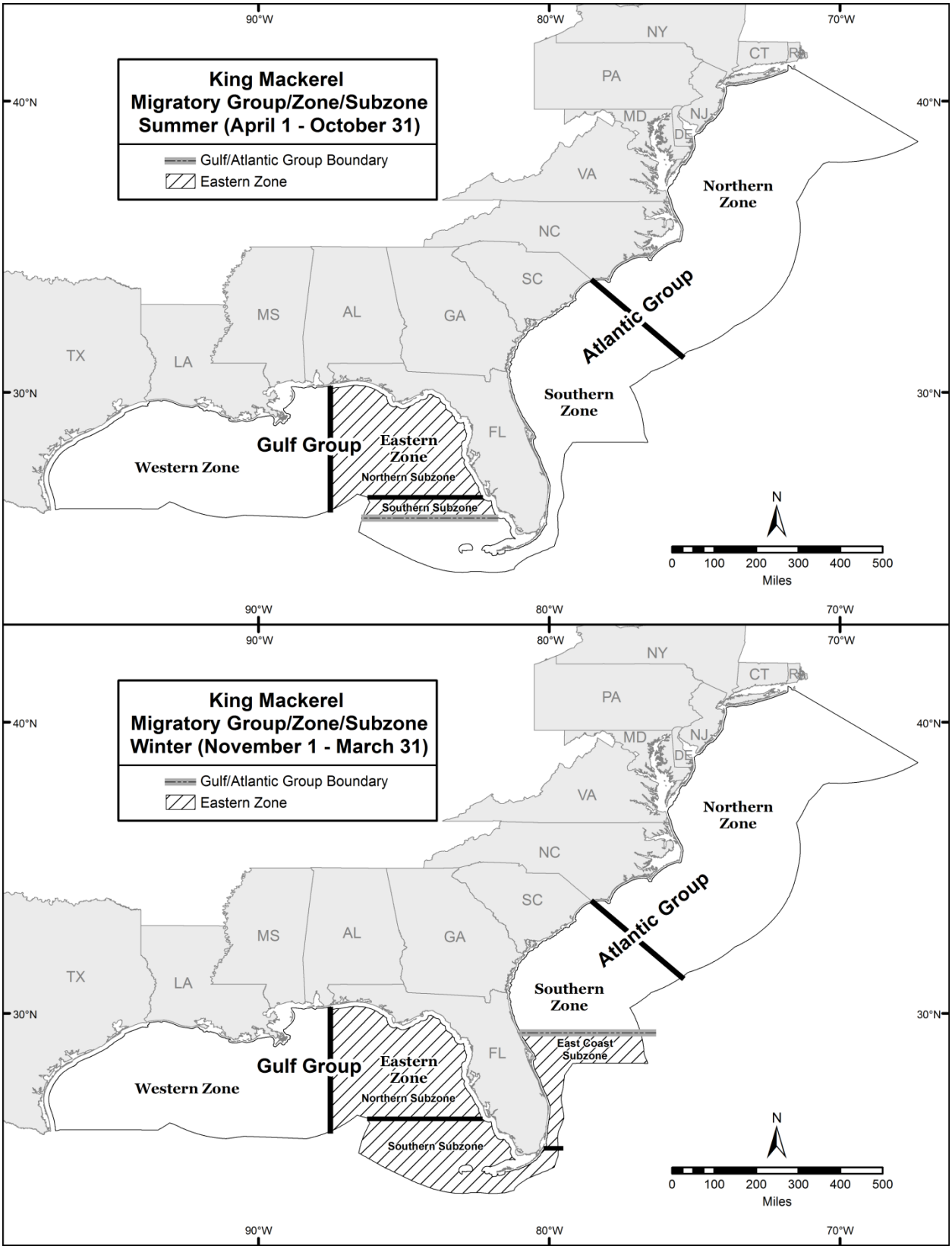

Figure 2.4.1. Designation of the Northern Zone and Southern Zone (**Alternative 3**) for Atlantic migratory group king mackerel.

Table 2.4.2. Expected portion of Atlantic migratory group king mackerel ACL that would be allocated to each zone under the options under **Alternative 3.**

	Northern Zone Commercial Allocation		**Southern Zone Commercial Allocation**	
	% of Quota	lbs under Current ACL[1]	% of Quota	lbs under Current ACL[1]
Option a Proportion of total landings 2007/08-2011/12	24.8%	962,240	75.2%	2,917,760
Preferred Option b Proportion of total landings 2002/03-2011/12	33.3%	1,292,040	66.7%	2,587,960
Option c Boyles Law (a+b)/2	29.1%	1,129,080	70.9%	2,750,920
Option d Proportion of total landings 1997/98-2011/12	37.4%	1,451,120	62.6%	2,428,880

[1] The current commercial ACL for Atlantic migratory group king mackerel is 3,880,000 lbs.

Preferred Alternative 4 would allow for quota to be transferred between North Carolina and the rest of the region (**Alternative 2)** or between the Northern and Southern Zones (**Preferred Alternative 3)**. The process is similar to quota transfers between states for Mid-Atlantic summer flounder and would provide a way for unused quota to be moved and utilized without negatively impacting the stock, thereby achieving optimum yield (OY). If **Preferred Alternative 4** is not selected as a preferred alternative in the final amendment, transfer would not be allowed.

2.4.2 Action 4.2 – Establish Regional Commercial Quotas for Atlantic Migratory Group Spanish Mackerel.

Alternative 1: No Action - retain one commercial quota for the Atlantic migratory group Spanish mackerel

Alternative 2: Establish a separate commercial quota for Atlantic migratory group Spanish mackerel for North Carolina based on Options a-d below. Monitoring and implementation would be based on Options e-g below.

Option a: The North Carolina quota would be the Atlantic migratory group ACL times the average of the proportion of landings in North Carolina from 2007/08 through 2011/12.

Option b: The North Carolina quota would be the Atlantic migratory group ACL times the average of the proportion of landings in North Carolina from 2002/03 through 2011/2012.

Option c: The North Carolina quota would be the Atlantic migratory group ACL times (50% of the proportion of landings in North Carolina 2002/03 through 2011/2012 and 50% of the proportion of landings in North Carolina 2007/08 through 2011/12).

Option d: The North Carolina quota would be the Atlantic migratory group ACL times the average of the proportion of landings in North Carolina from 1997/98 through 2011/12.

Option e: NMFS would monitor landings in both North Carolina and the rest of the states and close the EEZ of each area when the respective quota is met or expected to be met.

Option f: North Carolina would monitor landings in North Carolina and prohibit landings in North Carolina when the North Carolina quota is met or projected to be met. NMFS would monitor landings in the rest of the states and close the entire EEZ when the General Atlantic quota is reached.

Option g: North Carolina would monitor landings in North Carolina and inform NMFS when the North Carolina quota is met or expected to be met; NMFS would then close the EEZ off North Carolina. NMFS would monitor landings in the rest of the states and close the EEZ off those states when that quota is reached.

Note: One option from Options a-d and one option from Option e-g should be selected if this alternative is preferred.

Alternative 3: Establish quotas for Northern and Southern Zones for Atlantic migratory group Spanish mackerel based on Options a-d below. The Northern Zone would include the EEZ off states from North Carolina north to New York. The Southern Zone would include the EEZ off South Carolina, Georgia, and the east coast of Florida. NMFS would monitor landings in both zones and close the EEZ of each zone when the respective quota is reached.

Option a: Each zone quota would be the Atlantic migratory group ACL times the average of the proportion of landings in that zone from 2007/08 through 2011/2012.

Preferred Option b: Each zone quota would be the Atlantic migratory group ACL times the average of the proportion of landings in that zone from 2002/2003 through 2011/2012.

Option c: Each zone quota would be the Atlantic migratory group ACL times the average (50% of the proportion of landings from that zone 2002/2003 through 2011/2012 and 50% of the proportion of landings from that zone 2007/2008 through 2011/2012).

Option d: Each zone quota would be the Atlantic migratory group ACL times the average of the proportion of landings in that zone from 1997/1998 through 2011/2012.

Preferred Alternative 4: Allow for transfer of quota between regions. North Carolina and Florida would be designated as the coordinating states for any transfer request, in consultation with other states.

Process for Transfer under Alternative 2

Florida, in consultation with Georgia, South Carolina, and the Mid-Atlantic states, may request approval from the NMFS Regional Administrator to transfer part of the General Atlantic quota to the North Carolina quota for the remainder of the fishing year. Requests for transfer must be made by letter signed by the principal state official with marine fishery management responsibility and expertise, or his/her previously named designee, for Florida, after consultation with all other states. The letter must certify that all pertinent state requirements have been met and identify the amount of quota to be transferred.

North Carolina may request approval from the NMFS Regional Administrator to transfer part of the North Carolina quota to the General Atlantic quota for the remainder of the fishing year. Requests for transfer must be made by letter signed by the principal state official with marine fishery management responsibility and expertise, or his/her previously named designee, for North Carolina. The letter must certify that all pertinent state requirements have been met and identify the amount of quota to be transferred.

Process for Transfer under Alternative 3

Florida, in consultation with Georgia and South Carolina, may request approval from the NMFS Regional Administrator to transfer part of the Southern Zone quota to the Northern Zone quota for the remainder of the fishing year. Requests for transfer must be made by letter signed by the principal state official with marine fishery management responsibility and expertise, or his/her previously named designee, for Florida, after consultation with Georgia and South Carolina. The letter must certify that all pertinent state requirements have been met and identify the amount of quota to be transferred.

North Carolina, in consultation with all Mid-Atlantic states, may request approval from the NMFS Regional Administrator to transfer part of the Northern Zone quota to the Southern Zone quota for the remainder of the fishing year. Requests for transfer must be made by letter signed by the principal state official with marine fishery management responsibility and expertise, or his/her previously named designee, for North Carolina, after consultation with the Mid-Atlantic

states. The letter must certify that all pertinent state requirements have been met and identify the amount of quota to be transferred.

Discussion:
The rationale for consideration of an allocation of Atlantic migratory Spanish mackerel to North Carolina or an allocation of the Atlantic migratory group Spanish mackerel between Northern and Southern Zones is identical to that described in Section 2.4.1 for king mackerel.

Alternative 1 would not allocate any portion of the Atlantic migratory group Spanish mackerel commercial ACL to North Carolina and would not separate the Atlantic migratory group Spanish mackerel ACL into a Northern quota and Southern quota.

Under **Alternative 2**, a portion of the Spanish mackerel commercial ACL would be allocated to North Carolina based on landings from various periods under **Options a-d**. Under **Option e**, NMFS would monitor landings in all states and close harvest in the EEZ of the area when the respective quota is met. Under **Option f**, the North Carolina quota would be tracked by North Carolina through dealer reports of fish landed in North Carolina. The North Carolina Division of Marine Fisheries would monitor landings and prohibit sale of Spanish mackerel in North Carolina when the North Carolina quota is met or is expected to be met, but NMFS would not close the EEZ off North Carolina to Spanish mackerel harvest unless the full ACL is met or expected to be met. **Option g** would designate responsibility of monitoring North Carolina landings and prohibiting sale in North Carolina to the state, but NMFS would also close the EEZ off North Carolina when the North Carolina commercial quota is met or expected to be met. All current commercial accountability measures would remain in place. North Carolina currently monitors quotas and reports catches to Atlantic Coastal Cooperative Statistics Program and to NMFS, including state-by-state quotas of some Mid-Atlantic species, and has expressed interest in using a similar monitoring program for allocation of Spanish mackerel.

Table 2.4.3 shows the expected percentage of the Atlantic migratory group Spanish mackerel commercial ACL that would be allocated to North Carolina and to the general Spanish mackerel commercial quota for all other states for **Options a-d** under **Alternative 2**. **Option b**, which uses North Carolina's proportion of total Atlantic migratory group Spanish mackerel landings over the past ten years to determine the North Carolina allocation, would allocate the lowest percentage of the ACL to North Carolina. **Option a**, which uses North Carolina's proportion of total Atlantic migratory group Spanish mackerel landings over the past five years, would allocate the largest percentage to North Carolina.

Table 2.4.3. Expected portion of Atlantic migratory group Spanish mackerel ACL that would be allocated to North Carolina and the General Atlantic Group for **Options a-d** under **Alternative 2.**

	North Carolina Commercial Allocation		**General Atlantic Group Commercial Allocation**	
	% of Quota	lbs under Current ACL[1]	% of Quota	lbs under Current ACL[1]
Option a NC proportion of total landings 2007/08-2011/12	19.2%	600,960	80.8%	2,529,040
Option b NC proportion of total landings 2002/03-2011/12	17.2%	538,360	82.8%	2,591,640
Option c "Boyles Law" (a+b)/2	18.2%	569,660	81.8%	2,560,340
Option d NC proportion of total landings 1997/98-2011/12	18.2%	569,660	81.8%	2,560,340

[1] The current commercial ACL for Atlantic migratory group Spanish mackerel is 3,130,000 lbs.

Alternative 3 would separate the region into Northern and Southern Zones (Figure 2.4.2) and allocate the Atlantic migratory group Spanish mackerel commercial ACL between each zone based on an allocation in **Options a-d**. The boundary between the zones would be a line extending from the South Carolina/North Carolina state line. The Northern Zone allocation would be calculated using combined landings from North Carolina, Virginia, Maryland, Delaware, Pennsylvania, New Jersey, and New York. The Southern Zone allocation would be calculated using combined landings of South Carolina, Georgia, and the Florida east coast and Florida Keys on the Atlantic side. NMFS would monitor the Northern Zone commercial quota and Southern Zone commercial quota, and close the EEZ in the zone when the respective quota is met or expected to be met. Table 2.4.4 shows the expected percentage of the Atlantic migratory group Spanish mackerel commercial ACL that would be allocated to each zone under **Options a-d**. All current commercial accountability measures would remain in place.

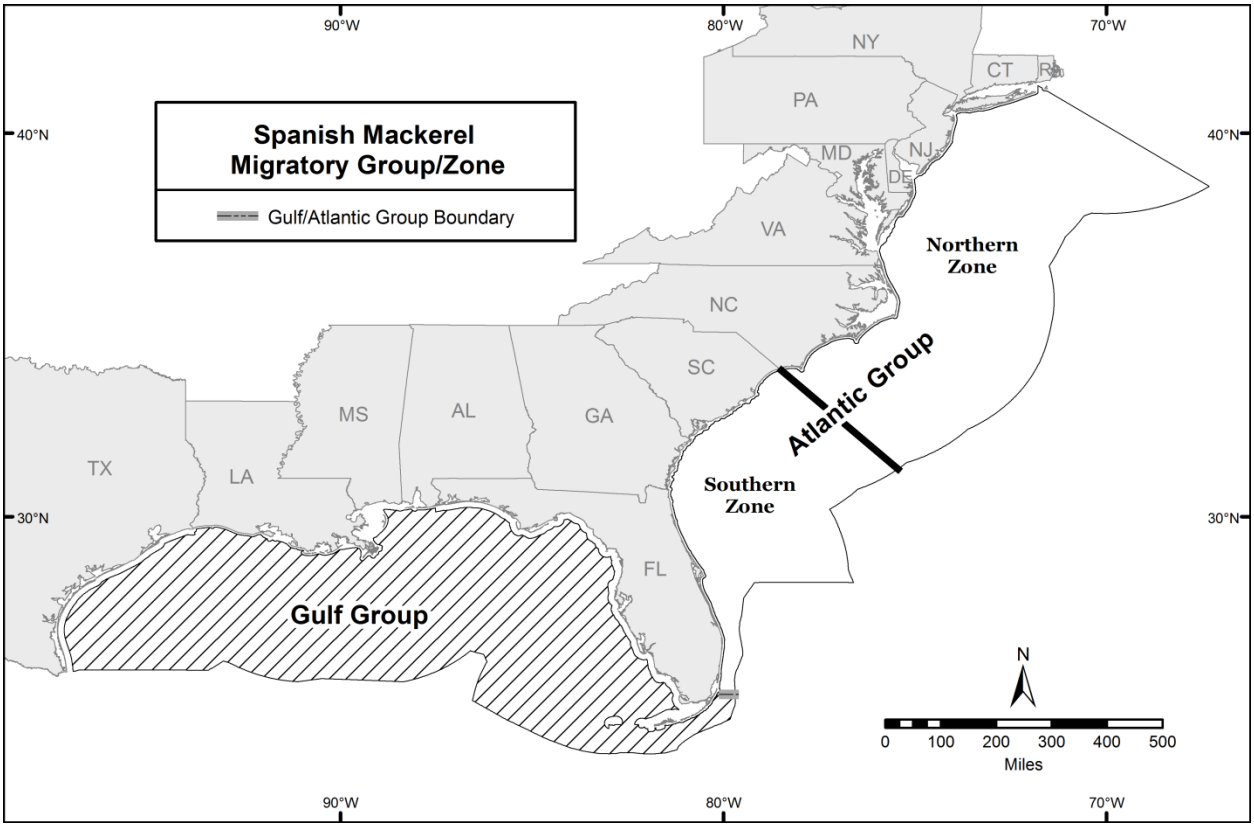

Figure 2.4.2. Designation of the Northern Zone and Southern Zone (**Alternative 3**) for Atlantic migratory group Spanish mackerel.

Table 2.4.4. Expected portion of Atlantic migratory group Spanish mackerel ACL that would be allocated to each zone under the options under **Alternative 3.**

	Northern Zone Commercial Allocation		**Southern Zone Commercial Allocation**	
	% of Quota	lbs under Current ACL[1]	% of Quota	lbs under Current ACL[1]
Option a Proportion of total landings 2007/08-2011/12	22.0%	688,600	78.0%	2,441,400
Preferred Option b Proportion of total landings 2002/03-2011/12	19.9%	622,870	80.1%	2,507,130
Option c "Boyles Law" (a+b)/2	21.0%	657,300	79.0%	2,472,700
Option d Proportion of total landings 1997/98-2011/12	22.8%	713,640	77.2%	2,416,360

[1] The current commercial ACL for Atlantic migratory group Spanish mackerel is 3,130,000 lbs.

Preferred Alternative 4 would allow for quota to be transferred between the Northern and Southern Zones (under **Alternative 3, Preferred Option b**). The process is similar to quota transfers between states for Mid-Atlantic summer flounder and would provide a way for unused ACL to be moved without negatively impacting the stock, thereby achieving OY. If **Preferred Alternative 4** is not selected as a preferred alternative in the final amendment, transfer would not be allowed.

Council Conclusions for Actions 4.1 and 4.2:

For both Action 4.1 and 4.2, the Councils selected an alternative that would establish regional commercial king and Spanish mackerel quotas for a Northern Zone and a Southern Zone. Initially an alternative was included to allocate a portion of the commercial ACLs for king and Spanish mackerel to each state, but only North Carolina was interested in pursuing a separate quota. During discussion, South Atlantic Council members from other states did not feel a separate quota was necessary for Florida, South Carolina, or Georgia. Additionally, Council members and representatives from South Carolina and Georgia expressed that the states did not have the resources to monitor a state quota at this time.

During development of the amendment, some South Atlantic Council members expressed concern about additional complexity in regulations and allocations of the ACLs given an already complex management system. The Mid-Atlantic states have relatively minimal landings of king and Spanish mackerel and the South Atlantic Council felt that quotas for separate zones, instead of to an individual state, would allow North Carolina to have access to quota at different times of year than the other states while minimizing complexity in allocations of the commercial ACLs for Atlantic migratory group king and Spanish mackerel.

For allocations, the Councils selected the option that would use the past ten years of landings to allocate to each zone. During discussion, the South Atlantic Council noted that using historical landings for a specified time period was a commonly accepted method to designate regional allocations. Using a combination of older and more recent landings (i.e., **Option c**) was more typical for sector allocations, and also would not capture variation in landings for North Carolina for each stock.

The Councils also selected an alternative to allow transfers to take place between the zones, pending approval of the states in the zone. If one quota is not met and is not expected to be met, allowing quota transfers would provide a way for unused quota to be moved without negatively impacting the stock, thereby achieving OY.

2.5 Action 5 - Modify the Framework Procedure.

Alternative 1: No Action – Do not modify the framework procedure adopted through Amendment 18.

Preferred Alternative 2: Modify the framework procedure to include changes to acceptable biological catches (ABCs), ABC/annual catch limit (ACL) control rules, and accountability measures (AMs) under the standard documentation process for open framework actions. Accountability measures that could be changed would include:

In-season AMs

- Closures and closure procedures
- Trip limit reductions or increases
- Designation of an individual fishing quota (IFQ) program as the AM for species in the IFQ program
- Implementation of gear restrictions

Post-season AMs

- Adjustment of season length
- Implementation of a closed season
- Adjustment or implementation of bag, trip, or possession limit
- Reduction of the ACL to account for the previous year overage
- Revoking a scheduled increase in the ACL if the ACL was exceeded in the previous year
- Implementation of gear restrictions
- Reporting and monitoring requirements

Alternative 3: Modify the framework procedure to include changes to accountability measures (AMs) under the standard documentation process for open framework actions. Accountability measures that could be changed would include:

In-season AMs

- Closure procedures
- Trip limit reductions or increases

Post-season AMs

- Adjustment of season length
- Adjustment of bag, trip, or possession limit

Preferred Alternative 4: Modify the framework procedure to include designation of responsibility to each Council for setting regulations for the migratory groups of each species.

This pertains to:

Responsibilities of each Council:

1. Recommendations with respect to the Atlantic migratory groups of king mackerel, Spanish mackerel, and cobia will be the responsibility of the South Atlantic Council, and those for the Gulf migratory groups of king mackerel, Spanish mackerel, and cobia will be the responsibility of the Gulf Council, with the following exceptions:
    a. The South Atlantic Council will have responsibility to set vessel trip limits,

closed seasons or areas, or gear restrictions for 1) the Eastern Zone - East Coast Subzone for Gulf migratory group king mackerel and 2) the east coast of Florida including the Atlantic side of the Florida Keys for Gulf migratory group cobia.

2. For stocks where a stock assessment indicates a different boundary between the Gulf and Atlantic migratory groups than the management boundary, a portion of the ACL for one migratory group may be apportioned to the appropriate zone, but management measures for that zone will be the responsibility of the Council within whose management area that zone is located.
3. Both Councils must concur on recommendations that affect both migratory groups.

Preferred Alternative 5: Make editorial changes to the framework procedure to reflect changes to the names of the Council advisory committees and panels.

Discussion:
The Councils currently have three different regulatory vehicles for addressing fishery management issues. First, they may develop a fishery management plan or plan amendment to establish management measures. The amendment process can take one to three years depending on the analysis needed to support the amendment actions. Second, the Councils may vote to request an interim or emergency rule that could remain effective for 180 days with the option to extend it for an additional 186 days. Interim and emergency rules are only meant as short-term management tools while permanent regulations are developed through the full/normal regulatory process. Third, the Councils may prepare a framework action (also called a framework amendment or regulatory amendment) based on a predetermined procedure that allows changes to specific management measures and parameters. Typically, framework actions take less than a year to implement, but, like plan amendments, are effective until amended. The current framework procedure was implemented through Amendment 18 (GMFMC and SAFMC 2011). The section below highlights the changes proposed in the alternatives to this action.

Proposed Language for Updated Framework Procedure
(Proposed changes are highlighted)

This framework procedure provides standardized procedures for implementing management changes pursuant to the provisions of the Coastal Migratory Pelagic Fishery Management Plan (FMP) managed jointly between the Gulf of Mexico and South Atlantic Fishery Management Councils (Councils). Two basic processes are included: the open framework process and the closed framework process. The open framework process/procedure addresses issues where more policy discretion exists in selecting among various management options developed to address an identified management issue, such as changing a size limit to reduce harvest. The closed framework process addresses much more specific factual circumstances, where the FMP and implementing regulations identify specific action to be taken in the event of specific facts occurring, such as closing a sector of a fishery when the quota is or is projected to be harvested.

Open Framework Procedure:

1. Situations under which this framework procedure may be used to implement management changes include the following:

a. A new stock assessment resulting in changes to the overfishing limit, acceptable biological catch, or other associated management parameters. In such instances the Councils may, as part of a proposed framework action, propose an annual catch limit (ACL) or series of ACLs and optionally an annual catch target (ACT) or series of ACTs, as well as any corresponding adjustments to MSY, OY, and related management parameters.
b. New information or circumstances. The Councils will, as part of a proposed framework action, identify the new information and provide rationale as to why this new information indicates that management measures should be changed.
c. Changes are required to comply with applicable law such as the Magnuson-Stevens Fishery Conservation and Management Act, Endangered Species Act, Marine Mammal Protection Act, or are required as a result of a court order. In such instances the NMFS Regional Administrator (RA) will notify the Councils in writing of the issue and that action is required. If there is a legal deadline for taking action, the deadline will be included in the notification.

2. Open framework actions may be implemented in either of two ways: abbreviated documentation or standard documentation process.
    a. Abbreviated documentation process: Regulatory changes that may be categorized as a routine or insignificant may be proposed in the form of a letter or memo from the Councils to the RA containing the proposed action, and the relevant biological, social and economic information to support the action. Either Council may initiate the letter or memo, but both Councils must approve it. If multiple actions are proposed, a finding that the actions are also routine or insignificant must also be included. If the RA concurs with the determination and approves the proposed action, the action will be implemented through publication of appropriate notification in the Federal Register. Changes that may be viewed as routine or insignificant include, among others:
        i. Reporting and monitoring requirements;
        ii. Permitting requirements;
        iii. Gear marking requirements;
        iv. Vessel marking requirements;
        v. Restrictions relating to maintaining fish in a specific condition (whole condition, filleting, use as bait, etc.);
        vi. Bag and possession limit changes of not more than one fish;
        vii. Size limit changes of not more than 10% of the prior size limit;
        viii. Vessel trip limit changes of not more than 10% of the prior trip limit;
        ix. Closed seasons of not more than 10% of the overall open fishing season,
        x. Species complex composition;
        xi. Restricted areas (seasonal or year-round) affecting no more than a total of 100 nautical square miles;
        xii. Re-specification of ACL, ACT or quotas that had been previously approved as part of a series of ACLs, ACTs or quotas;
        xiii. Specification of MSY proxy, OY, and associated management parameters (such as overfished and overfishing definitions) where new values are calculated based on previously approved specifications;

xiv. Gear restrictions, except those that result significant changes in the fishery, such as complete prohibitions on gear types;
xv. Quota changes of not more than 10%, or retention of portion of an annual quota in anticipation of future regulatory changes during the same fishing year.

b. Standard documentation process: Regulatory changes that do not qualify as a routine or insignificant may be proposed in the form of a framework document with supporting analyses. Non-routine or significant actions that may be implemented under a framework action include:
   i. Specification of ACTs or sector ACTs;
   ii. Specification of ABC and ABC/ACL control rules;
   iii. Rebuilding plans and revisions to approved rebuilding plans;
   iv. The addition of new species to existing limited access privilege programs (LAPP);
   v. Changes specified in section 2(a) that exceed the established thresholds;
   vi. Changes to AMs including:

In-season AMs

1. Closures and closure procedures
2. Trip limit reductions or increases
3. Designation of an existing IFQ program as the AM for species in the IFQ program
4. Implementation of gear restrictions

Post-season AMs

5. Adjustment of season length
6. Implementation of closed seasons/time periods
7. Adjustment or implementation of bag, trip, or possession limit
8. Reduction of the ACL/ACT to account for the previous year overage
9. Revoking a scheduled increase in the ACL/ACT if the ACL was exceeded in the previous year
10. Implementation of gear restrictions
11. Reporting and monitoring requirements

3. Either Council may initiate the open framework process to inform the public of the issues and develop potential alternatives to address those issues. The framework process will include the development of documentation and public discussion during at least one meeting for each Council.

4. Prior to taking final action on the proposed framework action, each Council may convene their advisory committees and panels, as appropriate, to provide recommendations on the proposed actions.

5. For all framework actions, the initiating Council will provide the letter, memo, or completed framework document along with proposed regulations to the RA in a timely manner following final action by both Councils.

6. For all framework action requests, the RA will review the Councils' recommendations and supporting information and notify the Councils of the determinations, in accordance with the Magnuson-Stevens Fishery Conservation and Management Act (Section 304) and other applicable law.

Closed Framework Procedure:
Consistent with existing requirements in the FMP and implementing regulations, the RA is authorized to conduct the following framework actions through appropriate notification in the *Federal Register*:

1. Close or adjust harvest any sector of the fishery for a species, sub-species, or species group that has a quota or sub-quota at such time as projected to be necessary to prevent the sector from exceeding its sector-quota for the remainder of the fishing year or sub-quota season;
2. Reopen any sector of the fishery that had been prematurely closed;
3. Implement an in-season AM for a sector that has reached or is projected to reach, or is approaching or is projected to approach its ACL, or implement a post-season AM for a sector that exceeded its ACL in the current year.

Responsibilities of Each Council:

1. Recommendations with respect to the Atlantic migratory groups of king mackerel, Spanish mackerel, and cobia will be the responsibility of the South Atlantic Council, and those for the Gulf migratory groups of king mackerel, Spanish mackerel, and cobia will be the responsibility of the Gulf Council, with the following exceptions:
   The South Atlantic Council will have responsibility to set vessel trip limits, closed seasons or areas, or gear restrictions for:
   a. The Eastern Zone - East Coast Subzone for Gulf migratory group king mackerel
   b. The east coast of Florida including the Atlantic side of the Florida Keys for Gulf migratory group cobia.

2. For stocks where a stock assessment indicates a different boundary between the Gulf and Atlantic migratory groups than the management boundary, a portion of the ACL for one migratory group may be apportioned to the appropriate zone, but management measures for that zone will be the responsibility of the Council within whose management area that zone is located.

3. Both councils must concur on recommendations that affect both migratory groups.

Alternative 1 would retain the current coastal migratory pelagics (CMP) framework procedure without any changes. This framework procedure provides the Gulf and South Atlantic Councils, and NMFS the flexibility to respond quickly to changes in the CMP fishery. The framework has both open and closed components. The open components provide more policy discretion, whereas the closed components address more specific, factual circumstances. Measures that can be changed under the procedure are identified, as well as the appropriate process needed for each type of change.

Preferred Alternative 2 would allow changes to management measures under the standard documentation process of the open framework procedure, including AMs (see highlighted portion of Section 2b of the framework procedure). The standard framework procedure involves the development of a framework action, with appropriate environmental analyses, which receives Council review and public comment. **Preferred Alternative 2** includes a comprehensive list of the specific AMs that could be changed through the process, and includes all AMs currently in place. Other items would also be added to the framework procedure to be consistent with those of other FMPs. These items include specification of the ABC and the ABC and ACL control rules. Adding these items would expedite changes needed after a new stock assessment. Table 2.5.1 lists the types of AMs that would be included under these alternatives, and an example of a change to an AM that would be possible through the framework action. **Alternative 3** would limit the management measures and types of AMs that could be changed through a framework action.

It is important to note that some items included in **Preferred Alternative 2** and **Alternative 3** are currently listed under the abbreviated process of the open framework procedure as management measures. Although similar, AMs differ from management measures in that they are tied in some way to the ACL. For example, through the abbreviated process, the Councils and NMFS may implement closed seasons of not more than 10% of the overall open fishing season. The reason for the closed season may be to protect spawning populations or to extend a fishing season later into the year. This is a management measure and would remain in effect until changed through another framework action. On the other hand, **Preferred Alternative 2** would allow the Councils and NMFS to implement a measure through the standard process whereby the Regional Administrator has the authority to set a closed season in the year following a year in which the ACL is exceeded. In this case, the reason for the closed season is to prevent another overage of the ACL. This is an AM and the closed season would only be in effect temporarily. Therefore, the current framework procedure allows changes to management measures, but the proposed alternatives would allow changes to AMs, including adding new AMs to the existing suite.

Table 2.5.1. Examples of proposed AMs that could be changed through a framework action, rather than a plan amendment.

AM type	Example
In-season	
Closure	Create an in-season closure when the ACL/ACT is reached or projected to be reached
Trip limit change	Implement or reduce a trip limit when landings reach 75% of the quota
LAPP	Allow an IFQ program to act as the commercial AM, and remove other AMs (as was done for grouper and tilefish)
Gear restrictions	Prohibit longlines when landings reach 75% of the quota
Post-season	**In a year following an overage of the ACL/ACT:**
Season length	Reduce the length of the season by the amount needed to prevent another overage
Closed season/time period	Prohibit fishing during a two-month closed season (as was done for greater amberjack)

	Prohibit fishing on weekends
Bag/trip/possession limit	Reduce the bag limit by the amount needed to prevent another overage
Reduction of ACL/ACT	Subtract the amount of the overage
Revoke an ACL/ACT increase	Freeze the ACL/ACT at the current level until overages cease
Gear restrictions	Prohibit use of longline gear shoreward of the 20 fathom contour
Reporting and monitoring	Require daily instead of weekly reporting to better track the ACL/ACT

A section outlining each Council's responsibilities was included in a previous CMP framework procedure, but was inadvertently omitted when the new framework procedure was developed in Amendment 18 (GMFMC and SAFMC 2011). **Preferred Alternative 4** would reinstate that language in addition to expanding the responsibilities to include those for Spanish mackerel and cobia. Section 1 (highlighted above) allows each Council to set regulations for the respective migratory groups of each species. An exception is included for Florida east coast zones of king mackerel and cobia, which are considered to contain Gulf migratory group fish, but are located within the South Atlantic Council's jurisdiction. Section 2 (highlighted above) allows similar exceptions if future stock assessments set biological boundaries different from management boundaries. Section 3 (highlighted above) ensures both Councils are involved when actions would affect fish in both areas. The Councils could choose this alternative in addition to any of the other alternatives.

Preferred Alternative 5 would amend language in the framework that refers to the Socioeconomic Panel, which no longer exists under that name due to reorganization of the Scientific and Statistical Committee (SSC). The more general proposed language would accommodate future changes (see highlighted portion of Section 4 above). The Councils could choose this alternative in addition to any of the other alternatives.

Council Conclusions:

Under **Alternative 1**, changes to accountability measures would continue to require full plan amendments, limiting the Council's ability to implement regulatory changes in a timely manner. Many of the actions used in accountability measures such as changes to bag limits or closed seasons can already be modified as management action under the framework procedure. Allowing such changes by a framework procedure in some circumstances but not in others is inconsistent. The Council chose **Preferred Alternative 2** because it allows such changes in accountability measures to be made under the framework procedure, and is consistent with the existing protocol that allows changes to be made under the framework procedure when they are management measures.

A previous framework procedure allowed each Council to independently approve framework actions specific to their jurisdictional area; this provision was inadvertently omitted when the new framework procedure was developed. The Councils chose **Preferred Alternative 4** to clarify the responsibilities of each Council and the procedure for developing framework actions

specific to each area. It also grants authority to the South Atlantic Council to manage Gulf migratory zones of CMP species that fall within their jurisdictional area.

Preferred Alternative 5 makes minor editorial changes in the text of the framework procedure to replace outdated terminology in the names of advisory committees. The Councils chose this alternative because it eliminates possible confusion from the use of terminology that is no longer accurate.

No direct physical, biological, or ecological effects would be expected from modifications of the framework procedure. However, if modifications increase the ease with which regulations can be implemented as needed, long-term biological benefits would increase, such as increased stock size. Framework changes may also result in a faster implementation of measures beneficial to fishery participants. Indirect positive economic effects are expected to result from these potential benefits to the stocks and/or to fishery participants. Further, timeliness in the regulatory process removes uncertainty with regard to changes in management while protecting the stock.

2.6 Action 6. Modify the Gulf and Atlantic Migratory Group Cobia Annual Catch Limits (ACLs) and Annual Catch Targets (ACTs).

Alternative 1: No Action. The entire Gulf migratory group cobia ACL applies to the Gulf Council jurisdictional area and the entire Atlantic migratory group cobia ACL applies to the South Atlantic jurisdictional area. The ACLs and ACTs established by Amendment 18 are as follows:

Gulf Migratory Group	Atlantic Migratory Group
ACL = ABC = 1,460,000 lbs	ACL = ABC = OY = 1,571,399 lbs Commercial ACL (8% ACL) = 125,712 lbs Recreational ACL (92% ACL) = 1,445,687 lbs
Stock ACT = 1,310,000 lbs	Recreational ACT = 1,184,688 lbs

Alternative 2: The ACL equals the ABC as determined by the SSCs for each migratory group. The entire Gulf migratory group cobia ACL applies to the Gulf Council jurisdictional area and the entire Atlantic migratory group cobia ACL applies to the South Atlantic jurisdictional area. The ACLs and ACTs would be as follows:

Gulf Migratory Group	Atlantic Migratory Group
(See Table 2.6.1 for values)	
ACL = ABC	ACL = ABC = OY Commercial ACL = 8% ACL Recreational ACL = 92% ACL
Stock ACT = 90% ACL	Recreational ACT = ACL [(1-PSE) or 0.5, whichever is greater]

Alternative 3: The ACL for each jurisdictional area would be determined as follows:

- The Gulf migratory group cobia ABC (as determined by the SSCs) would be divided into a Gulf Zone ACL and a Florida East Coast Zone ACL (Florida/Georgia border to the Gulf and South Atlantic Councils jurisdictional boundary) based on the options below.

  Option a: Use 2003-2012 (10 years) landings to establish the percentage split for the Gulf ABC.

  Option b: Use 2008-2012 (5 years) landings to establish the percentage split for the Gulf ABC.

  Option c: Use 50% of landings from 2003-2012 + 50% of landings from 2008-2012 to establish the percentage split for the Gulf ABC.

  Preferred Option d: Use 1998-2012 (15 years) landings to establish the percentage split for the Gulf ABC.

  Option e: Based on yellowtail snapper: 50% of average landings from 1993-2008 + 50% of average landings from 2006-2008 to establish the percentage split for the Gulf ABC.

  Option f: Based on mutton snapper: 50% of average landings from 1990-2008 + 50% of average landings from 2006-2008 to establish the percentage split for the Gulf ABC.

- The Atlantic migratory group ACL would be equal to the ABC for the Atlantic migratory group cobia (as determined by the SSCs).

- Management measures set by the South Atlantic Council for the Atlantic migratory group would also apply to the Gulf migratory group Florida East Coast Zone.

The ACLs and ACTs would be as follows:

Gulf Migratory Group		**Atlantic Migratory Group**
(see Table 2.6.3 for values for each Option)		
Gulf Zone	**FL East Coast Zone**	
ACL = x% ABC	ACL = x% ABC Commercial ACL = 8% ACL Recreational ACL = 92% ACL	ACL = ABC = OY Commercial ACL = 8% ACL Recreational ACL = 92% ACL
Stock ACT = 90%ACL	Recreational ACT = ACL [(1-PSE) or 0.5, whichever is greater]	Recreational ACT = ACL [(1-PSE) or 0.5, whichever is greater]

Discussion:

Amendment 18 (GMFMC and SAFMC 2011) established ABC control rules for Gulf and Atlantic migratory groups of cobia. The Councils' SSCs recommended the previous ABCs for both migratory groups of cobia based on the Gulf Council's ABC control rule for stocks for which landings data exist and expert opinion indicates that landings are a small portion of the stock biomass (Tier 3a).

In Amendment 18 (GMFMC and SAFMC 2011), the Councils established the ABCs for the separate migratory groups of cobia using the Councils' boundary in Monroe County. However, the determination in the most recent stock assessment (SEDAR 28 2013a, 2013c) was that the biological boundary should be at the Florida/Georgia line. The stock assessment results define Georgia north through the Mid-Atlantic area for the Atlantic migratory group, and the entire east coast of Florida through Texas for the Gulf migratory group. To adjust for this difference between the Councils' jurisdictional areas and the areas used by the stock assessment, the portion of the Gulf migratory group ACL attributable to the east coast of Florida and Atlantic side of the Florida Keys (i.e., the area within the South Atlantic Council's jurisdiction) would need to be reassigned to the South Atlantic Council. Action 5 adjusts the framework to allow the South Atlantic Council to create regulations for this area, even though the stock assessment considers those fish part of the Gulf migratory group, similar to how the East Coast Subzone for king mackerel is managed.

The ACLs and ACTs for Gulf and Atlantic migratory groups of cobia were also designated in Amendment 18 (GMFMC and SAFMC 2011). These harvest limits and targets would remain in effect under **Alternative 1** for this action, and they would not be updated according to the SSC's new ABC recommendation based on the SEDAR 28 stock assessment (SEDAR 28 2013a, 2013 c). The actions in Amendment 18 provided definitions for ACLs and ACTs, creating *de facto* control rules for their establishment. For both migratory groups, ACL was defined as equal to

ABC. For the Atlantic migratory group, sector ACLs were defined as the ACL times the sector allocation, and the recreational ACT was defined as the ACL times [(1-PSE) or 0.5, whichever is greater]. Furthermore, the Atlantic migratory group OY was set equal to the ACL. For the Gulf migratory group, the stock ACT was defined as 90% of the ACL. Thus, the numerical values associated with the ACLs and ACTs are dependent on the ABC. Therefore, a change in the ABC should result in a change in the ACLs and ACTs. By keeping the numerical values currently specified, the Council would be changing the intent of the ACL and ACT definitions, and removing associations with ABC.

Alternatives 2 and **Alternative 3** for this action would maintain the definitions established in Amendment 18 (GMFMC and SAFMC 2011). When the SSC recommends an ABC for a species, they systematically take into account scientific uncertainty, which establishes a buffer between the ABC and overfishing limit (OFL). With those factors built into the primary harvest limit from which the other limits are tiered, the risk of overfishing is significantly reduced regardless of how close the ACL and OY are set to the ABC. For Gulf migratory group cobia the ABC is 93% of the OFL, but for Atlantic migratory group cobia an OFL was not established. Amendment 18 set the cobia ACLs equal to the ABCs, with no buffers, because: 1) there was no indication either stock was overfished or undergoing overfishing; 2) the AMs implemented through Amendment 18 are in place to correct for any ACL overages should they occur; and 3) repeated ACL overages are not expected due to improved commercial monitoring mechanisms, proposed improvements to dealer reporting, and proposed improvements to reporting of recreational data.

The SEDAR 28 stock assessment for Atlantic migratory group cobia (SEDAR 28 2013c) determined that the stock is not overfished or experiencing overfishing. The current fishing mortality, $F_{Current,}$ was defined as the geometric mean of the previous three years of fishing mortality (2009-2011). The maximum fishing mortality threshold (MFMT) is the maximum amount of fishing mortality able to be supported by the population without resulting in overfishing. The current spawning stock biomass, $SSB_{Current,}$ was defined as the geometric mean of the previous three years of spawning stock biomass (2009-2011). The minimum stock size threshold (MSST) is the minimum spawning stock biomass level necessary to prevent the population from being overfished. Stock status indicators for the base case model were: $F_{Current}$/MFMT = 0.599; $SSB_{Current}$/MSST = 1.75.

The Gulf Council's SSC review (GMFMC 2013a) of the SEDAR 28 stock assessment of Gulf cobia (2013a) determined that the stock was not overfished or experiencing overfishing. Stock status indicators for the base case model were: $F_{Current}$/MFMT = 0.659; $SSB_{Current}$/MSST = 1.739.

After reviewing the SEDAR 28 stock assessments, the Gulf and South Atlantic SSCs recommended new ABCs to their respective Councils. Table 2.6.1 shows the recommended ABC values.

Alternative 2 would apply all of the ABC for Gulf migratory group cobia to the Gulf jurisdictional area; however, the ABC is based on landings that include the east coast of Florida, which is not within the Gulf jurisdictional area. Thus, the Gulf would be "credited" with landings that were actually from the South Atlantic jurisdictional area. Conversely, the South

Atlantic would lose the amount of landings from the Florida east coast, but that area would still be within the South Atlantic management area. The result would be an ACL for the South Atlantic that is lowered by the amount of east coast landings, but in the future, Florida east coast landings of cobia would still count against the South Atlantic ACL.

Table 2.6.1. ABCs for Atlantic and Gulf migratory group cobia (as recommended by the Council SSCs, based on results from SEDAR 28), and ACLs and ACTs for each option in **Alternative 2**. All values are in millions of pounds whole weight.

Year	Atlantic Migratory Group		Atlantic Zone ACL		Atlantic Zone ACT	Gulf Migratory Group		Gulf Zone ACL	Gulf Zone ACT
	OFL	ABC	Commercial	Recreational	Recreational	OFL	ABC	Stock	Stock
2014	0.81	0.73	0.06	0.67	0.55	2.56	2.46	2.46	2.21
2015	0.76	0.69	0.06	0.63	0.52	2.59	2.52	2.52	2.27
2016	0.73	0.67	0.05	0.62	0.50	2.66	2.60	2.60	2.34

Preferred Alternative 3 compensates for the difference in the biological boundary and the management boundary by creating a Florida East Coast Zone for cobia (Figure 2.6.1). This cobia zone would be similar to the king mackerel Florida East Coast Subzone in that the fish would be Gulf migratory group fish and part of the Gulf ABC, but would have a separate ACL and be managed by the South Atlantic Council. The cobia zone would differ from the king mackerel subzone in that it would remain the same year-round without a boundary shift. In essence, **Alternative 3** would take the portion of the Gulf ABC attributable to the Florida east coast and allow the South Atlantic Council to set management measures, as they have historically done for this area.

To determine to the appropriate proportion of the Gulf migratory group ABC to assign to the Florida East Coast Zone, landings from various time periods could be used. **Alternative 3 Options a**, **b**, and **Preferred Option d** propose to use historical landings ranges of 10, 5, and 15 years, respectively, all terminating in 2012. Compared to **Alternative 1**, **Alternative 3 Option a** and **Preferred Option d** would result in an increase to the Gulf ACL while **Option b** would result in a decrease. When compared to landings history for the Florida East Coast, the level of quota available to fishermen on the Florida East Coast Zone would increase under **Options a** and **b**, and **Preferred Option d**. **Options c**, **e**, and **f** would use 50% of landings from recent years and 50% of landings from a longer time period. **Options c, e**, and **f** all result in an increase in the Gulf ACL, while the combined Florida East Coast Zone and South Atlantic ACL would decrease only under **Options e** and **f**. The proportion of landings for the Florida East Coast Zone for each option is shown in Table 2.6.2.

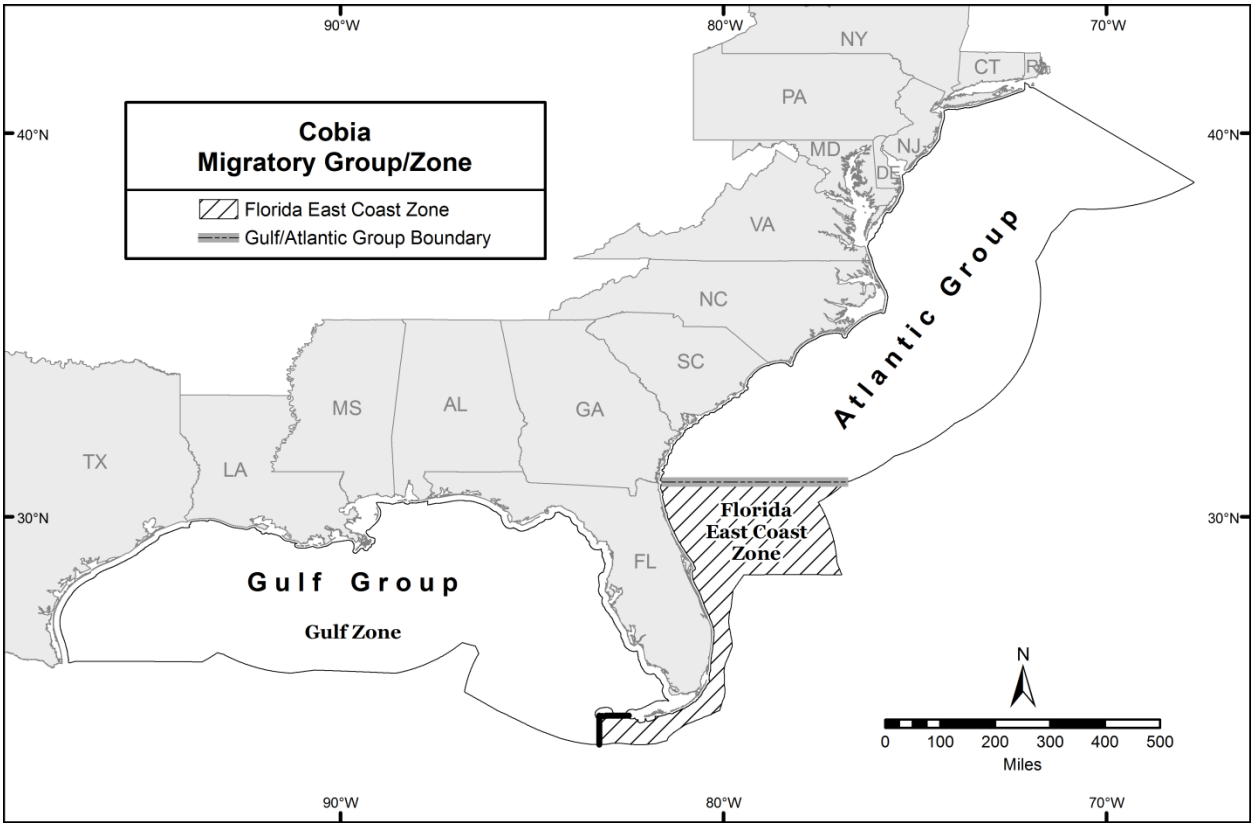

Figure 2.6.1. Cobia zones proposed in **Alternative 3.**

Table 2.6.2. Landings for the Gulf migratory group cobia (as defined by SEDAR 28) for each option in **Preferred Alternative 3** and the percentage attributable to the Florida east coast. The Florida East Coast Zone (FLEC) would range from the FL/GA border to the Council jurisdictional boundary in the Florida Keys. The Gulf zone would range from the TX/Mexico border to the Council jurisdictional boundary.

		Landings (lbs ww)			
Option	**Method/Years**	**Gulf Total**	**FLEC Zone**	**Gulf Zone**	**% FLEC Zone**
a	Average (2003-2012)	1,732,052	633,563	1,098,490	36.6
b	Average (2008-2012)	1,528,211	671,623	856,588	43.9
c	(0.5*(Average (2003-2012)))+ (0.5*(Average (2008-2012)))	1,630,132	652,593	977,539	40.0
d	Average (1998-2012)	1,729,311	623,255	1,106,056	36.0
e	(0.5*(Average (1993-2008)))+ (0.5*(Average (2006-2008)))	1,804,756	577,702	1,227,054	32.0
f	(0.5*(Average (1990-2008)))+ (0.5*(Average (2006-2008)))	1,794,279	580,520	1,213,760	32.4

Source: Southeast Fisheries Science Center, Accumulated Landings System and Marine Recreational Information Program databases

The percent of historical landings coming from the Florida East Coast Zone in Table 2.6.2 would be applied to the Gulf migratory group ABC to obtain the ACL for the Florida East Coast Zone (FLEC ACL = x% ABC). The Gulf Zone ACL would be the remainder (Gulf ACL = Gulf ABC - FLEC ACL). The ACLs for each option are shown in Table 2.6.3. The Gulf Council chose to manage the cobia stock under a combined ACL for both the recreational and commercial sectors. They also chose to set a stock ACT that is 90% of the stock ACL. The South Atlantic Council chose to manage the commercial and recreational sectors separately and set an allocation of 8% commercial and 92% recreational. They also chose to set a recreational ACT, but not a commercial ACT. The allocations and ACTs set by the South Atlantic Council would apply to the Florida East Coast Zone. The ACLs and ACTS for the Atlantic migratory group would be the same for Alternative 3 as Alternative 2, regardless of the option chosen (Table 2.6.1).

Table 2.6.3. ACLs and ACTs for Gulf migratory group cobia (as recommended by the Gulf SSC, based on results from SEDAR 28) for each option in **Preferred Alternative 3**. Management measures set by the South Atlantic Council for the Atlantic migratory group would also apply to the Gulf migratory group Florida East Coast Zone (FLEC). All weights for OFL, ABC, ACL, and ACT are in millions of pounds, whole weight. Note: ACLs and ACTs for the Atlantic migratory group would be the same as in **Alternative 2** and are shown in Table 2.6.1.

