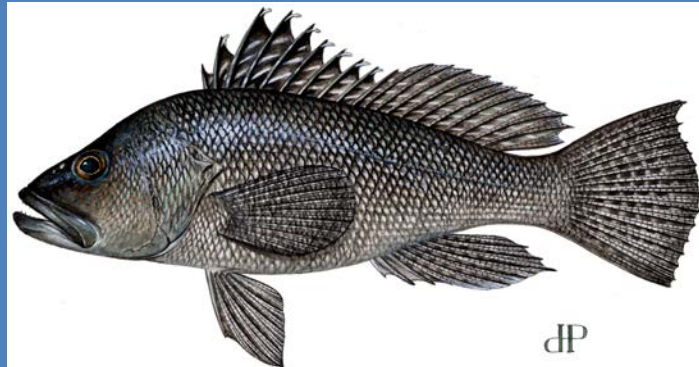


Regulatory Amendment 16

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



Changes to the Seasonal Closure for the Black Sea Bass Pot Sector



Including an Final Environmental Impact Statement

February 2016

A publication of the South Atlantic Fishery Management Council pursuant to
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Abbreviations and Acronyms Used in the FMP

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

Regulatory Amendment 16 to the Fishery Management Plan for the Atlantic Snapper Grouper Fishery of the South Atlantic Region

Including a Final Environmental Impact Statement (EIS)

Abstract: This Final EIS is prepared pursuant to the National Environmental Policy Act to assess the environmental impacts associated with a regulatory action. The Final EIS analyzes the impacts of a reasonable range of alternatives intended to evaluate modifying the annual November 1 through April 30 prohibition on the use of black sea bass pot gear and enhance current gear marking requirements for black sea bass pots.

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Summary

Background

A 2003 stock assessment concluded that black sea bass were overfished and undergoing overfishing. In response to the stock assessment and to end overfishing, the allowable harvest of black sea bass was reduced beginning in 2006, and the fishing year was changed from January 1 through December 31 to June 1 through May 31. To reduce overcapacity, measures were implemented in 2012 to limit participation through a black sea bass endorsement program and restrict the number of pots that could be fished. In 2013, a stock assessment concluded that the black sea bass stock in the South Atlantic is not undergoing overfishing, is not overfished, and is rebuilt. In response to the stock assessment, the South Atlantic Fishery Management Council's (Council) Scientific and Statistical Committee, at their April 2013 meeting, recommended an increase to the acceptable biological catch (ABC) for black sea bass. The increase in the ABC allowed the commercial and recreational annual catch limits (ACL) to increase. The Council and the National Marine Fisheries Service (NMFS,) through Regulatory Amendment 19 (Regulatory Amendment 19) to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (Snapper Grouper FMP) (SAFMC 2013b), modified the ABC, ACLs, recreational annual catch target, and optimum yield for the black sea bass stock.

November 1 through April 30 is when endangered whales are present in the South Atlantic. Prior to the increase to the commercial ACL, the pot sector had not fished later than November 1 since the 2009/2010 season, because the smaller ACL was always harvested by that time. Modeling by NMFS indicated the increased commercial ACL, implemented via Regulatory Amendment 19, would have likely extended fishing activity with black sea bass pot gear past November 1. There is a potential for black sea bass pot gear to entangle endangered large whales. The possibility that pots might be fished past November 1, resulted in the Council and NMFS implementing a prohibition on the use of black sea bass pot gear from November 1 through April 30 each year, beginning in 2013. This allowed the ACL increase to be implemented quickly, while protecting the endangered whales. Additionally, in December 2014, Regulatory Amendment 14 to the Snapper Grouper FMP (Regulatory Amendment 14) changed the commercial black sea bass fishing year back to January 1 through December 31 each year. The change of the fishing year also increased the chances black sea bass pots would be in the water when Endangered Species Act (ESA)-listed whales, particularly North Atlantic right whales, are migrating through and calving in the South Atlantic.

Without the prohibition on the use of black sea bass pots during the large whale migration and right whale calving season, a re-initiation of formal consultation for the snapper grouper fishery would have been necessary under the ESA prior to the implementation of Regulatory Amendment 19. Formal ESA consultation would have

required development of a biological opinion to evaluate the effects of the snapper grouper fishery including black sea bass pot gear on ESA listed species. Those analyses would not have been completed in time to allow the ACL increases to be implemented for the beginning of the 2013-2014 fishing season, which began on June 1. The black sea bass pot prohibition was a precautionary step taken by the Council and NMFS to allow the black sea bass ACL to increase in the 2013-2014 fishing year, while preventing potential entanglements with ESA-listed whales until a comprehensive Environmental Impact Statement and Biological Opinion could be completed.

Through Regulatory Amendment 16 to the Snapper Grouper FMP (Regulatory Amendment 16), the Council and NMFS are considering adjustments to both the geographical and temporal boundaries of the November 1 through April 30 prohibition to improve socio-economic benefits to black sea bass pot endorsement holders while maintaining protection for ESA-listed whales in the South Atlantic region. During the scoping process for Regulatory Amendment 16, fishermen reported that fishing for black sea bass during winter months is important to them, and claim that the fish migrate southward and are generally found closer to shore during winter months making them easier to harvest. Fishermen have also reported that black sea bass tend to be a lot darker during winter months, which commands a higher price on the market.

History of Management of the Black Sea Bass Pot Sector

The black sea bass portion of the snapper grouper fishery has been managed under the Snapper Grouper FMP since the plan was first established in 1983. **Table S-1** shows the actions implemented from 1983 through 2013 that have affected the black sea bass pot sector.

Table S-1. History of Council management of the black sea bass commercial pot sector.

Date	Document	Action
8/31/83	Original FMP	8 inch total length minimum size limit
1/1/92	Amendment 1	Prohibited black sea bass pots south of Cape Canaveral
8/31/92	Emergency Rule	Modified definition of black sea bass pots Allowed multigear trips for black sea bass Retention of bycatch in the black sea bass fishery
11/30/92	Emergency Rule Extension	Modified definition of black sea bass pots Allowed multigear trips for black sea bass Retention of bycatch in the black sea bass fishery
7/6/93	Regulatory Amendment 4	Modified definition of black sea bass pots Allowed multigear trips for black sea bass Retention of bycatch in the black sea bass fishery
2/24/99	Amendment 9	10 inch total length minimum size limit Required escape vents and degradable fasteners
12/2/99	Amendment 11	Set overfished level at 3.72 million pounds
10/23/06	Amendment 13C	Established a commercial quota in 2006 and stepped it down in from 477,000 pounds gutted weight (lbs gw) in 2006 to 309,000 lbs gw in 2008 Required 2 inch mesh in back panel of pots Changed fishing year to June through May
12/30/10	Amendment 17B	Specified a commercial ACL of 309,000 lbs gw and recreational ACL of 409,000 lbs gw.
7/1/12	Amendment 18A	Reduced participation in the pot sector with 32 endorsements Established 1,000 lbs gw (1,180 pounds whole weight [lbs ww]) commercial trip limit Specified a maximum of 35 pots per vessel Increased minimum size limit to 11 inches total length Required that pots be brought to shore at the conclusion of a trip
9/23/13	Reg Amend 19	Increased commercial ACL from 309,000 to 780,020 lbs ww
10/23/13	Reg Amend 19	Pot closure from 11/1 through 4/30
12/8/14	Reg Amend 14	Commercial fishing year changed to January - December Specified hook and line trip limit of 300 lbs gw November 1 - April 30

The Black Sea Bass Pot Sector Since the 2006 Biological Opinion

In 2006, the final rule for Amendment 13C to the Snapper Grouper FMP (Amendment 13C) established a commercial quota for black sea bass, which greatly restricted commercial harvest of black sea bass, the majority of which was taken in the pot sector. Two additional amendments, Amendment 18A to the Snapper Grouper FMP (SAFMC 2012) and Regulatory Amendment 19 (SAFMC 2013b) further affected commercial fishing for black sea bass, but in very different ways.

Amendment 18A saw the implementation of endorsements, which are now needed to harvest black sea bass with pots. Thirty-two endorsements were issued. For the first time, there was a commercial trip limit of 1,000 lbs gw (1,180 lbs ww) for the commercial harvest of black sea bass. Fishermen with black sea bass pot endorsements were limited to no more than 35 pots per vessel. Previous to the implementation of Amendment 18A some fishermen were deploying as many as 150 pots. Leaving black sea bass pots to soak unattended was prohibited, as the final rule for Amendment 18A required pots to be brought back to shore at the end of each trip. The minimum size limit for commercial black sea bass was also increased from 10 to 11 inches total length.

While Amendment 18A generally limited participation and reduced gear presence in the water, Regulatory Amendment 19 increased the commercial ACL from 309,000 to 780,020 lbs ww in response to a stock assessment that indicated that black sea bass were no longer overfished and were rebuilt. Because of the limitations put into place in Amendment 18A and the increase in the commercial ACL, the length of the commercial black sea bass pot fishing season was expected to last much longer than it had in recent years.

All of these changes, taken together with those proposed in Regulatory Amendment 16, make it difficult to predict how fishery participants would modify their behavior, and in turn, the economic effects of proposed measures. Because of this uncertainty, multiple scenarios must be considered, where appropriate, when estimating economic effects of potential management changes.

Regulatory Amendment 16 considers alternatives to allow pot fishing during all, or part, of the November 1 through April 30 closed season, in some areas. Selection of any alternative other than **Alternative 1 (No Action)** for **Action 1**, is expected to result in development of a new ESA Biological Opinion (BiOp) for the snapper grouper fishery.

As discussed above, Amendment 18A and Regulatory Amendment 19, as well as other factors such as the general downturn in the economy, greatly changed how the black sea bass pot portion of the snapper grouper fishery operates since the 2006 BiOp was published. The 2006 BiOp evaluated the impacts to ESA-listed species, following the Council's development of Snapper Grouper Amendment 13C. The 2006 BiOp assessed potential impacts from the snapper grouper fishery, including management actions for the harvest of snowy grouper, golden tilefish, vermilion snapper, red porgy, and black sea bass.

Table S-2 shows a few of the characteristics of the black sea bass pot sector. Since the 2006 BiOp went into effect on June 7th of that year, the characteristics for 2006 are split for pre and post 2006 BiOp. While trips and pounds landed are additive for 2006, the number of vessels targeting black sea bass with pots are not additive because many of the vessels that caught black sea bass with pots in the first part of the fishing year also caught black sea bass in the second part of the fishing year.

Since the 2006 BiOp, the average annual number of vessels participating in the black sea bass pot portion of the snapper grouper fishery has been reduced from 54 to 42 (22%) and the average number of trips has been reduced from 822 to 412 (50%). The changes were due largely to Amendment 13C, which established a commercial quota for black sea bass.

Table S-2. Black sea bass pot sector characteristics, 2002 through 2014.

	Year (June 1 st through May 31 st)	Vessels	Trips	Landings (lb gw)
Pre-2006 BiOp	1996-1997	86	1276	609,424
	1997-1998	77	1258	525,920
	1998-1999	70	1277	633,987
	1999-2000	64	808	344,906
	2000-2001	61	903	430,008
	2001-2002	58	1082	423,902
	2002-2003	48	693	308,005
	2003-2004	52	878	591,403
	2004-2005	47	732	458,264
	2005-2006	47	658	298,782
	2006-2007	55	739	409,162
Post-2006 BiOp	2007-2008	49	556	279,888
	2008-2009	56	562	346,765
	2009-2010	41	434	288,059
	2010-2011	52	406	345,118
	2011-2012	40	235	260,464
	2012-2013	26	322	213,509
	2013-2014	27	366	223,633
Averages	1999-2006	54	822	407,896
	2007-2014	42	412	279,634

Source: SEFSC Logbook data (Apr 2015)

Note: Landings from 2006 are excluded from Averages calculated for both Pre and Post 2006 Biological Opinion. Also, the landings in the year column are from June 1st through May 31st in order to retain a consistent time series for comparison purposes. Please note that the black sea bass fishing years for the commercial and recreational sectors prior to October 23, 2006, began on January 1st. On that date, the fishing years were changed to begin June 1st. On December 8, 2014, the fishing years were changed to begin on January 1st and April 1st for the commercial and recreational sectors, respectively.

Purpose for Action

The purpose of Regulatory Amendment 16 is to reevaluate the annual November 1 through April 30 prohibition on the use of black sea bass pot gear, and enhance buoy line/weak link gear requirements and buoy line rope marking for black sea bass pots required by the Atlantic Large Whale Take Reduction Plan.

Need for Action

The need for the amendment is to reduce the adverse socioeconomic impacts resulting from the annual November 1 through April 30 prohibition on the use of black sea bass pot gear and increase the flexibility of black sea bass pot endorsement holders to fish with this gear while continuing to protect ESA-listed whales in the South Atlantic region; and reduce the adverse effects on whales if entangled and help identify black sea bass pot lines used in the South Atlantic.

Proposed Actions

Note: All tables and figures for the alternatives are in Chapter 2 of the regulatory amendment.

Action 1. Modify the annual November 1 through April 30 prohibition on the use of black sea bass pot gear

There are many alternatives and sub-alternatives under **Action 1**. The Council's intent is to modify the current prohibition to allow the entire commercial black sea bass portion of the snapper grouper fishery (all gear) to open beginning January 1 each year and have it last as long as possible before reaching the ACL and closing prior to December 31. The Council is also factoring in the need to protect critically endangered North Atlantic Right Whales (NARW) that migrate through South Atlantic waters and calve in the South Atlantic roughly during the November through April time-frame. To meet these two objectives, the Council is considering various time frames, water depths, and locations for allowing or not allowing black sea bass pot gear to be in the waters managed by the Council, so as to reduce, as much as possible, the potential for interactions between NARWs and black sea bass pot gear. Each of the alternatives and sub-alternatives of **Action 1** manipulate timing and location/depth of prohibited fishing areas to maximize fishing opportunity and protection for whales.

Alternative 1 (No Action). Retention, possession, and fishing for black sea bass is prohibited using black sea bass pot gear, annually, from November 1 through April 30 where black sea bass is managed in the South Atlantic exclusive economic zone (EEZ) (south of Cape Hatteras, North Carolina).

The following provisions currently exist that may reduce entanglements of black sea bass pot gear and whales listed under the Endangered Species Act. The South Atlantic Fishery Management Council does not intend to change these provisions through this amendment.

Amendment 18A to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (SAFMC 2012):

- Established an endorsement program that capped the number of vessels utilizing pot gear at 32;
- Limited the number of pots per vessel to 35;
- Required that pots be brought back to shore after each trip; and
- Established a commercial trip limit of 1,000 lbs gw.

See **Tables 1.8.1** through **1.8.5** in Regulatory Amendment 16 for measures mandated through the Atlantic Large Whale Take Reduction Plan.

A transit provision is needed to allow vessels to transit through areas closed to sea bass pots. Having a transit provision would keep vessels with black sea bass pots onboard from having to transit north or south of the closed area to get to their fishing grounds. Not having a transit provision would be a hardship that would force some vessels to travel hundreds of miles. This provision applies to all **Alternatives** and **Sub-alternatives 2** through **12** for Action 1. Sea bass pots must be removed from the water in the applicable closed area within the EEZ before the applicable time period, and may not be onboard a vessel in the closed area within the South Atlantic EEZ during the applicable closure, except for such sea bass pot gear appropriately stowed onboard a vessel in transit through the closed area. Transit means non-stop progression through the area; fishing gear appropriately stowed means all black sea bass pot gear must be out of the water and on board the deck of the vessel. All buoys must either be disconnected from the gear or stowed within the sea bass pot. Disconnected buoys may remain on deck.

Alternative 2. The black sea bass pot closure applies to the area currently designated as North Atlantic right whale critical habitat (**Figure 2.1.2**). North Atlantic right whale critical habitat encompasses waters between 31° 15'N, (approximately the mouth of the Altamaha River, Georgia) and 30° 15'N (approximately Jacksonville, Florida) from the shoreline out to 15 nautical miles offshore; and the waters between 30° 15'N and 28° 00'N, (approximately Sebastian Inlet, Florida) from the shoreline out to 5 nautical miles. The closure applies to the area annually from November 15 through April 15.

This area represents North Atlantic right whale critical habitat in the South Atlantic region designated on June 3, 1994. **Figure 2.1.2** provides location of the critical habitat boundary. The critical habitat designation did not provide waypoints for the boundary. The boundary and area in **Alternative 2** would not automatically change if the boundary for the right whale critical habitat were to change. On January 26, 2016, NMFS issued a final rule that created an expansion of the critical habitat area. The South Atlantic Council voted in December 2015 to send this amendment in for U.S. Secretary of Commerce review prior to the publication of the final rule for the North Atlantic right whale critical habitat area expansion.

The following is language describing the North Atlantic right whale critical habitat area from 50 CFR § 226.203(c) used to develop **Alternative 2**:

Southeastern United States: The area designated as critical habitat in these waters encompasses waters between 31 deg.15'N (approximately located at the mouth of the Altamaha River, GA) and 30 deg.15'N (approximately Jacksonville, FL) from the shoreline out to 15 nautical miles offshore; and the waters between 30 deg.15'N and 28 deg.00'N (approximately Sebastian Inlet, FL) from the shoreline out to 5 nautical miles.

The following is language describing the North Atlantic right whale critical habitat area from 50 CFR § 226.203(c) as designated on January 26, 2016:

Southeastern United States: Includes marine waters from Cape Fear, North Carolina, southward to 28°N latitude (approximately 31 miles south of Cape Canaveral, Florida) within the area bounded on the west by the shoreline and the 72 COLREGS lines, and on the east by rhumb lines connecting the following points in the order stated from north to south.

N. Latitude	W. Longitude
33°51' N	at shoreline
33°42' N	77°43' W
33°37' N	77°47' W
33°28' N	78°33' W
32°59' N	78°50' W
32°17' N	79°53' W
31°31' N	80°33' W
30°43' N	80°49' W
30°30' N	81°01' W
29°45' N	81°01' W
29°15' N	80°55' W
29°08' N	80°51' W
28°50' N	80°39' W
28°38' N	80°30' W
28°28' N	80°26' W
28°24' N	80°27' W
28°21' N	80°31' W
28°16' N	80°31' W
28°11' N	80°33' W
28°00' N	80°29' W
28°00' N	At shoreline

Note: Federal regulations for **Alternative 2** would only apply to that portion of the area within the South Atlantic EEZ. The states would be asked to implement consistent regulations within state waters.

Alternative 3. The black sea bass pot closure applies to waters inshore of points 1-15 listed in **Table 2.1.1**; approximately Ponce Inlet, Florida, to Cape Hatteras, North Carolina (**Figure 2.1.3**). The closure applies to the area annually from November 1 through April 30.

This area likely represents North Atlantic right whale calving habitat. The area identified from Cape Fear, North Carolina, southward to 29°N (approximately Ponce Inlet, Florida) is based on model outputs (i.e., Garrison 2007, Keller et al. 2012, Good

2008). The area from Cape Fear, North Carolina, to Cape Hatteras, North Carolina, is an extrapolation of those model outputs and based on sea surface temperatures and bathymetry.

Note: Federal regulations for **Alternative 3** would only apply to that portion of the area within the South Atlantic EEZ. The states would be asked to implement consistent regulations within state waters.

Alternative 4. The black sea bass pot closure applies to waters inshore of points 1-28 listed in **Table 2.1.2**; approximately Cape Canaveral, Florida, to Cape Hatteras, North Carolina (**Figure 2.1.4**). The closure applies to the area annually from November 1 through April 30.

This area generally represents waters 25 m or shallower from 28° 21' N (approximately Cape Canaveral, Florida) to Savannah, Georgia; from the Georgia/South Carolina border to Cape Hatteras, North Carolina, the closure applies to waters under Council management that are 30 m or shallower. This bathymetric area is based on right whale sightings (all demographic segments) and sightings per unit of effort (proxy of density) by depth and captures 97% and 96% of right whale sightings off the North Carolina/South Carolina area, and Florida/Georgia area, respectively. **Figure 2.1.4** provides an approximate location of the proposed boundary.

Note: Federal regulations for **Alternative 4** would only apply to that portion of the area within the South Atlantic EEZ. The states would be asked to implement consistent regulations within state waters.

Alternative 5. The black sea bass pot closure applies to waters inshore of points 1-28 listed in **Table 2.1.3**; approximately Daytona Beach, Florida, to Cape Hatteras, North Carolina (**Figure 2.1.5**). The closure applies to the area annually from November 1 through April 30.

This area is based on joint comments received from non-government organizations (dated January 3, 2014) in response to NMFS's December 4, 2013, *Federal Register* Notice of Intent to Prepare a Draft Environmental Impact Statement (DEIS) (78 FR 72868). The non-government organizations proposed the area as a reasonable alternative for consideration. The area, also included in a Center for Biological Diversity et al. petition in 2009 for right whale critical habitat, is off the coasts of Georgia and Florida and based on calving right whale habitat modeling work of Garrison (2007) and Keller et al. (2012). This area represents the 75th percentile of sightings (91% of historical sightings included in their study) off Florida and Georgia (Garrison 2007 and Keller et al. 2012). Off the coasts of North Carolina and South Carolina, the closure extends from the start of the EEZ to 30 nautical miles offshore. **Figure 2.1.5** provides an approximate location of the proposed boundary.

Note: Federal regulations for **Alternative 5** would only apply to that portion of the area within the South Atlantic EEZ. The states would be asked to implement consistent regulations within state waters.

Alternative 6. The black sea bass pot closure applies to waters inshore of points 1-20 listed in **Table 2.1.4**; approximately Sebastian, Florida, to Cape Hatteras, North Carolina (**Figure 2.1.6**). The closure applies to the area annually from November 1 through April 30.

This area is also based on joint comments received from a number of environmental groups (dated January 3, 2014) in response to NMFS's December 4, 2013, *Federal Register* Notice of Intent to Prepare a DEIS (78 FR 72868). The environmental groups proposed the area as a reasonable alternative for consideration. This area represents an existing management area, the Southeast Seasonal Gillnet Restricted Area, under the Atlantic Large Whale Take Reduction Plan (ALWTRP); and an additional area off North Carolina. The area off North Carolina includes waters shallower than 30 m and is northward of the designated ALWTRP Southeast Restricted Area.

Note: Federal regulations for **Alternative 6** would only apply to that portion of the area within the South Atlantic EEZ. The states would be asked to implement consistent regulations within state waters.

Alternative 7. The black sea bass pot closure applies to the area currently designated as North Atlantic right whale critical habitat, in addition to waters inshore of points 1-29 listed in **Table 2.1.5**; approximately North of the Altamaha River, Georgia, to Cape Hatteras, North Carolina (**Figure 2.1.7**).

Sub-alternative 7a. The black sea bass pot closure applies to the area annually from November 1 through December 15 and March 15 through April 30.

Sub-alternative 7b. For the area off North Carolina and South Carolina, the black sea bass pot closure applies annually from November 1 through December 15 and March 15 through April 30. For the area off Georgia and Florida, the black sea bass pot closure applies annually from November 15 through April 15.

Sub-alternative 7c. For the area off North Carolina and South Carolina, the black sea bass pot closure applies annually from February 15 through April 30. For the area off Georgia and Florida, the black sea bass pot closure applies annually from November 15 through April 15.

This area represents existing North Atlantic right whale critical habitat in the South Atlantic region designated on June 3, 1994. North Atlantic right whale critical habitat is currently undergoing a revision based on more current data. On January 26, 2016, NMFS issued a final rule that created an expansion of the critical habitat area. The South Atlantic Council voted in December 2015 to send this amendment in for U.S. Secretary

of Commerce review prior to the publication of the final rule for the North Atlantic right whale critical habitat area expansion. Off North Carolina and South Carolina, the black sea bass pot closure applies in the exclusive economic zone in waters shallower than 25 m. The eastern boundary of the closure between these two areas was formed by drawing a straight line from the southeastern corner waypoint of the northern portion (North Carolina/South Carolina) to the northeastern corner waypoint of the southern section (Florida/Georgia).

The following is language describing the North Atlantic right whale critical habitat area from 50 CFR § 226.203(c) as designated on January 26, 2016:

Southeastern United States: Includes marine waters from Cape Fear, North Carolina, southward to 28°N latitude (approximately 31 miles south of Cape Canaveral, Florida) within the area bounded on the west by the shoreline and the 72 COLREGS lines, and on the east by rhumb lines connecting the following points in the order stated from north to south.

Latitude	Longitude
33°51' N	at shoreline
33°42' N	77°43' W
33°37' N	77°47' W
33°28' N	78°33' W
32°59' N	78°50' W
32°17' N	79°53' W
31°31' N	80°33' W
30°43' N	80°49' W
30°30' N	81°01' W
29°45' N	81°01' W
29°15' N	80°55' W
29°08' N	80°51' W
28°50' N	80°39' W
28°38' N	80°30' W
28°28' N	80°26' W
28°24' N	80°27' W
28°21' N	80°31' W
28°16' N	80°31' W
28°11' N	80°33' W
28°00' N	80°29' W
28°00' N	At shoreline

Note: Federal regulations for **Alternative 7** would only apply to that portion of the area within the South Atlantic EEZ. The states would be asked to implement consistent regulations within state waters.

Alternative 8. The black sea bass pot closure applies to waters inshore of points 1-35 listed in **Table 2.1.6**; approximately Daytona Beach, Florida, to Cape Hatteras, North Carolina (**Figure 2.1.8**).

Sub-alternative 8a. The black sea bass pot closure applies to the area annually from November 1 through April 15.

Sub-alternative 8b. For the area off North Carolina and South Carolina, the black sea bass pot closure applies annually from November 1 through December 15 and February 15 through April 30. For the area off Georgia and Florida, the black sea bass pot closure applies annually from November 15 through April 15.

In **Alternative 8**, the boundaries off Florida and Georgia are nearly identical to the boundaries in **Alternative 5**. Off North Carolina and South Carolina, the black sea bass pot closure applies in the exclusive economic zone in waters shallower than 25 meters.

Note: Federal regulations for **Alternative 8** would only apply to that portion of the area within the South Atlantic EEZ. The states would be asked to implement consistent regulations within state waters.

Alternative 9. The black sea bass pot closure applies to waters inshore of points 1-28 listed in **Table 2.1.7**; approximately Daytona Beach, Florida, to Cape Hatteras, North Carolina (**Figure 2.1.9**).

Sub-alternative 9a. The black sea bass pot closure applies to the area annually from November 1 through April 15.

Sub-alternative 9b. For the area off North Carolina and South Carolina, the black sea bass pot closure applies annually from November 1 through December 15 and February 15 through April 30. For the area off Georgia and Florida, the black sea bass pot closure applies annually from November 15 through April 15.

In **Alternative 9**, the boundaries off Florida and Georgia are nearly identical to the boundaries in **Alternative 5**. Off North Carolina and South Carolina, the black sea bass pot closure applies in the exclusive economic zone in waters shallower than 20 meters.

Note: Federal regulations for **Alternative 9** would only apply to that portion of the area within the South Atlantic EEZ. The states would be asked to implement consistent regulations within state waters.

Alternative 10. From November 1 through December 15, the black sea bass pot closure applies to waters inshore of points 1-20 listed in **Table 2.1.8**; approximately Georgia/South Carolina State Line, to Cape Hatteras, North Carolina (**Figure 2.1.10**).

From February 15 through April 30, the black sea bass pot closure applies to waters inshore of points 1-28 listed in **Table 2.1.9**; approximately Georgia/South Carolina State Line, to Cape Hatteras, North Carolina (**Figure 2.1.11**).

From December 16 through February 14, there would be no closure off of the Carolinas.

From November 15 through April 15, the black sea bass pot closure applies to waters inshore of points 20-28 listed in **Table 2.1.8**; approximately Georgia/South Carolina State Line, to approximately Daytona Beach, Florida (**Figure 2.1.10**).

Note: In **Alternative 10**, the boundaries off Florida and Georgia are nearly identical to the boundaries in **Alternative 5**. Off North Carolina and South Carolina, the black sea bass pot closure applies in the exclusive economic zone in waters shallower than 20 m from November 1 through December 15 and 25 m from February 15 through April 30.

Note: Federal regulations for **Alternative 10** would only apply to that portion of the area within the South Atlantic EEZ. The states would be asked to implement consistent regulations within state waters.

Preferred Alternative 11. From November 1 through 30 and from April 1 through 30 each year, the black sea bass pot closure applies to waters inshore of points 1-35 listed in **Table 2.1.10**; approximately Daytona Beach, Florida, to Cape Hatteras, North Carolina (**Figure 2.1.12**). From December 1 through March 31, the black sea bass pot closure applies to waters inshore of points 1-28 listed in **Table 2.1.11**; approximately Cape Canaveral, Florida, to Cape Hatteras, North Carolina (**Figure 2.1.13**).

From November 1 through 30 and from April 1 through 30 each year, the boundaries off Florida and Georgia are nearly identical to the boundaries in **Alternative 5**. Off North Carolina and South Carolina, the black sea bass pot closure applies in the exclusive economic zone in waters shallower than 25 m, corresponding with **Alternative 8**.

From December 1 through March 31, this area generally represents waters 25 m or shallower from 28° 21' N (approximately Cape Canaveral, Florida) to Savannah, Georgia; from the Georgia/South Carolina border to Cape Hatteras, North Carolina, the closure applies to waters under Council management that are 30 m or shallower and corresponds with **Alternative 4**. This bathymetric area is based on right whale sightings (all demographic segments) and sightings per unit of effort (proxy of density) by depth and captures 97% and 96% of right whale sightings off the North Carolina/South Carolina area, and Florida/Georgia area, respectively.

Note: Federal regulations for **Alternative 11** would only apply to that portion of the area within the South Atlantic EEZ. The states would be asked to implement consistent regulations within state waters.

Alternative 12. From November 1 through April 30, the black sea bass pot closure applies to waters inshore of points 1-31 listed in **Table 2.1.12**; approximately Cape Canaveral, Florida, to Cape Hatteras, North Carolina (**Figure 2.1.14**).

This closure approximates the midpoints between proposed closure **Alternative 4** and **Sub-Alternative 8a**.

Note: Federal regulations for **Alternative 12** would only apply to that portion of the area within the South Atlantic EEZ. The states would be asked to implement consistent regulations within state waters.

Biological Effects:

Black Sea Bass

Regardless of which alternative the Council chooses, no biological impacts to the black sea bass stock are expected. Adverse effects are prevented because the overall harvest in the commercial sector is currently limited to the commercial ACL by the commercial accountability measures (AMs) and the ACL, which is based on the ABC, reduced from the overfishing level as required to address assessment uncertainty. In addition, there is no evidence to suggest that changing the timing of harvest within the periods covered by the alternatives would have adverse biological impacts. These alternatives offer no advantages to the black sea bass stock in terms of further reduced harvest because it is estimated that 97-100% of the ACL would be taken (**Table S-3**). Therefore, there is no difference in the biological effects on black sea bass expected to occur from the alternatives.

The expected closure date ranges for the commercial black sea bass season are shown in **Table S-3**. The ranges of closing dates of the commercial ACL that would be landed are due to different scenarios considered in the analyses (SERO-LAPP-2015-09; included as **Appendix N**). The scenarios considered various combinations of the spatial distribution of landings and effort, and factors that affected catch rate projections.

Table S-3. Expected ACL closure dates for commercial black sea bass with a January 1 fishing year start date.

	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Alternative 1	No Closure	No Closure	No Closure	No Closure
Alternative 2	10/2	8/4	10/26 - 11/4	11/19 - 12/3
Alternative 3	11/26 - 12/5	10/4 - 10/17	10/26 - 11/4	11/19 - 12/3
Alternative 4	12/20 - 12/30	12/7 - 12/22	12/11 - 12/18	12/19 - 12/30
Alternative 5	12/16 - 12/24	12/1 - 12/11	12/6 - 12/11	12/15 - 12/23
Alternative 6	12/20 - NC*	12/7 - 12/25	12/10 - 12/20	12/19 - NC
Sub-Alternative 7a	10/11 - 10/12	8/18 - 8/20	10/6 - 10/9	10/7 - 10/9
Sub-Alternative 7b	12/28 - NC	12/18 - 12/30	12/17 - 12/21	12/28 - NC
Sub-Alternative 7c	12/22 - 12/28	12/9 - 12/17	12/11 - 12/14	12/23 - 12/29
Sub-Alternative 8a	12/6 - 12/11	10/14 - 10/25	10/29 - 11/5	12/5 - 12/9
Sub-Alternative 8b	12/29 - NC	12/20 - 12/30	12/18 - 12/21	12/29 - NC
Sub-Alternative 9a	10/28 - 11/9	9/15 - 9/27	10/13 - 10/19	10/24 - 11/3
Sub-Alternative 9b	12/26 - NC	12/15 - 12/28	12/14 - 12/20	12/26 - NC
Alternative 10	12/27 - NC	12/17 - 12/29	12/16 - 12/20	12/28 - NC
Preferred Alternative 11	12/18 - 12/28	12/3 - 12/18	12/6 - 12/13	12/17 - 12/27
Alternative 12	12/15 - 12/23	11/21 - 12/10	12/5 - 12/11	12/14 - 12/22

* NC = No Closure

Source: **Appendix N; Appendix I**
Protected Resources

The potential for serious injury or mortality to North Atlantic right whales should be considered for management measures in the black sea bass pot sector because right whales may be found in the Council's jurisdiction from November 1 through April 30 (NMFS 2008). The bulk of the black sea bass pot sector effort traditionally operated from November to April. Since 2010, the black sea bass pot sector has not opened during this time period due to commercial ACL closures (2010, 2011, and 2012) or by regulation (2013 to present). A regulatory closure of the pot sector from November 1 through April 30 was implemented in 2013, via Regulatory Amendment 19. The pot sector closure was implemented to protect endangered right whales and to expedite the increase in the black sea bass ACL in response to a stock assessment indicating the black sea bass stock had been rebuilt. Had the black sea bass pot closure not been implemented, the potential for black sea bass pot gear interactions with right whales would have increased, requiring re-initiation of formal ESA consultation, which would have delayed the ACL increase.

Prior to the increase in the ACL and black sea bass pot closure, restrictions in the pot sector were implemented via Amendment 18A, effective in 2012, to prevent AMs from being triggered early each fishing season, and mitigate associated negative social and economic impacts. The Council developed Amendment 18A because it determined action was needed to modify the rebuilding strategy including the ABC, ACL, and AMs, reduce participation and effort in the black sea bass pot segment of the snapper grouper fishery; and adjust the system of accountability in the recreational sector. Specifically, the Council established a maximum of 35 pots per fishermen, required that pots must be removed from the water when the trip is completed, an endorsement to limit the number of fishermen (32 fishermen) that could use pots to harvest black sea bass, and reduced the recreational bag limit from 20 to 15 per person per day. Since these restrictions were enacted, the average number of pots in the water per day is 75 for all endorsement holders combined, with a maximum reported number of pots fished on a day of 278; the total pots fished cannot exceed 1,120 pots (32 fishermen times 35 pots) in the South Atlantic (SAFMC 2012a). While not the purpose of the Amendment 18A, many of its requirements likely have some ancillary biological benefits to North Atlantic right whales. However, the most notable large whale entanglement risk reduction measure in the commercial black sea bass pot sector is that the black sea bass fishing season has not co-occurred with the right whale season for the last several years (July 16, 2013; 78 FR 42654).

The alternatives under consideration differ substantially in their potential biological effects on ESA-listed large whales. The comparison of alternatives below is based primarily on the analysis in SERO-LAPP-2014-09 as shown in **Table S-4**. The analysis simulated the potential landings of black sea bass pot endorsement holders during a winter season for **Alternatives 1** through **12**. Factoring in landings by other gear, the date the ACL would be met under each scenario was predicted. The analysis also considers overlays of the co-occurrence of the seasonal distribution of black sea bass pot gear and North Atlantic right whales as a proxy for the relative risk of right whale entanglements under each of the proposed alternatives. Overlaying distributions of right whales with fisheries/ships/etc. is an established way of evaluating risk from activities of

interest (NMFS 2015b, Redfern et al. 2013). Due to differences in right whale sampling protocols and data availability, separate models that overlaid right whale and black sea bass fishing effort were generated for two regions: North Carolina, and South Carolina to Florida. The resulting analysis estimated the relative risk of entanglement for a given alternative in those two regions.

Table S-4. Ranked projected risk of right whale entanglement in pot gear vertical lines (in relative risk units; RRU) under proposed Alternatives in Regulatory Amendment 16. The lowest projected relative risk is labeled as “most protective”, while the highest projected relative risk is labeled as “least protective”. Alternative 1 is the no action alternative.

RISK	Relative Risk of Alternative (Min-Max in Parentheses)
Low	Alt1: no risk of entanglement (0 RRU)
	Alt6: low increase in risk off NC (+2-8 RRU); no additional risk off FL-SC (0-0 RRU).
	Alt4: low increase in risk off NC (+2-8 RRU); low increase in risk off FL-SC (0-3 RRU).
	Alt12: low increase in risk off NC (+3-14 RRU); low increase in risk off FL-SC (2-9 RRU).
	Alt11: low increase in risk off NC (+3-15 RRU); low increase in risk off FL-SC (1-12 RRU).
	Alt5: low increase in risk off NC (+1-2 RRU); low to high increase in risk off FL-SC (11-58 RRU).
	Alt10: low to moderate increase in risk off NC (+6-20 RRU); low to high increase in risk off FL-SC (12-58 RRU).
	Alt8a: low to moderate increase in risk off NC (+6-26 RRU); low to high increase in risk off FL-SC (12-58 RRU).
	Alt3: low to moderate increase in risk off NC (+10-26 RRU); low to high increase in risk off FL-SC (16-52 RRU).
	Alt9a: moderate to high increase in risk off NC (+26-51 RRU); moderate to high increase in risk off FL-SC (30-72 RRU).
High	Alt8b: moderate to high increase in risk off NC (+46-50 RRU); high to very high increase in risk off FL-SC (58-77 RRU).
	Alt7c: moderate increase in risk off NC (+46-50 RRU); moderate to high increase in risk off FL-SC (55-76 RRU).
	Alt9b: high increase in risk off NC (+54-63 RRU); high to very high increase in risk off FL-SC (64-83 RRU).
	Alt7b: high increase in risk off NC (+69-74 RRU); high to very high increase in risk off FL-SC (67-94 RRU).
	Alt7a: high increase in risk off NC (+69-74 RRU); very high increase in risk off FL-SC (77-96 RRU).
	Alt2: very high increase in risk off NC (+100-100 RRU); very high increase in risk off FL-SC (100-100 RRU).
	1-25 RRU = low, 26-50 RRU = moderate, 51-75 RRU= high, 76-100+ RRU = very high

Economic Effects:

The commercial black sea bass sector was closed prior to the end of the fishing year in 2008/2009, on May 15, 2009, when the commercial ACL was met. Prior to that season, the sector operated without closures. **Figure S-1** shows the average percent of total annual commercial black sea bass landings by month from June 2000 through May 2009, the most recent seasons prior to years when there were ACL-related closures. When operating without closures, the months of June through September saw the fewest commercial landings of black sea bass, ranging from 2-4% each month, while landings tended to increase in November with an average of 11% of the landings. However, fall

through spring months saw the highest percentage of annual landings. Highest average annual percentage of total landings occurred in December and January at approximately 18% in each month.

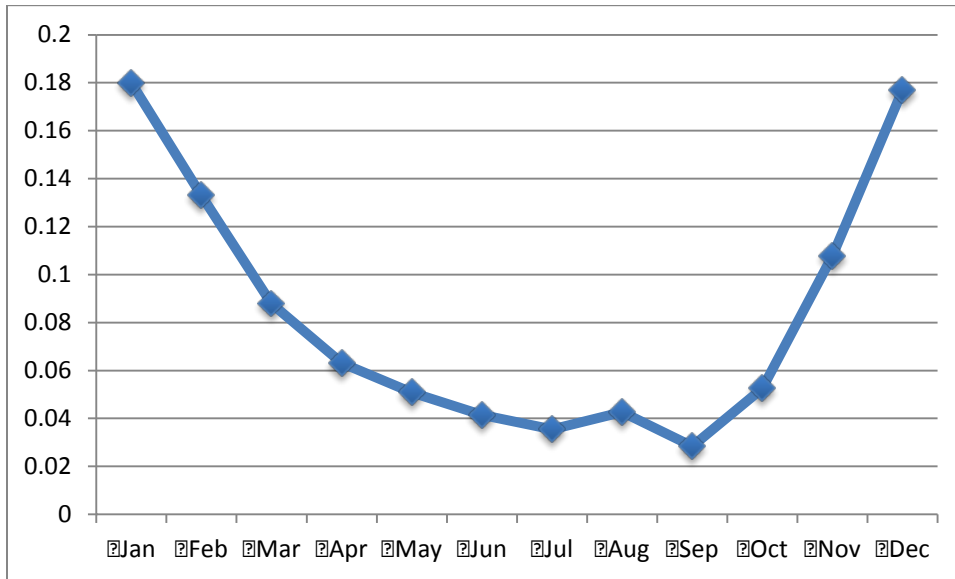


Figure S-1. Percent of average annual commercial black sea bass landings by month from June 2000 through May 2009.

Source: SEFSC/SSRG Economic Panel Data

Expected dockside revenue of the commercial black sea bass portion of the snapper grouper fishery

This analysis of the expected ex-vessel revenue of the alternatives and applied scenarios assumes that consumer demand for black sea bass would at least remain constant regardless of when the fish would be landed. At the very least, demand for black sea bass is assumed to be at the same level as in those years when no closures were in effect.

An expected closure date alone does not give the best estimate of expected value because the price per pound changes from month to month and is influenced also by which gear is being used at the time. The highest expected ex-vessel value would come when the expected landings are highest in months with the highest price per pound. Various estimates of average monthly price per pound, daily expected catch rates, and anticipated closure dates were used to calculate estimated annual dockside values for black sea bass. Estimates are shown for the four catch rate scenarios used in the SERO-LAPP-2014-09 (**Appendix I**) analysis and are based on the assumption that spatial location of gear in future years would mirror the average of the 2006/2007 through 2008/2009 fishing seasons where there was no closure in the commercial black sea bass season. **Table S-5** shows the differences in expected dockside values for **Alternative 1 (No Action)** subtracted from each of the **Alternatives 2 – 12** for all four catch rate

scenarios based on monthly price per pound calculations for two different time series, 2000 – 2013 landings and 2011 – 2013 landings.

Table S-5. Expected difference in dockside value of commercial black sea bass under the alternatives of **Action 1** compared to Alternative 1 (No Action) using two price per pound estimates, the four different catch rate scenarios (**Appendix N**), and estimations of spatial locations of gear based on the 2006/2007 through 2008/2009 fishing seasons (Scenario C; **Appendix N**).

	Price/lb years	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Alternative 2	2000-2013	\$55,579	\$41,654	\$54,865	\$59,233
	2011-2013	\$56,344	\$43,028	\$55,362	\$59,967
Alternative 3	2000-2013	\$48,666	\$57,925	\$53,395	\$50,417
	2011-2013	\$49,040	\$58,597	\$53,638	\$50,776
Alternative 4	2000-2013	\$43,849	\$44,929	\$46,574	\$43,207
	2011-2013	\$44,042	\$45,276	\$46,699	\$43,393
Alternative 5	2000-2013	\$44,747	\$48,036	\$45,777	\$45,404
	2011-2013	\$44,967	\$48,431	\$45,920	\$45,616
Alternative 6	2000-2013	\$44,488	\$45,844	\$41,955	\$43,936
	2011-2013	\$44,682	\$46,194	\$42,082	\$44,123
Sub-Alternative 7a	2000-2013	\$54,285	\$45,784	\$56,192	\$57,759
	2011-2013	\$55,050	\$47,158	\$56,690	\$58,494
Sub-Alternative 7b	2000-2013	\$53,721	\$44,771	\$55,776	\$57,106
	2011-2013	\$54,486	\$46,144	\$56,273	\$57,840
Sub-Alternative 7c	2000-2013	\$50,866	\$48,204	\$50,690	\$50,188
	2011-2013	\$51,631	\$49,578	\$51,188	\$50,923
Sub-Alternative 8a	2000-2013	\$43,933	\$52,528	\$50,096	\$46,268
	2011-2013	\$44,230	\$53,061	\$50,288	\$46,553
Sub-Alternative 8b	2000-2013	\$50,933	\$48,325	\$50,797	\$50,256
	2011-2013	\$51,698	\$49,698	\$51,295	\$50,990
Sub-Alternative 9a	2000-2013	\$51,312	\$55,582	\$56,634	\$52,214
	2011-2013	\$51,812	\$56,480	\$56,960	\$52,694
Sub-Alternative 9b	2000-2013	\$54,038	\$47,112	\$53,751	\$55,192
	2011-2013	\$54,803	\$48,485	\$54,248	\$55,926
Alternative 10	2000-2013	\$50,933	\$48,325	\$50,797	\$50,256
	2011-2013	\$51,698	\$49,698	\$51,295	\$50,990
Preferred Alternative 11	2000-2013	\$45,640	\$43,541	\$45,570	\$46,367
	2011-2013	\$45,834	\$43,889	\$45,696	\$46,553
Alternative 12	2000-2013	\$45,723	\$48,492	\$44,941	\$46,941
	2011-2013	\$45,956	\$48,911	\$45,093	\$47,165

The various alternatives and sub-alternatives of **Action 1** shift the balance among the gear that can harvest black sea bass. While **Table S-5** showed total expected differences in values for all the alternatives/sub-alternatives for each of the four catch rates estimated compared to **Alternative 1 (No Action)** by NMFS (2015a), **Table S-6** shows the expected dockside values based on monthly price per pound calculations based on two different time series, 2000 – 2013 landings and 2011 – 2013 landings, but just for pot landings. **Table S-7** is similar to **Table S-6**, but includes only the value of landings for

all non-pot gear landings. And by way of comparison, **Table S-8** shows the estimated percent of total landings by pot gear for the alternatives/sub-alternatives and for each of the four catch rate scenarios.

Table S-6. Expected dockside value of commercial black sea bass using pot gear only under the alternatives of **Action 1** using two price per pound estimates, the four different catch rate scenarios (**Appendix N**), and estimations of spatial locations of gear based on the 2006/2007 through 2008/2009 fishing seasons (Scenario C; **Appendix N**).

	Price/lb years	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Alternative 1	2000-2013	\$462,689	\$462,689	\$462,689	\$462,689
	2011-2013	\$488,456	\$488,456	\$488,456	\$488,456
Alternative 2	2000-2013	\$724,469	\$831,939	\$745,783	\$737,062
	2011-2013	\$832,095	\$996,907	\$887,610	\$850,222
Alternative 3	2000-2013	\$664,496	\$723,896	\$687,255	\$668,844
	2011-2013	\$760,533	\$837,248	\$803,188	\$761,967
Alternative 4	2000-2013	\$565,101	\$629,624	\$611,748	\$569,339
	2011-2013	\$634,498	\$721,730	\$711,203	\$640,319
Alternative 5	2000-2013	\$585,520	\$662,012	\$635,352	\$591,058
	2011-2013	\$660,970	\$761,957	\$741,575	\$668,001
Alternative 6	2000-2013	\$565,739	\$630,539	\$612,009	\$570,068
	2011-2013	\$635,344	\$722,853	\$711,270	\$641,314
Sub-Alternative 7a	2000-2013	\$710,039	\$804,150	\$719,244	\$719,351
	2011-2013	\$812,133	\$956,191	\$846,533	\$824,560
Sub-Alternative 7b	2000-2013	\$709,475	\$803,136	\$718,827	\$718,698
	2011-2013	\$811,393	\$954,861	\$845,993	\$823,700
Sub-Alternative 7c	2000-2013	\$689,105	\$765,302	\$699,146	\$692,806
	2011-2013	\$781,711	\$896,229	\$818,255	\$786,332
Sub-Alternative 8a	2000-2013	\$628,628	\$695,146	\$672,231	\$635,843
	2011-2013	\$715,341	\$797,732	\$784,537	\$723,297
Sub-Alternative 8b	2000-2013	\$689,172	\$765,422	\$699,253	\$692,874
	2011-2013	\$781,793	\$896,375	\$818,385	\$786,414
Sub-Alternative 9a	2000-2013	\$682,253	\$755,850	\$709,469	\$688,993
	2011-2013	\$774,717	\$884,926	\$834,595	\$783,398
Sub-Alternative 9b	2000-2013	\$703,954	\$791,798	\$716,802	\$710,946
	2011-2013	\$802,711	\$936,438	\$843,331	\$811,997
Alternative 10	2000-2013	\$689,172	\$765,422	\$699,253	\$692,874
	2011-2013	\$781,793	\$896,375	\$818,385	\$786,414
Preferred Alternative 11	2000-2013	\$576,653	\$647,757	\$635,145	\$582,260
	2011-2013	\$652,062	\$748,810	\$743,778	\$659,166
Alternative 12	2000-2013	\$591,376	\$666,177	\$639,396	\$597,474
	2011-2013	\$668,430	\$764,288	\$746,439	\$676,231

Table S-7. Expected dockside value of commercial black sea bass using non-pot gear under the alternatives of **Action 1** using two price per pound estimates, the four different catch rate scenarios (**Appendix N**), and estimations of spatial locations of gear based on the 2006/2007 through 2008/2009 fishing seasons (Scenario C; **Appendix N**).

	Price/lb years	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Alternative 1	2000-2013	\$866,496	\$866,496	\$866,496	\$866,496
	2011-2013	\$1,110,579	\$1,110,579	\$1,110,579	\$1,110,579
Alternative 2	2000-2013	\$660,295	\$538,900	\$638,267	\$651,356
	2011-2013	\$780,282	\$643,937	\$755,643	\$770,207
Alternative 3	2000-2013	\$713,354	\$663,214	\$695,325	\$710,758
	2011-2013	\$849,048	\$783,787	\$822,353	\$844,518
Alternative 4	2000-2013	\$807,933	\$744,490	\$764,011	\$803,053
	2011-2013	\$1,010,593	\$902,276	\$935,604	\$1,002,261
Alternative 5	2000-2013	\$788,412	\$715,209	\$739,610	\$783,532
	2011-2013	\$977,265	\$852,283	\$893,944	\$968,933
Alternative 6	2000-2013	\$807,933	\$744,490	\$759,131	\$803,053
	2011-2013	\$1,010,593	\$902,276	\$927,272	\$1,002,261
Sub-Alternative 7a	2000-2013	\$673,431	\$570,819	\$666,134	\$667,593
	2011-2013	\$796,058	\$680,026	\$787,293	\$789,046
Sub-Alternative 7b	2000-2013	\$673,431	\$570,819	\$666,134	\$667,593
	2011-2013	\$796,058	\$680,026	\$787,293	\$789,046
Sub-Alternative 7c	2000-2013	\$690,946	\$612,088	\$680,729	\$686,568
	2011-2013	\$817,094	\$726,517	\$804,823	\$811,835
Sub-Alternative 8a	2000-2013	\$744,490	\$686,568	\$707,050	\$739,610
	2011-2013	\$902,276	\$811,835	\$838,047	\$893,944
Sub-Alternative 8b	2000-2013	\$690,946	\$612,088	\$680,729	\$686,568
	2011-2013	\$817,094	\$726,517	\$804,823	\$811,835
Sub-Alternative 9a	2000-2013	\$698,244	\$628,917	\$676,351	\$692,406
	2011-2013	\$825,859	\$745,241	\$799,564	\$818,847
Sub-Alternative 9b	2000-2013	\$679,270	\$584,499	\$666,134	\$673,431
	2011-2013	\$803,070	\$695,492	\$787,293	\$796,058
Alternative 10	2000-2013	\$690,946	\$612,088	\$680,729	\$686,568
	2011-2013	\$817,094	\$726,517	\$804,823	\$811,835
Preferred Alternative 11	2000-2013	\$798,173	\$724,969	\$739,610	\$793,293
	2011-2013	\$993,929	\$868,947	\$893,944	\$985,597
Alternative 12	2000-2013	\$783,532	\$711,500	\$734,730	\$778,652
	2011-2013	\$968,933	\$845,812	\$885,612	\$960,601

The alternatives and sub-alternatives of **Action 1** based on when the pot sector is open or closed redistribute the commercial ACL between gear types. **Table S-8** shows the percentage of the total ACL expected to be caught by pot gear by alternative.

Table S-8. Expected dockside value of commercial black sea bass using pot gear only expressed as percent of expected total landings for all gear types under the alternatives of **Action 1** using two price per pound estimates, the four different catch rate scenarios (**Appendix N**), and estimations of spatial locations of gear based on the 2006/2007 through 2008/2009 fishing seasons (Scenario C; **Appendix N**).

	Price/lb years	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Alternative 1	2000-2013	35%	35%	35%	35%
	2011-2013	31%	31%	31%	31%
Alternative 2	2000-2013	52%	61%	54%	53%
	2011-2013	52%	61%	54%	52%
Alternative 3	2000-2013	48%	52%	50%	48%
	2011-2013	47%	52%	49%	47%
Alternative 4	2000-2013	41%	46%	44%	41%
	2011-2013	39%	44%	43%	39%
Alternative 5	2000-2013	43%	48%	46%	43%
	2011-2013	40%	47%	45%	41%
Alternative 6	2000-2013	41%	46%	45%	42%
	2011-2013	39%	44%	43%	39%
Sub-Alternative 7a	2000-2013	51%	58%	52%	52%
	2011-2013	50%	58%	52%	51%
Sub-Alternative 7b	2000-2013	51%	58%	52%	52%
	2011-2013	50%	58%	52%	51%
Sub-Alternative 7c	2000-2013	50%	56%	51%	50%
	2011-2013	49%	55%	50%	49%
Sub-Alternative 8a	2000-2013	46%	50%	49%	46%
	2011-2013	44%	50%	48%	45%
Sub-Alternative 8b	2000-2013	50%	56%	51%	50%
	2011-2013	49%	55%	50%	49%
Sub-Alternative 9a	2000-2013	49%	55%	51%	50%
	2011-2013	48%	54%	51%	49%
Sub-Alternative 9b	2000-2013	51%	58%	52%	51%
	2011-2013	50%	57%	52%	50%
Alternative 10	2000-2013	50%	56%	51%	50%
	2011-2013	49%	55%	50%	49%
Preferred Alternative 11	2000-2013	42%	47%	46%	42%
	2011-2013	40%	46%	45%	40%
Alternative 12	2000-2013	43%	48%	47%	43%
	2011-2013	41%	47%	46%	41%

Given the uncertainty of how fishery participants would change their behavior in the future, each of the four catch rate scenarios are plausible estimates of future fishing behavior. One way to simplify comparisons between alternatives is to use mean values across the four scenarios for each alternative or sub-alternative. **Table S-9** shows the percent of expected ex-vessel value landed by pot gear averaged across the four landings scenarios as a percent of expected black sea bass ex-vessel values for all gear types combined. Regardless of whether 2000 – 2013 or 2011 – 2013 price per pound values were used, **Alternative 1 (No Action)** had a lower percentage of the expected ex-vessel value landed by pot gear than all of the other alternatives/sub-alternatives considered. When using the 2000 – 2013 price per pound values, **Alternative 2, Sub-Alternative 7a, Sub-Alternative 7b,** and **Sub-Alternative 9a** had the highest expected percentage of overall ex-vessel values for black sea bass landed by pot gear. When using the 2011 – 2013 price per pound values, **Alternative 2, Sub-Alternative 7a,** and **Sub-Alternative 7b** had the highest expected percentage of overall ex-vessel values for black sea bass landed by pot gear.

Table S-9. Mean percentage and ranking of expected ex-vessel value of black sea bass landed by pot gear as a percent of expected ex-vessel value of black sea bass landed by all gear types averaged across the four landings scenarios.

	2000-2013		2011 -2013	
	Mean	Rank	Mean	Rank
Alternative 1	35%	16	31%	16
Alternative 2	55%	1	55%	1
Alternative 3	50%	9	49%	9
Alternative 4	43%	15	41%	15
Alternative 5	45%	12	43%	12
Alternative 6	43%	14	41%	14
Sub-Alternative 7a	53%	2	53%	2
Sub-Alternative 7b	53%	3	53%	3
Sub-Alternative 7c	52%	7	51%	7
Sub-Alternative 8a	48%	10	47%	10
Sub-Alternative 8b	52%	5	51%	5
Sub-Alternative 9a	51%	8	51%	8
Sub-Alternative 9b	53%	4	52%	4
Alternative 10	52%	5	51%	5
Preferred Alternative 11	44%	13	43%	13
Alternative 12	45%	11	44%	11

Economic effects of relative risk to North Atlantic Right Whales and the black sea bass pot sector

Throughout the range of the NARW, the NMFS budgeted \$8.7 million in FY 2013 and \$8.4 million in FY 2014 in whale recovery budgets. As an example, NMFS (NMFS

SERO PRD 2015) estimates that it cost \$87,900 for a multi-agency attempt to rescue a NARW in trap or pot gear in 2010/2011. Between FY 2003 and FY 2005, the costs of actions to reduce fishery bycatch of NARW were between \$4.9 million and \$7.7 million across several federal and NGO organizations (Reeves et al. 2007). During the fiscal years 2003-2005, the multi-agency costs to promote NARW recovery ranged from \$13.1 million to \$16.7 million throughout the NARW range.

Potential economic outcomes must be weighed against the chance that a NARW would become entangled in black sea bass pot gear. SERO-LAPP-2014-09 (**Appendix N**) analyzed the potential co-occurrence of black sea bass pot gear and NARW in space and time across the **Action 1** alternatives for a wide variety of potential scenarios (i.e., different assumptions regarding the distribution of pot gear, catch rates, and NARW responses to environmental conditions). In this analysis, co-occurrence was treated as a proxy for relative entanglement risk, an assumption used in other whale risk assessment models (NMFS 2015b; Redfern et al. 2013). The analysis was robust with regards to the differences between alternatives, although the absolute risk of a given alternative cannot be quantified because the entanglement rate of whales in black sea bass pots is unknown.

The **Action 1** alternatives/sub-alternatives can be compared in terms of relative risk as it is operationally defined here. However, the magnitude of the potential relative risk between the alternatives/sub-alternatives in this action cannot be estimated without knowing what the total risk would be if there were no restrictions on using black sea bass pot gear. In this analysis, greater relative risk means the likelihood of entanglements increases when there is more black sea bass pot gear in the water at the same time there is an increase in the presence of whales. In this sense, the alternatives/sub-alternatives can be ranked (e.g., most relative risk to least relative risk); however, the absolute additional amount of risk posed by one alternative/sub-alternative cannot be compared to the absolute amount of risk posed by another alternative/sub-alternative.

Social Effects:

The social effects of removal or modifications to the seasonal closure for black sea bass pots include direct effects on participants in the black sea bass pot sector, and direct effects on participants in the hook-and-line sector (and other gear types) of the black sea bass fishery. For pot fishermen, the potential effects are primarily associated with foregone economic benefits due to restricted or no access to the black sea bass resource during the winter. For hook-and-line fishermen, the potential effects of removal or modifications to the seasonal closure for black sea bass pots are associated with greater competition with pot fishermen, less access to the increased black sea bass ACL, and a likely shorter fishing season because the ACL would be more available to the pot fishermen, who account for most of the landings. Minimal indirect effects are expected for recreational anglers and for-hire businesses.

Sections 3.3.3 and **3.3.4** provide detailed information about the social environment for the black sea bass sector. **Figure 3.3.3.2** shows communities with the highest pounds of black sea bass harvested by pots, with the top ten including Sneds Ferry (North

Carolina), Georgetown (South Carolina), Little River (South Carolina), Harkers Island (North Carolina), McClellanville (South Carolina), Ponce Inlet (Florida), Hampstead (North Carolina), Cape Carteret (North Carolina), Wrightsville Beach (North Carolina), and Topsail Beach (North Carolina). **Figure 3.3.3.3** shows communities with the highest pounds of black sea bass harvested by bandit gear, with the top three including Little River (South Carolina), Southport (North Carolina), and Topsail Beach (North Carolina). Additionally, considering engagement and reliance on commercial fishing for each community (**Figure 3.3.3.4**) and social vulnerability (**Figure 3.3.4.1**), the communities of Wanchese (North Carolina) and Sneads Ferry (North Carolina) are those that would be expected to experience positive and negative effects of changes for the black sea bass pot fishermen.

Black sea bass pot fishermen have been affected by multiple management changes in a relatively short period of time through recent Council actions and Atlantic Large Whale Take Reduction Plan (ALWTRP) requirements. Following the restrictive catch limits implemented in the black sea bass rebuilding plan, and an effort shift from other target species due to ACLs and AMs, pot fishermen have experienced increasingly shorter seasons and continual overages. When the endorsement program was implemented through Amendment 18A (SAFMC 2012), more than half of active pot fishermen did not receive an endorsement and could no longer use black sea bass pots. Although the landings level of active fishermen who did not qualify for an endorsement was relatively small (to qualify for a black sea bass endorsement, a fishermen with a valid snapper grouper commercial must have had black sea bass landings using black sea bass pot gear averaging at least 2,500 lbs ww, annually during the period January 1, 1999, through December 31, 2010), the endorsement program also created an additional barrier for future participants. Overall, the endorsement program permanently locked out most fishermen from this sector of the black sea bass fishery unless they purchase an existing endorsement.

Fishermen who did receive endorsements were placed under a new trip limit, the new pot limit, and the requirement to bring pots to shore at the end of each trip. When the final rule for Regulatory Amendment 19 (SAFMC 2013b) indicated that the ACL could be more than doubled, there were only partial positive effects for the pot fishermen due to the closure from November through April that has restricted them from benefitting from the extended season and larger ACL. [While the closure was intended to minimize interaction of pot gear with large whales, it was also included in Regulatory Amendment 19 to expedite the increase in the black sea bass ACL due to the additional time that would have been required for NMFS to complete an ESA Section 7 consultation for the snapper grouper fishery (SAFMC 2013b).] Additionally, black sea bass pot fishermen are required to comply with the ALWTRP gear and seasonal requirements (**Tables 1.8.1 – 1.8.5**), which have been in place for the black sea bass pot sector since 2007, with the most recently added requirements implemented in November 1, 2014.

Under **Alternative 1 (No Action)**, pot fishermen would continue to forego economic benefits that would be available if harvest by pot was allowed into the winter months.

Some fishermen report that black sea bass caught in the winter are larger and more abundant, and market prices are better. However, some pot fishermen from the Carolinas have voiced concern that the winter pot harvest of black sea bass would favor Florida fishermen. Weather in Florida is generally better than weather conditions in North Carolina and South Carolina, and Florida pot fishermen could catch a greater proportion of the commercial ACL in winter months. Public input also indicates that some pot fishermen feel that compliance with the ALWTRP requirements, in addition to the measures established with the endorsement program are sufficient to protect right whales and calves, and keeping the seasonal closure invalidates the rationale and purpose for all protection measures under the ALWTRP and the ancillary benefits derived through Amendment 18A (SAFMC 2012).

For black sea bass participants who do not have a black sea bass pot endorsement, **Alternative 1 (No Action)** would be expected to provide the most benefits. The seasonal pot closure allows fishermen without a black sea bass pot endorsement to use gear types other than black sea bass pots to fish for black sea bass in the winter months. If pots are used during the winter months, it is more likely that the commercial ACL for black sea bass would be met before the end of the calendar year. Additionally, hook and line fishermen would have the opportunity to supply the winter market for black sea bass and take advantage of higher market prices.

As noted in **Section 3.3.3**, marine mammal protection has broad social effects as well, as conservation of endangered species can produce societal benefits by protecting species for aesthetic, economic, scientific, and historical value to the U.S. and citizens. Maintaining the seasonal closure for the pot sector under **Alternative 1 (No Action)** could result in broad social benefits through improved protection of right whales during migration to and from calving grounds during the winter more so than modification to the closure area or period (**Alternatives 2-12**). As discussed in **Appendix N**, the potential interaction with right whales is expected to be lower for alternatives with pot prohibitions that encompass larger areas and/or time periods during November through April. However, because the baseline value of potential interaction is unknown, the actual increase or decrease in potential interactions cannot be determined, so that any associated social benefits would also be unknown. With all other regulations and management measures in place for the black sea bass pot commercial sector that contribute to minimizing potential interactions through Council actions and ALWTRP requirements (see **Section 1.8**), the return on investment of additional restrictions such as a spatial/temporal prohibition on black sea bass pot fishing could be low, particularly for the relatively small black sea bass pot sector. Overall, any social benefits that would be expected to result from improved right whale protection would only be realized when biological benefits to the right whales can be measured and demonstrated.

The effects of **Alternatives 2-12** on fishermen and associated communities vary with the temporal and spatial characteristics of the closures, and effects would be different for pot fishermen and hook and line fishermen. In general, allowing harvest with pots in any way during the winter would be beneficial to pot fishermen, but could have negative

effects for all black sea bass fishermen if an increased rate of harvest causes an in-season closure. Additionally, allowing pots during the winter could affect access to the black sea bass commercial ACL for hook and line fishermen, since pots are more efficient gear and could harvest more of the commercial ACL.