Option	% landings from FLEC	Year	Gulf Migratory Group		FLEC Zone ACL		FLEC Zone ACT	Gulf Zone ACL	Gulf Zone ACT
			OFL	ABC	Commercial	Recreational	Recreational	Stock	Stock
Opt a	36.6	2014	2.56	2.46	0.07	0.83	0.68	1.56	1.40
		2015	2.59	2.52	0.07	0.85	0.69	1.60	1.44
		2016	2.66	2.60	0.08	0.88	0.72	1.65	1.48
Opt b	43.9	2014	2.56	2.46	0.09	0.99	0.81	1.38	1.24
		2015	2.59	2.52	0.09	1.02	0.83	1.41	1.27
		2016	2.66	2.60	0.09	1.05	0.86	1.46	1.31
Opt c	40	2014	2.56	2.46	0.08	0.91	0.74	1.48	1.33
		2015	2.59	2.52	0.08	0.93	0.76	1.51	1.36
		2016	2.66	2.60	0.08	0.96	0.78	1.56	1.40
Opt d	36	2014	2.56	2.46	0.07	0.81	0.67	1.57	1.42
		2015	2.59	2.52	0.07	0.83	0.68	1.61	1.45
		2016	2.66	2.60	0.07	0.86	0.71	1.66	1.50
Opt e	32	2014	2.56	2.46	0.06	0.72	0.59	1.67	1.51
		2015	2.59	2.52	0.06	0.74	0.61	1.71	1.54
		2016	2.66	2.60	0.07	0.77	0.63	1.77	1.59
Opt f	32.4	2014	2.56	2.46	0.06	0.73	0.60	1.66	1.50
		2015	2.59	2.52	0.07	0.75	0.62	1.70	1.53
		2016	2.66	2.60	0.07	0.78	0.63	1.76	1.58

Council Conclusions:

The results of the SEDAR 28 stock assessment on Gulf cobia (SEDAR 2013a) determined the biological northern boundary of the Gulf migratory stock to be north of Brevard County, Florida, with the northern delineation set at the Florida/Georgia state line for management purposes. The results from the stock assessment showed that the Gulf migratory group is healthy and capable of supporting increasing landings over the next few years. To take advantage of this healthy stock, the Councils selected **Alternative 3, Preferred Option d**, which establishes a Gulf jurisdictional ACL and an ACL for the eastern coast of Florida as percentages of the Gulf migratory group ACL. Under this preferred alternative, 36% of the Gulf migratory group ACL is apportioned to

the east coast of Florida based on average landings over the last 15 years (1998-2012), and would be managed by the South Atlantic Council according to provisions preferred by both Councils in Action 5. This option offers increases in the current ACLs for both Councils, and was viewed as a fair and equitable distribution of the resource.

CHAPTER 3. AFFECTED ENVIRONMENT

3.1 Description of the Fishery and Status of the Stocks

Two migratory groups, Gulf of Mexico (Gulf) and Atlantic, are recognized for king mackerel and Spanish mackerel. Commercial landings data come from the Southeast Fisheries Science Center (SEFSC) Accumulated Landings System (ALS), the Northeast Fisheries Science Center (NEFSC) Commercial Fisheries Data Base System (CFDBS), and SEFSC Coastal Fisheries Logbook (CFL) database. Recreational data come from the Marine Recreational Fisheries Statistics Survey (MRFSS), the Marine Recreational Information Program (MRIP), the Headboat Survey (HBS), and the Texas Parks and Wildlife Department (TPWD). All landings are in whole weight.

3.1.1 Description of the Fishery

A detailed description of the coastal migratory pelagic (CMP) fishery was included in Amendment 18 to the Fishery Management Plan for Coastal Migratory Pelagic Resources in the Gulf of Mexico and Atlantic Region (FMP) (GMFMC and SAFMC 2011) and is incorporated here by reference as well as further summarized below. Amendment 18 can be found at http://www.gulfcouncil.org/docs/amendments/Final%20CMP%20Amendment%2018%20092311%20w-o%20appendices.pdf.

King Mackerel

A king mackerel commercial vessel permit is required to retain king mackerel in excess of the bag limit in the Gulf and Atlantic. These permits are limited access. In addition, a limited-access gillnet permit is required to use gillnets in south Florida. For-hire vessels must have either a Gulf or South Atlantic charter/headboat CMP vessel permit, depending on where they fish. The Gulf permit is limited access, but the South Atlantic permit is open access. The commercial permits have an income requirement of 25% of earned income or $10,000 from commercial or charter/headboat fishing activity in one of the three calendar years preceding the application. As of April 4, 2013, there were 1,488 valid or renewable federal commercial king mackerel permits.

For the commercial sector, the area occupied by Gulf migratory group king mackerel is divided into Western and Eastern zones. The Western Zone extends from the southern border of Texas to the Alabama/Florida state line. The fishing year for this zone is July 1 through June 30.

The Eastern Zone, which includes only waters off Florida, is divided into the East Coast and West Coast Subzones (Figure 3.1.1.1A). The East Coast Subzone is from the Flagler/Volusia county line south to the Miami-Dade/Monroe county line and only exists from November 1 through March 31, when Gulf migratory group king mackerel migrate into that area. During the rest of the year, king mackerel in that area are considered part of the Atlantic migratory group (Figure 3.1.1.1B).

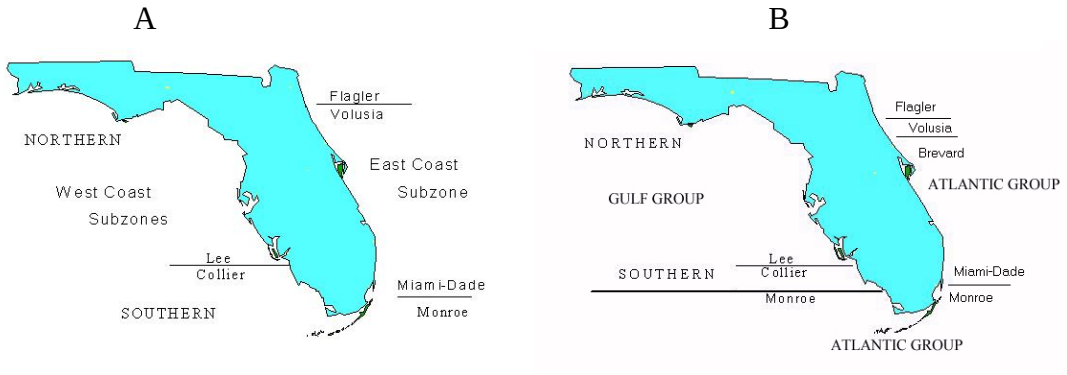

Figure 3.1.1.1. Gulf migratory group king mackerel Eastern Zone Subzones for A) November 1 – March 31, and B) April 1- October 31.

The West Coast Subzone, from the Alabama/Florida state line to the Monroe/Miami-Dade county line, is further divided into Northern and Southern Subzones at the Lee/Collier county line. The fishing year for hook-and-line gear in both regions runs July 1-June 30; in the Southern Subzone, the gillnet season opens on the day after the Martin Luther King, Jr. holiday. Gillnet fishing is allowed during the first weekend thereafter, but not on subsequent weekends.

Management measures for the South Atlantic apply to king mackerel from New York to the east coast of Florida. The Atlantic migratory group king mackerel fishing year is March 1 through end of February. This migratory group is not divided into zones; however, different areas have different trip limits at different times of the year.

Commercial landings of Gulf migratory group king mackerel increased as the total commercial quota for the Gulf increased until 1997/1998 when the quota was set at 3.39 million pounds (mp). After that, landings have been relatively steady at around 3.3 mp. The quota was decreased to 3.26 mp starting with the 2000/2001 season. Commercial landings of Atlantic king mackerel have also increased in recent years. The annual average for 2008/2009-2010/2011 was 3.6 mp versus 2.8 mp for the previous ten years (Table 3.1.1.1). However, the landings for the 2011/2012 fishing year were lower than recent years, especially for the Atlantic migratory group.

Table 3.1.1.1. Annual commercial landings of king mackerel.

Fishing Year	Landings (lbs)	
	Gulf	Atlantic
2000/2001	3,079,256	2,101,530
2001/2002	2,932,532	2,017,251
2002/2003	3,231,723	1,737,833
2003/2004	3,183,778	1,708,341
2004/2005	3,228,862	2,734,198
2005/2006	3,011,990	2,250,990
2006/2007	3,232,497	2,994,818
2007/2008	3,449,030	2,667,227
2008/2009	3,867,599	3,107,996
2009/2010	3,816,157	3,564,108
2010/2011	3,539,492	3,405,650

Source: SEFSC, ALS database; NEFSC, CFDBS database.

King mackerel have been a popular target for recreational fishermen for many years. The recreational sector is allocated 68% of the Gulf annual catch limit (ACL) and 62.9% of the Atlantic ACL. From the late 1980s to the late 1990s, Gulf recreational landings averaged about 4.9 mp per year. In the most recent five years, average annual landings have been about 2.8 mp. The recent five-year average for the Atlantic migratory group recreational landings is 4.9 mp per year (Table 3.1.1.2); however, landings of the Atlantic migratory group are particularly variable over the time period.

Table 3.1.1.2. Annual recreational landings of king mackerel.

Fishing Year	Landings (lbs)	
	Gulf	Atlantic
2000/2001	3,121,584	6,184,541
2001/2002	3,668,540	5,035,061
2002/2003	2,817,537	4,574,235
2003/2004	3,211,497	4,979,506
2004/2005	2,528,457	5,321,449
2005/2006	2,995,716	4,457,679
2006/2007	3,305,567	5,127,178
2007/2008	2,626,527	7,128,545
2008/2009	2,352,510	4,228,245
2009/2010	3,523,777	4,394,015
2010/2011	2,182,980	2,692,771

Source: SEFSC, MRFSS, HBS, and TPWD databases.

Spanish Mackerel

A commercial Spanish mackerel permit is required for vessels fishing in the Gulf or South Atlantic. This permit is open access. To obtain or renew the commercial permit, at least 25% of the applicant's earned income, or $10,000, must have come from commercial or charter/headboat

fishing activity in one of the previous three calendar years. For-hire vessels must have a limited access charter/headboat CMP permit to harvest Spanish mackerel. As of April 4, 2013, there were 1,748 valid or renewable federal commercial 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 and 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. One 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 1 – March 31. 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 SEDAR 28 stock assessment (2013b, 2013d) divide the two migratory groups at the boundary between the Gulf of Mexico and South Atlantic Fishery Management Councils (Councils) (the line of demarcation between the Atlantic Ocean and the Gulf), 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 boundary and calendar year are included here.

Commercial landings over the past five years have varied, averaging 1.3 mp annually in the Gulf and 3.7 mp annually in the Atlantic. Commercial landings of Spanish mackerel have general been increasing in the Atlantic over the last decade (Table 3.1.1.3).

Table 3.1.1.3. Annual commercial landings of Spanish mackerel.

	Landings (lbs)	
Fishing Year	**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.

*Note: For 1999/2000-2004/2005, the Atlantic fishing year is Apr 1 – Mar 31; for 2006/2007-2009/2010, the fishing year is Mar 1 – Feb 28.

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 most recent five years (Table 3.1.1.4). The recreational allocation in the Atlantic is 45%.

Table 3.1.1.4. Annual recreational landings of Spanish mackerel.

	Landings (lbs)	
Fishing Year	**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.

Cobia

Currently, no commercial vessel permit is required for cobia. For-hire vessels must have a charter/headboat CMP permit to land cobia. The regulations in the FMP also apply to cobia in the Mid-Atlantic region. Two migratory groups of cobia were created through Amendment 18 (GMFMC and SAFMC 2011), with the division occurring at the Council boundary in Monroe County, Florida. However, the data workshop for SEDAR 28 determined the division between migratory groups should be at the Florida/Georgia state line. The landings tables below use the SEDAR division; Action 6 addresses this difference in terms of the ACL.

Commercial landings have declined since the highest landings in 1996 (Vondruska 2010), with a steeper decline between 2004 and 2005, especially in the Gulf (Table 3.1.1.5). Recreational cobia landings have fluctuated during the past 10 years (Table 3.1.1.6).

Table 3.1.1.5. Annual commercial landings of cobia.

Fishing Year	Landings (lbs)	
	Gulf	Atlantic
2000	212,010	43,532
2001	177,866	40,791
2002	183,531	42,236
2003	194,833	35,305
2004	179,290	32,650
2005	136,851	28,675
2006	151,045	33,785
2007	147,187	31,576
2008	139,413	33,783
2009	137,305	42,278
2010	194,933	56,544
2011	238,799	33,978

Source: SEDAR 28; ALS database.

Table 3.1.1.6. Annual recreational landings of cobia.

Fishing Year	Landings (lbs)	
	Gulf	Atlantic
2000	1,508,489	464,236
2001	1,555,656	483,926
2002	1,227,708	381,849
2003	2,060,423	615,522
2004	2,090,425	1,028,231
2005	1,461,039	815,600
2006	1,572,637	1,231,415
2007	1,685,402	776,180
2008	1,312,126	546,297
2009	996,105	711,821
2010	1,317,728	876,505
2011	1,683,588	330,071

Source: SEDAR 28; MRFSS, HBS, and TPWD databases.

3.1.2 Status of Stocks

King Mackerel

Both the Gulf and Atlantic migratory groups of king mackerel were assessed by SEDAR in 2008/2009 (SEDAR 16 2009), and will be assessed again by SEDAR 38 in 2013/2014. The SEDAR 16 assessment determined the Gulf migratory group of king mackerel was not overfished and was uncertain whether the Gulf migratory group was experiencing overfishing. Subsequent analyses showed that $F_{Current}/F_{MSY}$ has been below 1.0 since 2002. Consequently, the most likely conclusion is the Gulf migratory group king mackerel stock is not undergoing

overfishing. Atlantic migratory group king mackerel were also determined not overfished however, it was uncertain whether overfishing is occurring, and thought to be at a low level if it is occurring.

Spanish Mackerel

The benchmark stock assessment for Spanish mackerel (SEDAR 28 2013b, 2013d) was completed and reviewed by the South Atlantic Council's Scientific and Statistical Committee (SSC) in April 2013, and by the Gulf Council's SSC in August 2013. Both SSCs made recommendations to the respective Councils for overfishing level (OFL) and acceptable biological catch (ABC). The SEDAR 28 stock assessment for South Atlantic migratory group Spanish mackerel (2013d) determined that the stock is not overfished or experiencing overfishing. The Gulf Council's review (GMFMC 2013b) of the SEDAR 28 stock assessment of Gulf migratory group Spanish mackerel (2013b) determined that the stock was not overfished or experiencing overfishing.

Cobia

Both the Gulf and Atlantic migratory groups of cobia were assessed by SEDAR 28 in 2013. The SEDAR 28 stock assessment for Atlantic migratory group cobia (2013c) determined that the stock is not overfished or experiencing overfishing. The Gulf Council's review (GMFMC 2013a) of the SEDAR 28 stock assessment of Gulf migratory group cobia (2013a) determined that the stock was not overfished or experiencing overfishing.

3.2 Description of the Physical Environment

3.2.1 Gulf of Mexico

The Gulf 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 3.2.1.1), 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 3.2.1.1). 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).

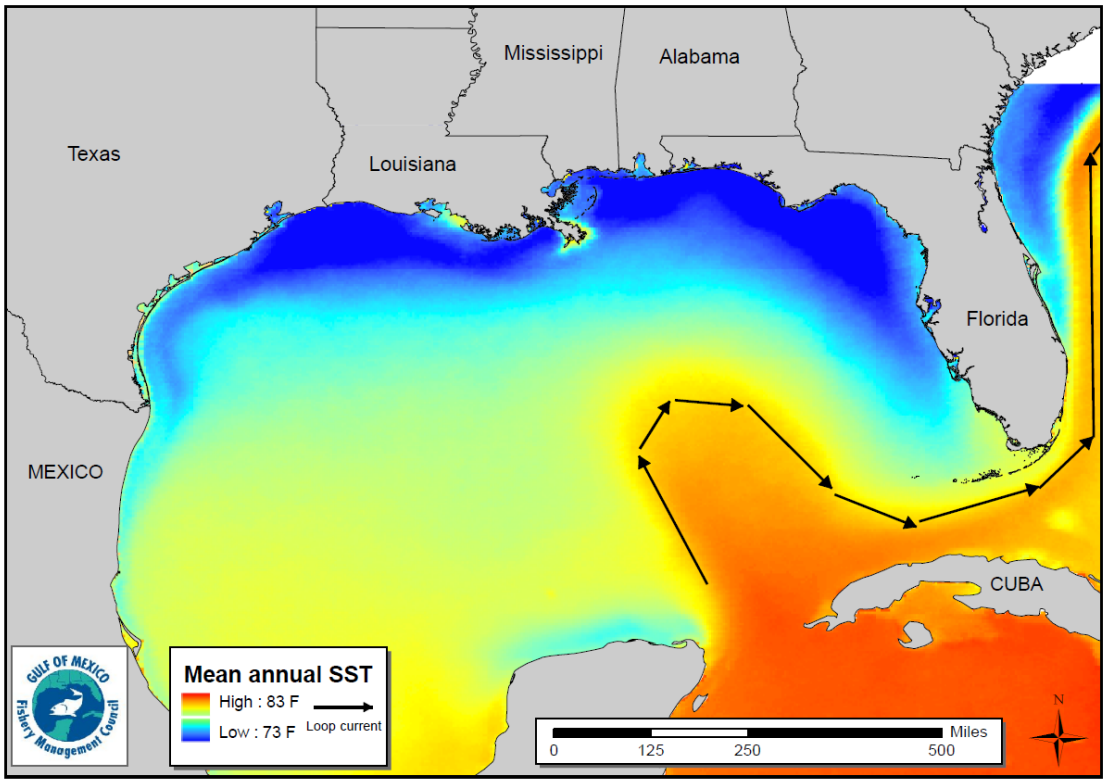

Figure 3.2.1.1. Mean annual sea surface temperature derived from the Advanced Very High Resolution Radiometer Pathfinder Version 5 sea surface temperature data set (http://pathfinder.nodc.noaa.gov).

Environmental Sites of Special Interest Relevant to CMP species (Figure 3.2.1.2)

The following area closures include gear restrictions that may affect targeted and incidental harvest of CMP species.

Longline/Buoy Gear Area Closure – Permanent closure to use of these gears for reef fish harvest inshore of 20 fathoms (36.6 meters) off the Florida shelf and inshore of 50 fathoms (91.4 meters) for the remainder of the Gulf, and encompasses 72,300 square nautical miles (nm^2) or 133,344 km^2 (GMFMC 1989). Bottom longline gear is prohibited inshore of 35 fathoms (54.3 meters) during the months of June through August in the eastern Gulf (GMFMC 2009), but is not depicted in Figure 3.2.1.2.

Madison-Swanson and Steamboat Lumps Marine Reserves - No-take marine reserves (total area is 219 nm^2 or 405 km^2) sited based on gag spawning aggregation areas where all fishing is prohibited except surface trolling from May through October (GMFMC 1999; 2003).

The Edges Marine Reserve – All fishing is prohibited in this area (390 nm^2 or 1,338 km^2) from January through April and possession of any fish species is prohibited, except for such

possession aboard a vessel in transit with fishing gear stowed as specified. The provisions of this do not apply to highly migratory species (GMFMC 2008).

Tortugas North and South Marine Reserves - No-take marine reserves (185 nm^2) cooperatively implemented by the state of Florida, National Ocean Service, the Gulf of Mexico Fishery Management Council (Council), and the National Park Service in Generic Amendment 2 Establishing the Tortugas Marine Reserves (GMFMC 2001).

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 - Pristine coral areas protected by preventing the use of some fishing gear that interacts with the bottom and prohibited use of anchors (totaling 263.2 nm^2 or 487.4 km^2). Subsequently, three of these areas were established as marine sanctuaries (i.e., East and West Flower Garden Banks and Stetson Bank). Bottom anchoring and the use of trawling gear, bottom longlines, buoy gear, and all traps/pots on coral reefs are prohibited in the East and West Flower Garden Banks, McGrail Bank, and on significant coral resources on Stetson Bank (GMFMC 2005m a). A weak link in the tickler chain of bottom trawls on all habitats throughout the Gulf exclusive economic zone (EEZ) is required. A weak link is defined as a length or section of the tickler chain that has a breaking strength less than the chain itself and is easily seen as such when visually inspected. An education program for the protection of coral reefs when using various fishing gears in coral reef areas for recreational and commercial fishermen was also developed.

Florida Middle Grounds HAPC - Pristine soft coral area (348 nm^2 or 644.5 km^2) that is protected by prohibiting the following gear types: bottom longlines, trawls, dredges, pots and traps (GMFMC and SAFMC 1982).

Pulley Ridge HAPC - A portion of the HAPC (2,300 nm^2 or 4,259 km^2) where deepwater hermatypic coral reefs are found is closed to anchoring and the use of trawling gear, bottom longlines, buoy gear, and all traps/pots (GMFMC 2005a).

Alabama Special Management Zone – For vessels operating as a charter vessel or headboat, a vessel that does not have a commercial permit for Gulf reef fish, or a vessel with such a permit fishing for Gulf reef fish, fishing is limited to hook-and-line gear with no more than three hooks. Nonconforming gear is restricted to recreational bag limits, or for reef fish without a bag limit, to 5% by weight of all fish aboard (GMFMC 1993).

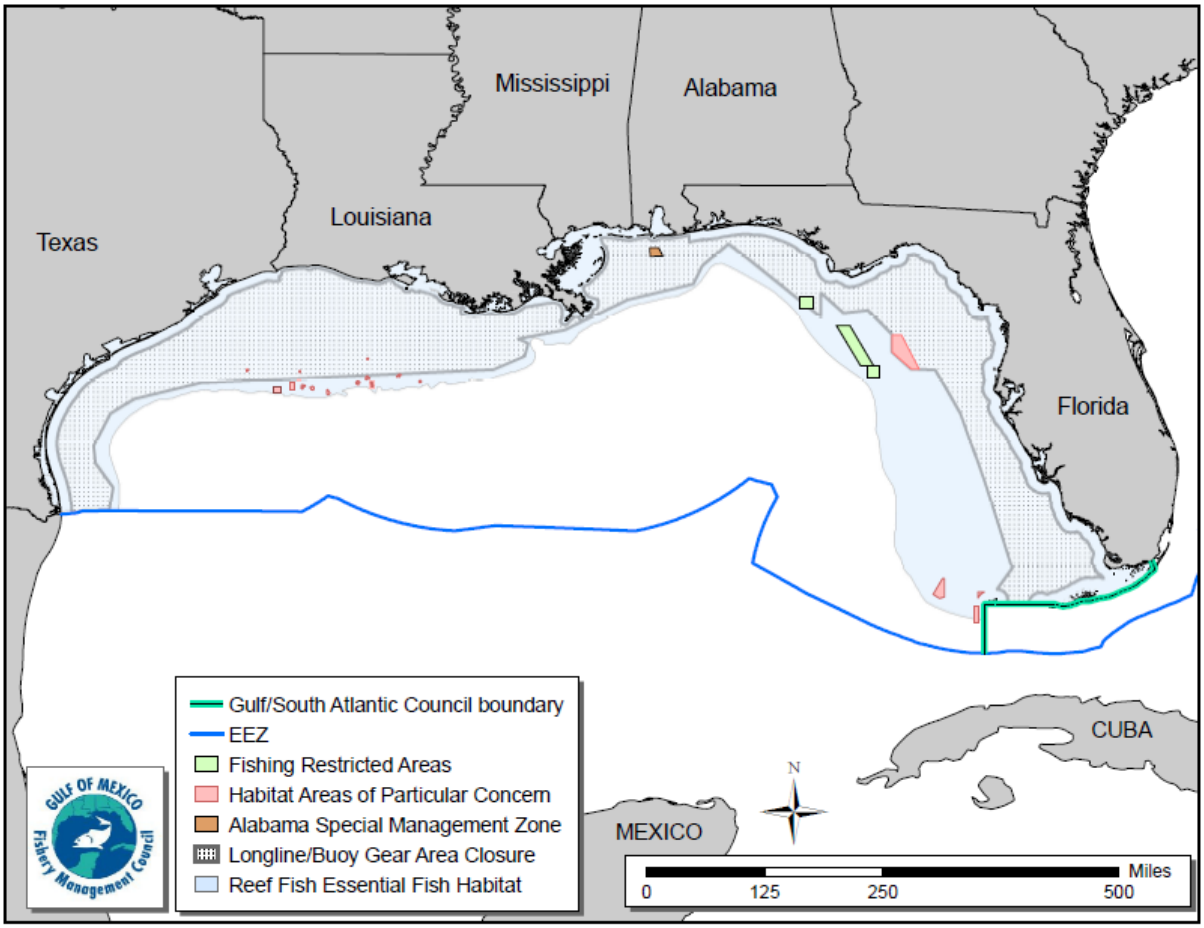

Figure 3.2.1.2. Map of most fishery management closed areas in the Gulf.

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).

3.2.2 South Atlantic

The South Atlantic Council has management jurisdiction of the federal waters (3-200 nm) offshore of North Carolina, South Carolina, Georgia, and Florida. The continental shelf off the southeastern U.S., extending from the Dry Tortugas, Florida, to Cape Hatteras, North Carolina, encompasses an area in excess of 100,000 km^2 (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 of 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 greatly influences the oceanographic characteristics 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 found are: Gulf Stream water; Carolina Capes water; Georgia water; and Virginia coastal water.

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). There are a large number of fishes that inhabit the water column as adults. Pelagic fishes include numerous clupeoids, flying fish, jacks, cobia, bluefish, dolphin, barracuda, and the mackerels (Schwartz 1989). Some pelagic species are associated with particular benthic habitats, while other species are truly pelagic.

In the South Atlantic, areas of unique habitat exist such as the Oculina Bank and large expanses of deepwater coral; however, regulations are currently in place to protect these areas. Additionally, there are several notable shipwrecks along the South Atlantic coast in state and

federal waters including Lofthus (eastern Florida), SS Copenhagen (southeast Florida), Half Moon (southeast Florida), Hebe (Myrtle Beach, South Carolina), Georgiana (Charleston, South Carolina), Monitor (Cape Hatteras, North Carolina), Huron (Nags Head, North Carolina), and Metropolis (Corolla, North Carolina). The South Atlantic coastline is also home to numerous marshes and wetland ecosystems; however, these sensitive ecological environments do not extend into federal waters of the South Atlantic. The proposed actions are not expected to alter fishing practices in any manner that would affect any of the above listed habitats or historic resources, nor would it alter any regulations intended to protect them.

3.3 Description of the Biological/Ecological Environment

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

On April 20, 2010, an explosion occurred on the Deepwater Horizon MC252 oil rig, resulting in the release of an estimated 4.9 million barrels of oil into the Gulf. In addition, 1.84 million gallons of Corexit 9500A dispersant were applied as part of the effort to constrain the spill. The cumulative effects from the oil spill and response may not be known for several years. The highest concern is that the oil spill may have impacted the spawning success of species that spawn in the summer months, either by reducing spawning activity or by reducing survival of the eggs and larvae. The oil spill occurred during spawning months for every species in the CMP FMP; however, most species have a protracted spawning period that extends beyond the months of the oil spill.

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

If eggs and larvae were affected, impacts on harvestable-size CMP species would begin to be seen when the 2010 year class becomes large enough to enter the fishery and be retained. King mackerel and cobia mature at ages of 2-3 years and Spanish mackerel mature at age 1-2; therefore, a year class failure in 2010 could be noted as early as 2011 or 2012. The impacts would be realized as reduced fishing success and reduced spawning potential, and would need to be taken into consideration in the next SEDAR assessment.

The oil and dispersant from the spill may have had direct negative impacts on egg and larval stages. Oil present in surface waters could affect the survival of eggs and larvae, affecting future recruitment. Effects on the physical environment such as low oxygen and the inter-related effects that culminate and magnify through the food web could lead to impacts on the ability of larvae and post-larvae to survive, even if they never encounter oil. In addition, effects of oil

exposure may not always be lethal, but can create sub-lethal effects on the early life stages of fish. There is the potential that the stressors can be additive, and each stressor may increase the susceptibility to the harmful effects of the other.

The oil spill resulted in the development of major monitoring programs by the National Marine Fisheries Service (NMFS) and other agencies, as well as by numerous research institutions. Of particular concern was the potential health hazard to humans from consumption of contaminated fish and shellfish. The National Oceanic and Atmospheric Administration, the Food and Drug Administration, the Environmental Protection Agency, and the Gulf states implemented a comprehensive, coordinated, multi-agency program to ensure that seafood from the Gulf is safe to eat. In response to the expanding area of the Gulf surface waters covered by the spill, NMFS issued an emergency rule to temporarily close a portion of the Gulf EEZ to all fishing to ensure seafood safety. The initial closed area (May 2, 2010) extended from approximately the mouth of the Mississippi River to south of Pensacola, Florida, and covered an area of 6,817 square statute miles. The coordinates of the closed area were subsequently modified periodically in response to changes in the size and location of the area affected by the spill. At its largest size on June 2, 2010, the closed area covered 88,522 square statute miles, or approximately 37% of the Gulf EEZ.

The mackerel family (Scombridae) includes tunas, mackerels and bonitos, which are among the most important commercial and sport fishes. The habitat of adults in the CMP management unit is the coastal waters out to the edge of the continental shelf in the Atlantic Ocean. Within the area, the occurrence of CMP species is governed by temperature and salinity. All species are seldom found in water temperatures less than 20°C. Salinity preference varies, but these species generally prefer high salinity, less than 36 parts per trillion (ppt). Salinity preference of cobia is not well defined. The habitat for eggs and larvae of all species in the CMP management unit is the water column. Within the spawning area, eggs and larvae are concentrated in the surface waters.

King Mackerel

King mackerel is a marine pelagic species that is found throughout the Gulf and Caribbean Sea and along the western Atlantic from the Gulf of Maine to Brazil and from the shore to 200 m depths. Adults are known to spawn in areas of low turbidity, with salinity and temperatures of approximately 30 ppt and 27°C, respectively. There are major spawning areas off Louisiana and Texas in the Gulf (McEachran and Finucane 1979); and off the Carolinas, Cape Canaveral, and Miami in the western Atlantic (Wollam 1970; Schekter 1971; Mayo 1973).

Spanish Mackerel

Spanish mackerel is also a pelagic species, occurring in depths up to 75 m throughout the coastal zones of the western Atlantic from southern New England to the Florida Keys and throughout the Gulf (Collette and Russo 1979). Adults 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.

Cobia
Cobia is a member of the family Rachycentridae but is managed in the CMP FMP because of its migratory behavior. Cobia is distributed worldwide in tropical, subtropical and warm-temperate waters. In the western Atlantic it occurs from Nova Scotia, Canada, south to Argentina, including the Caribbean Sea. It is abundant in warm waters off the coast of the U.S. from the Chesapeake Bay south and throughout the Gulf. Cobia prefer water temperatures between 68-86°F. Seeking shelter in harbors and around wrecks and reefs, cobia is often found off south Florida and the Florida Keys. As a pelagic fish, cobia are found over the continental shelf as well as around offshore reefs. It prefers to reside near any structure that interrupts the open water such as pilings, buoys, platforms, anchored boats, and flotsam. Cobia is also found inshore inhabiting bays, inlets, and mangroves.

3.3.1 Reproduction

King Mackerel
Spawning occurs generally from May through October with peak spawning in September (McEachran and Finucane 1979). Eggs are believed to be released and fertilized continuously during these months, with a peak between late May and early July with another between late July and early August. Maturity may first occur when the females are 450 to 499 mm (17.7 to 19.6 inches) in length and usually occurs by the time they are 800 mm (35.4 inches) in length. The most mature ovaries are found in females by about age 4. Males are usually sexually mature at age 3, at a length of 718 mm (28.3 inches). Females in U.S. waters, between the sizes of 446-1,489 mm (17.6 to 58.6 inches) release 69,000-12,200,000 eggs. There is some thought that they are reproductively isolated groups because both the Atlantic and Gulf populations spawn while in the northernmost parts of their ranges.

Larvae of king mackerel have been found in waters with temperatures between 26-31° C (79-88° F). This larval developmental stage has a short duration. King mackerel can grow up to 0.54-1.33 mm (0.02 to 0.05 inches) per day. This shortened larval stage decreases the vulnerability of the larva, and is related to the increased metabolism of this fast-swimming species.

Spanish Mackerel
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 ppt and 37 ppt. They are also most frequently found in water depths from 9 m to about 84 m, but are most common in less than 50 m.

Cobia
Cobia form large aggregations, spawning during daylight hours between June and August in the Atlantic Ocean near the Chesapeake Bay, off North Carolina in May and June, and in the Gulf during April through September. Spawning frequency is once every 9-12 days, spawning 15-20 times during the season. During spawning, cobia undergo changes in body coloration from brown to a light horizontal-striped pattern, releasing eggs and sperm into offshore open water. Cobia have also been observed spawning in estuaries and shallow bays with the young heading offshore soon after hatching. Cobia eggs are spherical, averaging 1.24mm in diameter. Larvae are released approximately 24-36 hours after fertilization.

3.3.2 Development, Growth and Movement Patterns

King Mackerel

Juveniles are generally found closer to shore than adults and occasionally in estuaries. Adults are migratory, and the CMP FMP recognizes two migratory groups (Gulf and Atlantic). Typically, adult king mackerel are found in the southern climates (south Florida and extreme south Texas/Mexico) in the winter and farther north in the summer; however some king mackerel overwinter in deeper waters off the mouth of the Mississippi River. Food availability and water temperature are likely causes of these migratory patterns. King mackerel mature at approximately age 2 to 3 and have longevities of 24 to 26 years for females and 23 years for males (GMFMC and SAFMC 1985; MSAP 1996; Brooks and Ortiz 2004).

Spanish Mackerel

Juveniles are most often found in coastal and estuarine habitats and at temperatures greater than 25° C and salinities greater than10 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).

Cobia

Newly hatched larvae are 2.5 mm (1 inch) long and lack pigmentation. Five days after hatching, the mouth and eyes develop, allowing for active feeding. A pale yellow streak is visible, extending the length of the body. By day 30, the juvenile takes on the appearance of the adult cobia with two color bands running from the head to the posterior end of the juvenile.

Weighing up to a record 61 kg (135 lbs), cobia are more common at weights of up to 23 kg (50 lbs). They reach lengths of 50-120 cm (20-47 inches), with a maximum of 200 cm (79 inches). Cobia grow quickly and have a moderately long life span. Maximum ages observed for cobia in the Gulf were 9 and 11 years for males and females, respectively, while off the North Carolina coast maximum ages were 14 and 13 years, respectively. Females reach sexual maturity at 3 years of age and males at 2 years in the Chesapeake Bay region. During autumn and winter months, cobia migrate south and offshore to warmer waters. In early spring, migration occurs northward along the Atlantic coast.

3.3.3 Protected Species

All sea turtle species occurring in the Atlantic Ocean are listed as either endangered or threatened under the Endangered Species Act (ESA). The alternatives discussed in this amendment may potentially affect five sea turtle species: the endangered leatherback, the endangered hawksbill, the endangered Kemp's ridley, the Northwest Atlantic distinct population segment (DPS) of the threatened loggerhead, and the threatened green, except for breeding populations of green turtles in Florida, which are listed as endangered.

The threatened Gulf sturgeon, the endangered shortnose sturgeon, the South Atlantic and Carolina DPS of the threatened Atlantic sturgeon, and the endangered smalltooth sawfish, also occur within the area encompassed by the alternatives analyzed within this amendment. Additionally, two threatened *Acropora* coral species, elkhorn and staghorn, can be found in areas off Florida.

Species of large whales protected by the ESA that occur throughout the Gulf and Atlantic Ocean include the blue whale, humpback whale, fin whale, North Atlantic right whale, sei whale, and the sperm whale. Additionally, the West Indian manatee also occurs both in the Gulf of Mexico and the Atlantic Ocean. These species are also considered depleted under the Marine Mammal Protection Act (MMPA). Depleted and endangered designations afford special protections from captures, and further measures to restore populations to recovery or the optimum sustainable population are identified through required recovery (ESA species) or conservation plans (MMPA depleted species). Numerous other species of marine mammals listed under the MMPA occur throughout the Atlantic Ocean and/or Gulf of Mexico.

Aside from the aforementioned protected species, portions of designated critical habitat for Gulf sturgeon, *Acropora* corals, and the North Atlantic Right Whale also occur within areas encompassed by the alternatives in this amendment.

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

The Gulf and South Atlantic CMP hook-and-line fishery is classified in the 2013 Marine Mammal Protection Act List of Fisheries as a Category III fishery (78 FR 53336, August 29, 2013), 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 CMP gillnet fishery is classified as a Category II fishery. This classification indicates an occasional incidental mortality or serious injury of a marine mammal stock resulting from the fishery (1-50% annually of the potential biological removal). The fishery has no documented interaction with marine mammals; NMFS classifies this fishery as Category II based on analogy (i.e., similar risk to marine mammals) with other gillnet fisheries.

3.4 Description of the Economic Environment

3.4.1 Economic Description of the Commercial Fishery

An economic description of the commercial sector for the CMP species is contained in Vondruska (2010) and is incorporated herein by reference. Updated select summary statistics are provided in Table 3.4.1.1. Landings information is provided in Section 3.1.

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 (2009) and are provided in Table 3.4.1.2. 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.

Table 3.4.1.1. Five-year average performance statistics for king mackerel, Spanish mackerel, and cobia from the Gulf and Atlantic migratory groups.

Species	Number of Vessels	Ex-vessel Value (millions)	Ex-vessel Value All Species (millions)	Average Ex-vessel Value per Vessel
King mackerel, Atlantic migratory group	776	$4.90	$27.24	$35,100
Spanish mackerel, Atlantic migratory group	387	$1.87	$11.99	$31,000
Cobia, Atlantic migratory group	432	$0.20	$17.99	$41,600
King mackerel, Gulf migratory group	662	$5.38	$32.06	$48,400
Spanish mackerel, Gulf migratory group	208	$0.28	$10.33	$49,700
Cobia, Gulf migratory group	266	$0.07	$30.38	$114,200

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) and for calendar years for cobia (2008-2012).
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 CFL for landings and NMFS ALS for prices. Note that small amounts (0.03% of king mackerel, 1.95% of Spanish mackerel, and 2.85% of cobia) 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.

As noted in Table 3.4.1.1, 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 3.4.1.2 are replicated from Table 3.4.1.1.

Table 3.4.1.2. 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
Atlantic migratory group cobia	$0.20	36	5	$2.63	$1.12
- all species	$17.99	3,245	423	$236.87	$100.95
Gulf migratory group cobia	$0.07	13	2	$0.92	$0.39
- all species	$30.38	5,480	715	$400.00	$170.48

[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 3.4.1.3

Table 3.4.1.3. 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.

3.4.2 Economic Description of the Recreational Fishery

The recreational fishery is comprised of private and for-hire anglers. The private mode includes anglers fishing from shore (all land-based structures) and private/rental boats. The for-hire sector is composed of the charter vessels and headboats (also called party boats). 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.

Harvest
Recreational harvest information is provided in Section 3.1.

Effort
Extrapolated recreational effort derived from the MRFSS/MRIP database, which does not include 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 individual angler 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 3.4.2.1-4. 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 three species examined, Spanish mackerel is subject to more target and catch effort than the other two species for the Gulf states (Table 3.4.2.1). Spanish mackerel is also subject to more catch effort than target effort, whereas more trips target (rather than catch) king mackerel and cobia.

The effort situation is somewhat different for the South Atlantic states (Table 3.4.2.2). 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 (and cobia). Further, all species, including cobia, are subject to more target effort than catch effort. East Florida dominates for all three 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 and cobia (Table 3.4.2.3). 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 all three species and effort type (Table 3.4.2.4).

Table 3.4.2.1. Average annual (calendar year) recreational effort (thousand trips) in the Gulf, 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	
Cobia	17	160	8	11	196	
	Catch Trips					
King Mackerel	49	229	3	2	283	23,600
Spanish Mackerel	83	1,070	18	13	1,185	
Cobia	8	71	12	3	94	

Source: NMFS MRFSS/MRIP and Southeast Regional Office.

Table 3.4.2.2. 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	
Cobia	121	4	50	17	193	
	Catch Trips					
King Mackerel	263	7	63	22	355	19,842
Spanish Mackerel	242	9	200	54	505	
Cobia	37	3	15	4	60	

Source: NMFS MRFSS/MRIP and Southeast Regional Office.

Table 3.4.2.3. Average annual (calendar year) recreational effort (thousand trips) in the Gulf, 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	
Cobia	78	7	112	196	
	Catch Trips				
King Mackerel	49	94	140	283	23,600
Spanish Mackerel	529	55	600	1,185	
Cobia	11	12	71	94	

Source: NMFS MRFSS/MRIP and Southeast Regional Office.

Table 3.4.2.4. 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	
Cobia	29	5	159	193	
	Catch Trips				
King Mackerel	7	49	298	355	19,842
Spanish Mackerel	189	22	294	505	
Cobia	6	5	49	60	

Source: NMFS MRFSS/MRIP and Southeast Regional Office.

Tables 3.4.2.5-12 contain estimates of the average annual (2007-2011) target trips and catch trips, by species, for each state and mode.

Table 3.4.2.5. 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
Cobia	1	0	1	1	16	7	17	8

Source: NMFS MRFSS/MRIP and Southeast Regional Office.

Table 3.4.2.6. 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
Cobia	77	10	4	6	79	55	160	71

Source: NMFS MRFSS/MRIP and Southeast Regional Office.

Table 3.4.2.7. 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
Cobia	0	0	2	5	6	7	8	12

Source: NMFS MRFSS/MRIP and Southeast Regional Office.

Table 3.4.2.8. 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
Cobia	0	0	0	0	11	3	11	3

Source: NMFS MRFSS/MRIP and Southeast Regional Office.

Table 3.4.2.9. 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
Cobia	12	1	3	4	106	33	121	37

Source: NMFS MRFSS/MRIP and Southeast Regional Office.

Table 3.4.2.10. 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
Cobia	0	0	0	0	4	3	4	3

Source: NMFS MRFSS/MRIP and Southeast Regional Office.

Table 3.4.2.11. 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
Cobia	16	5	1	1	33	9	50	15

Source: NMFS MRFSS/MRIP and Southeast Regional Office.

Table 3.4.2.12. 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
Cobia	1	1	1	0	15	4	17	4

Source: NMFS MRFSS/MRIP and Southeast Regional Office.

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 HBS program. The average annual (2007-2011) number of headboat angler days is presented in Table 3.4.2.13. 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 3.4.2.13, in both regions, Florida dominates, followed by Texas in the Gulf and South Carolina in the South Atlantic.

Table 3.4.2.13. 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: HBS, 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 CMP charter/headboat permits on March 21, 2013, are provided in Table 3.4.2.14. 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 HBS.

Table 3.4.2.14. 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.

There are no specific federal permitting requirements for recreational anglers to harvest CMP 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.

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). Comparable estimates have not been identified for Spanish mackerel or cobia.

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, pers. comm., 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 west 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 mackerel, Spanish mackerel, and cobia 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 (2009), and are provided in Tables 3.4.2.15-20. Business activity is characterized in the form of full-time equivalent 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 (2009) 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 3.4.2.16 contain 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 3.4.2.15, 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 3.4.2.15. 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 Southeast Regional Office using the model developed for NMFS (2009).

Table 3.4.2.16. 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 Southeast Regional Office using the model developed for NMFS (2009).

Table 3.4.2.17. 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 Southeast Regional Office using the model developed for NMFS (2009).

Table 3.4.2.18. 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 Southeast Regional Office using the model developed for NMFS (2009).

Table 3.4.2.19. Summary of cobia 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	781	76,520	0	439	unknown
Output Impact	$60,929	$5,529,895	$0	$6,302	
Value Added Impact	$32,776	$3,212,688	$0	$3,142	
Jobs	1	55	0	0	
	Private/Rental Mode				
Target Trips	15,521	79,002	6,142	10,866	unknown
Output Impact	$962,974	$3,824,876	$534,117	$330,449	
Value Added Impact	$527,206	$2,274,415	$262,698	$158,375	
Jobs	9	36	5	3	
	Charter Mode				
Target Trips	641	4,059	2,250	0	unknown
Output Impact	$355,890	$1,359,153	$1,142,213	$0	
Value Added Impact	$195,905	$805,838	$648,547	$0	
Jobs	4	13	11	0	
	All Modes				
Target Trips	16,943	159,581	8,392	11,305	unknown
Output Impact	$1,379,793	$10,713,924	$1,676,331	$336,751	
Value Added Impact	$755,888	$6,292,940	$911,244	$161,516	
Jobs	15	104	16	3	

Source: Effort data from the NMFS MRFSS/MRIP, economic activity results calculated by NMFS Southeast Regional Office using the model developed for NMFS (2009c).

Table 3.4.2.20. Summary of cobia 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	15,940	651	0	12,004
Output Impact	$4,257,436	$70,690	$0	$365,688
Value Added Impact	$2,370,772	$39,362	$0	$212,302
Jobs	48	1	0	4
	Private/Rental Mode			
Target Trips	33,009	15,471	4,056	106,004
Output Impact	$1,921,339	$725,876	$67,576	$4,274,630
Value Added Impact	$1,083,383	$423,539	$40,991	$2,554,318
Jobs	19	8	1	42
	Charter Mode			
Target Trips	1,091	972	47	3,370
Output Impact	$452,899	$349,542	$3,151	$1,408,372
Value Added Impact	$254,168	$197,477	$1,839	$829,148
Jobs	5	4	0	14
	All Modes			
Target Trips	50,040	17,094	4,103	121,378
Output Impact	$6,631,674	$1,146,108	$70,727	$6,048,689
Value Added Impact	$3,708,323	$660,378	$42,829	$3,595,768
Jobs	73	13	1	59

Source: Effort data from the NMFS MRFSS/MRIP, economic activity results calculated by NMFS Southeast Regional Office using the model developed for NMFS (2009c).

As previously noted, the values provided in Tables 3.4.2.15-20 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 3.4.2.15-20 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 HBS, which prevents the generation of estimates of the number of headboat target trips for individual species. Further, because the model developed for NMFS (2009) 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.

3.5 Description of the Social Environment

Demographic profiles of coastal communities can be found in Amendment 18 to the FMP (GMFMC and SAFMC 2011). The referenced description focuses on available geographic and demographic data to identify communities having a strong relationship with king mackerel, Spanish mackerel, and cobia fishing using 2008 ALS data. A strong relationship is defined as having significant landings and revenue for these species. Thus, positive or negative impacts from regulatory change are expected to occur in places with greater landings. This section has been updated using 2011 ALS data, the most recent year available.

The descriptions of Gulf and South Atlantic communities in this document include information about the top communities based upon a "regional quotient" of commercial landings and value for CMP species. The regional quotient is the proportion of landings and value out of the total landings and value of that species for that region, and is a relative measure. The Florida Keys communities are included in both Gulf and South Atlantic communities to allow for comparison within each region. Although almost all communities in the South Atlantic and Gulf regions have commercial landings of multiple species in addition to CMP species, these top communities are referred to in this document as "CMP Communities." These areas are those that would be most likely to experience the effects of proposed actions that could change the CMP fishery and impact the participants and associated businesses and communities within the region. If a community is identified as a CMP community based on the regional quotient, this does not necessarily mean that the community would experience significant impacts due to changes in the CMP fishery if a different species or number of species were also important to the local community and economy. The identified CMP communities in this section are referenced in the Social Effects sections in Section 4 in order to provide information on how the actions and alternatives could impact specific communities. More detailed information about communities with the highest regional quotients are found in Amendment 18 (GMFMC and SAFMC 2011).

In addition to examining the regional quotients to understand how South Atlantic and Gulf communities are engaged and reliant on fishing, and specifically on CMP species, indices were created using secondary data from permit and landings information for the commercial sector and permit information for the recreational sector (Jepson and Colburn 2013; Jacob et al. 2013). Fishing engagement is primarily the absolute numbers of permits, landings, and value. For commercial fishing, the analysis used the number of vessels designated commercial by homeport and owner address, value of landings, and total number of commercial permits for each community. Recreational fishing engagement is represented by the number of recreational permits and vessels designated as recreational by homeport and owners address. Fishing reliance includes the same variables as fishing engagement divided by population to give an indication of the per capita influence of this activity.

Using a principal component and single solution factor analysis each community receives a factor score for each index to compare to other communities. Taking the communities with the highest regional quotients, factor scores of both engagement and reliance for both commercial and recreational fishing were plotted. Two thresholds of one and ½ standard deviation above the mean are plotted onto the graphs to help determine a threshold for significance. The factor scores are standardized therefore a score above 1 is also above one standard deviation. A score

above ½ standard deviation is considered engaged or reliant with anything above 1 standard deviation to be very engaged or reliant.

The reliance index uses factor scores that are normalized. The factor score is similar to a z-score in that the mean is always zero and positive scores are above the mean and negative scores are below the mean. Comparisons between scores are relative but one should bear in mind that like a z-sore the factor score puts the community on a spot in the distribution. Objectively they have a score related to the percent of communities with those similar attributes. For example, a score of 2.0 means the community is two standard deviations above the mean and is among the 2.27% most vulnerable places in the study (normal distribution curve). Reliance score comparisons between communities are relative. However, if the community scores greater than two standard deviations above the mean, this indicated that the community is dependent on the species. Examining the component variables on the reliance index and how they are weighted by factor score provides a measurement of commercial reliance. The reliance index provides a way to gauge change over time in these communities and also provides a comparison of one community with another.

3.5.1 Gulf of Mexico CMP Fishing Communities

King Mackerel

Commercial Communities

About one-third of all Gulf king mackerel is landed in Destin, Florida, representing about 40% of the Gulf-wide value (Figure 3.5.1.1). Several Florida Keys communities (Key West, Islamorada, and Marathon) are included in the top communities and collectively these communities represent a significant portion of the landings and value of commercial king mackerel. In addition, three other Florida communities place in the top fifteen: four Louisiana communities, one Texas community, two in Alabama, and one community in Mississippi.

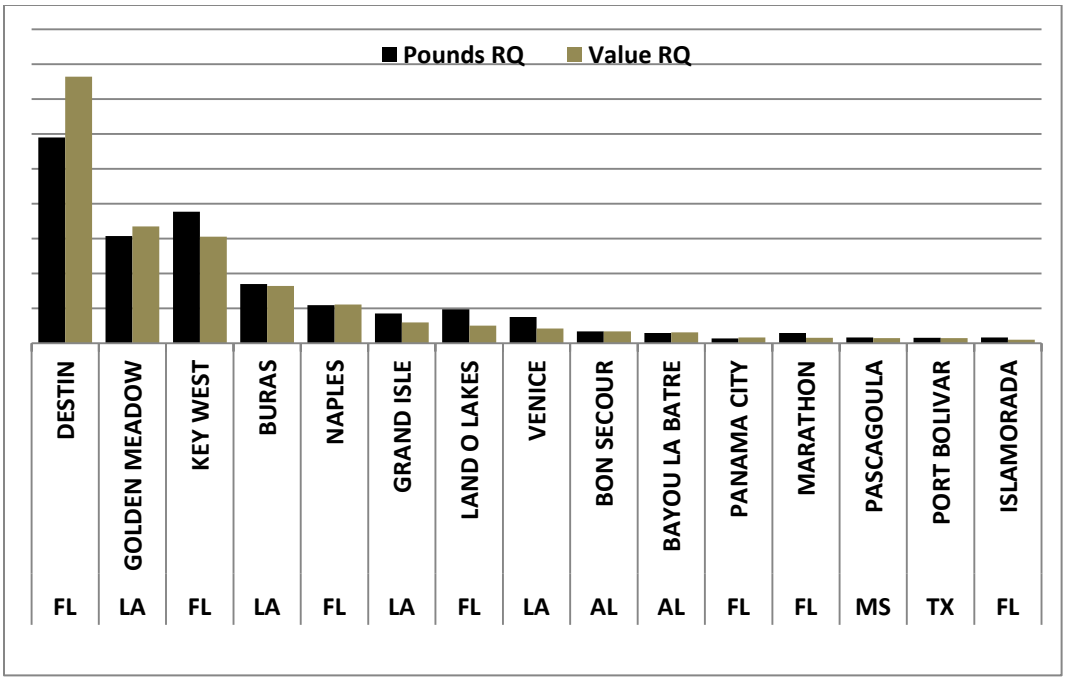

Figure 3.5.1.1. Top fifteen Gulf communities ranked by pounds and value regional quotient (RQ) of king mackerel. The actual RQ values (y-axis) are omitted from the figure to maintain confidentiality.
Source: Southeast Regional Office, Community ALS 2011.

Reliance on and Engagement with Commercial and Recreational Fishing
The details of how these indices are generated are explained in the beginning of the Social Environment section. For king mackerel (Figure 3.5.1.2), the primary communities that demonstrate high levels of commercial fishing engagement and reliance include Bayou La Batre, Boothville-Venice, and Grand Isle, Louisiana; and Key West, Marathon, and Panama City, Florida. Communities with substantial recreational engagement and reliance include Destin, Islamorada, Key West, Marathon, Naples, and Panama City, Florida.

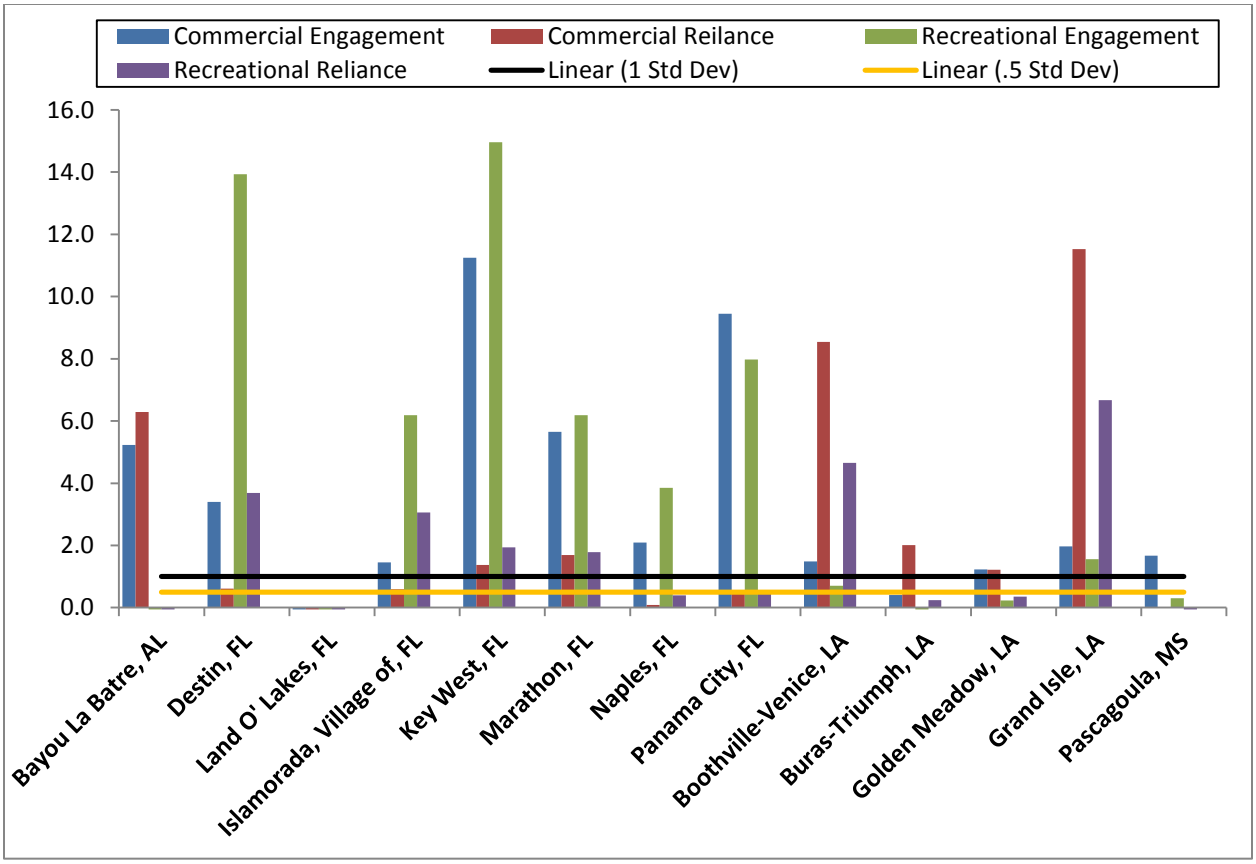

Figure 3.5.1.2. Commercial and recreational reliance and engagement for Gulf communities with the top regional quotients for king mackerel.
Source: Southeast Regional Office Social Indicator Database 2013.

Spanish Mackerel

Commercial Communities

Ranking first among all Gulf communities, Destin, Florida lands one quarter of all Spanish mackerel in the Gulf, and those landings represent over 25% of the total value (Figure 3.5.1.3). 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 rank among the top 15 communities for Spanish mackerel.

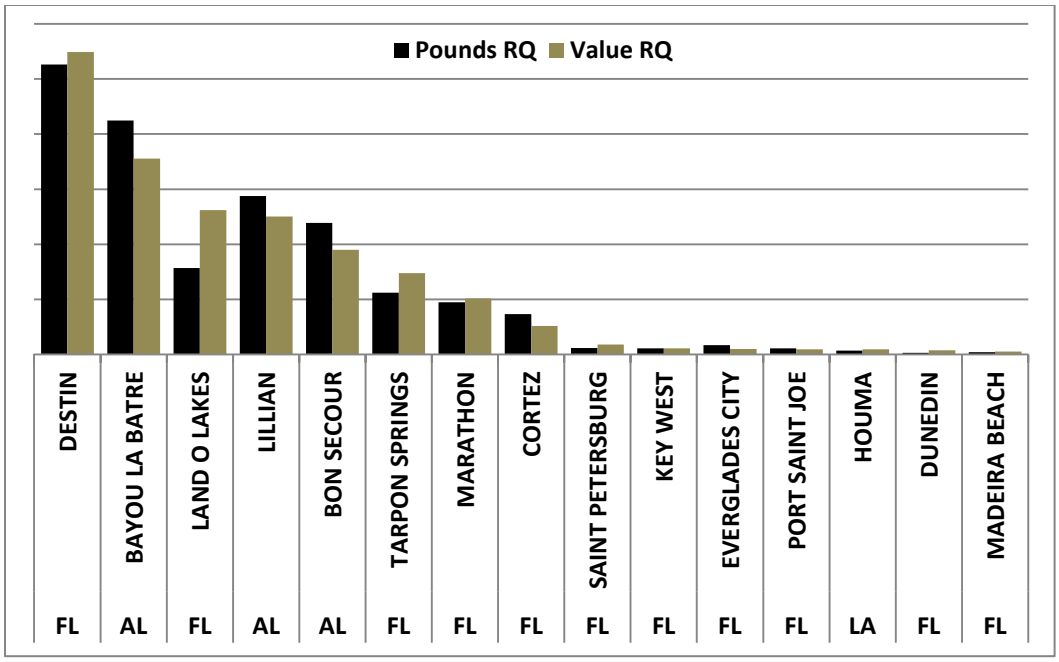

Figure 3.5.1.3. Top fifteen Gulf communities ranked by pounds and value of regional quotient (RQ) of Spanish mackerel. The actual RQ values (y-axis) are omitted from the figure to maintain confidentiality.
Source: Southeast Regional Office, Community ALS 2011.

Reliance on and Engagement with Commercial and Recreational Fishing
For significant communities in the Spanish mackerel fishery, Figure 3.5.1.4 shows commercial and recreational engagement and reliance on fishing. The primary commercial communities that could be affected by change in the Spanish mackerel fishery include Bayou La Batre and Houma, Louisiana. 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.

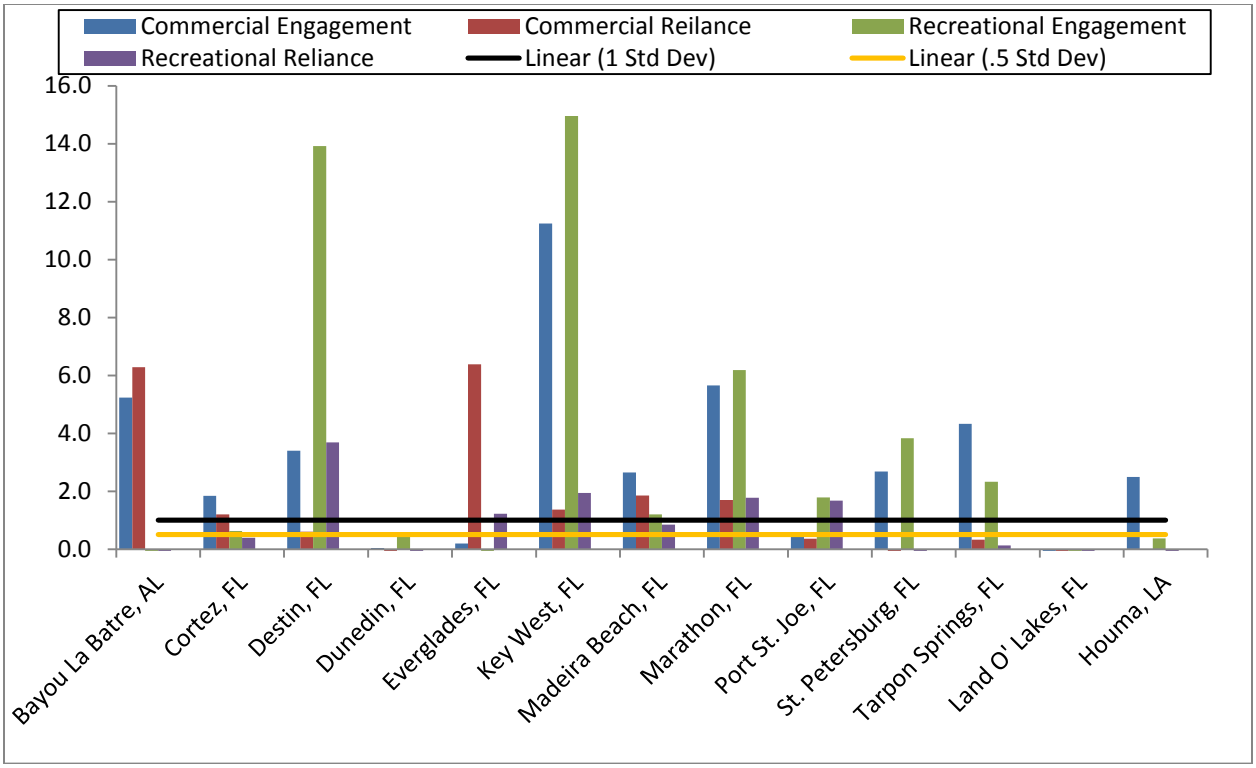

Figure 3.5.1.4. Commercial and recreational reliance and engagement for Gulf communities with the top regional quotients for Spanish mackerel.
Source: Southeast Regional Office Social Indicator Database 2013.

Cobia

Commercial Communities

Destin, Florida lands the majority of cobia for Gulf fishing communities (Figure 3.5.1.5). Twelve other Florida communities make up the top fifteen (including three Florida Keys communities) plus two Louisiana communities. No Texas, Alabama, or Mississippi communities are included in the top 15 communities for cobia.

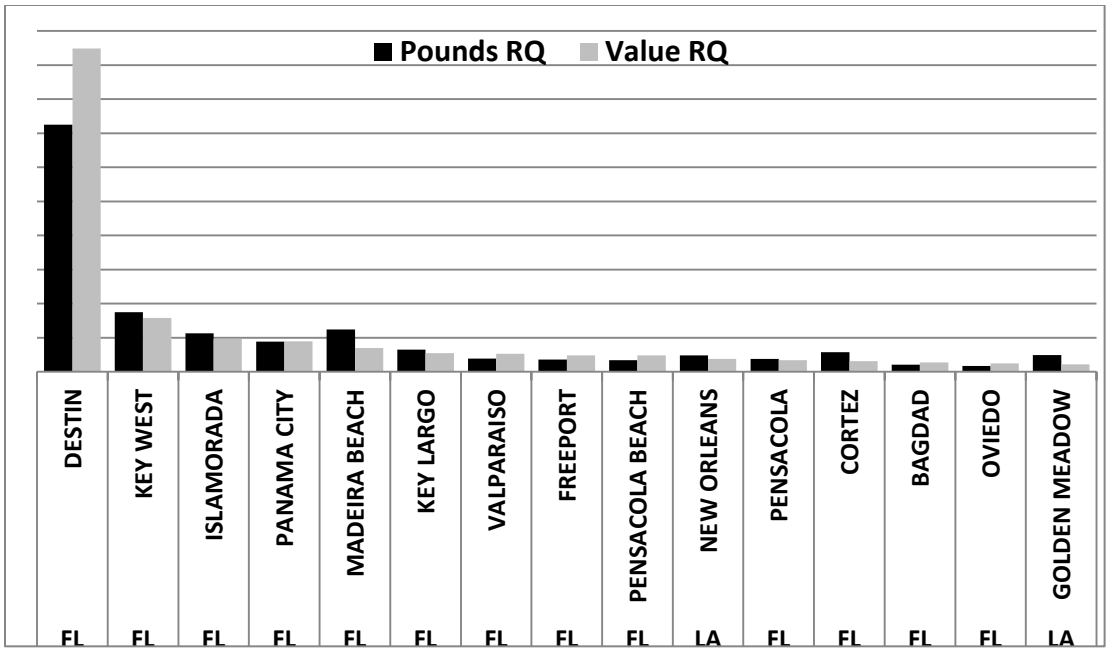

Figure 3.5.1.5. Cobia pounds and value regional quotient (RQ) for top fifteen communities in the Gulf. The actual RQ values (y-axis) are omitted from the figure to maintain confidentiality.
Source: Southeast Regional Office Community ALS 2011.

Reliance on and Engagement with Commercial and Recreational Fishing
Figure 3.5.1.6 shows measures of fishing engagement and reliance for the commercial and recreational sectors in the significant communities for the cobia fishery. The primary commercial communities in the cobia fishery include New Orleans, Louisiana, and the Florida communities of Destin, Key West, Key Largo, Panama City, and Pensacola. The primary recreational communities in the cobia fishery are all in Florida and include Destin, Key West, Key Largo, Islamorada, Panama City, and Pensacola.

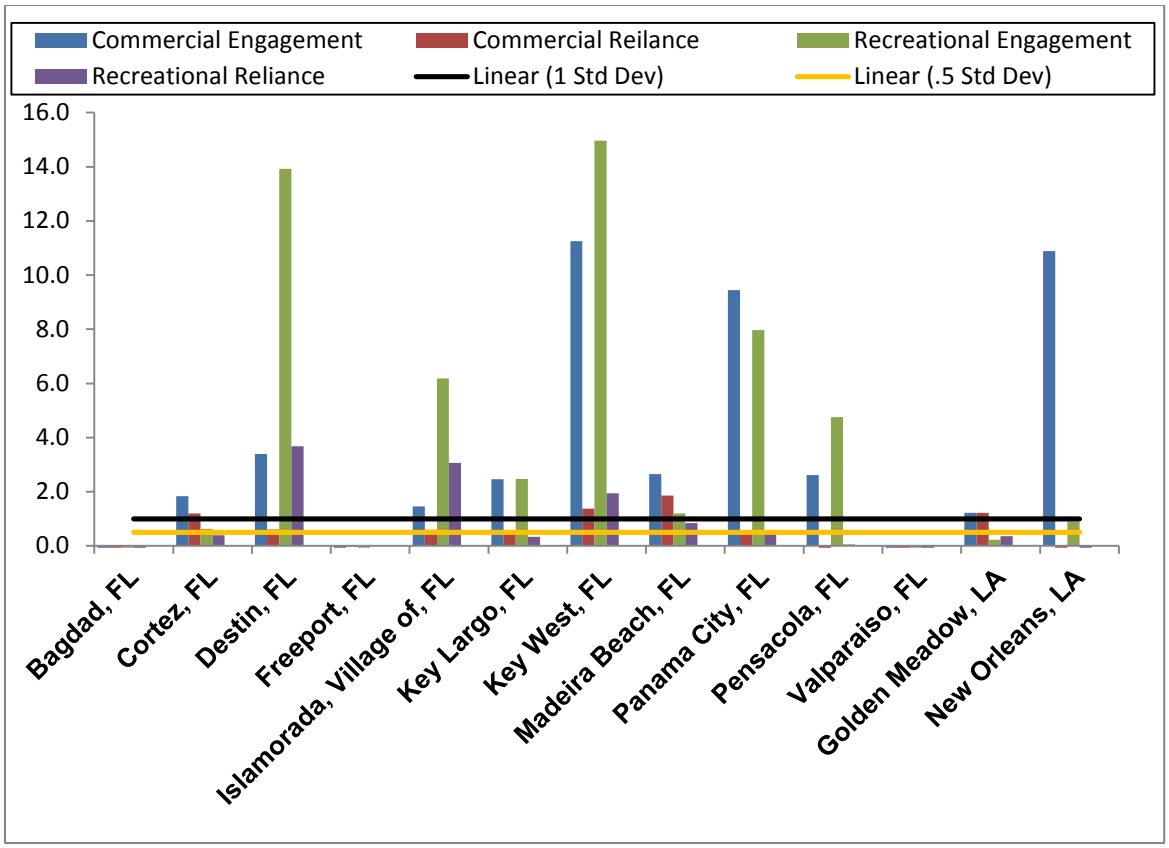

Figure 3.5.1.6. Commercial and recreational reliance and engagement for Gulf communities with the top regional quotients for cobia.
Source: Southeast Regional Office, Social Indicator Database 2013.

3.5.2 South Atlantic CMP Fishing Communities

King Mackerel

Commercial Communities

Cocoa, Florida lands about 25% of all king mackerel among South Atlantic fishing communities and those landings represent approximately 25% of the value (Figure 3.5.2.1). Only four North Carolina communities rank in the top fifteen, and no South Carolina or Georgia communities are included in the top 15 communities.

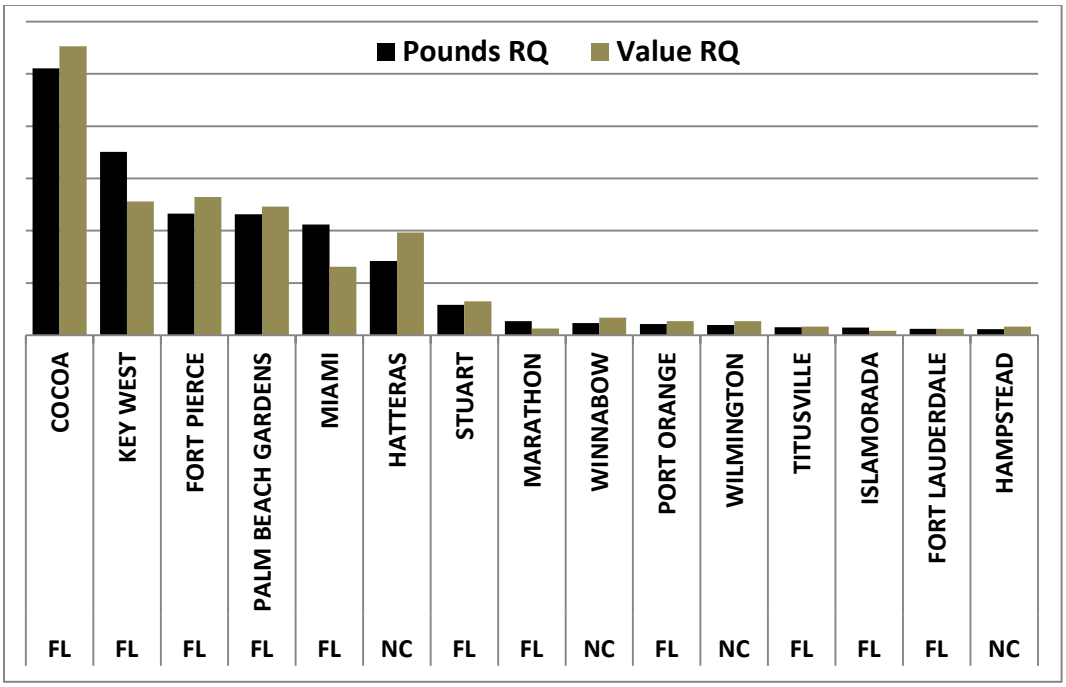

Figure 3.5.2.1. Top fifteen South Atlantic communities ranked by pounds and value regional quotient (RQ) of king mackerel. The actual RQ values (y-axis) are omitted from the figure to maintain confidentiality.
Source: ALS 2011.

Reliance on and Engagement with Commercial and Recreational Fishing
For king mackerel (Figure 3.5.2.2), the primary communities that demonstrate high levels of commercial fishing engagement and reliance are include Fort Pierce, Florida; Key West, Florida; Marathon, Florida; Miami Florida; and Wilmington, North Carolina. Communities with substantial recreational engagement and reliance include the Florida communities of Fort Lauderdale, Islamorada, Key West, Marathon, and Miami.

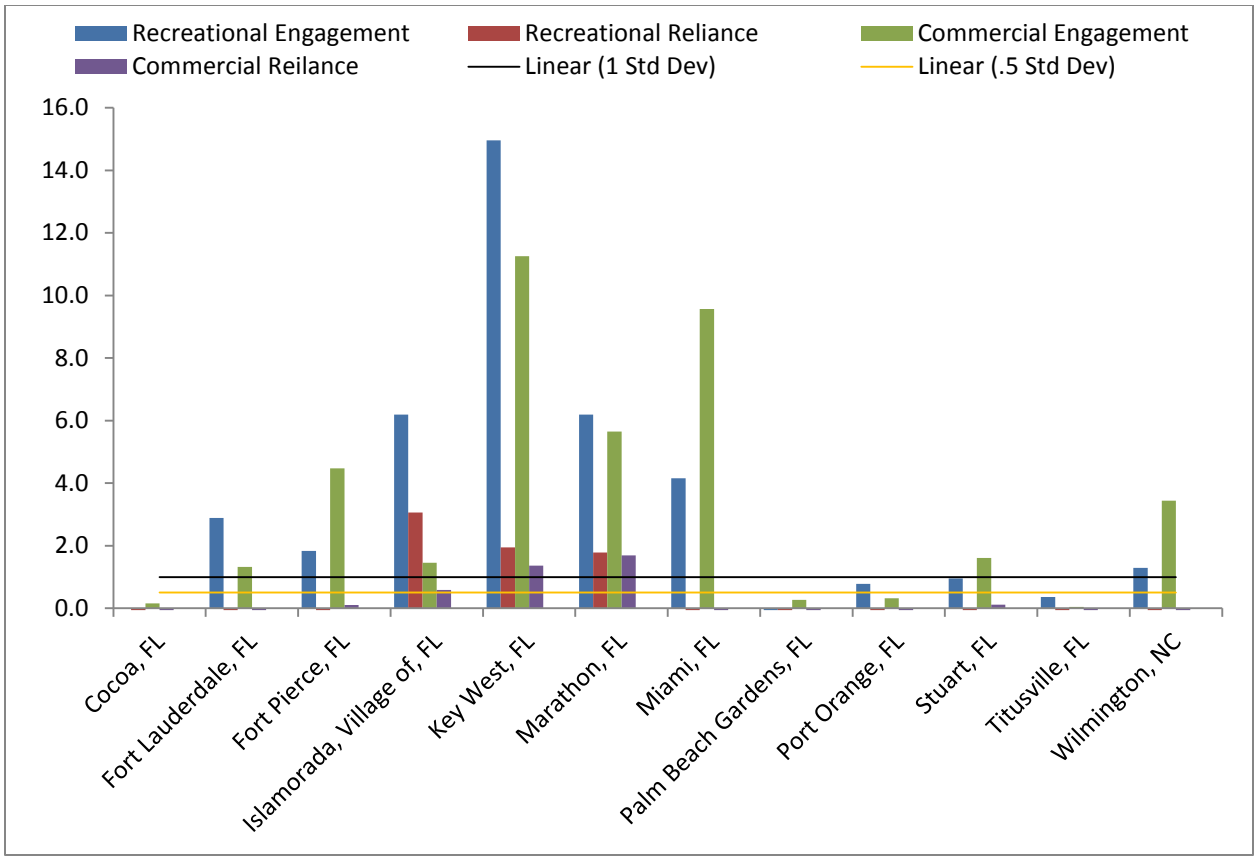

Figure 3.5.2.2. Commercial and recreational reliance and engagement for South Atlantic communities with the top regional quotients for king mackerel.
Source: Southeast Regional Office, Social Indicator Database 2013.

Spanish Mackerel

Commercial Communities

For Spanish mackerel in the South Atlantic (Figure 3.5.2.3), 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.

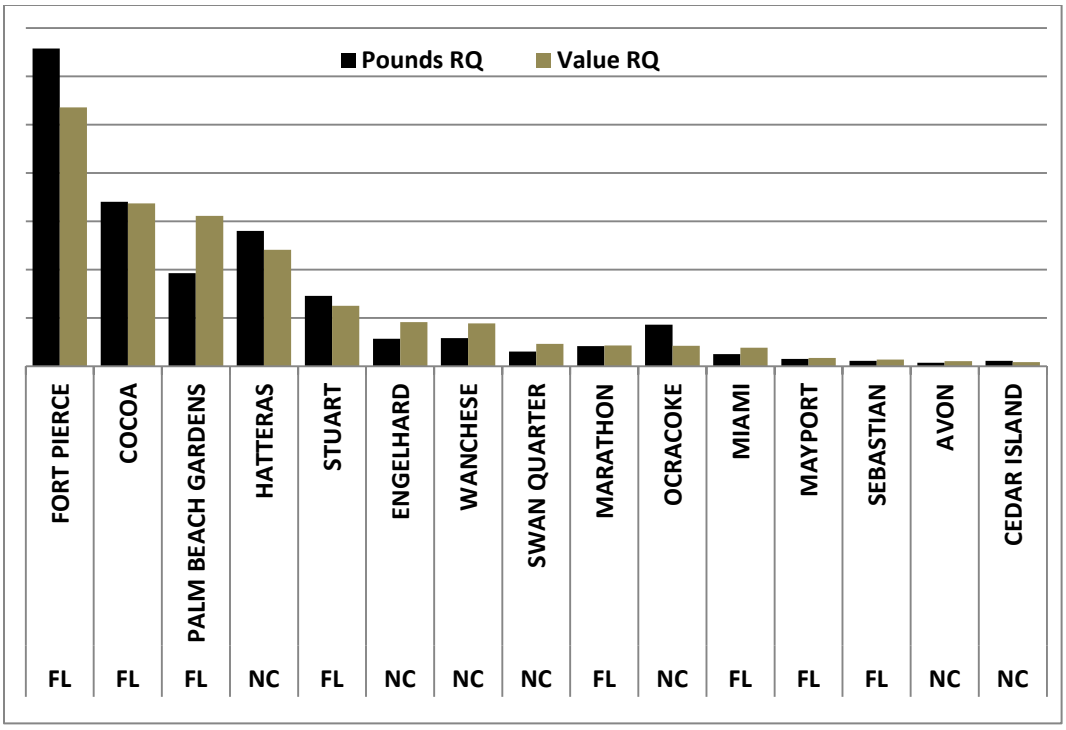

Figure 3.5.2.3. Top fifteen South Atlantic communities ranked by pounds and value of regional quotient (RQ) of Spanish mackerel. The actual RQ values (y-axis) are omitted from the figure to maintain confidentiality.
Source: ALS 2011.

Reliance on and Engagement with Commercial and Recreational Fishing
For significant communities in the Spanish mackerel fishery, Figure 3.5.2.4 shows commercial and recreational engagement and reliance on fishing. 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.

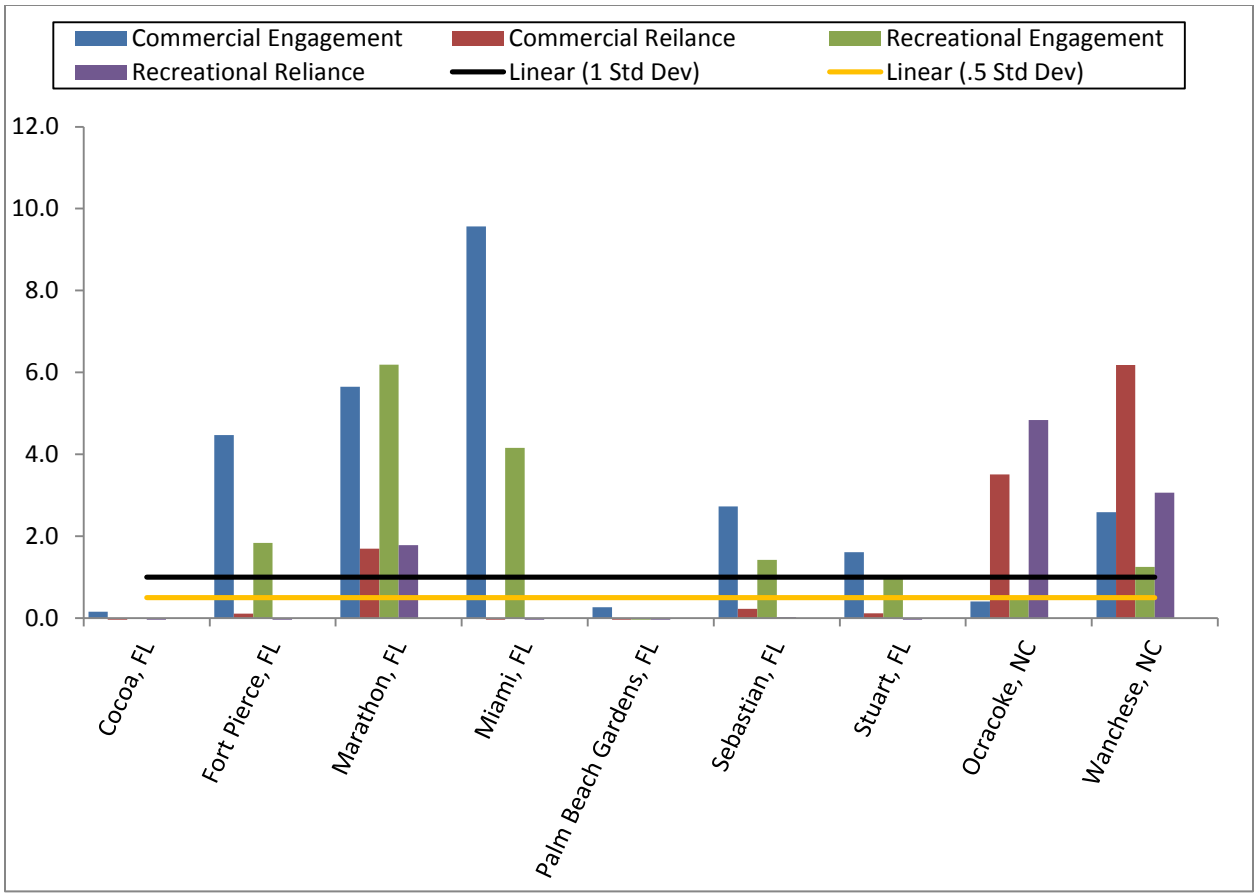

Figure 3.5.2.4. Commercial and recreational reliance and engagement for South Atlantic communities with the top regional quotients for Spanish mackerel.
Source: Southeast Regional Office, Social Indicator Database 2013.

Cobia

For cobia in the South Atlantic (Figure 3.5.2.5), the primary communities are all in Florida and include Cocoa, Fort Pierce, Jupiter, Palm Beach Gardens and Titusville. Hatteras, North Carolina, and Hilton Head, South Carolina, are also included in the top fifteen, but Georgia communities are included.

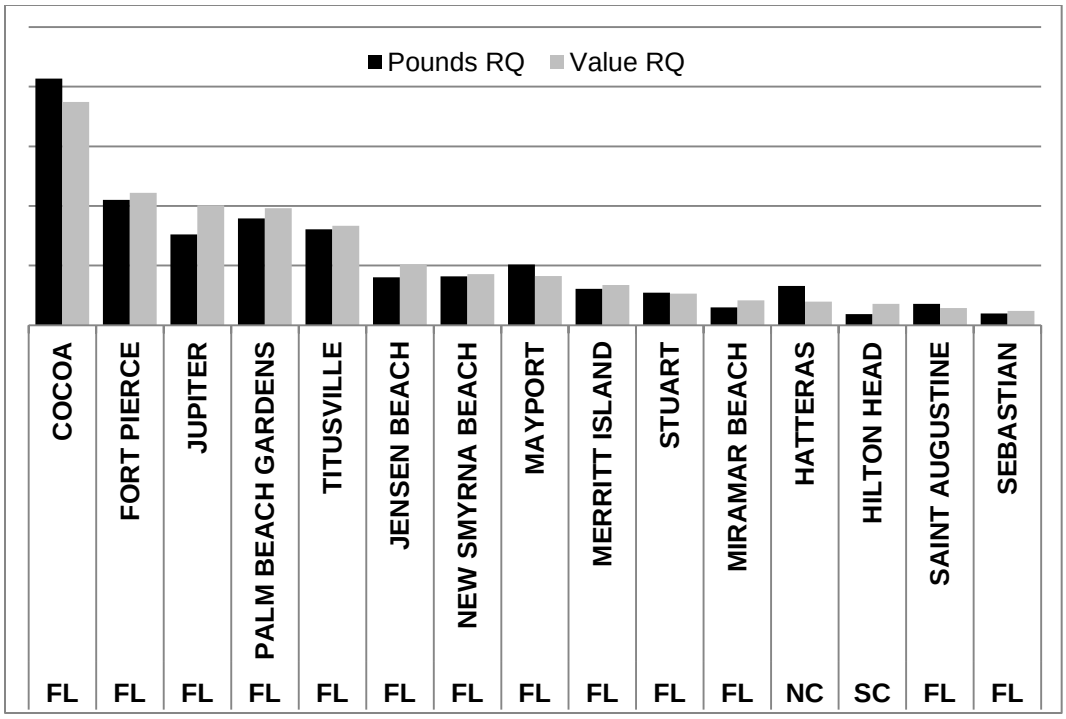

Figure 3.5.2.5. Top fifteen South Atlantic communities ranked by pounds and value of regional quotient (RQ) of cobia. The actual RQ values (y-axis) are omitted from the figure to maintain confidentiality.
Source: ALS 2011.

Reliance on and Engagement with Commercial and Recreational Fishing
Figure 3.5.2.6 shows commercial and recreational engagement and reliance on fishing in the significant communities in the cobia fishery. The primary commercial communities in the cobia fishery include the Florida communities of Fort Pierce, Jupiter, St. Augustine, Sebastian, and Stuart. The primary recreational communities in the cobia fishery include the Florida communities of Fort Pierce, Jupiter, St. Augustine, Sebastian, Stuart, and Merritt Island in addition to Hilton Head, South Carolina.

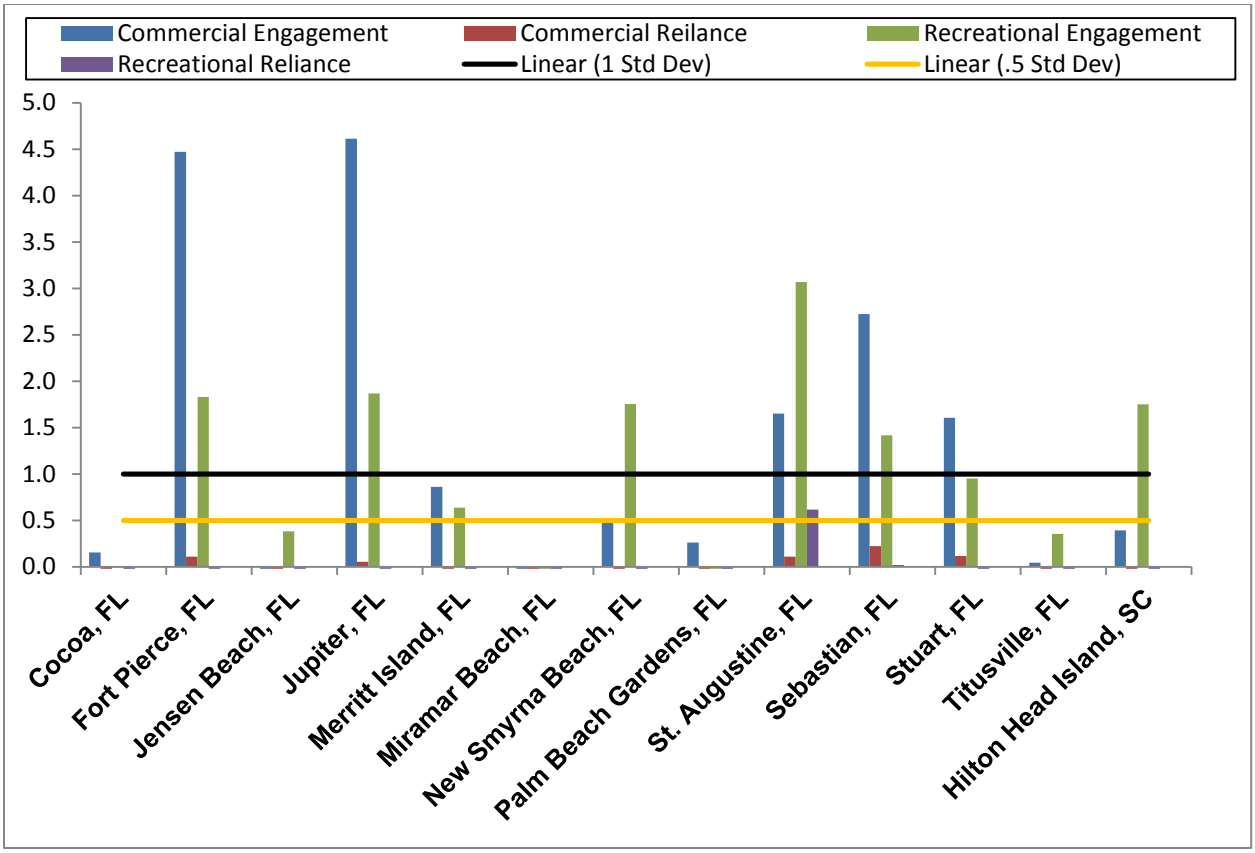

Figure 3.5.2.6. Commercial and recreational reliance and engagement for South Atlantic communities with the top regional quotients for cobia.
Source: Southeast Regional Office, Social Indicator Database 2013.

3.5.3 Mid-Atlantic CMP Fishing Communities

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.

King Mackerel

Commercial Communities

For king mackerel in the Mid-Atlantic (Figure 3.5.3.1), the relatively highest level of landings at the regional level occur in Accomac, Virginia. Other Mid-Atlantic communities with commercial king mackerel landings include Hampton, Virginia; Barnegat Light, New Jersey; Amagansett, New York; Moriches, New York; and Montauk, New York. No communities in Pennsylvania, Delaware, or Maryland are included in the top Mid-Atlantic communities for king mackerel.

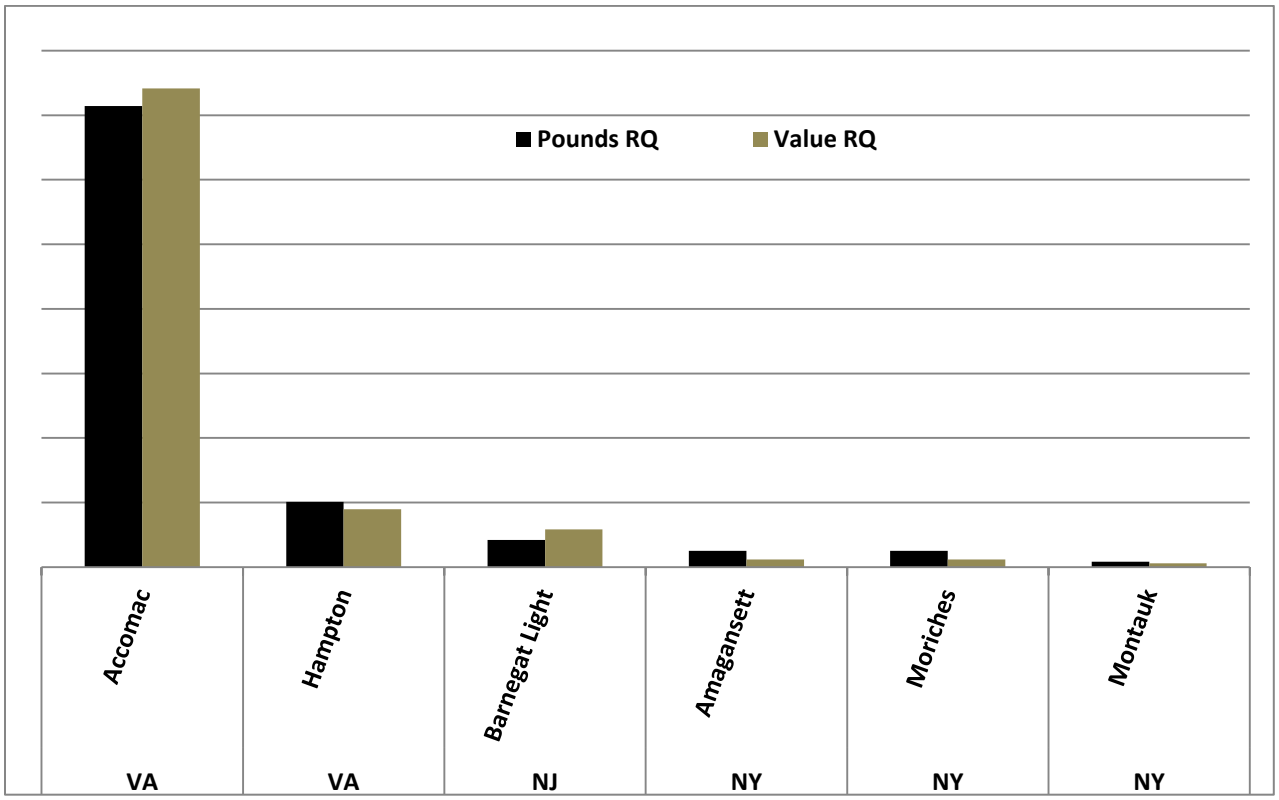

Figure 3.5.3.1. Top Mid-Atlantic communities ranked by pounds and value regional quotient (RQ) of king mackerel. The actual RQ values (y-axis) are omitted from the figure to maintain confidentiality.
Source: NEFSC 2011.

Reliance on and Engagement with Commercial and Recreational Fishing

For king mackerel (Figure 3.5.3.2), the primary Mid-Atlantic communities that demonstrate relatively high levels of commercial fishing engagement and reliance are include Montauk, New

York; and Barnegat Light, New Jersey. Communities with substantial recreational engagement and reliance include Montauk, New York; Hampton, Virginia; and Barnegat Light, New Jersey.

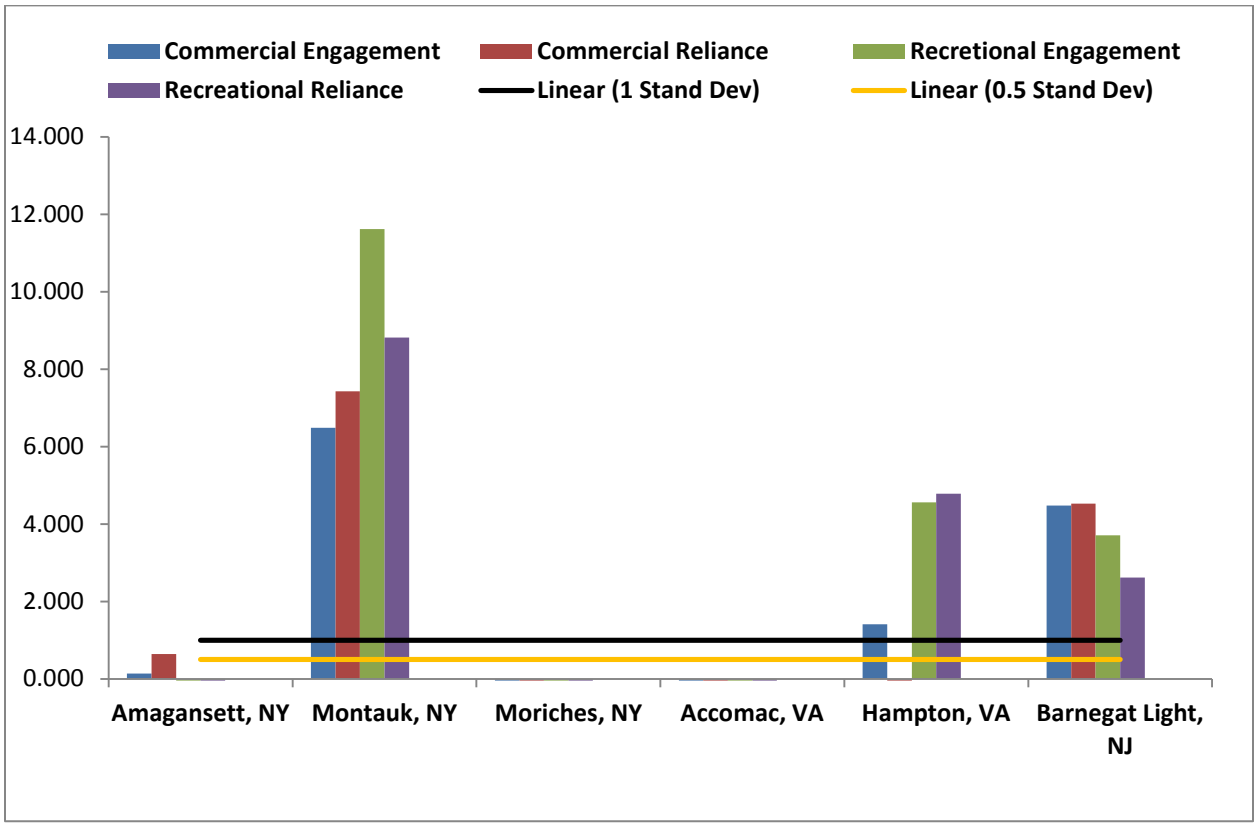

Figure 3.5.3.2. Commercial and recreational reliance and engagement for Mid-Atlantic communities with the top regional quotients for king mackerel.
Source: Southeast Regional Office/NEFSC, Social Indicator Database 2013.

Spanish Mackerel

Commercial Communities

For Spanish mackerel in the Atlantic (Figure 3.5.3.3), 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.

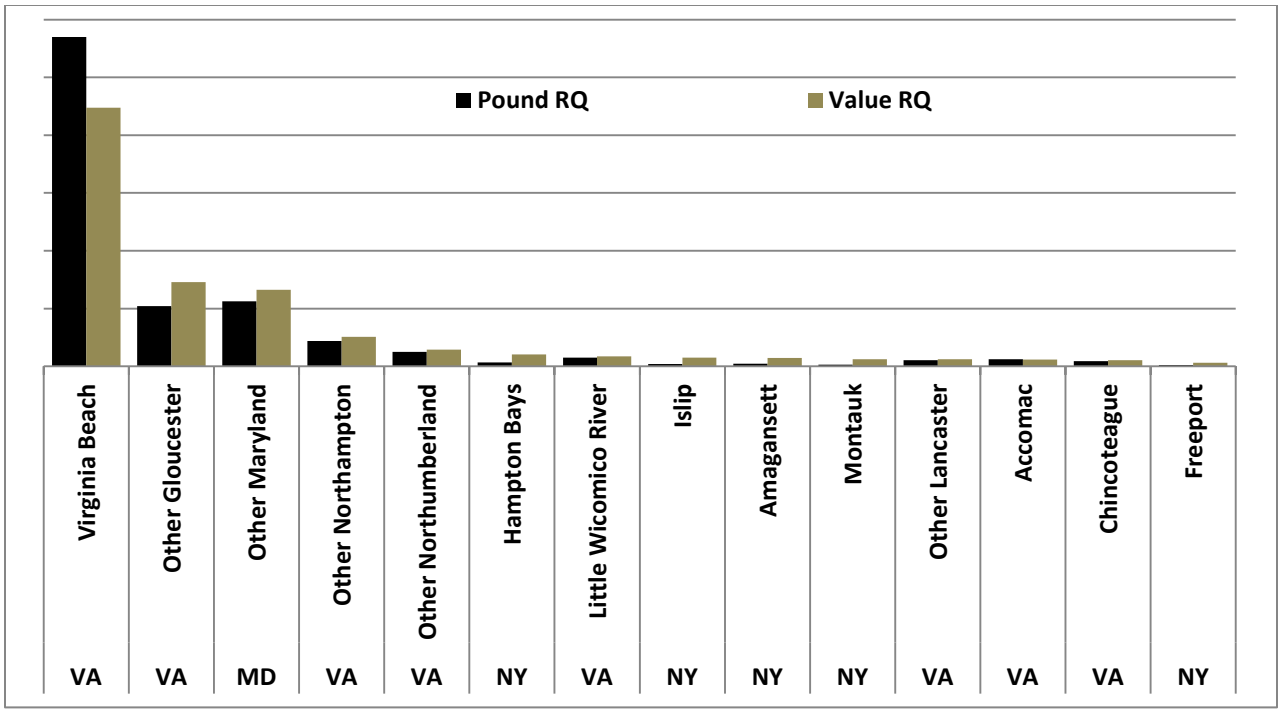

Figure 3.5.3.3. Top Mid-Atlantic communities ranked by pounds and value regional quotient (RQ) of Spanish mackerel. The actual RQ values (y-axis) are omitted from the figure to maintain confidentiality.
Source: NEFSC 2011.

Reliance on and Engagement with Commercial and Recreational Fishing
For king mackerel (Figure 3.5.3.4), 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.

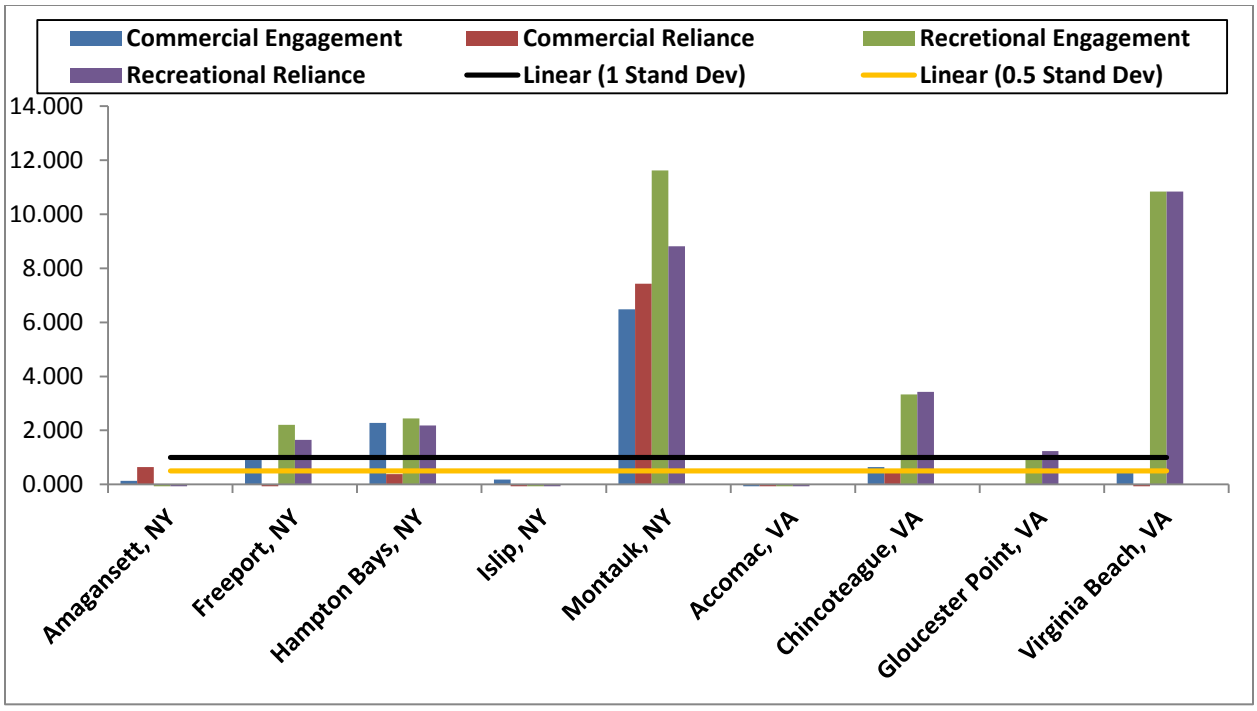

Figure 3.5.3.4. Commercial and recreational reliance and engagement for Mid-Atlantic communities with the top regional quotients for Spanish mackerel.
Source: Southeast Regional Office/NEFSC, Social Indicator Database 2013.

Cobia

Commercial Communities

For cobia in the Mid-Atlantic (Figure 3.5.3.5), the primary communities with the relatively highest level of landings at the regional level are all in Virginia and include Norfolk County, Virginia Beach, Hampton, Wachapreague, Northampton County, and Norfolk. Some communities in New York and New Jersey have commercial landings of cobia (minimal), but no communities in Pennsylvania, Maryland or Delaware are included in the top communities for cobia.