Depending on the areas that could be closed to pot fishing and actual areas where fishermen place their pots, **Alternatives 2-12** all provide some way for pot fishing to continue to some degree in the winter months, and would be expected to generate some of the same level of benefits to pot fishermen by increasing access to black sea bass with pots in the winter. However, the possible negative effects due to an earlier in-season closure (due to the ACL being met) would also be expected under **Alternatives 2-12**. Because of the location of calving areas, there may be less fishing ground available for Florida pot fishermen for most of the winter months (**Alternatives 2-6, 7b- Preferred Alternative 11**), except for under **Alternative 7/ Sub-Alternative 7a** that would allow fishing in the winter between December 16 through March 14. However, under this sub-alternative, the interaction with adult whales and calves may be more likely, which could result in further fishing restrictions in the future. The alternative(s) with the smallest area that would close potential fishing grounds for Florida pot fishermen would be expected to be the most beneficial to black sea bass pot fishermen in Florida.

For black sea bass pot fishermen in North Carolina and South Carolina, the alternatives with the smallest areas of fishing grounds closed and the shortest period of time would be expected to be the most beneficial. **Alternative 7/ Sub-Alternative 7a, 7b; Alternative 8/Sub-Alternative 8b; Alternative 9/ Sub-Alternative 9b; and Alternative 10** would allow more time available for harvest with pots in North Carolina and South Carolina than **Alternatives 2-6, Preferred Alternative 11 and Alternative 12**.

As discussed in **Section 3.3.3**, the black sea bass pot endorsement holders participate in several other fisheries throughout the year. As part of their fishing portfolio, many endorsement holders report that the closure in **Alternative 1 (No Action)** has negative effects on their ability to maximize returns in their overall portfolios. Additional information was collected through public comments about the role of winter pot fishing for the endorsement holders in fishing portfolios and yearly fishing business plans. This information is in **Appendix L** and was presented at the September 2015 Council meeting.

Action 2. Enhance the existing Atlantic Large Whale Take Reduction Plan (ALWTRP) buoy line/weak link gear requirements and buoy line rope marking for black sea bass pots

One or more actions beyond **Alternative 1 (No Action)** may be chosen.

Alternative 1 (No Action). Commercial black sea bass fishermen are required to abide by the pot configuration restrictions, pot escape mechanism requirements, and pot construction and escape mechanism requirements contained in 50 CFR § 622.189 (see discussion below). Additionally, commercial fishermen will continue to fish in compliance with existing buoy line and weak link gear requirements for black sea bass pots as required by the ALWTRP (50 CFR § 229.32).

Alternative 2. In addition to the requirements in 50 CFR § 622.189, enhance the current ALWTRP buoy line requirements from November 1 through April 30 in federal waters in the South Atlantic EEZ.

Sub-alternative 2a: The breaking strength must not exceed 2,200 lbs.

Sub-alternative 2b: The breaking line strength must not exceed 1,200 lbs.

Note: Fishermen could decide whether they would want to use the same buoy line from May 1 through October 31.

Alternative 3. In addition to the requirements in 50 CFR § 622.189, enhance the current ALWTRP weak link requirements. From November 1 to April 30, the breaking strength of the weak links must not exceed 400 pounds for black sea bass pots in the South Atlantic EEZ.

Note: Fishermen could decide whether they would want to use the same weak link strength from May 1 through October 31.

Preferred Alternative 4. In addition to the requirements in 50 CFR § 622.189, enhance the current ALWTRP gear marking requirements. In addition to the ALWTRP's rope marking requirements, include a feature to specifically distinguish the commercial South Atlantic black sea bass pot component of the snapper grouper fishery. Currently the ALWTRP requires three 12-inch color marks at the top, midway, and bottom sections of the buoy line specified for the individual management area in which the gear are deployed. This alternative will require an additional 12-inch wide purple band be added at the end of each required 12-inch colored mark. Each of the three marks would be a total of 24 inches in length. The additional gear marking requirements of this action are required in federal waters from November 15 through April 15 (Southeast Restricted Area North), September 1 through May 31 (Offshore Trap/Pot Area), and September 1 through May 31 (Southern Nearshore Trap/Pot Waters Area).

Action 2 Discussion

50 CFR § 622.189 Restrictions and requirements for sea bass pots.

(a) *Tending restriction.* A sea bass pot in the South Atlantic EEZ may be pulled or tended only by a person (other than an authorized officer) aboard the vessel permitted to fish such pot or aboard another vessel if such vessel has on board written consent of the owner or operator of the vessel so permitted.

(b) *Configuration restriction.* In the South Atlantic EEZ, sea bass pots may not be used or possessed in multiple configurations, that is, two or more pots may not be attached one to another so that their overall dimensions exceed those allowed for an individual sea bass pot. This does not preclude connecting individual pots to a line, such as a “trawl” or trot line.

(c) *Requirement for escape mechanisms.* (1) A sea bass pot that is used or possessed in the South Atlantic EEZ between 35°15.19' N. lat. (due east of Cape Hatteras Light, NC) and 28°35.1' N. lat. (due east of the NASA Vehicle Assembly Building, Cape Canaveral, FL) is required to have--

(i) On at least one side, excluding top and bottom, a panel or door with an opening equal to or larger than the interior end of the trap's throat (funnel). The hinges and fasteners of each panel or door must be made of one of the following degradable materials:

(A) Ungalvanized or uncoated iron wire with a diameter not exceeding 0.041 inches (1.0 mm), that is, 19 gauge wire.

(B) Galvanic timed-release mechanisms with a letter grade designation (degradability index) no higher than J.

(ii) An unobstructed escape vent opening on at least two opposite vertical sides, excluding top and bottom. The minimum dimensions of an escape vent opening (based on inside measurement) are:

(A) 1 1/8 by 5 3/4 inches (2.9 by 14.6 cm) for a rectangular vent.

(B) 1.75 by 1.75 inches (4.5 by 4.5 cm) for a square vent.

(C) 2.0-inch (5.1-cm) diameter for a round vent.

(2) [Reserved]

(d) *Construction requirements and mesh sizes.* (1) A sea bass pot used or possessed in the South Atlantic EEZ must have mesh sizes as follows (based on centerline measurements between opposite, parallel wires or netting strands):

(i) For sides of the pot other than the back panel:

(A) Hexagonal mesh (chicken wire)--at least 1.5 inches (3.8 cm) between the wrapped sides;

(B) Square mesh--at least 1.5 inches (3.8 cm) between sides; or

(C) Rectangular mesh--at least 1 inch (2.5 cm) between the longer sides and 2 inches (5.1 cm) between the shorter sides.

(ii) For the entire back panel, *i.e.*, the side of the pot opposite the side that contains the pot entrance, mesh that is at least 2 inches (5.1 cm) between sides.

(2) [Reserved]

(e) *Requirements for pot removal.* (1) A sea bass pot must be removed from the water in the South Atlantic EEZ and the vessel must be returned to a dock, berth, beach, seawall, or ramp at the conclusion of each trip. Sea bass pots may remain on the vessel at the conclusion of each trip.

(2) A sea bass pot must be removed from the water in the South Atlantic EEZ when the applicable quota specified in § 622.190(a)(5) is reached. After a closure is in effect, a black sea bass may not be retained by a vessel that has a sea bass pot on board.

(f) *Restriction on number of pots.* A vessel that has on board a valid Federal commercial permit for South Atlantic snapper-grouper and a South Atlantic black sea bass pot endorsement that fishes in the South Atlantic EEZ on a trip with black sea bass pots, may possess only 35 black sea bass pots per vessel per permit year. Each black sea bass pot in the water or onboard a vessel in the South Atlantic EEZ, must have a valid identification tag attached. Endorsement holders must apply for new tags each permit year through NMFS to replace tags from the previous year.

Biological Effects:

Black Sea Bass

The alternatives range from maintaining the current pot gear requirements to specifying buoy line strength and decreasing weak link breaking weight to adding an extra marking on the buoy line. Regardless of which alternative the Council chooses, no biological impacts to the black sea bass stock are expected. Adverse biological effects are prevented because the overall harvest in the commercial sector is limited to the commercial ACL; commercial AMs are also in place. The ACL, which is based on the ABC, is reduced from the overfishing level as required to address assessment uncertainty. In addition, there is no evidence to suggest that changing the gear requirements for the black sea bass pot sector would have adverse biological impacts. These alternatives are not predicted to reduce harvest and would not provide additional protection to the black sea bass stock. Therefore, there is no difference in the biological effects on black sea bass from the alternatives.

Protected Resources

Alternative 2 is likely to maintain or slightly reduce the overall breaking strength of line used in the commercial black sea bass pot sector throughout the Council's jurisdiction. Reduced line breaking strength can be less life threatening to large whales than lines with higher breaking strength if line breaking strength is below the threshold at which whales can safely break free from the lines. Knowlton et al. (2015) suggest that if buoy line breaking strength was 1,700 pounds (lbs) or less, the number of life-threatening entanglements to large whales would be reduced substantially. **Sub-alternative 2a** (maximum line strength of 2,200 lbs) would likely maintain the breaking strength of lines currently being used and would have limited, if any, benefits for listed whale species. **Sub-Alternative 2b** (maximum line strength of 1,200 lbs) would likely result in substantially fewer life-threatening entanglements for humpback whales and juvenile and adult right whales. The breaking strength in both **Sub-Alternatives 2a** and **2b** is greater than what minke whales are able to escape from (Knowlton et al in press). Given that very young right whale calves are smaller and weaker than minke whales, the breaking

strength of both sub-alternatives is also likely greater than what young calves could shed. Consequently, it is not clear if **Sub-Alternative 2b** would provide very young right whale calves any greater chance of breaking free from line than the lines allowed under **Sub-Alternative 2a**.

The biological impacts from **Alternative 3** on ESA-listed whales is unclear, but are likely beneficial. Weak links break apart when enough opposing pressure is applied to either side of the link. On pot gear, weak links are installed where the surface buoy attaches to the buoy (vertical) line. When the weak link breaks, it releases the buoy from the vertical buoy line and attached pot. A benefit of releasing the buoy is that the remaining entangling line will then be free to slide through baleen or over/around flippers and be shed by a free-swimming whale. Weak link provisions are likely to reduce entanglement risk relative to lines without weak links because the buoys can break away allowing the remaining gear to be potentially shed by the whale. A breaking strength of 400 lbs may be low enough to be broken by very young right whale calves. However, since adequate opposing pressure must be applied to the weak link to break the link, it is unclear how effective this measure will be on a case by case basis.

Preferred Alternative 4 provides a mechanism to identify if a line entangling a whale belongs to the black sea bass pot sector. There are no direct biological benefits from **Preferred Alternative 4**, however, any information gained from entangled whales on fishery type, entanglement location, and entanglement date is important to assess the impacts of a fishery and better understand and possibly work towards reducing future entanglements. However, not all gear remains on the individual whale after an interaction occurs. Furthermore, many entangled right whales are never seen nor is gear recovered. For line markings to be effective, the gear must be recovered, and the recovered gear must retain the marks. Line markings do improve the chances of identifying recovered gear, particularly as the number and size of marks increases. This alternative provides a mechanism to identify the black sea bass pot sector if an interaction occurs and if the gear remains entangled on the whale. This gear marking would be in addition to the gear marking required in the Large Whale Take Reduction Plan (<http://www.greateratlantic.fisheries.noaa.gov/protected/whaletrp/docs/2015-12869.pdf>).

None of these alternatives would reduce the potential of interaction between a black sea bass pot and ESA-listed whales. However, the alternatives could reduce the potential of serious injury or mortality (**Alternatives 2 and 3**) and potentially identify or eliminate the black sea bass pot sector gear implicated in an entanglement (**Preferred Alternative 4**).

Economic Effects:

The estimates of costs associated with **Alternatives 2 – 4 (Preferred)** assume that all fishermen would be affected by the additional gear requirements. However, what is not known is how many fishermen have gear that already would meet the additional requirements. Therefore, the estimates in this analysis represent the maximum costs expected.

There are 32 Black Sea Bass Pot Endorsements in the South Atlantic. North Carolina fishermen hold 17 active or renewable endorsements (http://sero.nmfs.noaa.gov/operations_management_information_services/constituency_services_branch/freedom_of_information_act/common_foia/SBPE.htm, accessed on January 29, 2015). Cost estimates were based on values obtained from HamiltonMarine.com (accessed on January 29, 2015) except where noted.

Alternative 2, Sub-Alternative 2a would require minimum line breaking strength of 2,200 lbs for North Carolina, which the ALWTRP already requires for South Carolina, Georgia, and Florida (**Alternative 1 – No Action**). A typical black sea bass pot buoy line is 100 to 130 feet in length (Jack Cox, pers. comm.) Assuming all 17 North Carolina fishermen with black sea bass pot endorsements have 35 pots and need to replace all the buoy lines, at 125 feet per pot, the cost to buy four bundles of line would be \$716 (5 bundles x \$179/bundle = \$895, with each bundle having 1,000' of line and with 35 pots x 125 feet = 4,350' buoy line would be needed). The total expected maximum cost associated with **Alternative 2, Sub-Alternative 2a** is \$12,172 (17 x \$716). It is not known how many black sea bass pot fishermen currently use buoy line with a breaking strength less than 1,200 lbs as proscribed by **Sub-Alternative 2b**. The worst case scenario is that all 32 endorsement holders would have to buy new buoy line at \$149 per 1,000 foot bundle, or \$745, assuming fishermen would attach 125 feet of buoy line to each pot (35 pots x 125' = 4,350' buoy line). The total expected maximum cost associated with **Sub-Alternative 2b** is \$23,840.

Alternative 3 would require a step-down from 600 to 400-lb strength weak link. One potential side effect of this step-down in weak links could be an increased probability of the links breaking and resulting in gear loss. However, the probability of such occurrences cannot be estimated at this time. All 32 endorsement holders in all four states could be required to buy new weak links as the current ALWTRP required links have a 600 lb breaking strength. The cost for new weak links for each fisherman is estimated to be \$65 (35 pots x \$1.85 per weak link). The total cost for **Alternative 3** for all endorsement holders is expected to be \$2,080.

Preferred Alternative 4 would require fishermen to mark three 12 inch bands on each buoy line. If using paint, it is assumed that one quart of marine buoy paint would be sufficient to paint the bands on buoy lines for 35 pots. The cost for a quart of marine buoy paint is \$47.35. The total maximum cost associated with **Preferred Alternative 4** if all endorsement holders marked their lines with paint is \$1,515 (32 x \$47.35). Some fishermen have reported that they mark their lines by weaving in surveyor's tape.

Checking various sources online

(www.amazon.com, www.uline.com/BL_6423/Flagging-Tape, and www.tigersupplies.com) show that rolls of 300' of surveyor's tape costs \$3 - \$11 per roll. Presumably, three 12 inch strips per pot would come out to 105 feet to initially equip each pot line. Therefore, if an endorsement holder decided to use surveyor's tape to mark lines, one roll would be needed. If all endorsement holders used surveyor's tape, the total cost would be between \$96 (32 x \$3) and \$352 (32 x \$11).

Social Effects:

In general, there could be some economic costs for fishermen if gear specifications require purchase of additional line and marking supplies. This could affect business cost decisions, which may have some negative effects on crew and associated shoreside support. Under **Alternative 1 (No Action)**, these effects would not be expected because the black sea bass pot fishermen are already required to have the ALWTRP gear specifications. Changing the specified breaking strength under **Alternatives 2 – 4 (Preferred)** would likely increase business costs for some black sea bass pot fishermen by requiring new gear to meet the requirements. The time periods specified in **Sub-Alternative 2a** and **Sub-Alternative 2b** would likely have similar effects on black sea bass pot fishermen, because if the breaking strength or gear marking is required in only one part of the year (**Sub-alternative 2a**) would likely be as much of a burden in terms of requiring new or additional gear purchases as a year-round requirement (**Sub-alternative 2b**). Changing the specified breaking strength under **Sub-alternative 2a** would have the same effects on fishermen and communities in Florida, South Carolina, and Georgia as under **Alternative 1 (No Action)**. However, **Sub-alternative 2a** would be expected to have some impact on black sea bass pot fishermen working in North Carolina because different gear would be required. **Sub-alternative 2b** would be expected to affect all black sea bass pot fishermen by increasing gear costs. The gear marking requirement in **Preferred Alternative 4** may be beneficial to the black sea bass pot fishermen by allowing NMFS to better identify gear associated with entanglements, which could help decipher entanglements with gear from other fisheries versus black sea bass pot gear.

Chapter 1.

Introduction

1.1 What Actions Are Being Proposed?

Fishery managers are reducing the temporal and spatial scope of the annual prohibition on the use of commercial black sea bass pot gear in the South Atlantic from November 1 through April 30. Fishery managers are also enhancing buoy line/weak link gear requirements and buoy line rope marking for black sea bass pots required by the Atlantic Large Whale Take Reduction Plan.

1.2 Who is Proposing the Actions?

The South Atlantic Fishery Management Council (Council) is proposing the action pursuant to the Magnuson-Stevens Conservation and Management Act (Magnuson-Stevens Act). The Council develops the framework amendment and sends it to the National Marine Fisheries Service (NMFS) who publishes a rule to implement the framework amendment on behalf of the Secretary of Commerce. NMFS is an agency in the National Oceanic and Atmospheric Administration.

South Atlantic Fishery Management Council

- Responsible for conservation and management of fish stocks
- Consists of 13 voting members: 8 appointed by the Secretary of Commerce, 1 representative from each of the 4 South Atlantic states, the Southeast Regional Director of NMFS; and 4 non-voting members
- Responsible for developing fishery management plans and amendments under the Magnuson-Stevens Act and recommends actions to NMFS for implementation
- Management area for most species is from 3 to 200 miles off the coasts of North Carolina, South Carolina, Georgia, and east Florida through Key West with the exception of Mackerel which is from New York to Florida, and Dolphin-Wahoo, which is from Maine to Florida
- Sea bass pots in the South Atlantic EEZ may be used between 35°15.19' N. lat. (due east of Cape Hatteras Light, NC) and 28°35.1' N. lat. (due east of the NASA Vehicle Assembly Building, Cape Canaveral, Florida)



1.3 Where is the Management Area?

Management of the federal snapper grouper fishery located off the southeastern United States (South Atlantic) in the 3-200 nautical miles U.S. Exclusive Economic Zone (EEZ) is conducted under the Snapper Grouper FMP (SAFMC 1983). Sea bass pots in the South Atlantic EEZ may be used between 35°15.19' N. lat. (due east of Cape Hatteras Light, North Carolina) and 28°35.1' N. lat. (due east of the NASA Vehicle Assembly Building, Cape Canaveral, Florida) (**Figure 1.3.1**). Black sea bass is one of 59 fish managed by the Council under the Snapper Grouper FMP.

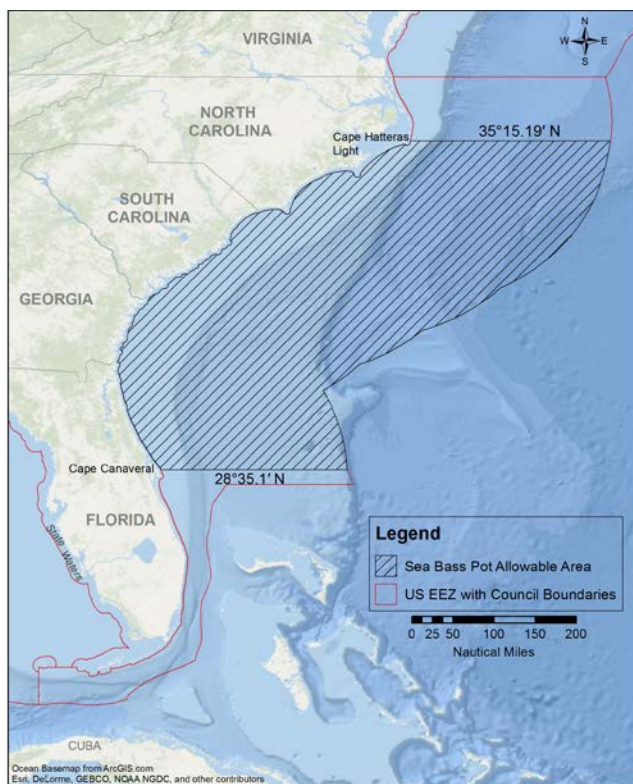


Figure 1.3.1. Jurisdictional boundaries of the South Atlantic Fishery Management Council and the allowable black sea bass pot area.

1.4 Why is the Council Considering Action?

The Council wants to reverse adverse socioeconomic impacts to black sea bass pot endorsement holders created by the annual November 1 through April 30 prohibition on the use of black sea bass pot gear and to increase flexibility to black sea bass pot endorsement holders while continuing to afford protection to Endangered Species Act (ESA)-listed whales in the South Atlantic region. In addition, the Council wants to reduce adverse effects to whales if entangled and to help identify black sea bass pot gear used in the South Atlantic.

Purpose for Action

The purpose of Regulatory Amendment 16 is to reevaluate the annual November 1 through April 30 prohibition on the use of black sea bass pot gear, and enhance buoy line/weak link gear requirements and buoy line rope marking for black sea bass pots required by the Atlantic Large Whale Take Reduction Plan.

Need for Action

The need for the amendment is to reduce the adverse socioeconomic impacts resulting from the annual November 1 through April 30 prohibition on the use of black sea bass pot gear and increase the flexibility of black sea bass pot endorsement holders to fish with this gear while continuing to protect ESA-listed whales in the South Atlantic region; and reduce the adverse effects on whales if entangled and help identify black sea bass pot lines used in the South Atlantic.

1.5 Why Did the Council and NMFS Implement the November 1 through April 30 Prohibition on the Use of Black Sea Bass Pot Gear?

A 2003 stock assessment concluded that black sea bass were overfished and undergoing overfishing. In response to the stock assessment and to end overfishing, a quota was established and the allowable harvest of black sea bass was reduced beginning in 2006, and the fishing year was changed to June 1 through May 31. In 2013, a stock assessment concluded that the black sea bass stock in the South Atlantic is not undergoing overfishing, is not overfished, and is rebuilt. In response to the stock assessment, the Council's Scientific and Statistical Committee (SSC), at their April 2013 meeting, recommended an increase to the acceptable biological catch (ABC) for black sea bass. The increase in the ABC allowed the commercial and recreational annual catch limits (ACL) to increase. The Council and NMFS through Regulatory Amendment 19 to the Snapper Grouper FMP (Regulatory Amendment 19; SAFMC 2013b), modified the ABC, ACLs, recreational annual catch target (ACT), and optimum yield (OY) for the black sea bass stock.

The Council and NMFS implemented the November 1 to April 30 prohibition on the use of black sea bass pots through the final rule for Regulatory Amendment 19 to the Snapper Grouper FMP to ensure protection of North Atlantic right whales (NARW) while allowing for an increase in the black sea bass commercial ACL in 2013 without significant delay in implementation of the regulations.

Increasing the commercial ACL could have extended fishing activity with black sea bass pot gear later into the year. Black sea bass pot gear could potentially be used past November 1, the onset of right whale calving season in the South Atlantic and migration of large ESA-listed

whales, increasing the risk of interactions between these species and this gear type. Therefore, the Council and NMFS implemented a prohibition on the use of black sea bass pot gear from November 1 through April 30 each year, beginning in 2013, to protect large whales from risk of entanglement.

Without the prohibition on the use of black sea bass pots during the large whale migration and right whale calving season, a re-initiation of formal consultation for the snapper grouper fishery probably would have been required under the ESA. Formal consultation requires development of a biological opinion to analyze the potential effects of black sea bass pot gear fished during NARW calving season on those ESA listed whale species. That analysis could not have been completed in time to allow the ACL increases to be implemented for the 2013-2014 fishing season, which began on June 1, 2013. The black sea bass pot prohibition was a precautionary step taken by the Council and NMFS to allow the black sea bass ACL to increase in the 2013-2014 fishing year, while preventing entanglements with ESA-listed whales until a comprehensive biological opinion and Environmental Impact Statement could have been completed.

1.6 Why is Allowing Fishing in the Wintertime Important to Some Fishermen?

Some fishermen have reported a desire to resume fishing in the winter months for black sea bass using pot gear. They have reported that, during winter months, (1) the price per pound is higher (**Figure 1.6.1**), (2) black sea bass migrate southward and are generally found closer to shore making them easier to harvest, and (3) black sea bass tend to be darker and larger, which commands a higher price on the market. The black sea bass stock north of Virginia in the Mid-Atlantic region is closed in the winter,

which increases the price for black sea bass harvested in the South Atlantic region.

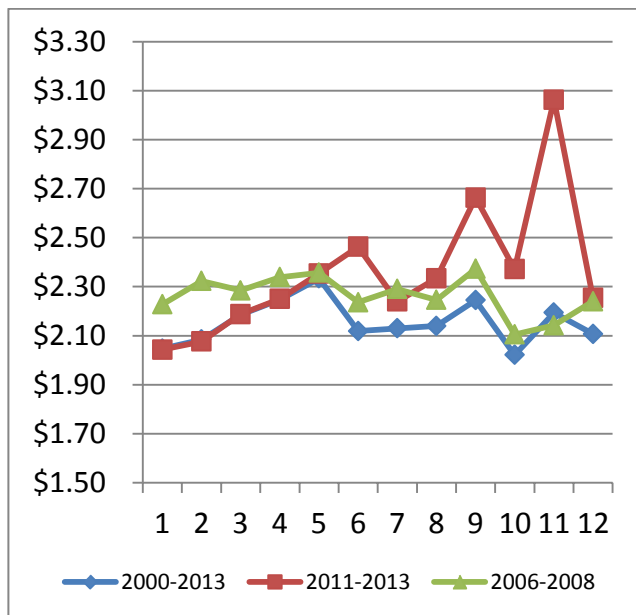


Figure 1.6.1. Average price per pound (whole weight) in the South Atlantic region for black sea bass by month for 2000 – 2013 and 2011 – 2013 (in 2013 dollars).

Source: SEFSC/SSRG Economic Panel Data, ACL_Tables_07102914

1.7 What is the Stock Status of Black Sea Bass in the South Atlantic Region?

The black sea bass stock is not undergoing overfishing, is not overfished, and is rebuilt (Table 1.7.1) (SEDAR 25 Update 2013). Section 3.2.1.1 includes a detailed description of the stock assessment and results. The stock assessment update was conducted in early 2013, with data through 2012, through the Southeast Data, Assessment, and Review (SEDAR) process. Most of the data sources in this assessment were updated with the two additional years of observations available since the benchmark assessment SEDAR 25 (2011). The Council’s SSC met to review the stock assessment in April 2013 and determined it was adequate and suitable to inform management decisions. The actions and alternatives in

Regulatory Amendment 19 (SAFMC 2013b) to increase the ACL were based on the results of this recent stock assessment update for black sea bass and the SSC’s recommendation.

Table 1.7.1. Stock status of black sea bass based on the SEDAR 25 Update (2013) assessment.

Status	SEDAR 25 Update 2013 (2012 most recent data)
Overfishing ($F_{CURR}/MFMT$ value)	No (0.659)
Overfished ($SSB_{CURR}/MSST$ value)	No (1.66)
Rebuilt (SSB_{CURR}/SSB_{MSY} value)	Yes (1.03)
<ul style="list-style-type: none"> • If $F_{CURR} > MFMT$, then undergoing overfishing. The higher the number, the greater degree of overfishing. • If $SSB_{CURR} < MSST$, then overfished. The lower the number, the greater degree of overfished. • If $SSB_{CURR} > SSB_{MSY}$, then the stock is rebuilt. 	

1.8 What Regulations Have the Council and NMFS Implemented Concerning Black Sea Bass in the South Atlantic Region?

1.8.1. Council Amendments

Amendment 13C to the Snapper Grouper FMP (SAFMC 2006) phased-in quota/total allowable catch reductions over 3 years to end overfishing, changed the fishing year from the calendar year to June 1 through May 31, required use of at least 2 inch (") mesh for the entire back panel of pots, required that pots be removed from the water when the commercial quota is met, increased the recreational minimum size limit from 10" total length (TL) to 11" TL in year 1 and 12" TL in year 2 onwards, and reduced the

recreational bag limit from 20 to 15 per person per day.

Amendment 15A to the Snapper Grouper FMP (SAFMC 2008a) updated black sea bass management reference points and modified the rebuilding strategy. Amendment 15A (SAFMC 2008a) established formulas for defining the maximum sustainable yield (MSY) for black sea bass. MSY equals the yield produced by F_{MSY} when the stock is at equilibrium. MSY and F_{MSY} are defined by the most recent SEDAR assessment.

Amendment 17B to the Snapper Grouper FMP (SAFMC 2010b) established ACLs and AMs for black sea bass and other snapper grouper species that were undergoing overfishing at the time.

Regulatory Amendment 9 to the Snapper Grouper FMP (SAFMC 2011a) reduced the recreational bag limit from 15 to 5 per person per day.

The Comprehensive ACL Amendment (SAFMC 2011c) includes ACLs and AMs for federally managed species not undergoing overfishing in four FMPs (Snapper Grouper, Dolphin Wahoo, Golden Crab, and *Sargassum*). The Comprehensive ACL Amendment also established an ABC control rule.

Amendment 18A to the Snapper Grouper FMP (SAFMC 2012) changed the definition of OY from the average yield associated with fishing at 75% of F_{MSY} when the stock is at equilibrium to a formula setting $ACL = ABC = OY$. Magnuson-Stevens Act national standard 1 establishes the relationship between conservation and management measures, preventing overfishing, and achieving OY from each stock complex, or fishery. Under this formula, the ACL/OY would be based on the ABC for black sea bass from the most recent SEDAR assessment, which takes into consideration scientific uncertainty to ensure catches are

maintained below the MSY/overfishing limit (OFL). Amendment 18A (SAFMC 2012) also modified the rebuilding strategy, ABC, ACLs, and ACTs; limited participation in the black sea bass pot sector (32 endorsements/vessels); limited pots to 35 per vessel; required that pots be brought back to shore after each trip; modified AMs; established a 1,000 pounds gutted weight (lbs gw) commercial trip limit; increased the recreational minimum size limit from 12" to 13" TL; and increased the commercial minimum size limit from 10" to 11" TL.

Regulatory Amendment 19 (SAFMC 2013b) made adjustments to the ACLs (including sector ACLs), recreational ACT, and OY for black sea bass based on the ABC recommendation of the SSC and established an annual prohibition on the use of black sea bass pots from November 1 through April 30 to minimize the probability of interactions between pot gear and ESA-listed whales during large whale migrations and right whale calving season off the southeastern coast. A SEDAR stock assessment update for black sea bass was completed in 2013, and results indicated the ACL for this species could be increased based upon the new ABC levels recommended by the SSC. The stock assessment update showed that black sea bass is no longer undergoing overfishing, is not overfished, and the stock is rebuilt. Based on the outcome of the stock assessment update for black sea bass, the SSC applied the approved ABC control rule to black sea bass, revised P^* to be 40%, and recommended new ABC values for 2013-2015.

The Council and NMFS changed the commercial and recreational fishing years for black sea bass from June 1 through May 31 to January 1 through December 31 for the commercial sector and April 1 through March 31 for the recreational sector. The changes began in 2015.

For a detailed history of management of the snapper grouper fishery, please refer to **Appendix D**.

1.8.2 Atlantic Large Whale Take Reduction Plan

In addition to the Council regulations, the commercial black sea bass pot sector must adhere to regulations implemented under the Atlantic Large Whale Take Reduction Plan (ALWTRP). The ALWTRP seeks to reduce serious injury to and/or mortality of large whales due to incidental entanglement in U.S. commercial fishing gear. Since its implementation in 1997, NMFS has modified the ALWTRP on several occasions to address the risk of entanglement in gear employed by gillnet and trap/pot fisheries. Although the plan focuses on right, humpback, and fin whales, its implementation also benefits minke whales. The ALWTRP consists of restrictions on where and how gear can be set; research into whale populations, whale behavior, and fishing gear; outreach to inform fishermen of the entanglement problem and to seek their help in understanding and solving the problem; and a program to disentangle whales that do get caught in gear.

ALWTRP trap/pot gear measures that apply to the southern commercial black sea bass pot

fishery, as managed by the Council, are listed in **Tables 1.8.1** through **1.8.5** and the times and areas where the restrictions apply in the South Atlantic are illustrated in **Figure 1.8.1**. These measures would remain in place regardless of any actions implemented through Regulatory Amendment 16.

Table 1.8.1. ALWTRP measures that are applicable to the those fishing black sea bass pots.

Area	Requirements
Offshore Trap/Pot Waters	<p>Year-round:</p> <ul style="list-style-type: none"> • No buoy line floating at the surface. • No wet storage of gear (gear must be hauled ≤ 30 days). • Gear marking (color = black; 3 marks of 12 in in length) • Weak links* ≤ 1,500 lbs on floats and/or weights • All ground lines must be made of sinking line.
Southern Nearshore Trap/Pot Waters	<p>Year-round:</p> <ul style="list-style-type: none"> • No buoy line floating at the surface. • No wet storage of gear (gear must be hauled ≤ 30 days). • Gear marking (color = orange; 3 marks of 12 in in length) • Weak links* ≤ 600 lbs on floats and/or weights • All ground lines must be made of sinking line.
<p>* Weak links must be chosen from the list of NMFS approved gear.</p> <p>Source: 50 CFR section 229.32, available online at http://www.nero.noaa.gov/whaletrp/.</p>	

Table 1.8.2. Southeast Trap/Pot Management Areas, Offshore Trap/Pot Waters.

LOCATION DESCRIPTION		
Offshore Trap/Pot Waters off South Carolina, Georgia, and Florida includes all Federal waters of the EEZ offshore of the Southern Nearshore Trap/pot Waters and the Southeast U.S. Restricted Area North south to 27°51'N. lat.		
DATES	AREA	RESTRICTIONS/REQUIREMENTS SUMMARY
Sept. 1- May 31	North of 32° N. lat.	<ul style="list-style-type: none"> • Universal requirements • Gear marking -BLACK • Weak links ≤ 1,500 lbs breaking strength and, ≤ 2,000 lbs breaking strength for the red crab trap/pot fishery. • Sinking groundlines
Nov. 15-April 15	Between 32° N. lat and 29° N. lat	<ul style="list-style-type: none"> • Universal requirements • Gear marking- BLACK • Weak links ≤ 1,500 lbs breaking strength and, ≤ 2,000 lbs breaking strength for the red crab trap/pot fishery. • Sinking groundlines
Dec. 1- March 31	Between 29°N. lat and 27° 51' N. lat	<ul style="list-style-type: none"> • Universal requirements • Gear marking- BLACK • Weak links ≤ 1,500 lbs breaking strength and, ≤ 2,000 lbs breaking strength for the red crab trap/pot fishery. • Sinking groundlines

Source: NOAA 2015b

Table 1.8.3. Southeast Trap/Pot Management Areas, Southeast Restricted Area North.

LOCATION DESCRIPTION		
<p>The Southeast U.S. Restricted Area North includes waters north of 29°00' N. (near Ponce de Leon Inlet, FL) to 32°00' N. (near the GA/SC border) from the shoreline eastward to 80°00' W, and off South Carolina, within 35 nautical miles of the shoreline. Little River Inlet, SC, is not located in the Southeast U.S. Restricted Area North.</p>		
DATES	AREA	RESTRICTIONS/REQUIREMENTS SUMMARY
November 15 - April 15	ALL of Southeast Restricted Area North	<ul style="list-style-type: none"> • Universal requirements • Gear markings- SEE BELOW • Buoy lines must be made of sinking line • Buoy lines- Only single traps are allowed. Also, whole buoy line (from trap/pot to buoy) must be the same diameter and free of objects (e.g., weights, floats, etc.) and the buoy line must be made of sinking line.
	FL State Waters	<ul style="list-style-type: none"> • See above • Weak links- ≤ 200lbs • Vertical line breaking strength ≤ 1,500 lbs • Gear marking- BLUE & ORANGE
	SC/GA State waters	<ul style="list-style-type: none"> • See above • Weak links- ≤ 600lbs • Vertical line breaking strength ≤ 2,200 lbs • Gear marking- BLUE & ORANGE
	Federal waters	<ul style="list-style-type: none"> • See above • Weak links- ≤ 600lbs • Vertical line breaking strength ≤ 2,200 lbs • Gear marking- GREEN & ORANGE • Trap/pot gear must be brought back to shore at the conclusion of each trip.

Source: NOAA 2015b

Table 1.8.4. Mid-Atlantic Trap/Pot Management Areas, Southern Nearshore Trap/Pot Waters.

MANAGEMENT AREA DESCRIPTION	
<p>Southern Nearshore Trap/Pot Waters includes all state and Federal waters which fall within EEZ Near-shore Management Area 4, EEZ Nearshore Management Area 5, and EEZ Nearshore Management Area 6 (as defined in the American Lobster Fishery regulations in 50 CFR 697.18), and inside the 100fa contour line from 35°30' N. lat. south to 27°51' N. lat. and extending inshore to the shoreline or exemption line, with the exception of the exempted waters (see Supplement A-Exempted Areas).</p>	
DATES	RESTRICTIONS/REQUIREMENTS SUMMARY
<p>Sept. 1- May 31</p>	<ul style="list-style-type: none"> • Universal requirements • Gear marking- ORANGE • Weak links ≤ 600lbs breaking strength • Sinking groundline • Please note- a small portion of these waters includes portions of LMA 6 (near the mouth of Long Island Sound). These waters follow year-round regulations as described in the “Northeast Trap/Pot Fisheries Management Areas.”

Source: NOAA 2015b

Table 1.8.5. Mid-Atlantic Trap/Pot Management Areas, Offshore Trap/Pot Waters (Mid-Atlantic).

LOCATION DESCRIPTION	
<p>Offshore Trap/Pot Waters includes all Federal waters of the EEZ Offshore Management Area 3 (including the areas known as the Area 2/3 Overlap and 3/5 Overlap, as defined in the American Lobster Fishery regulations found at 50 CFR 697.18), with the exception of the Great South Channel Restricted Trap/Pot Area, and extending south along the 100fa contour line from 35°30' N. lat. south to 27°51' N. lat., and east to the eastern edge of the EEZ.</p>	
DATES	RESTRICTIONS/REQUIREMENTS SUMMARY
<p>Sept. 1- May 31</p>	<ul style="list-style-type: none"> • Universal requirements • Gear marking- BLACK • Weak links ≤ 1,500 lbs breaking strength and, ≤ 2,000 lbs breaking strength for the red crab trap/pot fishery • Sinking groundlines • No trap restrictions in offshore waters south of 40 degrees

Source: NOAA 2015b

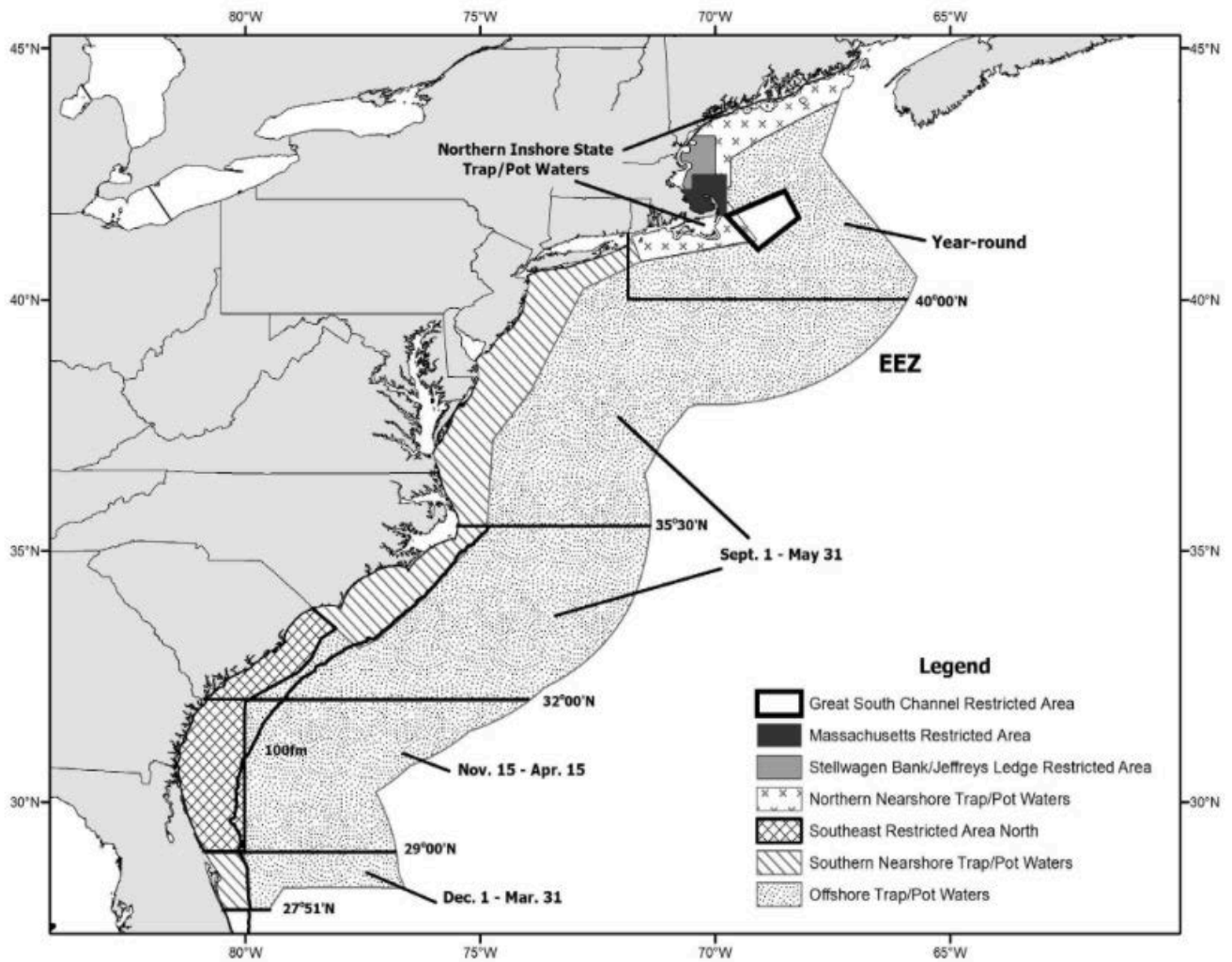


Figure 1.8.1. Times and areas where ALWTRP measures are in effect for the southern commercial black sea bass pot fishery.

Chapter 2. Proposed Actions and Alternatives

Action 1. Modify the annual November 1 through April 30 prohibition on the use of black sea bass pot gear

2.1.1 Action 1 Alternatives

Alternative 1 (No Action). Retention, possession, and fishing for black sea bass is prohibited using black sea bass pot gear, annually, from November 1 through April 30 where black sea bass is managed in the South Atlantic EEZ (south of Cape Hatteras, North Carolina; **Figure 2.1.1**).

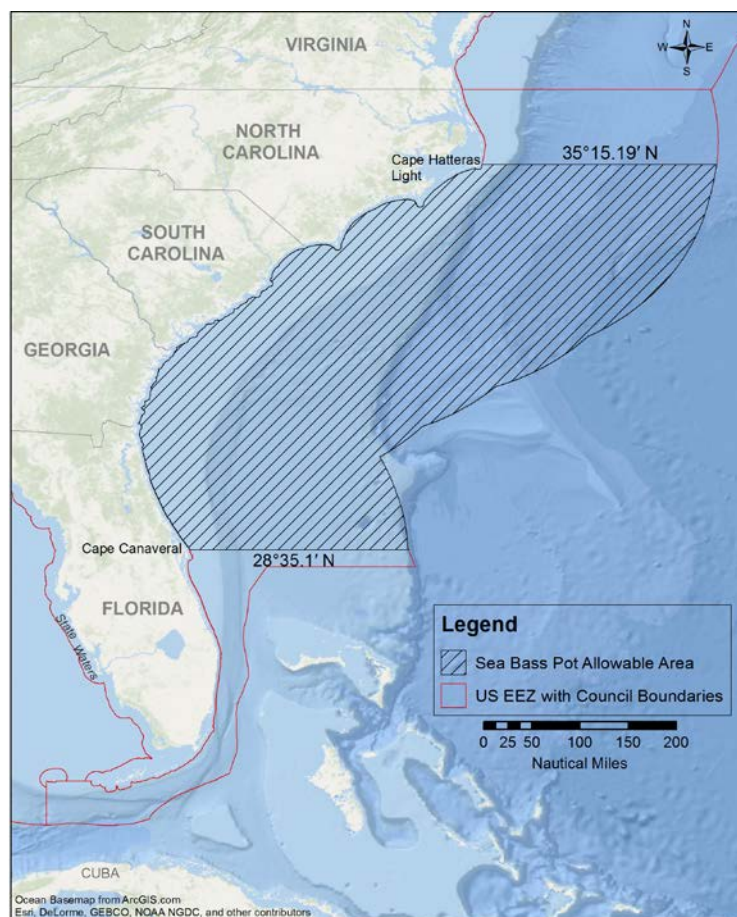


Figure 2.1.1. Jurisdictional boundaries of the South Atlantic Fishery Management Council and the allowable black sea bass pot area.

The following provisions currently exist that may reduce entanglements of whales listed under the Endangered Species Act. The South Atlantic Fishery Management Council does not intend to change these provisions through this amendment.

Amendment 18A to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (SAFMC 2012a):

- Established an endorsement program that capped the number of vessels utilizing pot gear at 32;
- Limited the number of pots per vessel to 35;
- Required that pots be brought back to shore after each trip;
- Established a commercial trip limit of 1,000 lbs gw;

See **Table 1.8.1** through **1.8.5** for measures mandated through the Atlantic Large Whale Take Reduction Plan.

A transit provision is needed to allow vessels to transit through areas closed to sea bass pots. Having a transit provision would keep vessels with black sea bass pots onboard from having to transit north or south of the closed area to get to their fishing grounds. Not having a transit provision would be a hardship that would force some vessels to travel hundreds of miles. This transit provision applies to all **Alternatives** and **Sub-alternatives 2** through **12** for Action 1. Sea bass pots must be removed from the water in the applicable closed area within the South Atlantic EEZ before the applicable time period, and may not be onboard a vessel in the closed area within the South Atlantic EEZ during the applicable closure, except for such sea bass pot gear appropriately stowed onboard a vessel in transit through the closed area. Transit means non-stop progression through the area; fishing gear appropriately stowed means all black sea bass pot gear must be out of the water and on board the deck of the vessel. All buoys must either be disconnected from the gear or stowed within the sea bass pot. Disconnected buoys may remain on deck.

Alternative 2. The black sea bass pot closure applies to the area currently designated as North Atlantic right whale critical habitat (**Figure 2.1.2**). North Atlantic right whale critical habitat encompasses waters between 31° 15'N, (approximately the mouth of the Altamaha River, Georgia) and 30° 15'N (approximately Jacksonville, Florida) from the shoreline out to 15 nautical miles offshore; and the waters between 30° 15'N and 28°00'N, (approximately Sebastian Inlet, Florida) from the shoreline out to 5 nautical miles. The closure applies to the area annually from November 15 through April 15.

This area represents North Atlantic right whale critical habitat in the South Atlantic region designated on June 3, 1994. **Figure 2.1.2** provides location of the critical habitat boundary. The critical habitat designation did not provide waypoints for the boundary. The boundary and area in **Alternative 2** would not automatically change if the boundary for the right whale critical habitat were to change. On January 26, 2016, NMFS issued a final rule that created an expansion of the critical habitat area. The South Atlantic Council voted in December 2015 to

send this amendment in for U.S. Secretary of Commerce review prior to the publication of the final rule for the North Atlantic right whale critical habitat area expansion.

The following is language describing the North Atlantic right whale critical habitat area from 50 CFR § 226.203(c):

Southeastern United States: The area designated as critical habitat in these waters encompasses waters between 31 deg.15'N (approximately located at the mouth of the Altamaha River, GA) and 30 deg.15'N (approximately Jacksonville, FL) from the shoreline out to 15 nautical miles offshore; and the waters between 30 deg.15'N and 28 deg.00'N (approximately Sebastian Inlet, FL) from the shoreline out to 5 nautical miles.

Note: Federal regulations for **Alternative 2** would only apply to that portion of the area within the South Atlantic EEZ. The states would be asked to implement compatible regulations within state waters.

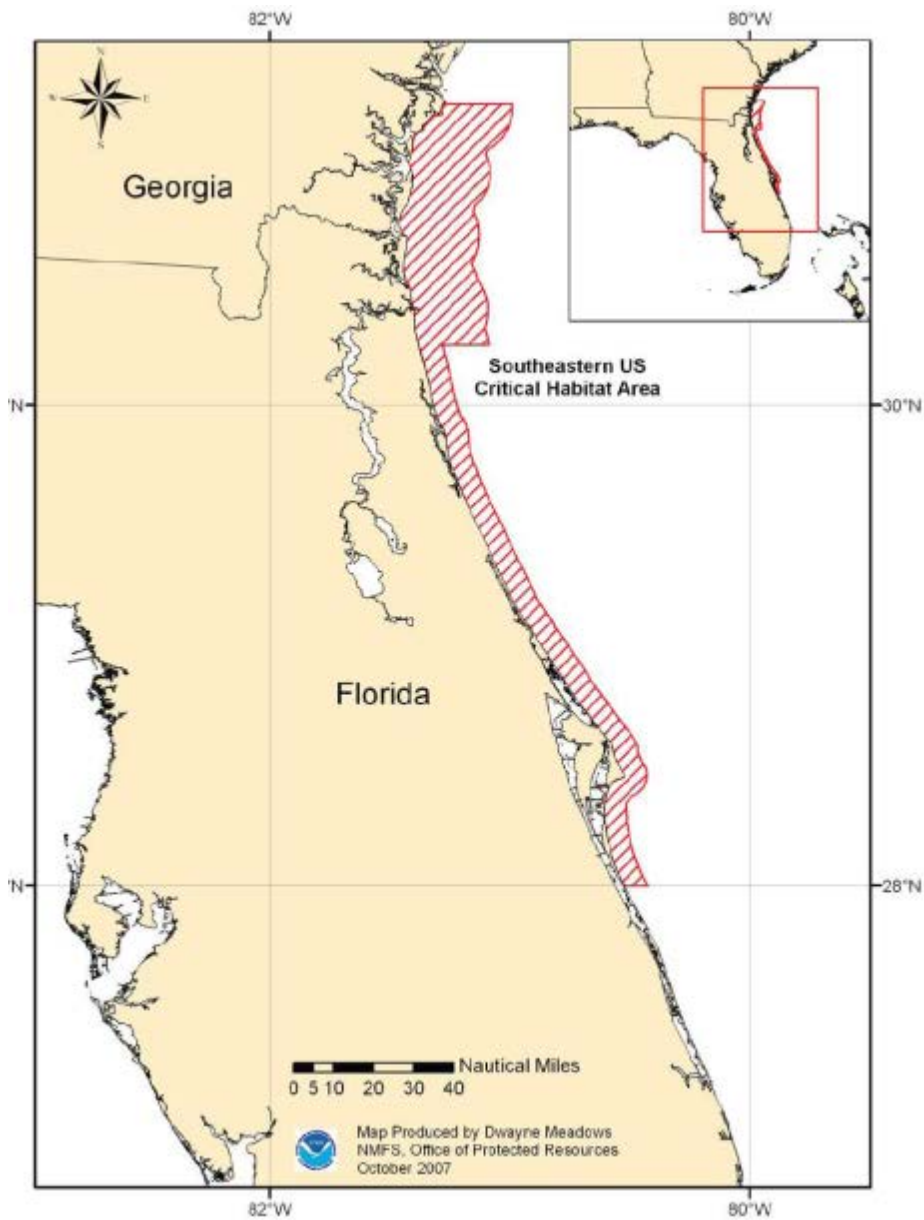


Figure 2.1.2. Area for the proposed black sea bass pot closure in **Alternative 2.**
 Source: <http://www.fisheries.noaa.gov/pr/pdfs/criticalhabitat/northatlanticrightwhale.pdf>

The following is language describing the North Atlantic right whale critical habitat area from 50 CFR § 226.203(c) as designated on January 26, 2016:

Southeastern United States: Includes marine waters from Cape Fear, North Carolina, southward to 28°N latitude (approximately 31 miles south of Cape Canaveral, Florida) within the area bounded on the west by the shoreline and the 72 COLREGS lines, and on the east by rhumb lines connecting the following points in the order stated from north to south.

N. Latitude	W. Longitude
33°51' N	at shoreline
33°42' N	77°43' W
33°37' N	77°47' W
33°28' N	78°33' W
32°59' N	78°50' W
32°17' N	79°53' W
31°31' N	80°33' W
30°43' N	80°49' W
30°30' N	81°01' W
29°45' N	81°01' W
29°15' N	80°55' W
29°08' N	80°51' W
28°50' N	80°39' W
28°38' N	80°30' W
28°28' N	80°26' W
28°24' N	80°27' W
28°21' N	80°31' W
28°16' N	80°31' W
28°11' N	80°33' W
28°00'	80°29' - W
28°00' N	At shoreline

Alternative 3. The black sea bass pot closure applies to waters inshore of points 1-15 listed below in **Table 2.1.1**; approximately Ponce Inlet, Florida, to Cape Hatteras, North Carolina (**Figure 2.1.3**). The closure applies to the area annually from November 1 through April 30.

This area likely represents North Atlantic right whale calving habitat. The area identified from Cape Fear, North Carolina, southward to 29°N (approximately Ponce Inlet, Florida) is based on model outputs (i.e., Garrison 2007, Keller et al. 2012, Good 2008). The area from Cape Fear, North Carolina, to Cape Hatteras, North Carolina, is an extrapolation of those model outputs and based on sea surface temperatures and bathymetry.

Note: Federal regulations for **Alternative 3** would only apply to that portion of the area within the South Atlantic EEZ. The states would be asked to implement compatible regulations within state waters.

Table 2.1.1. Eastern boundary coordinates for the proposed black sea bass pot closure in **Alternative 3**.

Point	N. Latitude	W. Longitude
1	35°15' N	State/EEZ boundary
2	35°15'	75°12'
3	34°51'	75°45'
4	34°21'	76°18'
5	34°21'	76°45'
6	34°12'	77°21'
7	33°37'	77°47'
8	33°28'	78°33'
9	32°59'	78°50'
10	32°17'	79°53'
11	31°31'	80°33'
12	30°43'	80°49'
13	30°30'	81°01'
14	29°45'	81°01'
15	29°00'	State/EEZ boundary

Source: Amanda Frick, NMFS SERO

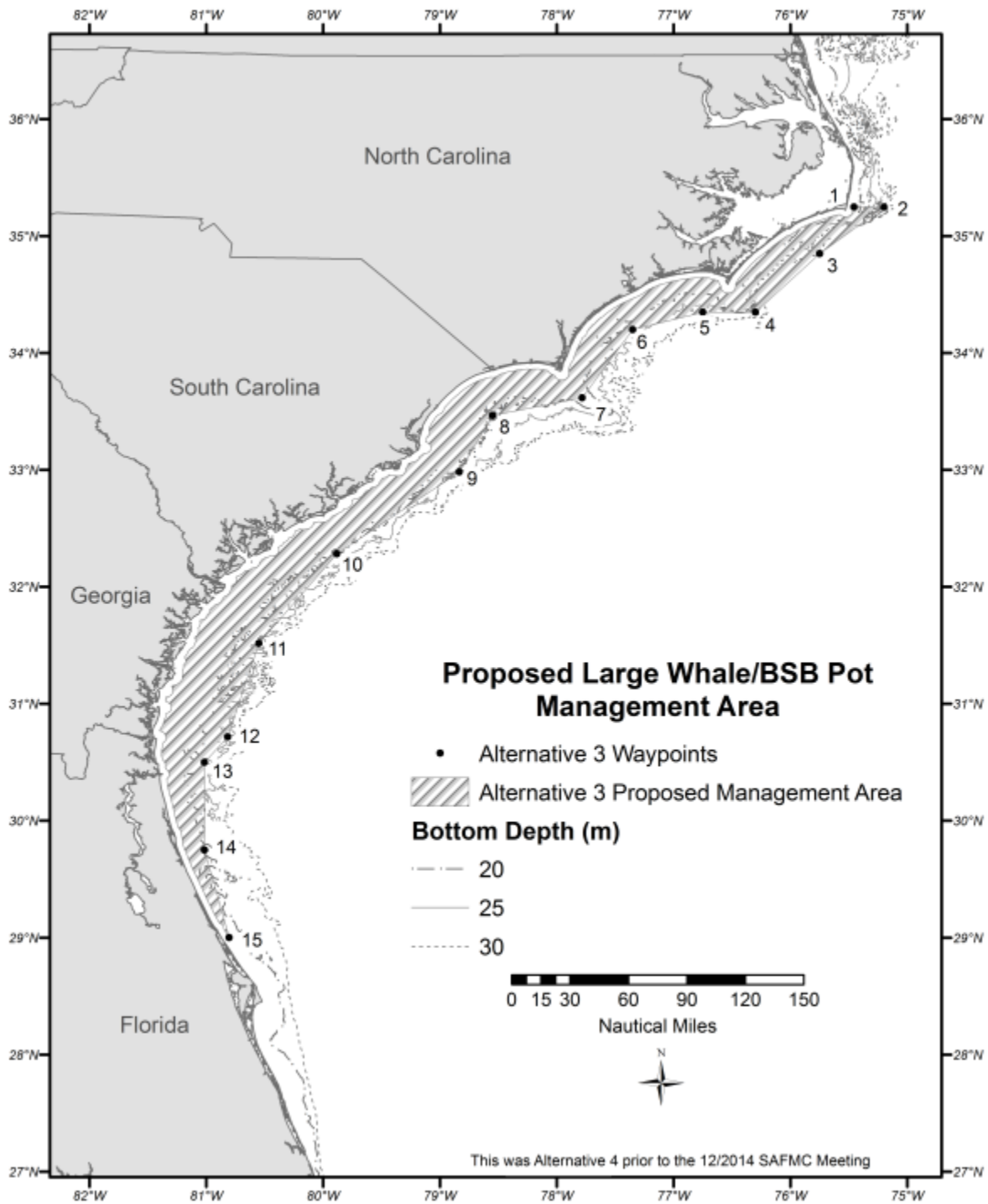


Figure 2.1.3. Area for the proposed black sea bass pot closure in **Alternative 3**.
 Source: Amanda Frick, NMFS SERO

Alternative 4. The black sea bass pot closure applies to waters inshore of points 1-28 listed in **Table 2.1.2**; approximately Cape Canaveral, Florida, to Cape Hatteras, North Carolina (**Figure 2.1.4**). The closure applies to the area annually from November 1 through April 30.

This area generally represents waters 25 m or shallower from 28° 21' N (approximately Cape Canaveral, Florida) to Savannah, Georgia; from the Georgia/South Carolina border to Cape Hatteras, North Carolina, the closure applies to waters under Council management that are 30 m or shallower. This bathymetric area is based on right whale sightings (all demographic segments) and sightings per unit of effort (proxy of density) by depth and captures 97% and 96% of right whale sightings off the North Carolina/South Carolina area, and Florida/Georgia area, respectively. The map below provides an approximate location of the proposed boundary.

Note: Federal regulations for **Alternative 4** would only apply to that portion of the area within the South Atlantic EEZ. The states would be asked to implement compatible regulations within state waters.

Table 2.1.2. Eastern boundary coordinates for the proposed black sea bass pot closure in **Alternative 4**.

Point	N. Latitude	W. Longitude	Point	N. Latitude	W. Longitude
1	35° 15'	State/EEZ boundary	15	33° 01'	78° 38'
2	35° 15'	75° 08'	16	32° 40'	79° 01'
3	34° 58'	75° 41'	17	32° 36'	79° 18'
4	34° 49'	75° 50'	18	32° 19'	79° 22'
5	34° 47'	76° 05'	19	32° 16'	79° 37'
6	34° 31'	76° 18'	20	32° 03'	79° 48'
7	34° 20'	76° 13'	21	31° 39'	80° 27'
8	34° 12'	77° 00'	22	30° 58'	80° 47'
9	33° 43'	77° 30'	23	30° 13'	81° 01'
10	33° 21'	77° 21'	24	29° 32'	80° 39'
11	33° 18'	77° 41'	25	29° 22'	80° 44'
12	33° 22'	77° 56'	26	28° 50'	80° 22'
13	33° 12'	78° 20'	27	28° 21'	80° 18'
14	33° 05'	78° 22'	28	28° 21'	State/EEZ boundary

Source: Amanda Frick, NMFS SERO

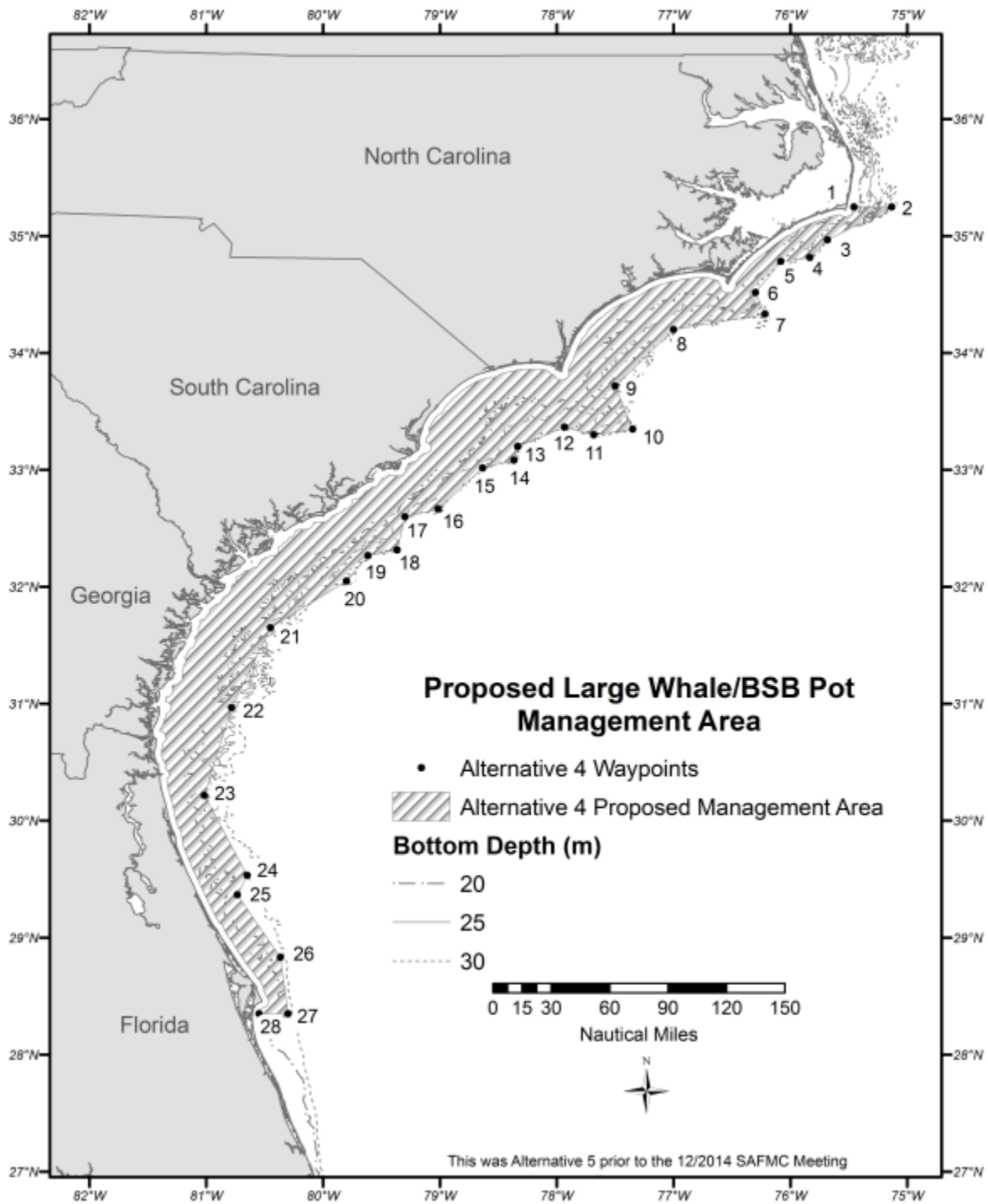


Figure 2.1.4. Area for the proposed black sea bass pot closure in **Alternative 4**.
 Source: Amanda Frick, NMFS SERO

Alternative 5. The black sea bass pot closure applies to waters inshore of points 1-28 listed in **Table 2.1.3**; approximately Daytona Beach, Florida, to Cape Hatteras, North Carolina (**Figure 2.1.5**). The closure applies to the area annually from November 1 through April 30.

This area is based on joint comments received from non-government organizations (dated January 3, 2014) in response to NMFS’ December 4, 2013, *Federal Register* Notice of Intent to Prepare a Draft Environmental Impact Statement (DEIS) (78 FR 72868). The non-government organizations proposed the area as a reasonable alternative for consideration. The area, also included in a Center for Biological Diversity et al. petition in 2009 for right whale critical habitat, is off the coasts of Georgia and Florida and based on calving right whale habitat modeling work of Garrison (2007) and Keller et al. (2012). This area represents the 75th percentile of sightings (91% of historical sightings included in their study) off Florida and Georgia (Garrison 2007 and Keller et al. 2012). Off the coasts of North Carolina and South Carolina, the closure extends from the start of the EEZ to 30 nautical miles offshore. The map below provides approximate location of proposed boundary.

Note: Federal regulations for **Alternative 5** would only apply to that portion of the area within the South Atlantic EEZ. The states would be asked to implement compatible regulations within state waters.

Table 2.1.3. Eastern boundary coordinates for the proposed black sea Bass pot closure in **Alternative 5**.

Point	N. Latitude	W. Longitude	Point	N. Latitude	W. Longitude
1	35°15'	State/EEZ Boundary	15	33°21'	77°45'
2	35°15'	74°54'	16	33°19'	78°02'
3	35°03'	74°57'	17	33°24'	78°17'
4	34°51'	75°06'	18	33°14'	78°33'
5	34°45'	75°18'	19	32°55'	78°39'
6	34°43'	75°33'	20	32°39'	78°56'
7	34°26'	75°57'	21	31°42'	80°24'
8	34°12'	76°07'	22	31°31'	80°33'
9	34°04'	76°26'	23	30°43'	80°49'
10	34°05'	76°41'	24	30°30'	81°01'
11	34°10'	76°55'	25	29°45'	81°01'
12	33°58'	77°16'	26	29°31'	80°58'
13	33°41'	77°23'	27	29°13'	80°52'
14	33°28'	77°32'	28	29°13'	State/EEZ boundary

Source: Amanda Frick, NMFS SERO

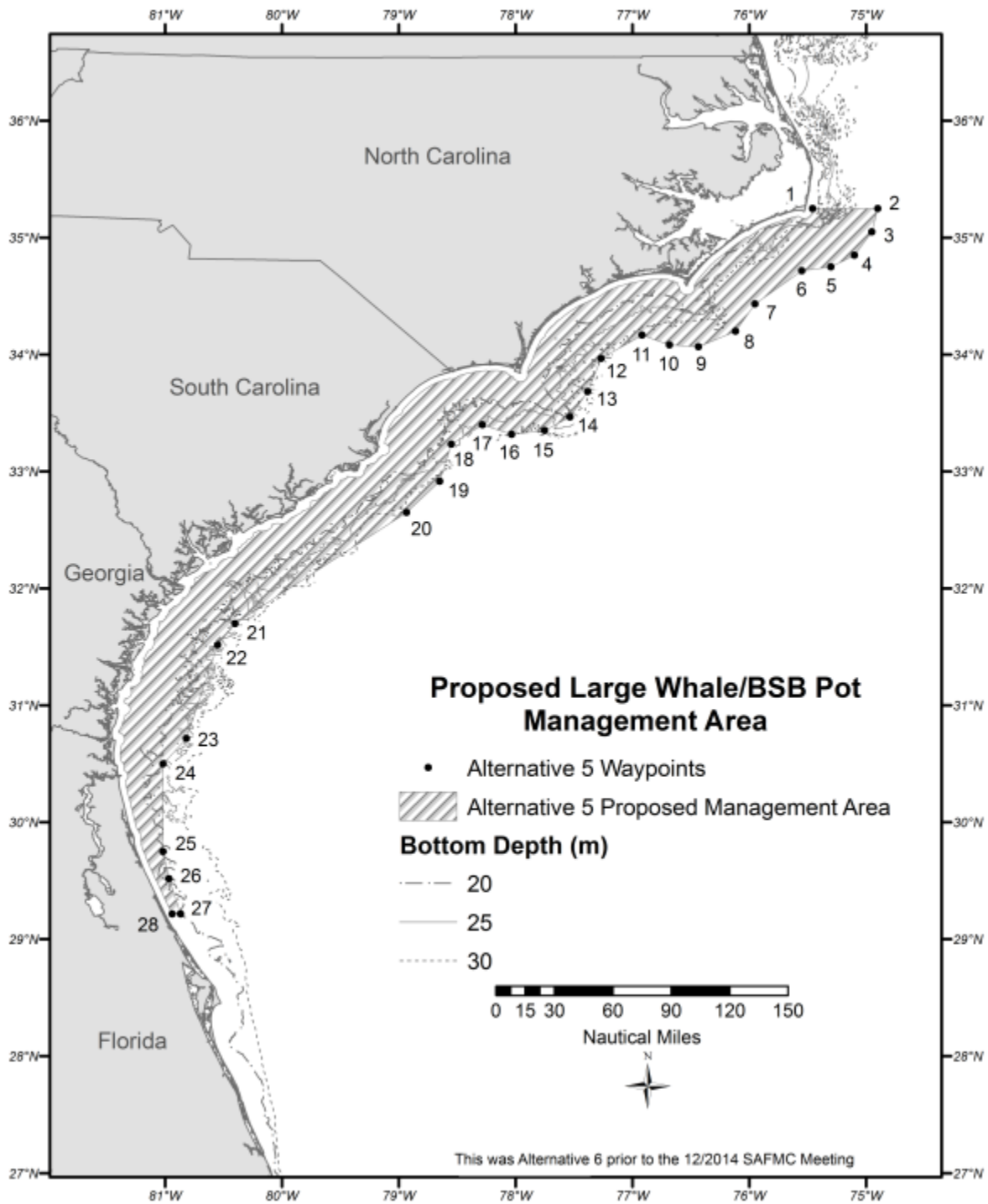


Figure 2.1.5. Area for the proposed black sea bass pot closure in **Alternative 5**.
 Source: Amanda Frick, NMFS SERO

Alternative 6. The black sea bass pot closure applies to waters inshore of points 1-20 listed in **Table 2.1.4**; approximately Sebastian, Florida, to Cape Hatteras, North Carolina (**Figure 2.1.6**). The closure applies to the area annually from November 1 through April 30.

This area is also based on joint comments received from a number of environmental groups (dated January 3, 2014) in response to NMFS’ December 4, 2013, *Federal Register* Notice of Intent to Prepare a DEIS (78 FR 72868). The environmental groups proposed the area as a reasonable alternative for consideration. This area represents an existing management area, the Southeast Seasonal Gillnet Restricted Area, under the Atlantic Large Whale Take Reduction Plan; and an additional area off North Carolina. The area off North Carolina includes waters shallower than 30 meters and is northward of the designated ALWTRP Southeast Restricted Area.

Note: Federal regulations for **Alternative 6** would only apply to that portion of the area within the South Atlantic EEZ. The states would be asked to implement compatible regulations within state waters.

Table 2.1.4. Eastern boundary coordinates for the proposed black sea bass pot closure in **Alternative 6**.

Point	N. Latitude	W. Longitude
1	35° 15'	State/EEZ Boundary
2	35° 15'	75° 08'
3	34° 58'	75° 41'
4	34° 49'	75° 50'
5	34° 47'	76° 05'
6	34° 31'	76° 18'
7	34° 20'	76° 13'
8	34° 12'	77° 00'
9	33° 43'	77° 30'
10	33° 21'	77° 21'
11	33° 18'	77° 41'
12	33° 22'	77° 56'
13	33° 19'	78° 06'
14	32° 58'	78° 39'
15	32° 39'	78° 59'
16	32° 37'	79° 14'
17	32° 22'	79° 22'
18	32° 00'	80° 00'
19	27° 51'	80° 00'
20	27° 51'	State/EEZ Boundary

Source: Amanda Frick, NMFS SERO

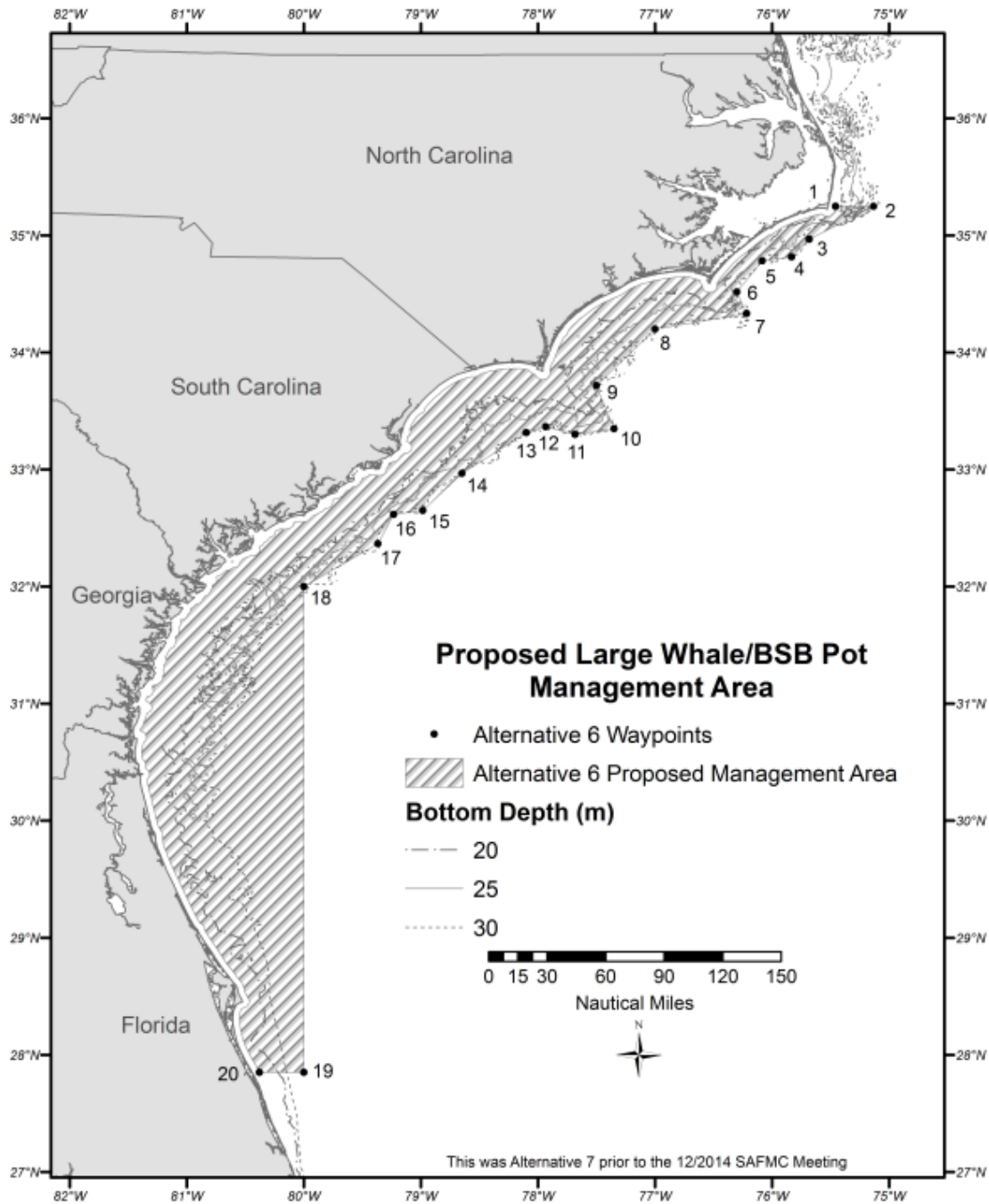


Figure 2.1.6. Area for the proposed black sea bass pot closure in **Alternative 6**.
Source: Amanda Frick, NMFS SERO

Alternative 7. The black sea bass pot closure applies to the area currently designated as North Atlantic right whale critical habitat, in addition to waters inshore of points 1-29 listed in **Table 2.1.5**; approximately North of the Altamaha River, Georgia, to Cape Hatteras, North Carolina (**Figure 2.1.7**).

Sub-alternative 7a. The black sea bass pot closure applies to the area annually from November 1 through December 15 and March 15 through April 30.

Sub-alternative 7b. For the area off North Carolina and South Carolina, the black sea bass pot closure applies annually from November 1 through December 15 and March 15 through April 30. For the area off Georgia and Florida, the black sea bass pot closure applies annually from November 15 through April 15.

Sub-alternative 7c. For the area off North Carolina and South Carolina, the black sea bass pot closure applies annually from February 15 through April 30. For the area off Georgia and Florida, the black sea bass pot closure applies annually from November 15 through April 15.

This area represents existing North Atlantic right whale critical habitat in the South Atlantic region designated on June 3, 1994. The following is language describing the North Atlantic right whale critical habitat area from 50 CFR § 226.203(c) as designated on January 26, 2016:

Southeastern United States: Includes marine waters from Cape Fear, North Carolina, southward to 28°N latitude (approximately 31 miles south of Cape Canaveral, Florida) within the area bounded on the west by the shoreline and the 72 COLREGS lines, and on the east by rhumb lines connecting the following points in the order stated from north to south.

Off North Carolina and South Carolina, the black sea bass pot closure applies in the exclusive economic zone in waters shallower than 25 m. The eastern boundary of the closure between these two areas was formed by drawing a straight line from the southeastern corner waypoint of the northern portion (North Carolina/South Carolina) to the northeastern corner waypoint of the southern section (Florida/Georgia).

The following is language describing the North Atlantic right whale critical habitat area from 50 CFR 226 (c):

Southeastern United States: The area designated as critical habitat in these waters encompasses waters between 31 deg.15'N (approximately located at the mouth of the Altamaha River, GA) and 30 deg.15'N (approximately Jacksonville, FL) from the shoreline out to 15 nautical miles offshore; and the waters between 30 deg.15'N and 28 deg.00'N (approximately Sebastian Inlet, FL) from the shoreline out to 5 nautical miles.

Note: Federal regulations for **Alternative 7** would only apply to that portion of the area within the South Atlantic EEZ. The states would be asked to implement compatible regulations within state waters.

Table 2.1.5. Eastern boundary coordinates for the proposed black sea bass pot closure in **Alternative 7.**

Point	N. Latitude	W Longitude	Point	N. Latitude	W Longitude
1	35° 15'	State/EEZ boundary	22	32° 56'	78° 57'
2	35° 15'	75° 09'	23	32° 44'	79° 04'
3	35° 06'	75° 22'	24	32° 42'	79° 13'
4	35° 06'	75° 39'	25	32° 34'	79° 23'
5	35° 01'	75° 47'	26	32° 25'	79° 25'
6	34° 54'	75° 46'	27	32° 23'	79° 37'
7	34° 52'	76° 04'	28	31° 53'	80° 09'
8	34° 33'	76° 22'	29	31° 15'	80° 59'
9	34° 23'	76° 18'	30	30° 56'	81° 05'
10	34° 21'	76° 27'	31	30° 42'	81° 07'
11	34° 25'	76° 51'	32	30° 15'	81° 05'
12	34° 09'	77° 19'	33	30° 15'	81° 17'
13	33° 44'	77° 38'	34	29° 40'	81° 07'
14	33° 25'	77° 27'	35	29° 08'	80° 51'
15	33° 22'	77° 40'	36	28° 36'	80° 28'
16	33° 28'	77° 41'	37	28° 26'	80° 25'
17	33° 32'	77° 53'	38	28° 20'	80° 31'
18	33° 22'	78° 26'	39	28° 11'	80° 30'
19	33° 06'	78° 31'	40	28° 00'	80° 25'
20	33° 05'	78° 40'	41	28° 00'	State/EEZ Boundary
21	33° 01'	78° 43'			

Source: Amanda Frick, NMFS SERO

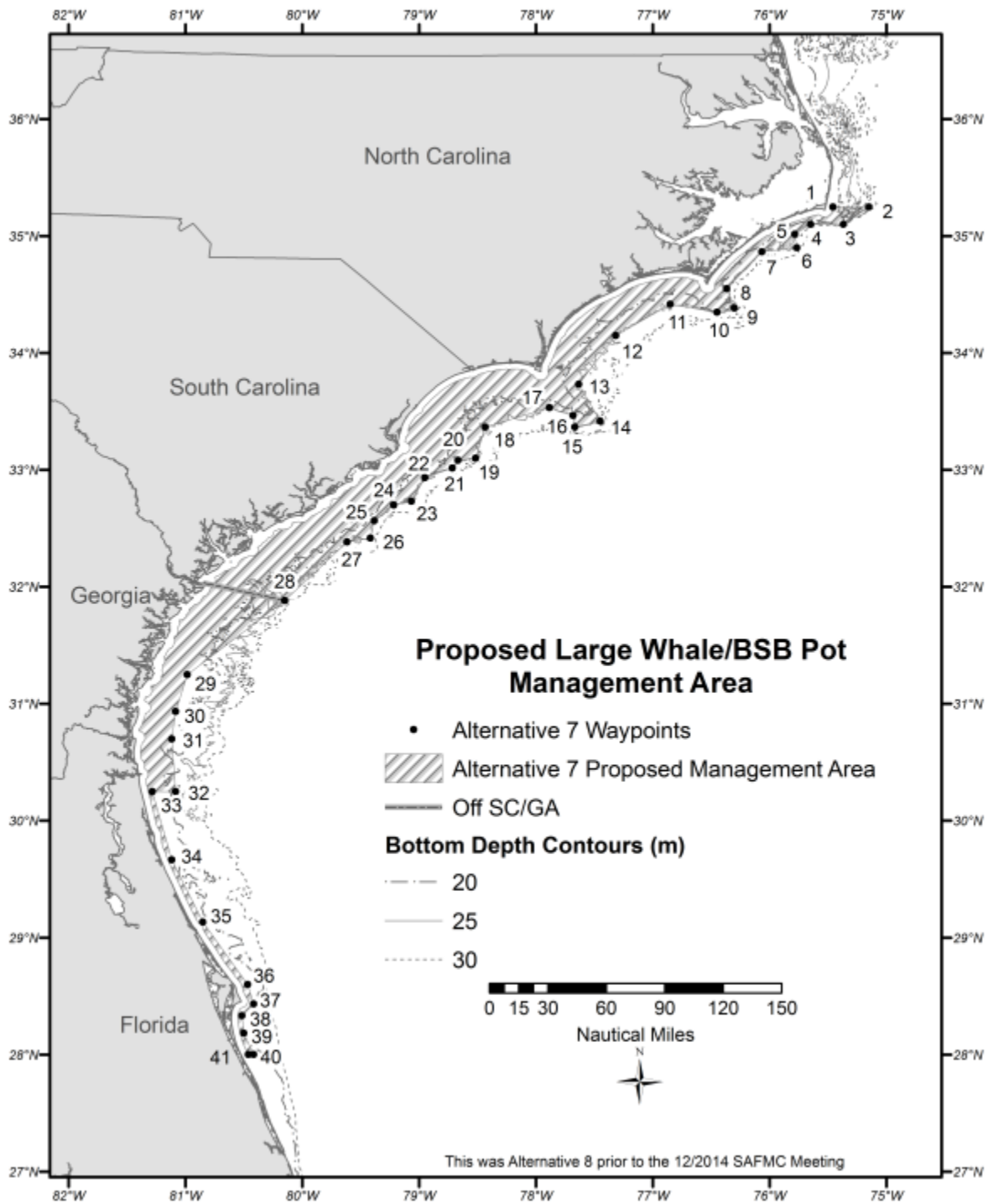


Figure 2.1.7. Area for the proposed black sea bass pot closure in **Alternative 7**.
Source: Amanda Frick, NMFS SERO

Alternative 8. The black sea bass pot closure applies to waters inshore of points 1-35 listed in **Table 2.1.6**; approximately Daytona Beach, Florida, to Cape Hatteras, North Carolina (**Figure 2.1.8**).

Sub-alternative 8a. The black sea bass pot closure applies to the area annually from November 1 through April 15.

Sub-alternative 8b. For the area off North Carolina and South Carolina, the black sea bass pot closure applies annually from November 1 through December 15 and February 15 through April 30. For the area off Georgia and Florida, the black sea bass pot closure applies annually from November 15 through April 15.

In **Alternative 8**, the boundaries off Florida and Georgia are nearly identical to the boundaries in **Alternative 5**. Off North Carolina and South Carolina, the black sea bass pot closure applies in the exclusive economic zone in waters shallower than 25 m.

Note: Federal regulations for **Alternative 8** would only apply to that portion of the area within the South Atlantic EEZ. The states would be asked to implement compatible regulations within state waters.

Table 2.1.6. Eastern boundary coordinates for the proposed black sea bass pot closure in **Alternative 8**.

Point	N. Latitude	W. Longitude	Point	N. Latitude	W. Longitude
1	35° 15'	State/EEZ Boundary	19	33° 06'	78° 31'
2	35° 15'	75° 09'	20	33° 05'	78° 40'
3	35° 06'	75° 22'	21	33° 01'	78° 43'
4	35° 06'	75° 39'	22	32° 56'	78° 57'
5	35° 01'	75° 47'	23	32° 44'	79° 04'
6	34° 54'	75° 46'	24	32° 42'	79° 13'
7	34° 52'	76° 04'	25	32° 34'	79° 23'
8	34° 33'	76° 22'	26	32° 25'	79° 25'
9	34° 23'	76° 18'	27	32° 23'	79° 37'
10	34° 21'	76° 27'	28	31° 53'	80° 09'
11	34° 25'	76° 51'	29	31° 31'	80° 33'
12	34° 09'	77° 19'	30	30° 43'	80° 49'
13	33° 44'	77° 38'	31	30° 30'	81° 01'
14	33° 25'	77° 27'	32	29° 45'	81° 01'
15	33° 22'	77° 40'	33	29° 31'	80° 58'
16	33° 28'	77° 41'	34	29° 13'	80° 52'
17	33° 32'	77° 53'	35	29° 13'	State/EEZ Boundary
18	33° 22'	78° 26'			

Source: Amanda Frick, NMFS SERO

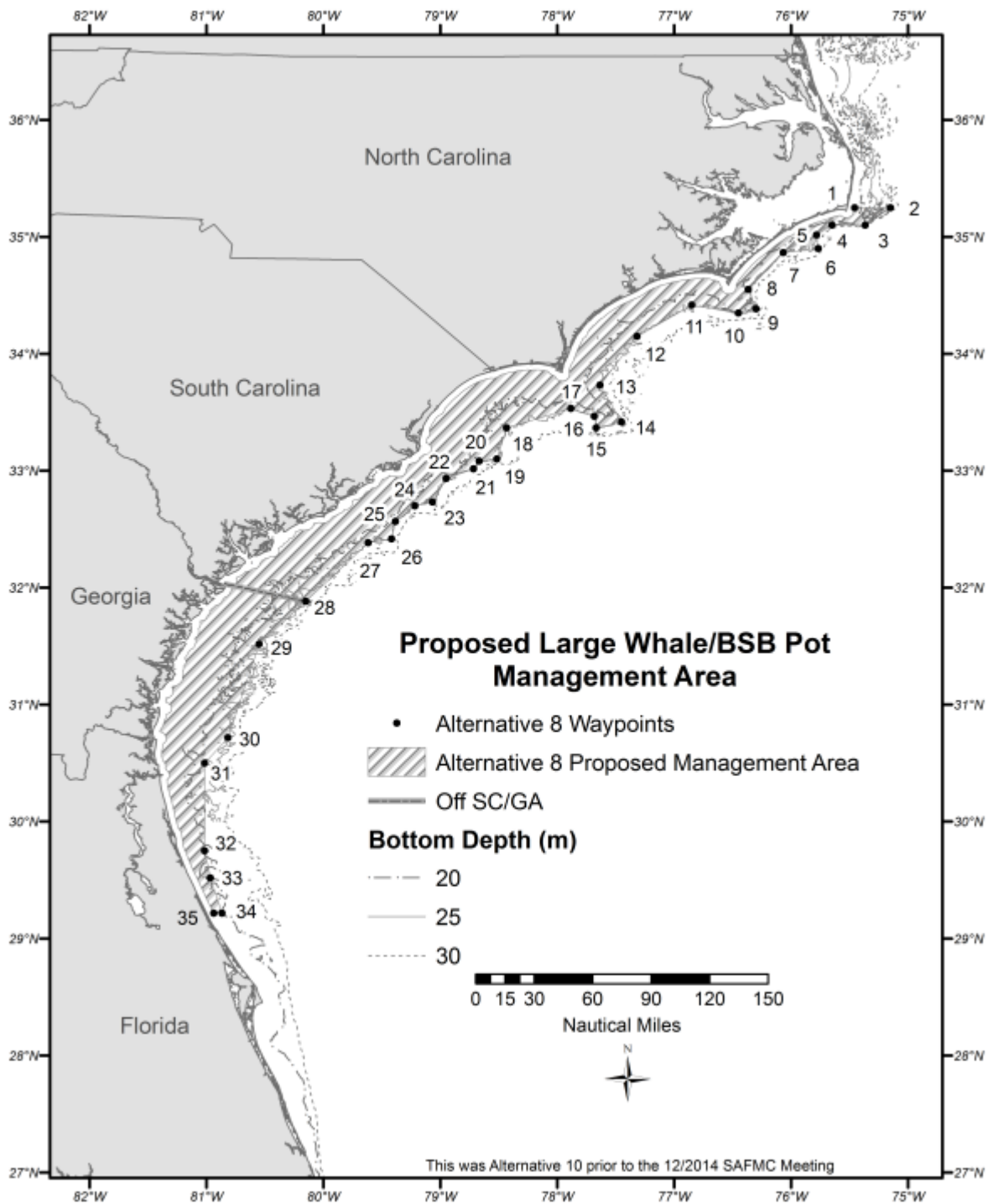


Figure 2.1.8. Area for the proposed black sea bass pot closure in **Alternative 8**.
Source: Amanda Frick, NMFS SERO

Alternative 9. The black sea bass pot closure applies to waters inshore of points 1-28 listed in **Table 2.1.7**; approximately Daytona Beach, Florida, to Cape Hatteras, North Carolina (**Figure 2.1.9**).

Sub-alternative 9a. The black sea bass pot closure applies to the area annually from November 1 through April 15.

Sub-alternative 9b. For the area off North Carolina and South Carolina, the black sea bass pot closure applies annually from November 1 through December 15 and February 15 through April 30. For the area off Georgia and Florida, the black sea bass pot closure applies annually from November 15 through April 15.

In **Alternative 9**, the boundaries off Florida and Georgia are nearly identical to the boundaries in **Alternative 5**. Off North Carolina and South Carolina, the black sea bass pot closure applies in the exclusive economic zone in waters shallower than 20 m.

Note: Federal regulations for **Alternative 9** would only apply to that portion of the area within the South Atlantic EEZ. The states would be asked to implement compatible regulations within state waters.

Table 2.1.7. Eastern boundary coordinates for the proposed black sea bass pot closure in **Alternative 9.**

Point	N. Latitude	W. Longitude
1	35° 15'	State/EEZ Boundary
2	35° 15'	75° 20'
3	35° 05'	75° 24'
4	35° 08'	75° 38'
5	35° 04'	75° 52'
6	34° 51'	76° 11'
7	34° 36'	76° 24'
8	34° 24'	76° 19'
9	34° 21'	76° 27'
10	34° 33'	76° 48'
11	34° 16'	77° 25'
12	33° 44'	77° 46'
13	33° 30'	77° 31'
14	33° 28'	77° 35'
15	33° 36'	77° 55'
16	33° 34'	78° 28'
17	32° 59'	78° 52'
18	32° 59'	79° 02'
19	32° 31'	79° 30'
20	31° 57'	80° 27'
21	31° 42'	80° 24'
22	31° 31'	80° 33'
23	30° 43'	80° 49'
24	30° 30'	81° 01'
25	29° 45'	81° 01'
26	29° 31'	80° 58'
27	29° 13'	80° 52'
28	29° 13'	State/EEZ Boundary

Source: Amanda Frick, NMFS SERO

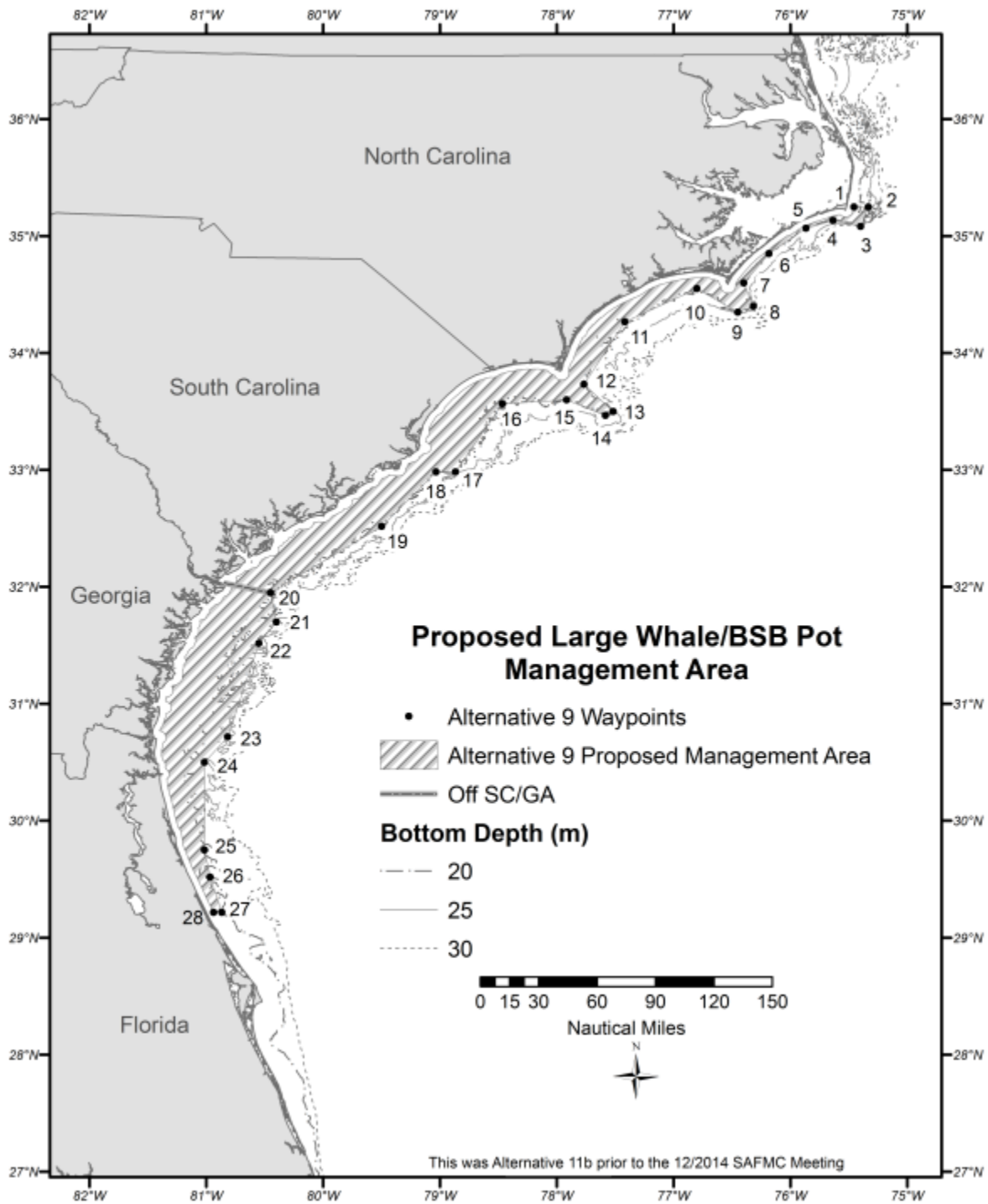


Figure 2.1.9. Area for the proposed black sea bass pot closure in **Alternative 9**.
 Source: Amanda Frick, NMFS SERO

Alternative 10. From November 1 through December 15, the black sea bass pot closure applies to waters inshore of points 1-20 listed in **Table 2.1.8**; approximately Georgia/South Carolina State Line, to Cape Hatteras, North Carolina (**Figure 2.1.10**).

From February 15 through April 30, the black sea bass pot closure applies to waters inshore of points 1-28 listed in **Table 2.1.9**; approximately Georgia/South Carolina State Line, to Cape Hatteras, North Carolina (**Figure 2.1.11**).

From December 16 through February 14, there would be no closure off of the Carolinas.

From November 15 through April 15, the black sea bass pot closure applies to waters inshore of points 20-28 listed in **Table 2.1.8**; approximately Georgia/South Carolina State Line, to approximately Daytona Beach, Florida (**Figure 2.1.10**).

In **Alternative 10**, the boundaries off Florida and Georgia are nearly identical to the boundaries in **Alternative 5**. Off North Carolina and South Carolina, the black sea bass pot closure applies in the exclusive economic zone in waters shallower than 20 m from November 1 through December 15 and 25 m from February 15 through April 30.

Note: Federal regulations for **Alternative 10** would only apply to that portion of the area within the South Atlantic EEZ. The states would be asked to implement compatible regulations within state waters.

Table 2.1.8. Eastern boundary coordinates for the proposed black sea bass pot closure in **Alternative 10** for November 1 through December 15 (points 1-20), and November 15 through April 15 (points 20-28).

Point	N. Latitude	W. Longitude	Point	N. Latitude	W. Longitude
1	35° 15'	State/EEZ Boundary	15	33° 36'	77° 55'
2	35° 15'	75° 20'	16	33° 34'	78° 28'
3	35° 05'	75° 24'	17	32° 59'	78° 52'
4	35° 08'	75° 38'	18	32° 59'	79° 02'
5	35° 04'	75° 52'	19	32° 31'	79° 30'
6	34° 51'	76° 11'	20	31° 57'	80° 27'
7	34° 36'	76° 24'	21	31° 42'	80° 24'
8	34° 24'	76° 19'	22	31° 31'	80° 33'
9	34° 21'	76° 27'	23	30° 43'	80° 49'
10	34° 33'	76° 48'	24	30° 30'	81° 01'
11	34° 16'	77° 25'	25	29° 45'	81° 01'
12	33° 44'	77° 46'	26	29° 31'	80° 58'
13	33° 30'	77° 31'	27	29° 13'	80° 52'
14	33° 28'	77° 35'	28	29° 13'	State/EEZ Boundary

Source: Amanda Frick, NMFS SERO

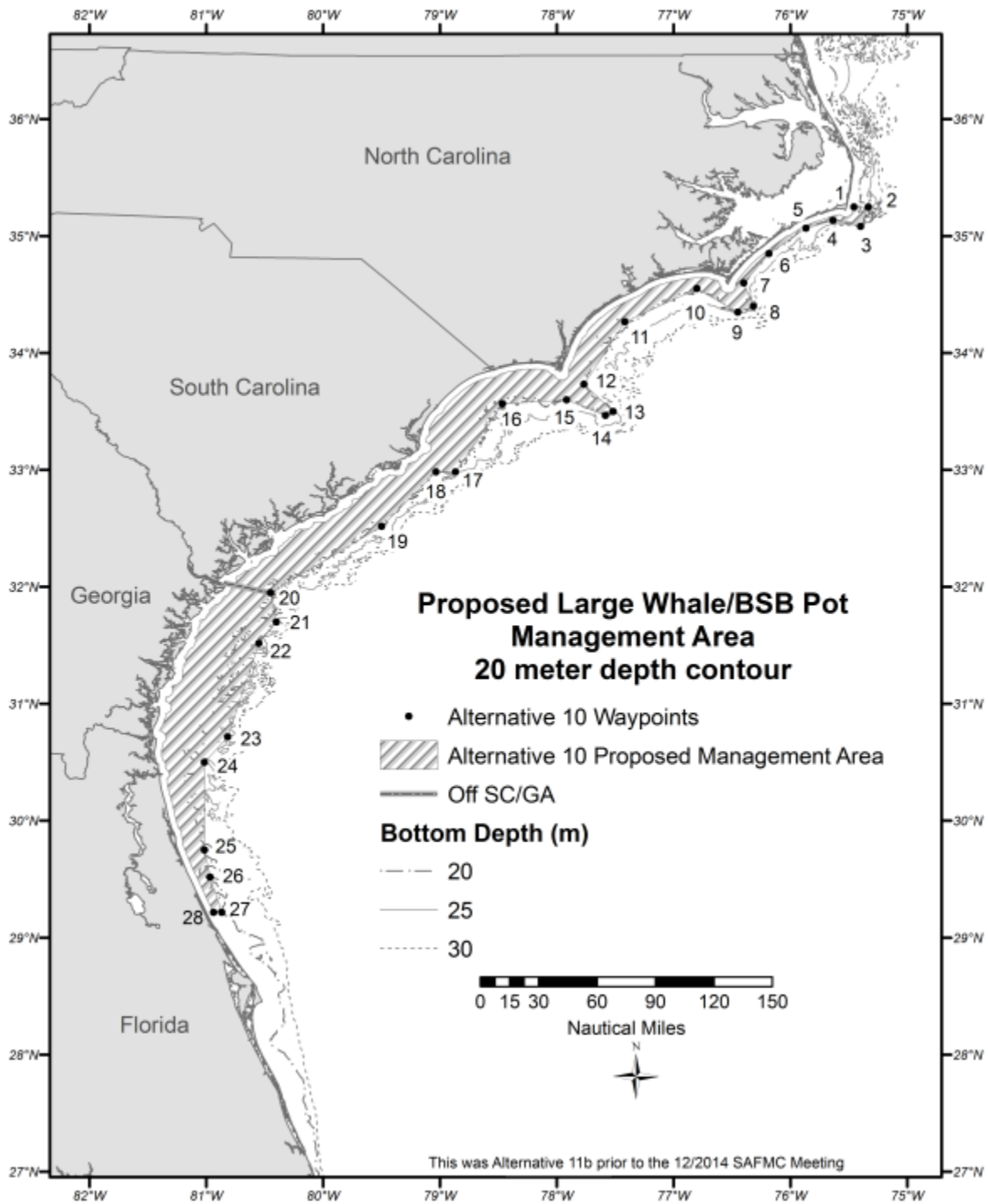


Figure 2.1.10. Area for the proposed black sea bass pot closure in **Alternative 10** from November 1 through December 15 (points 1-20), and November 15 through April 15 (points 20-28).
Source: Amanda Frick, NMFS SERO

Table 2.1.9. Eastern boundary coordinates for the proposed black sea bass pot closure in **Alternative 10** for February 15 through April 30.

Point	N. Latitude	W. Longitude	Point	N. Latitude	W. Longitude
1	35° 15'	State/EEZ Boundary	19	33° 06'	78° 31'
2	35° 15'	75° 09'	20	33° 05'	78° 40'
3	35° 06'	75° 22'	21	33° 01'	78° 43'
4	35° 06'	75° 39'	22	32° 56'	78° 57'
5	35° 01'	75° 47'	23	32° 44'	79° 04'
6	34° 54'	75° 46'	24	32° 42'	79° 13'
7	34° 52'	76° 04'	25	32° 34'	79° 23'
8	34° 33'	76° 22'	26	32° 25'	79° 25'
9	34° 23'	76° 18'	27	32° 23'	79° 37'
10	34° 21'	76° 27'	28	31° 53'	80° 09'
11	34° 25'	76° 51'	29	31° 31'	80° 33'
12	34° 09'	77° 19'	30	30° 43'	80° 49'
13	33° 44'	77° 38'	31	30° 30'	81° 01'
14	33° 25'	77° 27'	32	29° 45'	81° 01'
15	33° 22'	77° 40'	33	29° 31'	80° 58'
16	33° 28'	77° 41'	34	29° 13'	80° 52'
17	33° 32'	77° 53'	35	29° 13'	State/EEZ Boundary
18	33° 22'	78° 26'			

Source: Amanda Frick, NMFS SERO

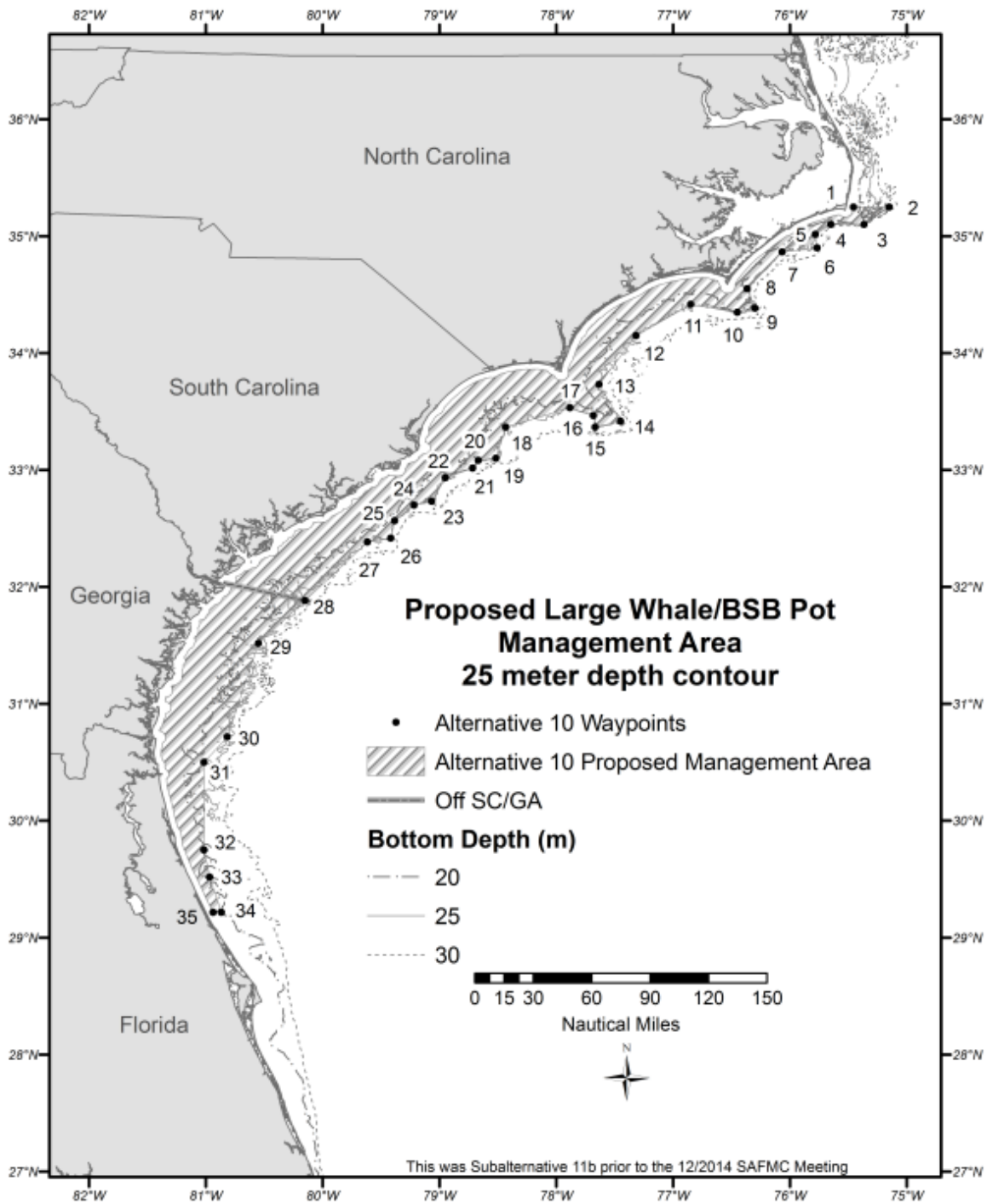


Figure 2.1.11. Area for the proposed black sea bass pot closure in **Alternative 10** from February 15 through April 30.

Source: Amanda Frick, NMFS SERO

Preferred Alternative 11. From November 1 through 30 and from April 1 through 30 each year, the black sea bass pot closure applies to waters inshore of points 1-35 listed in **Table 2.1.10**; approximately Daytona Beach, Florida, to Cape Hatteras, North Carolina (**Figure 2.1.12**). From December 1 through March 31, the black sea bass pot closure applies to waters inshore of points 1-28 listed in **Table 2.1.11**; approximately Cape Canaveral, Florida, to Cape Hatteras, North Carolina (**Figure 2.1.13**).

From November 1 through 30 and from April 1 through 30 each year, the boundaries off Florida and Georgia are nearly identical to the boundaries in **Alternative 5**. Off North Carolina and South Carolina, the black sea bass pot closure applies in the exclusive economic zone in waters shallower than 25 m, corresponding with **Alternative 8**.

From December 1 through March 31, this area generally represents waters 25 m or shallower from 28° 21' N (approximately Cape Canaveral, Florida) to Savannah, Georgia; from the Georgia/South Carolina border to Cape Hatteras, North Carolina, the closure applies to waters under Council management that are 30 m or shallower and corresponds with **Alternative 4**. This bathymetric area is based on right whale sightings (all demographic segments) and sightings per unit of effort (proxy of density) by depth and captures 97% and 96% of right whale sightings off the North Carolina/South Carolina area, and Florida/Georgia area, respectively.

Note: Federal regulations for **Preferred Alternative 11** would only apply to that portion of the area within the South Atlantic EEZ. The states would be asked to implement compatible regulations within state waters.

Table 2.1.10. Eastern boundary coordinates for the proposed black sea bass pot closure in **Preferred Alternative 11** from November 1 through November 30 and April 1 through April 30.

Point	N. Latitude	W. Longitude	Point	N. Latitude	W. Longitude
1	35° 15'	State/EEZ Boundary	19	33° 06'	78° 31'
2	35° 15'	75° 09'	20	33° 05'	78° 40'
3	35° 06'	75° 22'	21	33° 01'	78° 43'
4	35° 06'	75° 39'	22	32° 56'	78° 57'
5	35° 01'	75° 47'	23	32° 44'	79° 04'
6	34° 54'	75° 46'	24	32° 42'	79° 13'
7	34° 52'	76° 04'	25	32° 34'	79° 23'
8	34° 33'	76° 22'	26	32° 25'	79° 25'
9	34° 23'	76° 18'	27	32° 23'	79° 37'
10	34° 21'	76° 27'	28	31° 53'	80° 09'
11	34° 25'	76° 51'	29	31° 31'	80° 33'
12	34° 09'	77° 19'	30	30° 43'	80° 49'
13	33° 44'	77° 38'	31	30° 30'	81° 01'
14	33° 25'	77° 27'	32	29° 45'	81° 01'
15	33° 22'	77° 40'	33	29° 31'	80° 58'
16	33° 28'	77° 41'	34	29° 13'	80° 52'
17	33° 32'	77° 53'	35	29° 13'	State/EEZ Boundary
18	33° 22'	78° 26'			

Source: Amanda Frick, NMFS SERO

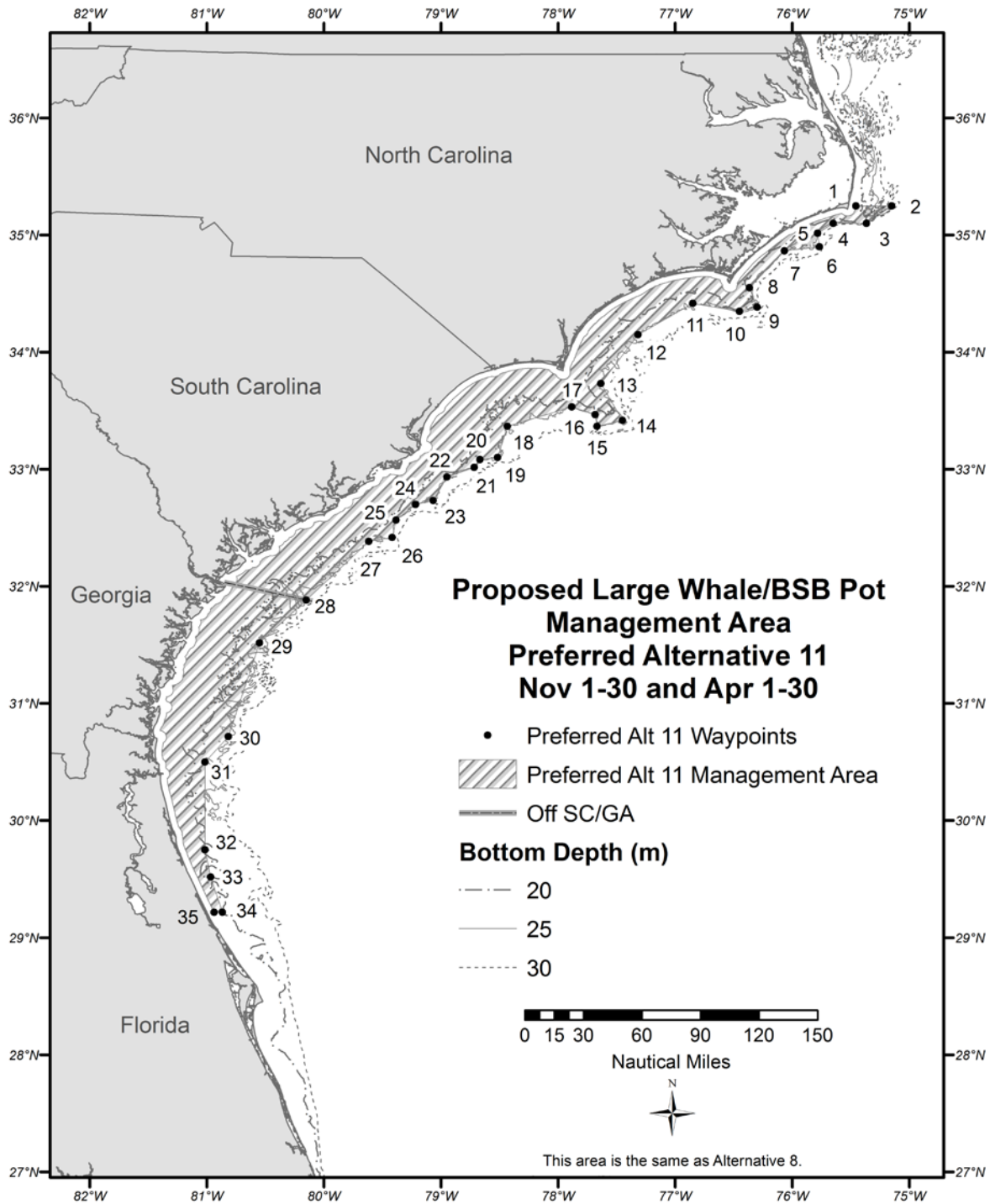


Figure 2.1.12. Area for the proposed black sea bass pot closure in **Preferred Alternative 11** from November 1 through November 30 and April 1 through April 30.
Source: Amanda Frick, NMFS SERO

Table 2.1.11. Eastern boundary coordinates for the proposed black sea bass pot closure in **Preferred Alternative 11** for December 1 through March 31.

Point	N. Latitude	W. Longitude	Point	N. Latitude	W. Longitude
1	35° 15'	State/EEZ boundary	15	33° 01'	78° 38'
2	35° 15'	75° 08'	16	32° 40'	79° 01'
3	34° 58'	75° 41'	17	32° 36'	79° 18'
4	34° 49'	75° 50'	18	32° 19'	79° 22'
5	34° 47'	76° 05'	19	32° 16'	79° 37'
6	34° 31'	76° 18'	20	32° 03'	79° 48'
7	34° 20'	76° 13'	21	31° 39'	80° 27'
8	34° 12'	77° 00'	22	30° 58'	80° 47'
9	33° 43'	77° 30'	23	30° 13'	81° 01'
10	33° 21'	77° 21'	24	29° 32'	80° 39'
11	33° 18'	77° 41'	25	29° 22'	80° 44'
12	33° 22'	77° 56'	26	28° 50'	80° 22'
13	33° 12'	78° 20'	27	28° 21'	80° 18'
14	33° 05'	78° 22'	28	28° 21'	State/EEZ boundary

Source: Amanda Frick, NMFS SERO

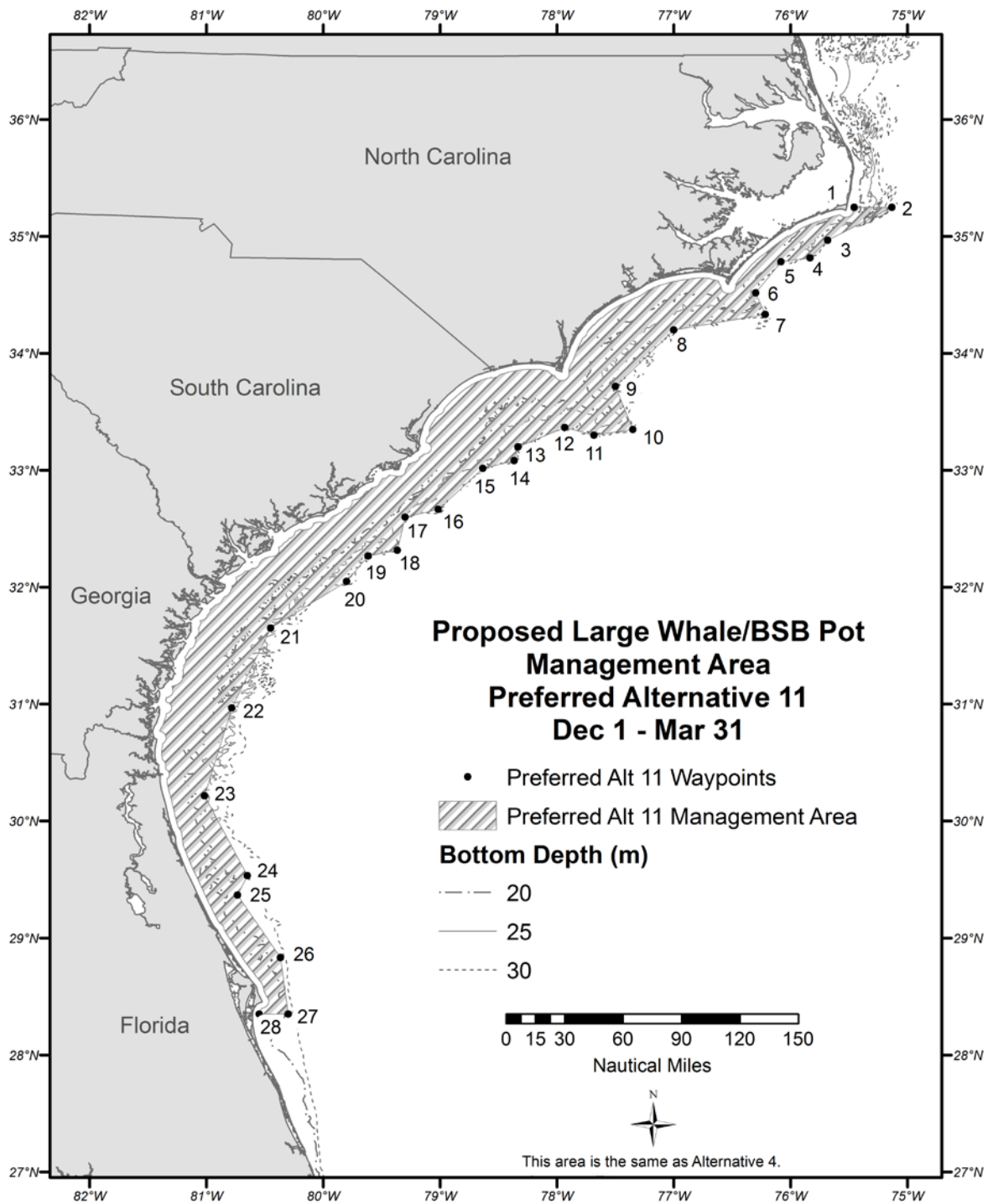


Figure 2.1.13. Area for the proposed black sea bass pot closure in **Preferred Alternative 11** from December 1 through March 31.
Source: Amanda Frick, NMFS SERO

Alternative 12. From November 1 through April 30, the black sea bass pot closure applies to waters inshore of points 1-31 listed in **Table 2.1.12**; approximately Cape Canaveral, Florida, to Cape Hatteras, North Carolina (**Figure 2.1.14**).

This closure approximates the midpoints between proposed closure **Alternative 4** and **Sub-Alternative 8a**.

Note: Federal regulations for **Alternative 12** would only apply to that portion of the area within the South Atlantic EEZ. The states would be asked to implement compatible regulations within state waters.

Table 2.1.12. Eastern boundary coordinates for the proposed black sea bass pot closure in **Alternative 12** for November 1 through April 30.

Point	N. Latitude	W. Longitude	Point	N. Latitude	W. Longitude
1	35° 15'	State/EEZ Boundary	17	33° 05'	78° 26'
2	35° 15'	75° 09'	18	33° 03'	78° 39'
3	35° 06'	75° 22'	19	32° 42'	79° 03'
4	35° 04'	75° 38'	20	32° 37'	79° 18'
5	35° 00'	75° 44'	21	32° 22'	79° 23'
6	34° 54'	75° 46'	22	32° 20'	79° 36'
7	34° 51'	75° 50'	23	31° 31'	80° 32'
8	34° 50'	76° 04'	24	30° 43'	80° 49'
9	34° 32'	76° 20'	25	30° 30'	80° 58'
10	34° 21'	76° 15'	26	30° 13'	81° 01'
11	34° 15'	77° 04'	27	29° 32'	80° 49'
12	33° 43'	77° 34'	28	29° 13'	80° 46'
13	33° 23'	77° 24'	29	28° 37'	80° 20'
14	33° 20'	77° 41'	30	28° 21'	80° 18'
15	33° 27'	77° 54'	31	28° 21'	State/EEZ Boundary
16	33° 17'	78° 22'			

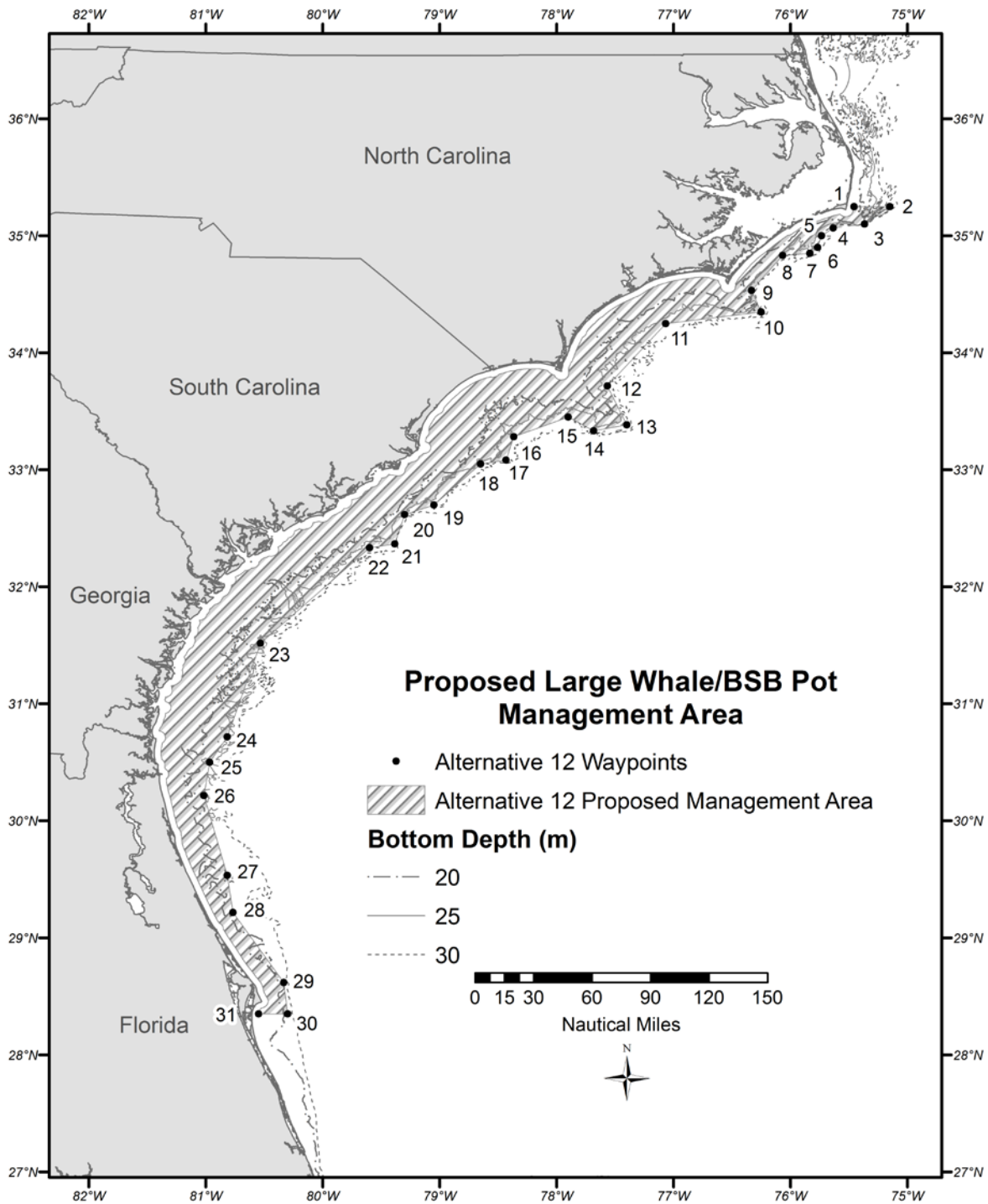


Figure 2.1.14. Area for the proposed black sea bass pot closure in **Alternative 12** from November 1 through April 30.

Source: Amanda Frick, NMFS SERO

2.1.2 Comparison of Alternatives

The attributes of the alternatives vary by alternatives (**Table 2.1.2.1**). The comparison of the effects of the alternatives are in **Chapter 4**.

Table 2.1.2.1. The attributes of the alternatives for **Action 1**.

	Alternative Attributes				Alternative Based On
	Area (mi ²) ¹	Time period	Approximate Depth Contour as Eastern Edge (m)		
			NC/SC	GA/FL	
Alternative 1 (No Action)	148,141	Nov. 1-April 30	Variable		Entire EEZ
Alternative 2	2263	Nov. 15-April 15	Variable		Current right whale critical habitat
Alternative 3	12,203	Nov. 1-April 30	Variable		Models of calving grounds and sea temp/bathymetry
Alternative 4	17,377	Nov. 1-April 30	30	25	97%/96% whale sightings
Alternative 5	17,848	Nov. 1-April 30	30	Variable	Models of calving grounds and 75 th percentile of sightings off FL & GA
Alternative 6	27,890	Nov. 1-April 30	30	Variable	Southeast seasonal gillnet restricted area and an additional area off NC
Sub-Alternative 7a	11,325	Nov. 1-Dec.15; March 15-April 30	25	Variable	Current right whale critical habitat; whale sightings
Sub-Alternative 7b	11,325	Nov. 1-Dec.15 (NC/SC); Nov. 15-April 15 (GA/FL)	25	Variable	
Sub-Alternative 7c	11,325	Feb. 15-April 30 (NC/SC); Nov. 15-April 15 (GA/FL)	25	Variable	
Sub-Alternative 8a	12,910	Nov. 1-April 15	25	Variable	75 th percentile of sightings off FL & GA
Sub-Alternative 8b	12,910	Nov. 1-Dec. 15/Feb. 15-April 30 (NC/SC); Nov. 15-April 15 (GA/FL)	25	Variable	
Alternative 9a	9,951	Nov. 1-April 15	20	Variable	75 th percentile of sightings off FL & GA
Alternative 9b	9,951	Nov. 1-Dec.15/Feb. 15-April 30 (NC & SC); Nov. 15-April 15 (GA & FL)	20	Variable	
Alternative 10	Varies	Nov. 1-Dec.15/Feb. 15-April 30 (NC & SC); Nov. 15-April 15 (GA & FL)	20 (first half) and 25 (second half)	Variable	75 th percentile of sightings off FL & GA
Alternative 11 (Preferred)	Varies	Nov. 1-Nov. 30 (1) Dec. 1-March 31 (2) April 1- April 30 (3)	25 (30m Dec-Mar)	Variable (1) 25 (2) Variable (3)	97%/96% whale sightings, models of calving grounds, and 75 th percentile of sightings off FL & GA
Alternative 12	15,648	Nov. 1-April 30	This closure approximates the midpoints between proposed closure Alternative 4 and Sub-alternative 8a		

¹Some alternatives extend south of the allowable black sea bass pot area and the area may be an overestimate.

Action 2. Enhance the existing Atlantic Large Whale Take Reduction Plan (ALWTRP) buoy line/weak link gear requirements and buoy line rope marking for black sea bass pots

2.2.1 Action 2 Alternatives

One or more actions beyond **Alternative 1 (No Action)** may be chosen.

Alternative 1 (No Action). Commercial black sea bass fishermen are required to abide by the pot configuration restrictions, pot escape mechanism requirements, and pot construction and escape mechanism requirements contained in 50 CFR § 622.189 (see discussion below). Additionally, commercial fishermen will continue to fish in compliance with existing buoy line and weak link gear requirements for black sea bass pots as required by the ALWTRP (50 CFR § 229.32).