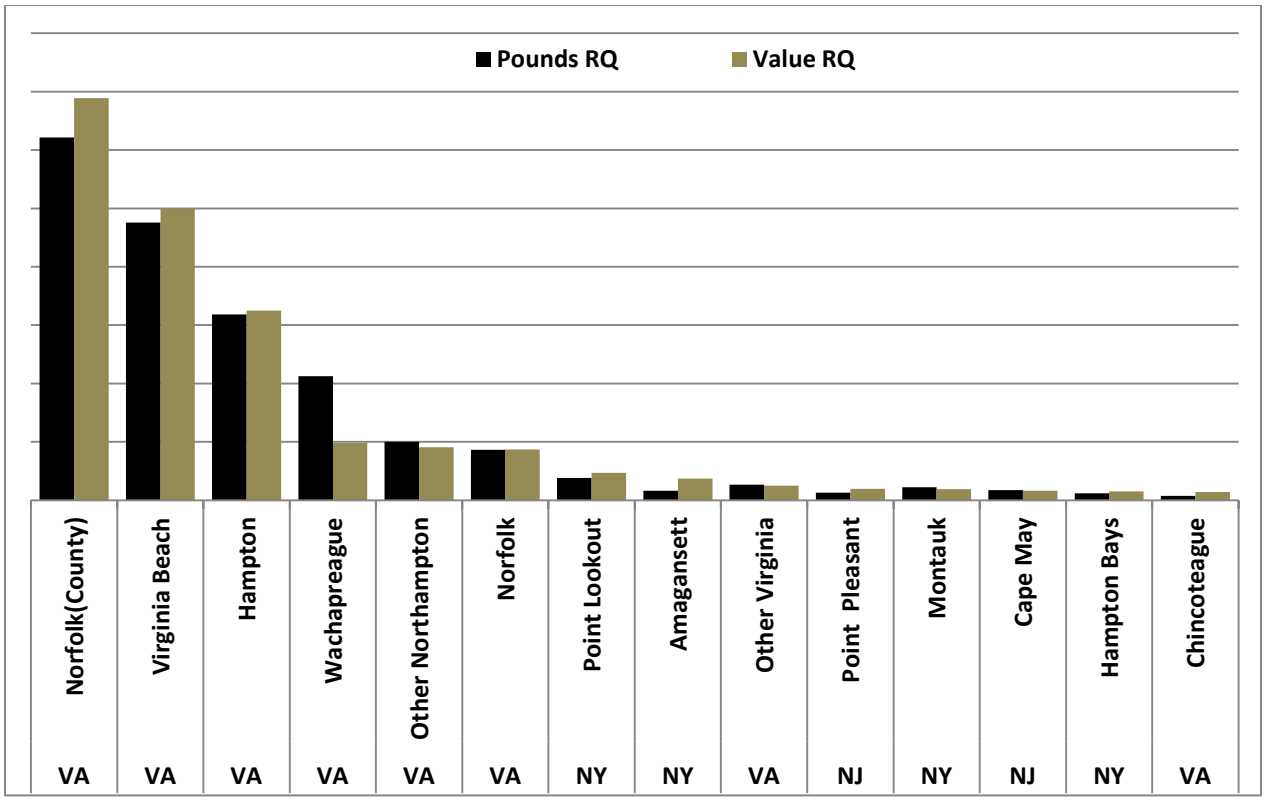

Figure 3.5.3.5. Top Mid-Atlantic communities ranked by pounds and value regional quotient (RQ) of cobia. The actual RQ values (y-axis) are omitted from the figure to maintain confidentiality.
Source: NEFSC 2011.

Reliance on and Engagement with Commercial and Recreational Fishing
For cobia (Figure 3.5.3.6), the primary communities that demonstrate relatively high levels of commercial fishing engagement and reliance are Montauk, New York; Cape May, New Jersey; and Point Pleasant, New Jersey. Communities with relatively substantial recreational engagement and reliance include the New York communities of Montauk and Hampton Bay; the New Jersey communities of Cape May and Point Pleasant; and the Virginia communities of Virginia Beach, Chincoteague, Norfolk, and Wachapreague.

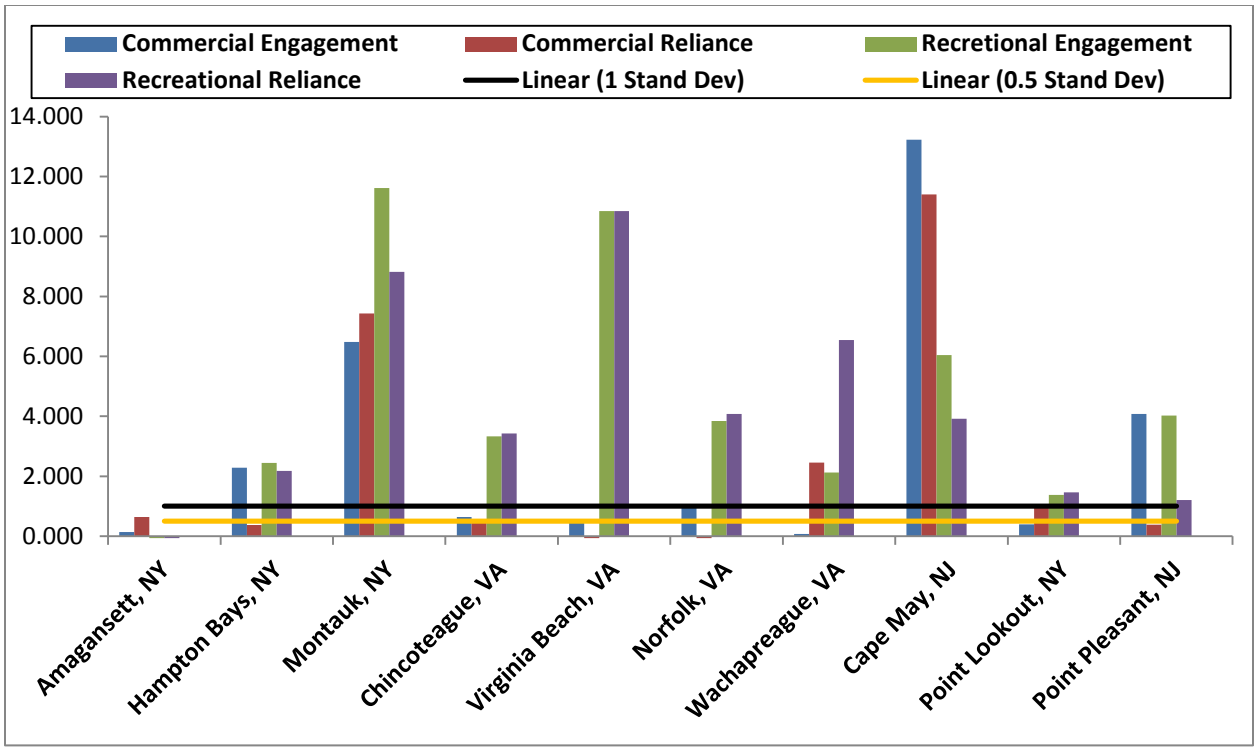

Figure 3.5.3.6. Commercial and recreational reliance and engagement for Mid-Atlantic communities with the top regional quotients for cobia.
Source: Southeast Regional Office/NEFSC, Social Indicator Database 2013.

3.5.4 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.

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 were used. Estimates of the state minority and poverty rates, associated thresholds, and community rates are provided in Table 3.5.4.1 and 3.5.4.2; note that only communities that exceed the minority threshold and/or the poverty threshold are included in the table**.**

Table 3.5.4.1. 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 3.5.4.2. 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
	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 3.5.4.1 and 3.5.4.1. The three indices are poverty, population composition, and personal disruptions. The variables included in each of these indices have been identified through the literature as being important components that contribute to a community's vulnerability. Indicators such as increased poverty rates for different groups; more single female-headed households; more households with children under the age of 5; and disruptions like higher separation rates, higher crime rates, and unemployment all are signs of populations having 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 at the beginning of **Section 3.5**, 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 3.5.4.1): Bayou La Batre, Alabama; Cocoa, Fort Pierce, Miami and Stuart in Florida; Golden Meadow and Grand Isle in Louisiana; and Wanchese, North Carolina. 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 have substantial vulnerabilities and may be susceptible to further effects from any regulatory change depending upon the direction and extent of that change.

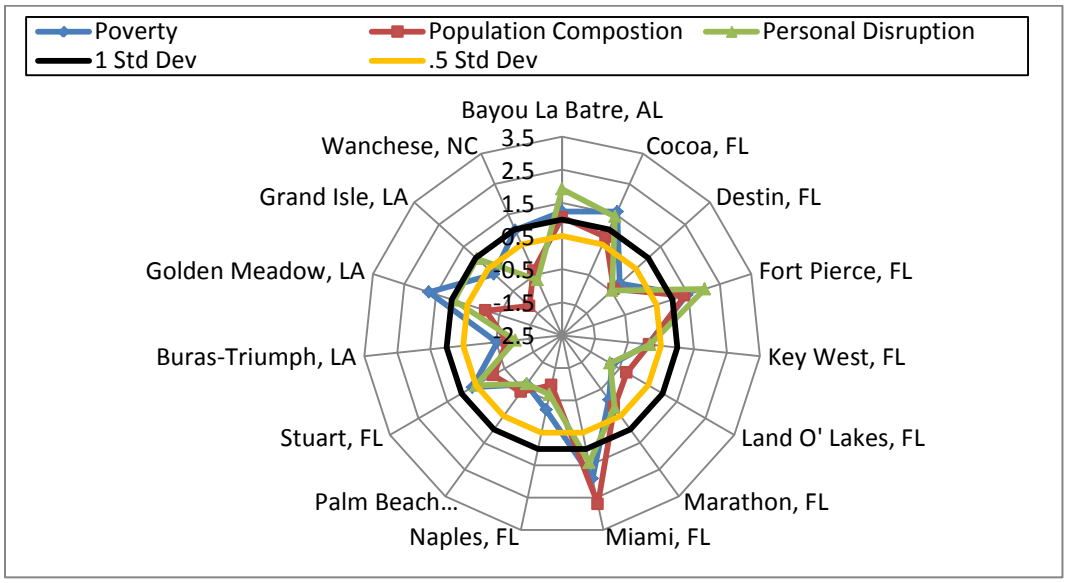

Figure 3.5.4.1. Social vulnerability indices for fifteen Gulf and South Atlantic communities with the top regional quotients for coastal pelagics.
Source: Southeast Regional Office, Social Indicator Database 2013.

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 3.5.4.2): Norfolk, Hampton, and Chincoteague, Virginia; and Freeport, New York. 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.

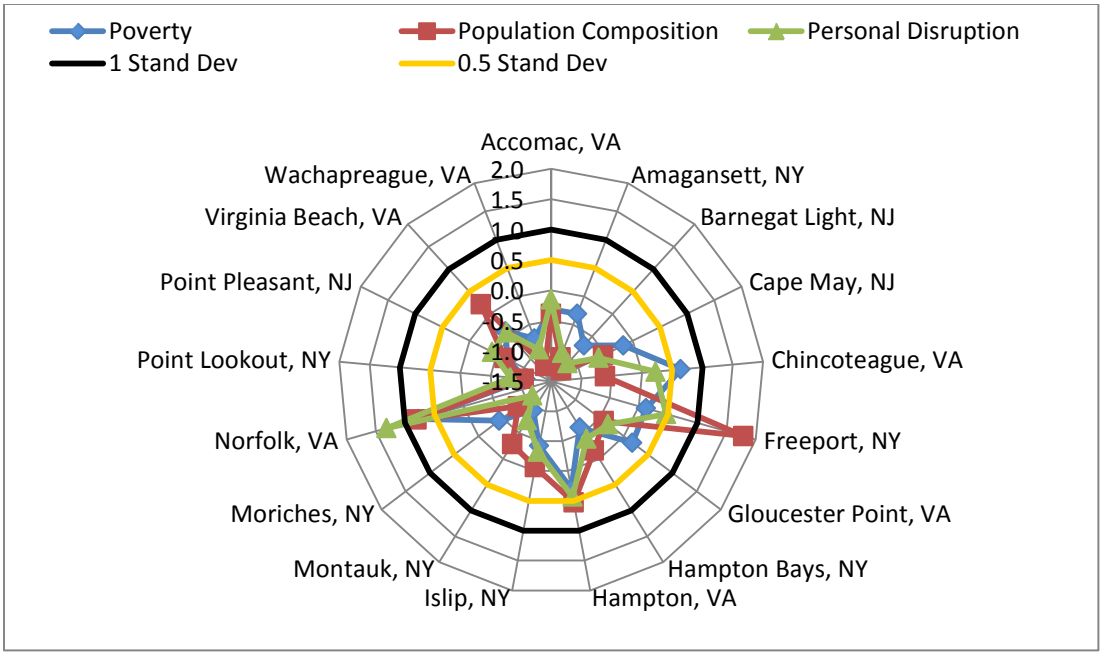

Figure 3.5.4.2. Social vulnerability indices for fifteen Mid-Atlantic communities with the top regional quotients for coastal pelagics.
Source: Southeast Regional Office, Social Indicator Database 2013.

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 was also held in the Mid-Atlantic region prior to final approval by the Councils.

3.6 Description of the Administrative Environment

3.6.1 Federal Fishery Management

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

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

The Gulf Council is responsible for fishery resources in federal waters of the Gulf. 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 public members appointed by the Secretary; one each from the fishery agencies of Texas, Louisiana, Mississippi, Alabama, and Florida; and one from NMFS. Non-voting members include representatives of the U.S. Fish and Wildlife Service, U.S. Coast Guard (USCG), and Gulf States Marine Fisheries Commission.

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, USCG, and Atlantic States Marine Fisheries Commission.

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 SSCs 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.

3.6.2 State Fishery Management

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

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

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

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

South Carolina Department of Natural Resources http://www.dnr.sc.gov/
North Carolina Department of Environmental and Natural Resources
http://portal.ncdenr.org/web/guest/

CHAPTER 4. ENVIRONMENTAL CONSEQUENCES

4.1 Action 1: Modify the Commercial Hook-and-Line Trip Limits for Gulf Migratory Group King Mackerel.

Alternative 1: No Action – Retain the existing commercial hook-and-line trip limits.
Western Zone: 3,000 lbs with no reduction
Eastern Zone Northern Subzone: 1,250 lbs until 75% of the quota is taken, at which time the trip limit decreases to 500 lbs
Eastern Zone Southern Subzone: 1,250 lbs until 75% of the quota is taken, at which time the trip limit decreases to 500 lbs

Alternative 2: Set the commercial hook-and-line trip limit at 2,000 lbs with no reduction.
Option a: For the Western zone
Option b: For the Eastern Zone Northern Subzone
Option c: For the Eastern Zone Southern Subzone

Alternative 3: Set the commercial hook-and-line trip limit at 3,000 lbs with no reduction.
Preferred Option a: For the Western zone
Option b: For the Eastern Zone Northern Subzone
Option c: For the Eastern Zone Southern Subzone

Alternative 4: Set the commercial hook-and-line trip limit at 1,250 lbs with no reduction.
Option a: For the Western zone
Preferred Option b: For the Eastern Zone Northern Subzone
Preferred Option c: For the Eastern Zone Southern Subzone

4.1.1 Direct and Indirect Effects on the Physical/Biological Environments

King mackerel are typically caught at the ocean surface and therefore neither hook-and-line nor run-around gillnet gear typically come in contact with bottom habitat. However, these gear types 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.

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 harvest is not maintained at sustainable levels. Impacts of these alternatives on the biological environment would depend on the resulting reduction or increases in the level of fishing as a result of each alternative.

Indirect impacts of these alternatives on the physical and biological environments would depend on the resulting reduction or increase in the level of commercial king mackerel fishing effort in

the Gulf of Mexico (Gulf). Based on Tables 2.1.2 and 2.1.3, the quota for each zone/subzone would still be reached before the end of the fishing year regardless of the trip limit. Therefore, no change in overall effort would be expected with **Options a-c** for **Alternatives 2-4** relative to **Alternative 1**, and no change to the impacts on the physical and biological environments would be expected.

4.1.2 Direct and Indirect Effects on the Economic Environment

Alternative 1 would retain the existing commercial hook-and-line trip limits for Gulf group king mackerel. Therefore, **Alternative 1** would not be expected to result in any change in the effects on the economic environment. All customary effort, harvest, and associated revenue and profit patterns to king mackerel fishermen and associated businesses, as discussed in Sections 1 and 3, would be expected to continue.

Alternatives 2-4 consider various adjustments to trip limits in the Western and Eastern Zones. In the analysis of economic effects for **Alternatives 2-4**, king mackerel fishermen are assumed to attempt to maximize net operating revenues per trip, subject to an array of constraints, including the prevailing king mackerel trip limit. It is also assumed that none of the trip limit adjustments considered would prevent fishermen from harvesting the totality of the king mackerel quota because, in response to a trip limit reduction, more trips can be scheduled. Other factors constant, the implementation of a less restrictive trip limit would be expected to afford some fishermen additional flexibility in trip planning and in the selection of the catch composition that could increase their net revenues, potentially resulting in direct economic benefits. However, larger trip limits would be expected to shorten the fishing season and may contribute to market gluts, which could depress the fishermen's net revenues. Trip limit increases would only benefit fishermen for whom the initial trip limit constituted a binding constraint. Conversely, the establishment of a binding and more restrictive trip limit would be expected to hamper fishermen's ability to select the catch composition that would maximize net revenues, potentially resulting in direct adverse economic effects. Negative economic effects are expected to be partially mitigated by market effects from price increases associated with reduced king mackerel harvests.

Alternative 2 would set a uniform king mackerel trip limit of 2,000 pounds whole weight (lbs ww) for all zones. For the Western Zone, **Alternative 2, Option a** would correspond to a 1,000-lb ww trip limit reduction. A trip limit adjustment from 3,000 lbs ww to 2,000 lbs ww is expected to be binding for about 29% of the king mackerel trips in the Western Zone. A cumulative distribution of king mackerel trips by zone and average king mackerel landings is provided in Table 4.1.2.2.

The reduction in the trip limit considered in **Alternative 2, Option a** is expected to result in negative direct economic effects by placing a binding constraint on about 29% of the king mackerel trips in the Western Gulf. Positive market effects due to potential increases in king mackerel prices are also expected. Although it is likely that the direct adverse economic effects that would stem from the reduction in the trip limit would be greater than the potential market effects, it is not possible to determine the net economic effects that would result from the trip limit adjustments because the catch composition and number of king mackerel trips that

fishermen would elect to take in response to a trip limit change are unknown. **Alternative 2, Option b** and **Option c** would increase the trip limit by 750 lbs ww in the Eastern Zone southern subzone. As indicated above, increases in the trip limit are expected to grant additional flexibility in trip scheduling and in the selection of a catch composition, potentially resulting in increased net revenues. These direct economic benefits may be offset to some degree as a result of adverse market effects due to the shortened season and the associated increase in the supply of king mackerel during the season and reduced prices. Because about 98% of king mackerel trips in the Eastern Zone Northern Subzone and 80% of the trips in the Eastern Zone Southern Subzone land 1,000 lbs ww of king mackerel or less, the economic effects that would to result from **Alternative 2, Option b** or **Option c** are expected to be negligible.

Table 4.1.2.2. King mackerel landings (lbs ww) per trip by zone – average cumulative percentages (2009/2010 to 2011/2012).

Pounds per trip	Western Zone	Eastern Zone	
		Northern	Southern
1,000 or less	46.4	98.4	79.2
1,250 or less	51.6	99.8	98.5
1,500 or less	60.4	99.9	99.0
2,000 or less	71.2	100.0	99.4
2,500 or less	86.0	100.0	99.6
3,000 or less	100.0	100.0	100.0

Source: National Marine Fisheries Service, Southeast Regional Office.

Alternative 3 would establish a king mackerel trip limit of 3,000 lbs ww for all zones. For the Western Zone, **Alternative 3, Preferred Option a** would implement the same trip limit as the status quo alternative. Therefore, economic effects are not expected to result from **Alternative 3, Preferred Option a**. In the Eastern Zone, **Alternative 3, Option b** and **Alternative 3, Option c** would more than double the current king mackerel trip limit. Any economic effects that would result from **Alternative 3, Option b** or **Alternative 3, Option c** are expected to be negligible because about 98% of king mackerel trips in the Eastern Zone Northern Subzone and 80% of the trips in the Eastern Zone Southern Subzone land 1,000 lbs ww of king mackerel or less.

Alternative 4 would set a king mackerel trip limit of 1,250 lbs ww across all zones. **Alternative 4, Option a** would correspond to a 1,750-lb ww trip limit reduction for the Western Zone. The reduction in the trip limit considered in **Alternative 4, Option a** is expected to result in negative direct economic effects by placing a binding constraint on 48.4% of the king mackerel trips in the Western Gulf. Positive market effects due to potential increases in king mackerel prices are also expected. Although it is likely that the direct adverse economic effects that would stem from the reduction in the trip limit would be greater than the potential positive market effects, it is not possible to determine the net economic effects that would result from **Alternative 4, Option a** because the catch composition and number of king mackerel trips that fishermen would elect to take in response to the trip limit reduction are unknown. **Alternative 4, Preferred Option b** and **Alternative 4, Preferred Option c** would maintain a king mackerel trip limit of 1,250 lbs ww and eliminate the step-down provision currently in effect once 75% of the ACL is

harvested in the Eastern Zone. The economic effects that would result from **Alternative 4, Preferred Option b** or **Alternative 4, Preferred Option c** are expected to be negligible because more than three quarters of king mackerel trips taken in the Eastern Zone land 1,000 lbs ww of king mackerel or less.

4.1.3 Direct and Indirect Effects on the Social Environment

An action is being considered to modify the commercial hook-and-line trip limits for Gulf migratory group king mackerel due to problems expressed by fishermen who travel long distances to reach fishing grounds. For example, a trip limit of 1,250 lbs ww may not allow enough income on a trip to cover expenses. This problem is exacerbated when the trip limit is reduced to 500 lbs ww when 75% of the quota is met, which has led to requests from fishermen to remove the trip limit reduction. Although no additional impacts would be expected under **Alternative 1**, current trip limits would be preserved, thereby allowing these problems to continue. Conversely, other fishermen have endorsed the idea of a trip limit reduction because it functions to prolong the fishing season. Due to the pace at which the quota is usually caught, however, the trip limit reduction is often enacted shortly before the zone's allocation is landed and harvest for the season is closed (Table 2.1.1).

Some impacts would be expected from a reduction to the trip limits. However, only trips harvesting more than the **Alternative 1** trip limits would be impacted. Also, there would be a trade-off in expected impacts of reduced trip limits. For example, greater impacts would be expected the larger the reduction to the trip limit. But, each reduction to the trip limit would be expected to result in an increase to the fishing season length, thereby providing some benefits to fishermen.

Each option (**a**, **b**, and **c**) under **Alternatives 2-4** pertains to a particular zone. This discussion compares the alternatives by zone or subzone (each option in turn). In the Western Zone (**Options a**), no impacts would be expected from **Alternative 3 Preferred Option a**, as it retains the same trip limit as the status quo **Alternative 1** (3,000 lbs ww). A 2,000-lb ww trip limit (**Alternative 2**) would be expected to result in minor impacts, with those vessels that land between 2,000 and 3,000 lbs ww being affected by the trip limit reduction. However, the fishing season would be extended accordingly. The 1,250-lb ww trip limit (**Alternative 4, Preferred Options b** and **c**) would affect the most trips, specifically those vessels that would land between 1,250 and 3,000 lbs ww per trip. In turn, this alternative would also be expected to result in the longest fishing season.

The same pattern holds for both Eastern Zone subzones, except in the inverse. The alternatives and options under **Alternatives 2-4** specify larger trip limits than **Alternative 1,** providing benefits to fishermen by allowing greater landings per trip. But, they would each be expected to result in a shorter fishing season as the quota would be expected to be caught more quickly with a higher trip limit. The differences in fishing season lengths are projected to be very small, see Chapter 2.1. Also, **Alternatives 2-4** would remove the trip limit reduction for both subzones, benefiting fishermen who want larger trip limits, while also impacting the fleet by shortening the fishing season. Thus, for both Eastern Zone subzones, **Alternative 3, Options b** and **c** would provide fishermen with the largest trip limit but result in the shortest fishing season. The trip

limit under **Alternative 2** is only 1,000 lbs ww per trip less than **Alternative 3** (including **Preferred Option a**), so impacts would be similar. **Alternative 4** (including **Preferred Option b**) would result in the fewest impacts compared to status quo, as the trip limit remains the same (1,250 lbs ww), but the trip limit reduction to 500 lbs ww when 75% of the quota is met would be removed. This would shorten the fishing season slightly, but enable fishermen to land more fish per trip.

The Western Zone trip limit specified in **Alternative 3, Preferred Option a** is the same as the **Alternative 1**. Therefore, the expected social effects on the king mackerel commercial fleet harvesting in the Western Zone under **Alternative 3, Preferred Option a** and **Alternative 1** would be the same. The effects on fishermen harvesting in the Eastern Zone Northern Subzone of **Alternative 4, Preferred Option b** are expected to benefit the commercial fleet fishing in the Northern Subzone by maximizing trip efficiency throughout the fishing season by removing the trip limit reduction when 75% of the quota is met, but retaining the 1,250 lb ww trip limit to maintain season length.

For some fishermen harvesting in the Eastern Zone Southern Subzone, the dockside value during the time of year when king mackerel are in the Southern Subzone could be too low to offset trip cost of gas and travel time. For these fishermen, increasing the trip limit to 2,000 lbs with no trip limit reduction under **Alternative 2**, **Option c** would be expected to increase trip efficiency. However, this could also shorten the season because the Southern Subzone ACL would likely be met sooner under a higher trip limit, which could affect other fishermen and the whole component in the long term, in addition to affecting the price and supply for king mackerel during certain times of the year. Maintaining the 1,250 lb trip limit under **Alternative 4**, **Preferred Option c** will likely continue to restrict the efficiency of king mackerel trips for the fishermen who cannot or do not make trips under the current trip limit. However, removal of the trip limit reduction under this alternative is expected to benefit fishermen harvesting in the Southern Subzone by keeping the maximum poundage for the 1,250 lb trip limit throughout the fishing year instead of the sharp decrease to 500 lbs under **Alternative 1**.

4.1.4 Direct and Indirect Effects on the Administrative Environment

If **Options a-c** are all chosen as preferred for any one of **Alternatives 2-4**, the burden on the administrative environment would be reduced relative to **Alternative 1** because all the trip limits in the Gulf would be the same. This situation would help enforcement, particularly in areas near the borders of two zones. The administrative burden would also be reduced by choosing any of **Alternatives 2-4** for the Northern and Southern Subzones because all the alternatives remove the trip limit reduction at 75% of the quota. **Alternative 1** requires the National Marine Fisheries Service (NMFS) to process two regulatory notices (trip limit reduction and closure) in most years for each subzone. However, in some years the landings are at such a high rate that the trip limit reduction cannot be implemented before a closure is necessary. This creates confusion among constituents and requires additional outreach by NMFS staff.

4.2 Action 2: Change the Fishing Year for Gulf Migratory Group King Mackerel for the Eastern and Western Zone.

Alternative 1: No Action - the fishing year remains July 1 – June 30**.**

Alternative 2: Change the fishing year for Gulf group king mackerel season to September 1 – August 31.

Gulf Preferred Option a: For the Western Zone
Option b: For the Eastern Zone Northern Subzone
Option c: For the Eastern Zone Southern Subzone

Alternative 3: Change the fishing year for Gulf group king mackerel season to October 1 – September 30.

Option a: For the Western Zone
Preferred Option b: For the Eastern Zone Northern Subzone
Option c: For the Eastern Zone Southern Subzone

4.2.1 Direct and Indirect Effects on the Physical/Biological Environments

Alternative 1 would maintain the commercial king mackerel fishing year at status quo, opening on July 1 and closing on June 30. As such, any direct or indirect effects to the physical, biological, and/or ecological environment would not be anticipated to be any different than those which currently occur. The impacts on the physical environment from coastal migratory pelagic (CMP) fishing are detailed in Section 4.1.1.

Alternatives 2 and **3** would move the start date of the commercial king mackerel fishing year to later in the calendar year. For both alternatives, **Option a** would move the start date for the Western Zone, **Option b** would move the start date for the Eastern Zone Northern Subzone, and **Option c** would move the start date for the Eastern Zone Southern Subzone. Such a move may result in decreased fishing pressure. Late summer into late fall corresponds with the height of hurricane season, and temporal effort reduction resulting from poor weather conditions may result in slower removal rates and a prolonged fishing season in some or all subzones. However, "bad weather days" are not anticipated to be frequent enough to result in a subzone not catching its quota. Additionally, a later start date might discourage movement of fishers from the Atlantic coast of Florida to south Louisiana, and into the Florida Panhandle as has been the case for several years. A change in the start date of the fishing year may force traveling fishers to pursue other species in the absence of an open commercial king mackerel fishing year in mid-summer months; however, this temporal shift in effort is not anticipated to result in a subzone not catching its quota. **Alternative 2, Gulf Preferred Option a** would result in these impacts to the Western Zone and **Alternative 3, Preferred Option b** would result in these impacts to the Eastern Zone Northern Subzone. The Eastern Zone Southern Subzone would not change from the current July-June fishing year.

In summary, it is not possible to accurately predict what might happen in terms of changes in effort, but from a biological standpoint, there are no differences in the impacts to the king mackerel stock for any of the alternatives. All subzones are predicted to catch their respective

annual quotas regardless of fishing year start dates, and accountability measures are in place to ensure quotas are not exceeded and overfishing does not occur. Consequently, no biological effects are anticipated from these alternatives because they merely address shifting of harvest time to coincide with availability of the resource in different areas.

4.2.2 Direct and Indirect Effects on the Economic Environment

Alternative 1 would maintain the current July 1 - June 30 fishing season in the Western and Eastern Zones. Therefore, **Alternative 1** would not be expected to result in any change in the effects on the economic environment. All customary effort, harvest, and associated revenue and profit patterns to king mackerel fishermen and associated businesses, as discussed in Sections 1 and 3, would be expected to continue. As discussed in Sections 1.1 and 2.2, the timing of the fishing season, in combination with the trip limit, affects when, or if, the quota is taken and commercial closures occurs within the Western and Eastern Zones. The average monthly percentages of the king mackerel quota landed in the Western and Eastern Zones are provided in Figures 4.3.2.1 and 4.3.2.2, respectively. The timing of the fishing season and pace at which the quota is taken may also affect vessel efficiency, the quality of fish harvested, and the distribution of harvest across vessels, communities, and states. If any of these effects adversely impact the economic benefits associated with king mackerel commercial harvest, these adverse economic effects would continue under **Alternative 1**.

Alternative 2, Gulf Preferred Option a and **Option b** would establish a September 1 – August 31 fishing season in the Western and Eastern zones, respectively. It is noted that because they deal with different areas, the expected economic effects of **Gulf Preferred Option a,** and **Option b** are not comparable to one another.

The implementation of **Alternative 2, Gulf Preferred Option a** would trigger substantial adjustments in monthly landings in the Western Zone if fishermen continue to harvest the total king mackerel quota because king mackerel harvests during the months of July and August have accounted for more than 60% of total king mackerel harvested in the Western Zone since the 2004-2005 fishing year (Figure 4.3.2.1). Although the cooler temperatures in the fall may allow some fishermen to improve the quality of harvested fish, a September 1 season start would cause potential disruptions to fishing operations. A later start to the fishing season would force fishermen to adjust their trip planning and catch composition over the course of the new fishing year, September 1 – August 31. The net economic effect of these adjustments cannot be determined with available data because the adjustments cannot be predicted. Increased king mackerel harvest in the fall (and winter if the quota is not harvested during the fall) may displace harvest, and associated revenue, from other species. Fishing activity in July and August may be particularly adversely affected if harvest of other species cannot be increased to compensate for the king mackerel harvest that normally occurs during these months. Problems would be compounded in years during which king mackerel migrate earlier than usual (they could not be harvested in July or August and may have substantially left certain areas by September and October). Therefore, a fall start to the fishing season may place added constraints to fishermen's attempts to maximize net revenues and could be expected to result in reduced direct economic benefits for many fishermen and the sector as a whole compared to **Alternative 1**. The

magnitude of the economic effects would be determined by the extent and nature of adjustments to fishing trips in response to the new season in the Western Gulf.

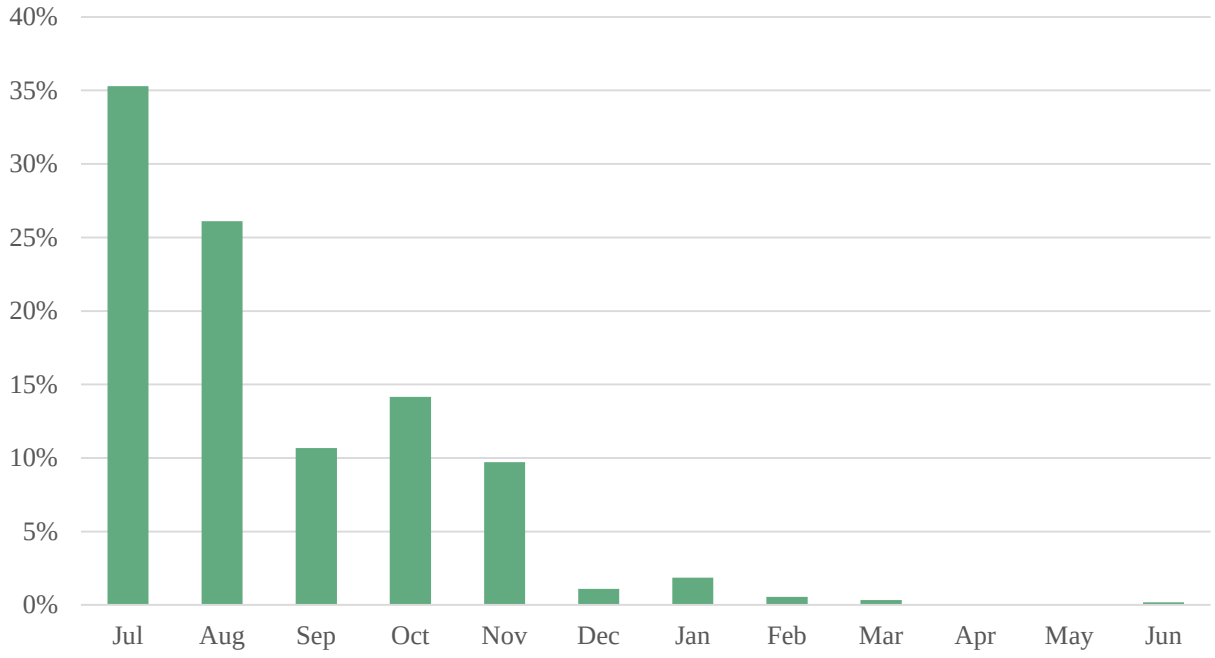

Figure 4.2.2.1. Average monthly percentage of Gulf migratory group king mackerel landed in the Western Zone (2004/05 to 2010/11).
Source: Accumulated Landings System data (7/12/2012).

In response to the implementation of **Alternative 2, Option b**, the impacts on fishing trips, and associated economic benefits, in the Northern Subzone of the Gulf Eastern Zone are expected to be relatively small because 15% of the king mackerel harvested in the Northern Subzone of the Gulf Eastern Zone have been landed during the months of July and August since the 2004-2005 fishing year (Figure 4.3.2.2). Therefore, disruptions to usual trip planning and catch composition as a result of **Alternative 2, Option b** are expected to be minimal, with relatively small associated economic effects. Although disruptions to trip planning and catch composition would be expected to result in adverse economic effects, the magnitude of these effects cannot be determined with available data.

The implementation of **Alternative 2, Option c** would not be expected to result in any measureable impact on fishing trips, catch composition because, on average, less than 0.1% of the king mackerel harvested in the Southern Subzone of the Gulf Eastern Zone are harvested during the months of July and August (Figure 4.3.2.3). Therefore, disruptions to customary trip planning and catch composition and economic effects due to **Alternative 2, Option c** are expected to be nil or negligible.

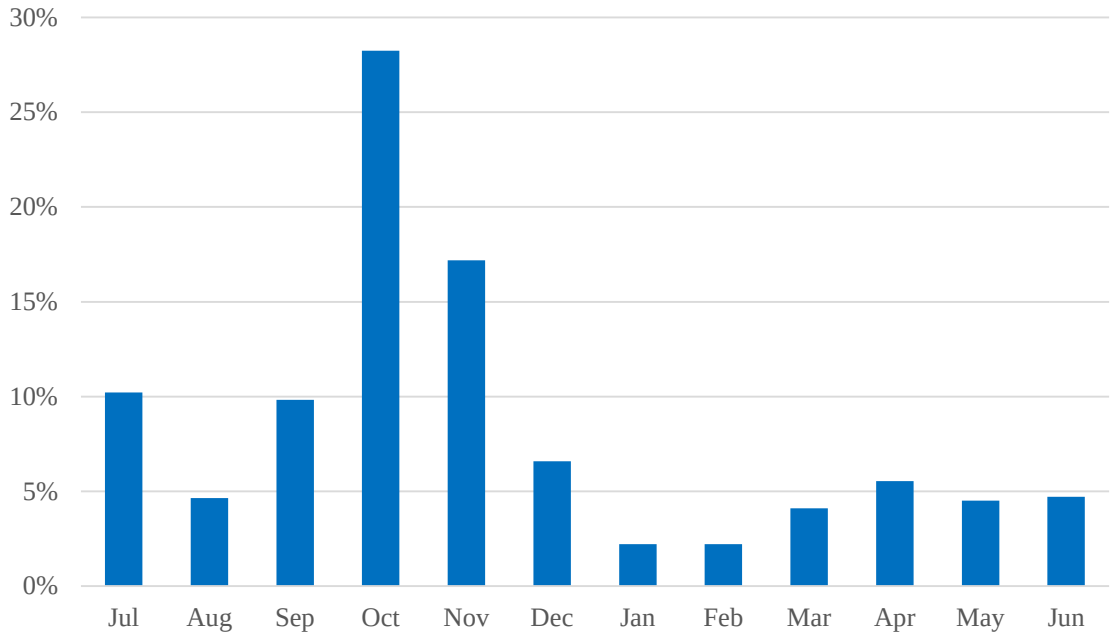

Figure 4.2.2.2. Average monthly percentage of Gulf migratory group king mackerel landed in the Eastern Zone Northern Subzone (2004/05 to 2010/11).
Source: Accumulated Landings System data (7/12/2012)

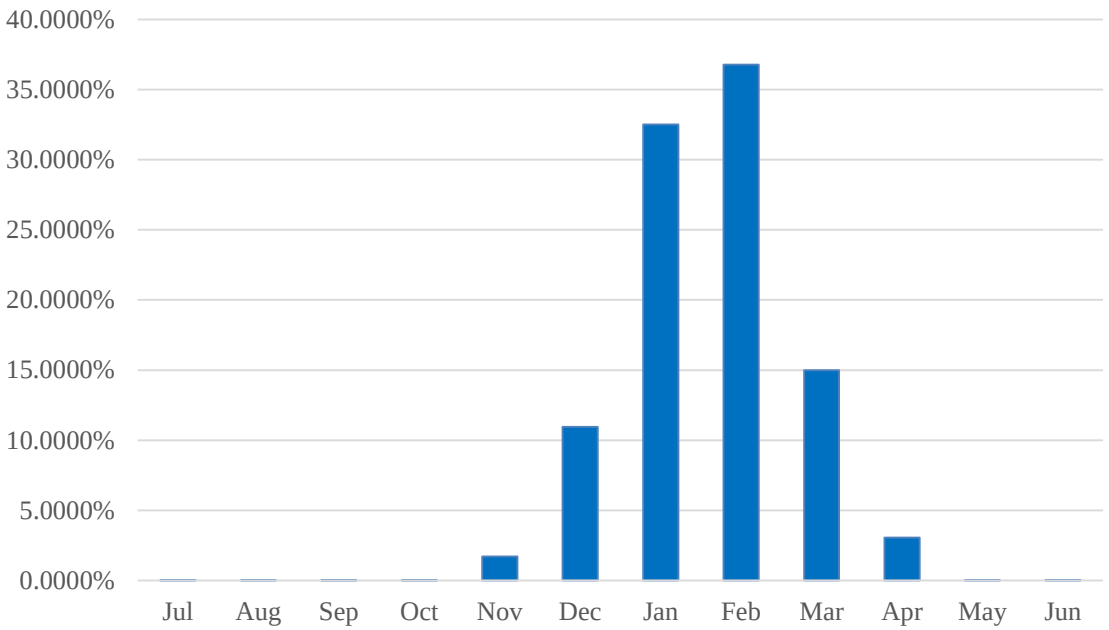

Figure 4.2.2.3. Average monthly percentage of Gulf migratory group king mackerel landed in the Eastern Zone Southern Subzone (2004/05 to 2010/11).
Source: Accumulated Landings System data (7/12/2012)

The expected concerns and associated economic effects of **Alternative 3, Option a, Preferred Option b,** and **Option c** would be of a similar nature to those discussed in **Alternative 2,** but greater because **Alternative 3, Options a-c** would result in greater shifts from the current fishing

year and thus, greater disruptions to usual trip planning. **Alternative 3, Option a, Preferred Option b,** and **Option c** would establish an October 1 - September 30 king mackerel fishing season in the Western and Eastern Zone-Northern Subzone, and Eastern Zone-Southern Subzone, respectively. In the Western Zone, more than 72% of the king mackerel harvested annually are landed before October 1. As a result, **Alternative 3, Option a** would be expected to cause potentially large adjustments to fishing operations in the Western Zone and may result in direct adverse economic effects. The extent to which the adjustments to fishing operations hamper fishermen's abilities to pursue net revenue maximizing strategies in the Western Zone would determine the magnitude of these economic effects. The potential adverse economic effects that would result from **Alternative 3, Option a** are expected to be greater than effects expected from **Alternative 2, Gulf Preferred Option a** because **Alternative 3, Option a** would postpone a greater proportion of king mackerel landings in the Western Zone by starting the fishing season one month later than the start date considered in **Alternative 2, Preferred Option a**.

The October 1-September 30 fishing season proposed in **Alternative 3, Preferred Option b** is expected to impact a sizeable portion of the king mackerel annual landings in the Northern Subzone of the Gulf Eastern Zone. On average, about 25% of the king mackerel landings in the Northern Subzone of the Gulf Eastern Zone have been landed between July 1 and September 30 since the 2004-2005 fishing year. Therefore, the season shift under consideration would be expected to result in sizeable adverse economic effects due to disruptions in customary trip planning. In contrast, **Alternative 3 Option c** is not expected to result in measurable economic effects because less than 0.1% of the king mackerel landings in the Southern Subzone of the Gulf Eastern Zone are harvested between July 1 and September 30.

4.2.3 Direct and Indirect Effects on the Social Environment

The three Gulf group king mackerel fishing zones are subject to quota closures, such that the timing of the fishing season, in combination with the trip limit, affects when, or if, the quota is taken and, in turn, the closure occurs. Although additional impacts would not be expected from retaining **Alternative 1**, this action is being considered due to problems expressed by fishermen for the northern and western parts of the Gulf, regarding the timing of the season opening. **Alternative 1** would preserve the status quo fishing season for the three zones, thereby allowing these problems to continue. For example, in the Western Zone (**Options a**), the season often closes when the migrating fish are arriving in larger numbers and closer to shore in the main fishing areas off south Louisiana. If the season opening date more closely aligns with optimal fishing conditions in terms of weather, fish abundance, and fish availability, trip limits are more likely to be met on more trips, enabling greater profits on trips taken and requiring fewer trips be taken by fishermen. On the other hand, establishing the season during such optimal fishing conditions would be expected to contribute to indirect impacts if a shorter season results. Essentially, there may be a trade-off in expected impacts, where benefits from modifying the season start date to coincide with optimal fishing opportunities may, in turn, result in negative impacts from a shorter season as the fish are caught faster.

The alternatives propose to modify the fishing season start date to begin September 1 (**Alternative 2**) or October 1 (**Alternative 3**) for the Western Zone (**Options a**) and both sub-zones of the Eastern Zone (**Options b** and **c**). There is a risk that if the season opens too late in the year (**Alternative 3**), the schools of migrating king mackerel may have already moved further south and thus be unavailable to fishermen who do not travel to other zones. For the Eastern Zone Northern Subzone, (**Preferred Option b** of **Alternative 3**), these potential negative effects of the later opening could affect fishermen harvesting in this area. Another factor, which could limit the benefits of a later opening date, would arise if foul weather, such as hurricanes, interferes with fishing trips before the quota can be harvested. Thus, an opening of October 1 may be too late in the calendar year to provide expected benefits from season modification. Modifying the opening season date to September 1 (**Alternative 2**) would be expected to result in greater benefits than **Alternatives 1** and **3** by better aligning the fishing season with opportune king mackerel fishing conditions, as is proposed for the Western Zone (**Alternative 2, Gulf Preferred Option a**). Nevertheless, any expected benefits may be lessened if a shorter season results because the quota was caught faster.

4.2.4 Direct and Indirect Effects on the Administrative Environment

Alternative 1 would result in no change in the current administrative environment. **Alternative 2, Gulf Preferred Option a, Option b** and **Option c** could result in short-term increased administrative burden if the Western Zone quota is caught more quickly as a result of larger numbers of large king mackerel being more easily harvested closer to shore. The faster pace of landings would require faster notification of subzone closures. **Alternative 3, Option a, Preferred Option b,** and **Option c** would likely result in similar administrative burdens as described for **Alternative 2**. Increased administrative burden is likely if different options are selected for different alternatives. Law enforcement may find it difficult to enforce different fishing seasons, especially near the Florida/Alabama state line; however, even with the current simultaneous openings, each zone has different closing dates. Other administrative burdens that may result from all of the alternatives considered would take the form of development and dissemination of outreach and education materials to inform fishery participants of any changes to the fishing season.

4.3 Action 3: Establish Transit Provisions for Travel through Areas that are Closed to King Mackerel Fishing.

Alternative 1: No Action – do not establish a transit provision.

Alternative 2: Establish a provision allowing transit through the Florida west coast Northern and Southern Subzones when those zones are closed for vessels possessing Atlantic migratory group king mackerel that were legally harvested in the exclusive economic zone (EEZ) off Monroe County.

Preferred Alternative 3: Establish a provision allowing transit through areas closed to king mackerel fishing for vessels possessing king mackerel that were legally harvested in the EEZ off areas open to king mackerel fishing.

Alternative 4: Establish a provision allowing transit through the Eastern Zone, Northern Subzone when that area is closed for vessels possessing king mackerel that were legally harvested in the EEZ off Collier County.

Note: For Alternatives 2-4, the following conditions apply:
Only for vessels in direct and continuous transit and with gear stowed
Only for fishermen holding a federal commercial king mackerel permit

4.3.1 Direct and Indirect Effects on the Physical/Biological Environments

The impacts on the physical environment from CMP fishing are detailed in Section 4.1.1. Indirect impacts of these alternatives on the physical and biological environments would depend on the resulting reduction or increases in the level of fishing effort in the commercial king mackerel sector of the CMP fishery. If fishing effort does not change, there would be no expected additional impacts from **Alternatives 2-4** versus **Alternative 1**.

A reduction of the indirect impacts would only occur with any of the alternatives if fishermen forego fishing opportunities because of their inability to transit through closed areas. This is most likely to occur in the Eastern Zone Southern Subzone. This subzone, comprised of Collier and Monroe Counties from November 1 - March 31, usually closes in early spring (see Table 2.2.1). Beginning April 1 of each year, Monroe County is considered to contain Atlantic migratory group king mackerel and the Southern Subzone is comprised of only Collier County. As a result, federal waters off Monroe County are part of an open zone, while federal waters off Collier County remain part of the closed Southern Subzone. Some fishermen fish in the northern portion of Monroe County, which is a sparsely populated area. To land those fish they must travel to the Florida Keys where dealers in Monroe County are located. **Alternatives 2-4** would allow fishermen who legally harvest king mackerel from Monroe County to transport and land their catch in other areas of the Gulf that are closed to king mackerel fishing. If these fishermen are more likely to fish for king mackerel if they can land in Collier County, than effort could increase relative to **Alternative 1** and the impacts to the physical and biological environments could increase. If levels of effort do change, the least restrictive alternative would have the largest impact on the biological and physical environments. The alternatives from least restrictive to most restrictive are **Preferred Alternative 3**, **Alternative 2**, **Alternative 4**, and **Alternative 1**.

4.3.2 Direct and Indirect Effects on the Economic Environment

Alternative 1 would not establish a transit provision. The no action alternative would continue to prohibit the possession of legally harvested king mackerel when transiting through closed areas. **Alternative 1** would not affect the harvest or other customary uses of the king mackerel resources. Therefore, **Alternative 1** is not expected to result in any change in effects on the economic environment.

Alternative 2 and **Preferred Alternative 3** would implement limited transit provisions for king mackerel legally harvested in specific areas. **Alternative 2** would allow Atlantic migratory

group king mackerel harvested in the EEZ off Monroe County to transit through the Florida west coast Northern and Southern Subzones. The most flexible transit provision would occur under **Preferred Alternative 3**, which would allow vessels with legally harvested king mackerel to transit through any area closed to king mackerel fishing. Vessels possessing king mackerel legally harvested in the EEZ off Collier County would be permitted to transit through the Eastern Zone Northern Subzone under **Alternative 4**.

Reducing binding constraints or eliminating restrictive regulations would generally be expected to benefit fishermen and result in economic benefits. The relaxation of the transit prohibition is expected to afford fishermen more flexibility in trip planning and provide opportunities to adjust the cost structure and catch composition of king mackerel trips. Under the status quo, some fishermen may elect to forego fishing for king mackerel at certain times of the year because of the transit prohibition through closed areas, and the potential increases in trip costs that would result from detours around closed areas to legally land king mackerel. In response to the establishment of favorable transit provisions, fishermen who have elected to limit their king mackerel fishing could increase their harvest. However, the potential increase in king mackerel landings by these fishermen could result in the commercial quota being reached sooner, triggering an earlier closure relative to status quo. Additionally, distributional effects would be expected to occur because, when a species is managed with a quota and the quota is routinely harvested, increased harvest by some fishermen must be matched by harvest reduction for other fishermen. As a result, while some fishermen may experience a net increase in economic benefits, others may experience a reduction in economic benefits if they are not able to adapt. Overall, however, the economic effects expected to result from a relaxation of transit restrictions are anticipated to be positive because the potential increases in net revenues that would result from the added flexibility in selecting catch composition and from costs savings from lower fuel expenditures are assumed to outweigh potential adverse economic effects that could result from earlier closures.

All other parameters equal, more lenient transit provisions granted during longer time periods would be expected to result in greater economic benefits (though the opportunity for distributional effects increases). Thus, **Preferred Alternative 3** is expected to result in the greatest increase in economic benefits. Although **Alternatives 2** and **4** are also expected to result in an increase in economic benefits relative to **Alternative 1**, it is not possible to rank these alternatives because the transit provisions proposed in these alternatives apply to different areas and time intervals.

4.3.3 Direct and Indirect Effects on the Social Environment

Transit provisions are expected to be beneficial to fishermen, dealers, and associated businesses. Allowing vessels to transit through closed areas to land fish harvested in open areas, with specifications for gear stowing, could reduce potential negative effects of unnecessary travel just to avoid closed areas to offload legally caught fish. Transit provisions that enable a fishing trip to be shorter in duration would allow fishermen to spend less time on the water due to the reduced travel time, thereby also supporting safety at sea. Also, harvest in an open zone or sub-zone could provide a supply of fish to areas that are closed by allowing vessels to land in the closed areas. **Alternative 1** would not allow for any of these benefits to the CMP fleet.

On the other hand, there may be a trade-off in these expected benefits as they could affect harvest patterns and fishermen's behavior. For example, if some fishermen are able to make additional fishing trips as a result of the reduced travel time to offload fish, effort would increase, resulting in less fish available for other fishermen. Thus, it is reasonable to expect that the quota would be caught in a shorter period of time, thereby decreasing the social benefits provided by the transit provisions.