Alternative 2. In addition to the requirements in 50 CFR § 622.189, enhance the current ALWTRP buoy line requirements from November 1 through April 30 in federal waters in the South Atlantic EEZ.

Sub-alternative 2a: The breaking strength must not exceed 2,200 lbs.

Sub-alternative 2b: The breaking line strength must not exceed 1,200 lbs.

Note: Fishermen could decide whether they would want to use the same buoy line from May 1 through October 31.

Alternative 3. In addition to the requirements in 50 CFR § 622.189, enhance the current ALWTRP weak link requirements. From November 1 to April 30, the breaking strength of the weak links must not exceed 400 pounds for black sea bass pots in the South Atlantic EEZ.

Note: Fishermen could decide whether they would want to use the same weak link strength from May 1 through October 31.

Preferred Alternative 4. In addition to the requirements in 50 CFR § 622.189, enhance the current ALWTRP gear marking requirements. In addition to the ALWTRP's rope marking requirements, include a feature to specifically distinguish the commercial South Atlantic black sea bass pot component of the snapper grouper fishery. Currently the ALWTRP requires three 12-inch color marks at the top, midway, and bottom sections of the buoy line specified for the individual management area in which the gear are deployed. This alternative will require an additional 12-inch wide purple band be added at the end of each required 12-inch colored mark. Each of the three marks would be a total of 24 inches in length. The additional gear marking requirements of this action are required in federal waters from November 15 through April 15 (Southeast Restricted Area North), September 1 through May 31 (Offshore Trap/Pot Area), and September 1 through May 31 (Southern Nearshore Trap/Pot Waters Area).

Action 2 Discussion

50 CFR § 622.189 Restrictions and requirements for sea bass pots.

(a) *Tending restriction.* A sea bass pot in the South Atlantic EEZ may be pulled or tended only by a person (other than an authorized officer) aboard the vessel permitted to fish such pot or aboard another vessel if such vessel has on board written consent of the owner or operator of the vessel so permitted.

(b) *Configuration restriction.* In the South Atlantic EEZ, sea bass pots may not be used or possessed in multiple configurations, that is, two or more pots may not be attached one to another so that their overall dimensions exceed those allowed for an individual sea bass pot. This does not preclude connecting individual pots to a line, such as a "trawl" or trot line.

(c) *Requirement for escape mechanisms.* (1) A sea bass pot that is used or possessed in the South Atlantic EEZ between 35°15.19' N. lat. (due east of Cape Hatteras Light, NC) and 28°35.1' N. lat. (due east of the NASA Vehicle Assembly Building, Cape Canaveral, FL) is required to have--

(i) On at least one side, excluding top and bottom, a panel or door with an opening equal to or larger than the interior end of the trap's throat (funnel). The hinges and fasteners of each panel or door must be made of one of the following degradable materials:

(A) Ungalvanized or uncoated iron wire with a diameter not exceeding 0.041 inches (1.0 mm), that is, 19 gauge wire.

(B) Galvanic timed-release mechanisms with a letter grade designation (degradability index) no higher than J.

(ii) An unobstructed escape vent opening on at least two opposite vertical sides, excluding top and bottom. The minimum dimensions of an escape vent opening (based on inside measurement) are:

(A) 1 1/8 by 5 3/4 inches (2.9 by 14.6 cm) for a rectangular vent.

(B) 1.75 by 1.75 inches (4.5 by 4.5 cm) for a square vent.

(C) 2.0-inch (5.1-cm) diameter for a round vent.

(2) [Reserved]

(d) *Construction requirements and mesh sizes.* (1) A sea bass pot used or possessed in the South Atlantic EEZ must have mesh sizes as follows (based on centerline measurements between opposite, parallel wires or netting strands):

(i) For sides of the pot other than the back panel:

(A) Hexagonal mesh (chicken wire)--at least 1.5 inches (3.8 cm) between the wrapped sides;

(B) Square mesh--at least 1.5 inches (3.8 cm) between sides; or

(C) Rectangular mesh--at least 1 inch (2.5 cm) between the longer sides and 2 inches (5.1 cm) between the shorter sides.

(ii) For the entire back panel, *i.e.*, the side of the pot opposite the side that contains the pot entrance, mesh that is at least 2 inches (5.1 cm) between sides.

(2) [Reserved]

(e) *Requirements for pot removal.* (1) A sea bass pot must be removed from the water in the South Atlantic EEZ and the vessel must be returned to a dock, berth, beach, seawall, or ramp at the conclusion of each trip. Sea bass pots may remain on the vessel at the conclusion of each trip.

(2) A sea bass pot must be removed from the water in the South Atlantic EEZ when the applicable quota specified in § 622.190(a)(5) is reached. After a closure is in effect, a black sea bass may not be retained by a vessel that has a sea bass pot on board.

(f) *Restriction on number of pots.* A vessel that has on board a valid Federal commercial permit for South Atlantic snapper-grouper and a South Atlantic black sea bass pot endorsement that fishes in the South Atlantic EEZ on a trip with black sea bass pots, may possess only 35 black sea bass pots per vessel per permit year. Each black sea bass pot in the water or onboard a vessel in the South Atlantic EEZ, must have a valid identification tag attached. Endorsement holders must apply for new tags each permit year through NMFS to replace tags from the previous year.

2.2.2 Comparison of Alternatives

The attributes of the alternatives vary by alternatives (**Table 2.2.2.1**). The comparison of the effects of the alternatives are in **Chapter 4**.

Table 2.2.2.1. The attributes of the alternatives for **Action 2.**

	Alternative Attributes		
	Buoy line breaking strength	Weak link breaking strength	Buoy line rope marking
Alternative 1 (No Action)		From November 15 through April 15, in specified areas, weak link strength must not exceed 200 and 400 pounds off Florida and South Carolina/Georgia, respectively	Three 12-inch color marks at the top, midway, and bottom sections of the buoy line specified for the individual management area in which the gear are deployed
Sub-Alternative 2a	In addition to the requirements under Alternative 1 (no action) , the buoy line breaking strength must not exceed 2,200 pounds from November 1 through April 30 in federal waters in the South Atlantic EEZ.	n/a	n/a
Sub-Alternative 2b	In addition to the requirements under Alternative 1 (no action) , the buoy line breaking strength must not exceed 1,200 pounds from November 1 through April 30 in federal waters in the South Atlantic EEZ.	n/a	n/a
Alternative 3	n/a	In addition to the requirements under Alternative 1 (no action) , from November 1 to April 30, the breaking strength of the weak links must not exceed 400 pounds for black sea bass pots in the South Atlantic EEZ	n/a
Alternative 4 (Preferred)	n/a	n/a	In addition to the requirements under Alternative 1 (no action) , require an additional 12-inch wide purple band be added at the end of each required 12-inch colored mark. The additional gear marking requirements of this action are required in federal waters from November 15 through April 15 (Southeast Restricted Area North), September 1 through May 31 (Offshore Trap/Pot Area), and September 1 through May 31 (Southern Nearshore Trap/Pot Waters Area).

Chapter 3. **Affected Environment**

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

Affected Environment

- **Habitat environment (Section 3.1)**

Examples include coral reefs and sea grass beds

- **Biological and ecological environment (Section 3.2)**

Examples include populations of red snapper, corals, turtles

- **Human environment (Section 3.3)**

Examples include fishing communities and economic descriptions of the fisheries

- **Administrative environment (Section 3.4)**

Examples include the fishery management process and enforcement activities

3.1 Habitat Environment

3.1.1 Inshore/Estuarine Habitat

Many snapper grouper species utilize both pelagic and benthic habitats during several stages of their life histories; larval stages of these species live in the water column and feed on plankton. Most juveniles and adults are demersal (bottom dwellers) and associate with hard structures on the continental shelf that have moderate to high relief (e.g., coral reef systems and artificial reef structures, rocky hard-bottom substrates, ledges and caves, sloping soft-bottom areas, and limestone outcroppings). Juvenile stages of some snapper grouper species also utilize inshore seagrass beds, mangrove estuaries, lagoons, oyster reefs, and embayment systems. In many species, various combinations of these habitats may be utilized during daytime feeding migrations or seasonal shifts in cross-shelf distributions. Additional information on the habitat utilized by species in the Snapper Grouper Complex is included in Volume II of the Fishery Ecosystem Plan (FEP, SAFMC 2009b) and incorporated here by reference. The FEP can be found at: <http://www.safmc.net/ecosystem/Home/EcosystemHome/tabid/435/Default.aspx>.

3.1.2 Offshore Habitat

Predominant snapper grouper offshore fishing areas are located in live bottom and shelf-edge habitats where water temperatures range from 11° to 27° C (52° to 81° F) due to the proximity of the Gulf Stream, with lower shelf habitat temperatures varying from 11° to 14° C (52° to 57° F). Water depths range from 16 to 27 meters (54 to 90 ft) or greater for live-bottom habitats, 55 to 110 meters (180 to 360 ft) for the shelf-edge habitat, and from 110 to 183 meters (360 to 600 ft) for lower-shelf habitat areas.

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

Rock outcroppings occur throughout the continental shelf from Cape Hatteras, North Carolina to Key West, Florida (MacIntyre and Milliman 1970; Miller and Richards 1979; Parker et al. 1983), which are principally composed of limestone and carbonate sandstone (Newton et al. 1971), and exhibit vertical relief ranging from less than 0.5 to over 10 meters (33 ft). Ledge systems formed by rock outcrops and piles of irregularly sized boulders are also common. Parker et al. (1983) estimated that 24% (9,443 km²) of the area between the 27 and 101-meter (89 and 331 ft) depth contours from Cape Hatteras, North Carolina, to Cape Canaveral, Florida, is reef habitat. Although the bottom communities found in water depths between 100 and 300 meters (328 and 984 ft) from Cape Hatteras, North Carolina, to Key West, Florida, is relatively small compared to the whole shelf, this area, based upon landing information of fishers, constitutes prime reef fish habitat and probably significantly contributes to the total amount of reef habitat in this region.

Artificial reef structures are also utilized to attract fish and increase fish harvests; however, research on artificial reefs is limited and opinions differ as to whether or not these structures promote an increase of ecological biomass or merely concentrate fishes by attracting them from nearby, natural un-vegetated areas of little or no relief.

The distribution of coral and live hard bottom habitat as presented in the Southeast Area Monitoring, Assessment, and Prediction Program (SEAMAP) bottom mapping project is a proxy for the distribution of the species within the snapper grouper complex. The method used to determine hard bottom habitat relied on the identification of reef obligate species including members of the snapper grouper complex. The Florida Fish and Wildlife Research Institute

(FWRI), using the best available information on the distribution of hard bottom habitat in the South Atlantic region, prepared ArcView maps for the four-state project. These maps, which consolidate known distribution of coral, hard/live bottom, and artificial reefs as hard bottom, are available on the South Atlantic Council's online map services provided by the newly developed SAFMC Habitat and Ecosystem Atlas: http://ocean.floridamarine.org/safmc_atlas/. An introduction to the system is found at: <http://www.safmc.net/EcosystemManagement/EcosystemBoundaries/MappingandGISData/tabid/632/Default.aspx>.

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

3.1.3 Essential Fish Habitat

Essential fish habitat (EFH) is defined in the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) as “those waters and substrates necessary to fish for spawning, breeding, feeding, or growth to maturity” (16 U.S. C. 1802(10)). Specific categories of EFH identified in the South Atlantic Bight, which are utilized by federally managed fish and invertebrate species, include both estuarine/inshore and marine/offshore areas. Specifically, estuarine/inshore EFH includes: Estuarine emergent and mangrove wetlands, submerged aquatic vegetation, oyster reefs and shell banks, intertidal flats, palustrine emergent and forested systems, aquatic beds, and estuarine water column. Additionally, marine/offshore EFH includes: live/hard bottom habitats, coral and coral reefs, artificial and manmade reefs, *Sargassum* species, and marine water column.

EFH utilized by snapper grouper species in this region includes coral reefs, live/hard bottom, submerged aquatic vegetation, artificial reefs and medium to high profile outcroppings on and around the shelf break zone from shore to at least 183 meters [600 ft (but to at least 2,000 ft for wreckfish)] where the annual water temperature range is sufficiently warm to maintain adult populations of members of this largely tropical fish complex. EFH includes the spawning area in the water column above the adult habitat and the additional pelagic environment, including *Sargassum*, required for survival of larvae and growth up to and including settlement. In addition, the Gulf Stream is also EFH because it provides a mechanism to disperse snapper grouper larvae.

For specific life stages of estuarine-dependent and near shore snapper grouper species, EFH includes areas inshore of the 30 meter (100-ft) contour, such as attached macroalgae; submerged rooted vascular plants (seagrasses); estuarine emergent vegetated wetlands (saltmarshes, brackish

marsh); tidal creeks; estuarine scrub/shrub (mangrove fringe); oyster reefs and shell banks; unconsolidated bottom (soft sediments); artificial reefs; and coral reefs and live/hard bottom habitats.

3.1.4 Habitat Areas of Particular Concern

Areas which meet the criteria for Essential Fish Habitat-Habitat Areas of Particular Concern (EFH-HAPCs) for species in the snapper grouper management unit include medium to high profile offshore hard bottoms where spawning normally occurs; localities of known or likely periodic spawning aggregations; near shore hard bottom areas; The Point, The Ten Fathom Ledge, and Big Rock (North Carolina); The Charleston Bump (South Carolina); mangrove habitat; seagrass habitat; oyster/shell habitat; all coastal inlets; all state-designated nursery habitats of particular importance to snapper grouper (e.g., Primary and Secondary Nursery Areas designated in North Carolina); pelagic and benthic *Sargassum*; Hoyt Hills for wreckfish; the Oculina Bank Habitat Area of Particular Concern; all hermatypic coral habitats and reefs; manganese outcroppings on the Blake Plateau; and South Atlantic Council-designated Artificial Reef Special Management Zones (SMZs).

Areas that meet the criteria for EFH-HAPCs include habitats required during each life stage (including egg, larval, postlarval, juvenile, and adult stages).

In addition to protecting habitat from fishing related degradation through fishery management plan regulations, the South Atlantic Council, in cooperation with National Marine Fisheries Service (NMFS), actively comments on non-fishing projects or policies that may impact essential fish habitat. With guidance from the Habitat Advisory Panel, the South Atlantic Council has developed and approved policies on: energy exploration, development, transportation and hydropower re-licensing; beach dredging and filling and large-scale coastal engineering; protection and enhancement of submerged aquatic vegetation; alterations to riverine, estuarine and near shore flows; offshore aquaculture; and marine invasive species and estuarine invasive species.

3.2 Biological and Ecological Environment

3.2.1 Fish Stocks

3.2.1.1 Black Sea Bass, *Centropristis striata*

Life History

Black sea bass, *Centropristis striata*, occur in the Western Atlantic, from Maine to northeastern Florida, and in the eastern Gulf of Mexico. The species can be found in extreme south Florida during cold winters (Robins and Ray 1986). Separate populations were reported to exist to the north and south of Cape Hatteras, North Carolina (Wenner et al. 1986; McCartney and Burton 2011). However, genetic similarities suggest that this is one stock (McGovern et al. 2002). This species is common around rock jetties and on rocky bottoms in shallow water (Robins and Ray 1986) at depths from 2-120 m (7-394 ft). Most adults occur at depths from 20-60 m (66-197 ft) (Vaughan et al. 1995).

Maximum reported size is 66.0 cm (26.1 in) TL and 3.6 kg (7.9 lbs) (McGovern et al. 2002). The minimum size and age of maturity for females studied off the southeastern U.S. coast is 10 cm (3.6 in) SL and age 0. All females are mature by 18 cm (7.1 in) SL and age 3 (McGovern et al. 2002). Wenner et al. (1986) reported that spawning occurs from March through May in the South Atlantic Bight. McGovern et al. (2002) indicated that black sea bass females are in spawning condition during March-July, with a peak during March through May. Some spawning also occurs during September and November. Spawning takes place in the evening (McGovern et al. 2002). Black sea bass change sex from female to male (protogyny). McGovern et al. (2002) noted that the size at maturity and the size at transition of black sea bass was smaller in the 1990s than during the early 1980s. Black sea bass appear to compensate for the loss of larger males by changing sex at smaller sizes and younger ages.

In the eastern Gulf of Mexico and off North Carolina, females dominate the first 5-year classes. Individuals over the age of 5 are more commonly males. Black sea bass live for at least 10 years. The diet of this species is generally composed of shrimp, crab, and fish (Sedberry 1988). Sedberry (1988) indicated that black sea bass consume primarily amphipods, decapods, and fishes off the Southeastern United States. Smaller black sea bass ate more small crustaceans and larger individuals fed more on decapods and fishes.

Descriptions of other South Atlantic Council-managed species may be found in Volume II of the Fishery Ecosystem Plan (SAFMC 2009b) or at the following web address: <http://www.safmc.net/ecosystem/Home/EcosystemHome/tabid/435/Default.aspx>.

Biomass and Landings

The following description of the biomass of black sea bass is from the SEDAR 25 Update report: In general, estimated abundance at age showed truncation of the older ages through the mid-1990s, and more stable or increasing values since. Total estimated abundance at the end of the assessment period showed some general increase from a low in 2000. In the most recent decade, a notably strong year class (age-0 fish) was predicted to have occurred in 2001 and 2010, and better than expected recruitment (i.e., positive residuals) from 2006 to 2011. Estimated biomass at age followed a similar pattern as abundance at age. Total biomass and spawning biomass showed similar trends – general decline from early 1980s until the mid-1990s, a relatively stable period from 1993-2006, and a steadily increasing since 2007 (**Figure 3.2.1**).

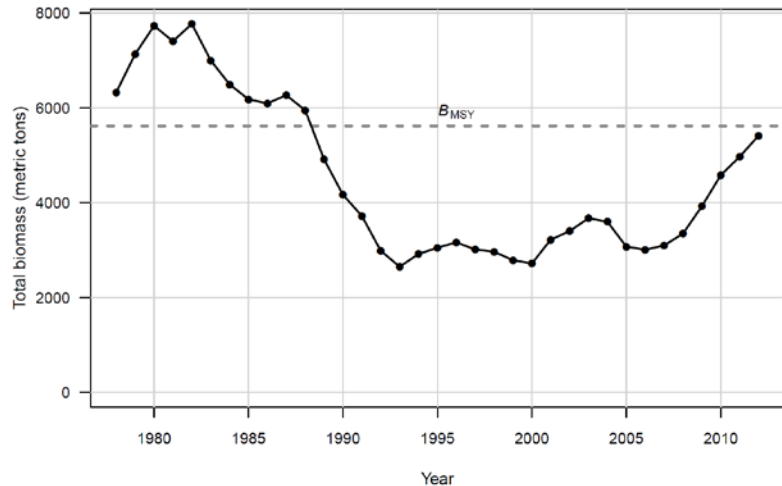


Figure 3.2.1. Estimated total biomass (metric tons) at start of year
Source: SEDAR 25 Update 2013)

Prior to the recent increase in commercial ACL for black sea bass, the commercial ACL was exceeded every year but one (2007-2008) (**Table 3.2.1**).

Table 3.2.1. Commercial landings in relation to the commercial ACL.

Fishing Year	Fishing Season	Total Landings	ACL/Quota	Units	Quota %	Closure Date
2014	June 1 - Dec 31	212,435	780,020	ww	27.23	
2013-2014	June 1 - May 31	776,723	780,020	ww	99.58	
2012-2013	July* 1 - May 31	383,292	309,000	gw	124.04	10/08/2012
2011-2012	June 1 - May 31	385,639	309,000	gw	124.80	7/15/2011
2010-2011		436,360	309,000	gw	144.22	10/7/2010
2009-2010		336,735	309,000	gw	108.98	12/20/2009
2008-2009		394,708	309,000	gw	127.74	5/15/2009
2007-2008		298,917	423,000	gw	70.67	

*The black sea bass fishing season opening was pushed back to July 1 for the 2012-2013 fishing season.

Bycatch

See **Section 4.1.1** and the **Bycatch Practicability Analysis (Appendix F)** for detail descriptions of bycatch when fishing for black sea bass.

Stock Status

An update to the black sea bass assessment was conducted in 2013 with data through 2012. Most of the data sources were simply updated with the 2 additional years of observations available since SEDAR 25 (2011) benchmark assessment that contained data through 2010. Additional changes made in some sources, such as recreational catch records, indices, and discards are detailed below. In addition, some datasets were unable to be updated due to management actions, regulations, and data availability issues.

Substantial changes are underway in recreational harvest surveys with implementation of the Marine Recreational Information Program (MRIP) in place of the prior Marine Recreational Fisheries Statistics Survey (MRFSS). Although the MRIP program promises improved data for the future, assessments must also consider the past and will continue to include the earlier data from the MRFSS program. However, these historical landings were calibrated to MRIP landings based on the years where overlapping data exists. At the time this update was prepared, recreational landings based upon MRIP methods were only available for 2004-2011.

General recreational landings, general recreational discards, headboat landings, and headboat discards from 2012 were not available by the data deadline for the 2013 update. In order to continue with the assessment, these data gaps were filled by taking the geometric mean of the landings and discards data for the previous 3 years (2009-2011). In addition, changes in the recreational and commercial fishing regulations, coupled with the early closure of both sectors of the fishery in 2011 and 2012, made the use of the fishery dependent indices of abundance questionable. These regulations include a decrease in the recreational bag limit from 15 fish to 5 fish, and a new commercial trip limit of 1,000 lb gutted weight. Due to the new regulations and closures, catch per unit effort (CPUE) from either fishery may not coincide with abundance, but instead may be driven by the regulatory changes and closures. For example, a higher percentage of anglers reached the lower bag limit, at which point they were expected to stop keeping black sea bass even though more fish were available to them. Since the regulation forces anglers to stop retaining fish even if fish are available, the CPUE from this segment of the fishery will be lower than it otherwise would. When this happens, CPUE becomes unreliable as a measure of population abundance and could lead to biased estimate of abundance in the assessment results. Therefore, it was decided not to update the headboat index of abundance and the commercial handline index of abundance with the most recent years of data. The headboat at-sea observer program discard index was updated through 2011, however 2012 data were not available for this assessment.

The MARMAP/SEFIS chevron trap index of abundance used in the model is standardized, meaning that the catch per unit effort (CPUE) is adjusted through a statistical model to account

for factors, other than changes in the population, which may affect the observed CPUE. Examples of such factors that are commonly addressed include yearly variation, environmental factors, depth, and sampling characteristics. While this approach improves the information obtained from the index, estimates of the parameters included in the standardization model change each time additional years of data are added, therefore changing the CPUE index for the entire time series. This index was also standardized in the SEDAR 25 (2011) benchmark assessment.

Uncertainty in the model was characterized using a technique called a “mixed Monte Carlo Bootstrap” (MCB) which enables estimates of model uncertainty to better reflect the true underlying uncertainty in model estimates. For the SEDAR 25 Update (2013), the MCB runs were modified to account for using the geometric mean in estimating landings and discards in the recreational sector. The recreational landings and discards were varied for 2012 by choosing new values for each data point from a truncated normal distribution with a mean equal to the geometric mean of the previous 3 years and a standard deviation that was obtained by examining each time series to investigate how well the geometric mean of the previous 3 years estimates the current year’s value. This resulted in widening the confidence intervals around the estimate of spawning stock biomass (SSB) in the terminal year.

The SEDAR 25 Update (2013) concluded that black sea bass are not overfished and overfishing is not occurring. The stock is very close to B_{MSY} ($B_{2012}/B_{MSY}=0.96$) and the SSB in 2012 is just above SSB_{MSY} ($SSB_{2012}/SSB_{MSY}=1.032$, **Table 3.2.2.1**). SSB in 2012 was estimated to be above SSB_{MSY} , indicating that the stock is rebuilt. Spawning stock biomass decreased significantly from the beginning of the assessment period, dropping below SSB_{MSY} in 1989, until finally stabilizing and remaining at a low level from 1994-2007. The SSB has been increasing consistently since 2008, crossing SSB_{MSY} in the terminal year of the assessment. Current fishing mortality (F) is well below F_{MSY} ($F_{Current}/F_{MSY}=0.659$, **Table 3.2.2.1**). The trend in F shows a rapid increase from the late-1970s until 1988, when it surpassed F_{MSY} by a significant amount. F remained above F_{MSY} , with large inter-annual variability, until it dropped below F_{MSY} in 2011.

There were several concerns addressed by the assessment scientists, all related to the final estimate of SSB. The MCB runs indicate a high level of uncertainty around the terminal estimate of SSB. Approximately 32% of the MCB runs indicate that the stock is still below SSB_{MSY} . Some of the increased uncertainty in these terminal year estimates concerns the use of a geometric mean of past landings and discards in the recreational sector to estimate the 2012 landings and discards. The other concern involves the estimates of recruitment in the model. The increasing trend in biomass is dependent on the estimate of a strong year class in 2010. The conclusion that the stock is rebuilt is also critically dependent on the estimate of this 2010 year class. However, there is a high level of uncertainty surrounding this estimate of R in 2010. The issue is that the fish do not appear in the age samples until age 2 and the estimates of the composition of age 2 fish from this year class do not agree well with respect to the strength of this year class. In addition, R has declined in the last 2 years of the assessment and shows a cyclical pattern throughout the time series. The pattern shows a good year class followed by several smaller year classes. If we did have a strong year class in 2010, there may not be another

one for several years or more. Although a 2010 strong year class was identified, more recent data than 2010 were used in the analysis

Table 3.2.2.1. Benchmarks and status parameters estimated in the 2013 update to SEDAR 25 for black sea bass.

M is the average Lorenzen natural mortality, F_{Current} is the geometric mean of F_{2011} and F_{2012} , F_{MSY} is the fishing mortality that produces MSY, SSB_{2012} is the estimated spawning stock biomass in 2012, SSB_{MSY} is the SSB when the stock is at MSY equilibrium, MSST is the minimum stock size threshold, B_{MSY} is the stock biomass when the stock is at MSY equilibrium, R_{MSY} is the expected number of age-0 fish when the stock is at MSY equilibrium, D_{MSY} is the expected dead discards when the stock is at MSY equilibrium, and MSY is the maximum sustainable yield. Data are from the 2013 assessment update report for black sea bass.

Quantity	Units	Estimate
M	per year	0.38
F_{current}	per year	0.402
F_{MSY}	per year	0.61
SSB_{2012}	1E10 eggs	265
SSB_{MSY}	1E10 eggs	256
MSST	1E10 eggs	159
B_{MSY}	1,000 lb	12,383
R_{MSY}	1,000 age-0 fish	35,843
D_{MSY}	1,000 fish	288
MSY	1,000 lb	1,780
$SSB_{2012}/SSB_{\text{MSY}}$	-	1.032
$SSB_{2012}/MSST$	-	1.66
$F_{\text{current}}/F_{\text{MSY}}$	-	0.659

3.2.3 Protected Species

There are 49 species, or distinct population segments (DPSs) of species, protected by federal law that may occur in the exclusive economic zone (EEZ) of the South Atlantic Region (Wynne and Schwartz 1999; Waring et al. 2013). Thirty-one of these species are marine mammals protected under the Marine Mammal Protection Act (MMPA). The MMPA requires that each commercial fishery be classified by the number of marine mammals they seriously injure or kill. NMFS's List of Fisheries (LOF) classifies U.S. commercial fisheries with analogous gear types into three categories based on the number of incidental mortality or serious injury they cause to marine mammals. More information about the LOF and the classification process can be found at: <http://www.nmfs.noaa.gov/pr/interactions/lof/>. Six of the marine mammal species (sperm, sei, fin, blue, humpback, and North Atlantic right whales) protected by the MMPA, are also listed as endangered under the Endangered Species Act (ESA). In addition to those six marine mammals, five species of sea turtles (green, hawksbill, Kemp's ridley, leatherback, and loggerhead); the smalltooth sawfish; five DPSs of Atlantic sturgeon; and seven species of coral (elkhorn coral [*Acropora palmata*], staghorn coral [*A. cervicornis*] ("*Acropora*" collectively); lobed star coral [*Orbicella annularis*], mountainous star coral [*O. faveolata*], and boulder star coral [*O. franksi*] ("*Orbicella*" collectively); pillar coral [*Dendrogyra cylindrus*] and rough cactus coral [*Mycetophyllia ferox*]) are also protected under the ESA. Portions of designated critical habitat for North Atlantic right whales, the Northwest Atlantic (NWA) DPS of loggerhead sea turtles, and *Acropora* corals occur within the South Atlantic Council's jurisdiction. NMFS has conducted specific analyses ("Section 7 consultations") to evaluate the potential adverse effects from the South Atlantic Snapper Grouper Fishery on species and critical habitat protected under the ESA. Because of Regulatory Amendment 16's emphasis on large whale interactions with black sea bass pot gear, we have provided additional information on ESA and MMPA listings histories and threats on North Atlantic right and humpback whales in **Appendix M**.

Large Whales

North Atlantic Right Whales

North Atlantic right whales generally have a stocky body, black coloration (although some have white patches on their bellies), no dorsal fin, a large head (about 1/4 of the body length), strongly bowed lower lip, and callosities (raised patches of roughened skin) on their head. Two rows of long (up to 8 ft) dark baleen plates hang from their upper jaw, with about 225 plates on each side. Their tail is broad, deeply notched, and all black with a smooth trailing edge. Right whale life expectancy is unclear, but one individual is known to have reached 65+ years of age (Hamilton et al. 1998, Kenney 2002). Adult North Atlantic right whales are generally between 13 and 16 m long and can weigh up to 71 metric tons. Females are larger than males.

Range

There are six known major habitats or aggregation areas for the North Atlantic right whales: the coastal waters of the southeastern United States; the Great South Channel; Georges

Bank/Gulf of Maine; Cape Cod and Massachusetts Bays; the Bay of Fundy; and the Scotian Shelf. North Atlantic right whales follow a general annual pattern of migration between low latitude winter calving grounds and high latitude summer foraging grounds (Perry et al. 1999, Kenney 2002). However, movements within and between habitats are extensive. In 2000, one whale was photographed in Florida waters on January 12, then again eleven days later (January 23) in Cape Cod Bay, less than a month later off Georgia (February 16), and back in Cape Cod Bay on March 23; effectively making the round-trip migration to the Southeast and back at least twice during the winter season (Brown and Marx 2000). Results from satellite tags clearly indicate that sightings separated by perhaps two weeks should not necessarily be assumed to indicate a stationary or resident animal. Instead, telemetry data have shown rather lengthy and somewhat distant excursions, including into deep water off the continental shelf (Mate et al. 1997, Baumgartner and Mate 2005).

The coastal waters of the southeastern United States are the only known calving area for right whales. Right whales generally occur off South and North Carolina from November 1 through April 30 (NMFS 2008) and have been sighted as far as about 30 nautical miles offshore (Knowlton et al. 2002, Pabst et al. 2009). Sighting records of right whales spotted in the core calving area off Georgia and Florida consist of mostly mother-calf pairs and juveniles but also some adult males and females without calves (Jackson et al 2012a). As many as 243 right whales have been documented in the southeastern United States during a single calving season (P. Hamilton, personal communication, April 11, 2014). Studies indicate that right whale concentrations are highest in the core calving area from November 15 through April 15 (NMFS 2008); on rare occasions, right whales have been spotted as early as September and as late as July (Taylor et al. 2010). Most calves are likely born early in the calving season. Right whale distribution off Georgia and Florida is restricted by the warm waters of the Gulf Stream, which serves as a thermal barrier (Keller et al. 2006).

Water temperature, bathymetry, and surface chop are factors in the distribution of calving right whales in the southeastern United States (Keller et al. 2012, Good 2008). Additional factors that are considered significant predictors of right whale abundance in the Southeast United States include year, distance to shore, and distance to the 22°C sea surface temperature isotherm (Gowan and Ortega-Ortiz 2014). Gowan and Ortega-Ortiz (2014) also identified right whale behavior, unrelated to any specific physical or environmental feature, as a factor for predicting abundance. Systematic surveys conducted off the coast of North Carolina during the winters of 2001 and 2002 sighted eight calves, suggesting the calving grounds may extend as far north as Cape Fear. Four of the calves were not sighted by surveys conducted further south. One of the females photographed was new to researchers, having effectively eluded identification over the period of its maturation (McLellan et al. 2004).

Abundance and Population Dynamics

Analysis of data on the minimum number of whales alive during 1990–2009 (based on 2011 analysis) indicate an increase in the number of catalogued whales during the period, a mean growth rate of 2.6%, but with high inter-annual variation in numbers (Waring et al. 2012). These population trends are low compared to those for populations of other large whales that are

recovering, such as South Atlantic right whales and taxonomically similar western Arctic bowhead whales, which have had growth rates of 4% to 7% or more per year for decades. An analysis of the age structure of North Atlantic right whales suggests that it contains a smaller proportion of juvenile whales than expected (Hamilton et al. 1998; Best et al. 2001), which may reflect lowered recruitment and/or high juvenile mortality.

Because of the North Atlantic Right Whale's low reproductive output and small population size, even low levels of human-caused mortality can pose a significant obstacle for their recovery. Population modeling studies in the late 1990s (Caswell et al. 1999; Fujiwara and Caswell, 2001) indicated that preventing the death of two adult females per year could be sufficient to reverse the slow decline detected in right whale population trends in the 1990s.

Potential Biological Removal (PBR) Level is defined by the MMPA as the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its maximum productivity (16 U.S.C. 1362(3)(9)). The PBR is calculated using the following factors—

- the minimum population estimate of the stock;
- one-half the maximum theoretical or estimated net productivity rate of the stock at a small population size; and
- a recovery factor for endangered, depleted, threatened stocks of between 0.1 and 1.0 (MMPA Sec. 3. 16 U.S.C. 1362) (Wade and Angliss 1997).

The recovery factor for right whales is 0.10 because this species is listed as endangered under the ESA. The minimum population size is 455 and the maximum net productivity is 0.04; thus, PBR for the North Atlantic right whale is 0.9 (Waring et al. 2013). This means that if more than a single (because 1.0 is > 0.9) right whale is killed or seriously injured from non-natural causes in a single year, than the population cannot achieve its optimum sustainable population.

Threats

North Atlantic right whales were severely depleted by commercial whaling. By the early 1900s, the remaining population off North America was reduced to no more than a few hundred whales. Despite protection from commercial whaling since 1935, the remaining population has not recovered. Given the small population size and low annual reproductive rate of North Atlantic right whales, human sources of mortality, particularly vessel collision and fishing gear entanglements (Clapham et al. 1999; Knowlton and Kraus 2001; Moore et al. 2004; NMFS 2005) may have a greater effect to relative population growth rate than for other large whale species (Waring et al. 2013). NMFS has identified a number of additional threats to the species that are indirectly related to this action. Other threats to right whales may include decreased reproductive rate, reduced genetic diversity, environmental contamination, biotoxins, nutritional stress, interspecific competition, and climate change. **Appendix M** provides a discussion of these potential threats.

The primary causes of the right whale's failure to recover are deaths resulting from collisions with ships and entanglement in commercial fishing gear (Clapham et al. 1999; Knowlton and Kraus 2001; Moore et al. 2004; NMFS 2005). Right whales may not die immediately as the result of a vessel strike or entanglement but may gradually weaken or otherwise be affected so that further injury or death is likely (Waring et al. 2013). Collisions or entanglements may result in systemic infection or debilitation from tissue damage. Additionally, any injury or entanglement that: restricts a right whale from rotating its jaw while feeding; prevents it from forming a hydrostatic oral seal; compromises the integrity of its baleen; or prevents it from swimming at speeds necessary to capture prey; will reduce its foraging capabilities and may lead to starvation (Cassof et al. 2011, van der Hoop et al. 2012).

An average of approximately 2 *known* vessel collision-related right whale deaths have occurred annually over the last decade (Henry et al. 2012 Waring et al. 2012) and an average of 1.2 known vessel-strike related fatalities occurred in the period 2006–2010 (Waring et al. 2012). NMFS believes the actual number of deaths is likely higher than those documented, as some deaths likely go undetected or unreported, and in many cases when deaths are observed it is not possible to determine the cause of death from recovered carcasses due, for example, to advanced decomposition.

Similarly, entanglement in fixed fishing gear (e.g., trap, pot and gillnet gear) is another leading cause of right whale mortality (NMFS 2005, Knowlton et al. 2012). Entanglement mortality and its effects on the right whale population are likely underestimated because some entanglements are undocumented or unreported and it is likely that carcasses from offshore are not detected or recovered (Cole et al. 2005). From 2006 through 2010, 9 of 15 records of mortality or serious injury involved entanglement or fishery interactions (Waring et al. 2012). Entanglement records from 1990 through 2010 (NMFS, unpublished data) included 74 confirmed right whale entanglements, including right whales in weirs, gillnets, and trailing line and buoys. Knowlton et al. (2005) examined 447 individual animals for evidence of scars left by fishing gear. Of the 447 whales examined, 338 of the whales (75.6%) had been entangled at least once and 608 separate entanglement interactions were documented between 1980 and 2002 (Knowlton et al. 2005). Further research using the North Atlantic Right Whale Catalogue has indicated that, annually, between 14% and 51% of right whales are involved in entanglements (Knowlton et al. 2005). Over time, there has been an increasing trend in entanglement rates, including an increase in the proportion of serious entanglements (Knowlton et al. 2005).

Information from an entanglement event often does not include the detail necessary to assign the entanglements to a particular fishery or location. Johnson et al. (2005) analyzed entanglements of 31 right whales and found that all types of fixed fishing gear and any part of the gear was involved in entanglements. When gear type was identified, pot gear and gillnet gear represented 71% and 14% of entanglements, respectively. The authors pointed out that buoy lines were involved in 51% of entanglements and suggested that entanglement risk is elevated by any line that rises in the water column. Mouth entanglements for right whales were the most common point of entanglement (77.4%) and were particularly deadly; 55.6% of right whales seen with mouth entanglements died (Johnson et al. 2005). Mouth entanglements likely occur when a whale's mouth is open giving rise to speculation that entanglements occur when whales

are feeding (Johnson et al. 2005). Occasionally, right whales with open mouths are observed in the southeastern U.S. calving area (Jackson et al. 2012b, Jackson et al. 2011). In a recent compilation of data from 2007-2014, there were 17 entangled whales and none of these were attributed to a specific fishery (Waring et al. 2014). As evidenced by these compilations, information from an entanglement event often does not include the detail necessary to assign the entanglements to a particular fishery or location, and scarring studies suggest the vast majority of entanglements are not observed (Waring et al. 2014).

Calves and juveniles become entangled more frequently than adults and are more likely to suffer deep wounds (> 8cm) from entanglement. Knowlton et al. (2011) studied ropes that were removed from entangled right whales (dead and alive) and suggested that a whale's ability to break free of entangling gear is related to its age. Breaking strength of rope also influences a whale's ability to break free of entangling gear. Adults appear to be able to break free of ropes with a breaking strength of less than 3,300 lbs, but calves and juveniles cannot and are more prone to drowning (Knowlton et al. 2011, Cassof et al. 2011). Right whale calves would likely need a line breaking strength of 600 lbs or lighter in order to have some chance of breaking free (Knowlton et al. 2015)

Gear trailing behind a right whale creates substantial drag and may inhibit foraging (van der Hoop et al. 2013). Entanglements may also reduce a whale's ability to maneuver, making it more susceptible to ship strikes (NMFS 2006).

Humpback Whales

Humpback whales are known for their long pectoral fins, which can be up to 15 feet long. These long fins give them increased maneuverability; they can be used to slow down or even go backwards. Similar to all baleen whales, adult females are larger than adult males, reaching lengths of up to 60 feet. Their body coloration is primarily dark grey, but individuals have a variable amount of white on their pectoral fins and belly. This variation is so distinctive that the pigmentation pattern on the undersides of their "flukes" is used to identify individual whales, similar to a human fingerprint.

Range

Like right whales, humpback whales follow a general annual pattern of migration between low latitude winter calving grounds (in the West Indies) and high latitude summer foraging grounds. Humpback whales feed during spring, summer, and fall in the Gulf of Maine, the Gulf of St. Lawrence, Newfoundland/Labrador, and western Greenland. In the Gulf of Maine, sightings are most frequent from mid-March through November between 41°N and 43°N, from the Great South Channel north along the outside of Cape Cod to Stellwagen Bank and Jeffreys Ledge, and peak in May and August (CETAP, 1982). Small numbers of individuals may be present in New England waters year-round, including the waters of Stellwagen Bank (Clapham et al, 1993). In winter, humpback whales calve primarily in the West Indies, specifically in the Antilles, primarily on Silver and Navidad Banks, north of the Dominican Republic (Clapham et

al. 1993; Katona and Beard, 1990; Palsboll et al. 1997; Stevick et al. 1998). The primary winter range also includes the Virgin Islands and Puerto Rico.

Humpback whales are assumed to use the Mid-Atlantic as a migratory pathway to and from the calving/mating grounds. The Mid-Atlantic may also be an important winter feeding area for juveniles. Since 1989, observations of juvenile humpbacks in the Mid-Atlantic have been increasing during the winter months, peaking from January through March (Swingle et al. 1993). Biologists theorize that non-reproductive animals may be establishing a winter feeding range in the Mid-Atlantic since they are not participating in reproductive behavior in the Caribbean (Barco et al. 2002). Swingle et al. (1993) identified a shift in distribution of juvenile humpback whales in the nearshore waters of Virginia, primarily in winter months. Identified whales using the Mid-Atlantic area were found to be residents of the Gulf of Maine and Atlantic Canada (Gulf of St. Lawrence and Newfoundland) feeding groups, suggesting a mixing of different feeding populations in the Mid-Atlantic region (Barco et al. 2002). Strandings of humpback whales have increased between New Jersey and Florida since 1985, consistent with the increase in Mid-Atlantic whale sightings. Strandings were most frequent from September through April in North Carolina and Virginia waters, and involved primarily juvenile humpback whales of no more than 35 feet long (Wiley et al. 1995).

Life History and Reproductive Success

It is generally believed that copulation and calving take place on the winter range in the Greater and Lesser Antilles. The gestation period in humpback whales is 12 months and females give birth every 2 to 3 years, usually between December and May (Clapham and Mayo 1987).

Abundance and Population Dynamics

Modeling using data obtained from photographic mark-recapture studies estimates the growth rate of the Gulf of Maine feeding population at 6.5% (Barlow and Clapham 1997). More recent studies have found lower growth rates of 0.0 percent to 4.0 percent, although these results may be a product of shifts in humpback distribution (Clapham et al. 2003). Current data suggest that the Gulf of Maine humpback whale stock is steadily increasing in size (Waring et al. 2012). With respect to the North Atlantic population overall, there are indications of increasing abundance. One study estimated a growth rate of 3.1 percent for the period from 1979 to 1993 (Stevick et al. 2001).

Potential Biological Removal for the Gulf of Maine humpback whale stock is 2.7 whales per year. As noted, PBR is the product of minimum population size, one-half the maximum productivity rate, and a “recovery” factor (MMPA Sec. 3. 16 U.S.C. 1362) (Wade and Angliss 1997). The minimum population size for the Gulf of Maine stock is 823 whales. The maximum productivity rate is 0.065. The “recovery” factor is assumed to be 0.10 because the humpback whale is listed as endangered under the ESA.

Threats

As with right whales, the major known sources of human-caused mortality and injury of humpback whales are commercial fishing gear entanglements and ship strikes. Sixty percent of closely investigated Mid-Atlantic humpback whale mortalities showed signs of entanglement or vessel collision (Wiley et al. 1995). From 2008 through 2012, there were at least 7 reports of mortalities as a result of collision with a vessel and 41 serious injuries and mortalities attributed to entanglement (80 FR 4881; January 29, 2015). Many carcasses also washed ashore or were spotted floating at sea for which the cause of death could not be determined. Robbins (2009) found that 64.9% of the North Atlantic population had entanglement scarring, which corresponds to approximately 66 entanglement cases per year. These estimates are based on sightings of free-swimming animals that initially survive the encounter. Some whales may drown immediately, others may be too decomposed for analysis, and some may never be examined. For these reasons, it is likely the actual number of interactions with fishing gear is higher than recorded (Waring et al. 2006).

Johnson et al. (2005) noted that any part of the gear (buoy line, groundline, floatline, and surface system line) creates a risk for entanglement. Johnson et al. (2005) also reported that of the 30 humpback whale entanglements examined in the study, 16 (53%) involved entanglements in the tail region and 13 (43%) involved entanglements in the mouth (note that in both cases, some entanglements included other points of gear attachment on the body). Although the sample size was small for cases in which the point of gear attachment and the associated gear part could be examined, 2 out of 2 floating groundline entanglements and 4 out of 7 (57%) buoy line entanglements involved the mouth.¹ In addition, 5 out of 7 (71%) buoy line entanglements and 3 out of 4 (75%) gillnet floatline entanglements involved the tail (Johnson et al. 2005).²

Based on studies of humpback whale caudal peduncle scars, Robbins and Mattila (2000) reported that calves (approximately 0-1 year) had a lower entanglement risk than yearlings (1 year old), juveniles, and mature whales; the latter 3 maturational classes exhibited comparable levels of high probability scarring. Based on these data as well as evidence that animals acquire new injuries when mature, the authors concluded that actively feeding whales may be at greater risk of entanglement. In any case, juveniles seemed to be at the most risk, possibly due to their relative inexperience.

Humpback whales employ a variety of foraging techniques, which may create entanglement risk (Hain et al. 1982, Weinrich et al. 1992). They feed on a number of species of small schooling fishes and krill (Wynne and Schwartz 1999), by targeting fish schools and filtering large amounts of water for their associated prey. One such technique is lunge feeding, in which the whale swims toward a patch of krill or small fish, then lunges into the patch with its mouth agape. The flippers may aid in concentrating the prey or in maneuvering. Another feeding method, called “flick-feeding,” involves flexing the tail forward when the whale is just below the

¹ Note that one humpback whale was entangled in both buoy line and groundline and was placed in both categories.

² Note that the entanglements in buoy line exceed the total of 7 because some animals were entangled in multiple locations on their body (e.g., both the mouth and the tail).

surface, which propels water over the whale's head, temporarily disorienting its prey. The whale then swims with its mouth open, through the wave it created. A third foraging strategy is bubble feeding, in which whales swim upwards, while blowing nets or clouds of bubbles, in a spiral under a concentration of prey. This creates a barrier through which the disoriented fish cannot escape. The whales then swim up through the bubble formation, engulfing their prey. These techniques demonstrate that humpback whales commonly use their mouths, flippers, and tails to aid in feeding. Thus, while foraging, all body parts are at risk of entanglement.

Turtles

Green, hawksbill, Kemp's ridley, leatherback, and loggerhead sea turtles are all highly migratory and travel widely throughout the South Atlantic. The following sections are a brief overview of the general life history characteristics of the sea turtles found in the South Atlantic region. Several volumes exist that cover the biology and ecology of these species more thoroughly (i.e., Lutz and Musick (eds.) 1997, Lutz et al. (eds.) 2002).

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

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

Kemp's ridley hatchlings are also pelagic during the early stages of life and feed in surface waters (Carr 1987, Ogren 1989). Once the juveniles reach approximately 20 cm carapace length

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

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

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

Fish

Historically the **smalltooth sawfish** in the U.S. ranged from New York to the Mexico border. Their current range is poorly understood but believed to have contracted from these historical

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

North Atlantic Right Whale Critical Habitat

In 1994, NMFS published a final rule designating critical habitat for right whales (59 FR 28793, June 3, 1994). The currently designated critical habitat included portions of Cape Cod Bay and Stellwagen Bank, the Great South Channel (each off the coast of Massachusetts), and the waters adjacent to the coast of Georgia and the east coast of Florida. These areas were determined to be essential to the conservation of right whales because of their importance as foraging, calving, and nursing habitats. For example, Cape Cod Bay and the Great South Channel represent two of the four known principal feeding grounds for adult right whales in the Western North Atlantic and the only two within U.S. waters. In addition, the waters off Georgia and Northern Florida have been identified as the only known calving ground for right whales. This area was originally based on 303 sightings from 1950-1989. All the designations were based primarily on right whale sightings data as opposed to an analysis of the physical and biological habitat features essential to the conservation of the species.

In July 2002, NMFS received a petition requesting revision of the current critical habitat designation for right whales, by combining and expanding the current Cape Cod Bay and Great South Channel critical habitats in the Northeast and by expanding the current critical habitat in the Southeast. In August 2003, NMFS determined that the requested revision, as specified by the petitioner, was not warranted at that time. On October 1, 2009, NMFS received another petition, this time from the Center for Biological Diversity (CBD), Defenders of Wildlife, Humane Society of the United States, Ocean Conservancy, and the Whale and Dolphin Conservation Society (the Petitioners) to revise the designated North Atlantic right whale critical habitat. The petition wanted to expand the existing North Atlantic right whale critical habitat by including more areas designated as critical feeding and calving habitat, and including a migratory corridor. On October 6, 2010, NMFS announced the 90-day finding: that the petition, in conjunction with the information readily available in the files, presents substantial scientific information indicating that the requested revision may be warranted. The October 6, 2010, Federal Register notice also included a 12-month determination on how to proceed with the petition: that NMFS would continue the ongoing rulemaking process which would result in the publication of a proposed rule in the Federal Register regarding North Atlantic right whale critical habitat. On February 20, 2015, NMFS published the proposed rule outlined the proposed changes to North Atlantic right whale critical habitat, available at: 80 FR 9314.

The following is language describing the North Atlantic right whale critical habitat area from 50 CFR § 226.203(c) as designated on January 26, 2016:

Southeastern United States: Includes marine waters from Cape Fear, North Carolina, southward to 28°N latitude (approximately 31 miles south of Cape Canaveral, Florida) within the area bounded on the west by the shoreline and the 72 COLREGS lines, and on the east by rhumb lines connecting the following points in the order stated from north to south.

N. Latitude	W. Longitude
33°51' N	at shoreline
33°42' N	77°43' W
33°37' N	77°47' W
33°28' N	78°33' W
32°59' N	78°50' W
32°17' N	79°53' W
31°31' N	80°33' W
30°43' N	80°49' W
30°30' N	81°01' W
29°45' N	81°01' W
29°15' N	80°55' W
29°08' N	80°51' W
28°50' N	80°39' W
28°38' N	80°30' W
28°28' N	80°26' W
28°24' N	80°27' W
28°21' N	80°31' W
28°16' N	80°31' W
28°11' N	80°33' W
28°00' N	80°29' W
28°00' N	At shoreline

3.3 Social and Economic Environment

3.3.1 Economic Description of the Commercial Sector

Snapper Grouper Fishery

The South Atlantic Fishery Management Council manages 6 key species groups, in addition to *sargassum* and coral/coral reefs. From 2009 through 2013, the snapper grouper complex accounted for the highest percentage of commercial landings (gutted weight; gw) at 39% followed by coastal migratory pelagics at 37% and spiny lobster at 14%. The rest of the species groups represented 10% of commercial landings, with golden crab accounting for 4% of total landings. In terms of dockside revenues (2013 \$), the snapper grouper complex represented the highest share at 38%, followed by spiny lobster at 33%, with coastal migratory pelagics ranking third at 19%. Golden crab accounted for 3% of total dockside revenues.

Any fishing vessel that harvests and sells any of the snapper grouper species from the South Atlantic EEZ must have a valid South Atlantic commercial snapper grouper permit, which is a limited access permit. There are currently 547 valid South Atlantic Snapper Grouper Unlimited Permits and 117 valid 225 lb Trip Limited Permits (**Table 3.3.1.1**). After a permit expires, it can be renewed and transferred up to one year after it expires. The numbers of valid and transferrable/renewable permits have declined since 2009 (**Table 3.3.1.2**). Whenever a new entrant enters the fishery, two existing South Atlantic Snapper Grouper Unlimited Permits must be purchased and one is then permanently retired as a means of reducing the number of permits available. For harvesting black sea bass using pots, a black sea bass pot endorsement is required. This is a limited access form of a system, so no new black sea bass pot endorsement will be issued. Like a permit, an endorsement may be transferred, subject to certain requirements. There are 32 endorsements established through Amendment 18A (SAFMC 2012).

Table 3.3.1.1. Valid and transferrable/renewable South Atlantic commercial snapper grouper permits as of January 30, 2014.

South Atlantic S-G Permits	Unlimited lb	225 lb
Valid	547	117
Transferrable/Renewable	22	8
Total	569	125

Source: NMFS SERO PIMS, 2014.

Table 3.3.1.2. Number of South Atlantic commercial snapper grouper permits.

	Unlimited	Limited 225 lb
2009	640	144
2010	624	139
2011	569	126
2012	558	123
2013	593	130
Average	597	132

Source: NMFS SERO PIMS, 2014

The following focuses on commercial landings and revenues for black sea bass. The major sources of data summarized in this description are the SEFSC Commercial ACL Dataset, as summarized by SERO-LAPP-2014-09, and Federal Logbook System (FLS), supplemented by average prices calculated from the Accumulated Landings System (ALS) and price indices taken from the Bureau of Labor Statistics. Landings from the FLS do not include all landings shown from the ACL dataset due to landings by fishermen who do not have the federal snapper grouper permit and are not required to complete the logbook; non-reporting in the logbook program is also an issue. Additional information on the commercial snapper grouper sector is contained in previous amendments and is incorporated herein by reference [see Amendment 13C (SAFMC 2006), Amendment 15A (SAFMC 2008a), Amendment 15B (SAFMC 2008b), Amendment 16 (SAFMC 2009a), Regulatory Amendment 9 (SAFMC 2011a), Comprehensive ACL Amendment for the South Atlantic Region (SAFMC 2011c), Amendment 18A (SAFMC 2012), and Regulatory Amendment 19 (SAFMC 2013b)] .

Total Annual Landings and Revenues for Black Sea Bass

The commercial black sea bass fishing fleet in the South Atlantic is composed of vessels using primarily black sea bass pots and hook and line gear. Other gear types have also been used for harvesting black sea bass. The commercial fishing season for black sea bass used to be from January 1 through December 31, but it was changed to June 1 through May 31 under Amendment 13C (SAFMC 2006). Regulatory Amendment 14 will change the commercial fishing year back to January 1 through December 31, starting in 2015. It is noted that a one-month delay for the 2012/2013 season was enacted to allow for some changes in regulations to take effect before the start of the fishing season. For presentation purposes, a fishing year is defined as June 1 through May 31. For each fishing year from 2000/01 through 2012/13 and on average, pots were the dominant gear type for harvesting black sea bass by weight and by revenue (**Table 3.3.1.3**). Notable, nonetheless, are the relatively large increases in hook-and-line landings and revenues in the 2012/2013 season. It will be shown later that, based on logbook reports, landings and revenues for gear other than pots also substantially increased in the 2013/14 fishing season.

In **Table 3.3.1.3**, the other gear category includes dredges, hand, gigs and spears, gillnets, lift nets, trap nets, unclassified, and diving. Each of these other gear, with the exception of “unclassified gear,” accounted for less than one percent of total black sea bass landings for the entire period. Unclassified landings accounted for approximately 7 percent of all landings by “other gear” for the entire period. Since the 2008/2009 fishing year, however, “unclassified

gear” accounted for 99 percent to 100 percent of total landings by other gear types. Landings information using logbooks (see **Table 3.3.1.7** below) indicates that most of the unclassified landings cannot be assigned to the pot gear. Based on the history of landings by other gear, particularly before the 2008/09 fishing season, it is likely that a good part of unclassified landings are by hook and line gear.

Table 3.3.1.3. Black sea bass commercial landings (lb gw) and dockside revenues (2013 \$) by gear type, fishing year 2000/01--2012/13.

	Total	Pots	Hook and Line	Others
Landings (lb gw)				
2000/01	470,412	79.1%	17.4%	3.6%
2001/02	491,204	83.4%	14.5%	2.1%
2002/03	341,092	80.8%	17.7%	1.5%
2003/04	676,227	84.2%	14.1%	1.7%
2004/05	541,550	82.8%	17.0%	0.2%
2005/06	342,636	84.8%	15.0%	0.1%
2006/07	458,439	86.8%	12.9%	0.3%
2007/08	298,917	81.4%	18.2%	0.4%
2008/09	394,708	68.0%	11.3%	20.7%
2009/10	336,735	70.2%	15.6%	14.3%
2010/11	436,360	66.4%	11.9%	21.7%
2011/12	385,639	61.0%	10.4%	28.6%
2012/13	383,292	46.6%	21.8%	31.6%
Average	427,478	75.8%	15.1%	9.1%
Revenues (2013 \$)				
2000/01	\$1,122,137	77.1%	19.9%	3.0%
2001/02	\$1,095,327	81.4%	16.3%	2.3%
2002/03	\$744,893	79.0%	19.2%	1.7%
2003/04	\$1,490,984	83.1%	15.2%	1.7%
2004/05	\$1,195,576	81.1%	18.6%	0.2%
2005/06	\$876,038	83.7%	16.1%	0.1%
2006/07	\$1,259,167	85.6%	14.1%	0.3%
2007/08	\$811,005	80.3%	19.4%	0.3%
2008/09	\$1,017,498	67.1%	12.7%	20.2%
2009/10	\$860,831	66.2%	16.4%	17.3%
2010/11	\$1,168,691	63.5%	11.6%	24.8%
2011/12	\$864,484	54.4%	11.9%	33.7%
2012/13	\$1,104,440	44.3%	23.0%	32.7%
Average	\$1,047,005	73.3%	16.4%	10.3%

Source: SEFSC Commercial ACL Dataset, ACL_Tables_07102014.

Among the various states, North Carolina accounted for the largest amount of landings for black sea bass by weight and revenue (**Table 3.3.1.4**). South Carolina generally came in second, and Florida/Georgia third. In 2011/12, however, Florida/Georgia landings by weight and revenues increased quite substantially, topping South Carolina. North Carolina landings include black sea bass landings that were likely caught in the South Atlantic but reported by dealers in the Northeast. Such landings annually averaged about 49,000 lb gw with a dockside value of \$137,000 for fishing years 2010/11 through 2012/13. Prior to those fishing years, there were virtually no such reported landings.

Table 3.3.1.4. Black sea bass commercial landings (lb gw) and dockside revenues (2013 \$) by state/area, fishing year 2000/01--2012/13.

	Total	Florida/Georgia	South Carolina	North Carolina
Landings (lb gw)				
2000/01	470,412	1.1%	18.8%	80.1%
2001/02	491,204	1.7%	10.4%	88.0%
2002/03	341,092	1.8%	12.1%	86.0%
2003/04	676,227	1.5%	29.1%	69.4%
2004/05	541,550	2.5%	22.0%	75.5%
2005/06	342,636	2.1%	18.9%	79.0%
2006/07	458,439	2.2%	22.0%	75.8%
2007/08	298,917	2.5%	35.1%	62.3%
2008/09	394,708	2.2%	28.7%	69.1%
2009/10	336,735	12.1%	17.9%	70.0%
2010/11	436,360	17.9%	19.0%	63.1%
2011/12	385,639	29.6%	21.9%	48.5%
2012/13	383,292	15.9%	26.0%	58.1%
Average	427,478	6.7%	21.7%	71.6%
Revenues (2013 \$)				
2000/01	\$1,122,137	0.8%	18.2%	81.0%
2001/02	\$1,095,327	1.4%	11.1%	87.5%
2002/03	\$744,893	1.7%	14.2%	84.1%
2003/04	\$1,490,984	1.5%	29.0%	69.5%
2004/05	\$1,195,576	2.5%	22.5%	75.1%
2005/06	\$876,038	2.0%	20.1%	77.9%
2006/07	\$1,259,167	2.1%	22.6%	75.3%
2007/08	\$811,005	2.3%	33.3%	64.4%
2008/09	\$1,017,498	2.1%	28.0%	69.8%
2009/10	\$860,831	10.7%	21.4%	67.8%
2010/11	\$1,168,691	13.3%	19.3%	67.4%
2011/12	\$864,484	19.7%	21.8%	58.5%
2012/13	\$1,104,440	12.0%	27.8%	60.2%
Average	\$1,047,005	5.3%	22.4%	72.2%

Source: SEFSC Commercial ACL Dataset, ACL_Tables_07102014

Most commercial fisheries are subject to seasonality, perhaps due to weather, regulations, markets for the fish, and the like. The commercial black sea bass segment of the snapper grouper fishery is no exception. For purposes of showing how seasonality possibly changed over time, three sub-periods are considered, 2000/01-2005/06, 2006/07-2009/10, and 2010/11-2012/13. The second sub-period starts right about the time the fishing season was changed from a calendar year to June 1-May 31, and the third sub-period starts at about the time closures to commercial harvest of black sea bass began to be implemented. Overall, a relatively strong seasonality characterizes the commercial landings (and revenues) for black sea bass (**Figure 3.3.1.1**). The first two sub-periods show about similar seasonality pattern: landings started at relatively low levels from June through October, rose in November with a peak in December and dropped thereafter. Apparently, the change in the fishing season did not alter the seasonality pattern of landings. The third sub-period is markedly different from the other two. Peak landings occurred at the start of the fishing season and dropped rather steeply through November, with a spike in December. The landings spike in December is similar to that of the

other two sub-periods. The change in seasonality pattern in the third period may be mainly attributed to fishing closures that reduced landings in the latter part of the season and that also motivated fishermen to fish harder at the start of the next fishing season. The three sub-periods also show different levels of average landings per month. From October through May, average monthly landings were highest in the first sub-period and lowest in the third sub-period, with those in the second sub-period falling between those of the first and third sub-periods. The reverse holds for the months of June through September, with the third sub-period showing the highest monthly landings and the first sub-period, the lowest monthly landings.

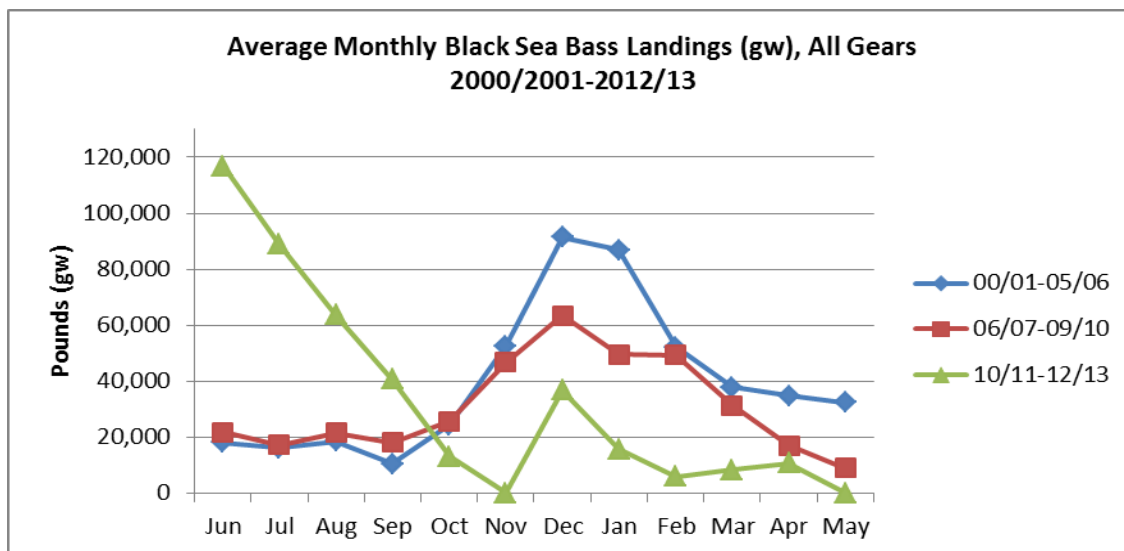


Figure 3.3.1.1. Average monthly black sea bass landings (lb gw) by all gear for fishing years 2000/01-2012/13.

Source: SEFSC Commercial ACL Dataset, ACL_Tables_07102014

The seasonality pattern for, and the level of, black sea bass landings by pots only appear similar to that for all gear types in each of the three sub-periods (**Figure 3.3.1.2**). This is probably as expected because pots have been the dominant gear type for black sea bass commercial landings.