The remaining alternatives differ in terms of which zone or subzone is proposed for transit, but would be expected to provide positive social effects for CMP fishermen and businesses that rely on a fresh supply of king mackerel. **Preferred Alternative 3** would provide the most flexibility in landing sites compared to **Alternatives 2** and **4**, by allowing transit through any closed area, as long as the king mackerel had been caught in an open area. By allowing transit through any closed area, **Preferred Alternative 3** would be expected to provide benefits to more fishermen than the other alternatives.

Alternatives 2-4 specify restrictions as to which closed areas may be transited, at what time, and for fish harvested from a particular area. These restrictions reduce the flexibility of the transit provision, resulting in fewer benefits, but potentially less disruption to normal harvest patterns. **Alternative 2** would provide more flexibility than **Alternative 4**, as the entire Eastern Zone may be transited with fish legally harvested off Monroe County. The transit provisions provided by these alternatives would provide benefits to fewer fishermen compared to **Preferred Alternative 3**, as only sub-sets of fishermen who need to transfer through the closed area, under the terms outlined by each alternative, would benefit.

4.3.4 Direct and Indirect Effects on the Administrative Environment

Allowing transit through closed areas would increase the burden on enforcement. Currently, with **Alternative 1**, fishermen cannot possess king mackerel in excess of the bag limit in a closed zone or subzone. **Alternatives 2-4** would allow vessels in direct and continuous transit with gear stowed to possess king mackerel within a closed area, requiring enforcement officers to make a determination about these conditions. **Alternatives 2** and **4** would restrict transit in some closed areas but allow it in others and would be the most difficult to enforce. **Alternative 1** would prohibit transit in all closed areas and **Preferred Alternative 3** would allow transit through all closed areas, both of which would be easier for enforcement officers and fishermen to remember in which areas transit is allowed and in which it is not.

4.4 Establish Regional Annual Catch Limits (ACLs) for Atlantic Migratory Group King Mackerel and Spanish Mackerel

2.4.1 Action 4.1 – Establish Regional Commercial Quotas for Atlantic Migratory Group King Mackerel

Alternative 1: No Action - retain one commercial quota for the Atlantic migratory group king mackerel.

Alternative 2: Establish a separate commercial quota of Atlantic migratory group king mackerel for North Carolina based on **Options a-d** below. Monitoring and implementation would be based on **Options e-g** below.

Option a: The North Carolina quota would be the Atlantic migratory group ACL times the average of the proportion of landings in North Carolina from 2007/2008 through 2011/2012.

Option b: The North Carolina quota would be the Atlantic migratory group ACL times the average of the proportion of landings in North Carolina from 2002/2003 through 2011/2012.

Option c: The North Carolina quota would be the Atlantic migratory group ACL times (50% of the proportion of landings in North Carolina 2002/2003 through 2011/2012 and 50% of the proportion of landings in North Carolina 2007/2008 through 2011/2012).

Option d: The North Carolina quota would be the Atlantic migratory group ACL times the average of the proportion of landings in North Carolina from 1997/1998 through 2011/2012.

Option e: NMFS would monitor landings in both North Carolina and the rest of the states and close the EEZ of each area when the respective quota is met or expected to be met.

Option f: North Carolina would monitor landings in North Carolina and prohibit landings in North Carolina when the North Carolina quota is met or projected to be met. NMFS would monitor landings in the rest of the states and close the entire EEZ when the General Atlantic quota is reached.

Option g: North Carolina would monitor landings in North Carolina and inform NMFS when the North Carolina quota is met or expected to be met; NMFS would then close the EEZ off North Carolina. NMFS would monitor landings in the rest of the states and close the EEZ off those states when the quota is reached.

Alternative 3: Establish quotas for Northern and Southern Zones for Atlantic migratory group king mackerel based on **Options a-d** below. The Northern Zone would include the EEZ off states from North Carolina north to New York. The Southern Zone would include the EEZ off South Carolina, Georgia, and the east coast of Florida. NMFS would monitor landings in both zones and close the EEZ of each zone when the respective quota is reached.

Option a: Each zone quota would be the Atlantic migratory group ACL times the average of the proportion of landings in that zone from 2007/2008 through 2011/2012.

Preferred Option b: Each zone quota would be the Atlantic migratory group ACL times the average of the proportion of landings in that zone from 2002/2003 through 2011/2012.

Option c: Each zone quota would be the Atlantic migratory group ACL times the average (50% of the proportion of landings from that zone 2002/2003 through 2011/2012 and 50% of the proportion of landings from that zone 2007/2008 through 2011/2012).

Option d: Each zone quota would be the Atlantic migratory group ACL times the average of the proportion of landings in that zone from 1997/1998 through 2011/2012.

Preferred Alternative 4: Allow for transfer of quota between regions. North Carolina and Florida would be designated as the coordinating states for any transfer request, in consultation with other states.

4.4.1.1 Direct and Indirect Effects on the Physical/Biological Environments

There are no direct biological or ecological effects from establishing regional commercial quotas for Atlantic migratory group king mackerel. The ACL and accountability measures (AMs) provide biological protection and prevent overfishing. This action does not change the level of catch, only how it is distributed.

Alternative 1 would retain one commercial quota for Atlantic migratory group king mackerel and this would not change the existing level of physical or biological effects.

Establishment of a separate commercial quota for North Carolina (**Alternative 2**) or separate commercial quotas for a Northern Zone and Southern Zone (**Alternative 3**), along with the options, would not change the existing level of biological/ecological effects. The commercial ACL and AMs provide biological protection and prevent overfishing of Atlantic migratory group king mackerel. **Alternatives 2** and **3** would not change the level of catch of Atlantic migratory group king mackerel, only how it is distributed.

Preferred Alternative 4 allows for transfer of commercial quota between the North Carolina commercial quota and the commercial quota for the remaining areas. This would help prevent commercial quota overages and reduce the potential for any physical or biological/ecological effects.

4.4.1.2 Direct and Indirect Effects on the Economic Environment

Typically, Atlantic migratory group king mackerel migrate from Florida northwards and the peak of the season in North Carolina occurs months later than it does in Florida. However, there is concern that if the future commercial ACL for Atlantic migratory group king mackerel is reduced, the entire quota could be caught off of Florida before the fish migrate towards North Carolina. **Alternative 2** seeks to insure that king mackerel fishermen from North Carolina have continued access to the shared stock by providing a separate ACL for that state. **Alternative 3** would divide the Atlantic migratory group king mackerel ACL into two zones, a Northern Zone

that would have an ACL for the states from North Carolina northwards, and a Southern Zone for South Carolina, Georgia, and Florida.

As shown in **Table 4.4.1.2.1**, in recent years, North Carolina has recorded a declining proportion of the total Atlantic migratory group king mackerel commercial landings. From the 2002/2003 season through the 2007/2008 season, commercial king mackerel landings in North Carolina averaged 41.65%. However, from the 2008/2009 season through the 2011/2012 season, the proportion of the commercial landings from North Carolina averaged 20.6%. The reason for the decline of landings in North Carolina is not clear. Only in the 2009/2010 season did the commercial sector come close to catching their entire quota (96.1%). As a result, quota closure has not been a factor in the decline of the proportion of king mackerel landings in North Carolina.

Table 4.4.1.2.1. Atlantic migratory group king mackerel commercial landings percentages for North Carolina vs. the rest of the Atlantic.

	North Carolina		**FL, GA, and SC**		
	% of Quota/ACL	% of Total Landings	% of Quota/ACL	% of Total Landings	**Unused Quota/ACL**
2002 - 2003	20.9%	44.7%	25.9%	55.3%	53.1%
2003 - 2004	16.0%	34.3%	30.5%	65.5%	53.5%
2004 - 2005	28.2%	38.2%	45.5%	61.7%	26.3%
2005 - 2006	31%	51.1%	29.5%	48.6%	39.3%
2006 - 2007	32.4%	40.2%	48.3%	59.8%	19.3%
2007 - 2008	29.8%	41.4%	41.9%	58.3%	28.3%
2008 - 2009	25.7%	30.7%	58.1%	69.3%	16.2%
2009 - 2010	21.2%	22%	74.9%	77.9%	3.9%
2010 - 2011	7.9%	8.6%	83.9%	91.4%	8.2%
2011 - 2012	11.7%	21.1%	43.7%	78.9%	44.6%

Note: Landings from the mid-Atlantic region equal <1%.
Source: Southeast Fisheries Science Center.

Table 4.4.1.2.2 shows the expected economic effects of Alternative 2, Options a-d based on the current commercial ACL for king mackerel of 3.88 mp. Because landings have been relatively volatile from one fishing year to the next, the average landings from the 2002/2003 through 2011/2012 season were compared to the ACLs that would result under each option. Under each option, both areas would receive an ACL that would be higher than the average landings in each respective area from the 2002/2003 through 2011/2012 fishing years. This result occurs because, as previously discussed, the total South Atlantic migratory group commercial king mackerel quota has not been harvested during any fishing year during this period. Assuming an ex-vessel price of $2.15 per pound (2011 dollars) and the entire ACL is harvested, fishermen in North Carolina would be expected to receive an increase in ex-vessel revenue ranging from approximately $278,000 to $1,312,000 under the different options. Under the same assumptions, fishermen in the other states would be expected to receive an increase in ex-vessel revenue ranging from approximately $1,396,000 to $2,431,000.

Table 4.4.1.2.3 shows the expected economic effects of Alternative 3, Options a-d assessed under the same assumptions utilized in the assessment of Alternative 2. Under Alternative 3, fishermen in the Northern Zone would be expected to receive an increase in ex-vessel revenue ranging from approximately $271,000 to $1,322,000 under the different options, and fishermen in the Southern Zone would be expected to receive an increase in ex-vessel revenue ranging from approximately $1,396,000 to $2,431,000.

Although not shown in Tables 4.4.1.2.2 and 4.4.1.2.3, all of the options under Alternatives 2 and 3 add up to the same total change in ex-vessel revenue. This occurs because the total harvest (3.88 mp) and average price per pound ($2.15) of king mackerel under each of the options remains unchanged, and the differences between the options lie only in how allocation is shifted between the different regions. As a result, options that benefit North Carolina (or the Northern Zone) would reduce the potential direct economic benefits for the remaining states (or the Southern Zone). Because the amount of harvest normally occurring in states north of North Carolina is typically rather small, the differences in the economic effects between the same options of Alternatives 2 and 3 are negligible. The options that have the potential to provide the greatest positive direct economic benefit to North Carolina (or the Northern Zone) in increasing order are Option d, Option b (Preferred Alternative 3, Option b is the preferred option), Option c, and Option a. The reverse order of these options has the potential to provide the greatest positive direct economic benefit the rest of the Atlantic coast.

Table 4.4.1.2.2. Expected economic effects of Action 4.1, Alternative 2 (2011 $).

Alternative 2	North Carolina KM Allocation (Percent)	North Carolina KM Allocation (Pounds)	Difference Between Allocation and Avg. Landed 2002/2002-2011/2012	Value of Difference in 2011 Dollars	General Atlantic Group KM Allocation (Percent)	General Atlantic Group KM Allocation (Pounds)	Difference Between Allocation and Avg. Landed 2002/2003-2011/2012	Value of Difference in 2011 Dollars
Option a	24.8%	962,240	129,252	$277,892	75.2%	2,917,760	1,127,467	$2,424,054
Option b	33.2%	1,288,160	455,172	$978,620	66.8%	2,591,840	801,547	$1,723,326
Option c	29.0%	1,125,200	292,212	$628,256	71.0%	2,754,800	964,507	$2,073,690
Option d	37.2%	1,443,360	610,372	$1,312,300	62.8%	2,436,640	646,347	$1,389,646

Table 4.4.1.2.3. Expected economic effects of Action 4.1, Alternative 3 (2011 $).

Alternative 3	Northern Zone KM Allocation (Percent)	Northern Zone KM Allocation (Pounds)	Difference Between Allocation and Avg. Landed 2002/2003-2011/2012	Value of Difference in 2011 Dollars	Southern Zone KM Allocation (Percent)	Southern Zone KM Allocation (Pounds)	Difference Between Allocation and Avg. Landed 2002/2003-2011/2012	Value of Difference in 2011 Dollars
Option a	24.8%	962,240	126,216	$271,364	75.2%	2,917,760	1,130,503	$2,430,581
Preferred Option b	33.3%	1,292,040	456,016	$980,434	66.7%	2,587,960	800,703	$1,721,511
Option c	29.1%	1,129,080	293,056	$630,070	70.9%	2,750,920	963,663	$2,071,875
Option d	37.4%	1,451,120	615,096	$1,322,456	62.6%	2,428,880	641,623	$1,379,489

As previously discussed, the effects depicted in Tables 4.4.1.2.2 and 4.4.1.2.3 are based on a comparison of the average landings from the 2002/2003 through 2011/2012 fishing years and assume each area harvests their ACL. The projected economic benefits would be reduced if the ACL in any area is not harvested (the transfer of unharvested quota would be allowed under **Preferred Alternative 4** and is discussed below). Also, as shown in Table 4.4.1.2.1, the distribution of harvest across the respective areas has been variable since the 2002/2003 fishing year and fishermen in some areas have harvested higher proportions of the ACL than would be allocated under the proposed alternatives and options. As a result, the proposed alternatives may result in a transfer of economic benefits from fishermen in one area to those in another. This may occur as a result of either the time period on which the regional ACLs are based (**Options a-d**) or the composition of the regions (**Alternative 2** or **Alternative 3**). The information available at the time of this analysis does not support a determination that the gain of revenue by fishermen in one area at the expense of fishermen in another would result in a net (overall) gain or loss. This finding holds regardless of whether the transfer of benefits (fish or revenue) occurs as a result of the option or alternative selected. As a result, available information does not support ranking within or across the alternative/option combinations of **Alternative 2** and **Alternative 3** according to most or least net economic benefits.

Options e, f, and **g** under **Alternative 2** may appear to be primarily administrative in nature because they address monitoring and quota closure. However, these options vary in who is responsible for harvest monitoring, when closures may occur, and which areas would be closed. As a result, these options may have different economic consequences. North Carolina would be responsible for monitoring landings in North Carolina under **Option f** and **Option g**, and NMFS would be responsible for monitoring landings in all states under **Option e**, and in all states but North Carolina under **Option f** and **Option g.** Available information does not support a determination that monitoring landings in North Carolina would be more or less accurate, timely, or effective under either state (North Carolina) or NMFS management. The additional need for coordination and communication between North Carolina and NMFS under state monitoring could result in closure delay, if appropriate. However, the potential for problems, and associated adverse economic consequences, should be low. The more significant differences would be expected to be associated with when and where closures may occur. Under **Option e** and **Option g,** the EEZ off an area would be closed if the ACL for that area is harvested (or projected to be harvested). This may result in the total ACL not being harvested, and associated economic benefits foregone, if the ACL in the remaining area is not harvested. As a result, the expected economic effects of **Option e** and **Option g**, other than as discussed above with respect to monitoring capabilities, would be expected to be indistinguishable. Under **Option f**, however, although landing in North Carolina would be prohibited after the North Carolina ACL is harvested (or projected to be harvested), the EEZ off North Carolina, and elsewhere, would only be closed if the entire ACL is harvested. As a result, **Option f** would be expected to result in the greatest likelihood the total ACL will be harvested and the associated economic benefits received.

Preferred Alternative 4, which would allow quota transfers between regions, would be expected to increase the probability the overall ACL would be harvested. As previously discussed, not harvesting the total ACL would be expected to result in foregone revenue and associated economic benefits. Although some quota may remain unharvested (not all of the

unharvested quota may be transferred, or conditions may not allow all of the quota transferred to be harvested), any portion that is transferred and subsequently harvested would result in increased revenue. Therefore, **Preferred Alternative 4** would be expected to result in increased economic benefits compared to **Alternative 1 (No Action)**.

4.4.1.3 Direct and Indirect Effects on the Social Environment

Allocation to one state or an additional separation of the commercial ACL for king mackerel into zones would be expected to have similar social effects as sector allocations, in that there could likely be some changes in fishing behavior and impacts to fishermen, communities, and businesses associated with the king mackerel portion of the CMP fishery. The mere act of separating a particular threshold into further allocation could have the perception of creating scarcity in that limits have been imposed on each individual allocation, which could contribute to restricted access to the resource for some user groups. Each subsequent division could drive perceptions of scarcity and could change the fishing behavior of those within a particular sector. These perceptions and associated effects on fishermen would not be expected under **Alternative 1**.

There has been concern from North Carolina representatives and fishermen about potential limited opportunity to fish for Atlantic migratory group king mackerel if a large proportion of the ACL is caught before North Carolina fishermen can access the stock due to weather or other factors. Specifically, the Atlantic migratory group king mackerel fishing year starts on March 1 and weather during this period may hinder North Carolina fishermen. However, fishermen in more southern states, particularly Florida, may be able to fish during this time and could impact the amount of quota left for the time when North Carolina fishermen can fish. Under **Alternative 1**, the risk of restricted access to king mackerel for North Carolina fishermen due to less time on the water associated with poor weather in the early months of the fishing year would likely continue.

Benefits primarily for North Carolina fishermen would be expected under **Alternative 2** because a separate North Carolina allocation would allow fishermen in North Carolina to have opportunity to harvest fish at different times of the year. Additionally, competition for quota among fishermen in North Carolina and fishermen in the other Atlantic states would be reduced, which may minimize any current or future localized derby conditions. However, fishermen associated with one of the allocations (North Carolina quota or General Atlantic quota) that reach the quota quickly may not benefit from the separate North Carolina allocation, because his/her quota would be lower if it is not a total ACL. A North Carolina commercial quota may also result in perceptions of inequity or reduce ability for a local fishery to grow.

Table 4.4.1.2.2 shows the expected allocations of the commercial ACL for Atlantic migratory group king mackerel under each option in **Alternative 2**. In general, a larger allocation to North Carolina would be the most beneficial to fishermen in North Carolina because it would allow landings levels to be maintained or increased, although larger allocations to North Carolina would reduce allocation to South Carolina, Georgia, Florida, and the Mid-Atlantic states. Also, separating an allocation would place North Carolina and the General Atlantic group under a smaller quota than previously accessible. South Carolina, Georgia, and the Mid-Atlantic states

would share a quota with Florida without access to the North Carolina quota. Because Florida generally makes up a majority of the landings, fishermen in some of the other states in the General Atlantic group (particularly Georgia and Florida) could have less access to the stock if Florida landings are a large proportion of the General Atlantic quota. If allocations are not substantially different from landings levels, there would be minimal impact on the fleet, although future harvest patterns could be affected if participation changes in the states fishing on the General Atlantic quota. For Florida, Georgia, South Carolina, and the Mid-Atlantic, it would be expected that benefits to the fleet and associated fishing communities and businesses would be the highest under **Option a**; next highest under **Option c**; followed by **Option b**. **Option d** would be expected to be the least beneficial for these states because it provides the smallest allocation to the Florida, Georgia, South Carolina, and the Mid-Atlantic. For the North Carolina fleet, the opposite would be expected, in that a smaller allocation to the General quota would be more beneficial to fishermen harvesting in the EEZ of North Carolina. Therefore **Option d** would be expected to be the most beneficial for North Carolina fishermen. **Option b** would be less beneficial followed by **Option c**. **Option a** would be expected to be the least beneficial to North Carolina fishermen.

Establishment of a Northern Zone and Southern Zone along with separate quotas under **Alternative 3** would create allocations as shown in Table 4.4.1.2.3. **Options a-d** under **Alternative 3** would calculate the percentage of the ACL for the Northern Zone using combined landings from North Carolina, Virginia, Maryland, Delaware, Pennsylvania, New Jersey, and New York, and for the Southern Zone using combined landings of South Carolina, Georgia, and the Florida East Coast, and Florida Keys on the Atlantic side. But, because Mid-Atlantic landings make up such a small proportion of total Atlantic migratory group king mackerel landings (less than 1% in all years), the expected allocations for each option under **Alternative 3** are similar to those under **Alternative 2**. The effects of options under **Alternative 3** on fishermen would be similar to those under **Alternative 2** except that fishermen in the Mid-Atlantic states would have access only to the Northern Zone quota. If allocations are not substantially different from landings levels, there would be minimal impact on the fleet, although future harvest patterns in the proposed Northern or Southern Zone could be affected if participation changes. For Florida, Georgia, and South Carolina, it would be expected that benefits to the fleet and associated fishing communities and businesses would be the highest under **Option a**; next highest under **Option c**; followed by **Preferred Option b**. The option that would be expected to be the least beneficial for these states is **Option d** because it provides the smallest allocation to the Florida, Georgia, and South Carolina. For benefits to the North Carolina and Mid-Atlantic fleet, the opposite would be expected, in that a smaller allocation to the Southern Zone quota would be more beneficial to fishermen harvesting in the proposed Northern Zone. Therefore **Option d** would be expected to be the most beneficial for North Carolina and Mid-Atlantic fishermen. **Preferred Option b** would be less beneficial followed by **Option c**. **Option a** would be expected to be the least beneficial to North Carolina and Mid-Atlantic fishermen.

The transfer provision that would be established under **Preferred Alternative 4** would provide broad social benefits by providing an avenue to adapt the available ACL for each zone. In a fishing year, market or environmental conditions could result in one zone not meeting the zone's

ACL and **Preferred Alternative 4** could help to meet the total commercial ACL for Atlantic migratory group king mackerel for that year even if one zone does not meet its ACL.

4.4.1.4 Direct and Indirect Effects on the Administrative Environment

The monitoring and documentation needed to track a separate North Carolina commercial quota for Atlantic migratory group king mackerel exist within the state of North Carolina. They have extensive experience working with similar programs for a number of northeast species and monitoring is something North Carolina has considerable experience in administering under the Atlantic States Marine Fisheries Commission management plans. Their trip ticket program is comprehensive and they call dealers to get updated landings as a quota gets closer to being met. Trip tickets from North Carolina are provided to the Atlantic Coastal Cooperative Statistics Program, and NMFS uses these data to track regional quotas.

The NMFS Commercial Landings Monitoring (CLM) System came online in June 2012 and is now being used to track commercial landings of most 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 how 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 SERO. The CLM system would be used to track the entire commercial ACL under **Alternative 1** whereas a combination of the CLM and North Carolina trip ticket program would be used to track the commercial quotas under **Alternatives 2** and **3**.

With the proposed requirements for mackerel dealers to obtain a dealer permit, improved commercial monitoring mechanisms recently implemented, and proposed improvements to dealer reporting, it is less likely that repeated commercial ACL overages would occur. The Southeast Fisheries Science Center (SEFSC) worked with SERO, the Gulf of Mexico Fishery Management Council (Gulf of Mexico Council), and South Atlantic Fishery Management Council (South Atlantic Council) to develop a Joint Dealer Reporting Amendment, which has been approved by Gulf of Mexico Council and South Atlantic Council (Councils) and submitted for formal review (reference). The Joint Dealer Reporting Amendment would be expected to enhance reporting of commercial data by requiring dealers have a federal permit for mackerel. Further, the 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.

Preferred Alternative 4 would increase the level of administrative burden as the commercial quotas for North Carolina and the remaining area would need to be changed as quota was transferred. Other administrative burdens that may result from separate commercial quotas would take the form of development and dissemination of outreach and education materials for fishery participants.

2.4.2 Action 4.2 – Establish Regional Commercial Quotas for Atlantic Migratory Group Spanish Mackerel.

Alternative 1: No Action - retain one commercial quota for the Atlantic migratory group Spanish mackerel

Alternative 2: Establish a separate commercial quota for Atlantic migratory group Spanish mackerel for North Carolina based on Options a-d below. Monitoring and implementation would be based on Options e-g below.

Option a: The North Carolina quota would be the Atlantic migratory group ACL times the average of the proportion of landings in North Carolina from 2007/08 through 2011/12.

Option b: The North Carolina quota would be the Atlantic migratory group ACL times the average of the proportion of landings in North Carolina from 2002/03 through 2011/2012.

Option c: The North Carolina quota would be the Atlantic migratory group ACL times (50% of the proportion of landings in North Carolina 2002/03 through 2011/2012 and 50% of the proportion of landings in North Carolina 2007/08 through 2011/12).

Option d: The North Carolina quota would be the Atlantic migratory group ACL times the average of the proportion of landings in North Carolina from 1997/98 through 2011/12.

Option e: NMFS would monitor landings in both North Carolina and the rest of the states and close the EEZ of each area when the respective quota is met or expected to be met.

Option f: North Carolina would monitor landings in North Carolina and prohibit landings in North Carolina when the North Carolina quota is met or projected to be met. NMFS would monitor landings in the rest of the states and close the entire EEZ when the General Atlantic quota is reached.

Option g: North Carolina would monitor landings in North Carolina and inform NMFS when the North Carolina quota is met or expected to be met; NMFS would then close the EEZ off North Carolina. NMFS would monitor landings in the rest of the states and close the EEZ off those states when that quota is reached.

Alternative 3: Establish quotas for Northern and Southern Zones for Atlantic migratory group Spanish mackerel based on Options a-d below. The Northern Zone would include the EEZ off states from North Carolina north to New York. The Southern Zone would include the EEZ off South Carolina, Georgia, and the east coast of Florida. NMFS would monitor landings in both zones and close the EEZ of each zone when the respective quota is reached.

Option a: Each zone quota would be the Atlantic migratory group ACL times the average of the proportion of landings in that zone from 2007/08 through 2011/2012.

Preferred Option b: Each zone quota would be the Atlantic migratory group ACL times the average of the proportion of landings in that zone from 2002/2003 through 2011/2012.

Option c: Each zone quota would be the Atlantic migratory group ACL times the average (50% of the proportion of landings from that zone 2002/2003 through 2011/2012 and 50% of the proportion of landings from that zone 2007/2008 through 2011/2012).

Option d: Each zone quota would be the Atlantic migratory group ACL times the average of the proportion of landings in that zone from 1997/1998 through 2011/2012.

Preferred Alternative 4: Allow for transfer of quota between regions. North Carolina and Florida would be designated as the coordinating states for any transfer request, in consultation with other states.

4.4.2.1 Direct and Indirect Effects on the Physical/Biological Environments

There are no direct biological or ecological effects from establishing regional commercial quotas for Atlantic migratory group Spanish mackerel. The ACL and AMs provide biological protection and prevent overfishing. This action does not change the level of catch, only how it is distributed.

Alternative 1 would retain one commercial quota for Atlantic migratory group Spanish mackerel and this would not change the existing level of physical or biological effects.

Establishment of a separate commercial quota for North Carolina (**Alternative 2**) or separate commercial quotas for a Northern Zone and Southern Zone (**Alternative 3**), along with the options, would not change the existing level of biological/ecological effects. The commercial ACL and AMs provide biological protection and prevent overfishing of Atlantic migratory group Spanish mackerel. **Alternatives 2** and **3** would not change the level of catch of Atlantic migratory group Spanish mackerel, only how it is distributed.

Preferred Alternative 4 allows for transfer of quota between the North Carolina commercial quota and the commercial quota for the remaining areas. This would help prevent commercial quota overages and reduce the potential for any physical or biological/ecological effects.

4.4.2.2 Direct and Indirect Effects on the Economic Environment

The distribution of Atlantic migratory group Spanish mackerel landings from the 2002/2003 through 2011/2012 fishing years is shown in **Table 4.4.2.2.1**. Although difficult to discern because of confidential data, the average fishing year distribution of landings over this period does not show a clear trend (**Table 2.4.3**; **Table 4.4.2.2.1**). The last three seasons in **Table 4.4.2.2.1** shows that the commercial fishery exceeded its allocation by as much as 24.7%. However, for the years that are not confidential, there is no discernible trend in the proportion of the overall commercial catch landed in North Carolina compared to landings from Florida, Georgia, and South Carolina.

Table 4.4.2.2.1. Atlantic migratory group Spanish mackerel commercial landings proportion for North Carolina compared to the rest of the South Atlantic and Mid-Atlantic states.

	North Carolina		FL, GA, SC and Mid-Atlantic[1]		
	% of Quota/ACL	% of Total Landings	% of Quota/ACL	% of Total Landings	**Unused Quota/ACL**
2002 - 2003	18.1%	22.9%	60.8%	77.1%	21.1%
2003 - 2004	11.8%	12.7%	81.4%	87.3%	6.8%
2004 - 2005	11.8%	14.8%	68.0%	85.2%	20.2%
2005 - 2006	11.5%	12.4%	81.7%	87.6%	6.7%
2006 - 2007	13.0%	13.0%	87.2%	87.0%	-0.2%
2007 - 2008	13.5%	16.2%	69.6%	83.8%	16.9%
2008 - 2009	11.5%	13.8%	71.6%	86.2%	17.0%
2009 - 2010	26.6%	23.8%	84.9%	76.2%	-11.5%
2010 - 2011	25.2%	20.2%	99.5%	79.8%	-24.7%
2011 - 2012	24.1%	22.0%	85.5%	78.0%	-9.5%

[1] Landings from the Mid-Atlantic region equal < 3%.
ACL for 2002/03 through 2005/06 = 3,870,000 lbs; ACL for 2006/07 to 2011/12 = 3,620,000 lbs.
Source: Southeast Fisheries Science Center.

The ACL for Spanish mackerel was recently changed (lowered) in Amendment 18 to the Coastal Migratory Pelagics FMP (GMFMC and SAFMC 2011). The economic effects of lowering the ACL were analyzed as part of that amendment. There are no data available from fishing years during which harvest was managed under the lower ACL because the actions of Amendment 18 were only recently put into effect for the 2012/2013 fishing year and final data for that fishing year are not available yet. As a result, the analysis for Action 4.4.4 required certain assumptions. The first assumption used in the analysis was that the total ACL will continue to be harvested. This is a logical assumption because, as shown in Table 4.4.2.2.1, harvest has exceeded the ACL in recent years. As a corollary to this assumption, this analysis also assumed the regional ACLs(state or zone) will be harvested, rather than allow overage of the ACL in one region, matched by an underage elsewhere, and a net harvest of no more (or less) than the total ACL. The second assumption used in the analysis was that the distribution of the total catch between regions in previous years would have remained unaffected if overages or underages, where they occurred, of the total ACL had not occurred. For example, as shown in Table 4.4.2.2.1, during the 2011/2012 fishing year, 22 percent of the total commercial harvest of Spanish mackerel was landed in North Carolina and 78 percent elsewhere. However, the total harvest exceeded the total ACL by 9.5 percent. The assumption used in this assessment was that the distribution of harvest would have remained 22 percent and 78 percent if the ACL had not been exceeded. The third assumption used in the analysis was that future harvest overages would not occur.

Under these assumptions, the assessment of the expected economic effects of Action 4.4.2 is based on a comparison of the allocation ratios, and associated harvest and revenue, that would result from each alternative/option combination to the baseline that would be expected to occur under **Alternative 1** (**No Action**). For discussion purposes, two alternative baselines were considered. The first baseline used the average annual distribution of landings from the 2002/2003 through the 2011/2012 fishing years. The second baseline used the average annual distribution of landings from the three most recent fishing years for which final harvest data are available, 2009/2010 through 2011/2012. It is not known which baseline would be expected to

best represent the harvest distribution most likely to occur under **Alternative 1** (**No Action**). However, because the first baseline incorporates the same period that would occur under **Option b** (2002/2003 through 2011/2012), consideration of the second baseline (or some other baseline, such as the distribution pattern from the most recent fishing year), eliminates the analytical outcome that **Option b** would not be expected to result in any change in harvest or economic benefits compared to **Alternative 1** (**No Action**) (because they utilize the same harvest distribution pattern). It is noted that the inclusion of a second baseline only affects comparison of a particular option (in this case, **Option b**) to **Alternative 1** (**No Action**) and not to the other options. Therefore, comparison of the options is not affected).

The results of the assessment are presented in Tables 4.4.2.2.2 through 4.4.2.2.5. Tables 4.4.2.2.2 and 4.4.2.2.3 utilize the 2002/2003 through 2011/2012 baseline and address the expected effects of **Alternative 2** and **Alternative 3**, respectively. Tables 4.4.2.2.4 and 4.4.2.2.5 utilize the 2009/2010 through 2011/2012 baseline. The results in all tables are based on the current commercial total ACL for Spanish mackerel of 3.13 mp and an average price per pound of $0.90 (2011 dollars).

Although not explicitly shown, for the results in Tables 4.4.2.2.2 and 4.4.2.2.3, it should be understood that the differences shown represent a gain to either North Carolina (**Alternative 2**) or the Northern Zone (**Alternative 3**) and a loss to the respective remaining states. This occurs because the options simply re-distribute the allowable harvest, the distribution of harvest under **Option b** is assumed equal to **Alternative 1** (**No Action**), and the remaining options would allocate more harvest to either North Carolina or the Northern Zone, which can only occur at the expense of harvest, and revenue, allocated to the remaining states. Thus, as an example, under **Alternative 2**, **Option a**, fishermen in North Carolina would be expected to receive an increase in total revenue from Spanish mackerel of approximately $56,000 and fishermen elsewhere would be expected to receive a decrease in total revenue of approximately $56,000.

Likewise, it should be understood for the results in Tables 4.4.2.2.4 and 4.4.2.2.5 that the differences shown represent a gain to either North Carolina (**Alternative 2**) or the Northern Zone (**Alternative 3**) and a loss to the respective remaining states. This occurs because the options simply re-distribute the allowable harvest, the options would allocate more harvest to either North Carolina or the Northern Zone, which can only occur at the expense of harvest, and revenue, allocated to the remaining states. Thus, as an example, under **Alternative 2**, **Option a**, fishermen in North Carolina would be expected to receive a decrease in total revenue from Spanish mackerel of approximately $79,000 and fishermen elsewhere would be expected to receive a decrease in total revenue of approximately $79,000.

Stating the relevant transfers in terms of effects to North Carolina or the Northern Zone, Alternative 2, Option a¸ Options c and d, Option c, and then Option b in increasing order result in expected transfers to North Carolina from the rest of the Atlantic coast. The estimated dollar value of these transfers ranges from approximately $79,000 to $135,000 per year. Alternative 3, Option d¸ Option a, Option c, and then Preferred Option b in increasing order result in expected transfers from the Northern Zone to the Southern Zone. The estimated dollar value of these transfers ranges from approximately $20,000 to $102,000 per year. In comparison to Alternative 1 (No Action), all of the options of Alternatives 2 and 3 are not expected to result in any changes

to the overall economic effects. However, compared to Alternative 1 (No Action), each of the options in Alternatives 2 and 3 could result in increased economic benefit to fishermen in North Carolina should the entire ACL potentially be taken south of North Carolina prior to the fish migrating northwards.

The expected economic effects of **Options e, f,** and **g** of **Alternative 2** would be identical to those discussed in Section 4.4.1.2 with respect to king mackerel. In summary, **Option f** would be expected to result in more economic benefits than **Alternative 1, Option e,** and **Option g**, and the expected economic effects of **Option e** and **Option g** would be equivalent.

Preferred Alternative 4, which would allow quota transfers between regions, would be expected to insure the probability the overall ACL would be harvested, regardless of how Spanish mackerel migrate in any given season. Therefore, **Preferred Alternative 4** would be expected to result in increased economic benefits compared to **Alternative 1 (No Action)**.

Table 4.4.2.2.2 Expected economic effects of Action 4.2, Alternative 2 compared to average annual landings from 2002/2003 to 2011/2012 (2011$)

Alternative 2	North Carolina SM Allocation (Percent)	General Atlantic Group SM Allocation (Percent)	Difference Between Allocation and Avg. Landed 2002/2003-2011/2012 (Percent)	Difference Between Allocation and Avg. Landed 2002/2003-2011/2012 (Pounds)	Difference Between Allocation and Avg. Landed 2002/2003-2011/2012 (Value)
Option a	19.2%	80.8%	2.0%	62,600	$56,340
Option b	17.2%	82.8%	0.0%	0	$0
Option c	18.2%	81.8%	1.0%	31,300	$28,170
Option d	18.2%	81.8%	1.0%	31,300	$28,170

Note: The baseline distribution ratio for Alternative 2 is Option b.

Table 4.4.2.2.3 Expected economic effects of Action 4.2, Alternative 3 compared to average annual landings from 2002/2003 to 2011/2012 (2011$)

Alternative 3	Northern Zone SM Allocation (Percent)	Southern Zone SM Allocation (Percent)	Difference Between Allocation and Avg. Landed 2002/2003-2011/2012 (Percent)	Difference Between Allocation and Avg. Landed 2002/2003-2011/2012 (Pounds)	Difference Between Allocation and Avg. Landed 2002/2003-2011/2012 (Value)
Option a	22.0%	78.0%	2.1%	65,730	$59,157
Preferred Option b	19.9%	80.1%	0.0%	0	$0
Option c	21.0%	79.0%	1.1%	34,430	$30,987
Option d	22.8%	77.2%	2.9%	90,770	$81,693

Note: The baseline distribution ratio for Alternative 3 is Option b.

Table 4.4.2.2.4 Expected economic effects of Action 4.2, Alternative 2 compared to average annual landings from 2009/2010 to 2011/2012 (2011$)

Alternative 2	North Carolina SM Allocation (Percent)	General Atlantic Group SM Allocation (Percent)	Difference Between Allocation and Avg. Landed 2009/2010-2011/2012 (Percent)	Difference Between Allocation and Avg. Landed 2009/2010-2011/2012 (Pounds)	Difference Between Allocation and Avg. Landed 2009/2010-2011/2012 (Value)
Option a	19.2%	80.8%	2.8%	87,640	$78,876
Option b	17.2%	82.8%	4.8%	150,240	$135,216
Option c	18.2%	81.8%	3.8%	118,940	$107,046
Option d	18.2%	81.8%	3.8%	118,940	$107,046

Note: The baseline distribution ratio for Alternative 2 is 22% for North Carolina SM Allocation and 78% for the General Atlantic Group SM Allocation.

Table 4.4.2.2.5 Expected economic effects of Action 4.2, Alternative 3 compared to average annual landings from 2009/2010 to 2011/2012 (2011$)

Alternative 3	Northern Zone SM Allocation (Percent)	Southern Zone SM Allocation (Percent)	Difference Between Allocation and Avg. Landed 2009/2010-2011/2012 (Percent)	Difference Between Allocation and Avg. Landed 2009/2010-2011/2012 (Pounds)	Difference Between Allocation and Avg. Landed 2009/2010-2011/2012 (Value)
Option a	22.0%	78.0%	1.5%	47,116	$42,405
Preferred Option b	19.9%	80.1%	3.6%	112,846	$101,562
Option c	21.0%	79.0%	2.5%	78,416	$70,575
Option d	22.8%	77.2%	0.7%	22,076	$19,869

Note: The baseline distribution ratio for Alternative 2 is 23.5% for Northern Zone SM Allocation and 76.5% for the Southern Zone SM Allocation.

4.4.2.3 Direct and Indirect Effects on the Social Environment

Overall, the potential impacts of an allocation of the Atlantic migratory group Spanish mackerel commercial ACL to North Carolina or separate allocations to a Northern Zone and Southern Zone on fishermen, communities and businesses associated with the Spanish mackerel commercial industry would be similar to impacts discussed in Section 4.4.1.3. No changes in the commercial quota under **Alternative 1** would likely avoid the effects that commonly occur when an ACL is divided. But, retaining **Alternative 1** may also have negative impacts on North Carolina fishermen if weather or other factors prohibit North Carolina fishermen from fishing during the early months of the fishing season (March 1 - February 28) while fishermen in the other South Atlantic states (particularly Florida) have Spanish mackerel landings that count towards the commercial ACL.

Table 4.4.2.2.2 shows the expected allocations of the commercial ACL for Atlantic migratory group Spanish mackerel under each option in **Alternative 2**. In general, a larger allocation to North Carolina under **Alternative 2**, **Options a-d** would be the most beneficial to fishermen in North Carolina because it would allow landings levels to be maintained or increased, although larger allocations to North Carolina would reduce allocation to South Carolina, Georgia, Florida, and the Mid-Atlantic states. Also, separating an allocation would place North Carolina and the general Atlantic group under a smaller quota than previously accessible. South Carolina, Georgia, and the Mid-Atlantic states would share a quota with Florida without access to the North Carolina quota. Because Florida generally makes up a majority of the landings, fishermen in some of the other states in the general Atlantic group (particularly Georgia and South Carolina Florida) could have less access to the stock if Florida landings are a large proportion of the general Atlantic quota. If allocation of the ACL to a state or region is not substantially different from landings levels, there would be minimal impact on the fleet, although future harvest patterns could be affected if participation changes in the states fishing on the General Atlantic quota. For Florida, Georgia, South Carolina, and the Mid-Atlantic, it would be expected that benefits to the fleet and associated fishing communities and businesses would be the highest under **Option b**, and the next highest under **Options c** and **d**. The option that would be expected to be the least beneficial for these states is **Option a** because it provides the smallest allocation to the Florida, Georgia, South Carolina, and the Mid-Atlantic. For benefits to the North Carolina fleet, the opposite would be expected, in that a smaller allocation to the General quota would be more beneficial to fishermen harvesting in the EEZ of North Carolina. Therefore **Option a** would be expected to be the most beneficial for North Carolina fishermen. **Options c** and **d** would be less beneficial, and **Option b** would be expected to be the least beneficial to North Carolina fishermen. Overall, the difference among the potential allocations of **Options a-d** is only 1-2%, and the social effects of the actual allocations would be similar for all options.

Establishment of a Northern Zone and Southern Zone along with separate quotas under **Alternative 3** would create allocations as shown in Table 4.4.2.2.3. Unlike king mackerel, Mid-Atlantic Spanish mackerel landings (primarily from Virginia) make up a small but measurable proportion of total Atlantic migratory group Spanish mackerel landings. Under **Alternative 3**, **Options a-d**, a higher percentage of the ACL would be allocated to the Northern Zone than just to North Carolina under **Alternative 2**. Although this higher percentage would be accessible to North Carolina fishermen, the landings history of the Mid-Atlantic states that contributed to the

higher allocation in **Options a-d** under **Alternative 3** would also likely contribute to the Northern Zone quota in addition to slightly lowering the expected allocation to the Southern Zone quota. As discussed, fishermen fishing in one zone would not have access to as many pounds as they have access to currently under the single quota for the Atlantic group.

If allocations are not substantially different from landings levels, there would be minimal impact on the fleet, although future harvest patterns could be affected if participation changes. For Florida, Georgia, and South Carolina, it would be expected that benefits to the fleet and associated fishing communities and businesses would be the highest under **Preferred Option b**; next highest under **Option c**; followed by **Option a**. The option that would be expected to be the least beneficial for these states is **Option d** because it provides the smallest allocation to the Florida, Georgia, and South Carolina. For benefits to the North Carolina and Mid-Atlantic fleet, the opposite would be expected, in that a smaller allocation to the proposed Southern Zone would be more beneficial to fishermen harvesting in the Northern Zone. Therefore **Option d** would be expected to be the most beneficial for North Carolina and Mid-Atlantic fishermen. **Option a** would be less beneficial followed by **Option c**. **Option b** would be expected to be the least beneficial to North Carolina and Mid-Atlantic fishermen.

The provision to allow transfer of quota under **Preferred Alternative 4** would provide broad social benefits by providing an avenue to adapt the available quota for each zone. In a fishing year, market or environmental conditions could result in one zone not meeting the zone's quota and **Preferred Alternative 4** could help to reach the total commercial ACL for Atlantic migratory group Spanish mackerel even if one zone does not meet its quota.

4.4.2.4 Direct and Indirect Effects on the Administrative Environment

The monitoring and documentation needed to track a separate North Carolina commercial quota for Atlantic migratory group Spanish mackerel exist within the state of North Carolina. They have extensive experience working with similar programs for a number of northeast species and monitoring is something North Carolina has considerable experience in administering under the Atlantic States Marine Fisheries Commission management plans. Their trip ticket program is comprehensive and they call dealers to get updated landings as a quota gets closer to being met. Trip tickets from North Carolina are provided to the Atlantic Coastal Cooperative Statistics Program, and NMFS uses these data to track regional quotas.

With the proposed requirements for mackerel dealers to obtain a dealer permit, improved commercial monitoring mechanisms recently implemented, and proposed improvements to dealer reporting, it is less likely that repeated commercial ACL overages would occur. The Joint Dealer Reporting Amendment (reference) would be expected to enhance reporting of commercial data by requiring dealers have a federal for mackerel. Further, the 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 NMFS CLM System is now being used to track commercial landings of most federally managed fish species (see section 4.4.1.4). The CLM system would be used to track the entire commercial ACL under **Alternative 1** whereas a combination of the CLM and North Carolina trip ticket program would be used to track the commercial quotas under **Alternatives 2** and **3**.

Preferred Alternative 4 would increase the level of administrative burden as the commercial quotas for North Carolina and the remaining area would need to be changed as quota was transferred. Other administrative burdens that may result from separate commercial quotas would take the form of development and dissemination of outreach and education materials for fishery participants.

4.5 Action 5: Modify the Framework Procedure.

Alternative 1: No Action – Do not modify the framework procedure adopted through Amendment 18.

Preferred Alternative 2: Modify the framework procedure to include changes to acceptable biological catches (ABCs), ABC/annual catch limits (ACL) control rules and, accountability measures (AMs) under the standard documentation process for open framework actions. Accountability measures that could be changed would include:

In-season AMs

- Closures and closure procedures
- Trip limit reductions or increases
- Designation of an individual fishing quota (IFQ) program as the AM for species in the IFQ program
- Implementation of gear restrictions

Post-season AMs

- Adjustment of season length
- Implementation of a closed season
- Adjustment or implementation of bag, trip, or possession limit
- Reduction of the ACL to account for the previous year overage
- Revoking a scheduled increase in the ACL if the ACL was exceeded in the previous year
- Implementation of gear restrictions
- Reporting and monitoring requirements

Alternative 3: Modify the framework procedure to include changes to accountability measures (AMs) under the standard documentation process for open framework actions. Accountability measures that could be changed would include:

In-season AMs

- Closure procedures
- Trip limit reductions or increases

Post-season AMs

- Adjustment of season length
- Adjustment of bag, trip, or possession limit

Preferred Alternative 4: Modify the framework procedure to include designation of responsibility to each Council for setting regulations for the migratory groups of each species.

This pertains to:
Responsibilities of Each Council:

1. Recommendations with respect to the Atlantic migratory groups of king mackerel, Spanish mackerel, and cobia will be the responsibility of the South Atlantic Council, and those for the Gulf migratory groups of king mackerel, Spanish mackerel, and cobia will be the responsibility of the Gulf Council, with the following exceptions:

   The South Atlantic Council will have responsibility to set vessel trip limits, closed seasons or areas, or gear restrictions for 1) the Eastern Zone - East Coast Subzone for Gulf migratory group king mackerel and 2) the east coast of Florida including the Atlantic side of the Florida Keys for Gulf migratory group cobia.
2. For stocks where a stock assessment indicates a different boundary between the Gulf and Atlantic migratory groups than the management boundary, a portion of the ACL for one migratory group may be apportioned to the appropriate zone, but management measures for that zone will be the responsibility of the Council within whose management area that zone is located.
3. Both councils must concur on recommendations that affect both migratory groups.

Preferred Alternative 5: Make editorial changes to the framework procedure to reflect changes to the names of the Council advisory committees and panels.

4.5.1 Direct and Indirect Effects on the Physical/Biological Environment

The impacts on the physical environment from CMP fishing are detailed in Section 4.1.1. No direct physical or biological effects would be expected from modifications of the framework procedure. Changes in harvest levels would change effort levels, either increasing or decreasing the impact on the physical and biological environments. If modifications increase the ease with which regulations can be implemented as needed, long-term benefits would increase.

Alternatives 2-5 offer greater management flexibility and, therefore, are expected to offer greater long-term benefits than **Alternative 1**. **Preferred Alternative 2** has a larger range of actions that can be taken through a framework procedure and therefore offers more flexibility than **Alternatives 1** and **3**. **Preferred Alternatives 4** and **5** are separate actions and could be implemented independently of either **Preferred Alternative 2** or **Alternative 3**, as well as each other. A combination of **Preferred Alternatives 2, 4,** and **5** offers the greatest efficiency and effectiveness of management change and the largest expected long-term benefit to the physical and biological environments.

4.5.2 Direct and Indirect Effects on the Economic Environment

Modifying the framework procedure is an administrative action. Other than **Alternative 1**, the proposed alternatives would expand the range of management measures that the Councils can implement without a full plan amendment. Because it is an administrative action, changing the framework procedure would not be expected to directly affect the harvest and other customary uses of the resource. Therefore, the proposed changes to the framework procedure are not expected to result in any direct changes on the economic environment. However, the proposed changes to the framework procedure could result in a speedier implementation of management

measures that may be beneficial to the stocks, with associated economic benefits, or otherwise result in increased economic benefits to fishermen and associated businesses. These would be indirect positive economic effects of the proposed changes. **Preferred Alternative 2** would implement broader changes to the framework procedure than **Alternative 3** and, as a result, is expected to result in greater indirect economic benefits than **Alternative 3**.

Neither **Preferred Alternative 4** nor **Preferred Alternative 5** address the same aspects of modification of the framework procedure addressed by **Preferred Alternative 2** or **Alternative 3** and should not be compared to these two proposed alternatives. Instead of improving the management process by expanding the range of management measures that can be changed through framework procedure, **Preferred Alternative 4** would be expected to improve management by shortening the management process. The explicit designation of responsibility to the Gulf and South Atlantic Councils proposed in **Preferred Alternative 4** is expected to streamline the implementation of required management measures, by limiting the management process to deliberation by a single Council. This would be expected to allow necessary regulatory changes, with associated economic benefits, to be implemented faster.

Preferred Alternative 5 would simply make editorial changes to the framework procedure to accommodate name changes of the Council advisory committees and panels. The names of some advisory groups have changed and certain management processes invoke participation of these groups by name. The proposed change would allow the Councils to continue to receive the information and advice from these groups, regardless of their current name or future name change, necessary to support better informed management decisions. Absent the proposed change, these and future groups may have reduced opportunity for participation in the management process. This may adversely affect the quality of resultant management decisions, with associated reduction in economic benefits. As a result, **Preferred Alternative 5** would be expected to result in increased economic benefits compared to **Alternative 1.**

A quantitative evaluation of the alternatives considered under this action cannot be provided with available information. A quantitative evaluation would require information on the specific management measures to be implemented, the expected changes to the stock(s) and/or participants in the fishery in question, and the anticipated time savings that would result from the use of the framework procedure. While unknown, the relative speed at which beneficial regulatory changes can be implemented under **Alternatives 2, 3,** and **4** would determine the magnitude of the anticipated indirect economic benefits.

4.5.3 Direct and Indirect Effects on the Social Environment

Modification of the framework procedure of the CMP fisheries would not be expected to result in any direct impacts. Rather, indirect effects would be expected and would result in broad, long-term social benefits, and minimal negative social effects. Although a framework is currently in place (**Alternative 1**), the proposed modifications to improve timeliness and incorporate regulatory updates (**Preferred Alternatives 2**, **Alternative 3, Preferred Alternative 4,** and **Preferred Alternative 5**) would be expected to contribute to improved management of the CMP stocks and would allow the Councils to respond to management needs. The relative speed at which beneficial regulatory changes can be implemented under **Preferred**

Alternative 2, **Alternative 3,** and **Preferred Alternative 4** would determine the magnitude of the anticipated indirect social benefits. Public participation and the review process would continue as part of the framework procedure under all alternatives.

Both **Preferred Alternative 2** and **Alternative 3** expand the range of management measures, including the AMs in the multiple zones of the CMP fishery, which the South Atlantic and Gulf Councils can implement without a full plan amendment. **Alternative 3** would allow for fewer changes to be made compared to **Preferred Alternative 2**, and would thus be expected to result in fewer indirect benefits by providing less flexibility to modify in-season and post-season AMs.

As discussed in the previous section, neither **Preferred Alternative 4** nor **Preferred Alternative 5** address the same aspects of modification of the framework procedure addressed by **Preferred Alternative 2** or **Alternative 3** and should not be compared to these two proposed alternatives. Instead of improving the management process by expanding the range of management measures that can be changed through framework procedure, **Preferred Alternative 4** would be expected to improve management by shortening the management process. The explicit designation of responsibility to the Gulf and South Atlantic Councils proposed in **Preferred Alternative 4** is expected to streamline the implementation of required management measures, by limiting the management process to deliberation by a single Council. This would be expected to allow necessary regulatory changes, with associated social benefits, to be implemented faster.

Preferred Alternative 5 would simply make editorial changes to the framework procedure to accommodate name changes of the Council advisory committees and panels. The names of some advisory groups have changed and certain management processes invoke participation of these groups by name. The proposed change would allow the Councils to continue to receive the information and advice from these groups, regardless of their current name or future name change, necessary to support better informed management decisions. Absent the proposed change, these and future groups may have reduced opportunity for participation in the management process. This may adversely affect the quality of resultant management decisions, with associated reduction in social benefits. As a result, **Preferred Alternative 5** would be expected to result in increased social benefits compared to **Alternative 1.**

4.5.4 Direct and Indirect Effects on the Administrative Environment

Alternative 1 would be the most administratively burdensome of the alternatives being considered, because any modifications to AMs would need to be implemented through a plan amendment, which is a more laborious and time consuming process than a framework action. Further, action by both Councils would be required for any framework action. **Preferred Alternative 2** and **Alternative 3** would give NMFS and the Councils flexibility by allowing for an adjustment of AMs through a framework action. Framework actions generally require less time and staff effort than plan amendments and would lessen the administrative burden on the agency. **Preferred Alternative 2** would provide the most flexibility, resulting in the least administrative burden on the agency.

Preferred Alternative 4 would decrease the administrative burden because each Council could carry out framework actions applying to their migratory groups without involvement of the other Council. This would save time because each Council meets on different schedules throughout the year.

Preferred Alternative 5 would reduce the administrative burden because the language is generic enough to incorporate future changes in the name of a committee or panel. Thus, development of a plan amendment and the associated time and work associated with it would be avoided.

4.6 Action 6: Modify the Gulf and Atlantic Migratory Group Cobia Annual Catch Limits (ACLs) and Annual Catch Targets (ACTs).

Alternative 1: No Action. The entire Gulf migratory group cobia ACL applies to the Gulf Council jurisdictional area and the entire Atlantic migratory group cobia ACL applies to the South Atlantic jurisdictional area. The ACLs and ACTs that were established by Amendment 18 are as follows:

Gulf Migratory Group	Atlantic Migratory Group
ACL = 1,460,000 lbs	ACL = OY = 1,571,399 lb Commercial ACL (8% ACL) = 125,712 lb Recreational ACL (92% ACL) = 1,445,687 lb
Stock ACT = 1,310,000 lbs	Recreational ACT = 1,184,688 lb

Alternative 2: The ACL = ABC as determined by the SSCs for each migratory group. The entire Gulf migratory group cobia ACL applies to the Gulf Council jurisdictional area and the entire Atlantic migratory group cobia ACL applies to the South Atlantic jurisdictional area. The ACLs and ACTs would be as follows:

Gulf Migratory Group	Atlantic Migratory Group
(See Table 2.6.1 for values)	
ACL = ABC	ACL = ABC = OY Commercial ACL = 8% ACL Recreational ACL = 92% ACL
Stock ACT = 90%ACL	Recreational ACT = ACL [(1-PSE) or 0.5, whichever is greater]

Alternative 3: The ACL for each jurisdictional area would be determined as follows:

- The Gulf migratory group cobia ABC (as determined by the SSC) would be divided into a Gulf Zone ACL and a Florida East Coast Zone ACL (FL/GA border to Council jurisdictional boundary) based on the options below.

  Option a: Use 2003-2012 (10 years) landings to establish the percentage split for the Gulf ABC.

Option b: Use 2008-2012 (5 years) landings to establish the percentage split for the Gulf ABC.
Option c: Use "Boyles Law": 50% of landings from 2003-2012 + 50% of landings from 2008-2012 to establish the percentage split for the Gulf ABC.
Preferred Option d: Use 1998-2012 (15 years) landings to establish the percentage split for the Gulf ABC.
Option e: Based on yellowtail snapper: 50% of average landings from 1993-2008 + 50% of average landings from 2006-2008 to establish the percentage split for the Gulf ABC.
Option f: Based on mutton snapper: 50% of average landings from 1990-2008 + 50% of average landings from 2006-2008 to establish the percentage split for the Gulf ABC.

- The South Atlantic ACL would equal to the ABC for the Atlantic migratory group cobia (as determined by the SSC).

- Management measures set by the South Atlantic Council for the Atlantic migratory group would also apply to the Gulf migratory group Florida East Coast Zone.

The ACLs and ACTs would be as follows:

Gulf Migratory Group		**Atlantic Migratory Group**
(see Table 2.6.3 for values for each option)		
Gulf Zone	**FL East Coast Zone**	
ACL = x% ABC	ACL = x% ABC Commercial ACL = 8% ACL Recreational ACL = 92% ACL	ACL = ABC = OY Commercial ACL = 8% ACL Recreational ACL = 92% ACL
Stock ACT = 90%ACL	Recreational ACT = ACL [(1-PSE) or 0.5, whichever is greater]	Recreational ACT = ACL [(1-PSE) or 0.5, whichever is greater]

4.6.1 Direct and Indirect Effects on the Physical/Biological Environment

Changing the ACL or ACT could affect the physical environment if effort changes from current levels. If harvest is restricted under an ACL or ACT, fishing effort could be reduced through AMs such as a shortened season. Cobia are typically caught at the ocean surface and hook-and-line gear typically do not come in contact with bottom habitat. Hook-and-line gear still has 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.

Amendment 18 (GMFMC and SAFMC 2011) set the cobia ACL equal to the ABC specified for cobia in the Gulf and South Atlantic. Furthermore, the Atlantic migratory group OY was set equal to the ACL, and the recreational ACT was defined as the ACL times [(1-PSE) or 0.5, whichever is greater]. For the Gulf migratory group, the stock ACT was defined as 90% of the

ACL. Thus, the numerical values associated with the ACLs and ACTs are dependent on the ABC. Therefore, a change in the ABC should result in a change in the ACLs and ACTs. Modifying the ACL or ACT from the current values described in CMP Amendment 18 (**Alternative 1**) would potentially have an impact on the biological environment if harvest changes from current levels, and AMs are triggered if the ACL or ACT is met or exceeded. An ACL equal to the ABC (**Alternatives 2** and **3**) would allow a higher level of landings than an ACL lower than the ABC. In fact, Gulf landings have only exceeded the current ACL once in the last 15 years. However, progressively lower ACLs would restrict landings more and increase the likelihood of exceeding the ACL in more years. Compared to **Alternative 1**, **Alternative 3 Option a** and **Preferred Option d** would result in an increase in the Gulf ACL while **Option b** would result in a decrease. The combined ACLs within the South Atlantic jurisdictional area (Atlantic ACL plus the Florida East Coast ACL) would increase under **Options a, b**, and **Preferred Option d**. **Options c**, **e**, and **f** would use 50% of landings from recent years and 50% of landings from a longer time period. **Options c, e**, and **f** all result in an increase in the Gulf ACL, while the combined South Atlantic and Florida East Coast ACLs would decrease only under **Options e** and **f**. Therefore, **Options a, c,** and **Preferred Option d** may have fewer biological benefits than the status quo if landings up to the ACL are achieved in both the Gulf and the Florida East Coast. **Option b** may have a similar effect on the Florida east coast, but not the Gulf. Conversely, **Options e** and **f** may have fewer biological benefits for cobia in the Gulf than the status quo, but not the Florida east coast. While options that result in lower catches would have a greater biological benefit, harvest levels associated with the ABC and ACLs are considered to be sustainable, and AMs are in place to ensure ACLs are not exceeded and overfishing does not occur. Therefore, options that increase the ACL for cobia in any of the jurisdictional areas are not likely to have negative biological effects on cobia stocks.

Jurisdictional ACLs and ACTs would allow the cobia portion of the CMP fishery to achieve OY while still constraining the stock within the ACL. If there are separate ACLs or ACTs for the Atlantic migratory group, the Gulf Zone, and the Florida East Coast Zone (**Alternative 3** and associated options), AMs could be triggered as each jurisdiction reaches its respective limit, provided adequate monitoring is in place. This level of control would be expected to result in greater positive impacts on the biological environment because catch could be more closely monitored. Further, with separate ACLs and/or ACTs, different types of AMs could be triggered that are more suited to the particular jurisdiction, and therefore, be more effective in constraining harvest within the ACL. Alternatively, because catches of cobia are approximately 90% recreational, monitoring precision is currently not as high as with other species with higher levels of observed or otherwise independently validated landings (commercial, headboat observer programs). Consequently, any potential positive biological impacts of jurisdiction-specific ACLs or ACTs may not be realized.

4.6.2 Direct and Indirect Effects on the Economic Environment

South Atlantic

Alternative 1 would not change the ACLs for the Gulf and South Atlantic Council cobia fisheries. However, **Alternative 1** would not use the best available data resulting from the SEDAR 28 stock assessment for cobia (SEDAR 2013a, 2013c). Not using the best available data could result in not fishing to OY, either in terms of causing potential harm to the stock by

allowing overharvest, or by not allowing fishermen to harvest as much of the resource as they would otherwise be able to safely, depriving them the opportunity for greater economic gain. The stock assessment for cobia (SEDAR 28 2013c) provided ABCs for 2014, 2015, and 2016 and indicated that it is necessary for the ABC to be reduced over time.

The pounds of cobia landed historically by sector and migratory group for the South Atlantic region and northwards are shown in Table 4.6.2.1. Table 4.6.2.2 shows the pounds that would be allocated to each sector under **Alternatives 2** and **3** based on data shown in Table 2.6.1 and Table 2.6.2. Additionally, Table 4.6.2.2 uses the sector allocation percentages shown in **Alternative 1.**

Table 4.6.2.1. Landings of cobia by sector and migratory group, 2007-2011, for the US east coast (pounds).

	North of Florida		**Florida East Coast**		**Total**	
	Commercial	Recreational	Commercial	Recreational	Commercial	Recreational
2007	31,185	765,969	60,805	588,244	91,990	1,354,213
2008	32,312	539,386	57,003	423,746	89,315	963,132
2009	41,727	708,895	65,953	386,952	107,680	1,095,847
2010	55,683	872,978	101,564	753,815	157,247	1,626,793
2011	33,717	327,871	156,069	761,440	189,786	1,089,311

Source: SEDAR 28 2013c.

Table 4.6.2.2. Cobia ACLs by sector and migratory group under **Alternatives 2** and **3** for fishing years 2014-2016 (in pounds).

	2014		**2015**		**2016**	
	Comm.	Rec.	Comm.	Rec.	Comm.	Rec.
Alternatives 2 and **3**- Atlantic Zone	60,000	670,000	60,000	630,000	50,000	620,000
Alternative 3 - FL E. Coast						
Option a	70,000	820,000	70,000	840,000	80,000	870,000
Option b	90,000	990,000	90,000	1,020,000	90,000	1,050,000
Option c	80,000	910,000	80,000	930,000	80,000	960,000
Pref. Option d	70,000	810,000	70,000	830,000	70,000	860,000
Option e	60,000	720,000	60,000	740,000	70,000	760,000
Option f	60,000	730,000	70,000	750,000	70,000	780,000

Note: the Atlantic Zone ACLs would be the same for both alternatives, but the area over which the ACL would apply would be larger for **Alternative 2** (FL Keys to NY) than **Alternative 3** (GA-NY).

Alternative 2 would have all of the Gulf Zone migratory group cobia ACL be allocated to the Gulf Council area of jurisdiction (W FL – TX) and the all of the Atlantic Zone migratory group cobia ACL allocated to the South Atlantic Council area of jurisdiction (E FL – NY). However,

although the tabulation of Gulf Zone ACL would include historic harvests from the east coast of Florida, subsequent harvest of cobia on the east coast of Florida under **Alternative 2** would be subject to South Atlantic Council management and count against the Atlantic migratory group ACL because this area falls under the jurisdiction of the South Atlantic Council. As a result, under **Alternative 2**, cobia harvested on the east coast of Florida would be counted against the Atlantic ACL even though these fish would not be part of the Atlantic migratory group. Conversely, Gulf anglers would be able to increase their harvest by harvesting in the Gulf fish that have historically been harvested on the east coast of Florida.

Alternative 2 Atlantic Zone ACLs for the commercial sector for cobia are approximately 60,000 lbs for both 2014 and 2015, but drop to approximately 50,000 lbs for the 2016 fishing year (Table 4.6.2.2). From 2007 through 2011, the commercial sector in this zone had its highest landings in 2011 of 189,786 lbs, averaging 127,204 lbs per year. Assuming the 2007 to 2011 average would be caught each year in 2014 through 2016 if there was no ACL to constrain the harvest, then **Alternative 2** would be expected to result in a reduction in cobia commercial harvest of approximately 67,200 lbs in 2014 and 2015, and 77,200 lbs in 2016.

The ex-vessel value for cobia landed off North Carolina in 2011 was $1.75/lb (S. McInerny, North Carolina Division of Marine Fisheries [NCDMF] Trip Ticket Program, pers. comm.). The ex-vessel value for cobia landed on the east coast of Florida in 2011 was $3.08 per lb (S. Brown, FWC State Trip Ticket Program, pers. comm.). Based on these ex-vessel prices, the estimated reduction in ex-vessel value of commercially harvested cobia to the Atlantic Zone in 2014 and 2015 to range from approximately $118,000 to $207,000, and range from approximately $135,000 to $238,000 in 2016.

Preferred Alternative 3 and associated options, including **Preferred Option d**, would differ from **Alternative 2** by dividing the Gulf migratory group ABC into a Gulf Zone ACL and a Florida East Coast ACL. The **Alternative 1** ACLs are based on counting the east coast of Florida landings with the states north of Florida. In order to understand the economic effects of this action on the entire South Atlantic region and northwards, Table 4.6.2.3 indicates future Atlantic migratory group ACLs combined with the Florida East Coast Zone ACL options from **Preferred Alternative 3**.

Table 4.6.2.3. Florida East Coast Zone plus Atlantic Zone commercial and recreational ACLs for cobia for 2014-2016 (pounds whole weight). This would be the total amount managed by the South Atlantic Council for **Alternative 3**.

	2014		**2015**		**2016**	
	Com.	Rec.	Com.	Rec.	Com.	Rec.
Opt a	130,000	1,490,000	130,000	1,470,000	130,000	1,490,000
Opt b	150,000	1,660,000	150,000	1,650,000	140,000	1,670,000
Opt c	140,000	1,580,000	140,000	1,560,000	130,000	1,580,000
Opt d	130,000	1,480,000	130,000	1,460,000	120,000	1,480,000
Opt e	120,000	1,390,000	120,000	1,370,000	120,000	1,380,000
Opt f	120,000	1,400,000	130,000	1,380,000	120,000	1,400,000

Average total recreational landings for the South Atlantic jurisdiction from 2007 through 2011 (Table 4.6.2.1) were lower than the combined Atlantic Zone and Florida East Coast Zone ACLs under all **Alternative 3** options (Table 4.6.2.3) for all years except 2010. Because 2014 allows for the greatest number of pounds to be landed by the recreational sector, the loss of trips and net operating revenue would be less. As discussed in Section 3.4.2, estimates of the consumer surplus (CS) for cobia are not available. As a result, estimates of the reduction in CS that would be expected to occur under **Alternative 3** relative to **Alternative 1** cannot be calculated; however, the potential reduction in private, recreational trips for 2014 through 2016 are estimated in Table 4.6.2.4.

The net operating revenue (NOR) for a recreational charterboat angler trip for North Carolina anglers is estimated to be $128 (2009 dollars) and $135 for east coast of Florida anglers (Section 3.4.2). Table 4.6.2.4 uses the Florida NOR value to calculate NOR losses. The estimates in Table 4.6.2.4 only include the charterboat component for-hire sector because NOR estimates are available only for that sector. The estimates of the expected reduction in effort and associated NOR under Alternative 2 are provided in Table 4.6.2.4.

Table 4.6.2.4. Expected reduction in recreational pounds and value (in 2011 $) of cobia as a result of **Alternative 2** and **3** from 2014 through 2016 for the Atlantic Zone (FL-NY) compared to 2007 through 2011.

	Pounds	Difference	Change in Private Trips	Change in Charterboat Trips	Change in Net Operating Revenue
2007-2011 Avg. Landings	1,225,859				
2014	670,000	-555,859	-90,698	-1,946	-$262,643
2015	630,000	-595,859	-97,224	-2,086	-$281,543
2016	620,000	-605,859	-98,856	-2,121	-$286,268

The Atlantic Zone ACLs for the commercial sector for cobia for **Alternative 3** are the same as the commercial sector Atlantic Zone ACLs for **Alternative 2**; 60,000 lbs for both 2014 and 2015, and 50,000 lbs for the 2016 fishing year (Table 4.6.2.2). From 2007 through 2011, the commercial sector in this zone had its highest landings in 2010 of 56,000 lbs, and averaged 38,925 lbs per year over this period. Assuming the landings trend continues, the proposed commercial ACLs would not be binding in most years. Based on the average annual cobia landings by the commercial sector from 2007-2011and using the ex-vessel value for cobia landed off North Carolina discussed above ($1.75 per lb), the proposed commercial ACLs for the Atlantic Zone under **Alternative 3** would allow the commercial sector to receive an increase in ex-vessel value from cobia of $36,881 in 2014 and 2015, and $19,381 in 2016. However, had any of the 2014 through 2016 ACLs been in place during 2007 through 2011, the commercial sector quota would have been reached prior to the end of the fishing year in three out of the five years.

For the recreational sector, the average recreational landings for the Atlantic Zone from 2007 through 2011 were 643,020 lbs. On average, it is estimated that 22,000 recreational trips are taken annually (Tables 3.4.2.10, 3.4.2.11, and 3.4.2.12) on which cobia is caught. Of these trips, 1,000 are charterboat trips and the remaining 21,000 trips are private angler trips. The ACL for the Atlantic Zone in **Alternative 3** represents an average reduction in landings from 2007 through 2011 of 27,000 lbs from 2007 through 2011. The reduction represents 46 for-hire and 878 private recreational trips that would not be able to take place. There are not sufficient data to determine the consumer surplus for cobia to calculate loss to anglers. An estimate of NOR for the Atlantic Zone ACL is only available for North Carolina and is $128 per angler per trip (see Section 3.4.2). Assuming the NOR value for the other states is similar, applying it results in an estimate of the number of for-hire trips that would be foregone. The reduction in 46 for-hire trips represents a NOR loss of $5,888 on average per year.

Alternative 3 has six options that specify how the overall Gulf migratory group ACL would be divided between the Gulf Zone and the Florida East Coast Zone. **Options a** and **b** and **Preferred Option d** use percent landings by area for different periods of time to determine how the ACL will be divided. **Options c, e,** and **f** are based on a variation of using both longer term and shorter term time series to determine the allocation to the zones. Using the two time series to help determine the allocation gives more weight to the recent year harvests. **Option c** uses the most recent years' data for both the long- and short-term time series.

Table 4.6.2.5 shows the direct negative economic effect in terms of ex-vessel value of cobia compared to the average annual 2007 through 2011 landings (most recent five years of landings) that would be expected to occur under **Alternative 3**. The trend in landings from the east coast of Florida has been increasing (Table 4.6.2.1). In 2011, 156,069 lbs were landed commercially. The ex-vessel price for cobia landed on the east coast of Florida in 2011 was $3.08 per lb (S. Brown, FWC State Trip Ticket Program, pers. comm.) and was used to calculate expected annual direct negative economic effects to the commercial sector. The commercial ACL allocated to the Florida East Coast Zone under five of the six **Alternative 3** options are likely to result in the ACL being reached prior to the end of the fishing year, resulting in direct negative economic effects for the sector. The lower the ACL, the greater the potential direct negative impact. In order of greatest potential direct negative economic effect to the least are **Option e, Option f, Preferred Option d, Option a, Option c,** and **Option b**.

Table 4.6.2.5. For the options of **Alternative 3**, expected reduction in commercial pounds and value (in 2011 $) of cobia from 2014 through 2016 for the east coast of Florida zone, compared to 2007 through 2011 average commercial landings and ex-vessel value.

	Pounds	Difference	Value
Landings (2007-2011)	88,279		$526,454
Option a	73,333	-14,946	-$46,033
Option b	90,000	1,721	$5,301
Option c	80,000	-8,279	-$25,499
Preferred Option d	70,000	-18,279	-$56,299
Option e	63,333	-24,946	-$76,833
Option f	66,667	-21,612	-$66,566

All options of **Preferred Alternative 3** except **Option b** are expected to result in reductions in ex-vessel values due to reduced ACLs. The annual expected direct negative economic effect to the east coast of Florida for 2014 through 2016 ranges from approximately $25,500 to $77,000. **Preferred Option d** would result in an estimated average annual reduction in ex-vessel landings value of $56,299.

Estimates of the expected economic effects of **Alternative 3** on the recreational sector in the Florida East Coast Zone are provided in Table 4.6.2.6. The average annual recreational landings in the Florida East Coast Zone from 2007 through 2011, approximately 583,000 lbs, was less than the ACLs under all of the options of **Alternative 3**. The range of average annual increase in the ACL is from approximately 157,000 lbs (**Option e**) to approximately 437,000 lbs **(Option b**). The additional recreational trips that could be taken as a result of the increased ACL ranges from approximately 26,000 (**Option e**) to approximately 71,000 trips (**Option b**). **Preferred Option d** is expected to result in an increase of harvest of approximately 833,000 lbs and 41,000 additional recreational trips.

As discussed in Section 3.4.2, estimates of the CS for cobia are not available for private angler activity. The estimated NOR values for a charterboat angler trip on the east coast of Florida for **Alternative 3** are provided in Table 4.6.2.6. These estimates utilize an estimate of $135 per charterboat angler trip for the east coast of Florida (Section 3.4.2). The expected range of annual increase in NOR for 2014 through 2016 compared the average number of trips from 2007-2011 is from approximately $74,00 for **Option e** to $207,000 for **Option b**. **Preferred Option d** would be expected to result in an annual increase in NOR of approximately $118,000.

Table 4.6.2.6. Alternative 3 expected changes in recreational trips for cobia from 2014 through 2016 for the Florida East Coast Zone compared to 2007 through 2011 average recreational landings.

		Trips	Difference	Change in Private Trips	Change in For-Hire Trips	Change in Net Operating Revenue
2007-2011 Avg.		582,839				
2014-2016	Option a	843,333	260,494	42,504	912	$123,084
	Option b	1,020,000	437,161	71,330	1,530	$206,559
	Option c	933,333	350,494	57,189	1,227	$165,609
	Pref. Opt. d	833,333	250,494	40,872	877	$118,359
	Option e	740,000	157,161	25,643	550	$74,259
	Option f	753,333	170,494	27,819	597	$80,559

South Atlantic Summary

Alternative 1 would not be expected to have additional economic effects relative to recent years. **Alternative 2** would be expected to have the most negative economic effects relative to recent years landings for both the recreational and commercial sectors of the cobia fishery in the South Atlantic jurisdiction. **Alternative 3** would not be expected to have significant negative

economic effects for the commercial fishery in the Atlantic Zone in most years. Because there is no discernible trend in recreational landings for this zone, it can be expected that there could be negative impacts for the recreational sector in some years in terms of lost opportunity should the recreational fishery be closed as a result of reaching their ACL. However, the recreational cobia fishery, especially in Georgia and the Carolinas takes place largely in a very short period of time. By the time the overage is detected and fishing is stopped for the recreational sector, it is highly probable that very few cobia will be caught the rest of the fishing year.

In the Florida East Coast Zone, the commercial sector would be expected to incur negative economic consequences, particularly if 2010 and 2011 represent an increasing trend. Ranked in order of the greatest to least potential direct negative economic effect, the options under **Alternative 3** are **Option e, Option f, Preferred Option d, Option a, Option c,** and **Option b**. In the Florida East Coast Zone, the recreational sector would be expected to receive an increase in economic benefits. Ranked in order of the least to most increase in economic benefits to the recreational sector are **Option e, Option f, Preferred Option d, Option a, Option c,** and **Option b**.

Gulf of Mexico

Alternative 1 (No Action) would maintain the Gulf cobia ACL and ACT set in CMP Amendment 18. Therefore, no economic effects would be expected to result from **Alternative 1** because it would not affect the harvests or customary uses of the cobia resource in the Gulf. It is important to note that in the Gulf, there is no explicit allocation of cobia resources between the commercial and recreational sectors. **Alternative 2** would redefine the Gulf cobia ACL by assigning a combined ACL for the Florida East Coast and the Gulf Council jurisdictional area. **Alternative 2** would redistribute cobia resources between the South Atlantic and Gulf Councils by shifting a portion of the South Atlantic ACL to the Gulf. The redistribution would be based on the landings recorded in the east coast of Florida. In the Gulf, the increased cobia ACL would be expected to result in an increase in economic benefits should the potential additional fishing opportunities afforded by the proposed increase be realized. The substantial increase in the Gulf ACL from 1.46 million pounds (mp) to 2.246 mp in 2014 that would result from **Alternative 2** would only be translated into economic benefits if fishermen in the Gulf take advantage of the additional fishing opportunities. However, average cobia landings in the Gulf have consistently been below the current ACL. Therefore, assuming no changes in fishing behavior, it is not expected that Gulf fishermen would take advantage of additional fishing opportunities that would result from ACL and ACT increases. As a result, no change in economic benefits would be expected to materialize.

The options proposed in **Preferred Alternative 3** would adjust the Gulf cobia ACL based on average cobia landings recorded for the Gulf migratory group during various time intervals, excluding landings from the east coast of Florida. Table 4.6.2.7 provides summary information on the current Gulf migratory group cobia ACL and ACT, average annual landings (as defined by SEDAR 28), the ACLs and ACTs that would correspond to each option under **Preferred Alternative 3**, and the associated differences relative to the status quo ACL and ACT.

Table 4.6.2.7. Alternative 3 ACLs, ACTs, landings (as defined by SEDAR 28), and ACL changes relative to status quo (in million pounds).

Option	Year	Alternative 3		Status Quo ACL	Status Quo ACT	Average Landings	ACL Change	ACT Change
		Stock ACL	Stock ACT					
Option a	2014	1.56	1.4	1.46	1.31	1.10	0.10	0.09
	2015	1.6	1.44	1.46	1.31	1.10	0.14	0.13
	2016	1.65	1.48	1.46	1.31	1.10	0.19	0.17
Option b	2014	1.38	1.24	1.46	1.31	0.86	-0.08	-0.07
	2015	1.41	1.27	1.46	1.31	0.86	-0.05	-0.04
	2016	1.46	1.31	1.46	1.31	0.86	0.00	0.00
Option c	2014	1.48	1.33	1.46	1.31	0.98	0.02	0.02
	2015	1.51	1.36	1.46	1.31	0.98	0.05	0.05
	2016	1.56	1.4	1.46	1.31	0.98	0.10	0.09
Preferred Option d	2014	1.57	1.42	1.46	1.31	1.11	0.11	0.11
	2015	1.61	1.45	1.46	1.31	1.11	0.15	0.14
	2016	1.66	1.5	1.46	1.31	1.11	0.20	0.19
Option e	2014	1.67	1.51	1.46	1.31	1.23	0.21	0.20
	2015	1.71	1.54	1.46	1.31	1.23	0.25	0.23
	2016	1.77	1.59	1.46	1.31	1.23	0.31	0.28
Option f	2014	1.66	1.5	1.46	1.31	1.21	0.20	0.19
	2015	1.7	1.53	1.46	1.31	1.21	0.24	0.22
	2016	1.76	1.58	1.46	1.31	1.21	0.30	0.27

With the exception of **Option b**, the options in **Alternative 3,** including **Preferred Option d,** would increase the ACLs and ACTs relative to the status quo, and increase the fishing opportunities for Gulf fishermen. Direct economic benefits would be expected to result from these increases if fishermen elected to take advantage of the additional fishing opportunities. However, average Gulf cobia landings have been below the status quo ACT for all the time intervals considered in **Alternative 3**. Therefore, all else equal, it is unlikely that these potential economic benefits would materialize in the short run. The ACL and ACT decreases that are proposed in **Alternative 3, Option b** for 2014 and 2015 would, in theory, correspond to adverse economic benefits due to reduced fishing opportunities and, thus, harvests. However, the resulting ACLs and ACTs under **Option b** are also more than the average cobia landings in the Gulf zone during all of the time periods under consideration. Therefore, all else equal, these potential negative economic effects would not be expected to occur in the short run. In summary, although **Alternative 3** proposes adjustments to the Gulf migratory group cobia ACLs and ACT for 2014 through 2016, the proposed changes, including the adjustments proposed in **Preferred Alternative 3 Preferred Option d,** would not be expected to result in any noticeable changes in economic benefits because the average landings recorded to date in the Gulf zone are well below the status quo ACT and all proposed ACTs.

4.6.3 Direct and Indirect Effects on the Social Environment

The social effects of modifications to the cobia ACL are associated with two main factors: updated catch limits based on the most recent information from the stock assessment and any changes in access to the resource**.** Overall, an increase in the ACL (**Alternative 2** and **Alternative 3**) is expected to benefit commercial and recreational cobia fishermen in addition to communities because the catch level recommendations are based on updated data used in the stock assessment. Gulf communities that would be expected to benefit the most from an increase in the cobia ACL include the Florida West Coast communities of Destin, Panama City Beach and Pensacola, and New Orleans, Louisiana, in addition to Florida Keys communities of Key West, Key Largo, and Islamorada (Figures 3.5.1.5 and 3.5.1.6). South Atlantic communities that are expected to benefit from the updated and increased ACL under **Alternative 2** and **Alternative 3**) are primarily in Florida and include Fort Pierce, Jupiter, St. Augustine, Stuart, Sebastian, and Merritt Island, in addition to Hilton Head, South Carolina (Figures 3.5.2.5 and 3.5.2.6).

Because the ACL would not be adjusted to reflect new information and outcomes form the recent stock assessment update, **Alternative 1** would not result in any social benefits expected from incorporating more accurate and up-to-date information into setting catch limits. **Alternative 2** and **Alternative 3** would be expected to be more beneficial to the fleet, private anglers, and other resource users because the new information better reflects current conditions with cobia. However, **Alternative 2** would assign quota to the Gulf Zone that should be assigned to the Florida East Coast, which result in zero quota for fishermen on the Florida East Coast.

Changes in the ACL for any stock would not directly affect resource users unless the ACL is met or exceeded, in which case 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 social and economic benefits that would be expected to accrue, assuming long-term sustainability goals are met. Adhering to sustainable harvest goals is assumed to 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.

The options for allocation of part of the Gulf ACL to the Florida east coast (**Alternative 3**) would likely impact fishermen working in the Gulf and on the Florida East Coast. In general, the higher the allocation to the Florida East Coast, the more beneficial for fishermen working off the Florida East Coast due to the opportunity to maintain harvest levels or increase harvest in the future and to reduced risk of meeting the ACL and triggering a commercial in-season closure at an earlier time of the year than anticipated, or total overage that would require a payback in the subsequent year for the sector that exceeded the ACL. Cobia landings vary each year, and it is likely that there will be years in which the Florida east coast ACL is not met, and years in which the Florida East Coast ACL is met sooner than expected. **Option b** would be the most beneficial with the highest percentage allocated to the Florida East Coast, while **Options e** and **f** could limit fishing opportunities for commercial and recreational fishermen on the Florida East Coast. **Preferred Option d** would provide less flexibility than **Options a-c**, but would likely be more beneficial to the Florida East Coast than **Options e** and **f.**

4.6.4 Direct and Indirect Effects on the Administrative Environment

Specifying ACLs for cobia in Gulf and South Atlantic jurisdictional waters alone would not typically increase the administrative burden over the status-quo (**Alternative 1**). However, with the change in the boundary between Gulf and South Atlantic migratory cobia stocks moved north to the Florida/Georgia line as dictated by SEDAR 28, the manner in which ACLs are specified for each Council's jurisdiction could result in additional administrative burden. **Alternative 2** may result in a lower ACL for the South Atlantic, which may result in quota overages and subsequent fisheries closures. Alternatively, the addition of the east coast of Florida to the Gulf migratory group may make it more unlikely that the Gulf would exceed their ACL. Impacts from options selected for **Alternative 3** would vary based on the resulting ACL determined from proportional landings analyses over the time period identified in **Options a-f**. NMFS would be responsible for monitoring three regional ACLs under this alternative (Gulf Zone, Florida East Coast Zone, and South Atlantic), which would result in increased administrative burdens. Additional administrative burdens that may result from all alternatives considered would take the form of development and dissemination of outreach and education materials to inform fishery participants of any changes to how ACLs and ACTs for Gulf and South Atlantic cobia are determined.

4.7 Cumulative Effects Analysis

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

Past Actions

On April 20, 2010, an explosion occurred on the Deepwater Horizon MC252 oil rig, resulting in the release of an estimated 4.9 million barrels of oil into the Gulf. In addition, 1.84 million gallons of Corexit 9500A dispersant were applied as part of the effort to constrain the spill. The cumulative effects from the oil spill and response may not be known for years. The oil spill affected more than one-third of the Gulf area from western Louisiana east to the Panhandle of Florida and south to the Campeche Bank in Mexico. The impacts of the Deepwater Horizon MC252 oil spill on the physical environment are expected to be significant and may be long-term. Oil was dispersed on the surface, and because of the heavy use of dispersants, oil was also documented as being suspended within the water column, some even deeper than the location of the broken well head. Floating and suspended oil washed onto shore in several areas of the Gulf as well as non-floating tar balls. Whereas suspended and floating oil degrades over time, tar balls are more persistent in the environment and can be transported hundreds of miles. In a study

conducted during the summer of 2011, University of South Florida researchers found more unhealthy fish in the area of the 2010 oil spill compared to other areas. Although some scientists have suggested that these incidences of sick fish may be related to the spill, others have pointed out that there is no baseline from which to judge the prevalence of sick fish, and no connection has been determined. Studies are continuing to check whether the sick fish suffer from immune system and fertility problems (Tampa Bay Times 2012).

The highest concern is that the oil spill may have impacted spawning success of species that spawn in the summer months, either by reducing spawning activity or by reducing survival of the eggs and larvae. The oil spill occurred during spawning months for both king and Spanish mackerel; however, both species have a protracted spawning period that extends beyond the months of the oil spill. Further, mackerels are migratory and move into specific areas to spawn. King mackerel, for example, move from the southern portion of their range to more northern areas for the spawning season. In the Gulf, that movement is from Mexico and south Florida to the northern Gulf (Godcharles and Murphy 1986). However, environmental factors, such as temperature can change the timing and extent of their migratory patterns (Williams and Taylor 1980). The possibility exists that mackerels would be able to detect environmental cues when moving toward the area of the oil spill that would prevent them from entering the area. These fish might then remain outside the area where oil was in high concentrations, but still spawn.

Effects on the physical environment, such as low oxygen, could lead to impacts on the ability of larvae and post-larvae to survive, even if they never encountered oil. In addition, oil exposure could create sub-lethal effects on the eggs, larva, and early life stages. The stressors could potentially be additive, and each stressor may increase susceptibility to the harmful effects of the other. If eggs and larvae were affected, impacts on harvestable-size coastal migratory pelagic fish may begin to be seen when the 2010 year class becomes large enough to enter the fishery and be retained. King mackerel mature at 2-3 years (GMFMC and SAFMC 1985; MSAP 1996) and Spanish mackerel mature at 1-2 years (Powell 1975); therefore a year class failure in 2010 may be felt by the fishery as early as 2011 or 2012. No obvious decreases in CMP stocks in the Gulf have been recorded at this time; the upcoming stock assessment for king mackerel may give an indication of whether these impacts have been realized.

Indirect and inter-related effects on the biological and ecological environment of the CMP fishery in concert with the Deepwater Horizon MC252 oil spill are not well understood. Changes in the population size structure could result from shifting fishing effort to specific geographic segments of populations, combined with any anthropogenically induced natural mortality that may occur from the impacts of the oil spill. The impacts on the food web from phytoplankton, to zooplankton, to mollusks, to top predators may be significant in the future. Impacts to mackerels from the oil spill may similarly impact other species that may be preyed upon by mackerel, or that might benefit from a reduced stock.

Participation in and the economic performance of the CMP fishery addressed in this document have been affected by a combination of regulatory, biological, social, and external economic factors. Regulatory measures have obviously affected the quantity and composition of harvests of species addressed in this document, through the various size limits, seasonal restrictions, trip or bag limits, and quotas. In addition to a complex boundary and quota system the coastal

migratory pelagic fishery also exists under regulations on bag limits, size limits, trip limits, and gear restrictions.

The commercial king mackerel permit, king mackerel gill net endorsement, and the Gulf Charter/Headboat CMP permit are all under limited entry permit systems. New participation in the king mackerel commercial fishery and the for-hire CMP sector in the Gulf require access to additional capital and an available permit to purchase, which may limit opportunities for new entrants. Additionally, almost all fishermen or businesses with one of the limited entry permits also hold at least one (and usually multiple) additional commercial or for-hire permit to maintain the opportunity to participate in other fisheries. Commercial fishermen, for-hire vessel owners and crew, and private recreational anglers commonly participate in multiple fisheries throughout the year. Even within the coastal migratory pelagics fishery, effort can shift from one species to another due to environmental, economic, or regulatory changes. Overall, changes in management of one species in the coastal migratory pelagics fishery can impact effort and harvest of another species (in the coastal migratory pelagics fishery or in another fishery) because of multi-fishery participation that is characteristic in the South Atlantic region.

Biological forces that either motivate certain regulations or simply influence the natural variability in fish stocks have likely played a role in determining the changing composition of the fisheries addressed by this document. Additional factors, such as changing career or lifestyle preferences, stagnant to declining prices due to imports, increased operating costs (gas, ice, insurance, dockage fees, etc.), and increased waterfront/coastal value leading to development pressure for other than fishery uses have impacted both the commercial and recreational fishing sectors. In general, the regulatory environment for all fisheries has become progressively more complex and burdensome, increasing the pressure on economic losses, business failure, occupational changes, and associated adverse pressures on associated families, communities, and businesses. Some reverse of this trend is possible and expected through management. However, certain pressures would remain, such as total effort and total harvest considerations, increasing input costs, import induced price pressure, and competition for coastal access.

Present Actions

Currently a formal consultation is underway for the Coastal Migratory Pelagics (CMP) fishery, triggered by the listing in 2012 of the Carolina and South Atlantic distinct population segments (DPSs) of Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*) as endangered under the ESA. Staff from the SERO Protected Resources Division will provide the Committee with an update on the consultation and record input from Committee members for consideration during the consultation. Additional requirements may result from the consultation. Additionally, in December 2012, NMFS issued a proposal to list 82 coral species as threatened or endangered, including seven species found in the South Atlantic region, including a proposal to relist two *Acropora* species (elkhorn and staghorn coral) as endangered.

Recent increases in fishing effort and resultant management actions, particularly in the South Atlantic, have restricted access to other species that provide income for mackerel fishermen. In 2013, fishing for 13 species or species groups in the South Atlantic was prohibited before the end of the year due to ACLs being met. Many commercial mackerel fishermen only fish for

mackerel part time. With reduced income from other fishing, some fishermen that have not been very active in the CMP fishery may shift effort to fish for mackerel.

Reasonably Foreseeable Future Actions

The following are actions affecting the CMP fishery that are expected to be implemented within the next year.

- Amendment 20A to the CMP FMP (GMFMC/SAFMC 2013) contains actions that would prohibit some sale of king and Spanish mackerel harvested under the bag limit and would remove the income requirement for king and Spanish mackerel commercial permits.
- A South Atlantic framework action addresses bycatch in Spanish mackerel nets and seeks to modify regulations.
- A generic amendment would require for the first time a federal dealer permit (and associated reporting requirements) for individuals buying CMP species.
- Two actions would implement additional reporting requirements for vessels with the Gulf and South Atlantic CMP federal for-hire permits.
- A framework action would increase the ACLs for both migratory groups of Spanish mackerel.
- A plan amendment would consider reallocation between sectors of the ACLs for Gulf migratory group king mackerel and Atlantic migratory group Spanish mackerel.
- A stock assessment for king mackerel will be completed, and the results could increase or decrease the available fish for harvest.

Although numerous regulatory changes have been proposed for the CMP fishery, the cumulative effects are likely not significant because of the nature of the CMP fishery, which is very different than many other fisheries. For example, in the Gulf Reef Fish and South Atlantic Snapper Grouper fisheries, all species are landed under one permit and in the same area, and each fisherman might be expected to be affected to some extent by all new regulations imposed on reef fish fishermen. However, under the CMP FMP, one single universe of fishermen cannot be assumed. Separate commercial permits are issued to king mackerel and Spanish mackerel fishermen, and no permits are required for cobia fishermen. In addition, king mackerel commercial permits are limited access and can only be purchased from existing permit holders. Some overlap of these groups most certainly occurs; however, different gear types are primarily used to fish for king mackerel and Spanish mackerel, and many fishermen do not switch between gear types. Further, each species is managed under two different sets of regulations, one for each migratory group. A large portion of commercial king mackerel fishermen fish in both the Gulf and South Atlantic, but it would not be expected, for example, that a cobia fisherman in the South Atlantic would also fish for Spanish mackerel in the Gulf. Recreational fishermen are also unlikely to move between the Gulf and South Atlantic, except perhaps in the Florida Keys.

The Environmental Protection Agency's climate change webpage (http://www.epa.gov/climatechange/) provides basic background information on measured or anticipated effects from global climate change. A compilation of scientific information on climate change can be found in the United Nations Intergovernmental Panel on Climate Change's Fourth Assessment Report (Solomon et al. 2007). Those findings are incorporated here by reference and are summarized. Global climate change can affect marine ecosystems through ocean warming by increased thermal stratification, reduced upwelling, sea level rise, and

through increases in wave height and frequency, loss of sea ice, and increased risk of diseases in marine biota. Decreases in surface ocean pH due to absorption of anthropogenic carbon dioxide emissions may impact a wide range of organisms and ecosystems. These influences could affect biological factors such as migration, range, larval and juvenile survival, prey availability, and susceptibility to predators. At this time, the level of impacts cannot be quantified, nor is the time frame known in which these impacts would occur. These climate changes could have significant effects on southeastern fisheries; however, the extent of these effects is not known at this time (IPCC 2007).

In the southeast, general impacts of climate change have been predicted through modeling, with few studies on specific effects to species. Warming sea temperature trends in the southeast have been documented, and animals must migrate to cooler waters, if possible, if water temperatures exceed survivable ranges (Needham et al. 2012). Mackerels and cobia are migratory species, and may shift their distribution over time to account for the changing temperature regime. However, no studies have shown such a change yet. Higher water temperatures may also allow invasive species to establish communities in areas they may not have been able to survive previously. An area of low oxygen, known as the dead zone, forms in the northern Gulf each summer, which has been increasing in recent years. Climate change may contribute to this increase by increasing rainfall that in turn increases nutrient input from rivers. This increased nutrient load causes algal blooms that, when decomposing, reduce oxygen in the water (Needham et al. 2012; Kennedy et al. 2002). Other potential impacts of climate change to the southeast include increases in hurricanes, decreases in salinity, altered circulation patterns, and sea level rise. The combination of warmer water and expansion of salt marshes inland with sea-level rise may increase productivity of estuarine-dependent species in the short term. However, in the long term, this increased productivity may be temporary because of loss of fishery habitats due to wetland loss (Kennedy et al. 2002). Actions from this amendment are not expected to significantly contribute to climate change through the increase or decrease in the carbon footprint from fishing.

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

The cumulative social and economic effects of past, present, and future amendments may be described as limiting fishing opportunities in the short-term, with some exceptions of actions that alleviate some negative social and economic impacts. The intent of these amendments is to improve prospects for sustained participation in the respective fisheries over time and the proposed actions in this amendment are expected to result in some important long-term benefits to the commercial and for-hire fishing fleets, fishing communities and associated businesses, and private recreational anglers. The proposed changes in management for CMP species will contribute to changes in the fishery within the context of the current economic and regulatory environment at the local and regional level.

Monitoring

The effects of the proposed action are, and will continue to be, monitored through collection of landings data by NMFS, stock assessments and stock assessment updates, life history studies, economic and social analyses, and other scientific observations. Landings data for the recreational sector in the Gulf are collected through the Marine Recreational Information Program, NMFS' Headboat Survey, and the Texas Marine Recreational Fishing Survey. Commercial data are collected through trip ticket programs, port samplers, and logbook programs. Currently, a Southeast Data Assessment and Review assessment of king mackerel is scheduled to be completed in 2014. In response to the Deepwater Horizon MC252 incident, increased frequency of surveys of the recreational sector's catch and effort, along with additional fishery-independent information regarding the status of the stock, were conducted. This will allow future determinations regarding the impacts of the Deepwater Horizon MC252 incident on various fishery stocks. At this time such determinations are not possible.

The proposed action relates to the harvest of an indigenous species in the Gulf and Atlantic, and the activity being altered does not itself introduce non-indigenous species, and is not reasonably expected to facilitate the spread of such species through depressing the populations of native species. Additionally, it does not propose any activity, such as increased ballast water discharge from foreign vessels, which is associated with the introduction or spread on non-indigenous species.

CHAPTER 5. REGULATORY IMPACT REVIEW

5.1 Introduction

The National Marine Fisheries Service (NMFS) requires a Regulatory Impact Review (RIR) for all regulatory actions that are of public interest. The RIR does three things: (1) It provides a comprehensive review of the level and incidence of impacts associated with a regulatory action; (2) it provides a review of the problems and policy objectives prompting the regulatory proposals and an evaluation of the major alternatives which could be used to solve the problem; and (3) it ensures that the regulatory agency systematically and comprehensively considers all available alternatives so that the public welfare can be enhanced in the most efficient and cost effective way.

The RIR also serves as the basis for determining whether any proposed regulations are a "significant regulatory action" under certain criteria provided in Executive Order 12866 (E.O. 12866) and whether the approved regulations will have a "significant economic impact on a substantial number of small business entities" in compliance with the Regulatory Flexibility Act of 1980..

5.2 Problems and Objectives

The purpose and need, issues, problems, and objectives of this action are presented in Chapter 1 of this amendment and are incorporated herein by reference.

5.3 Methodology and Framework for Analysis

This RIR assesses management measures from the standpoint of determining the resulting changes in costs and benefits to society. To the extent practicable, the net effects of the proposed measures for an existing fishery should be stated in terms of producer and consumer surplus, changes in profits, and employment in the direct and support industries. Where figures are available, they are incorporated into the analysis of the economic impacts of the different actions and alternatives.

5.4 Description of the Fishery

A description of the South Atlantic coastal migratory pelagics fishery is contained in Chapter 3 of this amendment and is incorporated herein by reference.

5.5 Effects on Management Measures

A larger scale discussion of the economic effects of the actions are presented in Chapter 4 of Amendment 20b to the Coastal Migratory Pelagics Fishery of the Gulf of Mexico and Atlantic Region, and are incorporated herein by reference.

Action 1, Preferred Alternative 3, Preferred Option a, Preferred Alternative 4, Preferred Option b and **Preferred Alternative 4, Preferred Option c** modify commercial trip limits for king mackerel in the Gulf of Mexico zones. For the Western Zone, **Preferred Alternative 3, Option a** would implement the same trip limit as the status quo alternative. Therefore, economic effects are not expected. Economic effects that would result from **Preferred Alternative 4,**

Option b and Preferred Alternative 4, Option c are expected to be negligible because more than three quarters of king mackerel trips taken in the Eastern Zone land 1,000 lbs of king mackerel or less.

Action 2, Preferred Alternative 2, Option a and **Preferred Alternative 3, Option b** will revise the fishing year for Gulf of Mexico king mackerel in two of the three zone/subzones. The implementation of **Preferred Alternative 2, Option a** would trigger substantial adjustments in monthly landings in the Western Zone if fishermen continue to harvest the total king mackerel annual catch limit (ACL) because king mackerel harvests during the months of July and August have accounted for more than 60% of total king mackerel harvested in the Western Zone since the 2004-2005 fishing year. A fall start to the fishing season may place added constraints to fishermen's attempts to maximize net revenues and could be expected to result in reduced direct economic benefits for many fishermen and the sector as a whole. The magnitude of the economic effects would be determined by the extent and nature of adjustments to fishing trips in response to the new season in the Western Gulf. The October 1-September 30 fishing season proposed in **Preferred Alternative 3, Option b** is expected to impact a small portion of the king mackerel annual landings in the Eastern Zone. Only 6.2% of the king mackerel landings in the Eastern Zone have been landed between July 1 and September 30 since the 2004-2005 fishing year. Therefore, any disruptions to trip planning and catch composition as a result of **Preferred Alternative 3, Option b** are expected to be minimal, with negligible associated economic effects.

Action 3, Preferred Alternative 3 allows for transit provisions The preferred alternative for his action is expected to increase economic benefits because the potential increases in net revenues that would result from more lenient transit provisions, the added flexibility in selecting catch composition and from costs savings from lower fuel expenditures are assumed to outweigh potential adverse economic effects that could result from earlier closures.

Action 4.1, Preferred Alternative 3, Option b and **Preferred Alternative 4** would establish a northern and a southern zone ACLs the Atlantic migratory group king mackerel and allow for transfer of quota between zones. The specification of the ACLs by zones increases the likelihood that the distribution of king mackerel harvest continues to follow historic harvest patterns and supports the fishermen and associated businesses associated with this harvest. Allowing the transfer of quota across zones helps to increase the likelihood that the entire ACL will be harvested and fish are not unnecessarily left unharvested. As a result, the likelihood of negative economic effects from unharvested king mackerel would be expected to be reduced. Available data does not support a determination of whether the allocation of the king mackerel ACL to zones, even with transfer between the zones, will differentially impact the zones. The proposed action would allocate the king mackerel to each zone based on the long-term historic harvest patterns. More recent harvest patterns may differ from these historic patterns. As a result, although the total harvest of king mackerel would not be expected to be affected, allocation by zone may result in the transfer of fish, and associated revenue, from fishermen in one zone to fishermen in another. The revenue associated with these transferred fish may be more economically important to the fishermen, and associated businesses, in one zone than to the respective entities in the other zone. As a result, a transfer may not have a net positive or a net ne~~utral~~gative economic effect rather than a neutral economic effect. Available data does not

support a definitive determination of this net effect. However, because the allocations are based on long-term averages and transfer of quota would be allowed, the net economic effect, whether positive or negative in any given season, would be expected to be small.

The economic effects of **Action 4.2, Preferred Alternative 3, Option b** and **Preferred Alternative 4** would be expected to be similar to those described for **Action 4.1** because **Action 4.2** would establish the same measures as **Action 4.1**, but for Atlantic migratory group Spanish mackerel instead of king mackerel. In summary, **Action 2, Preferred Alternative 3, Option b** and **Preferred Alternative 4** would increase the likelihood that the harvest pattern, and associated revenue, for Spanish mackerel continues to follow the historic pattern and the total ACL is harvested. Although the net economic effect of this action cannot be determined with available data, any net increase or decrease in economic benefits would be expected to be small.

Action 5, Preferred Alternative 2, Preferred Alternative 4 and **Preferred Alternative 5** modify the framework for coastal migratory pelagic species in the Gulf of Mexico and the Atlantic regions and are primarily administrative in nature, therefore, no economic effects are expected.

Action 6, Preferred Alternative 3, Option d modifies the Gulf and Atlantic migratory group ACLs and recreational annual catch targets (ACTs) for cobia. The ACLs and ACTs for cobia needed to be set lower for the South Atlantic and higher in the Gulf of Mexico than they had been in the past based on the results of a stock assessment. In the South Atlantic region the combined annual value of expected losses for both commercial and recreational fisheries is expected to be approximately $175,000 per year. However, these losses to fishermen in the South Atlantic region could nearly all be made up by increased opportunities to land more cobia in the Gulf of Mexico.

5.6 Public and Private Costs of Regulations

The preparation, implementation, enforcement, and monitoring of this or any Federal action involves the expenditure of public and private resources, which can be expressed as costs associated with the regulations. Costs associated with this emergency action include, but are not limited to Council costs of document preparation, meeting, and other costs; NMFS administration costs of document preparation, meetings and review, and annual law enforcement costs. A preliminary estimate is up to $150,000 before annual law enforcement costs.

5.7 Determination of Significant Regulatory Action

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

the first criterion. Therefore, this regulatory action is determined to not be economically significant for the purposes of E.O. 12866.

CHAPTER 6. REGULATORY FLEXIBILITY ACT ANALYSIS

[This section will be completed following the October 2013 Council meeting.]