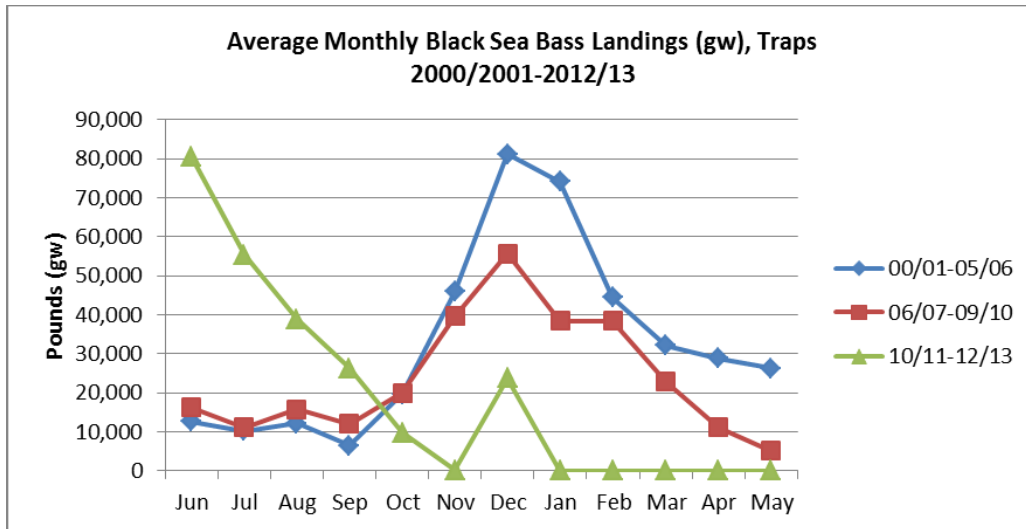


Figure 3.3.1.2. Average monthly black sea bass landings (lb gw) by pots for fishing years 2000/01-2012/13.

Source: SEFSC Commercial ACL Dataset, ACL_Tables_07102014

The seasonality pattern for landings by other, non-pot gear (**Figure 3.3.1.3**) is quite different from that for landings by all gear types (**Figure 3.3.1.1**). Peak landings in the first two sub-periods occurred in January, whereas peak landings for all gear types occurred in December. The landings spike in the third sub-period also occurred in January and not in December. Also observable for the third sub-period is the smaller landings spike that occurred in April. However, peak landings in the third sub-period occurred in June, similar to that for landings by all gear types. Considering that pot landings were generally zero from January through May, the seasonality pattern observed in the landings by all gear types during these months could be mainly conditioned by the seasonal pattern of landings by other gear types. In terms of level of landings, the third sub-period recorded higher landings in the second half of the fishing year (except February and May) than the other two sub-periods.

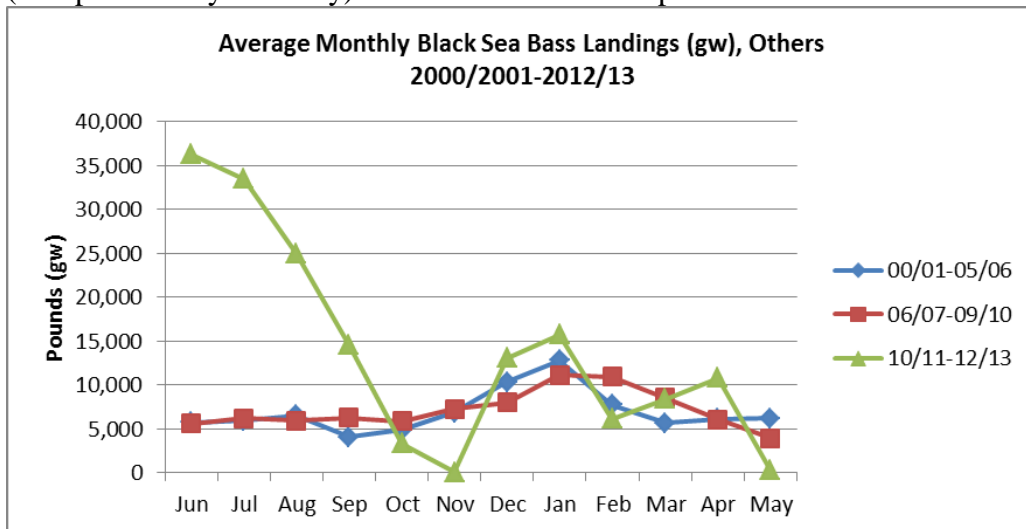


Figure 3.3.1.3. Average monthly black sea bass landings (lb gw) by other gear for fishing years 2000/01-2012/13.

Source: SEFSC Commercial ACL Dataset, ACL_Tables_07102014

Landings in the Florida/Georgia area show no apparent seasonal pattern for the first two sub-periods, although the second sub-period shows a slight spike in September (**Figure 3.3.1.4**). Seasonality of landings in the third sub-period generally follows that of landings for all gear types, with peak landings in June and a landings spike in December.

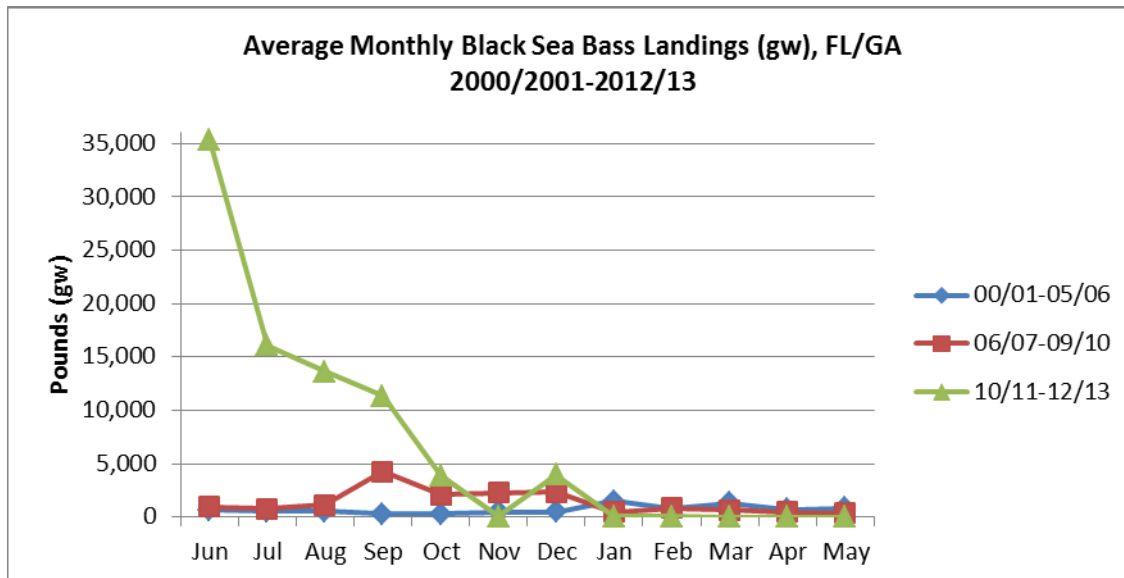


Figure 3.3.1.4. Average monthly FL/GA black sea bass landings (lb gw), fishing years 2000/01-2012/13. Source: SEFSC Commercial ACL Dataset, ACL_Tables_07102014

On average, peak landings in South Carolina differed across the three sub-periods. The first sub-period shows peak landings in January, the second sub-period in February, and the third sub-period in June with a spike in December (**Figure 3.3.1.5**). Other than the occurrence of peak landings, the seasonal pattern of landings in South Carolina appears to follow that for landings by pots only.

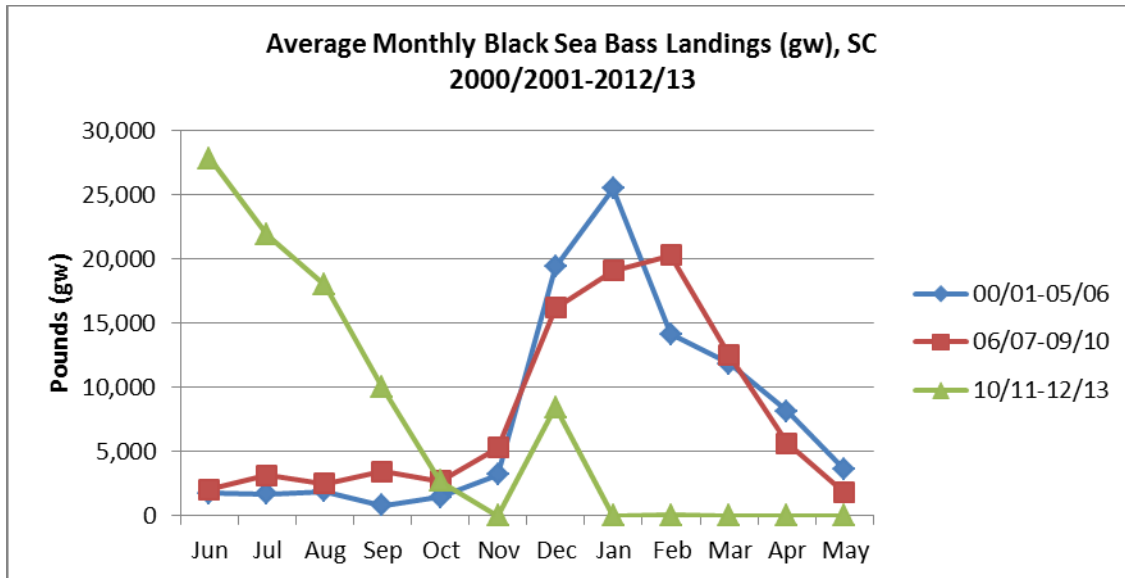


Figure 3.3.1.5. Average monthly SC black sea bass landings (lb gw), fishing years 2000/01-2012/13. Source: SEFSC Commercial ACL Dataset, ACL_Tables_07102014

The seasonality of landings in North Carolina is slightly similar to that of landings by all gear types. Peak landings occurred in December for the first two sub-periods and in June for the third sub-period with a spike in December (**Figure 3.3.1.6**). This is almost as expected since North Carolina has been the dominant state for black sea bass landings. However, unlike the case with landings by all gear types, peak landings for the third sub-period in North Carolina were lower than peak landings for the first sub-period.

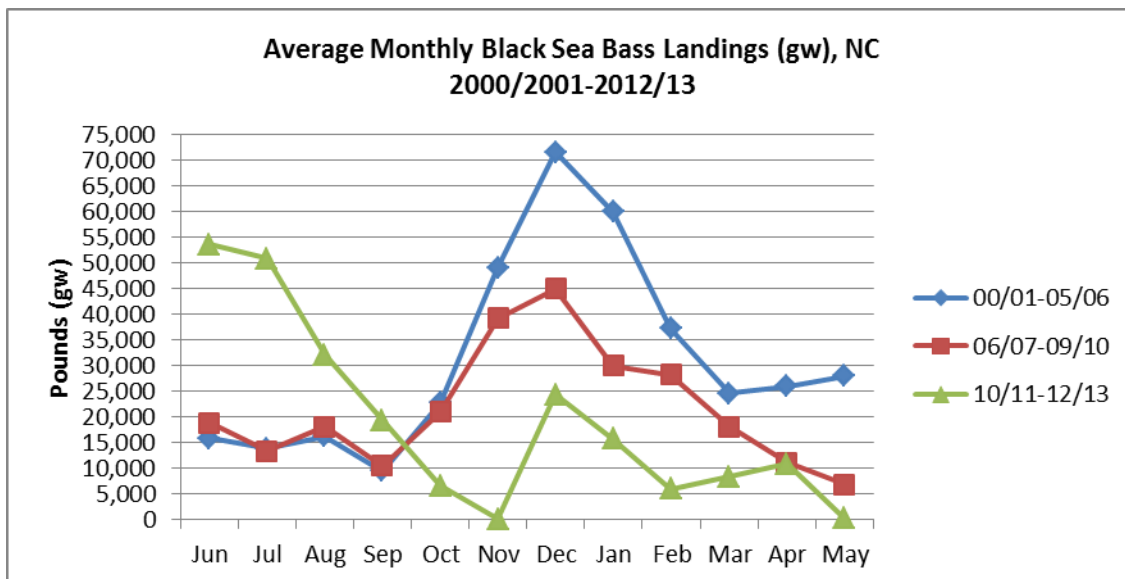


Figure 3.3.1.6. Average monthly NC black sea bass landings (lb gw), fishing years 2000/01-2012/13. Source: SEFSC Commercial ACL Dataset, ACL_Tables_07102014

There are many techniques for analyzing prices of a commodity including fish. The current approach is simple and straightforward with the main intent of providing a general description of monthly black sea bass prices. For the current purpose, prices are derived by dividing total revenues by total pounds, averaged for each month over the years within a sub-period, and expressed in 2013 dollars.

In general, prices varied across months for black sea bass landings by all gear types (**Figure 3.3.1.7**). Price variation appears to be within a narrow band for the first two sub-periods and over a wider range for the third sub-period. The lowest prices occurred in November for the first sub-period, October for the second sub-period, and June for the third sub-period. The lowest price coincided with peak landings for the third period, but not quite for the first two periods. As noted earlier, peak landings for each of the first two sub-periods occurred in December. The highest prices occurred in May for the three sub-periods, although the September price was about the same or slightly higher than the May price for the first sub-period. While the first two sub-periods show about similar seasonal pattern in prices, the third period is very different. For the third period, price rose quite sharply in July and August, remained steady in the next two months, spiked in November, fell in the next month, and rose sharply thereafter before reaching its peak in May. In general, prices increased over the years, with the first sub-period showing the lowest monthly prices and the last sub-period, the highest monthly prices. An exception to this is that prices for the third sub-period were not the highest in June and July.

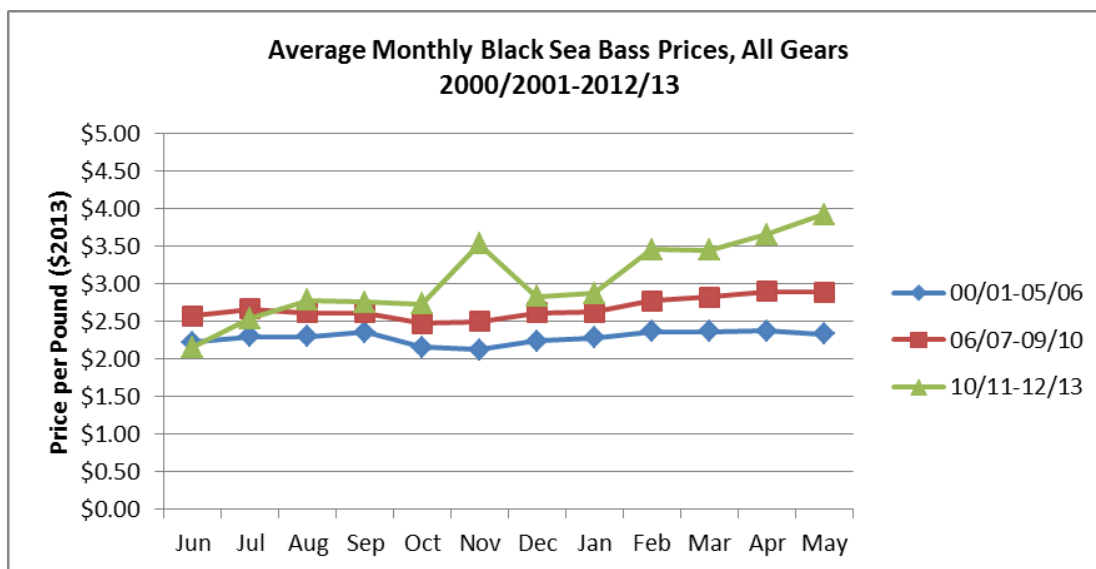


Figure 3.3.1.7. Average monthly black sea bass prices (2013 \$) by all types for gear fishing years 2000/01-2012/13.

Source: SEFSC Commercial ACL Dataset, ACL_Tables_07102014

The price pattern for pot landings closely mimics that for landings by all gear types, except that there are not reported prices for pot landings from January through May due to zero pot landings for these months (**Figure 3.3.1.8**). As with the seasonality of landings, this finding on price patterns for all gear types and pots is almost as expected because pots are the predominant gear in harvesting black sea bass. The absence of pot landings from January through May could

also be one reason for the overall prices to be generally higher during these months. This, of course, assumes that, at least, black sea bass demand during these months remained steady as in the previous sub-periods.

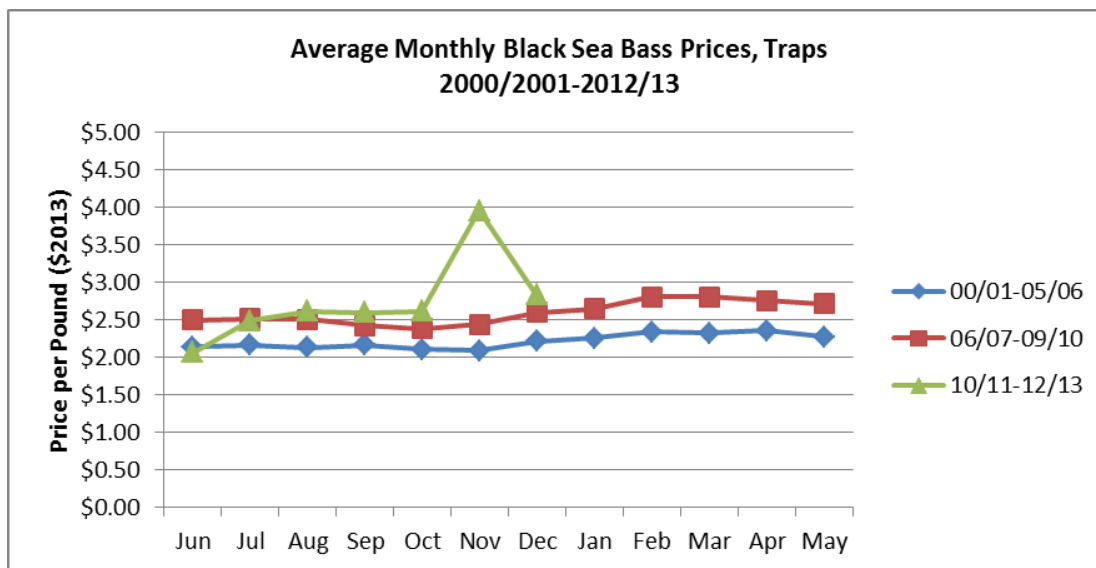


Figure 3.3.1.8. Average monthly black sea bass prices (2013 \$) by pots for fishing years 2000/01-2012/13.

Source: SEFSC Commercial ACL Dataset, ACL_Tables_07102014

Although in general, the pattern of monthly prices for landings by the other gear types is about similar to that of landings by all gear types, there are some differences worth noting. The lowest prices occurred in October (vs. November) for the first sub-period and January (vs. October) for the second sub-period (**Figure 3.3.1.9**). Moreover, for the third sub-period, price spiked in November for landings by all gear types but dipped for landings by the other gear types. This indicates that the price spike for landings by all gear types was primarily due to the price spike for pot landings. In addition, for the third sub-period, the pattern of prices for landings by all gear types during January through May exactly matches that for landings by the other gear types.

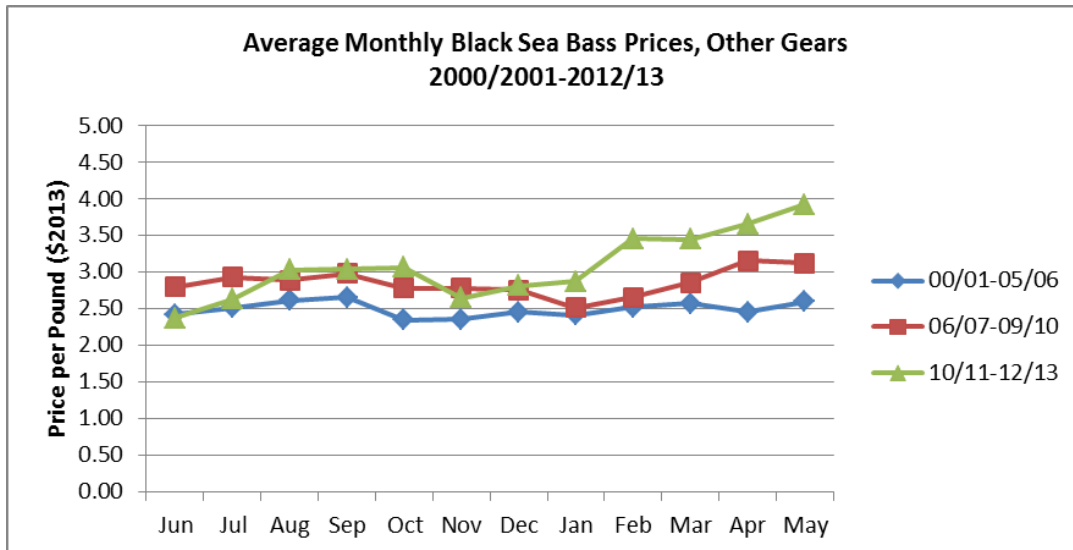


Figure 3.3.1.9. Average monthly black sea bass prices (2013 \$) by other gear types for fishing years 2000/01-2012/13.

Source: SEFSC Commercial ACL Dataset, ACL_Tables_07102014

Seasonality of prices can also be examined on a state-by-state basis. Peak landings in Florida/Georgia occurred in March for the first two periods, although June also registered a high price for the second period (**Figure 3.3.1.10**). For the third period, prices peaked in November; high prices in April and May are less accurate because of very low landings for these months. For the first two sub-periods, prices appear to be relatively stable, fluctuating within a narrow range. The last sub-period shows wider fluctuations in prices, particularly in the latter part of the fishing year. Moreover, prices for the third sub-period were generally not higher than those in the earlier sub-periods.

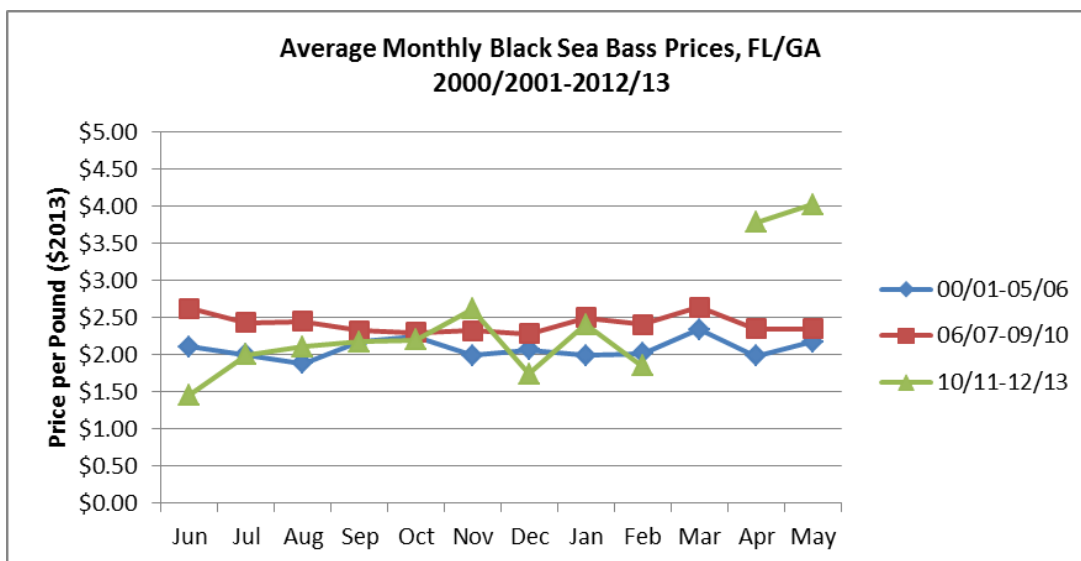


Figure 3.3.1.10. Average monthly FL/GA black sea bass prices (2013 \$), fishing years 2000/01-2012/13.

Source: SEFSC Commercial ACL Dataset, ACL_Tables_07102014

In South Carolina, prices generally rose in the first four months, fell in subsequent months until reaching their lowest levels in January, and steadily rose thereafter (**Figure 3.3.1.11**). However, lowest price in the third sub-period occurred in June. There are no reported prices starting in January for the third sub-period; price for February is unreliable due to very low landings. South Carolina prices for the third sub-period were higher than those for the earlier sub-periods only in October through December.

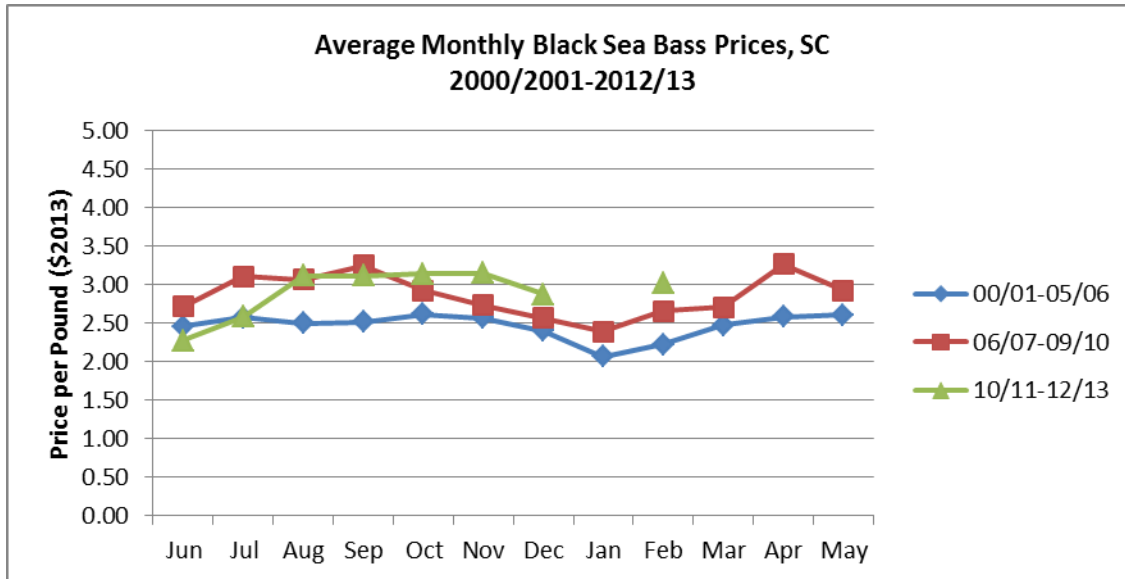


Figure 3.3.1.11. Average monthly SC black sea bass prices (2013 \$), fishing year 2000/01-2012/13. Source: SEFSC Commercial ACL Dataset, ACL_Tables_07102014

The seasonality of prices in North Carolina closely mirrors that for landings by all gear types (**Figure 3.3.1.12**). This close similarity in the seasonality pattern of prices is almost as expected because of the dominance of North Carolina in black sea bass landings and revenues. In general, prices increased over time, with the third sub-period registering the highest price levels among the three sub-periods.

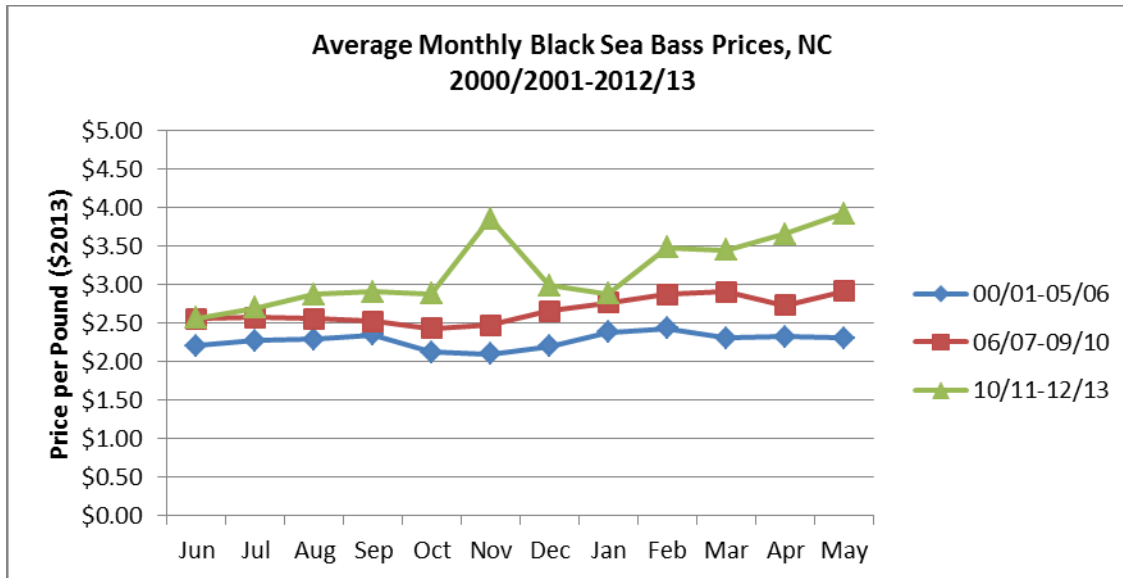


Figure 3.3.1.12. Average monthly NC black sea bass prices (2013 \$), fishing year 2000/01-2012/13. Source: SEFSC Commercial ACL Dataset, ACL_Tables_07102014

Trip Level Landings and Dockside Revenues for Black Sea Bass

Landings information in the tables below is solely based on logbook data and so would not exactly match with landings shown in the earlier tables. From 2000/01 through 2013/14, an annual average of 234 vessels took 2,013 commercial trips that combined landed an average of 422,200 lb gw of black sea bass annually with a dockside value (2013 dollars) of \$1,094,059 (Table 3.3.1.5). Average annual dockside revenue from black sea bass landings represented approximately 22% of total dockside revenue from trips that landed black sea bass from 2000/01 through 2013/14. Fishing year 2008/09 had the most number of vessels landing black sea bass, but the highest black sea bass landings occurred in 2003/04 and highest dockside revenues from black sea bass occurred in 2013/14. Including revenues from black sea bass and other species jointly caught and landed with black sea bass, the highest total revenues occurred in 2001/02, with the second highest occurring in 2013/14. The recent increase in the black sea bass ACL immediately translated into a relatively large landings increase in 2013/14. The number of vessel trips more than doubled in 2013/14 from that in 2012/13.

Table 3.3.1.5. Vessels and trips with black sea bass landings by weight (lb gw) and dockside revenue (2013 \$), fishing years 2000/01–2013/14 for all gear types.

Year	Number vessels that landed black sea bass	Number trips that landed black sea bass	Black sea bass landings (lb gw)	Black sea bass quota or ACL	Dockside revenue from black sea bass (2013 \$)	'Other species' landed and jointly caught with black sea bass (lb gw)	Dockside revenue from 'other species' from trips with black sea bass landings (2013 \$)	Total dockside revenue (2013 \$) from trips with black sea bass landings
2000/01	248	2,589	506,450	None	\$1,278,557	1,501,126	\$4,485,103	\$5,763,660
2001/02	250	3,019	495,863	None	\$1,165,505	1,928,448	\$5,546,695	\$6,712,199
2002/03	235	2,244	361,497	None	\$853,225	1,484,873	\$4,193,030	\$5,046,256
2003/04	239	2,365	656,446	None	\$1,511,486	1,428,869	\$4,102,985	\$5,614,471
2004/05	240	2,319	533,149	None	\$1,270,898	1,637,229	\$4,600,940	\$5,871,838
2005/06	224	2,058	346,034	None	\$974,884	1,434,845	\$4,250,338	\$5,225,222
2006/07	242	2,107	452,314	423,000 gw	\$1,327,408	1,357,072	\$4,155,409	\$5,482,817
2007/08	254	1,921	318,249	309,000 gw	\$914,222	1,339,664	\$4,115,800	\$5,030,021
2008/09	270	1,968	388,629	309,000 gw	\$1,066,824	1,458,016	\$4,287,517	\$5,354,341
2009/10	248	1,637	326,906	309,000 gw	\$848,990	1,147,186	\$3,287,444	\$4,136,434
2010/11	210	1,336	391,631	309,000 gw	\$1,022,432	903,470	\$2,590,011	\$3,612,444
2011/12	178	666	300,665	309,000 gw	\$644,100	324,237	\$970,480	\$1,614,580
2012/13	198	1,262	304,776	309,000 gw	\$886,002	747,860	\$2,297,386	\$3,183,388
2013/14	234	2,697	528,187	780,020 ww	\$1,552,294	1,532,890	\$4,891,735	\$6,444,028
Average	234	2,013	422,200	---	\$1,094,059	1,301,842	\$3,841,062	\$4,935,121

Source: SEFSC Coastal Fisheries Logbook for weight and NMFS ALS for revenues, L. Perruso, pers. comm., 2015

On average, the vessels that harvested black sea bass also took 3,759 trips per year without black sea bass landings. Combining all sources of revenues, the average annual dockside revenues of vessels that landed black sea bass was about \$53,986 (2013 \$) (**Table 3.3.1.6**). Annual dockside revenue from black sea bass landings represented, on average, approximately 9% of the total dockside revenue from all commercial landings from 2000/01 through 2013/14. Average annual dockside revenue per vessel from all landings was \$53,986 as compared to \$4,864 per vessel from black sea bass only. Dockside revenues from species caught and landed on trips without black sea bass were highest in 2011/12 while total dockside revenues from all species were highest in 2008/09.

Table 3.3.1.6. Dockside revenues (2013 \$) from all sources for vessels that landed black sea bass, fishing years 2000/01–2013/14 for all gear types.

Year	Number vessels that landed black sea bass	Dockside revenue from black sea bass (2013 \$)	Dockside revenue from ‘other species’ jointly landed with black sea bass (2013 \$)	Dockside revenue from ‘other species’ landed on trips without black sea bass (2013 \$)	Total dockside revenue (2013 \$)	Average total dockside revenue per vessel (2013 \$)
2000/01	248	\$1,278,557	\$4,485,103	\$8,350,093	\$14,113,753	\$56,910
2001/02	250	\$1,165,505	\$5,546,695	\$7,105,720	\$13,817,919	\$55,272
2002/03	235	\$853,225	\$4,193,030	\$6,638,633	\$11,684,889	\$49,723
2003/04	239	\$1,511,486	\$4,102,985	\$6,648,805	\$12,263,276	\$51,311
2004/05	240	\$1,270,898	\$4,600,940	\$6,883,410	\$12,755,247	\$53,147
2005/06	224	\$974,884	\$4,250,338	\$6,539,420	\$11,764,642	\$52,521
2006/07	242	\$1,327,408	\$4,155,409	\$7,945,898	\$13,428,715	\$55,491
2007/08	254	\$914,222	\$4,115,800	\$9,183,652	\$14,213,674	\$55,959
2008/09	270	\$1,066,824	\$4,287,517	\$9,048,602	\$14,402,943	\$53,344
2009/10	248	\$848,990	\$3,287,444	\$8,658,037	\$12,794,471	\$51,591
2010/11	210	\$1,022,432	\$2,590,011	\$7,602,809	\$11,215,253	\$53,406
2011/12	178	\$644,100	\$970,480	\$8,669,596	\$10,284,176	\$57,776
2012/13	198	\$886,002	\$2,297,386	\$7,333,275	\$10,516,662	\$53,114
2013/14	234	\$1,552,294	\$4,891,735	\$6,420,098	\$12,864,127	\$54,975
Average	234	\$1,094,059	\$3,841,062	\$7,644,861	\$12,579,982	\$53,896

Source: SEFSC Coastal Fisheries Logbook for weight and NMFS ALS for revenues, L. Perruso, pers. comm., 2015

From 2000/01 through 2013/14, an annual average of 45 vessels took 591 commercial trips using pots that combined landed an average of 348,952 lb gw of black sea bass annually with a dockside value (2013 dollars) of \$897,671 (**Table 3.3.1.7**). Average annual dockside revenue from black sea bass landings represented approximately 93% of total dockside revenue from trips that landed black sea bass from 2000/01 through 2013/14. This very high proportion indicates that vessels harvesting black sea bass using pots are highly dependent on black sea bass. Fishing year 2000/01 had the most number of vessels landing black sea bass using pots, but the highest black sea bass landings using pots occurred in 2003/04 and highest dockside revenues from black sea bass also occurred in 2003/04. Including revenues from black sea bass and other species jointly caught and landed with black sea bass, the highest total revenues occurred in 2003/04. The recent increase in the black sea bass ACL translated into a slight landings increase in 2013/14 for vessels using pots, despite a relative good increase in the number of trips. It is quite apparent that the November 1-April 30 ban on the use of pots for harvesting black sea bass constrained the landings of vessels that used pots.

Table 3.3.1.7. Vessels and trips with black sea bass landings by weight (lb gw) and dockside revenue (2013 \$), fishing years 2000/01–2013/14 by pots.

Year	Number vessels that landed black sea bass	Number trips that landed black sea bass	Black sea bass landings (lb gw)	Dockside revenue from black sea bass (2013 \$)	'Other species' landed and jointly caught with black sea bass (lb gw)	Dockside revenue from 'other species' from trips with black sea bass landings (2013 \$)	Total dockside revenue (2013 \$) from trips with black sea bass landings
2000/01	59	881	438,135	\$1,100,732	61,015	\$86,457	\$1,187,188
2001/02	55	1,045	423,652	\$994,401	81,912	\$97,236	\$1,091,636
2002/03	44	663	304,547	\$715,649	60,634	\$75,088	\$790,737
2003/04	51	846	587,633	\$1,355,015	39,404	\$61,842	\$1,416,857
2004/05	47	699	457,126	\$1,088,347	41,773	\$63,185	\$1,151,532
2005/06	46	628	295,954	\$839,219	47,763	\$70,881	\$910,099
2006/07	52	712	406,142	\$1,193,016	58,937	\$89,180	\$1,282,196
2007/08	46	519	277,314	\$796,999	51,582	\$79,252	\$876,251
2008/09	51	526	344,227	\$945,912	41,655	\$65,349	\$1,011,261
2009/10	39	409	279,601	\$722,645	47,146	\$69,653	\$792,299
2010/11	48	390	342,530	\$895,796	28,293	\$39,240	\$935,036
2011/12	39	221	256,589	\$550,520	10,928	\$15,697	\$566,216
2012/13	25	317	212,758	\$615,397	20,213	\$33,297	\$648,694
2013/14	29	420	259,128	\$753,742	22,701	\$49,808	\$803,550
Average	45	591	348,952	\$897,671	43,854	\$64,012	\$961,682

Source: SEFSC Coastal Fisheries Logbook for weight and NMFS ALS for revenues, L. Perruso, pers. comm., 2015

On average, the vessels that harvested black sea bass using pots also took 6 trips per year without black sea bass landings. Combining all sources of revenues, the average annual dockside revenues of vessels that landed black sea bass using pots was about \$21,609 (2013 \$) (Table 3.3.1.8). Annual dockside revenue from black sea bass landings represented, on average, approximately 93% of the total dockside revenue from all commercial landings from 2000/01 through 2013/14, indicating strong dependence of these vessels on black sea bass. Average annual dockside revenue per vessel from all landings was \$21,609 as compared to \$19,916 per vessel from black sea bass only. Dockside revenues from species caught and landed on trips without black sea bass were highest in 2003/04 and total dockside revenues from all species were also highest in 2003/04.

Table 3.3.1.8. Dockside revenues (2013 \$) from all sources for vessels that landed black sea bass, fishing years 2000/01–2013/14 by pots.

Year	Number vessels that landed black sea bass	Dockside revenue from black sea bass (2013 \$)	Dockside revenue from 'other species' jointly landed with black sea bass (2013 \$)	Dockside revenue from 'other species' landed on trips without black sea bass (2013 \$)	Total dockside revenue (2013 \$)	Average total dockside revenue per vessel (2013 \$)
2000/01	59	\$1,100,732	\$86,457	\$2,896	\$1,190,084	\$20,171
2001/02	55	\$994,401	\$97,236	\$3,194	\$1,094,830	\$19,906
2002/03	44	\$715,649	\$75,088	\$2,602	\$793,339	\$18,030
2003/04	51	\$1,355,015	\$61,842	\$7,225	\$1,424,082	\$27,923
2004/05	47	\$1,088,347	\$63,185	\$1,766	\$1,153,298	\$24,538
2005/06	46	\$839,219	\$70,881	\$6,935	\$917,034	\$19,936
2006/07	52	\$1,193,016	\$89,180	\$2,740	\$1,284,936	\$24,710
2007/08	46	\$796,999	\$79,252	\$8,419	\$884,670	\$19,232
2008/09	51	\$945,912	\$65,349	\$2,042	\$1,013,303	\$19,869
2009/10	39	\$722,645	\$69,653	\$2,216	\$794,514	\$20,372
2010/11	48	\$895,796	\$39,240	\$237	\$935,273	\$19,485
2011/12	39	\$550,520	\$15,697	\$0	\$566,216	\$14,518
2012/13	25	\$615,397	\$33,297	\$3,885	\$652,579	\$26,103
2013/14	29	\$753,742	\$49,808	\$638	\$804,188	\$27,731
Average	45	\$897,671	\$64,012	\$3,200	\$964,882	\$21,609

Source: SEFSC Coastal Fisheries Logbook for weight and NMFS ALS for revenues, L. Perruso, pers. comm., 2015

From 2000/01 through 2013/14, an annual average of 215 vessels took 1,422 commercial trips using other gear that combined landed an average of 73,247 lb gw of black sea bass annually with a dockside value (2013 dollars) of \$196,388 (**Table 3.3.1.9**). Average annual dockside revenue from black sea bass landings represented approximately 5% of total dockside revenue from trips that landed black sea bass from 2000/01 through 2013/14. It is worth noting, however, that this proportion was 14% for the 2013/14 fishing year. The average proportion indicates that vessels harvesting black sea bass using other gear are dependent on species other than black sea bass. Fishing year 2008/09 had the most number of vessels landing black sea bass using other gear, but the highest black sea bass landings and revenues from black sea bass using other gear occurred in 2013/14. Including revenues from black sea bass and other species jointly caught and landed with black sea bass, the highest total revenues occurred in 2013/14. The recent increase in the black sea bass ACL translated into a rather substantial landings increase in 2013/14 for vessels using other gear. Apparently, these vessels took advantage of the November 1-April 30 ban on the use of pots for harvesting black sea bass. Trips by vessels using other gear in harvesting black sea bass more than doubled in 2013/14 from the prior fishing year. Some of the increase in vessels harvesting black sea bass by non-pot gear could be some of the vessels that previously had used pot gear, but did not qualify for an endorsement.

Table 3.3.1.9. Vessels and trips with black sea bass landings by weight (lb gw) and dockside revenue (2013 \$), fishing years 2000/01–2013/14 by other gear types.

Year	Number vessels that landed black sea bass	Number trips that landed black sea bass	Black sea bass landings (lb gw)	Dockside revenue from black sea bass (2013 \$)	'Other species' landed and jointly caught with black sea bass (lb gw)	Dockside revenue from 'other species' from trips with black sea bass landings (2013 \$)	Total dockside revenue (2013 \$) from trips with black sea bass landings
2000/01	228	1,708	68,315	\$177,825	1,440,111	\$4,398,647	\$4,576,472
2001/02	231	1,974	72,211	\$171,104	1,846,536	\$5,449,459	\$5,620,563
2002/03	220	1,581	56,951	\$137,577	1,424,239	\$4,117,942	\$4,255,519
2003/04	220	1,519	68,813	\$156,471	1,389,466	\$4,041,143	\$4,197,614
2004/05	224	1,620	76,023	\$182,551	1,595,456	\$4,537,755	\$4,720,306
2005/06	212	1,430	50,080	\$135,666	1,387,082	\$4,179,457	\$4,315,123
2006/07	224	1,395	46,172	\$134,392	1,298,135	\$4,066,229	\$4,200,621
2007/08	239	1,402	40,935	\$117,222	1,288,082	\$4,036,548	\$4,153,770
2008/09	254	1,442	44,402	\$120,912	1,416,361	\$4,222,168	\$4,343,080
2009/10	229	1,228	47,305	\$126,345	1,100,039	\$3,217,790	\$3,344,135
2010/11	183	946	49,101	\$126,636	875,177	\$2,550,771	\$2,677,408
2011/12	153	445	44,076	\$93,581	313,310	\$954,783	\$1,048,364
2012/13	174	945	92,018	\$270,605	727,647	\$2,264,089	\$2,534,693
2013/14	222	2,277	269,059	\$798,552	1,510,190	\$4,841,927	\$5,640,478
Average	215	1,422	73,247	\$196,388	1,257,988	\$3,777,051	\$3,973,439

Source: SEFSC Coastal Fisheries Logbook for weight and NMFS ALS for revenues, L. Perruso, pers. comm., 2015

On average, the vessels that harvested black sea bass using other gear also took 3,684 trips per year without black sea bass landings. Combining all sources of revenues, the average annual dockside revenues of vessels that landed black sea bass using other gear was \$53,779 (2013 \$) (Table 3.3.1.10). Annual dockside revenue from black sea bass landings represented, on average, approximately 2% of the total dockside revenue from all commercial landings from 2000/01 through 2013/14. In 2013/14, this proportion was about 7%. Average annual dockside revenue per vessel from all landings was \$53,779 as compared to \$913 per vessel from black sea bass only. Dockside revenues from species caught and landed on trips without black sea bass were highest in 2007/08 and total dockside revenues from all species were highest in 2008/09.

Table 3.3.1.10. Dockside revenues (2013 \$) from all sources for vessels that landed black sea bass, fishing years 2000/01–2013/14 by other gear types.

Year	Number vessels that landed black sea bass	Dockside revenue from black sea bass (2013 \$)	Dockside revenue from 'other species' jointly landed with black sea bass (2013 \$)	Dockside revenue from 'other species' landed on trips without black sea bass (2013 \$)	Total dockside revenue (2013 \$)	Average total dockside revenue per vessel (2013 \$)
2000/01	228	\$177,825	\$4,398,647	\$8,273,088	\$12,849,560	\$56,358
2001/02	231	\$171,104	\$5,449,459	\$7,037,642	\$12,658,205	\$54,797
2002/03	220	\$137,577	\$4,117,942	\$6,616,611	\$10,872,130	\$49,419
2003/04	220	\$156,471	\$4,041,143	\$6,630,744	\$10,828,358	\$49,220
2004/05	224	\$182,551	\$4,537,755	\$6,856,488	\$11,576,793	\$51,682
2005/06	212	\$135,666	\$4,179,457	\$6,528,495	\$10,843,618	\$51,149
2006/07	224	\$134,392	\$4,066,229	\$7,942,298	\$12,142,919	\$54,209
2007/08	239	\$117,222	\$4,036,548	\$9,145,699	\$13,299,470	\$55,646
2008/09	254	\$120,912	\$4,222,168	\$9,007,804	\$13,350,884	\$52,563
2009/10	229	\$126,345	\$3,217,790	\$8,587,857	\$11,931,992	\$52,105
2010/11	183	\$126,636	\$2,550,771	\$7,368,545	\$10,045,952	\$54,896
2011/12	153	\$93,581	\$954,783	\$8,423,689	\$9,472,053	\$61,909
2012/13	174	\$270,605	\$2,264,089	\$6,989,299	\$9,523,993	\$54,736
2013/14	222	\$798,552	\$4,841,927	\$6,394,837	\$12,035,316	\$54,213
Average	215	\$196,388	\$3,777,051	\$7,557,364	\$11,530,803	\$53,779

Source: SEFSC Coastal Fisheries Logbook for weight and NMFS ALS for revenues, L. Perruso, pers. comm., 2015

Trip Level Landings and Dockside Revenues for Black Sea Bass: Endorsement Holders Using Pots

The following describes the performance of vessels used by endorsement holders for the period 2000/01 through 2013/14. The pot endorsement system was implemented in 2012, so data for earlier years was generated by tracking back in the time the trips and catches made by vessels used by endorsement holders (**Appendix N**). This dataset was merged with the logbook-based dataset provided by SEFSC (L. Perruso, pers. comm., 2015) to generate the corresponding revenue information. Due to incomplete linking of all vessels that endorsement holders used for the 2012/13 and 2013/14 fishing seasons, only trips by vessels with an endorsement that used pots are included for these fishing years.

From 2000/01 through 2013/14, an annual average of 31 vessels with an endorsement took 539 commercial trips using pots that combined landed an average of 276,160 lb gw of black sea bass annually with a dockside value (2013 dollars) of \$721,021 (**Table 3.3.1.11**). These vessels also caught other species jointly with black sea bass at an annual average of 90,357 lb gw with a dockside value of \$224,821. Fishing years 2001/02 and 2008/09 had the most number of vessels landing black sea bass, but the most number of trips occurred in 2001/02. The highest black sea bass landings occurred in 2003/04 but the highest dockside revenues from black sea bass was in

2006/07. In the last three fishing years (2011/13-2013/14), landings and revenues (except for 2013/14) from black sea bass were below the average for the entire period.

Table 3.3.1.11. Vessels and trips by endorsement holders with black sea bass landings by weight (lb gw) and dockside revenue (2013 \$), fishing years 2000/01–2013/14.

Year	Number vessels that landed black sea bass	Number trips that landed black sea bass	Black sea bass landings (lb gw)	Dockside revenue from black sea bass (2013 \$)	'Other species' landed and jointly caught with black sea bass (lb gw)	Dockside revenue from 'other species' from trips with black sea bass landings (2013 \$)	Total dockside revenue (2013 \$) from trips with black sea bass landings
2000/01	33	607	238,879	\$589,903	92,467	\$233,778	\$823,680
2001/02	35	786	261,521	\$614,122	159,220	\$397,211	\$1,011,333
2002/03	33	617	209,662	\$493,839	109,716	\$277,488	\$771,327
2003/04	30	713	402,176	\$925,927	92,721	\$247,004	\$1,172,931
2004/05	32	644	384,120	\$919,044	109,363	\$273,552	\$1,192,596
2005/06	31	643	263,156	\$748,200	123,611	\$311,317	\$1,059,517
2006/07	32	714	368,824	\$1,084,298	122,511	\$305,648	\$1,389,946
2007/08	31	545	237,158	\$690,107	132,968	\$347,443	\$1,037,550
2008/09	36	525	280,935	\$782,136	94,689	\$233,245	\$1,015,381
2009/10	28	448	255,549	\$652,247	89,754	\$207,271	\$859,518
2010/11	29	388	308,512	\$804,169	54,157	\$129,409	\$933,578
2011/12	32	179	183,861	\$421,165	40,902	\$101,019	\$522,184
2012/13	25	317	212,758	\$615,397	20,213	\$33,297	\$648,694
2013/14	29	420	259,128	\$753,742	22,701	\$49,808	\$803,550
Average	31	539	276,160	\$721,021	90,357	\$224,821	\$945,842

Note: For 2012/13 and 2013/14, trips taken by vessels that used pots within the fishing year are assumed to be made by vessels with a pot endorsement.

Source: SEFSC Coastal Fisheries Logbook for weight, NMFS ALS for revenues, and SERO-Permits for endorsement holders, L. Perruso, pers. comm., 2015; SERO-LAPP-2014-09.

Combining all sources of revenues, the average annual dockside revenues of vessels with an endorsement that landed black sea bass was \$38,097 (2013 \$) (**Table 3.3.1.12**). As noted, the 2012/13 and 2013/14 data assumes trips taken by vessels using pots anytime during the fishing year were made by vessels with an endorsement.

Table 3.3.1.12. Dockside revenues (2013 \$) from all sources for vessels that landed black sea bass, fishing years 2000/01–2013/14 by endorsement holders.

Year	Number vessels that landed black sea bass	Dockside revenue from black sea bass (2013 \$)	Dockside revenue from 'other species' jointly landed with black sea bass (2013 \$)	Dockside revenue from 'other species' landed on trips without black sea bass (2013 \$)	Total dockside revenue (2013 \$)	Average total dockside revenue per vessel (2013 \$)
2000/01	33	\$589,903	\$233,778	\$238,618	\$1,062,298	\$32,191
2001/02	35	\$614,122	\$397,211	\$226,014	\$1,237,347	\$35,353
2002/03	33	\$493,839	\$277,488	\$282,867	\$1,054,194	\$31,945
2003/04	30	\$925,927	\$247,004	\$146,798	\$1,319,729	\$43,991
2004/05	32	\$919,044	\$273,552	\$245,078	\$1,437,674	\$44,927
2005/06	31	\$748,200	\$311,317	\$189,003	\$1,248,520	\$40,275
2006/07	32	\$1,084,298	\$305,648	\$212,851	\$1,602,797	\$50,087
2007/08	31	\$690,107	\$347,443	\$366,890	\$1,404,440	\$45,305
2008/09	36	\$782,136	\$233,245	\$399,694	\$1,415,076	\$39,308
2009/10	28	\$652,247	\$207,271	\$280,625	\$1,140,143	\$40,719
2010/11	29	\$804,169	\$129,409	\$276,179	\$1,209,756	\$41,716
2011/12	32	\$421,165	\$101,019	\$556,560	\$1,078,744	\$33,711
2012/13	25	\$615,397	\$33,297	\$3,885	\$652,579	\$26,103
2013/14	29	\$753,742	\$49,808	\$638	\$804,188	\$27,731
Average	31	\$721,021	\$224,821	\$244,693	\$1,190,535	\$38,097

Note: For 2012/13 and 2013/14, trips taken by vessels that used pots within the fishing year are assumed to be made by vessels with a pot endorsement.

Source: SEFSC Coastal Fisheries Logbook for weight, NMFS ALS for revenues, and SERO-Permits for endorsement holders, L. Perruso, pers. comm., 2015; SERO-LAPP-2014-09.

3.3.2 Economic Description of the Recreational Sector

The following focuses on recreational landings and effort (angler trips) for black sea bass. The major sources of data summarized in this description are the Recreational ACL Dataset (SEFSC MRIPACLspec_rec81_13wv6_21Feb14), as summarized by **Appendix N**, for landings and the NOAA fisheries website for accessing recreational data [file://localhost/http://www.st.nmfs.noaa.gov/recreational-fisheries/access-data/run-a-data-query:index](file://localhost/http://www.st.nmfs.noaa.gov/recreational-fisheries/access-data/run-a-data-query/index) for effort. The 2013 data are preliminary or incomplete, including the unavailability of the 2013 headboat landings. Additional information on the recreational sector of the snapper grouper fishery contained in previous or concurrent amendments is incorporated herein by reference [see Amendment 13C (SAFMC 2006), Amendment 15A (SAFMC 2008a), Amendment 15B (SAFMC 2008b), Amendment 16 (SAFMC 2009a), Amendment 17A (SAFMC 2010a), Amendment 17B (SAFMC 2010b), Regulatory Amendment 9 (SAFMC 2011a),

Regulatory Amendment 11 (SAFMC 2011b), Comprehensive ACL Amendment for the South Atlantic Region (SAFMC 2011c), and Amendment 24 (SAFMC 2011d)].

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

Harvest

The private/rental mode was the dominant sector in the harvest for black sea bass, followed by headboats, charter boats, and shore mode (**Table 3.3.2.1**). This is true for recreational landings in the South Atlantic and in other states. The annual trend of recreational black sea bass landings was not uniform across fishing modes during 2009/10-2012/13. Landings were highest in 2009/10 for all fishing modes, except headboats whose highest landings occurred in 2010/11.

Among the states in the South Atlantic, Florida dominated all other states in the harvest for black sea bass in 2010/11 and 2011/12; South Carolina was the dominant state in 2009/10 and 2012/13; and, North Carolina had higher landings than Florida in 2012/13 (**Table 3.3.2.2**). Again some caution has to be recalled here regarding the incompleteness of the 2013 landings. Every year from 2009/10 through 2012/13, the Northern states recorded more landings than the combined landings of the four South Atlantic states.

Seasonality is quite apparent in black sea bass recreational landings (**Figure 3.3.2.1**). Landings peaked at the start of the fishing season, declined in the next two waves, and picked up again in March/April. The main reason July/August recorded higher landings than June is the two-month composition of this wave. Seasonality could be partly due to the opening and closing dates of the fishing season.

Table 3.3.2.1. Black sea bass recreational landings (lb ww) by mode, fishing year 2009/10–2012/13.

	Charter	Headboat	Private	Shore	Total
South Atlantic					
2009/10	123,016	209,720	402,828	5,189	740,754
2010/11	107,744	253,604	207,537	2,147	571,033
2011/12	100,907	201,957	334,139	1,309	638,312
2012/13	48,425	95,669	237,572	1,940	383,605
Average	95,023	190,238	295,519	2,646	583,426

Source: SEFSC MRIPACLspec_rec81_13wv6_21Feb14; SERO-LAPP-2014-09.

Note: Landings for 2013 are incomplete and headboat landings for 2013 are not yet available.

Table 3.3.2.2. Black sea bass recreational landings (lb ww) by state, fishing year 2009/10–2012/13.

	FL	GA	SC	NC	Total
2009/10	232,928	32,169	285,718	189,940	740,755
2010/11	221,968	41,436	156,218	151,410	571,032
2011/12	246,449	48,748	179,657	163,458	638,312
2012/13	106,209	13,548	138,706	125,143	383,606
Average	201,888	33,975	190,075	157,488	583,426

Source: SEFSC MRIPACLspec_rec81_13wv6_21Feb14; SERO-LAPP-2014-09

Note: Landings for 2013 are incomplete and headboat landings for 2013 are not yet available.

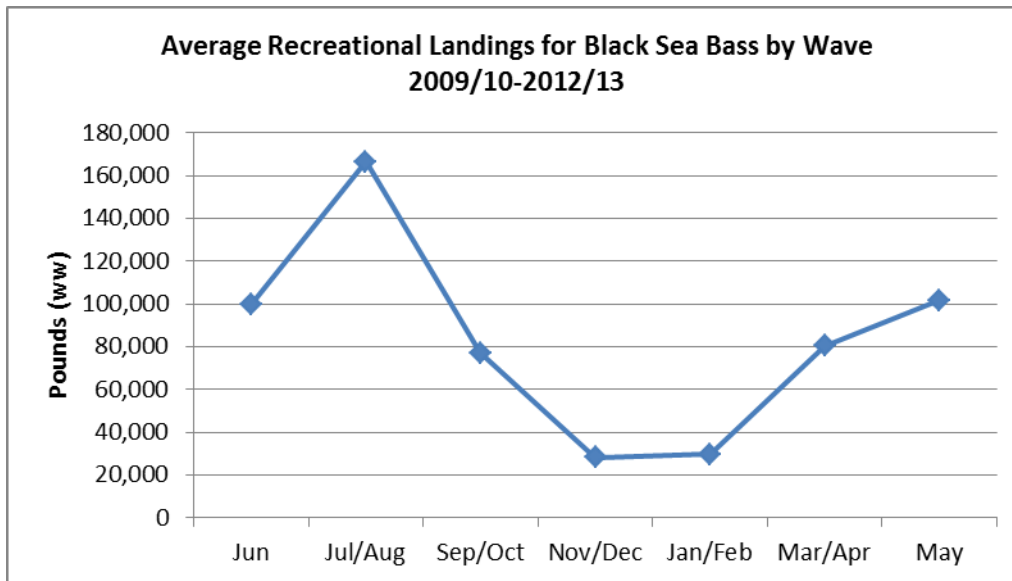


Figure 3.3.2.1. South Atlantic average recreational landings for black sea bass by wave, fishing year 2009/10-2012/13.

Source: SEFSC MRIPACLspec_rec81_13wv6_21Feb14; SERO-LAPP-2014-09

Note: Landings for 2013 are incomplete and headboat landings for 2013 are not yet available.

Effort

Recreational effort can be characterized in terms of the number of trips as follows:

1. Target effort - The number of individual angler trips, regardless of trip duration, where the intercepted 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.
2. 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.
3. All recreational trips - The total estimated number of recreational trips taken, regardless of target intent or catch success.

The source of the following target and catch trips is NOAA fisheries website for accessing recreational data: <http://www.st.nmfs.noaa.gov/recreational-fisheries/access-data/run-a-data-query/index>.

Estimates of target and catch effort for black sea bass in the South Atlantic by fishing mode are presented in **Table 3.3.2.3** and those by state are shown in **Table 3.3.2.4**. Clearly apparent in these tables is the substantial difference between target and catch trips, with target trips being generally less than 10 percent (significantly less for some modes) of catch trips. The private mode dominated in both target and catch trips. The charter mode reported higher target trips but lower catch trips than the shore mode. On average, North Carolina recorded the highest target and catch trips, followed by South Carolina for target trips and Florida for catch trips.

Similar to harvests and likely for the same reasons, there is an apparent seasonality of both target and catch trips for black sea bass (**Figure 3.3.2.2**). Catch trips peaked in July/August, declined thereafter through January/February, and picked up in the next two waves. This is the same pattern as that for harvests shown in **Figure 3.3.2.1**. Target trips followed almost the same pattern from wave to wave, except that they troughed in November/December.

Table 3.3.2.3. Target and catch trips for black sea bass in the South Atlantic by fishing mode, fishing year 2009/10-2012/13.

	Charter	Private	Shore	Total
Target Trips				
2009/10	2,185	30,062	404	32,652
2010/11	2,153	37,383	648	40,184
2011/12	506	44,063	175	44,744
2012/13	31	26,895	0	26,926
Average	1,219	34,601	307	36,126
Catch Trips				
2009/10	30,613	381,891	98,925	511,429
2010/11	35,245	450,206	99,899	585,350
2011/12	34,767	542,699	119,211	696,677
2012/13	21,283	464,412	87,706	573,401
Average	30,477	459,802	101,435	591,714

Table 3.3.2.4. Target and catch trips for black sea bass in the South Atlantic by state, fishing year 2009/10-2012/13.

	FL	GA	NC	SC
Target Trips				
2009/10	7,411	2,016	14,627	8,597
2010/11	11,444	3,755	16,876	8,512
2011/12	12,247	4,687	15,055	13,403
2012/13	2,974	526	9,526	13,900
Average	8,519	2,746	14,021	11,103
Catch Trips				
2009/10	157,848	38,677	214,857	100,047
2010/11	211,034	46,255	243,760	84,301
2011/12	275,153	43,059	264,399	114,066
2012/13	175,076	38,048	262,819	97,457
Average	204,778	41,510	246,459	98,968

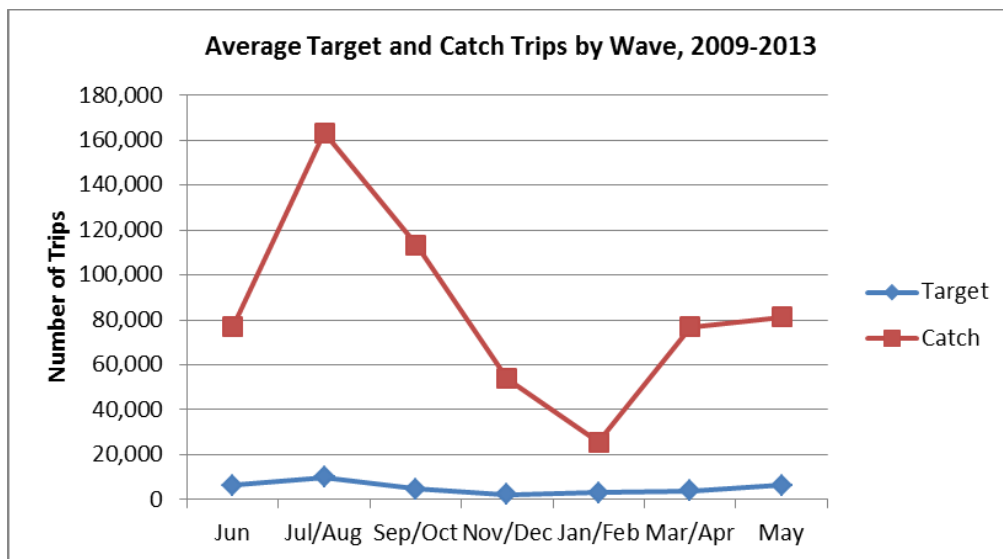


Figure 3.3.2.2. South Atlantic average target and catch trips by wave, fishing year 2009/10-2012/13.

Similar analysis of recreational effort is not possible for the headboat sector because 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. **Table 3.3.2.5** displays the annual angler days by state for 2009/10-2012/13 and **Table 3.3.2.6** displays their average (2009/10-2012/13) monthly distribution. Confidentiality issues required combining Georgia estimates with those of Northeast Florida.

Headboat angler days (trips) varied from year to year across various states. Total headboat angler trips fell followed a see-saw pattern, increasing in 2010/11, falling in the next year, and increasing the following year (**Table 3.3.2.5**). Southeast Florida registered the highest number of angler trips, followed by Georgia/Northeast Florida, South Carolina, and North Carolina. Clearly Florida dominated all other states in terms of headboat angler days (**Table 3.3.2.5**).

On average (2009/10-2012/13), overall angler days peaked in July and troughed in November (**Table 3.3.2.6**). All states recorded peak angler trips in July, similar to the overall peak month. None of the states, however, had the same trough month as the overall angler trips. North Carolina had a trough in February, South Carolina in January, Georgia/Northeast Florida in November, and Southeast Florida in October.

Table 3.3.2.5. South Atlantic headboat angler days, by state, fishing year 2009/10-2012/13.

	2009/10	2010/11	2011/12	2012/13	AVERAGE
NC	19,353	20,325	18,656	20,402	19,684
SC	40,703	46,175	44,126	39,510	42,629
GA/NEFL	61,108	50,859	31,239	28,509	42,929
SEFL	67,457	76,613	99,466	111,665	88,800
TOTAL	188,621	193,972	193,487	200,086	194,042

Source: SEFSC Headboat Survey, NOAA Fisheries, SEFSC, Beaufort Lab

Table 3.3.2.6. Average monthly distribution of headboat angler days in the South Atlantic, by state, fishing year 2009/10-2012/13.