6.1 Introduction

6.2 Statement of the need for, objective of, and legal basis for the rule

6.3 Description and estimate of the number of small entities to which the proposed action would apply

6.4 Description of the projected reporting, record-keeping and other compliance requirements of the proposed rule, including an estimate of the classes of small entities which will be subject to the requirement and the type of professional skills necessary for the preparation of the report or records

6.5 Identification of all relevant federal rules, which may duplicate, overlap or conflict with the proposed rule

6.6 Significance of economic impacts on a substantial number of small entities

6.7 Description of the significant alternatives to the proposed action and discussion of how the alternatives attempt to minimize economic impacts on small entities

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PREPARERS

Name	Expertise	Responsibility
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Kari MacLauchlin, SAFMC	Fishery Social Scientist	Co-Team Lead – amendment development, social environment and impacts
Susan Gerhart, NMFS	Fishery Biologist	Co-Team Lead – amendment development, introduction, biological and cumulative impacts
Assane Diagne, GMFMC	Economist	Economic impacts, regulatory impact review
Brian Cheuvront, SAFMC	Economist	Economic impacts
Ava Lasseter, GMFMC	Anthropologist	Social impacts
Stephen Holiman, NMFS/SF	Economist	Economic environment and impacts, Regulatory Flexibility Act analysis
Jack McGovern, NMFS/SF	Fishery Biologist	Physical and biological environments
Nikhil Mehta, NMFS/SF	Fishery Biologist	Bycatch practicability analysis
Christina Package, NMFS/SF	Anthropologist	Social environment
Mike Larkin, NMFS/SF	Data Analyst	Data analysis
Gregg Waugh, SAFMC	Biologist	Biological impacts

REVIEWERS

Name	Discipline/Expertise	Role in EA Preparation
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Noah Silverman, NMFS	Natural Resource Management Specialist	NEPA review
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Jennifer Lee, NMFS/PR	Protected Resources Specialist	Protected resources review
Christopher Liese	Economist	Social/economic review

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

CHAPTER 8. LIST OF AGENCIES AND ORGANIZATIONS CONSULTED

National Marine Fisheries Service
- Southeast Fisheries Science Center
- Southeast Regional Office
- Office for Law Enforcement

NOAA General Counsel

Environmental Protection Agency
United States Coast Guard
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
Florida Fish and Wildlife Conservation Commission
Georgia Department of Natural Resources/Coastal Resources Division
South Carolina Department of Natural Resources/Marine Resources Division
North Carolina Division of Marine Fisheries

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APPENDIX A. ALTERNATIVES CONSIDERED BUT REJECTED

Action 1 - Modify the Commercial Hook-and-Line Trip Limits for Gulf Migratory Group King Mackerel.

Alternative: Set the commercial hook-and-line trip limit at 1,500 pounds with no reduction.

Option a: For the Western zone
Option b: For the Eastern Zone Northern Subzone
Option c: For the Eastern Zone Southern Subzone

Alternative: Set the commercial hook-and-line trip limit at 2,000 pounds with no reduction.

Option a: For the Western zone
Option b: For the Eastern Zone Northern Subzone
Option c: For the Eastern Zone Southern Subzone

Action 2 - Change the Fishing Season for Gulf Group King Mackerel for the Eastern and Western Zone.

Alternative: Change the fishing season for Gulf group king mackerel season to November 1 – October 31.

Option a: For the Western Zone
Option b: For the Eastern Zone

Actions complete removed:

Consider modifications to the existing commercial fishery boundary line between the Gulf group king mackerel eastern zone and western zone (currently set at the Alabama - Florida border [87°31'06"]).

Alternative 1: No Action - Retain the current boundary between the eastern and western zones at the Alabama/Florida border

Alternative 2: Move the current boundary line between the eastern zone and western zone from the Alabama/Florida border to Cape San Blas, Florida (85°30' w. longitude).

Alternative 3: Move the current boundary line between the eastern zone and western zone from the Alabama/Florida border to 89°30' w. longitude near the mouth of the Mississippi river.

Discussion: The current boundary between the eastern and western zones at the Alabama/Florida border was set in 1985 with the implementation of Amendment 1 to the Coastal Migratory Pelagics Fishery Management Plan (Figure 2.1.1). This line was chosen because existing scientific information at that time recognized a western migratory group of king mackerel that moved northward up the Texas and Louisiana coasts in spring and summer and southward in fall and winter. Another migratory group moved northward from the Florida Keys area to the Panhandle area of Florida in the spring and summer and back southward in fall and winter. Although these groups were known to mix, such mixing was believed to be small, and the Mississippi River outfall appeared to be somewhat of a barrier. In considering the boundary, the

Councils also took into consideration the need to allow all areas of the Gulf some degree of access to the stock. The stock is managed under a commercial allocation of total allowable catch (TAC), and the TAC was very low at that time (only approximately 2.9 mp as compared to 10.2 mp over the past few years). With a set season and TAC, it was believed that without a zone/separate TAC allocation, the entire TAC would be taken before fish migrated into some areas. The Councils also considered that there was very little participation in the commercial fishery from Alabama and Mississippi, thus the dividing line at the Florida/Alabama border and a July 1 season opening were considered the least disruptive measures to participants. These decisions were based on known elements of the fishery from the mid to late 1970s. A review of the current and more recent past data may provide additional information.

Consider retaining or eliminating the northern subzone based on any of the boundaries chosen in Action 1. If eliminated, consider transferring the current allocation percentage to either the eastern or western zone based on any of the boundaries chosen in Action 1.
Alternative 1: No Action – Retain the existing northern and southern subzones and retain the existing allocations for these areas

Alternative 2: Eliminate the northern subzone and add the assigned allocation to the eastern zone based on any of the boundaries chosen in Action 1.

Alternative 3: Eliminate the northern subzone and add the assigned allocation to the western zone based on any of the boundaries chosen in Action 1.

Alternative: Develop alternatives to permit access to the king mackerel fishery by those just north of the Collier/Lee boundary.

Discussion: In 2000, the Council established two subzones off the west coast of Florida with the northern subzone extending from the Collier/Lee County line to the Alabama/Florida border. This action was based on the king mackerel fishery in the panhandle area of Florida having significantly increased its catch in the last few years prior to 1999. In establishing this northern subzone the Gulf and South Atlantic Councils agreed to allocate to this new subzone a small portion of the total allocation for the eastern zone (approximately 3.85% that amounted to approximately 168,500 pounds). Since the implementation of this action, the northern subzone has caught its allocation in seven of the twelve years. However, when the subzone has been closed, it has happened usually in the fall, before the fish have migrated south. The result is that fishermen along the peninsula of Florida do not have an opportunity to participate in the fishery during those years. Combining the northern subzone with the southern subzone or western zone reduces the number of quota areas for Gulf group king mackerel from 3 to 2, thus it simplifies monitoring. It also provides for a larger potential share of TAC for fishermen over a broader area.

Restrictions on fishing for king mackerel in multiple zones.
Alternative 1: No Action – vessels with king mackerel commercial vessel permits may fish in any zone of the Gulf or South Atlantic.

Alternative 2: Require that prior to the beginning of the fishing year, each owner of a permitted commercial king mackerel hook-and-line vessel must identify the zone/subzone in which the vessel will fish during the upcoming fishing year (western zone, Florida east coast subzone, Florida west coast southern subzone, or Florida west coast northern subzone).

Option a: only one zone may be identified

Option b: two zones may be identified

Alternative 3: Require an endorsement to fish in a particular zone or subzone.

Option a: Only one endorsement is allowed at any one time, and it is not transferable during that year.

Option b: No more than two endorsements are allowed at any one time, and they are not transferable during that year.

Discussion: Historically, commercial king mackerel hook-and-line vessels have primarily fished in the zones that they are home-ported. In recent years, however, a fleet of vessels from the east coast of Florida has traveled to the western zone in the summer months to fish on that quota and subsequently moved to the Florida west coast northern subzone; thus following the migrating fish from area to area where they are most abundant. This additional effort in each zone has resulted in earlier than normal closings in some years. Requiring vessels to declare and fish in only 1 or 2 zones/subzones during a given year would help reduce the chance of early closures and could help maintain a higher ex-vessel value. On the other hand, it would probably increase the monitoring and enforcement burden tremendously. Requiring an endorsement would ease the at sea enforcement burden of identifying the legal area in which a vessel is entitled to fish

Set the Gulf and Atlantic migratory group cobia annual catch limits (ACLs).

Alternative 1: No Action –

a. The Gulf migratory group cobia ACL = ABC for Gulf migratory group cobia [1.46 mp based on preferred ABC]. Set a single stock ACL
b. The Atlantic migratory group cobia ACL = OY = ABC (currently 1,571,399 lbs based on the SSC Interim Control Rule; Recreational Sector ACL = 92% = 1,445,687 lbs; Commercial Sector ACL = 8% = 125,712 lbs)
c. The entire Gulf migratory group cobia ACL applies to the Gulf Council jurisdictional area and the South Atlantic migratory group cobia ACL applies to the South Atlantic jurisdictional area.

Alternative 2: The Gulf migratory group cobia ACL = ABC for Gulf migratory group cobia based on the SSC control rule and latest stock assessment. The ABC/ACL for the Gulf migratory group cobia would be divided between the Gulf jurisdictional area and the east coast of Florida based on the options below. A portion of the Gulf group cobia ACL is assigned to the east coast of Florida. The ACL for the Atlantic migratory group cobia = OY = ABC from the SSC based on the most recent stock assessment, plus the ABC/ACL from the Gulf for the east coast of Florida.

Option a: Use 2000-2009 landings to establish the percentage split by subzone.

Option b: Use 2005-2009 landings to establish the percentage split by subzone.

Option c: Use 2007-2009 landings to establish the percentage split by subzone.

Option d: Other years???

Alternative 3: The Gulf migratory group cobia ACL = ABC for Gulf migratory group cobia based on the SSC control rule and latest stock assessment. The ABC/ACL for the Gulf migratory group cobia would be divided between the Gulf jurisdictional area and the east coast of Florida based on the options below. A portion of the Gulf group cobia ACL is assigned to the east coast of Florida. The ACL for the Atlantic migratory group cobia = OY = 90% of the ABC from the SSC based on the most recent stock assessment, plus the ABC/ACL from the Gulf for the east coast of Florida.

Option a: Use 2000-2009 landings to establish the percentage split by subzone.
Option b: Use 2005-2009 landings to establish the percentage split by subzone.
Option c: Use 2007-2009 landings to establish the percentage split by subzone.

Set annual catch target (ACTs) by sub-zones for Atlantic migratory group cobia.
Alternative 1: No Action – There is no commercial sector ACT for Atlantic migratory group cobia. The recreational sector ACT equals sector ACL*[(1-PSE) or 0.5, whichever is greater] (currently 1,184,688 lbs). Note: PSE is the average of the most recent 5 years data available.

Alternative 2: The commercial sector ACT for the Atlantic migratory group cobia for each subzone (to be determined by Action 7) equals 90% of the subzone ACL. The recreational sector ACT for the Atlantic migratory group cobia subzones (to be determined by Action 7) equals sector ACL*[(1-PSE) or 0.5, whichever is greater]. Note: PSE is the average of the most recent 5 years data available.

Specify Accountability Measures (AMs) by sub-zones for Atlantic migratory group cobia.
Alternative 1: No Action:

a. The commercial AM for Atlantic migratory group cobia is to prohibit harvest, possession, and retention when the commercial quota (total ACL x commercial allocation) is met or projected to be met. All purchase and sale is prohibited when the commercial quota is met or projected to be met.
b. The recreational AM for Atlantic migratory group cobia is if the recreational sector quota (total ACL x recreational allocation) is exceeded, the Regional Administrator shall publish a notice to reduce the length of the following fishing year by the amount necessary to ensure landings do not exceed the recreational sector quota for the following fishing year. Compare the recreational ACL with recreational landings over a range of years. For 2011, use only 2011 landings. For 2012, use the average landings of 2011 and 2012. For 2013 and beyond, use the most recent three-year (fishing years) running average. If in any year the ACL is changed, the sequence of future ACLs will begin again starting with a single year of landings compared to the ACL for that year, followed by two-year average landings compared to the ACL in the next year, followed by a three-year average of landings ACL for the third year and thereafter. Only adjust the recreational season length if the Total ACL is exceeded.
c. Commercial payback of any overage. Payback only if overfished - If the commercial sector ACL is exceeded, the Assistant Administrator for Fisheries shall file a notification with the Office of the Federal Register to reduce the commercial sector ACL in the following year by the amount of the overage.

d. Recreational payback of any overage from one year to the next. Payback only if overfished - If the recreational ACL is exceeded, the Assistant Administrator for Fisheries shall file a notification with the Office of the Federal Register to reduce the recreational ACL in the following year by the amount of the overage. The ACT would also be adjusted according to the ACT formula in CMP Amendment 18, Action 19-6. Only deduct overages if the Total ACL is exceeded

Alternative 2: The current commercial and recreational AMs for Atlantic migratory group cobia apply to each of the Atlantic migratory group cobia subzones (as determined by Action 7).

Alternative 3: The current commercial and recreational AMs for Atlantic migratory group cobia apply to each of the Atlantic migratory group cobia subzones (as determined by Action 7) except that the 3-year moving average is replaced by the most recent year's landings.

Discussion: The three actions above were removed because SEDAR 28 was not expected to be completed in time for inclusion in this amendment. However, SEDAR 28 was completed before public hearings so a new action was added to address the same issue.

Modify Subzones and Allocation of Gulf Migratory Group Eastern Zone King Mackerel.

Alternative 1: No Action – Retain the existing northern and southern subzones and retain the existing allocations for these areas.

Alternative 2: Eliminate the current northern and southern subzones and add the assigned allocation to the combined eastern zone.

Alternative 3: Modify the Florida West Coast subzones and reallocate quota

Option a: Retain subzones but modify the boundary between the northern and southern subzones to the Dixie/Levy County line.

Option b: Create a third Florida West Coast subzone from the Collier/Lee County line to the Dixie/Levy County line with an allocation based on:

Suboption i. Reallocating x lbs from the Southern subzone hook-and-line fishery

Suboption ii. Reallocating x lbs from the East Coast Zone, Gill Net allocation, and Southern Subzone allocation

Suboption iii. Reallocating 2% from the recreational sector allocation based on a temporary reallocation for the next 5 years

Option c: Retain the current subzones but increase the allocation to the Northern subzone based on:

suboption i. Reallocating x lbs from the Southern Subzone hook-and-line fishery

suboption ii. Reallocating x lbs from the East Coast Zone, Gill Net allocation, and Southern Subzone allocation

suboption iii. Reallocating 2% from the recreational sector allocation based on a temporary reallocation for the next 5 years

Discussion: In 2000, the Gulf of Mexico Fishery Management (Gulf Council) established two subzones off the west coast of Florida with the northern subzone extending from the Collier/Lee County line to the Alabama/Florida border and the southern subzone extending over Collier and

Monroe counties. This action was based on the king mackerel fishery in the panhandle area of Florida having significantly increased its catch in the last few years prior to 1999. In establishing this northern subzone the Gulf and South Atlantic Councils agreed to allocate to this new subzone a small portion of the total allocation for the eastern zone (approximately 3.85% that amounted to approximately 168,500 lbs). Since the implementation of this action, the northern subzone has caught its allocation in seven of the twelve years. However, when the subzone has been closed, it has happened usually in the fall, before the fish have migrated south. The result is that fishermen along the peninsula of Florida do not have an opportunity to participate in the fishery during those years. Combining the northern subzone with the southern subzone reduces the number of quota areas for Gulf group king mackerel from three to two, thus it simplifies monitoring. It also provides for a larger potential share of TAC for fishermen over a broader area.

Establish State-by-State or Regional Quotas for Atlantic Migratory Group King Mackerel, Spanish Mackerel, and Cobia.

Alternative 1: No Action - retain one commercial quota each for Atlantic migratory groups of king mackerel, Spanish mackerel, and cobia.

Alternative 2: Establish commercial quotas for each South Atlantic state for Atlantic migratory groups of king mackerel, Spanish mackerel, and cobia. Establish a commercial quota for the Mid-Atlantic Council (Virginia-New York) area for Atlantic migratory group of king mackerel, Spanish mackerel, and cobia.

Option a: king mackerel
Option b: Spanish mackerel
Option c: cobia

Alternative 3: Establish commercial quotas for three regions: North Carolina/South Carolina, Georgia/Florida, and Mid-Atlantic for Atlantic migratory groups of king mackerel, Spanish mackerel, and cobia.

Option a: king mackerel
Option b: Spanish mackerel
Option c: cobia

APPENDIX B. 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 include the Endangered Species Act (Section 3.3.3), Marine Mammal Protection Act (Section 3.3.3), E.O. 12866 (Regulatory Planning and Review, Chapter 5) and E.O. 12898 (Environmental Justice, Section 3.5.5). Other applicable laws 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 will determine if this plan amendment is consistent with the Coastal Zone Management programs of the states of Alabama, Florida, Louisiana, Mississippi, and Texas 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 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 Office of Management and Budget 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.

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. 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 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 National Marine Fisheries Service 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 National Marine Fisheries Service, 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 action proposed in this amendment. Therefore, consultation with state officials under Executive Order 12612 is not necessary.

APPENDIX C. SUMMARIES OF PUBLIC COMMENTS RECEIVED

Summary of the Public Hearings on
Coastal Migratory Pelagics Amendments 20A and 20B

D'Iberville, MS
8/5/2013

Council/Staff
Dale Diaz
Corky Perret
Ava Lasseter

7 members of the public attended.

Gary Smith: Recreational angler
The commercial fishermen he knows complain that the Council is constantly trying to downsize the fleet, which conflicts with free markets. The commercial fishermen are against that. The fish houses want to see the industry shrink. His friends have to fish under a fish house permit because they can't get their own permit. When is the Council going to make their own permits so the fishermen don't have to fish under a fish house, which controls what price they get paid? That's the reality of what the Council has created in this system. They ought to have the ability to get their own permits.

He's against removing inactive permits as he's in the insurance business and you have to be inactive sometimes. For Amendment 19 Gary supports the Gulf Council's preferred alternative (Action 2, Alternative 1); permits should be allowed to go inactive which would allow others to come in and they could get their license reactivated. The Council has increased the commercial red snapper quota but not increased the number of people who can fish it. It would scare him to depend on a fish house owner like the commercial fishermen do. His biggest concern is that fishermen not be beholden to the fish houses.

Panama City, FL
8/6/2013

Council/Staff
Pam Dana
Ryan Rindone
Ava Lasseter

2 members of the public attended.

BJ Burkett: Charter and Commercial Fisherman: Hook 'Em Up Charters
Mr. Burkett prefers an October 1 opening for the Eastern Zone, northern subzone (Amendment 20B, Action 1, Alternative 3b). He thinks the Western Zone should be reduced to a 1250 pound trip limit. He also thinks permitted vessels should be required to declare the zone in which they want to fish. He needs his zone open when he can fish it. October would be the best time for him to fish off Panama City. Any one of the three things mentioned would help, but not all of them are necessary.

He also doesn't necessarily agree with the sale of bag limit mackerel (Amendment 20A, Action 1). He says it takes fish out of his subzone's quota.

He would also like to see a change in the commercial allocation between the zones, which would shift more of the quota to the Eastern Zone northern subzone.

Randall Akins: Charter and Commercial Fisherman
Mr. Akins is a federal Spanish mackerel permit holder. He thinks there is a problem with the distribution of information, since he did not know that he could sell bag limit caught Spanish mackerel. He also wants a chance to read the documents ahead of time, as opposed to receiving them at the meetings. In the past, he has found words like "estimated" and "probably" in reference to quantitative values- these should be exact numbers, not estimates.

Mr. Akins prefers the elimination of the income requirement for CMP permits (Amendment 20A, Action 3, Alternative 1)

Mobile, AL
8/8/2013

Council/Staff
Kevin Anson
Chris Blankenship
Ryan Rindone
Ava Lasseter

11 members of the public attended.

No comments received.

St. Petersburg, FL
8/12/2013

Council/Staff
Martha Bademan
Ryan Rindone

Ava Lasseter

8 members of the public attended.

Gary Smith: Retired FL Commercial Fisherman
Mr. Smith has been a king mackerel fisherman for 51 years. He wonders why there can't be a central zone from the Collier/Monroe County line north to Cedar Key. The Martin Luther King Day opening of net season took all those fishermen out of the fishery, and they can't get back in. Give the king mackerel increases to the FL West Coast fishermen, not the Keys. Make it a 5,000 pound trip limit for the few net boats that would fish there.

On changing the trip limit in the Eastern Zone southern subzone (Amendment 20B, Action 1), increasing the trip limit to 3,000 pounds with no reduction is going to shorten the season and drive the price down. Naples fishermen prefer the 1,250 pound trip limit, and they have to go further than the Keys fishermen. It would have to be a cold winter to push the fish down to the Tortugas.

Buddy Bradham: Recreational Fishing Alliance, Retired CFH and Commercial Fisherman
The following are preferred alternatives for CMP Amendment 20A:

- Action 1, Alternative 1- Selling recreational fish helps cover expenses for the CFH industry. Most commercial fishermen just go along with it. Why not have MRIP have an extra question to indicate whether the fish caught are going to a fish house?
- Action 2, Alternative 1- Don't eliminate permits. If the trip limit is increased to 3,000 pounds, guys who have not been fishing their permits will be able to do so again, as it will become economically feasible to go after the fish.
- Action 3, Alternative 1- Keep the income requirement to qualify for permits. It has worked in the past, and it helps to limit entry into the fishery.

The following are preferred alternatives for CMP Amendment 20B:

- Action 1, Alternative 3- For the Eastern Zone, southern subzone.
- Action 2, Alternative 1- Leave the season opening as it is.
- Action 3, Alternative 4- Allow transit through all zones.

League City, TX
8/13/2013

Council/Staff
Robin Riechers
Lance Robinson
Emily Muehlstein
Charlotte Schiaffo

21 members of the public attended.

Scott Hickman: Charter Owner/Operator
The science does not show the damage that has been done to cobia since oil spill. They have seen very few juvenile cobia and would like the Council to consider going to a 1 fish limit.

Shane Cantrell: Charter Owner/Operator
According the most recent stock assessment the cobia population is in good shape but his eyes on the water are not seeing any little cobia. He would like to see caution with the possibly of missing juvenile cobia. He does not like to lose a fish because he doesn't see the bag increase once it decreases but if it helps ensure the health of the cobia stock he would make the sacrifice.

Grand Isle, LA
8/14/2013

Council/Staff
Camp Matens
Emily Muehlstein
Charlotte Schiaffo

27 members of the public attended.

Don Comron: Commercial Fisherman - Florida
Mr. Comron agreed with participation reduction, stating he would like to reduce participation as much as possible especially on the east coast and he would like to see the reduction 2 for 1 or increasing to a 75% earned income requirement, which he considered the ideal solution. He expressed a desire to see the reduction of part-time fishing, adding that he could not make a living on the east coast of Florida and so he had to travel over to the Gulf to fish. He emphasized that he did not want to keep anyone from fishing if that is what they genuinely do for a living but he did not appreciate recreational part time fishers who made money and filled the quota at the expense of full time commercial fishermen.

Ryan Mallory: 3rd Generation Fisherman - Florida
Mr. Mallory stated that everyone should have the opportunity to fish but the problem was that there were so many people that want to work and jump on the bandwagon when the fishing is good and take away from the commercial fleet who depend on the fishery for their livelihood. He stated that some action to reduce the number of permits would be better than no action, and asked what would happen to the next generation of fishermen? He stated that if the Council went to a two for one permit reduction it would reduce the fishery and increase the cost of a permit. He noted that it costs $30-50K to get a snapper-grouper permit in the east coast before you ever catch a fish. He asked why the fishery could not just have more fish. He stated that the stocks were fine, and that mackerel fishers filled the quotas, which they would not be able to do if there was not enough stock. He wanted the quota to stay open until Lent when the fish were worth more, adding that when the price goes down its hard to make money.

Michael Sappe: 3rd Generation Fishermen: King and Spanish mackerel on 2 boats
Mr. Sappe asked why permits cannot be taken away from people who are not using them- noting that this is done in other fisheries. He noted that all these permits were taken away because they aren't being used. He added that if 1400 people were in LA catching king mackerel and they all came in with the allowed amount it would exceed the quota, and pointed out that there would need to be enough at least 30,000 pounds of fish per permit each year to satisfy them. He strongly urged limiting the permits.

Dean Blanchard: Seafood Dealer: Dean Blanchard Seafood
Mr. Blanchard stated that the regulations were causing much friction between the fishermen and urged the different stakeholders to cooperate and not argue amongst themselves. His preferences on the actions are:

For Amendment 20A Dean supports **Action 2, Alternative 1 do not eliminate inactive king mackerel permits.** On Action 3, he would rather no one be restricted from having a permit but he supports Alternative 4, Option a. **Modify Income Requirements for Gulf and South Atlantic Commercial Coastal Migratory Pelagic Permits by requiring people to earn at least 75% of their income from fishing to renew or obtain a commercial mackerel permit.** He urged that part time fishermen should not take the place of real commercial fishermen. He would rather the Council not reduce permits at all but if they had to do something then the option of a 75% of the earned income requirement should be enacted. He questioned why permits should be taken from someone, and added that the Gulf Council was funneling everyone into certain fisheries, then after so long saying this stock is overfished. He stated his opinion that the stock was overfished because the Council had created a system were commercial boats were forced to fish single species. He emphasized that there were plenty of fish in the sea, so they should be allowed to fish for them.

For Amendment 20B Actions 2 he backed the idea of having the season in the Western Zone open as late as possible (Alternative 3a).

Tim O'Malley: Commercial King Fisherman - Florida
Mr. O'Malley stated that he first came over to the area in the 70's and had been fishing every year for 25 years in the Gulf. He noted that the 500lb requirement on local fishermen made it harder for them to earn a living when several hundred recreational fishermen from the East Coast came over drinking beer and harvesting 200 pounds of quota each. He stated he has to come over from the East Coast and he had to harvest fish from LA and take those fish away from the locals. For Amendment 20A Action 3 he supported Alternative 4a and noted that if someone made 75% of their living commercial fishing then they were meeting the requirements. He added that 1400 permits were too many, suggesting that the number be reduced to 300, and noted that many of the current 1400 permits were not active. He stated that his quota in Fort Walton Beach was useless since it was so small, that it was met too quickly, and needed to be increased because the fish were plentiful in the Panhandle. For Amendment 20B he supported pushing back the season opening in September in the western zone (Action 2, Alternative 2a) and using a 2007 control date. Otherwise, he suggested not opening it because every little boat on the East

coast would descend on the area because the fish could be caught within 10 miles of the beach in the Grand Isle area.

James Turner: Commercial Mackerel Fisherman - Florida
Mr. Turner testified that things were getting worse in the fishery each year. He explained that his trips had gone down from 18 per season to 10 and added that if it went any lower he would be out of business. He stated that there are more and more participants and he kept hearing the Council was going to IFQ's and that there were not going to be any new participants allowed, but there had been not any change. He supported endorsements, and a control or cut-off date of 2007 or 2010. He urged the Council to act now and quit allowing more boats to come over and harvest the fish. He added that he could not afford to come over for one week of fishing, and that the price dropped with so many people selling kingfish from three areas at the same time. In Amendment 20B, Action 2, Alternative 1 he suggested that the season opening date should be left alone so the market was not flooded, adding that if the season was opened when the fish were closer to shore it would close after a week because of all the boats coming over and the quota being quickly filled. For Amendment 20A, Action 2, Alternative 4 he supported two for one permit reduction in the king mackerel fishery. He catches his fish and he hates having to travel and have people think he is taking local fish. He urged the Council to either give them more fish or stop new fishermen.

Nick Hill: Commercial Fisherman - Florida
Mr. Hill stated that this was the 12th fishery he has been kicked out of, and that none of his permit losses were based on science. He asked why the Council was constantly changing the rules before stock assessments were done. He lamented that the Council parroted the same broken record and nobody followed the rules. For Amendment 20, Action 5 he believed that changing the framework would only make it easier to make the changes that no one wants before the science says anything. He supports Amendment 20B, Action 3, Alternative 1: if the transit rule was put into effect it would be a law enforcement nightmare. For Amendment 19, Action 3 he expressed his opinion that the only way to get a permit is by lying on the form so if you don't fish you don't qualify, adding that if you have not used it in the last 2 or 3 years then you do not need a permit. He urged the Council to be sure if limits were based on landings that the Council do something to look out for people who have new permits but have been fishing them actively.

For Amendment 20A, Action 2 – Elimination of Inactive King Mackerel Permits Nick said that if the rules currently in place- (with a qualifier on the vessel) were enforced it would eliminate a lot of fishermen. He expressed frustration that the Mackerel AP came up with various proposals which were then shot down by the International Protocol Team, ignoring the will of the fishermen. He worried that the children of fishers would not go into the fishery because there was no future in it. Action 1: He suggested that the recreational sale of fish should be counted under the recreational quota, not the commercial quota.

Al Cassagne: Commercial Fisherman
On Amendment 20A Mr. Cassagne testified that permits seemed to be an East Coast of Florida issue which followed everyone down Grand Isle. He noted that all he had ever done for a living was to fish and that there did not use to be so many people in the area fishing for mackerel. He

added that he had lost his right to some permits as well and does not want to lose another permit. He explained that he has one he doesn't use so he doesn't hurt the quota but he will sell it to someone who wants to fish it and then there will be more people harvesting the permit. He did not have a solution but he does not want his permit to be eliminated and he is worried that this will become like snapper where one person who does not fish will make all the money because he owns the permits. He asked that the Council go back and set control dates/time frames so that people who have not fished an area historically cannot start now.

For Amendment 20B, Action 2 he supported a later opening date.

Jack Robinson: Commercial Fisherman
Mr. Robinson said that this was the 3rd time he come and made comments. For Amendment 20A he would like there to be some type of historical qualifier to eliminate permits, noting that people were getting pushed out of the different fisheries so they were turning into mackerel fishermen. For Action 3 he supported raising the earned income requirement as a good way to eliminate part-time fishermen.

For Amendment 20B Action 2 he opposed a September opening, stating that it would not be good for Texas fishermen who would not get a chance to fish and added that the price would be too low.

He suggested that the mackerel committee should be used more and it seemed that all the suggestions in the presentations were from the Council. Jack also suggested that the two Councils (S. Atlantic & Gulf) should divorce their co-management of mackerel so that it could be simplified and move faster.

Dan Kane: Commercial King Fisherman
Mr. Kane did not understand how the Council could manage the fisheries without doing the math correctly. He stated that there should only be 350 permits with the amount of quota that there is currently allowed. He noted that in 2008 the number of king fish permits almost doubled and added that mackerel needed to be a commercial fishery only. He gave his opinion that recreational fishers did not need so many fish and the commercial quota needed to be increased. He reemphasized the urgency of correct math being used to determine what needs to be done in the fishery. He stated that he lost two months of fishing on the east coast of Florida because there are so many fishermen and the fishing over there was not worthwhile, and that he lost over $200,000 because of the bad math. He stated that there were too many permits and not enough fish. He noted that there were over 50 boats from the east coast in the Grand Isle area, and that the market could only handle about 40,000 lbs a week. For Amendment 20B, Action 2 he opposed opening the season on September 1st, adding that this would cause the market to flood and the fish price to drop. He stated that there was enough room for 18 or 21 boats in the Western zone, and suggested that the Council decide how many boats can fish in each zone. He suggested going back to historical fishermen of 20 years ago. He urged the Council to figure out how to let people make a living.

Mickey Readenour: Commercial Fisherman - Grand Isle
Mr. Readenour stated that fishermen in the area have had several events that have happened in the past 10 years; hurricanes oil spills etc.; that have limited fishermen from participating in the fishery. For Amendment 20B, Action 2 he supported an October 1st opening for the Western Gulf (Alternative 3a), adding that locals who have not been able to participate would then be allowed to because when the quota was reduced to a 3000lbs trip limit it made small boats unable to fish. He suggested a September 1st opening would be fine for Florida (Alternative 2 b & c).

Key West, FL
8/15/2013

Council/Staff
John Sanchez
Doug Gregory
Ryan Rindone

35 members of the public attended.

David Fleming: Commercial Fisherman – Naples
Mr. Fleming is opposed to the 3000 pound trip limit increase for the southern subzone (Amendment 20B, Action 1, Alternative 3b). Keep it at 1250 pounds. Remove the trip limit reduction (Action 2, Alternative 4b).

Pedro Almanza: Commercial Fisherman – Key West
At 1250 pounds, the trip limit is too low for me to make any money. He supports the 3000 pound trip limit for the southern subzone (Amendment 20B, Action 1, Alternative 3b)

Rick J. Matthews: Commercial Fisherman – Naples
Raising the trip limit to 3000 pounds would drop the price of king mackerel and shorten the season. He prefers the 1250 pound trip limit. I am not opposed to the trip limit reduction (Amendment 20B, Action 1, Alternative 1).

James Cass: Commercial Fisherman – Naples
Mr. Cass is opposed to the 3000 pound trip limit for the southern subzone (Amendment 20B, Action 1, Alternative 3b). The price would drop, the season would be too short, and he can't transport that many fish.

Patrick Purslow: Commercial Fisherman – Naples
Mr. Purslow opposed to the 3000 pound trip limit (Amendment 20B, Action 1, Alternative 3b). It has worked fine at 1250 pounds for the past 15 years. Don't fix what isn't broken. Keep the trip limit reduction. Increasing to 3000 pounds would create more problems than it would solve.

Bill Kelly: Florida Key Commercial Fishing Association
For Amendment 20A the FKCFA prefer no action on eliminating latent permits (Action 2, Alternative 1). FKCFA opposes the 2 for 1 permit reduction proposal from the South Atlantic Council (Action 2, Alternative 4). We need to create opportunity- not restrict it. We are opposed to an income requirement (Action 3, Alternative 1). We have multi-species fishermen. For Amendment 20B FKCFA fully supports transit through closed areas from open areas (Action 3, Alternative 4). FKCFA supports increasing the trip limit in the southern subzone to 3000 pounds (Amendment 20B, Action 1, Alternative 3b). The fish stock is healthy. They are not worried about a price drop. This is an opportunity for better marketing. The current low trip limit is hamstringing opportunities. FKCFA completely oppose Action 4. They are opposed to any IFQ or catch share system. Keep the Gulf mackerel fishery catch share-free.

Josh Nicklaus: Commercial Fisherman – Key West
Mr. Nicklaus prefers the 3000 pound trip limit for the southern subzone (Amendment 20B, Action 1, Alternative 3b). It is too expensive to fish for mackerel at 1250 pounds per trip.

Billy Niles: Commercial Fisherman – Summerland Key
Mr. Niles has fished for 61 years, often at Half Moon Shoal. It's always been that the price drops when the fish hit Monroe County. He can't land fish because it is too expensive to fish with a 1250 pound trip limit. He says they need more fish. They need a 3000 pound trip limit in the southern subzone (Amendment 20B, Action 1, Alternative 3b). He is opposed to the 2 for 1 permit reduction (Amendment 20A, Action 2, Alternative 4). Charter for hire sales should be under a separate quota. The fish stocks are healthy.

Mario Torres: Commercial Fisherman – Hialeah
Mr. Torres is currently pursuing a Gulf king mackerel permit. It may not be economically feasible to fish king mackerel with a 1250 pound trip limit. He prefers the 3000 pound trip limit increase (Amendment 20B, Action 1, Alternative 3b).

Bobby Pillar: Commercial Fisherman – Summerland Key
Mr. Pillar understands the argument from the Naples fishermen. The 1250 pound trip limit came about to keep the price up. That was when diesel was 75 cents a gallon. Fuel is just too expensive these days to make any money with a 1250 pound trip limit. If they can't get a 3000 pound trip limit, traditional fishermen will be regulated out of the fishery. 1250 pounds per trip may be okay in Naples, but no fishermen are going out for kingfish in Key West at 1250 pounds. They catch their fish from December to January.

Brian Bennett: Commercial Fisherman – Key West
Mr. Bennett makes more money on kingfish than anything else. He is opposed to the 3000 pound trip limit increase (Amendment 20B, Action 1, Alternative 3b). The quota will be filled too quickly and the price will drop. The price is great right now. More boats will fish our zone with a higher trip limit.

George Niles: Commercial Fisherman – Summerland Key
In Amendment 19 do not eliminate any permits. He is against the 2-for-1 permit reduction proposed by the South Atlantic (Amendment 20A, Action 2, Alternative 4). Fuel costs are too high and trip limits are too restrictive. The current southern subzone trip limits are from a time when they had $1 diesel. There needs to be 3000 pound trip limits (Amendment 20B, Action 1, Alternative 3). He is opposed to trip limit reductions. He wants the season in the southern subzone to open on January 1. They need to be able to transit to the closest fish house to offload. Fishermen should have to declare their zone. Fish should be reallocated from the recreational fishery to the commercial fishery.

Daniel Padron- Commercial Fisherman – Key West
Mr. Padron supports the 3000 pound trip limit for the southern subzone (Amendment 20B, Action 1, Alternative 3b). It is too expensive to fish for mackerel at 1250 pounds per trip. He is opposed to sale of bag limit caught fish. Don't eliminate permits. They need new people in the fishery. Give folks a chance to fish. He is opposed to the trip limit reduction (Amendment 20B, Action 1). He supports open transit through closed zones from open zones (Amendment 20B, Action 3, Alternative 4). He is opposed to any VMS to monitor transit.

Jason Yarborough: Commercial Fisherman – Key West
Mr. Yarborough supports the 3000 pound trip limit for the southern subzone (Amendment 20B, Action 1, Alternative 3b). Fuel is just too expensive. Only one boat landed 1250 pounds at his fish house last year. Increasing the trip limit to 3000 pounds will allow folks to fish again and make money. He is opposed to eliminating permits (Amendment 20A, Action 2, Alternative 1). They need to preserve fishing opportunities for future generations.

Eduardo Gomez: Commercial Fisherman – Key West
Mr. Gomez supports the 3000 pound trip limit for the southern subzone (Amendment 20B, Action 1, Alternative 3b). Key West is one of the most important seafood ports in Florida. With fuel costs and distance to the fish, a 1250 pound trip limit is not doable.

Eduardo Sariol: Commercial Fisherman – Key West
Mr. Sariol supports the 3000 pound trip limit for the southern subzone (Amendment 20B, Action 1, Alternative 3b). They need more fish to make money. Trip limit reductions are unnecessary. He is opposed to any VMS for monitoring transit.

Mike Pierce: Commercial Fisherman – Key West
Mr. Pierce supports the 3000 pound trip limit for the southern subzone (Amendment 20B, Action 1, Alternative 3b). He is opposed to the trip limit reduction. Fuel is too expensive to make 1250 pounds economically doable.

Juan Blanco: Commercial Fisherman – Key West
Boats used to be loaded with fish. They don't need quotas. More fish coming in means more fish to sell. He supports the 3000 pound trip limit for the southern subzone (Amendment 20B, Action 1, Alternative 3b). He is opposed to the trip limit reduction. He sees fishermen breaking the law all the time. Fuel is too expensive, and you have to support your mates. He just wants to

work. He is opposed to the 2 for 1 permit reduction (Amendment 19, Action 2, Alternative 4). They can still sell the fish. The most they get is $2, then it drops to about $1.

Yordy Martinez: Commercial Fisherman – Key West
Speaking for: Himself, and Alberto and Carlos Martinez
Mr. Martinez supports the 3000 pound trip limit for the southern subzone (Amendment 20B, Action 1, Alternative 3b). He wants his son to be a fisherman. The regulations make fishing hard. He is opposed to the trip limit reductions and VMS.

Marco Herrera: Commercial Fisherman – Key West
Mr. Herrera is a multispecies fisherman. He supports the 3000 pound trip limit for the southern subzone (Amendment 20B, Action 1, Alternative 3b). The Council needs to give something back to the fishermen. Give the commercial sector some of the recreational quota.

Jose Blanco: Commercial Fisherman – (No Location Given)
Mr. Blanco has been fishing in Naples and Tampa. He's seen Naples fishermen catching four days' worth of trip limits, and then sell them at Naples fish houses. They are in 43' and 39' boats. They are selling 6000 pounds of fish at a time. They are hurting everyone.

Nicholas DeMauro: Commercial Fisherman – Sugarloaf Key
Mr. DeMauro fishes for snapper/grouper and kingfish. He needs a 250 pound bycatch permit for the charter for hire industry.

Omar Manso: Commercial Fisherman – Miami
Mr. Manso supports the 3000 pound trip limit for the southern subzone (Amendment 20B, Action 1, Alternative 3b). Fuel costs and distance are just too great for 1250 pounds.

Tom Marvel: Commercial Fisherman – Naples
Mr. Marvel travels for kingfish. Maintain the trip limit at 1250 pounds (Action 1, Alternative 1). The season would be too short at 3000 pounds. The price of fish would be too low. Collier County fishermen would suffer; they rely on the spring fish. They have to fish for multiple species. At 3000 pounds, no one will catch more fish. With unlimited transit, more folks will travel. For Amendment 20A, he prefers Action 1 Alternative 3b. Action 2 Alternative 1, and Action 3 Alternative 2. For Amendment 20B, he prefers Action 1 Alternative 4c and Action 2 Alternative 1.

Randy Wamble: Commercial Fisherman – Naples
Mr. Wamble has to run long distances for fish. He has tailored his business for 1250 pound trip limits. 3000 pounds is no good (Amendment 20B, Action 1, Alternative 3b). The price and season would drop, and effort would increase. He opposes the 500 pound reduction.

Johnny Brown: Commercial Fisherman – Naples
Mr. Brown opposes the 3000 pound trip limit increase (Amendment 20B, Action 1, Alternative 3b). 95% of his income is from king mackerel fishing. He fishes alone. He only has 1900 pounds of grouper allocation. He needs the 1250 pound kingfish trip limit to keep the season

long and the price up. The 500 pound reduction is not needed. He obeys the rules and does not want to be punished.

Rick Matthews, Sr.: Commercial Fisherman – Naples
Mr. Matthews is a multispecies fisherman. The net ban hurt. He got into stone crab, sharks, and grouper. Now he only fishes stone crabs and king mackerel. He opposes the 3000 pound trip limit because the season will drop (Amendment 20B, Action 1, Alternative 3b). The 500 pound trip limit reduction is not needed. He would rather spend more time fishing than have a higher trip limit.

https://docs.google.com/spreadsheet/ccc?key=0AhC1wo3e6k8TdC1KUk9VNjA5aWVwRUtiazNYYkxqRUE#gid=0

South Atlantic
August 2013
South Atlantic Public Hearing Comments
Joint CMP Amendment 20B

Dates and Locations

August 5, 2013
Richmond Hill City Center
520 Cedar Street

Richmond Hill, GA 31324

August 6, 2013
Jacksonville Marriott
4670 Salisbury Road
Jacksonville, FL 32256

August 7, 2013
Doubletree Hotel
2080 N. Atlantic Avenue
Cocoa Beach, Florida 32931

August 8, 2013
Hilton Key Largo Resort
97000 South Overseas Highway
Key Largo, Florida 33037

August 13, 2013
Hilton Garden Inn Airport
5265 International Boulevard
North Charleston, SC 29418

August 14, 2013
Double Tree by Hilton Wilmington
4727 Concord Pike
Wilmington, DE 19803

August 15, 2013
Bridgepoint Hotel
101 Howell Road
New Bern, NC 28582

4 individuals provided public comment at the hearings.
3 individuals provided written comments.

Action 1- H&L trip limits for Gulf king mackerel
- One commenter supported Alternative 4 (1,250 lbs with no reduction).

- Two commenters supported no action.
- Two commenters supported a 3,000 lb trip limit. The commenter also noted that this could affect the number of inactive permits by making trips more efficient.
- One commenter supported Alternative 3c (3,000 lbs with no reduction in the Eastern Zone Southern Subzone) and 4b (1,250 lbs with no reduction in the Eastern Zone Northern Subzone

Action 2- fishing seasons for Gulf king mackerel
- Two commenters supported no action. One commenter stated that changes in the fishing years will hurt the Atlantic fishermen's market.
- One commenter supported Alternative 2 (change the season to Sept 1- Aug 1).

Action 3- provision to transit through closed king mackerel zones
- All 5 commenters supported a transit provision.

Action 4.1 and 4.2- regional allocation of Atlantic group king mackerel and Spanish mackerel
- One commenter supported Alternative 2, Option D, to give North Carolina the quota they have been requesting.
- Two commenters supported no action.

Action 5- framework procedure modification
- Two commenters supported Preferred Alternative 2.
- One commenter also supported Preferred Alternatives 4 and 5.

Action 6- cobia ACL/ACT
- Three commenters supported the Preferred Alternative 3 and Preferred Option D.

APPENDIX D. BYCATCH PRACTICABILITY ANALYSIS (BPA)

Population Effects for the Bycatch Species

Background
Amendment 20B to the FMP (CMP Amendment 20B) includes actions that consider modifying the commercial hook-and-line trip limits for Gulf migratory group king mackerel, changing the fishing season for Gulf migratory group king mackerel for the eastern and western zones, establishing transit provisions for travel through areas that are closed to king mackerel fishing, establishing regional annual catch limits (ACLs) for Atlantic migratory group king and Spanish mackerel, modifying the framework procedure, and modifying the Gulf and Atlantic migratory group cobia ACLs and annual catch targets (ACTs).

In the Gulf of Mexico (Gulf) and Atlantic (Florida through New York) regions, most king mackerel and cobia are harvested with hook and line gear; however, gillnets and castnets are the predominant gear type used to harvest Spanish mackerel.

Commercial Sector
Currently, discard data are collected using a supplemental form that is sent to a 20% stratified random sample of the active permit holders in CMP fishery. However, in the absence of any observer data, there are concerns about the accuracy of logbook data in collecting bycatch information. Biases associated with logbooks primarily result from inaccuracy in reporting of species that are caught in large numbers or are of little economic interest (particularly of bycatch species), and from low compliance rates. During 2008-2012, the commercial sector for CMP species in both the Gulf of Mexico and Atlantic (Florida to New York) landed 11,714,560 pounds (lbs) whole weight (ww) and discarded 44,035 lbs ww (**Table 1**). The commercial sector predominantly harvested king and Spanish mackerel, with relatively few cobia (**Table 1**).

Recreational Sector
For the recreational sector, during 2008-2012, estimates of the number of recreational discards were available from Marine Recreational Fisheries Statistical Survey (MRFSS) and the National Marine Fisheries Service (NMFS) headboat survey. The MRFSS system classifies recreational catch into three categories:

- Type A - Fishes that were caught, landed whole, and available for identification and enumeration by the interviewers.

- Type B - Fishes that were caught but were either not kept or not available for identification:

    - Type B1 - Fishes that were caught and filleted, released dead, given away, or disposed of in some way other than Types A or B2.

    - Type B2 - Fishes that were caught and released alive.

During 2008-2012, the private recreational landings and discards for all three CMP species were higher than for either the headboat or charterboat category (Table 1). Landings and subsequent discards for the private recreational category were highest for Spanish mackerel, followed by king mackerel (Table 1). Discards in the private recreational category for cobia were disproportionally high compared with its landings (Table 1). A similar trend was seen for the charterboat category, with landings and discards for Spanish mackerel higher than king mackerel and cobia (Table 1). However, in the headboat category, landings and discards were higher for king mackerel, followed by Spanish mackerel, and cobia (Table 1). Discards for each of the three species were proportionally higher in the recreational sector than in the commercial sector (Table 1).

During 2008-2012, information for charter trips came from two sources. Charter vessels for the CMP fishery were selected to report by the Science and Research Director (SRD) to maintain a fishing record for each trip, or a portion of such trips as specified by the SRD, and on forms provided by the SRD. Harvest and bycatch information was monitored by MRFSS. Since 2000, a 10% sample of charter vessel captains were called weekly to obtain trip level information, such as date, fishing location, target species, etc. In addition, the standard dockside intercept data were collected from charter vessels and charter vessel clients were sampled through the standard random digital dialing of coastal households. Precision of charter vessel effort estimates has improved by more than 50% due to these changes (Van Voorhees et al. 2000).

Harvest from headboats was monitored by NMFS at the Southeast Fisheries Science Center's (SEFSC) Beaufort Laboratory. Collection of discard data began in 2004. Daily catch records (trip records) were filled out by the headboat operators, or in some cases by NMFS approved headboat samplers based on personal communication with the captain or crew. Headboat trips were subsampled for data on species lengths and weights. Biological samples (scales, otoliths, spines, reproductive tissues, and stomachs) were obtained as time allowed. Lengths of discarded fish were occasionally obtained but these data were not part of the headboat database.

Recent improvements have been made to the MRFSS program, and the program is now called the Marine Recreational Information Program (MRIP). Beginning in 2013, samples were drawn from a known universe of fishermen rather than randomly dialing coastal households. Other improvements have been and will be made that should result in better estimating recreational catches and the variances around those catch estimates.

Table 1. Mean Headboat, MRFSS, and commercial estimates of landings and discards in the Gulf of Mexico and U.S. Atlantic Ocean (Florida to New York) during 2008-2012. Headboat, MRFSS (charter and private) landings are in numbers of fish (N); commercial landings are in pounds whole weight (lbs ww). Discards represent numbers of fish that were caught and released alive (B2).

	HEADBOAT				MRFSS CHARTER				MRFSS PRIVATE				COMMERCIAL		
	Catch (N)	Landings (N)	Discards (N)	Percent Discards	Catch (N)	Landings (N)	Discards (N)	Percent Discards	Catch (N)	Landings (N)	Discards (N)	Percent Discards	Landings (lbs ww)	Discards (N)	Percent Discards
Cobia	2,393	2,393	0	0%	22,579	12,256	10,323	84%	191,018	71,916	119,102	166%	202,991	0	0%
King Mackerel	33,449	31,254	2,195	7%	182,772	153,474	29,297	19%	622,353	441,727	180,625	41%	6,380,061	42,323	<1%
Spanish Mackerel	13,454	11,997	1,458	12%	437,110	334,701	102,409	31%	5,250,479	2,708,586	2,541,893	94%	5,131,508	1,712	<1%
Total	**49,297**	**45,644**	**3,653**		**642,461**	**500,431**	**142,030**		**6,063,850**	**3,222,229**	**2,841,621**		**11,714,560**	**44,035**	

Sources: MRFSS data from SEFSC Recreational ACL Dataset (May 2013); Headboat data from SEFSC Headboat Logbook CRNF files (expanded; May 2013);

Commercial landings data from SEFSC Commercial ACL Dataset (July 10, 2013) with discard estimates from expanded SEFSC Commercial Discard Logbook (Jun 2013).

Notes: Commercial discard estimates are for vertical line gear only. Commercial king mackerel includes "king and cero mackerel" category;

Estimates of commercial discards are highly uncertain; No reported discards for Commercial and Headboat Cobia.
King mackerel, cobia, and Spanish mackerel data include both Atlantic coast and Gulf of Mexico. Note that discard estimates for commercial and headboat include only the Gulf of Mexico and SAFMC jurisdiction; discards from the Mid-Atlantic would likely be relatively low, but are not reported here.

Finfish Bycatch Mortality

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

SEDAR 28 (2013a, 2013b, 2013c, 2013d) assessed Spanish mackerel and cobia stocks in the South Atlantic and the Gulf of Mexico. The stocks were determined to be neither overfished nor undergoing overfishing. Both the Gulf and Atlantic migratory groups of king mackerel were assessed by SEDAR 16 in 2008/2009 (SEDAR 16 2009), and will be assessed again by SEDAR 38 in 2013/2014. The SEDAR 16 (2009) assessment determined the Gulf migratory group of king mackerel was not overfished and was uncertain whether the Gulf migratory group was experiencing overfishing. Subsequent analyses showed that $F_{Current}/F_{MSY}$ has been below 1.0 since 2002. Consequently, the most likely conclusion is the Gulf migratory group king mackerel stock is not undergoing overfishing. Atlantic migratory group king mackerel were also determined not to be overfished; however, it was uncertain whether overfishing is occurring, and thought to be at a low level if it is occurring.

SEDAR 16 (2009) provided a 20% estimate of release mortality of king mackerel for the private and charter sectors and 33% release mortality for the headboat sector. For Spanish mackerel, SEDAR 17 (2008) used the following discard mortality rates: gillnets 100%, shrimp trawls 100%, trolling 98%, hook-and-line 80%, and trolling/hook-and-line combined 88%. SEDAR 28 (2013c, 2013d) recommended identical discard mortality for Spanish mackerel as 100% for gillnets and shrimp trawls, but recommended a 10% discard mortality rate for commercial handlines, and 20% for recreational handlines. For cobia, SEDAR 28 (2013a and 2013b) used a discard mortality rate of 5% for the hook-and-line gear (both commercial and recreational sectors), and 51% for gillnets. Most king mackerel and cobia are harvested using hook-and-line gear, and gillnets are the primary gear for Spanish mackerel. As shown in Table 1, discards in the commercial sector are relatively low for all three CMP species, and while discards of cobia in the private recreational sector are very high, the discard mortality rate is very low for this species using hook-and-line gear (SEDAR 28, 2013a and 2013b).