	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
NC	3,978	4,605	3,574	2,059	1,794	320	3	15	0	175	898	2,263
SC	9,081	11,401	8,239	3,382	2,283	583	107	44	97	1,098	2,834	3,481
GA/NEFL	6,909	7,277	4,576	2,531	2,312	1,526	2,030	1,673	1,917	3,341	4,228	4,610
SEFL	8,998	10,371	7,524	4,545	3,806	4,559	6,223	6,609	7,406	9,974	9,920	8,867
TOTAL	28,965	33,654	23,913	12,517	10,194	6,987	8,363	8,340	9,420	14,588	17,879	19,221

Source: SEFSC Headboat Survey, NOAA Fisheries, SEFSC, Beaufort Lab

Economic Values and For-Hire Vessel Financials

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 NMFS Southeast Science Center (Carter and Liese 2012) developed estimates of consumer surplus per fish, per angler trip. These estimates were culled from various studies – Haab et al. (2009), Dumas et al. (2009), and NOAA SEFSC SSRG (2009). The values/ranges of consumer surplus estimates are (in 2013 dollars) \$121 to \$139 for red snapper, \$134 to \$139 for grouper, \$11.90 for other snappers, and \$87 for snapper grouper. Haab et al. (2009) also estimated consumer surplus for snapper in general to range from \$12 to \$34 (2013 dollars) for one additional fish caught and kept.

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 (Christopher Liese, NMFS SEFSC, personal communication, August 2010). These estimates were culled from several studies – Liese et al. (2009), Dumas et al. (2009), Holland et al. (1999), and Sutton et al. (1999). Estimates of net operating revenue per angler trip (2013 dollars) on representative charter trips (average charter trip regardless of area fished) are \$158 for Louisiana through east Florida, \$147 for east Florida, \$170 for northeast Florida, and \$139 for North Carolina. For charter trips into the EEZ only, net operating revenues are \$153 in east Florida and \$161 in northeast Florida. For full-day and overnight trips only, net operating revenues are estimated to be \$169-\$174 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 (2013 dollars) for a representative headboat trip are \$52 in the Gulf of Mexico (all states and all of Florida), and \$68-\$74 in North Carolina. For full-day and overnight headboat trips, net operating revenues are estimated to be \$81-\$84 in North Carolina. Comparable estimates are not available for Georgia and South Carolina.

A study of the North Carolina for-hire fishery provides some information on the financial status of the for-hire fishery in the state (Dumas et al. 2009). Depending on vessel length, regional location, and season, charter fees per passenger per trip ranged from \$182.58 to \$273.20 for a full-day trip and from \$101.70 to \$134.63 for a half-day trip; headboat fees ranged from \$78.71 to \$88.75 for a full-day trip and from \$41.32 to \$46.60 for a half-day trip. Charter boats generated a total of \$60.48 million in passenger fees, \$3.5 million in other vessel income (e.g., food and beverages), and \$5.2 million in tips. The corresponding figures for headboats were \$10.67 million in passenger fees, \$0.22 million in other vessel income, and \$0.97 million in tips. Non-labor expenditures (e.g., boat insurance, dockage fees, bait, ice, fuel) amounted to \$46.6 million for charter boats and \$5.8 million for headboats. Summing across vessel lengths and regions, charter vessels had an aggregate value (depreciated) of \$130.70 million and headboats had an aggregate value (depreciated) of \$11.08 million. All these values are in 2013 dollars.

A more recent study of the for-hire sector provides estimates on gross revenues generated by the charter boats and headboats in the South Atlantic (Holland et al. 2012). Average annual revenues (2013 dollars) per charter boat are estimated to be \$130,524 for Florida vessels, \$55,348 for Georgia vessels, \$104,417 for South Carolina vessels, and \$105,593 for North Carolina vessels. For headboats, the corresponding per vessel estimates are \$216,975 for Florida vessels and \$159,332 for vessels in the other states.

3.3.3 Social and Cultural Environment

Black sea bass are commercially harvested using a variety of gear including hook and line gear and pots. Before the winter prohibition on pot fishing, the majority of commercial harvest was landed using pot gear off the coasts of North and South Carolina. In the recent Amendment 18A (SAFMC 2012), the Council implemented restrictions on the number of pots (35) and a prohibition on overnight soaking of pots (leaving them in the water). These were considered to be viable alternatives to reduce interactions with marine mammals.

In addition, Amendment 18A (SAFMC 2012) added an endorsement to limit participation in the pot sector, reducing the number of active fishermen from approximately 55-60 to 32 valid or renewable endorsements. As of August 20, 2015, 14 endorsements are associated with communities in North Carolina, 8 endorsements with communities in South Carolina, two endorsements in Georgia, and 8 endorsements with Florida communities. It should be noted that in recent months, several endorsements have been transferred to different businesses, including two endorsements now associated with Georgia. Most of the North Carolina endorsements are associated with areas in Onslow County, primarily Sneads Ferry, with other communities with

black sea bass pot fishermen in Carteret County and further north into the Outer Banks (Wanchese) (see **Figure 3.3.1**). In South Carolina, communities associated with black sea bass pot fishing include Little River and Charleston. The Florida communities of note include several communities north of Cape Canaveral, including Port Orange, Ormond Beach, and Ponce Inlet. Until the summer months of 2015, few endorsements had been transferred from the original issue to a different snapper grouper permit holder. However, recently several endorsements have been transferred to other snapper grouper permit holders, indicating that the fishery is transitioning to adapt to recent changes to the fishery.

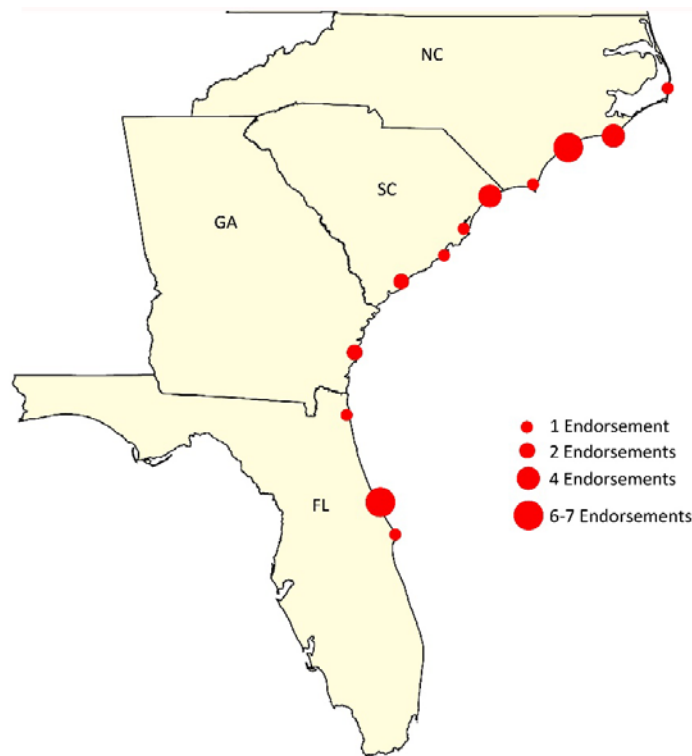


Figure 3.3.3.1. Distribution of black sea bass pot endorsements as of August 24, 2015
Source: SERO Permits 2015

Black sea bass is part of the larger snapper grouper complex and while this species is harvested commercially using several different gear types, the proposed regulatory action within this regulatory amendment will primarily affect commercial black sea bass pot fishermen, with some indirect effects for commercial black sea bass fishermen using other types of gear.

Figure 3.3.3.2 shows the top fishing communities in the South Atlantic by the combined vessel local quotient (LQ). The vessel LQ is a measure of the proportion of an individual vessel’s total landings of one species (in this case, black sea bass) in a fishing year compared to landings of all species in that year. An individual vessel LQ illustrates if a species is a large part of a vessel’s catch, which can indicate that the vessel (and associated captain, owner, crew, fish house) is relatively more reliant on a species. For **Figure 3.3.3.2**, the vessel LQs in each community are combined to allow for a comparison among communities, and to show how vessels’ reliance in a community on black sea bass has changed in recent years.

Most black sea bass pot endorsement holders participate in several other fisheries throughout the year (**Appendix I**) and hold other commercial permits. The pot endorsement is one of several permits in the fishermen’s portfolios. Public comments received specifically about the value of access to the pot fishery in the winter months are discussed in more detail in **Appendix L**.

Figure 3.3.3.2 suggests that the communities of Sneads Ferry, North Carolina; Georgetown, South Carolina; and Little River, South Carolina, have vessels with relatively higher reliance on black sea bass harvested with pots within the region over the last few years. It should be noted that **Figure 3.3.3.2** also shows how the combined vessel LQs for a community changed after the endorsement program was implemented. Sneads Ferry, Georgetown and Little River have almost always been the top three communities, while most other communities have fluctuated. In particular, the graph shows that Ponce Inlet, Florida, and Cape Carteret, North Carolina, have increased combined vessel LQs over recent years, suggesting growth in one or several black sea bass pot businesses in those communities.

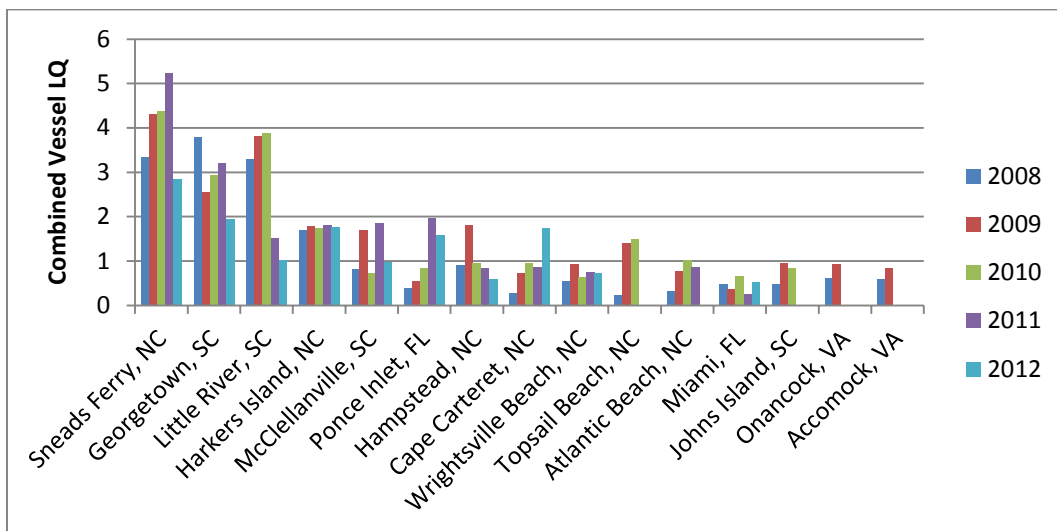


Figure 3.3.3.2. Combined vessel local quotients (LQs) for black sea bass harvested with pots in the top communities for 2008-2012.
Source: SEFSC ALS

Figure 3.3.3.3 shows the combined vessel LQs for black sea bass harvested with bandit gear in the top communities in recent years. This figure illustrates how communities may compare to one another in terms of reliance on black sea bass hook and line fishing, and how this has changed over the past few years. Communities in North Carolina and South Carolina are dominant in the region for black sea bass harvested with bandit gear, particularly Little River, South Carolina. **Figure 3.3.3.3** also suggests growth in black sea bass harvest with bandit gear for fishing businesses in several communities since the pot endorsement program began.

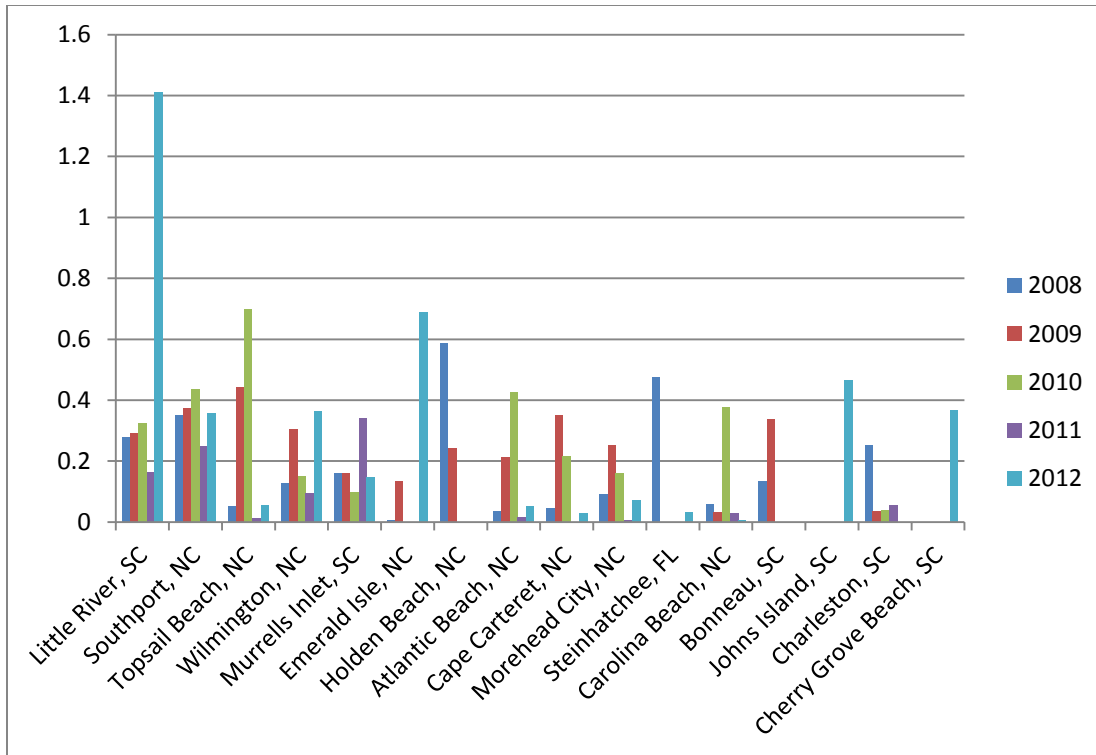


Figure 3.3.3.3. Combined vessel local quotients (LQs) for black sea bass harvested with bandit gear in the top communities for 2008-2012.
Source: SEFSC ALS

Commercial Fishing Engagement and Reliance

While we can characterize the fleet landings with regard to those communities that have high regional quotients for landings and value, it is more difficult to characterize the fleet and its labor force regarding demographics and places of residence for captains and crew of vessels. There is little to no information on captains and crew, including demographic makeup of crew, so we are left with descriptions regarding the engagement and reliance of fishing communities and their social vulnerability. To further delineate which communities are more dependent upon fishing, a suite of measures has been developed which uses the top communities identified in the RQ graphics and applies indices of fishing engagement and reliance.

Several indices composed of existing permit and landings data were created to provide a more empirical measure of fishing dependence (Jacob et al. 2012; Colburn and Jepson 2012; Jepson and Colburn 2013). Fishing engagement uses the absolute numbers of permits, landings and value, while fishing reliance includes many of the same variables as engagement, but divides by population to give an indication of the per capita impact 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. Factor scores are represented by colored bars and are standardized, therefore the mean is zero. Two thresholds of 1 and ½ standard deviation above the mean are plotted onto the graphs to help determine thresholds for

significance. Because the factor scores are standardized, a score above 1 is also above one standard deviation.

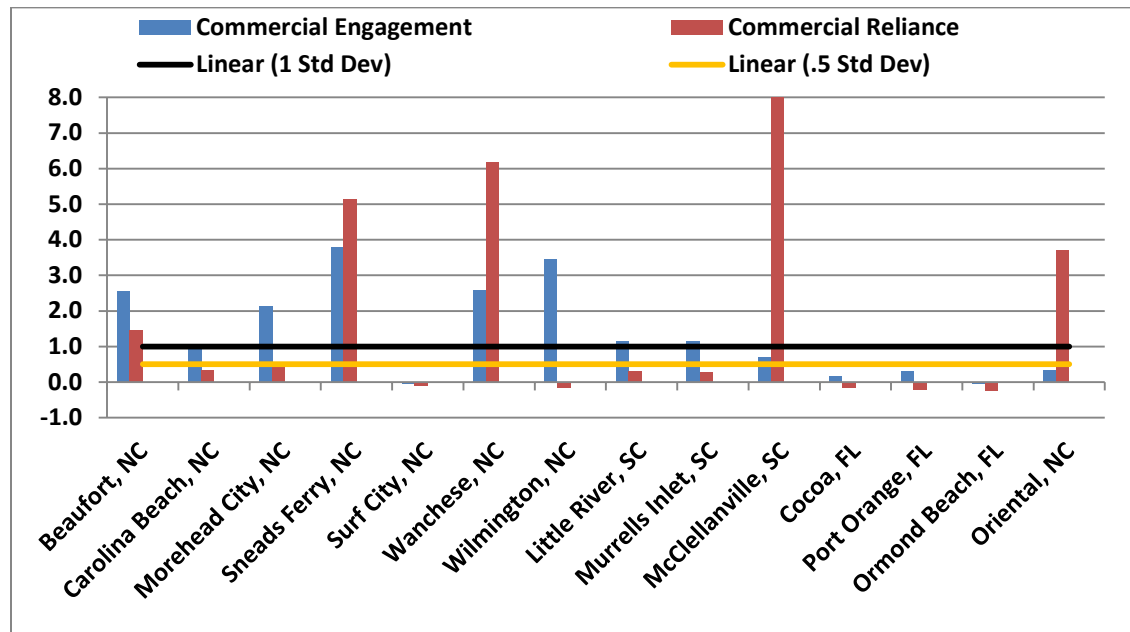


Figure 3.3.3.4. Commercial fishing engagement and reliance for top black sea bass fishing communities. Source: SERO Social Indicator Database 2013

The communities included in **Figures 3.3.3.4** have varying combinations of reliance and engagement. The communities of Beaufort, Sneads Ferry and Wanchese, North Carolina are considered likely dependent upon fishing overall as they exceed both thresholds for fishing reliance and engagement measures. Other communities might be considered commercially engaged as they exceed the highest threshold for commercial engagement. Those communities are: Morehead City, and Wilmington, North Carolina; Little River and Murrell’s Inlet, South Carolina. Finally, communities like McClellanville, South Carolina and Oriental, North Carolina are commercially reliant as they exceed the highest threshold for commercial reliance.

Broader Affected Social Environment

In addition to fishermen and fishing communities as part of the social environment, this regulatory amendment may also have a broader Affected Social Environment because it addresses protection of North Atlantic right whales, which are protected under two federal laws, the MMPA and ESA. The mandates and authority under these laws were established with the end-goal that protection of these species is important to U.S. citizens and society. Specifically, the MMPA states that:

..marine mammals have proven themselves to be resources of **great international significance, esthetic and recreational as well as economic**, and it is the sense of the Congress that they should be protected and encouraged to develop to the greatest extent feasible commensurate with sound policies of resource management and that the primary

objective of their management should be to maintain the health and stability of the marine ecosystem. (16 U.S. Code § 1361) (emphasis added)

The ESA also includes language that states:

...these species of fish, wildlife, and plants are **of esthetic, ecological, educational, historical, recreational, and scientific value to the Nation and its people;**

...encouraging the States and other interested parties, through Federal financial assistance and a system of incentives, to develop and maintain conservation programs which meet national and international standards is a key to meeting the Nation's international commitments and to better safeguarding, **for the benefit of all citizens**, the Nation's heritage in fish, wildlife, and plants. (16 U.S. Code § 1531) (emphasis added)

Therefore, the United States and its citizens are included in the social environment for purposes of analysis of potential social effects in **Chapter 4, Section 4.1.3**.

3.3.4 Environmental Justice

In order to assess whether a community may be experiencing environmental justice (EJ) issues, a suite of indices created to examine the social vulnerability of coastal communities (Colburn and Jepson 2012; Jacob et al. 2012) is presented in **Figure 3.3.4.1**. 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 and children under the age of 5, disruptions such as higher separation rates, higher crime rates, and unemployment all are signs of vulnerable populations. These indicators are closely aligned to previously used measures of EJ, which used thresholds for the number of minorities and those in poverty, but are more comprehensive in their assessment. Again, for those communities that exceed the threshold, it would be expected that they would exhibit vulnerabilities to sudden changes or social disruption that might accrue from regulatory change. It should be noted that some communities may not appear in these figures as there are no census data available to create the indices.

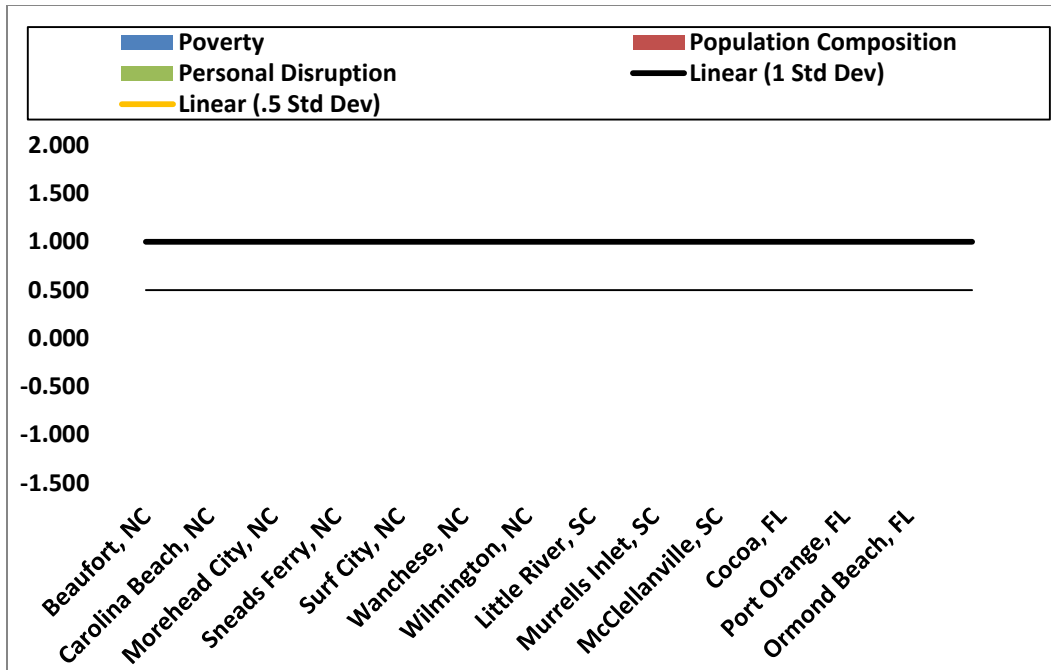


Figure 3.3.4.1. Social Vulnerability indices for black sea bass fishing communities in terms of pounds and value regional quotient in the South Atlantic.
 Source: SERO Social Indicator Database 2014

There is one community in **Figure 3.3.4.1** that exceeds both thresholds for at least two indices: Cocoa, Florida. Wilmington, North Carolina, exceeds the lower threshold for poverty and personal disruption, with a few other communities exceeding the lower threshold for one or the other: Beaufort, Carolina Beach, Morehead City and Wanchese, North Carolina. While most communities in **Figure 3.3.4.1** are not experiencing much social vulnerability, there could still be some negative social effects that are exacerbated by other vulnerabilities that occur but are not represented by these indicators. However, these measures of social vulnerability are representative of many common social vulnerability factors.

Finally, the general participatory process used in the development of fishery management measures (e.g., scoping meetings, public hearings, and open South Atlantic Council meetings) provides sufficient opportunity for meaningful involvement by potentially affected individuals to participate in the development process of this regulatory 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 regulatory amendment.

3.4 Administrative Environment

3.4.1 The Fishery Management Process and Applicable Laws

3.4.1.1 Federal Fishery Management

Federal fishery management is conducted under the authority of the Magnuson-Stevens Act (16 U.S.C. 1801 et seq.), originally enacted in 1976 as the Fishery Conservation and Management Act. The Magnuson-Stevens Act claims sovereign rights and exclusive fishery management authority over most fishery resources within the exclusive economic zone (EEZ), an area extending 200 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 U.S. EEZ.

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

The South Atlantic Council is responsible for conservation and management of fishery resources in federal waters of the U.S. South Atlantic. These waters extend from 3 to 200 miles offshore from the seaward boundary of North Carolina, South Carolina, Georgia, and east Florida to Key West. The South Atlantic Council has thirteen voting members: one from NMFS; one each from the state fishery agencies of North Carolina, South Carolina, Georgia, and Florida; and eight public members appointed by the Secretary. On the South Atlantic Council, there are two public members from each of the four South Atlantic States. Non-voting members include representatives of the U.S. Fish and Wildlife Service, U.S. Coast Guard, State Department, and Atlantic States Marine Fisheries Commission (ASMFC). The South Atlantic Council has adopted procedures whereby the non-voting members serving on the South Atlantic Council Committees have full voting rights at the Committee level but not at the full South Atlantic Council level. South Atlantic Council members serve three-year terms and are recommended by state governors and appointed by the Secretary from lists of nominees submitted by state governors. Appointed members may serve a maximum of three consecutive terms.

Public interests also are involved in the fishery management process through participation on Advisory Panels and through council meetings, which, with few exceptions for discussing personnel and legal matters, are open to the public. The South Atlantic Council uses its Scientific and Statistical Committee to review the data and science being used in assessments

and fishery management plans/amendments. In addition, the regulatory process is in accordance with the Administrative Procedure Act, in the form of “notice and comment” rulemaking.

3.4.1.2 State Fishery Management

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

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

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

3.4.1.3 Enforcement

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

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

Administrative monetary penalties and permit sanctions are issued pursuant to the guidance found in the Policy for the Assessment of Civil Administrative Penalties and Permit Sanctions for the NOAA Office of the General Counsel – Enforcement Section. This Policy is published at the Enforcement Section’s website: <http://www.gc.noaa.gov/enforce-office3.html> .

Chapter 4. Environmental Consequences and Comparison of Alternatives

4.1 Action 1. Modify the annual November 1 through April 30 prohibition on the use of black sea bass pot gear

4.1.1 Biological/Ecological Effects

Black Sea Bass

The alternatives range from maintaining the current prohibition on use of black sea bass pots in the entire exclusive economic zone (EEZ) from November 1 through April 30, annually (**Alternative 1 (No Action)**) to allowing the black sea bass pot sector to operate based on varying spatial and seasonal closures. **Alternative 2** would prohibit black sea bass pots within the currently designated North Atlantic Right Whale (NARW) critical habitat, annually, from November 15 through April 15. **Alternatives 3-6** include various areas in which use of black sea bass pots would be prohibited, annually, from November 1 through April 30. **Alternatives 7a-7c** combine the area designated for NARW critical habitat with additional area off the Carolinas and northern Georgia that would close the areas for differing times.

Alternatives 8a and **8b** combine the area closure for Florida and Georgia in **Alternative 5** with the area closure for North Carolina and South Carolina from **Alternative 7** over differing time frames. **Alternative 9a** combines **Alternative 5** for the closure off Florida and Georgia with a

Action 1 Alternatives¹ *(preferred alternative in bold)*

1. No action. Closure would remain.
2. Closure of the currently designated North Atlantic right whale critical habitat area Nov 15 – April 15.
3. Closure from Nov 1 – April 30 between Ponce Inlet, FL and Cape Hatteras, NC based on extrapolated model outputs.
4. Closure from Nov 1 – April 30 in depths 25 m or shallower from Daytona Beach to Savannah and 30 m or shallower from Savannah to C. Hatteras.
5. Closure from Nov 1 – April 30 between Daytona Beach & C. Hatteras based on NGO comments.
6. Closure from Nov 1 – April 30 between Sebastian, FL & C. Hatteras, NC based on NGO comments.
7. Closure of the currently designated North Atlantic right whale critical habitat area & north to C. Hatteras in depths 25 m or shallower.
 - 7a. Nov 1 – Dec 15 & Mar 15 – Apr 30.
 - 7b. Off NC/SC Nov 1 – Dec 15/Mar 15 – April 30 and off FL/GA Nov 15 – April 15.
 - 7c. Off NC/SC Feb 15 – Apr 30. Off FL/GA Nov 15 – Apr 15.
8. Off FL/GA same as Alt 5. Off SC/NC < 25 m.
 - 8a. Closure Nov 1 – Apr 15.
 - 8b. FL/GA closure Nov 15 – Apr 1 SC/NC closure Nov 1 – Dec 15 and Feb 15 – Apr 30.
9. Off FL/GA same as Alt 5. Off SC/NC < 20 m.
 - 9a. Closure Nov 1 – Apr 15.
 - 9b. FL/GA closure Nov 15 – Apr 15. SC/NC closure Nov 1 – Dec 15 and Feb 15 – Apr 30.
10. Off FL/GA same as Alt 5 with closure Nov 15 – Apr 15. Off SC/NC Nov 1 – Dec 15 < 20 m. Off SC/NC Feb 15 1 – Apr 30 < 25 m.
11. **Nov 1 – 30 and Apr 1 - 30 off FL/GA same as Alt 5, off SC/NC same as Alt 8. Dec 1 – Mar 31, off FL/GA closure < 25 m, off SC/NC closure < 30 m.**
12. Nov 1 – Apr 30, midpoints between proposed closure Alts 4 and 8.

¹See Chapter 2 for a more detailed description of the alternatives.

closure off North Carolina and South Carolina based on the 20 meter depth contour from November 1 through April 15. **Alternative 9b** has the same area closure as **Alternative 9a** but would close from November 15 through April 15 off Florida and Georgia and would close off North Carolina and South Carolina from November 1 through December 15 and February 15 through April 30. **Alternative 10** has the same area closure off Florida and Georgia as **Alternative 5** with a seasonal closure from November 15 through April 15 and would close off North Carolina and South Carolina from November 1 through December 15 in waters less than 20 meters (66 feet) and from February 15 through April 30 in waters less than 25 meters (82 feet). **Preferred Alternative 11** has the same area closure as **Alternative 5** off Florida and Georgia and **Alternative 8** off North and South Carolina from November 1 through November 30 and April 1 through April 30 and **Alternative 4** for all areas from December 1 through March 31. **Alternative 12** is the mid-point between **Alternative 4** and **Sub-Alternative 8a** and would apply from November 1 through April 30.

The expected closure date ranges for the commercial black sea bass season are shown in **Table 4.1.1.1**. The ranges of closing dates and expected percentages of the commercial ACL that would be landed are due to different scenarios considered in the analyses (SERO-LAPP-2015-09; included as **Appendix N**). The scenarios considered various combinations of the spatial distribution of landings and effort, and factors that affected catch rate projections.

Regardless of which alternative the Council chooses, no biological impacts to the black sea bass stock are expected. Adverse biological effects are prevented because overall harvest in the commercial sector is limited to the commercial ACL; commercial accountability measures (AMs) are also in place. The ACL, which is a function of the acceptable biological catch (ABC) is reduced from the overfishing level as required to address assessment uncertainty. In addition, there is no evidence to suggest that changing the timing of harvest within the periods covered by the alternatives would have adverse biological impacts. These alternatives are predicted to allow harvest of 97-100% of the ACL and would not provide additional protection to the black sea bass stock in terms of reduced harvest (**Table 4.1.1.1**). Therefore, there is no difference in the biological effects on black sea bass from the alternatives.

Table 4.1.1.1. Expected closure dates for the commercial black sea bass fishery with a January 1 fishing year start date.

	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Alternative 1	No Closure	No Closure	No Closure	No Closure
Alternative 2	10/2	8/4	10/26 - 11/4	11/19 - 12/3
Alternative 3	11/26 - 12/5	10/4 - 10/17	10/26 - 11/4	11/19 - 12/3
Alternative 4	12/20 - 12/30	12/7 - 12/22	12/11 - 12/18	12/19 - 12/30
Alternative 5	12/16 - 12/24	12/1 - 12/11	12/6 - 12/11	12/15 - 12/23
Alternative 6	12/20 - NC*	12/7 - 12/25	12/10 - 12/20	12/19 - NC
Sub-Alternative 7a	10/11 - 10/12	8/18 - 8/20	10/6 - 10/9	10/7 - 10/9
Sub-Alternative 7b	12/28 - NC	12/18 - 12/30	12/17 - 12/21	12/28 - NC
Sub-Alternative 7c	12/22 - 12/28	12/9 - 12/17	12/11 - 12/14	12/23 - 12/29
Sub-Alternative 8a	12/6 - 12/11	10/14 - 10/25	10/29 - 11/5	12/5 - 12/9
Sub-Alternative 8b	12/29 - NC	12/20 - 12/30	12/18 - 12/21	12/29 - NC
Sub-Alternative 9a	10/28 - 11/9	9/15 - 9/27	10/13 - 10/19	10/24 - 11/3
Sub-Alternative 9b	12/26 - NC	12/15 - 12/28	12/14 - 12/20	12/26 - NC
Alternative 10	12/27 - NC	12/17 - 12/29	12/16 - 12/20	12/28 - NC
Preferred Alternative 11	12/18 - 12/28	12/3 - 12/18	12/6 - 12/13	12/17 - 12/27
Alternative 12	12/15 - 12/23	11/21 - 12/10	12/5 - 12/11	12/14 - 12/22

* NC = No Closure

Source: **Appendix N; Appendix I**

Bycatch

Catch in the black sea bass pot sector consists of two components: landed fish and discarded bycatch. The landed catch was analyzed using logbook data reported by fishermen for trips with landings of black sea bass reported. The total number of trips catching black sea bass, total catch of each species or category, and catch per trip was summarized. The catch per trip was simply the total landings for each market category divided by the total number of trips. Data on landed catch might have changed over time due to seasonal restrictions, desirability of the species, gear restrictions, and improved reporting. It cannot be determined if a change in landings or average catch per trip is due to regulation effects or population effects. The landings are associated with the pot sector; however, the species could have been harvested using other gear.

Besides black sea bass, landed catch, which averaged greater than 2 pounds (lbs) per trip associated with the black sea bass pot sector from 2000 to 2011, consisted of white grunt, king mackerel, cero mackerel, triggerfishes, king mackerel, blueline tilefish), and unclassified scups or porgies (**Figure 4.1.1.1**). The average landings of catch per trip of species other than black sea bass was 78 lbs from 2000 to 2011, while the average catch of black sea bass per trip was 629 lbs. The time period selected was based on the timing of the pot endorsement becoming effective in 2012.

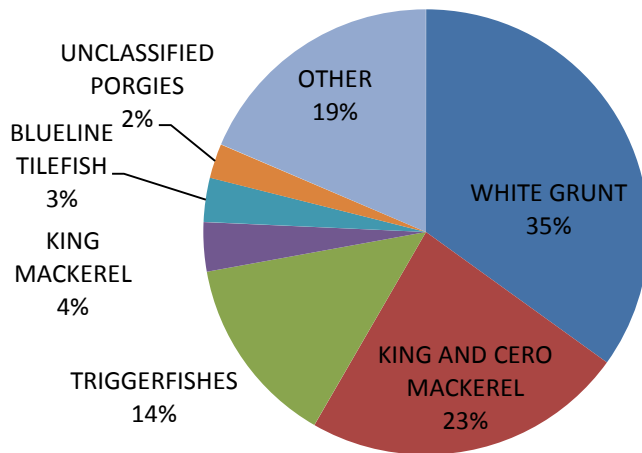


Figure 4.1.1.1. Percentage of landed catch in the black sea bass pot sector for landings categories from 2000 to 2011. Source: SEFSC Commercial Logbook (accessed May 2015) and Commercial Discard Logbook (accessed November 2014).

In 2012 and 2013, the landed catch from black sea bass pots (other than black sea bass), which averaged greater than 2 lbs per trip associated consisted of white grunt, triggerfishes, greater amberjack, red porgy, wahoo, king mackerel, bluefish, gag, and red snapper (**Figure 4.1.1.2**). The average landings of catch per trip for species besides black sea bass was 63 lbs from 2012 and 2013. The average landings of black sea bass was 645 pounds. In both time periods, white grunt, triggerfish, and king mackerel were commonly landed species associated with the black sea bass pot sector. The remaining species varied over the time period. The change in the landed species could have resulted from different seasons of fishing, restrictions on the pot sector, change in the distribution of the pot sector, change in abundance, or change in desirability of different species. The effect of the different alternatives on the landed incidental catch in black sea bass pots cannot be determined. The hook and line sector has a much higher diversity in landing categories than pot gear. Thus, if black sea bass pot fishermen shift to hook and line gear, it would be difficult to determine the targeted species.

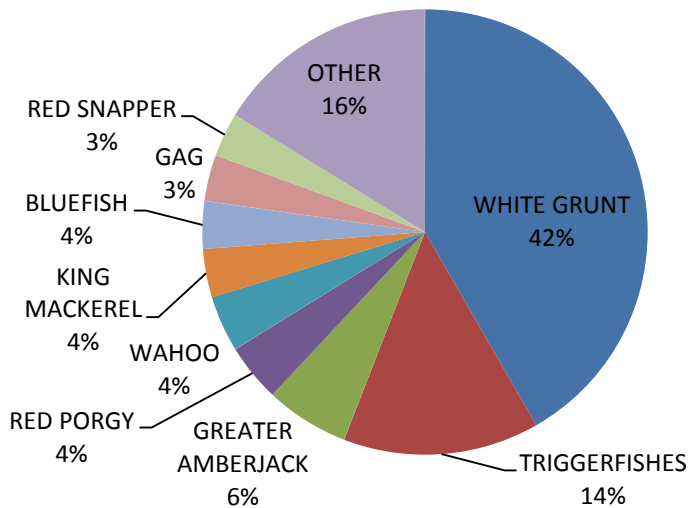


Figure 4.1.1.2. Percentage of landed bycatch in the black sea bass pot sector for landings categories from 2012 and 2013.

Source: SEFSC Commercial Logbook (accessed May 2015) and Commercial Discard Logbook (accessed November 2014).

The discarded bycatch greater than 10 fish per trip included black sea bass, spottail pinfish, gray triggerfish, white grunt, and scup (**Table 4.1.1.2**). The greatest number of fish discarded was black sea bass and averaged 3,709 fish per year. Fishermen did not report discarding greater than 100 fish per year for any other species.

Table 4.1.1.2. Top ten stocks with mean estimated South Atlantic commercial discards (#fish) during snapper grouper trips (defined as trips with >50% of landings from snapper grouper stocks), sorted from largest to smallest, by gear, for the 2009-2013 period.

Stock	Handline /Electric	Stock	Pot
yellowtail snapper	5483.2	black sea bass	3708.8
gray snapper	1887.4	pinfish spottail	59
black sea bass	1274.6	gray triggerfish	54.8
red snapper	1132.6	white grunt	43.6
vermilion snapper	721.6	grunts	32.7
red pogy	640.7	scup	30.8
gag	492.3	red pogy	27.6
unc amberjack	172.2	finfishes unc	8.3
unc groupers	143.9	gag	8.2
unc snappers	130.9	vermilion snapper	5.8

Source: SEFSC Commercial Logbook (accessed May 2015) and Commercial Discard Logbook (accessed November 2014).

Protected Resources

The South Atlantic black sea bass pot sector is listed as part of the larger “Atlantic mixed species trap/pot fishery” under the List of Fisheries (LOF). The National Marine Fisheries Service (NMFS) publishes annually the LOF as required by the Marine Mammal Protection Act (MMPA). The LOF classifies U.S. commercial fisheries into one of three categories according to the level of incidental mortality or serious injury of marine mammals:

- I. **frequent** incidental mortality or serious injury of marine mammals
- II. **occasional** incidental mortality or serious injury of marine mammals
- III. **remote likelihood of/no known** incidental mortality or serious injury of marine mammals.

The classification of a fishery on the LOF determines whether participants in that fishery are subject to certain provisions of the MMPA, such as registration, observer coverage, and take reduction plan (TRP) requirements.

The Atlantic mixed species trap/pot fishery (of which the Council’s black sea bass pot sector is a part) is considered a Category II fishery under the LOF because it occasionally causes incidental mortality or serious injury to marine mammals. The Atlantic mixed species trap/pot fishery has interacted with fin and humpback whales (January 28, 2015, 79 FR 77919). Some pot gear in other areas are Category I fisheries under the LOF because they are known to frequently cause incidental mortalities or serious injuries of marine mammals. Category I fisheries have been documented to cause serious injury and death to NARW (Johnson et al. 2005, Knowlton et al. 2012). Other trap/pot fisheries are classified as Category III fisheries because there is a remote likelihood of or no known incidental mortality or serious injury of marine mammals.

Entanglements incidental to commercial fishing are the primary threat to right whales; however, less is known about the source of entanglement. In a study of 31 right whale entanglements, Johnson et al. (2005) found 14 cases where gear type could be identified; pot gear represented 71% of these cases (8 lobster pots, 1 crab pot, 1 unknown pot). In a recent compilation of data from 2007-2014, there were 17 entangled whales and none of these were attributed to a specific fishery (Waring et al. 2014). These data indicate information from an entanglement event often does not include the detail necessary to assign the entanglements to a particular fishery or location, and scarring studies suggest the vast majority of entanglements are not observed (Waring et al. 2014). Consequently, while black sea bass pot gear has not been definitively identified in a right whale entanglement, right whale entanglements in gear consistent with that used in the commercial black sea bass sector have been documented. Knowlton et al. (2015) examined line characteristics of fishing gear removed from live and dead entangled whales from the U.S. East Coast and Canada from 1994-2010. Of 132 ropes from 70 cases, they found 26% of ropes were in the range of 0.312 in (~5/16 in) to .654 in (11/16 in) diameter and made out of polypropylene (Knowlton et al, in press). Levesque (2009) interviewed 42 black sea bass pot fishermen from major fishing ports in the area from Georgia through North Carolina. Fishermen reporting using 1/4 in, 5/16 in, or 3/8 in diameter buoy lines and most used line made out of polypropylene (Levesque 2009).

The western NARW stock is endangered and the minimum population size was 455 individuals in 2012 (Waring et al. 2014). The potential biological removal (PBR) for right

whales is 0.9 individuals, and any mortality or serious injury is considered significant (Waring et al. 2014). (PBR is defined by the MMPA as the maximum number of animals, not including natural mortalities that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population.) Serious injury and mortality due to human anthropogenic impacts has exceeded the PBR from 2006 to 2011 (Waring et al. 2013, Waring et al. 2014). Specifically, the current rate of fishery entanglements averages 3.25 animals per year and is 3.6 times over PBR (Waring et al. 2014). Additionally, an increase in mortality in 2004 and 2005 was cause for serious concern (Kraus et al. 2005; Waring et al. 2014). Calculations based on demographic data through 1999 (Fujiwara and Caswell 2001) indicated that this mortality rate increase would reduce population growth by approximately 10% per year (Kraus et al. 2005; Waring et al. 2014). Of those mortalities, six were adult females, three of which were carrying near-term fetuses. Furthermore, four of these females were just starting to bear calves, losing their complete lifetime reproduction potential. From 1998-2000, strong evidence suggested a flat or negative growth in the minimum number of animals alive, which coincided with very low calf production in 2004 (Waring et al. 2014). However, the population has continued to grow since that apparent interval of decline. Examination of the minimum population estimates for NARW indicates an estimated population growth rate of 2.8% per year from the 1990s to 2010s (Waring et al. 2014).

Potential serious injury or mortality to right whales should be considered for management measures in the black sea bass pot sector because right whales may be found in the Council's jurisdiction from November 1 through April 30 (NMFS 2008). The bulk of the black sea bass pot effort traditionally operated from November to April. Since 2010, the black sea bass pot sector has not fished during this time due to ACL closures (2010, 2011, and 2012) or by regulation (2013 to present). A regulatory closure of the pot sector from November 1 through April 30 was implemented in 2013, via Regulatory Amendment 19 to the Snapper Grouper FMP (2013b). The regulatory closure was implemented to protect endangered right whales while allowing an increase in the ACL. Had the regulatory closure not been implemented, the potential for black sea bass pot gear interactions with right whales would have increased, requiring re-initiation of formal consultation under the Endangered Species Act (ESA) which would have delayed the ACL increase.

Throughout the range of the NARW, the NMFS budgeted \$8.7 million in fiscal year (FY) 2013 and \$8.4 million in FY 2014 in whale recovery budgets. As an example, NMFS (NMFS SERO PRD 2015) estimates that it cost \$87,900 for a multi-agency attempt to rescue a right whale in trap/pot gear in 2010/2011. Between FY 2003 and FY 2005, the costs of actions to reduce fishery bycatch of NARW were between \$4.9 million and \$7.7 million across several federal and non-governmental organizations (Reeves et al. 2007). During the FY 2003-2005, the multi-agency costs to promote NARW recovery ranged from \$13.1 million to \$16.7 million throughout the NARW range (Reeves et al. 2007).

Restrictions to black sea bass pot sector were implemented via Amendment 18A to the Snapper Grouper FMP (Amendment 18A; SAFMC 2012) in 2012. The Council developed Amendment 18A to modify the rebuilding strategy including the ABC, ACL, and AMs, reduce participation and effort in the black sea bass pot segment of the snapper grouper fishery, and adjust the system of accountability in the recreational sector. Specifically, the Council

established a maximum of 35 pots per fishermen, required that pots be removed from the water when a trip is completed, established an endorsement to limit the number of fishermen (32 fishermen) that could use pots to harvest black sea bass, and increased the recreational size limit. Since these restrictions were enacted, the average number of pots in the water per day is 75 for all endorsement holders combined, with a maximum reported number of pots fished on a day of 278; the total pots fished in one day cannot exceed 1,120 pots (32 fishermen times 35 pots) in the South Atlantic (SAFMC 2012). While not the purpose of the Amendment 18A, many requirements it implemented likely have some ancillary biological benefits to NARW. However, the most notable large whale entanglement risk reduction measure in the Council's commercial black sea bass pot sector is that the black sea bass fishing season has not co-occurred with the right whale season for the last several years (July 16, 2013; 78 FR 42654).

To quantify the different alternatives in **Action 1**, an entanglement relative risk analysis was conducted to estimate the biological effects of proposed closures on black sea bass pot gear fishing and NARW entanglement risk (**Appendix N**). Data on actual interactions between black sea bass pots and NARW do not exist, so the co-occurrence of gear and whales was used as a proxy for entanglement risk. This co-occurrence model estimated the relative risk of entanglement relative to each alternative. The distribution of whales in the model was simulated using approaches described in **Appendix N**. This analysis was reviewed by the Southeast Fishery Science Center, the Atlantic Scientific Review Group (SRG), and the Council's Scientific and Statistical Committee (SSC). The SRG advises NMFS and U.S. Fish and Wildlife Service on the status of marine mammal stocks (under Section 117 of the Marine Mammal Protection Act). Comments from the SSC's October 2014 review of the analysis were addressed, and an updated analysis was presented to the SSC in April 2015. These scientific review bodies agreed that the whale interaction prediction model provided a reasonable proxy for the relative entanglement risk associated with each of the proposed alternatives. The analysis of uncertainty in the model indicated that the differences between alternatives were robust. The Atlantic SRG found that modeled distribution of right whales off North Carolina was valid and consistent with the expectations of experts on right whale biology. In April 2015, the SSC agreed that the updated analysis addressed all the concerns they had raised in their October 2014 meeting, and the analysis represented the best available scientific information on right whale entanglement relative risk associated with the proposed alternatives in Regulatory Amendment 16.

Due to uncertainty in how the black sea bass pot sector would proceed with their first winter opening since December 2010, many different scenarios were considered in the entanglement relative risk analyses (**Appendix N**). The scenarios considered various combinations of the spatial distribution of landings and effort, and factors that affected catch rate projections. These scenarios produced a range of potential closure dates (**Table 4.1.1.1**).

Regardless of which alternative the Council chooses, no biological impacts to the black sea bass stock are expected. No adverse biological effects are anticipated because overall harvest in the commercial sector is limited to the commercial ACL by the commercial AM, and the ACL, which is a function of the ABC, is reduced from the overfishing level as required to address assessment uncertainty. In addition, there is no evidence to suggest that changing the timing of harvest within the periods covered by the alternatives would have adverse biological impacts. These alternatives offer no advantages to the black sea bass stock in terms of further reduced

harvest because it is estimated that 97-100% of the ACL would be taken (**Appendix N**). Therefore, there is no difference in the biological effects on black sea bass from the alternatives.

The alternatives under consideration differ substantially in their potential biological effects on ESA-listed large whales. The comparison of alternatives below is based primarily on the analysis in SERO-LAPP-2014-09 (**Appendix N; Table 4.1.1.3**). The analysis simulated the potential landings of black sea bass pot endorsement holders during a winter season for **Alternatives 1** through **12**. Factoring in landings by other gear, the date the ACL would be met under each scenario was predicted. The analysis also considers overlays of the co-occurrence of the seasonal distribution of black sea bass pot gear and North Atlantic right whales as a proxy for the relative risk of right whale entanglements under each of the proposed alternatives. Overlaying distributions of right whales with fisheries/ships/etc., is an established way of evaluating risk from activities of interest (NMFS 2015b, Redfern et al. 2013). Due to differences in right whale sampling protocols and data availability, separate models that overlaid right whale and black sea bass fishing effort were generated for two regions: for North Carolina and for South Carolina to Florida. The resulting analysis estimated the relative risk of entanglement for a given alternative in those two regions.

Table 4.1.1.3. Ranked projected risk of right whale entanglement in pot gear vertical lines (in relative risk units; RRU) under proposed Alternatives in Regulatory Amendment 16. **Alternative 1** is the no action alternative.

RISK	Relative Risk of Alternative (Min-Max in Parentheses)
Low	Alt1: no risk of entanglement (0 RRU)
	Alt6: low increase in risk off NC (+2-8 RRU); no additional risk off FL-SC (0-0 RRU).
	Alt4: low increase in risk off NC (+2-8 RRU); low increase in risk off FL-SC (0-3 RRU).
	Alt12: low increase in risk off NC (+3-14 RRU); low increase in risk off FL-SC (2-9 RRU).
	Preferred Alt11: low increase in risk off NC (+3-15 RRU); low increase in risk off FL-SC (1-12 RRU).
	Alt5: low increase in risk off NC (+1-2 RRU); low to high increase in risk off FL-SC (11-58 RRU).
	Alt10: low to moderate increase in risk off NC (+6-20 RRU); low to high increase in risk off FL-SC (12-58 RRU).
	Alt8a: low to moderate increase in risk off NC (+6-26 RRU); low to high increase in risk off FL-SC (12-58 RRU).
	Alt3: low to moderate increase in risk off NC (+10-26 RRU); low to high increase in risk off FL-SC (16-52 RRU).
	Alt9a: moderate to high increase in risk off NC (+26-51 RRU); moderate to high increase in risk off FL-SC (30-72 RRU).
	Alt8b: moderate to high increase in risk off NC (+46-50 RRU); high to very high increase in risk off FL-SC (58-77 RRU).
	Alt7c: moderate increase in risk off NC (+46-50 RRU); moderate to high increase in risk off FL-SC (55-76 RRU).
	Alt9b: high increase in risk off NC (+54-63 RRU); high to very high increase in risk off FL-SC (64-83 RRU).
	Alt7b: high increase in risk off NC (+69-74 RRU); high to very high increase in risk off FL-SC (67-94 RRU).
	Alt7a: high increase in risk off NC (+69-74 RRU); very high increase in risk off FL-SC (77-96 RRU).
High	Alt2: very high increase in risk off NC (+100-100 RRU); very high increase in risk off FL-SC (100-100 RRU).
	1-25 RRU = low, 26-50 RRU = moderate, 51-75 RRU= high, 76-100+ RRU = very high

Alternative 1 (No Action) introduces no additional entanglement risk to ESA-listed large whales. North Atlantic right whales follow a general annual pattern of migration between low latitude winter calving grounds and high latitude summer foraging grounds (Perry et al. 1999, Kenney 2002). The coastal waters of the southeastern United States are the only known calving area for North Atlantic right whales. As many as 243 right whales have been documented in the southeastern United States during a single calving season (P. Hamilton, personal communication, April 11, 2014). Studies indicate that right whale concentrations are highest in the core calving area off Florida and Georgia from November 15 through April 15 (NMFS 2008), but they may occur from North Carolina to Florida from November 1 through April 30 (NMFS 2008). Systematic surveys conducted off the coast of North Carolina during the winters of 2001 and 2002 sighted eight calves, suggesting the calving grounds may actually extend as far north as Cape Fear, North Carolina (McLellan et al. 2004). The amount of time non-calving right whales spend in the southeastern United States is typically less than one month (A. Krzystan, June 2014 SEIT meeting) indicating a steady stream of right whales travel between habitats in the northeastern and southeastern United States during fall, winter, and spring. For example, two right whales tagged off Florida in January 2015 and radio-tracked for more than 24 hours migrated northward, mid-season, within days of being tagged. On rare occasions, right whales have been spotted as early as September and as late as July in the southeastern United States (Taylor et al. 2010). There is also increasing evidence that juvenile humpback whales remain in the Mid-Atlantic during the winter to feed instead of travelling to the Caribbean to breed.

Entanglement in fixed fishing gear is a leading cause of right whale mortality (Knowlton et al. 2012). Rope from trap/pot gear was more frequently found on entangled right whales than rope associated with gillnets when gear from entangled whales could be identified (Johnson et al. 2005). Knowlton et al. (2012) report that approximately 83% of all right whales have been entangled at least once, and 60% of those animals had been entangled multiple times. The authors further clarify that this is a minimum estimate (Knowlton et al. 2012). Based on the current known information about North Atlantic right and humpback whales in the southeastern United States, **Alternative 1 (No Action)** removes temporal and spatial overlap between the black sea bass pot sector and these species; essentially eliminating entanglement risk. Maintaining status quo ensures that no black sea bass pot lines would be in the water when ESA-listed large whales are likely to be in or transiting through waters under the Council's jurisdiction.

Alternative 2 introduces the greatest amount of entanglement risk relative to all the other alternatives. The SERO-LAPP-2014-09 analysis indicates a very high increase in entanglement risk for right whales off North Carolina and from South Carolina to Florida for **Alternative 2**, relative to **Alternative 1 (No Action)**. The very high relative risk associated with **Alternative 2** is because predicted North Atlantic right whale presence is high outside of the spatial boundaries of **Alternative 2**. **Alternative 2** is based on the currently designated North Atlantic right whale critical habitat, designated in the 1994. This area was originally based on 303 sightings from 1950-1989. In the 20+ years since designation, the understanding of where North Atlantic right whales occur, or are most likely to occur, in southeastern United States has grown significantly. The current Right Whale Critical Habitat includes state waters. The SERO-LAPP-2014-09 analysis does not include data from state waters, as the Council does not have authority to prohibit the use of black sea bass pots in state waters. On January 26, 2016, NMFS issued a final rule that created an expansion of the critical habitat area. The South Atlantic Council voted in December 2015 to send this amendment in for U.S. Secretary of Commerce review prior to the publication of the final rule for the North Atlantic right whale critical habitat area expansion.

The following is language describing the North Atlantic right whale critical habitat area from 50 CFR § 226.203(c) used to develop **Alternative 2**:

Southeastern United States: The area designated as critical habitat in these waters encompasses waters between 31 deg.15'N (approximately located at the mouth of the Altamaha River, GA) and 30 deg.15'N (approximately Jacksonville, FL) from the shoreline out to 15 nautical miles offshore; and the waters between 30 deg.15'N and 28 deg.00'N (approximately Sebastian Inlet, FL) from the shoreline out to 5 nautical miles.

The following is language describing the North Atlantic right whale critical habitat area from 50 CFR § 226.203(c) as designated on January 26, 2016:

Southeastern United States: Includes marine waters from Cape Fear, North Carolina, southward to 28°N latitude (approximately 31 miles south of Cape Canaveral, Florida) within the area bounded on the west by the shoreline and the 72 COLREGS lines, and on

the east by rhumb lines connecting the following points in the order stated from north to south.

N. Latitude	W. Longitude
33°51' N	at shoreline
33°42' N	77°43' W
33°37' N	77°47' W
33°28' N	78°33' W
32°59' N	78°50' W
32°17' N	79°53' W
31°31' N	80°33' W
30°43' N	80°49' W
30°30' N	81°01' W
29°45' N	81°01' W
29°15' N	80°55' W
29°08' N	80°51' W
28°50' N	80°39' W
28°38' N	80°30' W
28°28' N	80°26' W
28°24' N	80°27' W
28°21' N	80°31' W
28°16' N	80°31' W
28°11' N	80°33' W
28°00' N	80°29' W
28°00' N	At shoreline

Alternative 3 would likely introduce less entanglement risk than many alternatives (i.e., **Alternative 2**, and **Sub-Alternatives 7a, 7b, 7c, 8b, 9a, and 9b**), but introduce more entanglement risk than others (i.e., **Alternatives 1 (No Action), 4, 5, 6, 8a, 10, Preferred 11, and 12**). The SERO-LAPP-2014-09 analysis indicates a low to moderate increased entanglement risk in right whales off North Carolina, for this alternative, relative to **Alternative 1 (No Action)**. However, that analysis indicates a low to high increased risk of entanglement from South Carolina to Florida for this alternative, relative to **Alternative 1 (No Action)**. **Alternative 3** considers the entire period when ESA-listed large whales may be in the southeastern United States (i.e., November 1 through April 30). However, the increase in relative risk is likely because the area proposed in **Alternative 3** is based on habitat features preferred by pregnant right whales and mother/calf pairs only (Good 2008, Keller et al. 2012). It does not consider juveniles, non-reproducing adults, or account for the north/south migratory behavior of right whales (i.e., whales that may occur outside of predicted areas due to behavioral reasons). Juvenile right whales are the age class most prone to entanglement and entangle at a higher rate (Knowlton et al. 2012).

Alternative 4 likely introduces relatively little entanglement risk relative to almost all of the alternatives. Only **Alternative 1 (No Action)** and **Alternative 6** would introduce less entanglement risk than **Alternative 4**. The SERO-LAPP-2014-09 analysis indicates a low increased risk of entanglement both off North Carolina and from South Carolina to Florida, for

this alternative, relative to **Alternative 1 (No Action)**. The area proposed under this alternative is based on bathymetry, 2005/06-2012/13 right whale Early Warning System data, and South Carolina/Georgia aerial survey data and 2001/02, 2005/06, and 2006/07 surveys by the University of North Carolina-Wilmington (L. Garrison, pers. comm. 2014). These data sources are more expansive and recent than those used to develop the area proposed in **Alternative 3**. These newer data sources are particularly more robust off the state of South Carolina, and include all right whale demographic segments (i.e., mother/calf pairs, pregnant females, non-reproducing females, adult males, and juveniles). This alternative considers the entire period when ESA-listed large whales may be in the southeastern United States (i.e., November 1 through April 30) and captures approximately 97% and 96% of right whale sightings in the North Carolina/South Carolina region and the Florida/Georgia region, respectively.

Alternative 5 introduces lower entanglement risk relative to most of the alternatives (i.e., **Alternatives 2, 3, and 10** and **Sub-Alternatives 7a, 7b, 7c, 8a, 8b, 9a, and 9b**) but more than others (i.e., **Alternatives 1 (No Action), 4, 6, Preferred 11, and 12**). The SERO-LAPP-2014-09 analysis indicates a low increased entanglement risk in right whales off North Carolina, for this alternative, relative to **Alternative 1 (No Action)**. However, that analysis indicates a low to high increased risk of entanglement from South Carolina to Florida for this alternative, relative to **Alternative 1 (No Action)**. The area closure for pots proposed off Florida/Georgia under this alternative is based on the right whale calving habitat model that is also the basis for **Alternative 3**. Off the coasts of North Carolina/South Carolina, the closure extends offshore 30 nautical miles. This alternative considers the entire period when ESA-listed large whales may be in the southeastern United States (i.e., November 1 through April 30). However, the increase in relative risk from South Carolina to Florida is the result of estimated commercial black sea bass pot gear effort south and east of the proposed pot area closure from St. Augustine to Cape Canaveral, Florida. This alternative provides less protection in the core calving area because the protected area likely does not extend far enough into South Florida waters to capture the full extent of right whale occurrence based on updated information.

Alternative 6 would likely introduce very little entanglement risk; only **Alternative 1 (No Action)** is expected to have lower entanglement risks. The SERO-LAPP-2014-09 analysis indicates a low increased entanglement risk in right whales off North Carolina, and no increased risk from South Carolina to Florida for this alternative, relative to **Alternative 1 (No Action)**. This area represents an existing federal management area, the Southeast Restricted Area for gillnets, under the Atlantic Large Whale Take Reduction Plan (ALWTRP); and an additional area off North Carolina. The area off North Carolina includes waters shallower than 30 meters. This alternative considers the entire period when ESA-listed large whales may be in the southeastern United States (i.e., November 1 through April 30). This area extends substantially further offshore of Florida and Georgia than areas included in other alternatives. Thus, no increase in relative risk to right whales is anticipated off Florida and Georgia and a negligible increase in relative risk is projected off South Carolina.

Sub-Alternative 7a would likely introduce more entanglement risk than all other alternatives except for **Alternative 2**. The SERO-LAPP-2014-09 analysis indicates a high increased entanglement risk for right whales off North Carolina, and a very high increased risk of entanglement for right whales from South Carolina to Florida for **Sub-Alternative 7a**, relative to

Alternative 1 (No Action). The SERO-LAPP-2014-09 analysis indicates a high to very high increased risk of entanglement under **Sub-Alternative 7b** and moderate under **Alternative 7c** in right whales off North Carolina and a high to very high increase from South Carolina to Florida. Each sub-alternative establishes a “book end” closure period for the area off North Carolina/South Carolina and for the area off Florida/Georgia. As noted previously, North Atlantic right whales may be found in the southeastern United States from November 1 through April 30, and do not mass migrate only at the beginning and end of the calving season but rather there is a steady stream of animals traveling between the northeastern and southeastern United States habitats in fall, winter and spring. As a result, the closure periods for black sea bass pots proposed under these sub-alternatives does not cover the entire period when these animals occur in the region. **Sub-Alternative 7c** covers more of the period when North Atlantic right whales would occur in the southeastern United States; however, the commercial black sea bass portion of the snapper grouper fishery is anticipated to reach its ACL soonest under **Sub-Alternative 7a** (somewhere between mid August and early October), followed by **Sub-Alternative 7c** and **Sub-Alternative 7b**. Thus, the SERO-LAPP-2014-09 analysis indicates **Sub-Alternative 7a** would introduce less entanglement risk than **Sub-Alternatives 7c** and **7b**, respectively.

Sub-Alternative 8a would likely introduce less entanglement risk than a number of others (i.e., **Alternatives 2** and **3** and **Sub-Alternatives 7a, 7b, 7c, 8b, 8c, 9a, and 9b**), but would likely introduce more than others (i.e., **Alternatives 1, 4, 5, 6, 10, 11 (Preferred), and 12**). The SERO-LAPP-2014-09 analysis indicates a low to moderate increase in entanglement risk for right whales off North Carolina, and a low to high increased risk of entanglement from South Carolina to Florida for **Sub-Alternative 8a**, relative to **Alternative 1 (No Action)**. Conversely, the SERO-LAPP-2014-09 analysis indicates a moderate to high increased risk of entanglement under **Sub-Alternatives 8b** off North Carolina and a high to very high increase in entanglement risk from South Carolina to Florida. **Sub-Alternative 8a** would likely introduce less entanglement risk relative to **Sub-Alternative 8b** for two primary reasons. As noted previously, North Atlantic right whales may be found in the southeastern United States from November 1 through April 30, and do not mass migrate only at the beginning and end of the calving season but rather there is a steady stream of animals traveling between the northeastern and southeastern United States habitats in fall, winter and spring. The closure under **Sub-Alternative 8a** spans almost the entire period North Atlantic right whales will occur in the southeastern United States; whereas, **Sub-Alternative 8b** establishes a “book-end” closure that does not. The ACL is also projected to be met sooner (between mid-October and mid-December) under **Sub-Alternative 8a** than under **Sub-Alternative 8b** (mid-December or not met at all). The sooner the ACL is met, the less likely pots would be in the water when right whales may be in the region.

Sub-Alternative 9a would likely introduce less entanglement risk than **Alternative 2** and **Sub-Alternatives 7a, 7b, 7c, 8b, and 9b**, but would likely introduce more entanglement risk than **Alternatives 1, 3, 4, 5, 6, 10, 11 (Preferred), 12 and Sub-Alternative 8a**). The SERO-LAPP-2014-09 analysis indicates a moderate to high increase in entanglement risk for right whales off North Carolina, and from South Carolina to Florida for **Sub-Alternative 9a**, relative to **Alternative 1 (No Action)**. Conversely, the SERO-LAPP-2014-09 analysis indicates a high increased risk of entanglement under **Sub-Alternatives 9b** off North Carolina and high to very high risk from South Carolina to Florida. **Sub-Alternative 9a** would likely introduce less entanglement risk relative to **Sub-Alternative 9b** for two primary reasons. As noted previously,

North Atlantic right whales may be found in the southeastern United States from November 1 through April 30, and do not mass migrate only at the beginning and end of the calving season but rather there is a steady stream of animals traveling between the northeastern and southeastern United States habitats in fall, winter, and spring. The closure under **Sub-Alternative 9a** spans almost the entire period North Atlantic right whales will occur in the southeastern United States; whereas, **Sub-Alternative 9b** establishes a “book-end” closure that does not. The ACL is projected to be met sooner under **Sub-Alternative 9a** (between mid-September and early November) than under **Sub-Alternative 9b** (mid-December or not met at all). The sooner the ACL is met, the less likely pots would be in the water when right whales may be in the region.

Alternative 10 would likely introduce more entanglement risk than some of the alternatives and sub-alternatives (i.e., **Alternatives 1, 4, 5, 6, 11 (Preferred), and 12**); though is likely to introduce less entanglement risk than **Alternative 2** and **Sub-Alternatives 7a, 7b, 7c, 8a, 8b, 9a, and 9b**. The SERO-LAPP-2014-09 analysis indicates a low to moderate increase in entanglement risk for right whales off North Carolina and a low to high increase from South Carolina to Florida for **Alternative 10**, relative to **Alternative 1 (No Action)**. As with other alternatives and sub-alternatives, **Alternative 10** establishes “book-end” closure periods for areas off North Carolina and South Carolina with a no closure period from December 16 through February 14, while establishing a year-round closure off Florida and Georgia. As noted previously, North Atlantic right whales may be found in the southeastern United States from November 1 through April 30, and do not mass migrate only at the beginning and end of the calving season but rather there is a steady stream of animals traveling between the northeastern and southeastern United States habitats in fall, winter and spring. As a result, the “book-end” closure of November 1 through December 15 and February 15 through April 20 off North Carolina and South Carolina is likely to have limited biological benefits. The closure period off Florida and Georgia is likely to be more biologically beneficial, but does not encompass the entire period when North Atlantic right whales will occur in the southeastern United States.

Preferred Alternative 11 would likely introduce relatively little entanglement risk compared to most alternatives (i.e., **Alternatives 2, 3, 5, and 10**, and **Sub-Alternatives 7a, 7b, 7c, 8a, 8b, 9a, and 9b**) but would likely introduce more entanglement risk than **Alternatives 1 (No Action), 4, 6, and 12**. The analysis found in **Appendix P** indicates a low increased entanglement risk in right whales off North Carolina and from South Carolina to Florida, for this alternative, relative to **Alternative 1 (No Action)**. This alternative is a hybrid of **Alternative 4** and **8a**. **Preferred Alternative 11** would implement a “book-end” closure, closing fishing only from November 1-30 and April 1-30 in the area proposed for closure under **Alternative 8a**. However, it would also implement a much longer closure from December 1-March 31 in the area currently proposed for closure under **Alternative 4**. This alternative provides a protection to whales during the primary “shoulder season” when whales are migrating to and from the calving grounds. As noted previously, North Atlantic right whales do not mass migrate only at the beginning and end of the calving season but rather there is a steady stream of animals traveling between the northeastern and southeastern United States habitats in fall, winter, and spring. As a result, the “book-end” closure may expose some late/early migrating animals to entanglement risk. However, the alternative does provide a high level of protection to the core calving area, including young calves that are likely to persist off Florida throughout the primary calving season.

Alternative 12 would likely introduce less entanglement risk than all alternatives other than **Alternatives 1 (No Action), 4, and 6**. The analysis found in **Appendix P** indicates a low increased entanglement risk in right whales off North Carolina and from South Carolina to Florida, for this alternative, relative to **Alternative 1 (No Action)**. **Alternative 12** essentially “splits the difference” between the western boundaries of **Alternative 4** and **8a**. **Alternative 12** would implement an annual closure for the proposed area from November 1 through April 30. This alternative considers the entire period when ESA-listed large whales may be in the southeastern United States (i.e., November 1 through April 30).

There is uncertainty in the predicted distribution of right whales, especially off North Carolina, where limited data with relatively few sightings are available. However, limited data should not be confused with limited right whale use of the area. Right whales use the mid-Atlantic as a migratory corridor, among other uses such as calving grounds, so right whale presence off North and South Carolina is likely underestimated by visual detection surveys. As previously mentioned, the Atlantic SRG found that the additional model developed for the distribution of right whales off North Carolina was valid and consistent with the expectations of experts on right whale biology.

With respect to non-marine mammal ESA-listed species, **Alternative 1 (No Action)** would perpetuate the existing level of risk for interactions between these species and the snapper grouper fishery. Previous ESA consultations determined the snapper grouper fishery (including the black sea bass pot sector) would have no effect on ESA-listed corals and was not likely to adversely affect any distinct population segments of Atlantic sturgeon. For the species that may interact with the snapper grouper fishery (i.e., sea turtles and smalltooth sawfish), it is unclear how the other alternatives would affect existing levels of risks for fishery interactions with sea turtles and smalltooth sawfish. Both sea turtles and smalltooth sawfish are known to interact with pot/trap gear. Thus, any alternative besides **Alternative 1 (No Action)** is likely to increase the potential risk of entanglement, relative to status quo. Area prohibitions on the use of black sea bass pots are likely to provide some level of biological benefit to these species by reducing the likelihood of interaction between these species and black sea bass pots.

However, the potential for interactions between these species and hook-and-line gear is generally considered greater than for trap/pot gear, because sea turtles and sawfish can be attracted to, and may actively pursue, bait used during hook-and-line fishing. Thus, if black sea bass pot fishermen switch to hook-and-line gear to target black sea bass or other species during proposed pot closures, the likelihood of interactions between the black sea bass portion of the snapper grouper fishery and sea turtles and smalltooth sawfish may actually increase. Similarly, if black sea bass pot fishermen switch to hook-and-line gear to target other species when the ACL is met, then alternatives leading to the black sea bass commercial ACL being caught faster may be less biologically beneficial to sea turtles and smalltooth sawfish. So while this action may have some biological benefits to sea turtles and sawfish by reducing the likelihood of interaction with black sea bass pot gear, the potential likelihood of capture on hook-and-line gear may actually increase.

4.1.2 Economic Effects

Additional economic effects analyses not directly related to the comparison of alternatives for this action are presented in **Appendix I**.

Expected closure date

Table 4.1.1.1 shows the expected closure dates for **Alternatives/Sub-alternatives 1** through **12** for the three pot placement scenarios considered in NMFS (2015a). **Table 4.1.2.1** shows the expected closure dates for **Alternatives/Sub-alternatives 1-12** for pot placement Scenario C (placement for 2006/2007-2008/2009 seasons) assuming that mean conditions exist for each of the four catch rate scenarios.

Table 4.1.2.1. Expected closure dates for each alternative/sub-alternative of **Action 1** using Scenario C (last three complete year around seasons with no closures prior to current management for mean conditions) for each of the four catch rate scenarios (Scenarios 1-4).

Scenario C	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Alternative 1	No Closure	No Closure	No Closure	No Closure
Alternative 2	2-Oct	4-Aug	20-Sep	27-Sep
Alternative 3	26-Nov	4-Oct	26-Oct	19-Nov
Alternative 4	20-Dec	7-Dec	11-Dec	19-Dec
Alternative 5	16-Dec	1-Dec	6-Dec	15-Dec
Alternative 6	20-Dec	7-Dec	10-Dec	19-Dec
Sub-Alternative 7a	11-Oct	18-Aug	6-Oct	7-Oct
Sub-Alternative 7b	No Closure	27-Dec	19-Dec	No Closure
Sub-Alternative 7c	27-Dec	16-Dec	13-Dec	28-Dec
Sub-Alternative 8a	6-Dec	17-Oct	29-Oct	5-Dec
Sub-Alternative 8b	No Closure	28-Dec	20-Dec	No Closure
Sub-Alternative 9a	28-Oct	15-Sep	13-Oct	24-Oct
Sub-Alternative 9b	31-Dec	24-Dec	17-Dec	No Closure
Alternative 10	No Closure	25-Dec	18-Dec	No Closure
Preferred	18-Dec	3-Dec	6-Dec	17-Dec
Alternative 11				
Alternative 12	15-Dec	21-Nov	5-Dec	14-Dec

Because the commercial black sea bass fishing year was changed to start January 1 through the implementation of Regulatory Amendment 14 to the Snapper Grouper FMP (SAFMC 2014), alternatives that would be expected to keep the black sea bass fishing season open until December would be expected to have the highest positive economic effect because historically ex-vessel price per pound tends to be higher than average for black sea bass in winter months. A longer season has additional benefits for fishermen such as better business cash flow and fewer potential economic losses due to regulatory discards (releasing fish while targeting other species). A longer season has economic benefits beyond those realized by fishermen. A longer season would provide for a more steady market supply benefitting processors, fish houses, and restaurants, as well as the consumer.

Expected dockside revenue of the commercial black sea bass sector

The expected changes in dockside revenue under each of the proposed alternatives are provided in **Table 4.1.2.2** and shows the differences in expected dockside values for **Alternative 1 (No Action)** subtracted from each of the **Alternatives 2 – 12** for all four catch rate scenarios based on monthly price per pound calculations for two different time series, 2000 – 2013 landings and 2011 – 2013 landings (**Figure 4.1.2.1**).

Table 4.1.2.2. Expected difference in dockside value of commercial black sea bass (for all gear) under the alternatives of Action 1 compared to **Alternative 1 (No Action)** using two price per pound estimates, the four different catch rate scenarios (**Appendix N**), and estimations of spatial locations of gear based on the 2006/2007-2008/2009 fishing seasons (Scenario C; **Appendix N**).

	Price/lb years	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Alternative 2	2000-2013	\$55,579	\$41,654	\$54,865	\$59,233
	2011-2013	\$56,344	\$43,028	\$55,362	\$59,967
Alternative 3	2000-2013	\$48,666	\$57,925	\$53,395	\$50,417
	2011-2013	\$49,040	\$58,597	\$53,638	\$50,776
Alternative 4	2000-2013	\$43,849	\$44,929	\$46,574	\$43,207
	2011-2013	\$44,042	\$45,276	\$46,699	\$43,393
Alternative 5	2000-2013	\$44,747	\$48,036	\$45,777	\$45,404
	2011-2013	\$44,967	\$48,431	\$45,920	\$45,616
Alternative 6	2000-2013	\$44,488	\$45,844	\$41,955	\$43,936
	2011-2013	\$44,682	\$46,194	\$42,082	\$44,123
Sub-Alternative 7a	2000-2013	\$54,285	\$45,784	\$56,192	\$57,759
	2011-2013	\$55,050	\$47,158	\$56,690	\$58,494
Sub-Alternative 7b	2000-2013	\$53,721	\$44,771	\$55,776	\$57,106
	2011-2013	\$54,486	\$46,144	\$56,273	\$57,840
Sub-Alternative 7c	2000-2013	\$50,866	\$48,204	\$50,690	\$50,188
	2011-2013	\$51,631	\$49,578	\$51,188	\$50,923
Sub-Alternative 8a	2000-2013	\$43,933	\$52,528	\$50,096	\$46,268
	2011-2013	\$44,230	\$53,061	\$50,288	\$46,553
Sub-Alternative 8b	2000-2013	\$50,933	\$48,325	\$50,797	\$50,256
	2011-2013	\$51,698	\$49,698	\$51,295	\$50,990
Sub-Alternative 9a	2000-2013	\$51,312	\$55,582	\$56,634	\$52,214
	2011-2013	\$51,812	\$56,480	\$56,960	\$52,694
Sub-Alternative 9b	2000-2013	\$54,038	\$47,112	\$53,751	\$55,192
	2011-2013	\$54,803	\$48,485	\$54,248	\$55,926
Alternative 10	2000-2013	\$50,933	\$48,325	\$50,797	\$50,256
	2011-2013	\$51,698	\$49,698	\$51,295	\$50,990
Preferred Alternative 11	2000-2013	\$45,640	\$43,541	\$45,570	\$46,367
	2011-2013	\$45,834	\$43,889	\$45,696	\$46,553
Alternative 12	2000-2013	\$45,723	\$48,492	\$44,941	\$46,941
	2011-2013	\$45,956	\$48,911	\$45,093	\$47,165

Figure 4.1.2.1 and **Figure 4.1.2.2** show the expected differences in economic value for each of the alternatives under Scenarios 1 – 4 using each of the price per pound calculation methods.

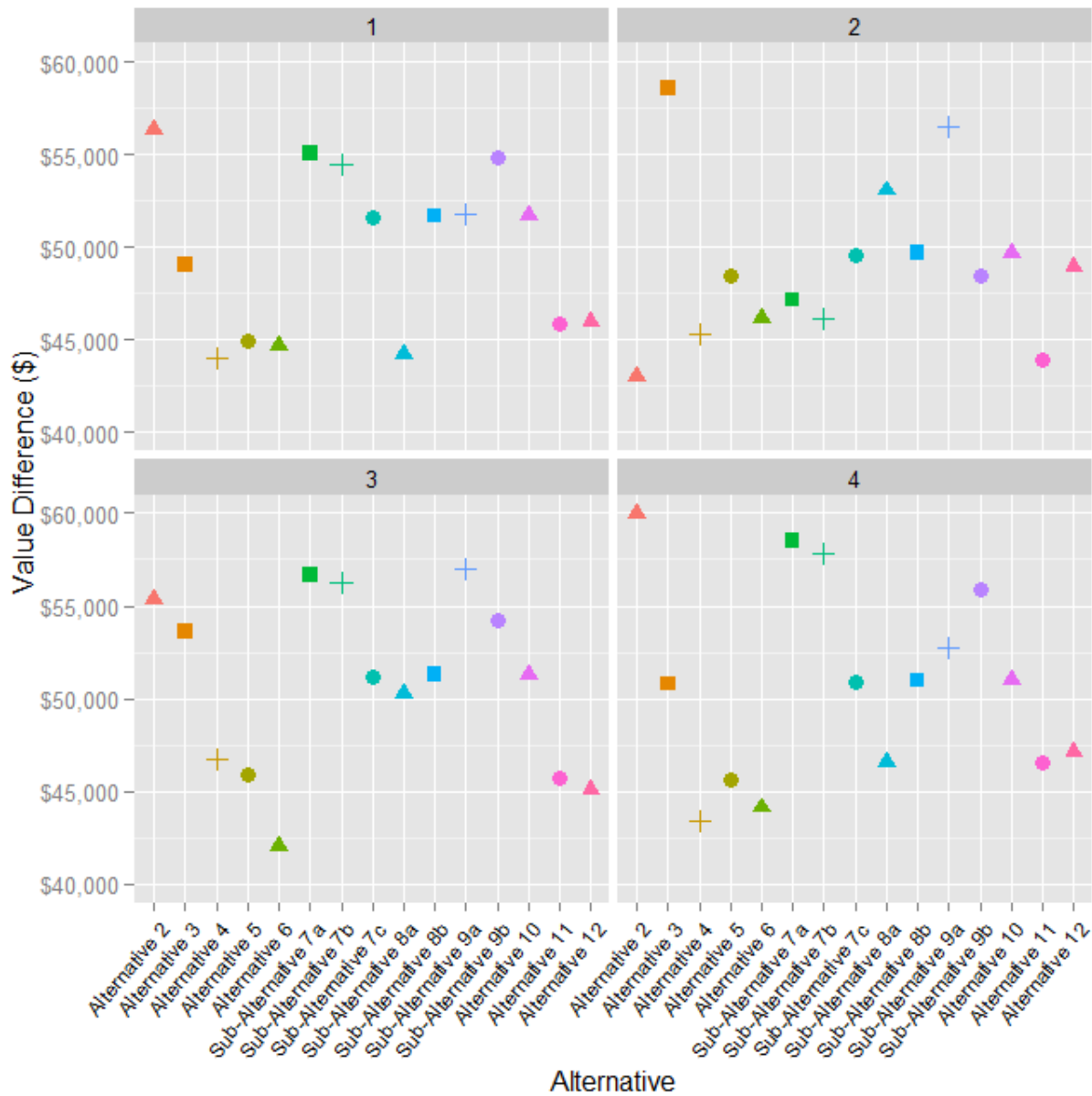


Figure 4.1.2.1. Expected difference in value (in 2013 dollars) between **Alternative 1 (No Action)** and the other Alternatives/Sub-Alternatives by catch rate scenario for **Action 1**, using the monthly price per pound calculations from 2011 – 2013.



Figure 4.1.2.2. Expected difference in value (in 2013 dollars) between **Alternative 1 (No Action)** and the other Alternatives/Sub-Alternatives by catch rate scenario for **Action 1**, using the monthly price per pound calculations from 2000 – 2013.

The various alternatives and sub-alternatives of **Action 1** shift the balance among the gear that can harvest black sea bass. While **Table 4.1.2.2** showed total expected differences in dockside values for **Alternatives/Sub-alternatives 2-12** compared to **Alternative 1 (No Action)** for each of the four catch rates estimated by NMFS (2015a), **Table 4.1.2.3** shows the same information as **Table 4.1.2.2**, but just for pot landings. **Table 4.1.2.4** shows the same information as **Table 4.1.2.2**, but only for all non-pot gear landings. All alternatives/sub-alternatives increase the total ex-vessel value for landings by pot gear compared to **Alternative 1 (No Action)**. And conversely, all alternatives/sub-alternatives decrease the total ex-vessel value for landings by non-pot gear compared to **Alternative 1 (No Action)**.

Table 4.1.2.3. Expected difference in dockside value of commercial black sea bass (for pot gear only) under the alternatives of **Action 1** compared to **Alternative 1 (No Action)** using two price per pound estimates, the four different catch rate scenarios (**Appendix N**), and estimations of spatial locations of gear based on the 2006/2007-2008/2009 fishing seasons (Scenario C; **Appendix N**).

	Price/lb years	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Alternative 1	2000-2013	\$0	\$0	\$0	\$0
	2011-2013	\$0	\$0	\$0	\$0
Alternative 2	2000-2013	\$261,780	\$369,250	\$283,094	\$274,373
	2011-2013	\$343,639	\$508,452	\$399,154	\$361,766
Alternative 3	2000-2013	\$201,807	\$261,207	\$224,566	\$206,155
	2011-2013	\$272,077	\$348,792	\$314,732	\$273,511
Alternative 4	2000-2013	\$102,412	\$166,935	\$149,059	\$106,650
	2011-2013	\$146,042	\$233,275	\$222,747	\$151,863
Alternative 5	2000-2013	\$122,831	\$199,323	\$172,663	\$128,369
	2011-2013	\$172,514	\$273,501	\$253,120	\$179,545
Alternative 6	2000-2013	\$103,051	\$167,850	\$149,320	\$107,379
	2011-2013	\$146,889	\$234,397	\$222,815	\$152,859
Sub-Alternative 7a	2000-2013	\$247,350	\$341,461	\$256,555	\$256,662
	2011-2013	\$323,678	\$467,735	\$358,077	\$336,104
Sub-Alternative 7b	2000-2013	\$246,786	\$340,447	\$256,138	\$256,009
	2011-2013	\$322,937	\$466,405	\$357,537	\$335,244
Sub-Alternative 7c	2000-2013	\$226,416	\$302,613	\$236,457	\$230,117
	2011-2013	\$293,256	\$407,774	\$329,799	\$297,877
Sub-Alternative 8a	2000-2013	\$165,939	\$232,457	\$209,542	\$173,154
	2011-2013	\$226,885	\$309,276	\$296,081	\$234,841
Sub-Alternative 8b	2000-2013	\$226,483	\$302,733	\$236,564	\$230,185
	2011-2013	\$293,337	\$407,919	\$329,929	\$297,958
Sub-Alternative 9a	2000-2013	\$219,564	\$293,161	\$246,780	\$226,304
	2011-2013	\$286,261	\$396,470	\$346,140	\$294,942
Sub-Alternative 9b	2000-2013	\$241,265	\$329,109	\$254,113	\$248,257
	2011-2013	\$314,255	\$447,983	\$354,875	\$323,541
Alternative 10	2000-2013	\$226,483	\$302,733	\$236,564	\$230,185
	2011-2013	\$293,337	\$407,919	\$329,929	\$297,958
Preferred Alternative 11	2000-2013	\$113,964	\$185,068	\$172,456	\$119,571
	2011-2013	\$163,606	\$260,355	\$255,322	\$170,710
Alternative 12	2000-2013	\$128,687	\$203,488	\$176,707	\$134,785
	2011-2013	\$179,974	\$275,832	\$257,983	\$187,776

Table 4.1.2.4. Expected difference in dockside value of commercial black sea bass (for non-pot gear only) under the alternatives of **Action 1** compared to **Alternative 1 (No Action)** using two price per pound estimates, the four different catch rate scenarios (**Appendix N**), and estimations of spatial locations of gear based on the 2006/2007-2008/2009 fishing seasons (Scenario C; **Appendix N**).

	Price/lb years	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Alternative 2	2000-2013	(\$206,201)	(\$327,596)	(\$228,229)	(\$215,140)
	2011-2013	(\$330,297)	(\$466,642)	(\$354,935)	(\$340,372)
Alternative 3	2000-2013	(\$153,142)	(\$203,282)	(\$171,171)	(\$155,738)
	2011-2013	(\$261,531)	(\$326,791)	(\$288,226)	(\$266,061)
Alternative 4	2000-2013	(\$58,563)	(\$122,006)	(\$102,485)	(\$63,443)
	2011-2013	(\$99,985)	(\$208,303)	(\$174,974)	(\$108,318)
Alternative 5	2000-2013	(\$78,084)	(\$151,287)	(\$126,886)	(\$82,964)
	2011-2013	(\$133,314)	(\$258,296)	(\$216,635)	(\$141,646)
Alternative 6	2000-2013	(\$58,563)	(\$122,006)	(\$107,365)	(\$63,443)
	2011-2013	(\$99,985)	(\$208,303)	(\$183,307)	(\$108,318)
Sub-Alternative 7a	2000-2013	(\$193,065)	(\$295,677)	(\$200,363)	(\$198,903)
	2011-2013	(\$314,521)	(\$430,553)	(\$323,285)	(\$321,532)
Sub-Alternative 7b	2000-2013	(\$193,065)	(\$295,677)	(\$200,363)	(\$198,903)
	2011-2013	(\$314,521)	(\$430,553)	(\$323,285)	(\$321,532)
Sub-Alternative 7c	2000-2013	(\$175,550)	(\$254,408)	(\$185,767)	(\$179,928)
	2011-2013	(\$293,485)	(\$384,062)	(\$305,756)	(\$298,744)
Sub-Alternative 8a	2000-2013	(\$122,006)	(\$179,928)	(\$159,447)	(\$126,886)
	2011-2013	(\$208,303)	(\$298,744)	(\$272,532)	(\$216,635)
Sub-Alternative 8b	2000-2013	(\$175,550)	(\$254,408)	(\$185,767)	(\$179,928)
	2011-2013	(\$293,485)	(\$384,062)	(\$305,756)	(\$298,744)
Sub-Alternative 9a	2000-2013	(\$168,252)	(\$237,579)	(\$190,146)	(\$174,090)
	2011-2013	(\$284,720)	(\$365,338)	(\$311,015)	(\$291,732)
Sub-Alternative 9b	2000-2013	(\$187,226)	(\$281,997)	(\$200,363)	(\$193,065)
	2011-2013	(\$307,509)	(\$415,087)	(\$323,285)	(\$314,521)
Alternative 10	2000-2013	(\$175,550)	(\$254,408)	(\$185,767)	(\$179,928)
	2011-2013	(\$293,485)	(\$384,062)	(\$305,756)	(\$298,744)
Preferred Alternative 11	2000-2013	(\$68,323)	(\$141,527)	(\$126,886)	(\$73,204)
	2011-2013	(\$116,650)	(\$241,631)	(\$216,635)	(\$124,982)
Alternative 12	2000-2013	(\$82,964)	(\$154,996)	(\$131,766)	(\$87,844)
	2011-2013	(\$141,646)	(\$264,767)	(\$224,967)	(\$149,978)

Given the uncertainty of how fishery participants will change their behavior, each of the four catch rate scenarios are assumed to be plausible estimates of future fishing behavior sufficient to bracket actual pot placement and associated harvest. One way to simplify comparisons between alternatives is to use mean values across the four scenarios for each alternative or sub-alternative. **Table 4.1.2.5** shows the percent of expected ex-vessel revenue of black sea bass landed with pot gear averaged across the four landings scenarios as a percent of the expected black sea bass ex-vessel revenue for all gear types combined. Regardless of whether 2000 – 2013 or 2011 – 2013 prices are used, **Alternative 1 (No Action)** would be expected to result in a lower percentage of the expected total ex-vessel revenue harvested with pot gear than all of the other alternatives/sub-alternatives considered. When using the 2000–2013 prices, **Alternative 2, Sub-Alternative 7a, Sub-alternative 7b, and Sub-Alternative 9b** had the highest expected percentage of total ex-vessel revenues from black sea bass harvested with pot gear. When using the 2011–2013 price per pound values, the comparable alternatives (highest percentage) are **Alternative 2, Sub-Alternative 7a, and Sub-Alternative 7b**. Any alternative or sub-alternative other than **Alternative 1 (No Action)** would likely result in a greater percentage of the commercial ACL for black sea bass being caught by pot gear and a lower percentage of the ACL being caught by other gear.

Table 4.1.2.5. Mean percentage and ranking of expected ex-vessel value of black sea bass landed by pot gear as a percent of expected ex-vessel value of black sea bass landed by all gear types averaged across the four landings scenarios.

	2000-2013		2011 -2013	
	Mean	Rank	Mean	Rank
Alternative 1	35%	16	31%	16
Alternative 2	55%	1	55%	1
Alternative 3	50%	9	49%	9
Alternative 4	43%	15	41%	15
Alternative 5	45%	12	43%	12
Alternative 6	43%	14	41%	14
Sub-Alternative 7a	53%	2	53%	2
Sub-Alternative 7b	53%	3	53%	3
Sub-Alternative 7c	52%	7	51%	7
Sub-Alternative 8a	48%	10	47%	10
Sub-Alternative 8b	52%	5	51%	5
Sub-Alternative 9a	51%	8	51%	8
Sub-Alternative 9b	53%	4	52%	4
Alternative 10	52%	5	51%	5
Preferred Alternative 11	44%	13	43%	13
Alternative 12	45%	11	44%	11

Table 4.1.2.6 shows the percent of expected ex-vessel revenue of black sea bass landed with non-pot gear averaged across the four landings scenarios as a percent of the expected black sea bass ex-vessel revenue for all gear types combined. Regardless of whether 2000 – 2013 or 2011 – 2013 prices are used, **Alternative 1 (No Action)** would be expected to result in the highest

percentage of the expected total ex-vessel revenue harvested with non-pot gear than all of the other alternatives/sub-alternatives considered. When using the either the 2000–2013 or 2011–2013 price per pound values, **Alternative 4**, **Alternative 6** had the second and third highest expected percentage of total ex-vessel revenues from black sea bass harvested with non-pot gear.

Table 4.1.2.6. Mean percentage and ranking of expected ex-vessel value of black sea bass landed by non-pot gear as a percent of expected ex-vessel value of black sea bass landed by all gear types averaged across the four landings scenarios.

	2000-2013		2011-2013	
	Mean	Rank	Mean	Rank
Alternative 1	65%	1	69%	1
Alternative 2	45%	16	45%	16
Alternative 3	50%	8	51%	8
Alternative 4	57%	2	59%	2
Alternative 5	55%	5	57%	5
Alternative 6	57%	3	59%	3
Sub-Alternative 7a	47%	15	47%	15
Sub-Alternative 7b	47%	14	47%	14
Sub-alternative 7c	48%	10	49%	10
Sub-Alternative 8a	52%	7	53%	7
Sub-Alternative 8b	48%	11	49%	11
Sub-Alternative 9a	49%	9	49%	9
Sub-Alternative 9B	47%	13	48%	13
Alternative 10	48%	11	49%	11
Preferred Alternative 11	56%	4	57%	4
Alternative 12	55%	6	56%	6

Economic effects of relative risk to North Atlantic Right Whales and the black sea bass pot fishery

Potential economic outcomes must be weighed against the chance that a NARW would become entangled in black sea bass pot gear. SERO-LAPP-2014-09 (**Appendix N**) analyzed the potential co-occurrence of black sea bass pot gear and NARW in space and time across the **Action 1** alternatives for a wide variety of potential scenarios (i.e., different assumptions regarding the distribution of pot gear, catch rates, and NARW responses to environmental conditions). In this analysis, co-occurrence was treated as a proxy for relative entanglement risk, an assumption used in other whale risk assessment models (NMFS 2015b; Redfern et al. 2013). The analysis was robust with regards to the differences between alternatives, although the absolute risk of a given alternative cannot be quantified because the entanglement rate of whales in black sea bass pots is unknown.

The **Action 1** alternatives/sub-alternatives can be compared in terms of relative risk as it is operationally defined here. However, the magnitude of the potential relative risk between the alternatives/sub-alternatives in this action cannot be estimated without knowing what the total risk would be if there were no restrictions on using black sea bass pot gear. In this analysis

greater relative risk means the likelihood of entanglements increases when there is more black sea bass pot gear in the water at the same time there is an increase in the presence of whales. In this sense, the alternatives/sub-alternatives can be ranked (e.g., most relative risk to least relative risk); however, the absolute additional amount of risk posed by one alternative/sub-alternative cannot be compared to the absolute amount of risk posed by another alternative/sub-alternative.

Given these caveats for understanding the relative risk, **Figures 4.1.2.3** and **4.1.2.4** show the two separate price per pound time series, the two models used to estimate NARW relative risk from black sea bass pot gear, and the difference between each of the alternatives/sub-alternatives for **Action 1** compared to **Alternative 1 (No Action)**. For Florida through South Carolina, **Alternatives 4** and **6** provide the least relative risk to the NARW while **Alternative 2** provides the greatest relative risk to the NARW (**Figure 4.1.2.3**). For North Carolina, **Alternatives 4 - 6** provide the least relative risk to the NARW while **Alternative 2** provides the greatest relative risk to the NARW (**Figure 4.1.2.4**). Using either the 2000-2013 or the 2011-2013 price per pound estimates, **Alternative 2** has the potential to provide the highest level of ex-vessel value for all the South Atlantic States (**Table 4.1.2.2**).

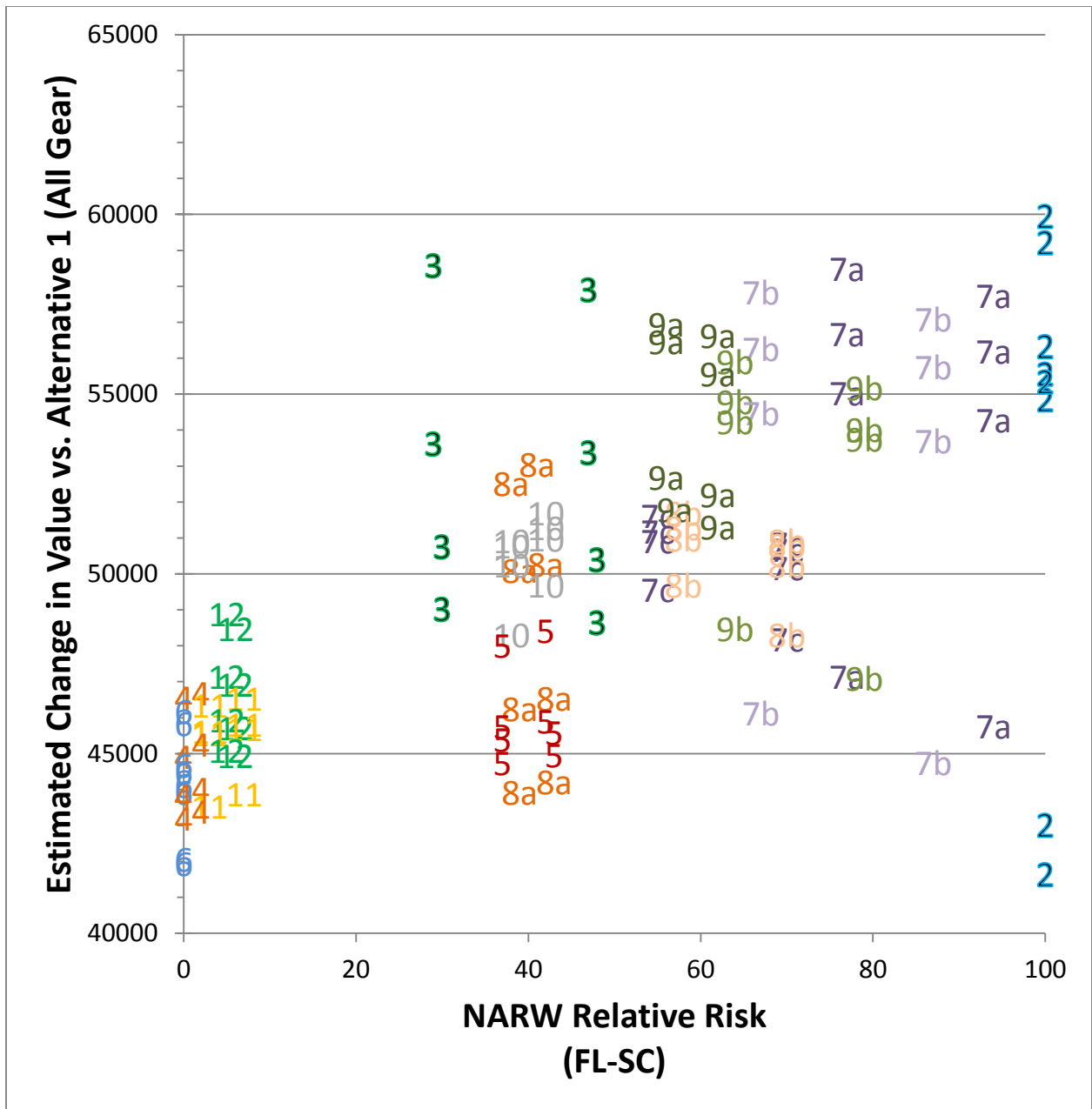


Figure 4.1.2.3. Estimated change in value of commercial black sea bass fishery versus relative right whale risk off FL-SC for spatial closure alternatives proposed in Regulatory Amendment 16.

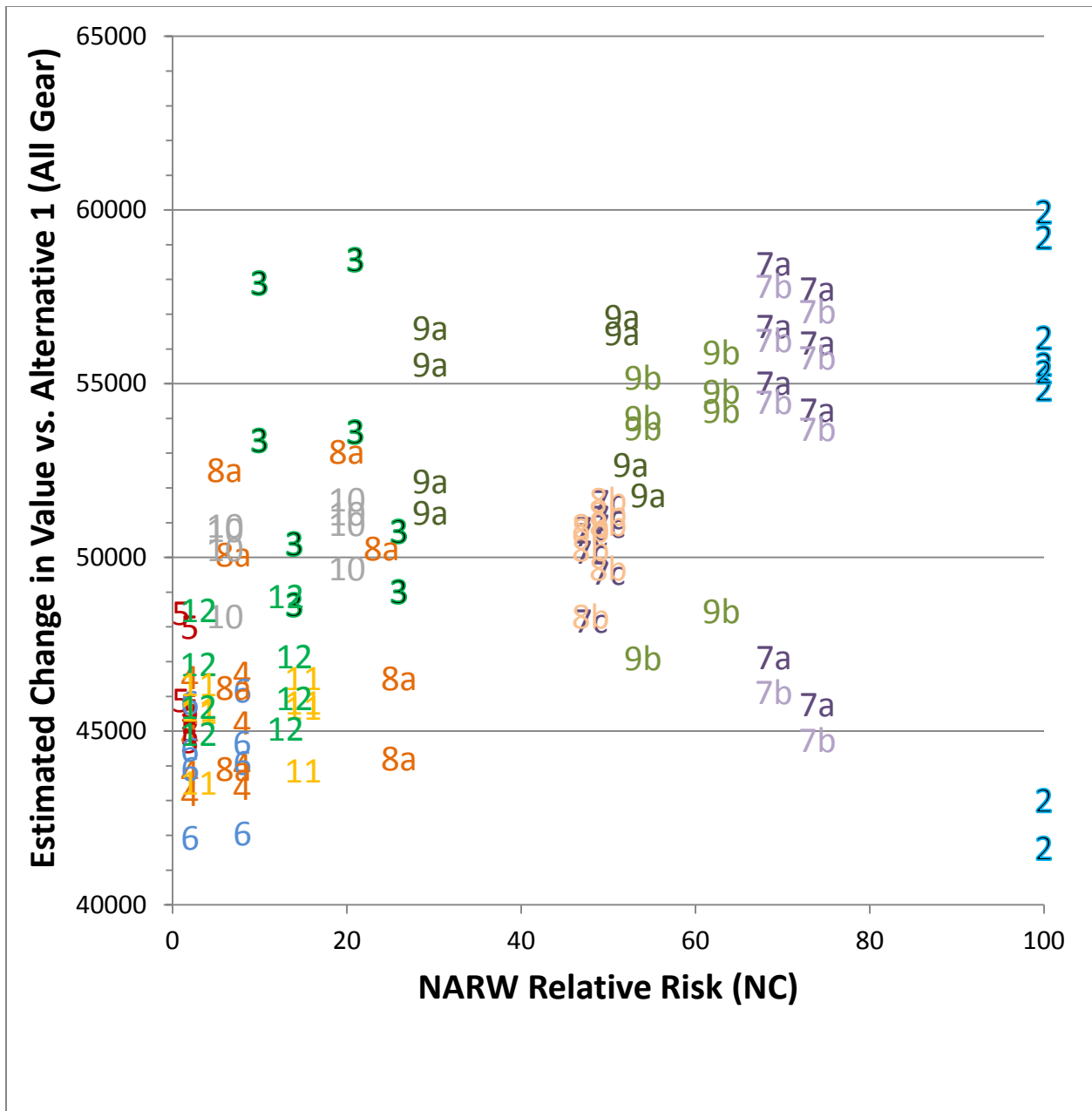


Figure 4.1.2.4. Estimated change in value of commercial black sea bass fishery versus relative right whale risk off NC for spatial closure alternatives proposed in Regulatory Amendment 16.

4.1.3 Social Effects

The social effects of removal or modifications to the seasonal closure for black sea bass pots include direct effects on participants in the black sea bass pot sector, and direct effects on participants in the hook-and-line (and other gear types) sector. For pot fishermen, the potential effects are primarily associated with foregone economic benefits due to restricted or no access to the black sea bass resource during the winter. For hook-and-line fishermen, the potential effects

of removal or modifications to the seasonal closure for black sea bass pots are associated with greater competition with pot fishermen, less access to the increased black sea bass ACL, and a likely shorter fishing season because the ACL would be more available to the pot fishermen, who make up most of the landings. Minimal indirect effects are expected for recreational anglers and for-hire businesses.

Sections 3.3.3 and 3.3.4 provide detailed information about the social environment for the black sea bass portion of the snapper grouper fishery. **Figure 3.3.3.2** shows communities with the highest pounds of black sea bass harvested by pots, with the top ten including Sneads Ferry (North Carolina), Georgetown (South Carolina), Little River (South Carolina), Harkers Island (North Carolina), McClellanville (South Carolina), Ponce Inlet (Florida), Hampstead (North Carolina), Cape Carteret (North Carolina), Wrightsville Beach (North Carolina), and Topsail Beach (North Carolina). **Figure 3.3.3.3** shows communities with the highest pounds of black sea bass harvested by bandit gear, with the top three including Little River (South Carolina), Southport (North Carolina), and Topsail Beach (North Carolina). Additionally, considering engagement and reliance on commercial fishing for each community (**Figure 3.3.3.4**) and social vulnerability (**Figure 3.3.4.1**), the communities of Wanchese (North Carolina) and Sneads Ferry (North Carolina) are those that would be expected to experience positive and negative effects of changes for the black sea bass pot fishermen.

Black sea bass pot fishermen have been affected by multiple management changes in a relatively short period of time through recent Council actions and Atlantic Large Whale Take Reduction Plan (ALWTRP) requirements. Following the restrictive catch limits implemented in the rebuilding plan, and an effort shift from other target species due to ACLs and AMs, pot fishermen have experienced increasingly shorter seasons and continual overages. When the endorsement program was implemented through Amendment 18A (SAFMC 2012), more than half of active pot fishermen did not receive an endorsement and could no longer participate in the pot sector. Although the landings level of active fishermen who did not qualify for an endorsement was relatively small (to qualify for a black sea bass endorsement, a fishermen with a valid snapper grouper commercial permit must have had black sea bass landings using black sea bass pot gear averaging at least 2,500 pounds (lbs) whole weight, annually during the period January 1, 1999 through December 31, 2010), the endorsement program also created an additional barrier for future participants. Overall, the endorsement program permanently locked out most fishermen from using pots to target black sea bass, unless they purchase an endorsement.

Fishermen who did receive endorsements were placed under a new trip limit, the new pot limit, and requirement to bring pots to shore at the end of each trip. When the final rule for Regulatory Amendment 19 (SAFMC 2013b) indicated that the ACL could be more than doubled, there were only partial positive effects for the pot fishermen due to the closure from November through April that has restricted them from benefitting from the extended season and larger ACL. [While the closure was intended to minimize interaction of pot gear with large whales, it was also included in Regulatory Amendment 19 to expedite the increase in the black sea bass ACL due to the additional time that would have been required for NMFS to complete an ESA Section 7 consultation for the snapper grouper fishery (SAFMC 2013b) and to meet National Environmental Policy Act requirements.] Additionally, black sea bass pot fishermen are

required to comply with the ALWTRP gear and seasonal requirements (**Tables 1.8.1 – 1.8.5**), which have been in place for the black sea bass pot sector since 2007, with the most recently added requirements implemented in November 1, 2014.

Under **Alternative 1 (No Action)**, pot fishermen would continue to forego economic benefits that would be available if harvest by pot was allowed into the winter months. Some fishermen report that black sea bass caught in the winter are larger and more abundant, and market prices are better. However, some pot fishermen from the Carolinas have voiced concern that fishing pots for black sea bass in winter would favor Florida fishermen. Weather in Florida is generally better than weather conditions in North Carolina and South Carolina, and Florida pot fishermen could catch a greater proportion of the commercial ACL in winter months. Public input also indicates that some pot fishermen feel that compliance with the ALWTRP requirements, in addition to the measures established with the endorsement program are sufficient to protect right whales and calves, and keeping the seasonal closure invalidates the rationale and purpose for all protection measures under the ALWTRP and the ancillary benefits derived through Amendment 18A (SAFMC 2012).

For black sea bass participants who do not have a black sea bass pot endorsement, **Alternative 1 (No Action)** would be expected to provide the most benefits. The seasonal pot closure allows fishermen without a black sea bass pot endorsement to use gear types other than black sea bass pots to fish for black sea bass in the winter months. If pots are used during the winter months, it is more likely that the commercial ACL for black sea bass would be met before the end of the calendar year. Additionally, hook and line fishermen would have the opportunity to supply the winter market for black sea bass and take advantage of higher market prices.

As noted in **Section 3.3.3**, marine mammal protection has broad social effects as well, as conservation of endangered species can produce societal benefits by protecting species for aesthetic, economic, scientific, and historical value to the U.S. and citizens. Maintaining the seasonal closure for the pot sector under **Alternative 1 (No Action)** could result in broad social benefits through improved protection of right whales during migration to and from calving grounds during the winter more so than modification to the closure area or period (**Alternatives 2-9b**). As discussed in **Appendix N**, the potential interaction with right whales is expected to be lower for alternatives with pot prohibitions that encompass larger areas and/or time periods during November through April. However, because the baseline value of potential interaction is unknown, the actual increase or decrease in potential interactions cannot be determined, so that any associated social benefits would also be unknown. With all other regulations and management measures in place for the black sea bass pot sector that contribute to minimizing potential interactions through Council actions and ALWTRP requirements (see **Section 1.8**), the return on investment of additional restrictions such as a spatial/temporal prohibition on black sea bass pot fishing could be low, particularly for the relatively small black sea bass pot sector. Overall, any social benefits that would be expected to result from improved right whale protection would only be realized when biological benefits to the right whales can be measured and demonstrated.

The effects of **Alternatives 2-12** on fishermen and associated communities vary with the temporal and spatial characteristics of the closures, and effects would be different for pot

fishermen and hook and line fishermen. In general, allowing harvest with pots in any way during the winter would be beneficial to pot fishermen, but could have negative effects on all black sea bass fishermen if an increased rate of harvest causes an in-season closure (because the commercial ACL is met). Additionally, allowing pots to be fished during the winter could affect access to the black sea bass commercial ACL for hook and line fishermen, since pots are more efficient gear and could use up more of the commercial ACL.

Depending on the areas that could be closed to pot fishing and actual areas where fishermen place their pots, **Alternatives 2-12** all provide some way for pot fishing to continue to some degree in the winter months, and would be expected to generate some of the same benefits to pot fishermen. However, all possible negative effect due to an earlier in-season closure (because the commercial ACL is met) would be expected under **Alternatives 2-12**. Because of the location of calving areas, there may be less fishing ground available for Florida pot fishermen for most of the winter months (**Alternatives 2-6, 7b-11 [Preferred]**), except under **Alternative 7/ Sub-Alternative 7a** that would allow fishing in the winter between December 16 through March 14. However, under this sub-alternative, the interaction with adult whales and calves may be more likely, which could result in further fishing restrictions in the future. The alternative(s) with the smallest area that would close potential fishing grounds for Florida pot fishermen would be expected to be the most beneficial to black sea bass pot fishermen in Florida.

For black sea bass pot fishermen in North Carolina and South Carolina, the alternatives with the smallest areas of fishing grounds closed and the shortest period of time would be expected to be the most beneficial. **Alternative 7/ Sub-Alternative 7a, 7b; Alternative 8/Sub-Alternative 8b; Alternative 9/ Sub-Alternative 9b; and Alternative 10** would allow more time available for harvest with pots in North Carolina and South Carolina than **Alternatives 2-6, 11 (Preferred) and 12**.

As discussed in **Section 3.3.3**, the black sea bass pot endorsement holders target other species throughout the year. As part of their fishing portfolio, many endorsement holders report that the closure in **Alternative 1 (No Action)** has negative effects on their ability to maximize returns in their overall portfolios. Information collected during the public comment period about the role of fishing pots in winter for the endorsement holders in fishing portfolios and yearly fishing business plans is included in **Appendix L**.

4.1.4 Administrative Effects

Alternative 1 (No Action) would retain the year-long prohibition of fishing with black sea bass pots in the entire South Atlantic region. As such, the alternative would retain the current level of administrative effects. There are logistical and economic costs of monitoring spatial and temporal fishing closures by law enforcement personnel. The costs may be mitigated by public compliance with the regulations. **Alternatives 2-12** would likely result in adverse administrative effects to enforcement compared to **Alternative 1 (No Action)** as these alternatives would specify the pot prohibition in certain areas during certain times. Such changes could make enforcement more difficult. **Alternatives 10 and 12** would likely have the greatest burden of the alternatives to law enforcement as the eastern boundary of the area changes during the year.

4.2 Action 2. Enhance the existing Atlantic Large Whale Take Reduction Plan (ALWTRP) buoy line/weak link gear requirements and buoy line rope marking for black sea bass pots

4.2.1 Biological Effects

Black Sea Bass

The alternatives range from maintaining the current pot gear requirements (**Alternative 1 – No Action**) to specifying buoy line strength (**Alternative 2**) and decreasing weak link breaking weight (**Alternative 3**) to adding an extra marking on the buoy line (**Preferred Alternative 4**). Regardless of which alternatives or sub-alternatives the Council chooses, no biological impacts to the black sea bass stock are expected. Adverse effects are prevented because overall harvest in the commercial sector is limited to the commercial annual catch limit (ACL); commercial accountability measures (AMs) are also in place. The ACL, which is based on

the ABC, is reduced from the overfishing level as required to address assessment uncertainty. In addition, there is no evidence to suggest that changing the gear requirements for the black sea bass pot sector would have adverse biological impacts. These alternatives are not predicted to reduce harvest and would not provide additional protection to the black sea bass stock or other non-target species. Therefore, there are no biological effects on the black sea bass stock from the alternatives/sub-alternatives in **Action 2**.

Protected Resources

The South Atlantic black sea bass pot sector is listed as part of the larger “Atlantic mixed species trap/pot fishery” under the List of Fisheries (LOF). The National Marine Fisheries Service (NMFS) publishes annually a List of Fisheries (LOF) as required by the Marine Mammal Protection Act (MMPA). The LOF classifies U.S. commercial fisheries into one of three categories according to the level of incidental mortality or serious injury of marine mammals:

- I. **frequent** incidental mortality or serious injury of marine mammals
- II. **occasional** incidental mortality or serious injury of marine mammals
- III. **remote likelihood of/no known** incidental mortality or serious injury of marine mammals.

The classification of a fishery on the LOF determines whether participants in that fishery are subject to certain provisions of the MMPA, such as registration, observer coverage, and take reduction plan requirements.

Action 2 Alternatives¹ *(preferred alternative in bold)*

1. No action. Status quo gear marking requirements.
2. Modify buoy line strength Nov 1 – Apr 30
 - 2a. less than or equal to 2,200 lbs in federal waters of the South Atlantic.
 - 2b. less than or equal to 1,200 lbs in federal waters of the South Atlantic.
3. Modify weak links to no more than 400 lbs Nov 1 – Apr 30.
4. **Add a purple 12” color mark adjacent to ALWTRP required line markings from Nov 1 – Apr 30.**

The black sea bass pot sector is considered a Category II fishery by the NMFS because of its potential to occasionally interact with marine mammals. The Atlantic mixed species trap/pot fishery has had interactions with threatened and endangered species including fin and humpback whales (January 28, 2015; 79 FR 77919). Some pot gear in other areas are Category I fisheries under the LOF, because they frequently cause incidental mortalities or serious injuries of marine mammals. Category I fisheries have been documented to cause serious injury and death to North Atlantic right whales (Johnson et al. 2005, Knowlton et al. 2012). Other trap/pot fisheries are classified as Category III fisheries because there is a remote likelihood of or no known incidental mortality or serious injury of marine mammals.

Entanglements incidental to commercial fishing are the primary threat to right whales; however, less is known about the source of entanglement. In a study of 31 right whale entanglements, Johnson et al. (2005) found 14 cases where gear type could be identified; pot gear represented 71% of these cases (8 lobster pots, 1 crab pot, 1 unknown pot). In a recent compilation of data from 2007-2011, there were 17 entangled whales and none of these were attributed to a specific fishery (Waring et al. 2014). Waring et al. (2014) indicated information from an entanglement event often does not include the detail necessary to assign the entanglements to a particular fishery or location, and scarring studies suggest the vast majority of entanglements are not observed. Consequently, while black sea bass gear has not been definitively identified in entanglements, it also cannot be ruled out as gear that has resulted in serious injuries or deaths to right whales. Knowlton et al. (2015) examined line characteristics of fishing gear removed from live and dead entangled whales from the U.S. East Coast and Canada from 1994-2010. Of 132 ropes from 70 cases, they found 26% of ropes were in the range of 0.312 in (~5/16 in) to 0.654 in (11/16 in) diameter and made out of polypropylene (Knowlton et al, in press). Levesque (2009) interviewed 42 black sea bass pot fishermen from major fishing ports in the area from Georgia through North Carolina. Fishermen reporting using 1/4 in, 5/16 in, or 3/8 in diameter buoy lines and most used polypropylene line (Levesque 2009).

Knowlton et al (in press) suggest that if buoy line breaking strength was 1,700 lbs or less, the number of life-threatening entanglements to large whales would be reduced substantially. However, this is not the case for smaller whales. Eight minke whales (relatively small body sizes to other large whale species) were included in the study and all had died presumably because they could not break free from the entangling gear (Knowlton et al, in press). The breaking strength of rope removed from minke whales ranged from 650 lbs to 3,780 lbs. Very young right whale calves are smaller and weaker than minke whales so line breaking strength would need to be less than 600 lbs to potentially allow right whale calves to break free of the gear (Knowlton et al. 2015).

NMFS tested the breaking strength of number 8 and number 10 Osprey lines, based on information indicating that Florida black sea bass pot fishermen were using primarily number 8 and number 10 Osprey line (T. Burgess, pers. comm. 2015). The testing concluded the maximum breaking strengths were 1,475 lbs and 2,218 lbs, respectively.

Buoy line diameter used off North Carolina was significantly larger than line used off South Carolina or Georgia (Levesque 2009). The majority of fishermen using black sea bass pots in North Carolina report using 5/16 in diameter line (T. Burgess, pers. comm. 2015).

Compared to **Alternative 1 (No Action)**, **Alternative 2** is likely to maintain (**Sub-alternative 2a**) or slightly reduce (**Sub-alternative 2b**) the overall breaking strength of line used in the commercial black sea bass pot sector throughout the Council's jurisdiction. Reduced line breaking strength can be less life threatening to large whales than lines with higher breaking strength if line breaking strength is below the threshold at which whales can safely break free from the lines. Knowlton et al (in press) suggest that if buoy line breaking strength was 1,700 lbs or less, the number of life-threatening entanglements to adult large whales may be reduced substantially. **Sub-Alternative 2a** (maximum line strength of 2,200 lbs) would likely maintain the breaking strength of lines currently being used and would have limited, if any, benefits for listed whale species. **Sub-Alternative 2b** (maximum line strength of 1,200 lbs) would likely result in fewer life-threatening entanglements for humpback whales and juvenile and adult right whales. The breaking strength in both **Sub-Alternative 2a** and **Sub-Alternative 2b** is greater than strength from which minke whales are able to escape. Given that very young right whale calves are smaller and weaker than minke whales, the breaking strength of both sub-alternatives is also likely greater than what young calves could shed. Consequently, **Sub-Alternative 2b** would not be expected to provide any less risk from entanglement to very young right whale calves than **Sub-alternative 2a**.

The biological impacts from **Alternative 3** on ESA-listed whales is unclear, but are likely beneficial. Weak links break apart when enough opposing pressure is applied to the either side of the link. On pot gear, weak links are installed where the surface buoy attaches to the buoy (vertical) line. When the weak link breaks, it releases the buoy from the vertical buoy line and attached pot. A benefit of releasing the buoy is that the remaining entangling line will then be free to slide through baleen or over/around flippers and be shed by a free swimming whale. Weak link provisions are likely to reduce entanglement risk relative to lines without weak links because the buoys can break away allowing the remaining gear to be potentially shed by the whale. A breaking strength of 400 lbs may be low enough to be broken by very young right whale calves. However, since adequate opposing pressure must be applied to the weak link to break the link, it is unclear how effective this measure would be on a case by case basis.

Preferred Alternative 4 provides a mechanism to identify the black sea bass pot sector if a line entangles a whale. There are no direct biological benefits from **Preferred Alternative 4**; however, any information gained from entangled whales on fishery type, entanglement location, and entanglement date is important to assess the impacts of a fishery and better understand and possibly work towards reducing future entanglements. However, not all gear remains on the individual after an interaction occurs. Furthermore, many entangled right whales are never seen nor is gear recovered. For line markings to be effective, the gear must be recovered, and the recovered gear must retain the marks. Line markings do improve the chances of identifying recovered gear, particularly as the number and size of marks increases. This alternative provides a mechanism to identify the black sea bass pot sector if an interaction occurs and if the gear remains entangled on the whale. This gear marking would be in addition to the gear marking

required in the Large Whale Take Reduction Plan (<http://www.greateratlantic.fisheries.noaa.gov/protected/whaletrp/docs/2015-12869.pdf>).

None of these alternatives would reduce the potential of interaction between a black sea bass pot and ESA-listed whales. The likelihood of entanglement with right whales is primarily affected by the number of pots in the water and what time of year and where they are fished. A line's breaking strength and weak link's breaking strength has no influence on those factors. Thus, selecting **Alternative 2** and/or **3** is unlikely to have any influence on the overall number of potential interactions. However, **Alternatives 2** and **3** could reduce the potential of serious injury or mortality and potentially identify or eliminate the black sea bass pot sector as a gear with an entanglement (**Preferred Alternative 4**) if the pot sector were to begin operating during November 1-April 30.

4.2.2 Economic Effects

Alternative 2, Sub-Alternative 2a would require minimum line breaking strength of 2,200 lbs for North Carolina, which the ALWTRP already requires for South Carolina, Georgia, and Florida (**Alternative 1 – No Action**). A typical black sea bass pot buoy line is 100 to 130 feet in length (Jack Cox, pers. comm.) Assuming all 17 North Carolina fishermen with black sea bass pot endorsements have 35 pots and need to replace all the buoy lines, at 125 feet per pot, the cost to buy four bundles of line would be \$716 (5 bundles x \$179/bundle = \$895, with each bundle having 1,000' of line and with 35 pots x 125 feet = 4,350' buoy line would be needed). The total expected maximum cost associated with **Alternative 2, Sub-Alternative 2a** is \$12,172 (17 x \$716). It is not known how many black sea bass pot fishermen currently use buoy line with a breaking strength less than 1,200 lbs as proscribed by **Sub-Alternative 2b**. The worst case scenario is that all 32 endorsement holders would have to buy new buoy line at \$149 per 1,000 foot bundle, or \$745, assuming fishermen would attach 125 feet of buoy line to each pot (35 pots x 125' = 4,350' buoy line). The total expected maximum cost associated with **Sub-Alternative 2b** is \$23,840.

Alternative 3 would require a step-down from 600 to 400-lb in weak link strength. All 32 endorsement holders in all four states could be required to buy new weak links as the current required links have a 600-lb breaking strength. The cost for new weak links for each fisherman is estimated to be \$65 (35 pots x \$1.85 per weak-link). The total cost for **Alternative 3** for all endorsement holders would therefore be expected to be \$2,080 (32 x \$65) if specifically-made weak links are added to each pot. Some fishermen choose to set up their gear using hog rings to act as the weak link. To reduce to a 400-lb weak link, the fishermen would simply need to remove the number of hog rings necessary to reduce the breaking strength down to a 400-lb maximum. A potential side effect of this step-down in weak-link strength could be an increased probability of the links breaking and resulting in gear loss.

While it is unknown what the rate of lost gear might be should the Council choose any alternative/sub-alternative of **Action 2** as preferred alternatives/sub-alternatives, the cost to replace lost gear can be estimated. Two active black sea bass pot fishermen estimated their replacement costs for an entire pot assembly (Jack Cox pers. comm., May 7, 2015; Tom Burgess, pers. comm., May 10, 2015). The following are the estimated costs for replacement:

Pot: \$38.50 - 50
Buoys: \$4 - 20
Iron weights: \$5 - 7
Line: \$10 - 40
Weak links: \$0 - \$1.85 (\$0 assumes the fisherman will remove hog rings)
Floy tags: \$1.50 – 1.85
Shipping cost for equipment: \$10
One hour of labor to assemble a single pot: \$23.

Based on these estimates, the range of cost to replace a single lost black sea bass pot runs from approximately \$92 to \$154.

Preferred Alternative 4 would require fishermen to mark three 12 inch bands on each buoy line. If using paint, it is assumed that one quart of marine buoy paint would be sufficient to paint the bands on buoy lines for 35 pots. The cost for a quart of marine buoy paint is \$47.35. The total maximum cost associated with **Preferred Alternative 4** if all endorsement holders marked their lines with paint is \$1,515 (32 x \$47.35). Some fishermen have reported that they mark their lines by weaving in surveyor's tape. Checking various sources online (www.amazon.com, www.uline.com/BL_6423/Flagging-Tape, and www.tigersupplies.com) show that rolls of 300 foot of surveyor's tape costs \$3 - \$11 per roll. This analysis assumes that three 12 inch strips per pot would come out to 105 feet (12 inches per strip x 3 strips per line x 35 pots) to initially equip each pot line. Therefore, if an endorsement holder decided to use surveyor's tape to mark lines, one roll would be sufficient. If all endorsement holders used surveyor's tape, the total cost would be between \$96 (32 x \$3) and \$352 (32 x \$11).

4.2.3 Social Effects

In general, the social effects of additional gear specifications would be associated with the economic effects and burden on black sea bass fishermen, and with broad social benefits that could occur with improved protection for right whales. **Sections 3.3.3** and **3.3.4** provide detailed information about the social environment for the black sea bass portion of the snapper grouper fishery. Additionally, considering engagement and reliance on commercial fishing for each community (**Figure 3.3.4**) and social vulnerability (**Figure 3.3.4.1**), the communities of Wanchese (North Carolina) and Sneads Ferry (North Carolina) are those that would be expected to experience positive and negative effects of changes for the black sea bass pot fishermen.

As discussed in **Section 4.2.2**, there could be some economic costs for fishermen if gear specifications require purchase of additional line and marking supplies. This could affect business cost decisions, which may have some negative effects on crew and associated shoreside support. Under **Alternative 1 (No Action)**, these effects would not be expected because the black sea bass pot fishermen are already required to have the ALWTRP gear specifications. Changing the specified breaking strength under **Alternative 2 - Preferred Alternative 4** would likely increase business costs for some black sea bass pot fishermen by requiring new gear to meet the requirements. The time periods specified in **Sub-Alternative 2a** and **Sub-Alternative 2b** would likely have similar effects on black sea bass pot fishermen, because if the breaking strength or gear marking is required in only one part of the year (**Sub-alternative 2a**) it would

likely be as much of a burden in terms of requiring new or additional gear purchases as a year-round requirement (**Sub-alternative 2b**). Changing the specified breaking strength under **Sub-alternative 2a** would have the same effects on fishermen and communities in Florida, South Carolina, and Georgia as under **Alternative 1 (No Action)**. However, **Sub-alternative 2a** would be expected to have some impact on black sea bass pot fishermen working in North Carolina because different gear would be required. **Sub-alternative 2b** would be expected to affect all black sea bass pot fishermen by increasing gear costs. The gear marking requirement in **Preferred Alternative 4** may be beneficial to the black sea bass pot fishermen by allowing NMFS to better identify gear associated with entanglements, which could help decipher entanglements with gear from other fisheries from black sea bass pot gear.

As noted in **Section 3.3.3**, marine mammal protection has broad social effects as well, as conservation of endangered species can produce societal benefits by protecting species for aesthetic, economic, scientific, and historical value to the U.S. and citizens. The social benefits would be tied to any benefits for right whale protection, as discussed in **Section 4.2.1**. If the biological benefits and contribution to right whale protection are higher, the broad social benefits associated with protected species conservation would be higher. However, because information on actual risk of interaction is unknown, any associated social benefits would also be unknown. With all other regulations and management measures in place for the black sea bass pot sector that contribute to minimizing potential interactions through Council actions and ALWTRP requirements (see **Section 1.8**), the return on investment of additional gear specifications under **Alternative 2 - Preferred Alternative 4** could be low, particularly for a relatively small fishery such as the black sea bass pot sector. Overall, any social benefits that would be expected to result from improved right whale protection would only be realized when biological benefits to the right whales can be measured and demonstrated.

4.2.4 Administrative Effects

Under **Alternative 1 (No Action)**, commercial black sea bass fishermen are required to abide by the pot configuration restrictions, pot escape mechanism requirements, and pot construction and escape mechanism requirements contained in 50 CFR § 622.189. As such, the alternative would retain the current level of administrative effects. There are logistical and economical costs of monitoring gear requirements. **Alternatives 2 and 3** would change the current requirements and could increase administrative costs, in the short-term, as law enforcement personnel adapt to the changes. **Preferred Alternative 4** would require unique line markings for those using black sea bass pots; this alternative may decrease adverse administrative effects compared to **Alternative 1 (No Action)** as it would be easier for law enforcement personnel to identify black sea bass pots.

Chapter 5. Council Conclusions

5.1 Action 1. Modify the annual November 1 through April 30 prohibition on the use of black sea bass pot gear

5.1.1 Snapper Grouper Advisory Panel (AP) Comments and Recommendations

From their November 2013 meeting

South Atlantic Fishery Management Council (Council) staff reviewed alternatives to address the proposed annual closure of black sea bass pots from November 1 to April 30. Regulatory Amendment 19 to the Snapper Grouper FMP implemented this regulation as well as an increase to the black sea bass annual catch limit (ACL.) The AP discussed the feasibility of the November-April black sea bass pot prohibition only applying within designated right whale critical habitat. Some of the AP members from North Carolina indicated that migratory whales are frequently encountered in water 30-60 feet deep off the North Carolina coast. Migrating whales are distributed from the Gulf of Maine south in spring and fall and congregate on calving grounds. The number of black sea bass pots the whales encounter in the South Atlantic is minuscule relative to the number of pots in the Gulf of Maine.

The AP approved the following motion:

MOTION: RECOMMEND ALTERNATIVE 4 AS PREFERRED

Alternative 4. Prohibit retention, possession, and fishing for black sea bass using black sea bass pot gear, annually, from November 1 to April 30, in designated right whale critical habitat in the South Atlantic region.