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

Bycatch information is currently being collected in the CMP fishery. The anticipated effects on bycatch mortality of target and non-target species as a result of the actions contained in CMP Amendment 20B would depend on whether the action is decreasing fishing or increasing opportunities for harvest.

In CMP Amendment 20B, the preferred alternative in Action 1 would establish the commercial trip limits for Gulf migratory group king mackerel at 3,000 pounds (lbs) for the western zone and maintain the trip limit of 1,250 lbs for the southern and northern sub-zones of the eastern zone, but remove the reduction at 75% of the quota. Analysis in Chapter 4 of CMP Amendment 20B shows that the quota for each zone/subzone would still be reached before the end of the 2012 fishing season regardless of the trip limit. Therefore, no change in overall effort and consequently no change to the impacts on bycatch are expected for Action 1.

Action 2 of CMP Amendment 20B would change the fishing season for Gulf migratory group king mackerel for the western and eastern zones to start in September and October, respectively. Moving the start date of the commercial king mackerel season later in the calendar year may result in decreased fishing pressure. This time of year corresponds with the height of hurricane season, and temporal effort reduction resulting from poor weather conditions may result in slower removal rates and a prolonged fishing season in some or all subzones. However, "bad weather days" are not anticipated to be frequent enough to result in a subzone not catching its quota. Additionally, a later start date might discourage movement of fishers from the Atlantic coast off of Florida to south Louisiana and into the Florida panhandle, as has been the case for several years. Otherwise, traveling fishers may be forced to pursue other species in the absence of an open commercial king mackerel fishing season in mid-summer months; however, this temporal shift in effort is also not anticipated to result in a subzone not catching its quota. Therefore, it is not possible to accurately predict what might happen in terms of changes in effort, but from a biological standpoint and concerning bycatch, no differences in the impacts to king mackerel are expected under Action 2.

The action alternatives of Action 3 of CMP Amendment 20B would establish transit provision to allow fishermen who legally harvest king mackerel from Monroe County after April 1 of each year to transport and land their catch in other areas of the Gulf that are closed. If these fishermen are more likely to fish for king mackerel if they can land in another zone, then effort could increase relative to the current regulations and the biological impacts (including bycatch) could increase.

Action 4 of CMP Amendment 20B would establish regional ACLs for Atlantic migratory group king (Action 4.1) and Spanish (Action 4.2) mackerel. Establishment of a separate ACL for a Northern Zone and Southern Zone would not change the existing level of biological/ecological effects. The ACL and accountability measures (AMs) provide biological protection and prevent overfishing of Atlantic migratory group king mackerel. Actions 4.1 and 4.2 would not change the level of catch (including bycatch) of Atlantic migratory group king mackerel, only how it is distributed.

Action 5 of CMP Amendment 20B would modify the framework procedure and is purely administrative; positive biological/ecological benefits could be expected due to greater efficiency and effectiveness of management changes.

Action 6 would modify the ACLs and annual catch targets (ACT) for Gulf and Atlantic migratory group cobia that were originally established by CMP Amendment 18. SEDAR 28 After reviewing the SEDAR 28 stock assessments (2013a, 2013b), the Gulf of Mexico Fishery Management Council's (Gulf Council) Scientific and Statistical Committee (SSC) and South Atlantic Fishery Management Council's (South Atlantic Council) SSC recommended new acceptable biological catch (ABC) levels to their respective Councils. Under Action 6, the Gulf migratory group cobia ABC would be divided into a Gulf Zone ACL and a Florida East Coast Zone ACL (Florida/Georgia border to the Gulf and South Atlantic Council jurisdictional boundary) based on 1998-2012 (15 years) landings data. The South Atlantic ACL would equal to the SSC's ABC recommendation for the Atlantic migratory group cobia. Modifying the ACL

or ACT from the current values described in CMP Amendment 18 would potentially have an impact on the biological environment if harvest changes from current levels, and AMs are triggered if the ACL or ACT is met or exceeded. Action 6 would result in an increase in the Gulf ACL as well as the South Atlantic jurisdictional ACL (North Carolina to the Florida East Coast). Because approximately 90% of the overall harvest cobia is from the recreational sector, monitoring precision is currently not as high as with other species with higher levels of observed or otherwise independently validated landings (commercial, headboat observer programs). Consequently, any potential positive biological impacts (including bycatch and bycatch mortality) of jurisdiction-specific ACLs or ACTs may not be realized.

According to the bycatch information for mackerel gillnets, menhaden, smooth dogfish sharks, and spiny dogfish sharks were the three most frequently discarded species (SAFMC 2004). There were no interactions of sea turtles or marine mammals reported (Poffenberger 2004). The Southeast Region Current Bycatch Priorities and Implementation Plan FY04 and FY05 reported that 26 species of fish are caught as bycatch in the Gulf king mackerel gillnet sector. Of these, 34% are reported to be released dead, 59% released alive, and 6% undetermined. Bycatch was not reported for the Gulf Spanish mackerel sector. The Atlantic Spanish mackerel portion of the CMP fishery has 51 species reported as bycatch with approximately 81% reported as released alive. For the South Atlantic king mackerel portion of the CMP fishery 92.7% are reported as released alive with 6% undetermined. Bycatch was not reported separately for gillnets and hook-and-line gear. Additionally, the supplementary discard program to the logbook reporting requirement shows no interactions of gillnet gear with marine mammals or birds. Tables 2, 3, and 4 list the species most often caught with king and Spanish mackerel in the Gulf and South Atlantic from the SEFSC commercial logbook. There is very little bycatch in the Spanish mackerel component of the fishery with gillnet gear, and the king mackerel component is also associated with a low level of bycatch. CMP Amendments 20A and 20B would not modify the gear types or fishing techniques in the mackerel segments of the CMP fishery. Therefore, bycatch and subsequent bycatch mortality in the CMP fishery is likely to remain very low if these amendments are implemented.

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

Species	Percent of Harvest (Gillnets Only)
Spanish mackerel	94.1%
Blue runner	2.8%
King mackerel & Cero	2.6%
Unclassified jacks	0.38%
Crevalle jack	0.09%
Black sea bass	0.02%
Sheepshead	0.01%

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

Table 3. Top three species caught on trips where at least one pound of Spanish mackerel was caught with all gear types in the Gulf of Mexico and South

Atlantic from 2008-2012.

Species	Percent of Harvest (All Gear Types)
Spanish mackerel	78%
King mackerel & Cero	15%
Blue runner	2%
Yellowtail snapper	1%

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

Table 4. Top 10 species caught on trips where at least one pound of king-cero mackerel with all gear types in the Gulf of Mexico and in the South Atlantic from 2008-2012.

Species	Percent of Total Harvest
King mackerel & Cero	73.83%
Vermilion snapper	5.93%
Red grouper	3.10%
Red snapper	2.76%
Spanish mackerel	2.47%
Yellowtail snapper	2.14%
Greater amberjack	2.07%
Gag	1.31%
Red porgy	0.89%
Gray triggerfish	0.83%
Scamp	0.80%

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

Additional information on fishery related actions from the past, present, and future considerations can be found in Chapter 6 (Cumulative Effects) of CMP Amendment 20B.

Ecological Effects Due to Changes in the Bycatch

The ecological effects of bycatch mortality are the same as fishing mortality from directed fishing efforts. If not properly managed and accounted for, either form of mortality could potentially reduce stock biomass to an unsustainable level. The Gulf Council, South Atlantic Council, and NMFS are in the process of developing actions that would improve bycatch monitoring in all fisheries including the CMP fishery. For example, the Joint South Atlantic/Gulf of Mexico Generic Charter/Headboat Reporting in the South Atlantic Amendment (Charter/Headboat Amendment), which has been approved by the South Atlantic Council, includes an action that would require weekly electronic reporting of landings and bycatch data for headboats in the South Atlantic. A framework action to require electronic reporting of landings and bycatch by headboats in the Gulf has been approved by the Gulf Council. The Gulf and South Atlantic Councils are developing an amendment that would require electronic reporting of commercial logbook data, which would include landed and discarded fish. Better bycatch and discard data would provide a better understanding of the composition and magnitude of catch and bycatch, enhance the quality of data provided for stock assessments, increase the quality of assessment output, provide better estimates of interactions with protected species, and lead to better decisions regarding additional measures to reduce bycatch. Management measures

that affect gear and effort for a target species can influence fishing mortality in other species. Therefore, enhanced catch and bycatch monitoring would provide better data that could be used in multi-species assessments.

Ecosystem interactions among CMP species in the marine environment are poorly known. The three species are migratory, interacting in various combinations of species groups at different levels on a seasonal basis. With the current state of knowledge, it is difficult to evaluate the potential ecosystem-wide impacts of these species interactions, or the ecosystem impacts from the limited mortality estimated to occur from mackerel fishing effort. However, there is very little bycatch in the Spanish mackerel portion of the CMP fishery with gillnet gear, and the king mackerel portion of the CMP fishery is also associated with a low level of bycatch (Tables 2, 3, and 4). CMP Amendment 20B would not modify the gear types or fishing techniques in the CMP fishery. Therefore, ecological effects due to changes in bycatch in the CMP fishery are likely to remain very low if implemented. For more details on ecological effects, see Chapters 3 and 4 of the amendment.

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

Actions in CMP Amendment 20B are not expected to affect bycatch of other non-mackerel fish species. Less than 7% of the total landings in the mackerel and cobia components of the CMP fishery are non-targeted species (Tables 2, 3, and 4**)**. As discussed in the "practicability of management measures" portion of this BPA, the actions in CMP Amendment 20B are not expected to substantially affect bycatch of other fish species or result in population and ecosystem effects.

Effects on Marine Mammals and Birds

Under Section 118 of the Marine Mammal Protection Act (MMPA), NMFS must publish, at least annually, a List of Fisheries (LOF) that places all U.S. commercial fisheries into one of three categories based on the level of incidental serious injury and mortality of marine mammals that occurs in each fishery. The 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 portion of the CMP fishery is classified as Category II fishery. This classification indicates an occasional incidental mortality or serious injury of a marine mammal stock resulting from the fishery (1-50 % annually of the potential biological removal). The gillnet portion of the CMP fishery has no documented interaction with marine mammals; NMFS classifies gillnet portion of the CMP fishery as Category II based on analogy (similar risk to marine mammals) with other gillnet fisheries.

The Bermuda petrel and roseate tern occur within the action area. Bermuda petrels are occasionally seen in the waters of the Gulf Stream off the coasts of North Carolina and South Carolina during the summer. Sightings are considered rare and only occurring in low numbers (Alsop 2001). Roseate terns occur widely along the Atlantic coast during the summer but in the

southeast region, they are found mainly off the Florida Keys (unpublished USFWS data). Interaction with fisheries has not been reported as a concern for either of these species.

Fishing effort reductions have the potential to reduce the amount of interactions between the fishery and marine mammals and birds. Although, the Bermuda petrel and roseate tern occur within the action area, these species are not commonly found and neither has been described as associating with vessels or having had interactions with the CMP fishery. Thus, it is believed that the CMP fishery is not likely to negatively affect the Bermuda petrel and the roseate tern.

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

There is some observer coverage of CMP targeted trips by vessels with an active directed shark permit. The Shark Gillnet Observer Program is mandated under the Atlantic Highly Migratory Species FMP, the Atlantic Large Whale Take Reduction Plan (50 CFR Part 229.32), and the Biological Opinion for the Continued Authorization of the Atlantic Shark Fishery under Section 7 of the Endangered Species Act. Observers are deployed on any active fishing vessel reporting shark drift gillnet effort. In 2005, this program also began to observe sink gillnet fishing for sharks along the southeastern U.S. coast.

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

Changes in Fishing, Processing, Disposal, and Marketing Costs

It is likely that all states within the Gulf and South Atlantic Councils' jurisdictions would be affected by the regulations associated with actions in CMP Amendment 20B. Under Action 3 in CMP Amendment 20B, reducing binding constraints or eliminating restrictive regulations would generally be expected to benefit fishermen and result in economic benefits. The relaxation of the transit prohibition is expected to afford fishermen more flexibility in trip planning and provide opportunities to adjust the cost structure and catch composition of king mackerel trips. However, the potential increase in king mackerel landings by these fishermen could result in the ACL being reached sooner, triggering an earlier closure of the fishery relative to status quo. Additionally, distributional effects would be expected to occur because, when a species is managed with a quota and the quota is routinely harvested, increased harvest by some fishermen must be matched by harvest reduction for other fishermen. As a result, while some fishermen may experience a net increase in economic benefits, others may experience a reduction in economic benefits if they are not able to adapt. Overall, however, the economic effects expected

to result from a relaxation of transit restrictions are anticipated to be positive because the potential increases in net revenues that would result from the added flexibility in selecting catch composition and from costs savings from lower fuel expenditures are assumed to outweigh potential adverse economic effects that could result from earlier closures.

Both Councils are considering options to enhance current data collection programs in future amendments. This might provide more insight in calculating the changes in fishing, processing, disposal, and marketing costs. See Chapter 4 of CMP Amendment 20B for a complete description of how the CMP fishery and the species would be impacted by the proposed actions.

Changes in Fishing Practices and Behavior of Fishermen

Actions proposed in CMP Amendment 20B could result in a modification of fishing practices by commercial and recreational fishermen. In CMP Amendment 20B, analysis in Chapter 4 shows that the quota for each zone/subzone would still be reached before the end of the 2012 fishing season regardless of the trip limit. Therefore, no change in overall effort is expected for Action 1. The benefits of changing the fishing season for the eastern and western zones of Gulf migratory group king mackerel to start later in the season under Action 2 may be minimal due to bad weather and migratory patterns of the fish. Therefore, the fishing practices and behavior of fishermen may not change. In Action 3, transit provisions are expected to be beneficial to fishermen, dealers, and associated businesses. Allowing vessels to transit through closed areas to land fish harvested in open areas, with specifications for gear stowing, could reduce potential negative effects of unnecessary travel just to avoid closed areas to offload legally caught fish. On the other hand, there may be a trade-off in these expected benefits as they could affect harvest patterns and fishermen's behavior. For example, if some fishermen are able to make additional fishing trips as a result of the reduced travel time to offload fish, effort would increase, resulting in less fish available for other fishermen. It is reasonable to expect that the quota would thus be caught in a shorter period of time, thereby decreasing the social benefits provided by the transit provisions. Separation of the commercial ACL for king and Spanish mackerel into zones under Actions 4.1 and 4.2, respectively, would be expected to have similar social effects as sector allocations, in that there could likely be some changes in fishing behavior and impacts to fishermen, communities and businesses associated with the CMP fishery.

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

All actions in CMP Amendment 20B would affect some measure of change in research, administration, and enforcement costs and management effectiveness. See Chapter 4 of this amendment for more details.

Research and monitoring is ongoing to understand the effectiveness of proposed management measures and their effect on bycatch. In 1990, the SEFSC initiated a logbook program for vessels with federal permits in the snapper grouper fishery from the Gulf of Mexico and South Atlantic. In 1999, logbook reporting was initiated for vessels catching king and Spanish mackerel (Gulf and South Atlantic Councils). The Dolphin and Wahoo FMP required logbook reporting by fishermen with Commercial Atlantic Dolphin/Wahoo Permits. Approximately 20%

of commercial fishermen from snapper grouper, dolphin wahoo, and CMP fisheries are asked to fill out discard information in logbooks; however, a greater percentage of fishermen could be selected with emphasis on individuals that dominate landings. Recreational discards are obtained from the MRIP and logbooks from the NMFS headboat program.

The preferred alternative in Charter/Headboat Amendment, which has been approved by the South Atlantic Council, would require electronic reporting for headboats and increase the frequency of reporting to seven days for the snapper grouper, dolphin wahoo, and CMP fisheries in the Atlantic. A similar amendment is being developed by the Gulf Council to require electronic reporting for headboats and increase the frequency of reporting to seven days for the reef and CMP fisheries in the Gulf. Some observer information for the snapper grouper fishery has been provided by the SEFSC, Marine Fisheries Initiative, and Cooperative Research Programs (CRP), but more is desired for the snapper grouper, dolphin wahoo, reef fish, and CMP fisheries. An observer program is in place for headboats in the southeast for the snapper grouper, reef fish, dolphin wahoo, and CMP fisheries. Observers in the NMFS Headboat survey collect information about numbers and total weight of individual species caught, total number of passengers, total number of anglers, location fished (identified to a 10 mile by 10 mile grid), trip duration (half, ¾, full or multiday trip), species caught, and numbers of released fish with their disposition (dead or alive). The headboat survey does not collect information on encounters with protected species. At the September 2012 South Atlantic Council meeting, the SEFSC indicated that observers are placed on about 2% of the headboat trips out of South Carolina to Florida, and about 9% of the headboat trips out of North Carolina (http://www.safmc.net/LinkClick.aspx?fileticket=XGaVZzxLePY%3d&tabid=745).

Cooperative research projects between science and industry are being used to a limited extent to collect bycatch information from fisheries in the Gulf and South Atlantic. Research funds for observer programs, and gear testing and testing of electronic devices are also available each year in the form of grants from the Foundation, Marine Fisheries Initiative, Saltonstall-Kennedy program, and the CRP. Efforts are made to emphasize the need for observer and logbook data in requests for proposals issued by granting agencies. A condition of funding for these projects is that data are made available to the Councils and NMFS upon completion of a study.

Stranding networks have been established in the Southeast Region. The NMFS SEFSC is the base for the Southeast United States Marine Mammal Stranding Program (http://sero.nmfs.noaa.gov/pr/strandings.htm). The NMFS authorizes organizations and volunteers under the MMPA to respond to marine mammal stranding events throughout the United States. These organizations form the stranding network whose participants are trained to respond to, and collect samples from live and dead marine mammals that strand along southeastern United State beaches. The SEFSC is responsible for: coordinating stranding events; monitoring stranding rates; monitoring human caused mortalities; maintaining a stranding database for the southeast region; and conducting investigations to determine the cause of unusual stranding events including mass stranding events and mass mortalities (http://www.sefsc.noaa.gov/species/mammals/strandings.htm).

The Southeast Regional Office and the SEFSC participate in a wide range of training and outreach activities to communicate bycatch related issues. The NMFS Southeast Regional

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

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

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

Proposed management measures, and any changes in economic, social, or cultural values are discussed in Chapter 4 of CMP Amendment 20B. Further analysis can be found in Chapter 5 (Regulatory Impact Review) and Chapter 6 (Regulatory Flexibility Act Analysis) of the amendment.

Changes in the Distribution of Benefits and Costs

The distribution of benefits and costs expected from actions in CMP Amendment 20B are discussed in Chapters 4, 5, and 6 of the amendment.

Social Effects

The social effects of all the measures are described in detail in Chapter 4 of CMP Amendment 20B.

Conclusion

This section evaluates the practicability of taking additional action to minimize bycatch and bycatch mortality using the ten factors provided at 50 CFR 600.350(d)(3)(i). In summary, measures proposed in CMP Amendment 20B will address issues associated with the boundaries between migratory groups, zones, and subzones; allocation of commercial ACLs; and modification of the framework procedure for management of king mackerel, Spanish mackerel, and cobia. None of the actions in this amendment are expected to significantly increase or decrease the magnitude of bycatch or bycatch mortality in the CMP fishery. Both sectors of the CMP fishery have relatively low baseline levels of bycatch, which are not expected to change as

a result of implementation of this amendment. No additional action is needed to further minimize bycatch in the CMP fishery.

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APPENDIX E. DECISIONS TOOLS

Analysis of Modifying the Commercial Hook-and-Line Trip Limit for the King Mackerel Gulf Migratory Group.

Amendment 20B to the Fishery Management Plan for Coastal Migratory Pelagics Resources of the Gulf of Mexico and South Atlantic proposes management changes to the king mackerel Gulf Migratory group. Action 1 of the amendment proposes changes to the hook-and-line trip limits of the Western Zone, Eastern Zone - Northern Subzone, and Eastern Zone - Southern Subzone. The alternatives presented for Action 1 in Amendment 20B propose reductions in the current trip limit of the Western Zone from the current trip limit of 3,000 lbs to 1,250 or 2,000, lbs. The alternatives increase the trip limit of the Eastern Zone - Northern Subzone and the Eastern Zone - Southern Subzone from 1,250 pounds to, 2,000 or 3,000 lbs. These actions were evaluated to determine their impact on landings and to provide predictions on when ACLs for each zone would be met.

The first step in the analysis was to review the available data. King mackerel hook-and-line landings data from the Coastal Fisheries Logbook Program (logbook) for each zone were examined in two ways: (1) by area fished; and (2) by state and county where the landings were reported. Each data sorting method has advantages and disadvantages. The area fished provides the location on the water where the fish were caught, but the area fished boundaries do not align with the state and county boundaries used to define king mackerel management zones. Summarizing the landings by area fished presents the possibility that landings caught at sea from one king mackerel zone could be incorrectly assigned to a different king mackerel zone. Using the state and county of landings allows alignment with the zone boundaries but there is a possibility that fishermen may enter a zone to fish but then travel to a different zone to land their catch. Thus, exploration of landings from both data sorting methods is warranted to see if they produce significantly different landing estimates.

During the past three king mackerel fishing years (2009/2010, 2010/2011, and 2011/2012) king mackerel commercial fishing zones were closed early because ACLs were met before the full 12 months of the fishing year were completed. Closures varied by zone. Additionally, the Eastern Zone - Northern Subzone and the Eastern Zone - Southern Subzone have their trip limits reduced from 1,250 to 500 pounds when landings reach 75% of the quota in some of the years. The Eastern Zone - Northern Subzone had the trip limit reduced in the 2010/2011 fishing year on October 26, 2012, and the Eastern Zone - Southern Subzone had the trip limit reduced in the 2009/2010 fishing year on February 7, 2010, and 2010/2011 fishing year on March 8, 2011. Figure 1 provides the percent of Gulf of Mexico trips that harvested king mackerel with hook-and-line gear from logbooks for the three fishing years of 2009/2010, 2010/2011, and 2011/2012 and for the three zones and two different data sorting methods. Landings after trip limit reductions and after closures were removed from Figure 1 since they can cause significant changes to the amount of fish landed per trip.

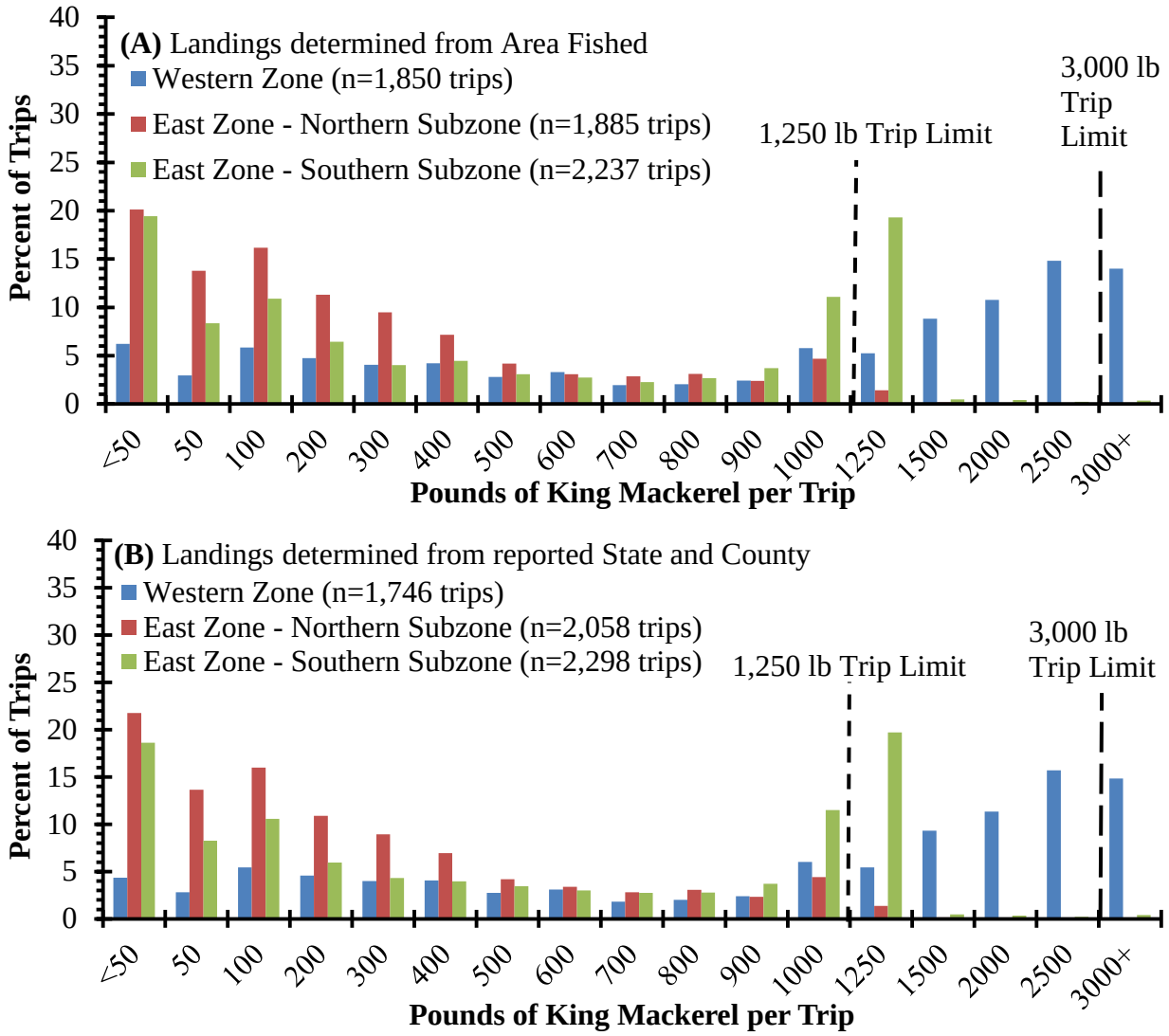

Figure 1. Percent of Gulf of Mexico logbook-reported trips that commercially harvested king mackerel with hook-and-line gear for the three fishing years of 2009/2010, 2010/2011, and 2011/2012. Harvest was defined as pounds whole weight of king mackerel per trip, and the trips were separated by zone (Western Zone, Eastern Zone - Northern Subzone, and Eastern Zone - Southern Subzone). Figure A provides the trips reported by area fished, and Figure B provides the trips reported by State and County of landing. Landings after any reductions of trip limits and after any of the closures were removed.

Percent increase or decrease in annual landings

Action 1 proposes reductions to the trip limit for the Western Zone. The impact from reducing the trip limit was calculated by limiting trips in previous years (2009/2010, 2010/2011, and 2011/2012) to newly proposed trip limits. These reductions were converted to percentages based on the total harvest from previous years.

Action 1 in Amendment 20B proposes increases in the trip limits for the Eastern Zone - Northern Subzone and Eastern Zone - Southern Subzone. Impacts from increasing the trip limits were evaluated assuming that trips that met the trip limit in recent years will also meet the new trip

limit. This provides a maximum estimated harvest rate that may occur if trip limits are increased. Not all trips meeting the current trip limit will likely meet newly proposed trip limits, but information is not available to determine exactly how many additional pounds of king mackerel these trips would harvest once the trip limits are increased. Trips that met the trip limit were defined as trips with landings of 1,200 pounds or more. Therefore, if the proposed trip limit of 2,000 pounds is being explored then any trips that had 1,200 to 2,000 pounds were adjusted to be 2,000 pounds. The range starts at 1,200 pounds instead of 1,250 pounds to account for any trips that were close but slightly under the trip limit. Trips that harvested below 1,200 lbs were not modified. Trips with landings greater than the proposed trip limit were not changed since these trips did not follow the current trip limit in the past, and will probably not follow trip limits in the future. Table 1 provides the percent increases and decreases in annual landings for the various trip limits being proposed.

Table 1. Percent increases and decreases in annual landings for various commercial king mackerel hook-and-line trip limits proposed in Amendment 20B generated from logbook data in the fishing years 2009/2010, 2010/2011, and 2011/2012. Percent decreases in landings are negative and increases in landings are positive. The reductions were calculated with landings per trip reported by area fished, and also for trips reported by State and County of landing. The current trip limit is 3,000 lbs for the Western Zone (Western), and 1,250 lbs for the Eastern Zone – Northern Subzone (E. Northern) and Eastern Zone – Southern Subzone (E. Southern).

Zone	Alternative			
	1	2	3	4
	3,000/1250 lbs ww	2,000 lbs ww	3,000 lbs ww	1,250 lbs ww
Trips Reported by Fishing Area				
Western	No Change	-19.5	No Change	-42.2
E. North	No Change	6.0	13.4	No Change
E. South	No Change	21.1	39.6	No Change
Trips Reported by State and County of Landing				
Western	No Change	-19.7	No Change	-42.7
E. North	No Change	5.9	13.3	No Change
E. South	No Change	20.9	39.3	No Change

Predicting closure dates

Western Zone

Logbook hook-and line landings data were used to predict when the ACL would be met with the proposed trip limits for the Western Zone. Table 1 shows only minor differences in percent reductions between landings by area fished and landings by state and county. Therefore, only the landings by state and county were pursued. Landings by state and county were chosen over area fished because the mackerel zone boundaries were set by state and county borders.

Action 1 of Amendment 20B proposes reductions in the trip limits for the Western Zone. Impacts from reducing the trip limits were evaluated using logbook landings for 2011/2012 from

the start of the fishing year (July 1, 2011) to the closure date (September 16, 2011). Logbook landings data before the 2011/2012 fishing year were not used because the 2009/2010 season closed even earlier (September 4, 2009), and the 2010/2011 fishing year was heavily impacted by closures from the Deepwater Horizon Oil spill. Trip limits were applied to 2011/2012 logbook landings data to predict daily landings. This was done by reducing the landings for trips that exceeded the proposed trip limit to match the proposed trip limit. For example, if a trip limit of 1,500 pounds is being explored then a trip with 2,300 pounds would have the landings reduced to 1,500 pounds. Logbook landings are not a perfect match to quota monitoring landings because the data are collected differently and non-federally permitted fishermen fishing in state waters do not have to submit federal logbooks. Figure 2 displays the difference between logbook and quota monitoring landings. This difference in landings between the two datasets was accounted for by scaling the monthly logbook landings to equal monthly quota monitoring landings.

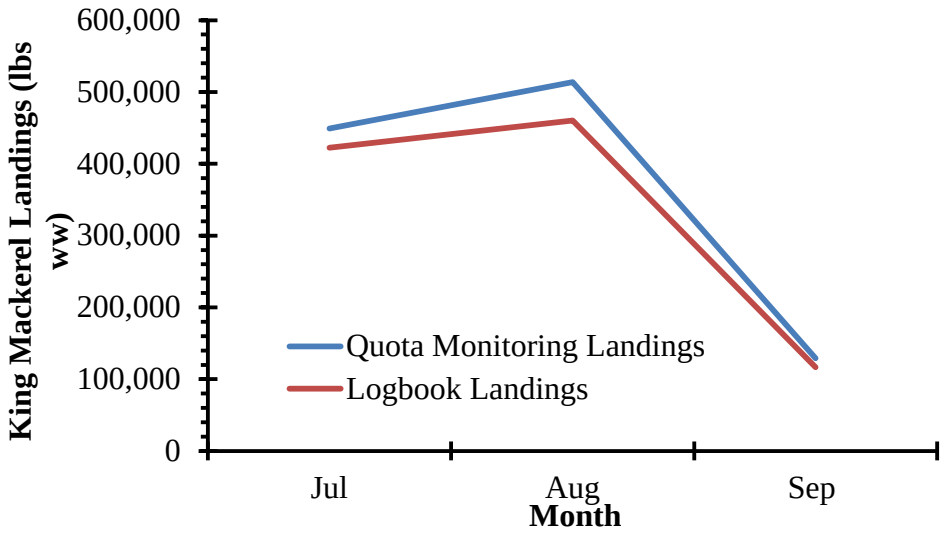

Figure 2. King mackerel Western Zone quota monitoring and logbook landings for July to September of 2011.

Landings for the remaining closed days of September (Sept. 16-30) were predicted by determining the average pounds per day of king mackerel harvested during days when the fishery was open (Sept 1-15, 2011) and then applying the pounds per day to the remaining closed days. This follows the assumption that if September had remained open the harvest rate would have stayed the same for the rest of the month.

An estimate of landings for October was needed to determine closure dates from reducing the trip limit in the Western zone. The Western Zone king mackerel fishery in 2005/2006, 2007/2008, and 2008/2009 did not close until after October, and had relatively similar October landings for all three years (Figure 3). The average October landings from these three fishing years were used as the predicted October landings. Landings for October were slightly less than predicted September landings. It is recognized that historical landings may not be representative of current fishing patterns, but information is lacking to determine what landings would be in late fall and winter.

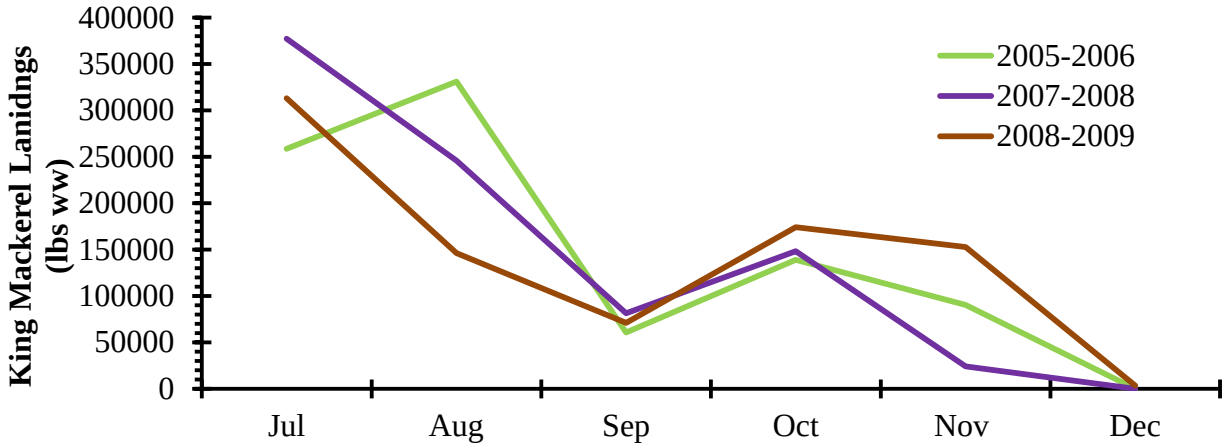

Figure 3. Monthly commercial king mackerel logbook hook-and-line gear landings for the western zone for July-December for the fishing years 2005/2006, 2007/2008, and 2008/2009.

In the last 12 years only two fishing seasons in the Western Zone were open for the entire month of November, and one of these years (2010/2011) had many areas closed due to the Deepwater Horizon Oil Spill. Since there is a relatively small amount of data available for November, and also the next month of December, predicted landings for November and December were assumed to be the same as October. Figure 4 provides the predicted monthly landings for the Western Zone used to determine closure dates based on various trip limits, and the monthly logbook landings for the past seven fishing years.

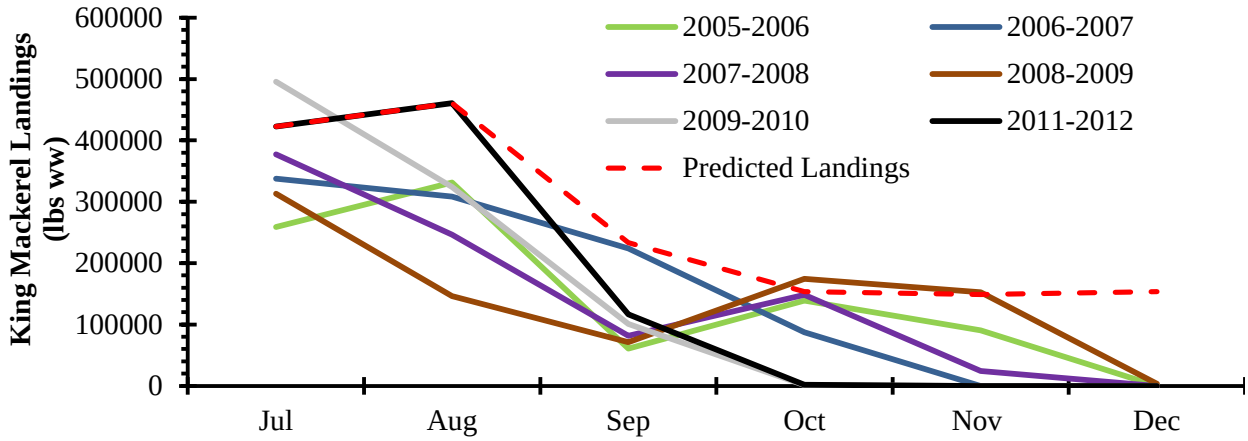

Figure 4. Monthly commercial king mackerel logbook hook-and-line landings for the Western Zone for July-December for the fishing years 2005/2006, 2006/2007, 2007/2008, 2008/2009, 2009/2010, 2011/2012, and the predicted landings used to determine closure dates based on various trip limits. Landings from the 2010/2011 fishing year were not included because they were impacted by the multiple closures from the Deepwater Horizon Oil Spill.

The predicted landings in July and August reflect the high catch rates for the most recent year of data (2011/2012) (Figure 4). The predicted landings for September are similar to the 2006/2007 landings, but much higher than the September landings for the other five fishing years presented

in Figure 4. These low landings in September for three of those five recent years are probably due to the hurricanes that struck the Western Zone in September during those fishing years. Both hurricanes Katrina and Rita hit in the 2005/2006 fishing year, hurricane Huberto hit in the 2007/2008 fishing year, and hurricane Ike hit in 2008/2009 fishing year. The September landings were low in the 2009/2010 fishing year because the fishery was closed on September 4th. The 2010/2011 fishing year landings were not explored because they were heavily impacted with closures from the Deepwater Horizon Oil Spill. Only the 2006/2007 fishing year did not have any hurricanes in the Western Zone in September, was open the entire month of September, and was not impacted by an oil spill. Figure 3 shows 2006/2007 September landings are similar to the predicted September landings. This provides evidence that the predicted September landings are likely a reflection of the true landings if the fishery is not interrupted by hurricanes, oil spills, and closures.

Percent reductions for each proposed trip limit were calculated monthly and for all three months combined using logbook data from the 2011/2012 fishing year (Table 2). The average percent reductions generated for July-September for each proposed trip limit were applied to the daily landings from September 16th to December 31st to predict monthly landings. Landings were then cumulatively summed across months from July 1 until the ACL was projected to be met.

Table 2. Western Zone percent reductions for various commercial king mackerel hook-and-line trip limits proposed in Amendment 20B generated from the 2011/2012 fishing year and predicted landings. Alternatives 1 and 3 propose no change to the current trip limit of 3,000 pounds.

Month	Percent Reduction for Various Trip Limits			
	Alt 1	Alt 2	Alt 3	Alt 4
	3000 lbs	2000 lbs	3000 lbs	1250 lbs
July	No Change	19.1	No Change	41.4
August	No Change	21.9	No Change	44.7
September	No Change	23.1	No Change	46.8
Jul-Sep Average	No Change	20.9	No Change	43.6

Table 3 provides the predicted closure dates for the proposed Western Zone trip limits. The reductions in the trip limit do extend the number of open days but none of them extend the open days to a full year.

Table 3. Predicted closure dates for the Western Zone king mackerel hook-and-line fishery for the different proposed trip limits in Amendment 20B. Alternatives 1 and 3 propose no change to the current trip limit of 3,000 pounds, and the closure date for the 2011/2012 season was September 16, 2011.

Alternative	1	2	3	4
Trip Limit	3,000 lbs ww	2,000 lbs ww	3,000 lbs ww	1,250 lbs ww
Closure Date	11-Sep*	28-Oct	11-Sep*	11-Feb

* Projected closure date is earlier than the 2011/2012 closure date because the ACL was exceeded.

Eastern Zone - Northern Subzone

Logbook hook-and-line landings data were used to predict when the ACL would be met for the proposed trip limits for the Eastern Zone - Northern Subzone. Table 1 shows only minor differences in percent reductions between landings by area fished and landings by state and county. Therefore, only the landings by state and county were pursued. Landings by state and county were chosen over area fished because the king mackerel zone boundaries were set by state and county borders.

Action 2 of Amendment 20B proposes increases in the trip limits for the Eastern Zone - Northern Subzone. Impacts from increasing the trip limits were evaluated assuming that trips that met the trip limit (1,200 lbs or more) in recent years will also meet the new trip limits as described above.

Logbook landings for 2011/2012 were used to predict when the ACL would be met. This fishing year reflects recent catch rates and, unlike earlier years, did not experience a trip limit reduction when 75% of the quota was met. Instead the fishery closed on October 7, 2011 with no change to the trip limit during the season. Logbook landings are not a perfect match to quota monitoring landings because the data are collected differently and non-federally permitted fishermen fishing in state waters do not have to submit federal logbooks. Figure 5 displays the difference between logbook and quota monitoring landings. This difference in landings between the two datasets was accounted for by scaling the monthly logbook landings to equal monthly quota monitoring landings.

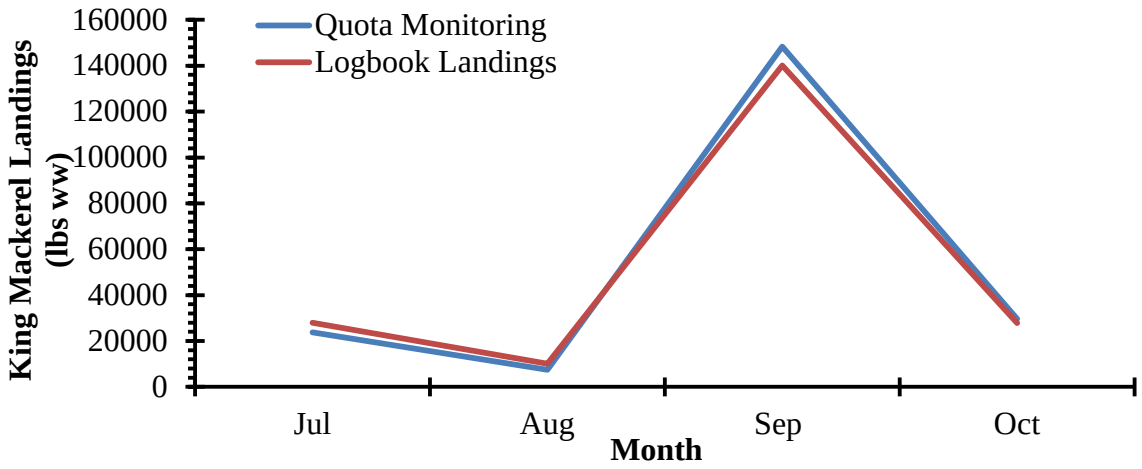

Figure 5. King mackerel Eastern Zone - Northern Subzone quota monitoring and logbook landings for July to October of 2011.

Increases in the trip limit did not result in large changes to the season length (Table 4). The largest increase in the trip limit to 3,000 pounds decreased the season length by less than two weeks from last year's closure date. The small change in season length is a result of recent landings being high in the month of September. Over 70% of the landings in 2011/2012 came from the month of September (Table 5). Also, there were a relatively small number of trips in this subzone that met or exceeded the 1,250 trip limit (Figure 1). In 2011/2012 only 2 percent of the trips exceeded 1,200 pounds per trip, and only 1 percent of the trips met or exceeded the

1,250 trip limit and. Therefore, only a small amount of the landings were adjusted to predict closure dates from the increase in the trip limit.

Table 4. King mackerel Eastern Zone - Northern Subzone predicted closure dates for the proposed hook-and-line trip limits in Amendment 20B. Alternative 1 proposes no change to the current trip limit of 1,250 pounds, and the closure date for the 2011/2012 season was October 7, 2011.

Alternative	1	2	3
Trip Limit	1,250 lbs ww	2,000 lbs ww	3,000 lbs ww
Closure Date	28-Sep*	27-Sep	26-Sep

* Projected closure date is earlier than the 2011/2012 closure date because the ACL was exceeded.

Table 5. Monthly quota monitoring king mackerel hook-and-line gear landings for the Eastern Zone - Northern Subzone in 2011/2012. The fishery was closed on October 7, 2011.

Month	lbs ww	%
Jul	23,722	11.3
Aug	7,390	3.5
Sep	148,383	71.0
Oct	29,610	14.2
Total	209,105	100

Alternative 1 has a decrease of the trip limit from 1,250 pounds to 500 pounds when 75% of the ACL is met. Under this alternative 75% of the ACL is met on September 23rd. The reduction of the trip limit to 500 pounds after September 23rd extends the season until October 1st.

Eastern Zone - Southern Subzone

Logbook hook-and-line landings data were used to predict when the ACL would be met with the proposed trip limits for the Eastern Zone - Southern Subzone. Table 1 shows only minor differences in percent reduction results between landings by area fished and landings by state and county. Therefore, only the landings by state and county were pursued. Landings by state and county were chosen over area fished because the mackerel zone boundaries were set by state and county borders.

Action 1 of Amendment 20B proposes increases in the trip limits for the Eastern Zone - Southern Subzone. Impacts from increasing the trip limits were evaluated assuming that trips that met the trip limit in recent years will also meet the new trip limits as described above.

Logbook landings for 2011/2012 were used to predict when the ACL would be met. This fishing year reflects recent catch rates and, unlike earlier years, did not experience a trip limit reduction when 75% of the quota was met. Instead the fishery closed on February 26, 2012 with no change to the trip limit during the season. Logbook landings are not a perfect match to quota monitoring landings because the data are collected differently and non-federally permitted fishermen fishing in state waters do not have to submit federal logbooks. Figure 6 displays the difference between

logbook and quota monitoring landings. This difference in landings between the two datasets was accounted for by scaling the monthly logbook landings to equal monthly quota monitoring landings.

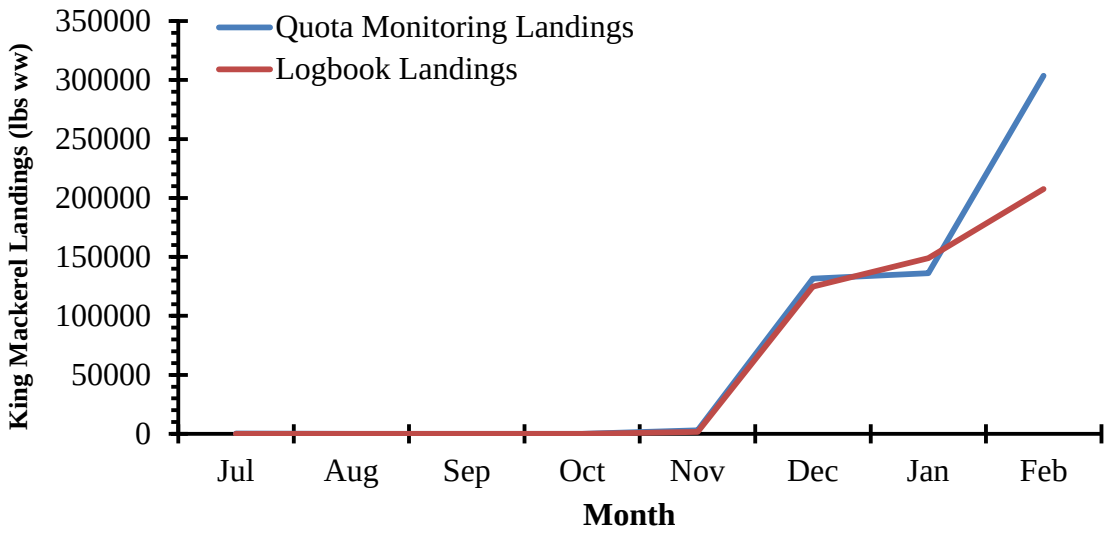

Figure 6. King mackerel Eastern Zone - Southern Subzone quota monitoring and logbook landings for July to February of the 2011/2012 fishing year.

Increases in the trip limit did not result in large changes to the season length (Table 6). Even the largest increase in the trip limit decreased the season length by only 17 days compared to last year's closure date of February 26, 2012. This small change is likely a result of two factors. The first factor is over 50% of the landings in 2011/2012 came from the month of February even though the fishery was not open the entire month (Table 7). The second factor is the pounds per trip increased with each month, and 50% of the trips exceeding 1,200 pounds per trip occurred in February. Additionally, the majority of these trips with landings greater than 1,200 pounds took place at the end of the month between February 16 and the closure date (February 26, 2012) (Table 8).

Table 6. King mackerel Eastern Zone - Southern Subzone predicted closure dates for the proposed trip limits in Amendment 20B. Alternative 1 proposes no change to the current trip limit of 1,250 pounds, and the closure date for the 2011/2012 season was February 26, 2012.

Alternative	1	2	3
Trip Limit	1,250 lbs ww	2,000 lbs ww	3,000 lbs ww
Closure Date	21-Feb*	15-Feb	9-Feb

* Projected closure date is earlier than the 2011/2012 closure date because the ACL was exceeded.

Table 7. Monthly quota monitoring king mackerel Eastern Zone – Southern Subzone hook-and-line landings for 2011/2012. Landings in July to October were combined to protect confidentiality of the data. The fishery was closed on February 26, 2012.

Month	lbs ww	%
Jul-Oct	252	0.0
Nov	2,997	0.5
Dec	131,637	22.9
Jan	136,235	23.7
Feb	303,714	52.8
Total	574,835	100

Table 8. Number of king mackerel hook-and-line trips for 2011/2012 for the Eastern Zone - Southern Subzone that exceeded 1,200 pounds per trip. No trips during July to October exceeded 1,200 pounds per trip.

Month	n	%
Nov	0	0.0
Dec	40	24.8
Jan	40	24.8
Feb 1-15	30	18.6
Feb 16-26	51	31.7

Alternative 1 has a decrease of the trip limit from 1,250 pounds to 500 pounds when 75% of the ACL is met. Under this alternative 75% of the ACL is met on February 15th. In the 2011/2012 season the fishery closed on February 26th, 2012. Yet, the analysis from reducing the landings from applying the 500 pound trip limit extended the season beyond February 26th. Therefore, data after February 26th was needed to determine a closure date from reaching the ACL. The king mackerel Southern Subzone was open from February 26th to March 23rd in the 2010/2011 season, and the logbook data from this time was used to predict when the season would reach the ACL with the 500 pound trip limit. The 2010/2011 season had the reduction in the trip limit from 1,250 to 500 pounds on March 8th, 2011. This was addressed by applying a 500 pound trip limit from February 26th to March 7th. The analysis predicted a closure date of March 7th. In conclusion, the reduction of the trip limit to 500 pounds after February 15 extends the season until March 7th.

All Three Zones

Table 9 provides the predicted closure dates for all three zones for all the trip limit alternatives being proposed in Amendment 20B.

Table 9. Predicted closure dates for the three king mackerel zones in the Gulf of Mexico for the proposed trip limits in Amendment 20B. The dates in parentheses provided for Alternative 1 were each zone's actual closure dates for the 2011/2012 season.

Zone	Projected Closure Dates for Various Trip Limits			
	Alt. 1	Alt. 3	Alt. 5	Alt. 6
	3,000/1,250 lbs ww	2,000 lbs ww	3,000 lbs ww	1,250 lbs ww
Western Zone	11-Sep (9/16/2011)	28-Oct	11-Sep	11-Feb
Eastern Zone - Northern Subzone	28-Sep (10/7/2011)	27-Sep	26-Sep	28-Sep
Eastern Zone - Southern Subzone	21-Feb (2/26/2012)	15-Feb	9-Feb	21-Feb

Zone	Projected Closure Dates for Various Trip Limits		
	Alt. 1	Alt. 3	Alt. 5
	3,000/1,250 lbs ww	2,000 lbs ww	3,000 lbs ww
Western Zone	11-Sep (9/16/2011)	28-Oct	11-Sep
Eastern Zone - Northern Subzone	28-Sep (10/7/2011)	27-Sep	26-Sep
Eastern Zone - Southern Subzone	21-Feb (2/26/2012)	15-Feb	9-Feb