Action 1 Alternatives¹ (preferred alternative in bold)

1. No action. Closure would remain.
2. Closure of the currently designated North Atlantic right whale critical habitat area Nov 15 – April 15.
3. Closure from Nov 1 – April 30 between Ponce Inlet, FL and Cape Hatteras, NC based on extrapolated model outputs.
4. Closure from Nov 1 – April 30 in depths 25 m or shallower from Daytona Beach to Savannah and 30 m or shallower from Savannah to C. Hatteras.
5. Closure from Nov 1 – April 30 between Daytona Beach & C. Hatteras based on NGO comments.
6. Closure from Nov 1 – April 30 between Sebastian, FL & C. Hatteras, NC based on NGO comments.
7. Closure of the currently designated North Atlantic right whale critical habitat area & north to C. Hatteras in depths 25 m or shallower.
 - 7a. Nov 1 – Dec 15 & Mar 15 – Apr 30.
 - 7b. Off NC/SC Nov 1 – Dec 15/Mar 15 – April 30 and off FL/GA Nov 15 – April 15.
 - 7c. Off NC/SC Feb 15 – Apr 30. Off FL/GA Nov 15 – Apr 15.
8. Off FL/GA same as Alt 5. Off SC/NC < 25 m.
 - 8a. Closure Nov 1 – Apr 15.
 - 8b. FL/GA closure Nov 15 – Apr 1 SC/NC closure Nov 1 – Dec 15 and Feb 15 – Apr 30.
9. Off FL/GA same as Alt 5. Off SC/NC < 20 m.
 - 9a. Closure Nov 1 – Apr 15.
 - 9b. FL/GA closure Nov 15 – Apr 15. SC/NC closure Nov 1 – Dec 15 and Feb 15 – Apr 30.
10. Off FL/GA same as Alt 5 with closure Nov 15 – Apr 15. Off SC/NC Nov 1 – Dec 15 < 20 m. Off SC/NC Feb 15 1 – Apr 30 < 25 m.
11. **Nov 1 – 30 and Apr 1 - 30 off FL/GA same as Alt 5, off SC/NC same as Alt 8. Dec 1 – Mar 31, off FL/GA closure < 25 m, off SC/NC closure < 30 m.**
12. Nov 1 – Apr 30, midpoints between proposed closure Alts 4 and 8.

¹See Chapter 2 for a more detailed description of the alternatives.

From their April 2014 meeting

The AP recommended that the closure on the use of pots be limited to designated right whale critical habitat in the South Atlantic region. The AP made no further recommendations on the amendment but reiterated that vertical lines in the northeast lobster fishery pose a much more severe threat to whales than black sea bass pots and questioned why there are no restrictions in place for the northeast lobster fishery.

From their October 2014 meeting

No analyses were available for AP comment. The following are highlights from the discussion:

- Concerns that the Council has not been given credit thus far for measures that have been implemented, e.g., endorsement program for pots, restriction on number of pots and soak time, etc.
- There have been no documented interactions between black sea bass pots and right whales.
- Amendment 18A drastically reduced effort effectively creating a day-boat fishery. Common sense indicates that there is very little risk to whales, especially since there has not been a single interaction between a whale and black sea bass pot even when the number of pots in the water was much larger and with longer soak times.
- While effort could potentially shift based on the area that is closed, it is very unlikely.
- Price of black sea bass is higher in winter. North Carolina wants their winter fishery back.

The AP approved the following motions:

MOTION: RECOMMEND ALTERNATIVE 2 AS PREFERRED

Alternative 2. Remove the annual November 1 through April 30 prohibition on the retention, possession, and fishing for black sea bass using black sea bass pot gear.

MOTION: RECOMMEND THAT THE COUNCIL CONSIDER A SEPARATE ACL FOR THE COMMERCIAL HOOK AND LINE SECTOR FOR BLACK SEA BASS IF THE CURRENT CLOSURE ON BLACK SEA BASS POTS IS REMOVED.

From their April 2015 meeting

After reviewing the analyses, the Snapper Grouper AP made the following motions regarding Regulatory Amendment 16:

MOTION: THE SG AP SUPPORTS THE COUNCIL'S CHOSEN PREFERRED ALTERNATIVE 9/SUB-ALTERNATIVE 9A.

APPROVED BY AP

Alternative 9. The black sea bass pot closure applies to waters inshore of points 1-28 listed in **Table 2.1.7**; approximately Daytona Beach, Florida, to Cape Hatteras, North Carolina (**Figure 2.1.9**).

Sub-alternative 9a. The black sea bass pot closure applies to the area annually from November 1 through April 15.

5.1.2 Law Enforcement Advisory Panel (LEAP) Comments and Recommendations

From their March 2014 meeting

The LEAP received a general overview of the alternatives proposed under Regulatory Amendment 16 during their March 3, 2014, meeting. The LEAP did not express concerns or provide recommendations. One LEAP member; however, stated that the annual closure of black sea bass pots is negatively impacting North Carolina fishermen who hold endorsements to fish for black sea bass using pot gear.

From their March 2015 meeting

The LEAP received a general overview of the alternatives proposed under Regulatory Amendment 16 and made the following recommendations:

- Keep number of waypoints to a minimum.
- Effective enforcement is dependent on few waypoints and straight lines. The more waypoints there are, the more opportunity for error and it may also complicate prosecution.

5.1.3 Scientific and Statistical Committee Comments (SSC) and Recommendations

From their October 2014 meeting

The SSC met in October 2014 and discussed Snapper Grouper Regulatory Amendment 16.

The following is directly quoted from the report:

The SSC reviewed the analysis of Regulatory Amendment 16 alternatives conducted by SERO staff. The most relevant comments, concerns, and discussion points brought up during the SSC meeting included:

- *The SSC expressed concern about the lack of detail in uncertainty characterizations in the analysis. Several sensitivity runs were conducted to evaluate major uncertainties. However, the Committee expressed concern with the ability to discern differences between management alternatives given the information provided. The Committee advised that further exploration and reporting of within-model uncertainties would improve insight into the variability associated with model parameters and help to distinguish between the different alternatives considered. The SSC recognizes that conducting a more complete, in-depth uncertainty characterization would provide a more robust picture of the proposed management alternatives given the amount of uncertainty in model outputs. At the very least it would be useful to explore uncertainty in a subset of runs and give a better picture of how well this analysis can distinguish between alternatives.*
- *Dr. Nick Farmer explained that rerunning the original model using bootstrapping or MCMC technique is not feasible given the current timeline for the amendment. However, the SSC recommended clearly defining this particular deficiency in the analysis such that the Council*

understands that the ranking of considered alternatives might not hold true if a full uncertainty analysis was undertaken.

Overall, the SSC felt the presentation was informative. The approach of ranking the alternatives on a relative scale was supported. Inferring that the analysis evaluates and quantifies risk to whale encounters was not supported. With some refinement, directed at providing information on error associated with estimated scalar values for the alternatives, the analysis could allow the Council to distinguish between the different alternatives.

The SSC cautioned that assuming model output of co-occurrence between black sea bass pot effort and whale sightings is a proxy for whale interaction or entanglement overstates model and data capabilities. The Committee recommended presenting the scalar as a dimensionless value to avoid potential misunderstandings and misuse of the term 'risk'.

In terms of next steps regarding this issue the SSC provided the following recommendations:

- 1. Convene an SSC ad hoc sub-Committee to advise Dr. Nick Farmer (SERO) on uncertainty analyses to more reliably distinguish between alternatives.*
- 2. The SSC recommends an analysis of relative sea bass gear-whale sighting encounter scalar values (relative to alternative 2) that consider historic as well as current levels of effort.*
- 3. The SSC also requested that a staff member from NMFS Protected Resources Division attend the next SSC meeting to address Committee questions and clarify how these types of analyses are used to create a Biological Opinion and guide management.*

From their April 2015 meeting

The SSC reviewed and discussed the revised analyses of RA16 alternatives provided by Dr. Nick Farmer. Regarding the three action items listed above the SSC provides the following recommendations:

- The revised analyses addressed concerns raised by the SSC during the Oct 2014 meeting.*
- The SSC agrees that this analysis should be considered BSIA.*
- The SSC agrees that the analysis only characterizes the co-occurrence of whales and black sea bass pots as relative risk, not actual risk or percent risk of entanglement.*

The Socio-economic Panel (SEP) of the SSC met prior to the full SSC meeting. The SEP made the following recommendations based on specific questions asked regarding the two actions in the amendment:

Action 1

Specific Questions:

1. Two time frames were used to calculate price per pound by month (ref. Figure 4.1.2.1).
Would it be beneficial to include other time frames?

No. The SEP felt that no additional price analysis with other time frames is necessary. Additional analysis might add some variation but it would not be enough to change recommendations.

2. Table 4.1.1.1 uses information from an analysis by the Southeast Regional Office (SERO) that projects expected closure dates under various scenarios. Where there is a range of closure dates, it is due to estimated closure dates based on differences between three different scenarios that were used to calculate pot placement for each month. The analysis used for the economic effects only used one of the three modeled scenarios for where pots would be placed. Is there value in repeating the analyses for the other two pot placement scenarios?

No. Additional analysis using other pot placement scenarios is not necessary because the SEP felt that there would probably be not much variation.

3. Are there additional social or economic analyses that the SEP recommends be completed for this action?

The SEP recommends that additional economic analysis be considered.

- a. *For the price analysis, the SEP recommends using regression analysis to model the effects of regulatory measures in addition to temporal patterns. This may allow a more refined simulation of future regulatory measures, especially if price variation by market grade (fish size) can be incorporated.*
- b. *To consider efficiency, the SEP recommends predicting a change in the number of trips and change in predicted landings at the pot level and or trip level, especially seasonally. A more sophisticated analysis would model the trip-level decision process that also considers substitute target species but this could involve substantial effort.*
- c. *To incorporate changes in fishing costs, the SEP recommends considering a potential change in trip costs (e.g., due to a change in predicted landings) and vessels needing to travel further distances (e.g., by calculating the change in distance and a standard estimate of additional fuel costs required).*
- d. *Consider addressing the risk associated with expected returns, including localized depletion issues on other sectors of this fishery (e.g., recreational and commercial hook and line) and potential user conflicts with the recreational sector since the pot fishery has switched to the summer and early fall seasons, which is the time when recreational effort is generally at its highest level.*

Note: Regarding a. above, regression analysis was completed. A discussion of market grade is now included in the analysis; however, market grade was only available from the North Carolina trip ticket program and could not be included in the overall black sea bass Southeast logbook landings and therefore market grade could not be included in the regression analysis. Sufficient data do not exist to complete recommended analyses b. and c. above. A qualitative discussion of the potential impacts of localized depletion and potential user conflicts is discussed in Section 4.1.3.

4. What additional recommendations does the SEP have for **Action 1**?

*The SEP had no additional recommendations for **Action 1**.*

5. Does this analysis represent BSIA?

Yes. The SEP feels that this is the BSAI, but are interested in sensitivity analysis resulting from investigating variation in seasonal prices, prices by fish size and additional ways to capture

changes in trip efficiency. Additional sensitivity analysis is not likely to fundamentally change the results of the economic analysis. But, additional sensitivity analysis would provide more confidence in the results.

Note: Additional sensitivity analyses in the form of ANOVA and simple linear regression analyses are now included in the economic effects analysis for **Action 1** (Section 4.1.2).

5.1.4 Public Comments and Recommendations

Public comments for Snapper Grouper Regulatory Amendment 16 were taken in August of 2015. In-person public hearings were held at three locations: Little River, South Carolina on August 11, 2015; Jacksonville, North Carolina on August 12, 2015; and Ormond Beach, Florida on August 17, 2015. Written public comments were accepted by U.S. mail, facsimile, or email until August 21, 2015.

A total of 11 comments were received. There were seven comments given at the public hearings and four comments were submitted by email.

All of the commenters who appeared in person urged the Council to make provisions to allow black sea bass pot gear in some format from November through April each year. Commenters acknowledged keeping pot gear away from whales was a good idea, not just for the whales, but for fishermen, too.

Highlights of public hearing comments:

- Reasonable allowable fishing areas differ by region.
- Florida-based black sea bass pot fishermen could fish beyond 20 meters depth and be away from whales and still catch black sea bass in pots November through April.
- North Carolina-based black sea bass pot fishermen have very few days they can fish from January through April because the weather is too rough. The further out they have to go to fish, the less likely they will be able to make a trip.
- There was no absolute consensus from North Carolina pot users on the depth they need to be able to fish. All agreed that 20 meters depth was doable, but there was less consensus among public hearing attendees regarding other depths. There was no support for a 30-nautical mile from shore closure (**Alternative 5**) off the Carolinas. Weather during that time of year and the fact that the fish tend to school closer to shore in winter makes fishing at that depth impracticable.
- Pot fishermen want to catch black sea bass November through April because the fish are of higher quality and easier to catch in pots during that time of the year.
- Public hearing attendees tended not to endorse specific alternatives for **Action 1**. They endorsed specific depth closures by area.

Four written comments were received (including one from a person who also spoke at one of the public hearings). Below is a summary of those written comments.

- Recommendation to use VHF radio to warn fishermen and other boaters when endangered mammals such as North Atlantic right whales (NARW) are seen.

- The potential hazard to NARWs has been greatly reduced since the requirement of pot endorsements was introduced. Participation in the black sea bass pot sector was capped at 32 participants with no more than 35 pots. Most of the fishermen are using fewer than 35 pots now.
- The Southeastern Fisheries Association, East Coast Fisheries Section, for **Action 1** endorsed **Alternative 9, Sub-Alternative 9a** citing the fact this alternative/sub-alternative provides continued protection for NARWs and allows fishermen to use pots.
- A joint written comment from The Humane Society of the U.S., Whale and Dolphin Conservation, Center for Biological Diversity, Defenders of Wildlife, Mason Weinrich, and Carolyn Good stated their position for retaining the current closure, **Action 1, Alternative 1 (No Action)**. Their objections included what they see as problems with the document development, changing purpose and need for the actions, the imperative to protect NARWs in their only known calving grounds, the need to do whatever is possible and necessary to protect NARWs, shifting economic effects from other gear to pot gear, and size of the economic gain by shifting landings to the pot sector. Should the Council choose an alternative other than **Action 1 (No Action)**, the letter writers urged the Council to choose from among the other alternatives that would have the least risk of an interaction between NARWs and pot gear, namely, **Alternatives 4, 6, 11, or 12**.

Additional public comment outreach was conducted to solicit input from each of black sea bass pot endorsement holders in August and September 2015. The outcome of those interviews is located in **Appendix L**.

5.1.5 Council Choice for Preferred Alternative

The Council chose **Preferred Alternative 11** as its preferred alternative. The Council's main determinants in choosing its preferred alternative was to insure NARWs were protected while allowing fishing using pot gear, as much as possible. The Council determined that **Alternative 1 (No Action)** would not be the best alternative because the status quo unfairly prohibits all black sea bass pot fishing from November 1 through April 30 even in areas where NARW are not present. Initially, the Council had chosen **Alternative 9, Sub-alternative 9a** as its preferred alternative/sub-alternative. However, subsequent analysis (see **Table 4.1.1.3**) indicated **Alternative 9, Sub-alternative 9a** posed too great a risk of entanglements to NARWs. The Council ultimately determined the preferred alternative is the best management strategy based on **Preferred Alternative 11** prohibits black sea bass pot fishing from areas where 96% to 97% of the known sightings of NARWs occurred from November 1 through April 30 and allows black sea bass pot fishing outside the closed area. Among the alternatives/sub-alternatives with low risk for entanglement with NARWs and allowed for year around fishing using pot gear, **Preferred Alternative 11** had among the highest economic and social benefit (see **Tables 4.1.1.3 and 4.1.2.2**) compared to **Alternative 1 (No Action)**.

The Council concluded **Preferred Alternative 11** best meets the purpose and need, the objectives of the Snapper Grouper FMP, as amended, while complying with the requirements of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) and other applicable law.

5.2 Action 2. Enhance the existing Atlantic Large Whale Take Reduction Plan (ALWTRP) buoy line/weak link gear requirements and buoy line rope marking for black sea bass pots

5.2.1 Snapper Grouper AP Comments and Recommendations

From their April 2015 meeting

The Snapper Grouper AP made the following motions regarding Regulatory Amendment 16:

MOTION: SG AP RECOMMENDS COUNCIL REQUIRE BLACK SEA BASS POT GEAR MARKING BE A SEPARATE COLOR FROM ANY OTHER VERTICAL LINE FISHERY IN THE REGION YEAR AROUND.
APPROVED BY AP

MOTION: SG AP RECOMMENDS RESEARCH BE DONE TO DETERMINE PROPER VERTICAL LINE AND WEAK LINK STRENGTH FOR THE BLACK SEA BASS POT FISHERY IN THE SOUTH ATLANTIC IN ORDER TO MAKE FUTURE RECOMMENDATIONS.
APPROVED BY AP

MOTION: RECOMMEND THE COUNCIL RESEARCH DIFFERENT MESH SIZES FOR BLACK SEA BASS POTS.
APPROVED BY AP

The AP's suggested a mesh size modification for black sea bass pots to 2 inches or 2 3/8 inches to minimize or eliminate discards if the minimum size for commercially harvested black sea bass were to increase from 11 inches to 12 inches.

5.2.2 Law Enforcement Advisory Panel Comments and Recommendations

From their March 2015 meeting

The LEAP received a general overview of the alternatives proposed under Regulatory Amendment 16 and made the following recommendations:

- The LEAP defers to the ALWTRP for recommendations on Action 2.

Action 2 Alternatives¹ *(preferred alternative in bold)*

1. No action. Status quo gear marking requirements.
2. Modify buoy line strength Nov 1 – Apr 30
 - 2a. less than or equal to 2,200 lbs in federal waters of the South Atlantic.
 - 2b. less than or equal to 1,200 lbs in federal waters of the South Atlantic.
3. Modify weak links to no more than 400 lbs Nov 1 – Apr 30.
4. **Add a purple 12” color mark adjacent to ALWTRP required line markings from Nov 1 – Apr 30.**

¹See Chapter 2 for a more detailed description

5.2.3 Scientific and Statistical Committee Comments and Recommendations

From their April 2015 meeting

The SSC reviewed and discussed the revised analyses of RA16 alternatives provided by Dr. Nick Farmer. Regarding the three action items listed above the SSC provides the following recommendations:

- *The revised analyses addressed concerns raised by the SSC during the Oct 2014 meeting.*
- *The SSC agrees that this analysis should be considered BSIA.*
- *The SSC agrees that the analysis only characterizes the co-occurrence of whales and black sea bass pots as relative risk, not actual risk or percent risk of entanglement.*

The SEP of the SSC met prior to the full SSC meeting. The SEP made the following recommendations based on specific questions asked regarding the two actions in the amendment:

Action 2

Specific Questions:

1. The Council has request that the SEP look at how **Action 2** is structured. Does the SEP have recommendations regarding this action?

No. The SEP has no recommendation on how Action 2 is structured.

2. Are there additional social or economic analyses that the SEP recommends be completed for this action?

Yes. The SEP recommends that the analysis includes estimates for any potential loss in yield (and associated costs) from the potential gear changes that would result from this action (i.e., loss in CPUE or loss in pots, revenue and/or costs, respectively). Ideally, the gear would be tested for a reduction in breaking strength and diameter with pot weight to minimize potential costs or losses to the fishermen. In addition, the data sources for the costs used should be referenced (we understand that point estimates are sufficient since fishermen will likely use the least expensive alternative, but including those sites would be helpful).

3. What additional recommendations does the SEP have for **Action 2**?

To the extent possible consider the opportunity costs of re-rigging the gear, especially if there is a specified time period, and input from fishermen on how this would affect them.

4. Does this analysis represent BSIA?

No. The SEP feels that this will be the BSIA after the addition of information on the potential cost of lost pots due to the gear requirements.

Note: information on the potential cost of lost pots due to modified gear requirements has been included in the economic effects discussion for **Action 2 (Section 4.2.2)**.

5.2.4 Public Comments and Recommendations

Public comments for Snapper Grouper Regulatory Amendment 16 were taken in August of 2015. In person public hearings were held at three locations: Little River, South Carolina on August 11, 2015; Jacksonville, North Carolina on August 12, 2015; and Ormond Beach, Florida on August 17, 2015. Written public comments were accepted by U.S. mail, facsimile, or email until August 21, 2015.

A total of 11 comments were received. There were seven comments given at the public hearings and four comments were submitted by email.

All of the commenters who appeared in person urged the Council to make provisions to allow black sea bass pot gear in some format from November through April each year. Commenters acknowledged keeping pot gear away from whales was a good idea, not just for the whales, but for fishermen, too.

Highlights of public hearing comments relevant to **Action 2**:

- Fishermen are willing to modify their gear and fishing behavior as necessary so they can fish during the currently closed season and at reasonable depths.

Four written comments were received (including one from a person who also spoke at one of the public hearings). Below is a summary of those written comments.

- The potential hazard to NARWs has been greatly reduced since the requirement of pot endorsements was introduced. Participation in the fishery was capped at 32 participants with no more than 35 pots. Most of the fishermen are using fewer than 35 pots now.
- The Southeastern Fisheries Association, East Coast Fisheries Section, for **Action 2** supported the Council's choices of **Preferred Alternative 2, Sub-Alternative 2a, Preferred Alternative 3, and Preferred Alternative 4**.

Additional public comment outreach was conducted to solicit input from each of black sea bass pot endorsement holders in August and September 2015. The outcome of those interviews is located in **Appendix L**.

5.2.5 Council Choice for Preferred Alternative

The Council chose **Preferred Alternative 4** as its preferred alternative. The Council determined that **Alternative 1 (No Action)** would not be the best alternative because the status quo would not be able to identify black sea bass pot gear if it was found entangled on a NARW.

At the March 2015 Council meeting, **Alternative 9, Sub-alternative 9a** was selected as the preferred alternative for **Action 1**. At the June 2015 meeting, the Council changed its preferred alternative and sub-alternative to **Alternative 8, Sub-alternative 8a** and at the same meeting selected **Action 2, Alternative 2, Sub-alternative 2a, Alternative 3, and Alternative 4** as

preferred alternatives. **Alternative 2, Sub-alternative 2a** and **Alternative 3** were selected because pot fishing would have allowed closer to shore under **Action 1, Alternative 8, Sub-alternative 8a** and the Council was concerned that if NARWs did encounter pot gear, the then-preferred **Alternatives 2, Sub-alternative 2a** and **3** would increase the likelihood a NARW could free itself from the gear because of the weaker buoy line and weak links. The Council determined that **Alternatives 2** and **3** would not be good management strategies based on **Action 1, Preferred Alternative 11** because black sea bass pots would be required to fish further offshore from November 1 through April 30 when the weather is likely to be rougher than at other times of the year, requiring stronger buoy lines and weak links. The Council's final choice of **Preferred Alternative 11** under **Action 1** requires fishing further offshore than 96% - 97% of all known NARW sightings. Therefore, the Council determined there was little need to require weaker weak links or weaker buoy line strength. Additionally, fishing further offshore as required by **Action 1, Preferred Alternative 11** would necessitate the use of gear with stronger weak links and buoy line strength than specified in **Alternatives 2** and **3**, to help prevent lost pot gear from fishing in deeper depths and stronger currents.

The Council determined **Preferred Alternative 4** of additional gear marking is the best management strategy based on the increased probability of identify black sea bass pot gear if it was found entangled on a NARW.

The Council concluded **Preferred Alternative 4** best meets the purpose and need and the objectives of the Snapper Grouper FMP, as amended, while complying with the requirements of the Magnuson-Stevens Act and other applicable law.

Chapter 6. Cumulative Effects

As directed by the Council on Environmental Quality (CEQ) regulations, federal agencies are mandated to assess not only the indirect and direct impacts, but the cumulative impacts of proposed actions as well. The CEQ regulations define 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 C.F.R. 1508.7). Cumulative effects can either be additive or synergistic. A synergistic effect is when the combined effects are greater than the sum of the individual effects.

Various approaches for assessing cumulative effects have been identified, including checklists, matrices, indices, and detailed models. The Council on Environmental Quality (CEQ) offers guidance on conducting a Cumulative Effects Analysis (CEA) in a report titled “Considering Cumulative Effects under the National Environmental Policy Act” (CEQ 1997). The report outlines 11 items for consideration in drafting a CEA for a proposed action.

6.1 Biological

A. Identify the significant cumulative effects issues associated with the proposed action and define the assessment goals.

CEQ cumulative effects guidance states that this step is done through three activities. The three activities and the location in the document are as follows:

- I. The direct and indirect effects of the proposed actions (**Chapter 4**);
- II. Which resources, ecosystems, and human communities are affected (**Chapter 3**);
and
- III. Which effects are important from a cumulative effects perspective (**information revealed in this CEA**).

2. Establish the geographic scope of the analysis.

The immediate impact area would be the federal 200-mile limit of the Atlantic off the coasts of North Carolina, South Carolina, Georgia, and east Florida to Key West, which is also the South Atlantic Fishery Management Council’s (South Atlantic Council) area of jurisdiction. This section discusses the geographical boundaries of the cumulative effects analysis. For the Regulatory Amendment 16 CEA analysis, we define the extent of the geographical boundaries by the distance of fish migration of snapper-groupers or their larval transport, whichever is greater. Therefore, the proper geographical boundary to consider effects on the biophysical environment is larger than the entire South Atlantic exclusive economic zone (EEZ). The ranges

of affected species are described in **Section 3.2**. The most measurable and substantial effects would be limited to the South Atlantic region.

A. Establish the timeframe for the analysis.

The timeframe for the analysis of cumulative effects is 1983 through the present. Fishery managers implemented the first significant regulations pertaining to black sea bass in 1983 through the Snapper Grouper FMP (SAFMC 1983). The regulations included an 8 inch minimum size limit for black sea bass.

Identify the other actions affecting the resources, ecosystems, and human communities of concern (the cumulative effects to the human communities are discussed in Chapter 4).

Listed are other past, present, and reasonably foreseeable actions occurring in the South Atlantic region. These actions, when added to the proposed management measures, may result in cumulative effects on the biophysical environment.

A. Fishery-related actions affecting the snapper grouper species addressed in this amendment

A. Past

The reader is referred to **Appendix D** for past regulatory activity all species in the Snapper Grouper FMP. Past regulatory activity for the relevant snapper grouper species in this amendment is listed below.

Amendment 13C to the Snapper Grouper FMP (SAFMC 2006) phased-in quota/total allowable catch reductions over 3 years to end overfishing, changed the fishing year from the calendar year to June 1 through May 31, required use of at least 2 inch (") mesh for the entire back panel of pots, required that pots be removed from the water when the commercial quota is met, increased the recreational minimum size limit from 10" total length (TL) to 11" TL in year 1 and 12" TL in year 2 onwards, and reduced the recreational bag limit from 20 to 15 per person per day.

Amendment 15A to the Snapper Grouper FMP (SAFMC 2008a) updated black sea bass management reference points and modified the rebuilding strategy. Amendment 15A to the Snapper Grouper FMP (SAFMC 2008a) established formulas for defining the maximum sustainable yield (MSY) for black sea bass. MSY equals the yield produced by F_{MSY} when the stock is at equilibrium. MSY and F_{MSY} are defined by the most recent SEDAR assessment.

Amendment 17B to the Snapper Grouper FMP (SAFMC 2010b) established annual catch limits (ACLs) and accountability measures (AMs) for black sea bass and other snapper grouper species that were undergoing overfishing at the time.

Regulatory Amendment 9 to the Snapper Grouper FMP (SAFMC 2011a) reduced the black sea bass recreational bag limit from 15 fish per person per day to 5 fish per person per day. The final rule published in the *Federal Register* on June 15, 2011.

The Comprehensive ACL Amendment (SAFMC 2011c) includes ACLs and AMs for federally managed species not undergoing overfishing in four fishery management plans (Snapper Grouper, Dolphin Wahoo, Golden Crab, and *Sargassum*). Actions contained within the Comprehensive ACL Amendment included: (1) Removal of species from the snapper grouper fishery management unit; (2) designation of ecosystem component species; (3) allocations; (4) management measures to limit recreational and commercial sectors to their ACLs; (5) AMs; and (6) any necessary modifications to the range of regulations. The South Atlantic Council approved the Comprehensive ACL Amendment in September 2011. The final rule published in the *Federal Register* on March 16, 2012, and became effective on April 16, 2012.

Amendment 18A to the Snapper Grouper FMP (SAFMC 2012) contained measures to limit participation and effort for black sea bass. Amendment 18A established an endorsement program that enables snapper grouper fishermen with a certain catch history to harvest black sea bass with pots. In addition, Amendment 18A included measures to reduce bycatch in the black sea bass pot sector, modified the rebuilding strategy, and other necessary changes to management of black sea bass as a result of a 2011 stock assessment. The amendment was partially approved and the final rule published in the *Federal Register* on June 1, 2012, and became effective on July 1, 2012.

Regulatory Amendment 19 (SAFMC 2013b) adjusted the black sea bass harvest limits based on the results of a 2013 update assessment. Because the increase to the acceptable biological catch/ACL was substantial, there was concern that this could extend fishing with pots into the calving season for right whales and create a risk of entanglement for large migratory whales during the fall months. To minimize this risk, the amendment also proposed a closure to black sea bass pot gear from November 1 to April 30. The South Atlantic Fishery Management Council (Council) approved the amendment for submission to the Secretary of Commerce at a special Council meeting held via webinar in May 2013. The final rule published on September 23, 2013. The ACL increase for black sea bass in the South Atlantic was effective September 23, 2013. The annual prohibition on the use of black sea bass pots from November 1 through April 30 became effective October 23, 2013.

Through Regulatory Amendment 14 (SAFMC 2014), the Council modified the fishing year for greater amberjack; revised the minimum size limit measurement for gray triggerfish; increased the minimum size limit for hogfish; modified the commercial and recreational fishing year for black sea bass; adjusted the commercial fishing season for vermilion snapper; modified the aggregate grouper bag limit; and revised the AMs for gag and vermilion snapper. The National Marine Fisheries Service (NMFS) implemented the regulations on December 8, 2014.

B. Present

On January 26, 2016, NMFS issued a final rule that created an expansion of the critical habitat area. The South Atlantic Council voted in December 2015 to send this amendment in for

U.S. Secretary of Commerce review prior to the publication of the final rule for the North Atlantic right whale critical habitat area expansion. The rule would expand the critical habitat to roughly 29,945 square nautical miles, and include northeast feeding areas in the Gulf of Maine/Georges Bank region and calving grounds from southern North Carolina to northern Florida.

The following is language describing the North Atlantic right whale critical habitat area from 50 CFR § 226.203(c) as designated on January 26, 2016:

Southeastern United States: Includes marine waters from Cape Fear, North Carolina, southward to 28°N latitude (approximately 31 miles south of Cape Canaveral, Florida) within the area bounded on the west by the shoreline and the 72 COLREGS lines, and on the east by rhumb lines connecting the following points in the order stated from north to south.

N. Latitude	W. Longitude
33°51' N	at shoreline
33°42' N	77°43' W
33°37' N	77°47' W
33°28' N	78°33' W
32°59' N	78°50' W
32°17' N	79°53' W
31°31' N	80°33' W
30°43' N	80°49' W
30°30' N	81°01' W
29°45' N	81°01' W
29°15' N	80°55' W
29°08' N	80°51' W
28°50' N	80°39' W
28°38' N	80°30' W
28°28' N	80°26' W
28°24' N	80°27' W
28°21' N	80°31' W
28°16' N	80°31' W
28°11' N	80°33' W
28°00' N	80°29' W
28°00' N	At shoreline

In addition to snapper grouper fishery management issues being addressed in this amendment, other snapper grouper amendments have been developed concurrently and are in the process of approval and implementation.

The Joint Dealer Reporting Amendment was developed to improve the timeliness and accuracy of fisheries data reported by permitted dealers. The amendment created one dealer permit for all federally-permitted dealers in the southeast region. Requiring dealers to report landings data weekly will help to improve in-season quota monitoring efforts, which will

increase the likelihood that AMs could be more effectively implemented prior to ACLs being exceeded. The notice of availability of the amendment and the proposed rule published on December 19, 2013, and January 2, 2014, respectively. The proposed rule published in the *Federal Register* on January 2, 2014, the final rule published on April 9, 2014, and became effective on August 7, 2014.

The South Atlantic Headboat Reporting Amendment requires that all federally-permitted headboats on the South Atlantic report their landings information electronically, and on a weekly basis to improve the timeliness and accuracy of harvest data. The proposed rule published in the *Federal Register* on September 27, 2013. The final rule published on December 27, 2013, and regulations became effective on January 27, 2014.

At their September 2012 meeting, the Council directed staff to develop Amendment 27 to the Snapper Grouper FMP to address issues related to blue runner, and extension of management into the Gulf of Mexico for Nassau grouper. The proposed rule published in the *Federal Register* on September 27, 2013. The final rule published on December 27, 2013, and regulations became effective on January 27, 2014.

C. Reasonably Foreseeable Future

The Joint Commercial Logbook Reporting Amendment would require electronic reporting of landings information by federally-permitted commercial vessels, which is expected to increase the timeliness and accuracy of landings data.

The Joint Charter Boat Reporting Amendment would require charter vessels to regularly report their landings information electronically. Including charter boats in the recreational harvest reporting system would further improve the agency's ability to monitor recreational catch rates in-season.

At their June 2013 meeting, the Council requested development of Regulatory Amendment 16 to the Snapper Grouper FMP to adjust management measures for black sea bass by removing the November through April prohibition on the use of black sea bass pots in Regulatory Amendment 19 (SAFMC 2013f). An options paper was reviewed by the Council in September 2013. The Council held scoping meetings in January 2014. **Appendix O** describes the results of the scoping process.

The Council is considering the implementation of Spawning Special Management Zones through Amendment 36 to the Snapper Grouper FMP. The timeline is for the Council to take final action at the March 2016 meeting.

At their June 2013 meeting, the Council began development of Amendment 29 to the Snapper Grouper FMP, which would consider adjustments to the ABCs for data poor snapper grouper species, and management measures for gray triggerfish. Public hearings took place in January 2014, and the regulations were implemented July 1, 2015.

At their December 2013 meeting, the Council began development of Regulatory Amendment 21 to the Snapper Grouper FMP, which would consider redefining the minimum stock size threshold for species, including blueline tilefish, with small natural mortality rates. Regulations in Regulatory Amendment 21 became effective on November 26, 2014. The Council also began development of Amendment 32 to the Snapper Grouper FMP, which would include actions to end overfishing of blueline tilefish and rebuild the stock. Regulations in Amendment 32 became effective on March 30, 2015. In response to stock assessments for snowy grouper and wreckfish, the Council developed Regulatory Amendment 20 to the Snapper Grouper FMP, which became effective on August 20, 2015. At their December 2015 meeting, the Council approved Regulatory Amendment 25, which includes management measures for blueline tilefish and yellowtail snapper. The Council is developing Amendment 37 to the Snapper Grouper FMP, which includes measures for hogfish in response to a stock assessment, and Amendment 41 to the snapper grouper, which includes measures for mutton snapper in response to a stock assessment.

II. Non-Council and other non-fishery related actions, including natural events affecting snapper grouper species in this amendment.

- A. Past**
- B. Present**
- C. Reasonably foreseeable future**

In terms of natural disturbances, it is difficult to determine the effect of non-Council and non-fishery related actions on stocks of snapper grouper species. Annual variability in natural conditions such as water temperature, currents, food availability, predator abundance, etc. can affect the abundance of young fish, which survive the egg and larval stages each year to become juveniles (i.e., recruitment). This natural variability in year class strength is difficult to predict, as it is a function of many interactive and synergistic factors that cannot all be measured (Rothschild 1986). Furthermore, natural factors such as storms, red tide, cold-water upwelling, etc. can affect the survival of juvenile and adult fishes; however, it is very difficult to quantify the magnitude of mortality these factors may have on a stock. Alteration of preferred habitats for snapper grouper species could affect survival of fish at any stage in their life cycles. However, estimates of the abundance of fish, which utilize any number of preferred habitats, as well as, determining the impact habitat alteration may have on snapper grouper species, is problematic.

Climate change can impact marine ecosystems through ocean warming by increased thermal stratification, reduced upwelling, sea level rise, 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 CO₂ emissions may impact a wide range of organisms and ecosystems, particularly organism that absorb calcium from surface waters, such as corals and crustaceans (IPCC 2007, and references therein).

The BP/Deepwater Horizon oil spill event, which occurred in the Gulf of Mexico on April 20, 2010, did not impact fisheries operating the South Atlantic. Oil from the spill site has not been detected in the South Atlantic region, and is not likely to pose a threat to the species addressed in this amendment.

Climate change projections show increases in sea-surface temperature and sea level; decreases in sea-ice cover; and changes in salinity, wave climate, and ocean circulation [Intergovernmental Panel on Climate Change (IPCC) <http://www.ipcc.ch/>]. These changes are likely to affect plankton biomass and fish larvae abundance that could adversely impact fish, marine mammals, seabirds, and ocean biodiversity. Kennedy et al. (2002) and Osgood (2008) have suggested global climate change could affect temperature changes in coastal and marine ecosystems that can influence organism metabolism and alter ecological processes such as productivity and species interactions; change precipitation patterns and cause a rise in sea level which could change the water balance of coastal ecosystems; altering patterns of wind and water circulation in the ocean environment; and influence the productivity of critical coastal ecosystems such as wetlands, estuaries, and coral reefs. NOAA's Climate Change Web Portal (<http://www.esrl.noaa.gov/psd/ipcc/ocn/>) indicates the average sea surface temperature in the South Atlantic will increase compared to the average over past years. For reef fishes, Burton (2008) speculated climate change could cause shifts in spawning seasons, changes in migration patterns, and changes to basic life history parameters such as growth rates. It is unclear if black sea bass distribution in the South Atlantic has been effected. Black sea bass has been used in the OceanAdapt model (http://oceanadapt.rutgers.edu/regional_data/); this model investigates whether there are distributional trends both in latitude and depth over the time period 1985-2013 for fish species. For black sea bass, there does not appear to be a clear distributional trend in the South Atlantic. These changes in distributions have been hypothesized as a response to environmental factors such as increases in temperature.

5. Characterize the resources, ecosystems, and human communities identified in scoping in terms of their response to change and capacity to withstand stress.

In terms of the biophysical environment, the resources/ecosystems identified in earlier steps of the CEA are the fish populations, right whales, and other protected resources directly or indirectly affected by the regulations. This step should identify the trends, existing conditions, and the ability to withstand stresses of the environmental components. Information on species most affected by this amendment are provided in **Section 3.2** of this document.

6. Characterize the stresses affecting these resources, ecosystems, and human communities and their relation to regulatory thresholds.

This step is important in outlining the current and probable stress factors on the affected species, ecosystems, and human communities identified in the previous steps. The goal is to determine whether these species are approaching conditions where additional stresses could have an important cumulative effect beyond any current plan, regulatory, or sustainability threshold (CEQ 1997). Sustainability thresholds can be identified for some resources, which are levels of impact beyond which the resources cannot be sustained in a stable state. Other thresholds are established through numerical standards, qualitative standards, or management goals. The CEA should address whether thresholds could be exceeded because of the contribution of the proposed action to other cumulative activities affecting resources.

The threats to large endangered whales and the relation to regulatory thresholds, within the Endangered Species Act (ESA) and the Marine Mammal Protection Act (MMPA), can be found in **Sections 3.2** and **4.1** and **Appendix M** of this document.

Fish populations

This document updates thresholds already specified for black sea bass to ensure future overfishing does not occur, and to ensure these stocks can be maintained at sustainable levels. With current accountability measures (AMs) in place for both species it is unlikely that these thresholds would be exceeded. If the harvest limits are exceeded, management measures are in place to either restrict further fishing or correct for the overage in the following fishing season.

Climate change

Global climate changes could have significant effects on South Atlantic fisheries. However, the extent of these effects is not known at this time. Possible impacts include temperature changes in coastal and marine ecosystems that can influence organism metabolism and alter ecological processes such as productivity and species interactions; changes in precipitation patterns and a rise in sea level which could change the water balance of coastal ecosystems; altering patterns of wind and water circulation in the ocean environment; and influencing the productivity of critical coastal ecosystems such as wetlands, estuaries, and coral reefs (IPCC 2007; Kennedy et al. 2002).

It is unclear how climate change would affect snapper grouper species in the South Atlantic. Climate change can affect factors such as migration, range, larval and juvenile survival, prey availability, and susceptibility to predators. In addition, the distribution of native and exotic species may change with increased water temperature, as may the prevalence of disease in keystone animals such as corals and the occurrence and intensity of toxic algae blooms. Climate change may significantly impact snapper grouper species in the future, but the level of impacts cannot be quantified at this time, nor is the time frame known in which these impacts will occur. In the near term, it is unlikely that the management measures contained in Regulatory Amendment 16 would compound or exacerbate the ongoing effects of climate change on snapper grouper species.

Protected resources

The threats to large endangered whales and the relation to regulatory thresholds, within the ESA and MMPA, can be found in **Sections 3.2.3** and **4.1** and **Appendix M** of this document.

7. Define a baseline condition for the resources, ecosystems, and human communities.

The purpose of defining a baseline condition for the resource and ecosystems in the area of the proposed action is to establish a point of reference for evaluating the extent and significance of expected cumulative effects. The SEDAR assessments show trends in biomass, fishing

mortality, fish weight, and fish length going back to the earliest periods of data collection. For some species such as snowy grouper, assessments reflect initial periods when the stock was above B_{MSY} and fishing mortality was fairly low. However, some species were heavily exploited or possibly overfished when data were first collected. As a result, the assessment must make an assumption of the biomass at the start of the assessment period thus modeling the baseline reference points for the species. The baseline condition for the resources, ecosystems, and human communities can be found in **Chapter 3**.

8. Identify the important cause-and-effect relationships between human activities and resources, ecosystems, and human communities.

The cause and effect relationship of fishing and regulatory actions for black sea bass is shown in **Table 6.1**. The analysis that evaluates the potential cause-and-effect relationships between the various alternatives and right whale risk can be found in **Appendix N**.

Table 6.1. The cause and effect relationship of fishing and regulatory actions within the time period of the Cumulative Effects Analysis (CEA).

Time period/dates	Cause	Observed and/or Expected Effects
January 1992	<u>Prohibited gear</u> : fish pots south of Cape Canaveral, FL; entanglement nets; longline gear inside of 50 fathoms; powerheads and bangsticks in designated SMZs off SC. <u>Size/Bag limits</u> : 10" TL vermilion snapper (recreational only); 12" TL vermilion snapper (commercial only); 10 vermilion snapper/person/day; aggregate grouper bag limit of 5/person/day; and 20" TL gag, red, black, scamp, yellowfin, and yellowmouth grouper size limit (Snapper Grouper Amendment 4; SAFMC 1991).	Reduce mortality of snapper grouper species.
February 24, 1999	Snapper Grouper Amendment 6; SAFMC 1993.	All S-G without a bag limit: aggregate recreational bag limit 20 fish/person/day, excluding tomtate and blue runners. Vessels with longline gear aboard may only possess snowy, warsaw, yellowedge, and misty grouper, and golden, blueline and sand tilefish.
Effective October 23, 2006	Stock assessments indicate black sea bass , vermilion snapper, red porgy, and snowy grouper are undergoing overfishing. Snapper Grouper FMP Amendment 13C (SAFMC 2006)	Management measures implemented to end overfishing of these species.
Effective March 20, 2008	Stock assessments indicate snowy grouper, black sea bass, and red porgy are overfished. Snapper Grouper FMP Amendment 15A (SAFMC 2008a).	Establish rebuilding plans and SFA parameters for snowy grouper, black sea bass , and red porgy.
Effective Date July 29, 2009	Stock assessment indicates some species are experiencing overfishing	Protect spawning aggregations and snapper grouper in spawning condition

Time period/dates	Cause	Observed and/or Expected Effects
	and is approaching an overfished condition. Snapper Grouper FMP Amendment 16 (SAFMC 2009a).	by increasing the length of the spawning season closure, decrease discard mortality by requiring the use of dehooking tools, reduce overall harvest of gag and vermilion snapper to end overfishing.
Effective January 31, 2011	Reauthorized Magnuson-Stevens Act required ACLs and AMs for managed species except those with annual life cycle. Snapper Grouper FMP Amendment 17B (SAFMC 2010b),	Established ACLs and AMs for black sea bass and other snapper grouper species that were undergoing overfishing at the time.
Effective Date July 15, 2011	Additional management measures are considered to help ensure overfishing of black sea bass, vermilion snapper, and gag does not occur. Desired to have management measures slow the rate of capture to prevent derby fisheries. Snapper Grouper FMP Regulatory Amendment 9 (SAFMC 2011a)	Harvest management measures for black sea bass ; commercial trip limits for gag, vermilion snapper, and greater amberjack
Effective Date July 1, 2012	Need to slow rate of harvest in black sea bass pot sector to ease derby conditions. Snapper Grouper FMP Amendment 18A (SAFMC 2012).	Established an endorsement program for black sea bass commercial sector; established a trip limit; specified requirements for deployment and retrieval of pots; made improvements to data reporting for commercial and for-hire sectors
Effective Date January 7, 2013	Clarification of action in Amendment 18A for black sea bass pot endorsement transferability was needed. Snapper Grouper FMP Amendment 18A Transferability Amendment.	Reconsidered action to allow for transfer of black sea bass pot endorsements that was disapproved in Amendment 18A.
Effective Date July 17, 2013	The recreational data collection system has changed from MRFSS to MRIP. ACLs and allocations in place utilize MRFSS data. Snapper Grouper FMP Regulatory Amendment 13. (SAFMC 2013c).	Adjust ACLs and allocations for unassessed snapper grouper species with MRIP recreational estimates
Effective Date September 23, 2013	New stock assessment for black sea bass indicates the stock is rebuilt and catch levels can be increased. Snapper Grouper FMP Regulatory Amendment 19 (SAFMC 2013b).	Increase recreational and commercial ACLs for black sea bass . Black sea bass pots prohibited from November 1 through April 30 (effective October 23, 2013).
Effective Date December 8, 2014	Snapper Grouper FMP Regulatory Amendment 14 (SAFMC 2014).	Change the fishing years for greater amberjack and black sea bass , change in AMs for vermilion snapper and black sea bass , and modify the gag trip limit.
Effective Date August 20, 2015	Snapper Grouper FMP Regulatory Amendment 20A (SAFMC 2012b).	Revises the snowy grouper ACLs, commercial trip limit, and recreational fishing season

Time period/dates	Cause	Observed and/or Expected Effects
Target 2016	Snapper Grouper FMP Regulatory Amendment 25.	Proposes to increase the recreational bag limit for black sea bass
Target 2017	Snapper Grouper FMP 41 Amendment 41.	Adjust management measures for mutton snapper

9. Determine the magnitude and significance of cumulative effects.

Regulatory Amendment 16 alone would not result in significant cumulative impacts on snapper grouper fishery. When combined with the impacts of past, present, and future actions affecting the snapper grouper fishery, specifically black sea bass, minor cumulative adverse impacts are likely to accrue, such as a shift to fishing with pot gear. Actions in Regulatory Amendment 16 that address the black sea bass segment of the snapper grouper fishery, together or separately, are not expected to result in significant cumulative adverse biological effects. All of the proposed, or recently implemented management actions affecting black sea bass within the snapper grouper fishery, are intended to improve management of the snapper grouper resource, while minimizing, to the maximum extent practicable adverse social and economic impacts. The actions in Regulatory Amendment 16 are expected to reduce the adverse socioeconomic impacts resulting from the annual November 1 through April 30 prohibition on the use of black sea bass pot gear and increase the flexibility of black sea bass pot endorsement holders to fish with this gear while continuing to protect ESA-listed whales in the South Atlantic region and reduce the adverse effects on whales if entangled and help identify black sea bass pot lines used in the South Atlantic.

The actions are not likely to result in direct, indirect, or cumulative adverse effects to unique areas, such as significant scientific cultural, or historical resources, park land, prime farmlands, wetlands, wild and scenic rivers or ecologically critical areas as the proposed action is not expected to substantially increase fishing effort or the spatial and/or temporal distribution of current fishing effort within the South Atlantic region. The USS Monitor, Gray’s Reef, and Florida Keys National Marine Sanctuaries are within the boundaries of the South Atlantic EEZ. The proposed actions are not likely to cause loss or destruction of the resources found within the national marine sanctuaries.

10. Modify or add alternatives to avoid, minimize, or mitigate significant cumulative effects.

The cumulative adverse effects on the biophysical environment are expected to be negligible. Most of the alternatives in **Action 1** were developed as avoidance and minimization strategies to mitigate potential entanglement effects of fishing sea bass pots during winter months. Mitigation is not necessary for the successful implementation of the proposed actions in this amendment.

11. Monitor the cumulative effects of the selected alternatives and adopt management.

The effects of the proposed actions are, and will continue to be, monitored through collection of data by the NMFS, states, stock assessments and stock assessment updates, life history studies, and other scientific observations.

No specific observer program is in place for the 32 permits in the black sea bass pot fishery; however, in the programs described below, any gear recovered from an animal is analyzed to try and determine which fishery caused the entanglement. Because of the difficulty of identifying a specific fishery from the entangling gear, very few entanglements are identified beyond the gear type (i.e., a trap/pot or gillnet gear entanglement, without indicating a specific fishery).

NMFS authorizes organizations and volunteers in the Marine Mammal Stranding Program to respond to marine mammal strandings throughout the United States. Stranding network participants are trained to respond to, and collect samples from live and dead marine mammals that strand along southeastern United State beaches. As part of the network, the Southeast Fisheries Science Center coordinates stranding events, monitors stranding rates, monitors human-caused mortalities, and maintains a stranding database for the region, among other things. The Atlantic Large Whale Disentanglement Network responds to reports of entangled whales and attempts to remove entangling gear when possible. The network includes numerous governmental and non-governmental agencies, fishermen, and other trained individuals from Canada to Florida. Additionally, the MMPA and the Marine Mammal Authorization Program require that all commercial fishermen report all incidental injuries and mortalities of marine mammals that have occurred as a result of commercial fishing operations. Those reports must be sent to NMFS within 48 hours of the end of a fishing trip in which the serious injury or mortality occurred, or, for non-vessel fisheries, within 48 hours of the occurrence.

6.2 Socioeconomic

The actions in this amendment would modify the prohibition for harvest of black sea bass with pots in the winter months, and implement additional gear specifications for pots. The overall cumulative social and economic effects would be associated with increased fishing opportunities for pot endorsement holders, potential effects on hook and line fishermen, restrictions already in place due to existing regulations, and broad social benefits of whale protection.

Because of regulatory and economic changes that have affected the snapper grouper fishery, any action that restricts economic opportunity may have detrimental social and/or economic effects. The commercial sector of the snapper grouper fishery has seen significant changes in regulatory actions with limited entry, ACLs and associated AMs, and other restrictive measures.

Specifically, the black sea bass pot sector has experienced several recent regulatory changes in addition to existing requirements that have limited access to the black sea bass resource. The proposed action to modify the closure to allow fishing in areas that would not increase risk of interaction with right whales is expected to benefit the black sea bass pot fishermen to a large extent.

Furthermore, almost all fishermen or businesses with snapper grouper commercial permits also hold at least one (and usually multiple) additional commercial or for-hire permit to maintain the opportunity to participate in other fisheries. Even within the snapper grouper 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 snapper grouper fishery can impact effort and harvest of another species (in the snapper grouper fishery or in another fishery) because of multi-fishery participation that is characteristic in the South Atlantic region.

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 regulatory 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 this regulatory amendment that could affect access to several important species in the South Atlantic region may contribute to changes in the snapper grouper fishery within the context of the current economic and regulatory environment at the local and regional level.

Chapter 7. List of Preparers

Table 7.1.1. List of Regulatory Amendment 16 preparers

Name	Organization	Title
Andy Herndon	NMFS/PR	Protected Resources Biologist
Chip Collier	SAFMC	Fishery Biologist
Brian Chevront	SAFMC	Economist
Heather Blough	NMFS/SER	Acting Regional NEPA Coordinator
Gregg Waugh	SAFMC	Deputy Executive Director
Jack McGovern	NMFS/SF	Fishery Biologist
Jessica Powell	NMFS/PR	Protected Resources Biologist
Kari MacLauchlin	SAFMC	Fishery Social Scientist
Mike Errigo	SAFMC	Data Analyst
Mike Jepson	NMFS/SF	Fishery Social Scientist
Nick Farmer	NMFS/SF	Fishery Biologist
Rick DeVictor	NMFS/SF	Fishery Biologist
Tony Lamberte	NMFS/SF	Economist

NMFS = National Marine Fisheries Service, SAFMC = South Atlantic Fishery Management Council, SF = Sustainable Fisheries Division, PR = Protected Resources Division, SERO = Southeast Regional Office, HC = Habitat Conservation Division, GC = General Counsel, Eco=Economics

Table 7.1.2. List of Regulatory Amendment 16 interdisciplinary plan team members.

Name	Organization	Title
Andy Herndon	NMFS/PR	Protected Resources Biologist
Chip Collier	SAFMC	Fishery Biologist
Brian Chevront	SAFMC	Economist
David Dale	NMFS/HC	EFH Specialist
Heather Blough	NMFS/SER	Special Assistant to the RA
Gregg Waugh	SAFMC	Deputy Executive Director
Jack McGovern	NMFS/SF	Fishery Biologist
Jessica Powell	NMFS/PR	Protected Resources Biologist
Kari MacLauchlin	SAFMC	Fishery Social Scientist
Lance Garrison	NMFS/SEFSC	Research Biologist
Scott Crosson	NMFS/SEFSC	Economist
Mike Errigo	SAFMC	Fishery Biologist
Mike Jepson	NMFS/SF	Fishery Social Scientist
Monica Smit-Brunello	NMFS SERO/GC	Attorney
Myra Brouwer	SAFMC	Fishery Biologist
Nick Farmer	NMFS/SF	Fishery Biologist
Jeff Radonski	NOAA/OLE	Special Agent
Rick DeVictor	NMFS/SF	Fishery Biologist
Roger Pugliese	SAFMC	Sr. Fishery Biologist
Scott Sandorf	NMFS/SF	Technical Writer & Editor
Stephen Holiman	NMFS/SF	Supervisory Industry Economist
Tony Lamberte	NMFS/SF	Economist

NMFS = National Marine Fisheries Service, SAFMC = South Atlantic Fishery Management Council, SF = Sustainable Fisheries Division, PR = Protected Resources Division, SERO = Southeast Regional Office, HC = Habitat Conservation Division, GC = General Counsel, Eco=Economics

Chapter 8. List of Agencies, Organizations, and Persons to Whom Copies of the Statement are Sent

Responsible Agency

Regulatory Amendment 16:

South Atlantic Fishery Management Council
4055 Faber Place Drive, Suite 201
Charleston, South Carolina 29405
(843) 571-4366 (TEL)
Toll Free: 866-SAFMC-10
(843) 769-4520 (FAX)
safmc@safmc.net

Environmental Impact Statement:

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

List of Agencies, Organizations, and Persons Consulted

Environmental Protection Agency
North Carolina Coastal Zone Management Program
South Carolina Coastal Zone Management Program
Georgia Coastal Zone Management Program
Florida Coastal Zone Management Program
Florida Fish and Wildlife Conservation Commission
Georgia Department of Natural Resources
South Carolina Department of Natural Resources
North Carolina Division of Marine Fisheries
Atlantic States Marine Fisheries Commission
National Marine Fisheries Service
- Washington Office
- Office of Ecology and Conservation
- Southeast Fisheries Science Center

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- SEFIS, 53
- South Atlantic EEZ, 8, 9, 10, 11, 12, 13, 27, 2, 14, 16, 18, 20, 22, 24, 27, 29, 32, 36, 40, 43, 66, 160
- South Atlantic Fishery Management Council, 1, 15, 1, 2, 3, 12, 66, 109, 152, 163, 164, 165, 174, 175, 176
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Appendix A. Considered But Rejected Alternatives

Alternative 3. Prohibit retention, possession, and fishing for black sea bass using black sea bass pot gear, annually, from November 15 through April 15.

Discussion: This alternative was removed from Regulatory Amendment 16 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (Regulatory Amendment 16) because the timeframe of the prohibition on the use of black sea bass pots did not encompass the time during which large whales first arrive off the coast of North Carolina during their southward migration. Similarly, as the whales undertake their northward migration in late spring, they can be found off the Carolina's after April 15. Hence, the South Atlantic Fishery Management Council (Council) determined this alternative did not meet the purpose and need of Regulatory Amendment 16 and voted to remove it from further consideration.

Alternative 2. Remove the annual November 1 through April 30 prohibition on the retention, possession, and fishing for black sea bass using black sea bass pot gear.

Discussion: This alternative was removed from Regulatory Amendment 16 because consideration of a complete removal of pot restrictions was not considered precautionary in terms of protecting pregnant, southward migrating whales in the fall and northward migrating calves in the spring. Hence, the Council determined this alternative did not meet the purpose and need of Regulatory Amendment 16 and voted to remove it from further consideration.

Appendix B. Glossary

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

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

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

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

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

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

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

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

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

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

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

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

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

Discards: Fish captured, but released at sea.

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

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

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

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

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

F: Fishing mortality.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Marine Recreational Information Program (MRIP): Survey operated by NMFS in cooperation with states that collects marine recreational fisheries data. It replaced the MRFSS survey.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Appendix C. Other Applicable Laws

1.1 Administrative Procedure Act (APA)

All federal rulemaking is governed under the provisions of the APA (5 U.S.C. Subchapter II), which establishes a “notice and comment” procedure to enable public participation in the rulemaking process. Among other things under the APA, the National Marine Fisheries Service (NMFS) is required to publish notification of proposed rules in the *Federal Register* and to solicit, consider and respond to public comment on those rules before they are finalized. The APA also establishes a 30-day wait period from the time a final rule is published until it takes effect, with some exceptions. Regulatory Amendment 16 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (Regulatory Amendment 16) complies with the provisions of the APA through the South Atlantic Fishery Management Council’s (South Atlantic Council) extensive use of public meetings, requests for comments and consideration of comments. The proposed rule associated with this amendment will have a request for public comments, which complies with the APA, and upon publication of the final rule, unless the rule falls within an APA exception, there will be a 30-day wait period before the regulations are effective.

1.2 Information Quality Act (IQA)

The IQA (Section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Public Law 106-443)) which took effect October 1, 2002, directed the Office of Management and Budget (OMB) to issue government-wide guidelines that “provide policy and procedural guidelines to federal agencies for ensuring and maximizing the quality, objectivity, utility, and integrity of information disseminated by federal agencies.” OMB directed each federal agency to issue its own guidelines, establish administrative mechanisms allowing affected persons to seek and obtain correction of information that does not comply with OMB guidelines, and report periodically to OMB on the number and nature of complaints. The NOAA Section 515 Information Quality Guidelines require a series of actions for each new information product subject to the IQA. Regulatory Amendment 16 has used the best available information and made a broad presentation thereof. The information contained in this document was developed using best available scientific information. Therefore, this document is in compliance with the IQA.

1.3 Coastal Zone Management Act (CZMA)

Section 307(c)(1) of the federal CZMA of 1972 requires that all federal activities that directly affect the coastal zone be consistent with approved state coastal zone management programs to the maximum extent practicable. While it is the goal of the South Atlantic Council to have management measures that complement those of the states, federal and state administrative procedures vary and regulatory changes are unlikely to be fully instituted at the same time. The South Atlantic Council believes the actions in this amendment are consistent to the maximum extent practicable with the Coastal Zone Management Plans of Florida, Georgia, South Carolina, and North Carolina. Pursuant to Section 307 of the CZMA, this determination will be submitted to the responsible state agencies who administer the approved Coastal Zone Management Programs in the States of Florida, South Carolina, Georgia, and North Carolina.

1.4 Endangered Species Act (ESA)

The ESA of 1973 (16 U.S.C. Section 1531 et seq.) requires that federal agencies must ensure actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered species or the habitat designated as critical to their survival and recovery. The ESA requires NMFS to consult with the appropriate administrative agency (itself for most marine species, and the U.S. Fish and Wildlife Service for all remaining species) when proposing an action that may affect threatened or endangered species or adversely modify critical habitat. Consultations are necessary to determine the potential impacts of the proposed action. They are concluded informally when proposed actions may affect but are “not likely to adversely affect” threatened or endangered species or designated critical habitat. Formal consultations, resulting in a biological opinion, are required when proposed actions may affect and are “likely to adversely affect” threatened or endangered species or adversely modify designated critical habitat. NMFS completed a biological opinion (NMFS 2006) in 2006 evaluating the impacts of the continued authorization of the South Atlantic snapper grouper fishery under the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (Snapper Grouper FMP) and Amendment 13C to the Snapper Grouper FMP on ESA-listed species (see **Chapter 3**). The opinion stated the fishery was not likely to adversely affect North Atlantic right whale critical habitat, seabirds, or marine mammals (see NMFS 2006 for discussion on these species). However, the opinion did state that the snapper grouper fishery would adversely affect sea turtles and smalltooth sawfish, but would not jeopardize their continued existence. An incidental take statement was issued for green, hawksbill, Kemp’s ridley, leatherback, and loggerhead sea turtles, as well as smalltooth sawfish. Reasonable and prudent measures to minimize the impact of these incidental takes were specified, along with terms and conditions to implement them. See NMFS (2006) for a full discussion of impacts to smalltooth sawfish.

Table C-1. Three-year South Atlantic anticipated takes sea turtles in the snapper grouper fishery.

Species	Amount of Take	Total
Green	Total Take	39
	Lethal Take	14
Hawksbill	Total Take	4
	Lethal Take	3
Kemp’s Ridley	Total Take	19
	Lethal Take	8
Leatherback	Total Take	25
	Lethal Take	15
Loggerhead	Total Take	202
	Lethal Take	67

Source: NMFS 2006. NMFS (National Marine Fisheries Service). 2006. Endangered Species Act Section 7 consultation on the continued authorization of snapper grouper fishing under the Snapper Grouper FMP and Proposed Amendment 13C. Biological Opinion. June 7.

Sea turtles are vulnerable to capture by bottom longline and vertical hook-and-line gear. The magnitude of the interactions between sea turtles and the South Atlantic snapper grouper fishery was evaluated in NMFS (2006) using data from the Supplementary Discard Data Program (SDDP). Three loggerheads and three unidentified sea turtles were caught on vertical lines; one leatherback and one loggerhead were caught on bottom longlines, all were released alive. The effort reported in the program

represented between approximately 5% and 14% of all South Atlantic snapper-grouper fishing effort. These data were extrapolated in NMFS (2006) to better estimate the number of interactions between the entire snapper-grouper fishery and ESA-listed sea turtles. The extrapolated estimate was used to project future interactions (**Table C-1**).

The SDDP does not provide data on recreational fishing interactions with ESA-listed sea turtle species. However, anecdotal information indicates that recreational fishermen occasionally take sea turtles with hook-and-line gear. The biological opinion also used the extrapolated data from the SDDP to estimate the magnitude of recreational fishing on sea turtles (**Table C-1**).

Regulations implemented through Amendment 15B to the Snapper Grouper FMP (74 FR 31225; June 30, 2009) required all commercial or charter/headboat vessels with a South Atlantic snapper grouper permit, carrying hook-and-line gear on board, to possess required literature and release gear to aid in the safe release of incidentally caught sea turtles and smalltooth sawfish. These regulations are thought to decrease the mortality associated with accidental interactions with sea turtles and smalltooth sawfish.

Subsequent to the June 7, 2006, opinion, NMFS made several modifications to the list of protected species for which they are responsible. These changes included (1) the listing of two species of *Acropora* coral (71 FR 26852, May 9, 2006), (2) the designation of *Acropora* critical habitat (73 FR 72210, November 26, 2008), (3) the determination that the loggerhead sea turtle population consists of nine DPSs (76 FR 58868, September 22, 2011), (4) the listing of five DPSs of Atlantic sturgeon (77 FR 5914, February 6, 2012, and 77 FR 5880, February 6, 2012), and (5) the listing of five additional coral species (79 FR 53851, September 10, 2014).

NMFS addressed these ESA changes in a series of consultation memoranda. In separate memoranda, NMFS concluded the continued authorization of the South Atlantic snapper-grouper fishery is not likely to adversely affect elkhorn or staghorn coral (*Acropora* spp.; July 9, 2007), *Acropora* critical habitat (December 2, 2008), and Atlantic sturgeon (February 15, 2012). The February 15, 2012, memorandum also stated that because the 2006 biological opinion had evaluated the impacts of the snapper-grouper fishery on the loggerhead sea turtle subpopulations now wholly contained within the Northwest Atlantic DPS, the biological opinion's conclusion that the fishery is not likely to jeopardize the continued existence of loggerhead sea turtles remains valid. In a memorandum dated January 23, 2013, NMFS concluded new information provided in the proposed reclassification (uplisting) of *Acropora* did not change the previous effects determination that the fishery was not likely to adversely affect *Acropora*. No new information was included in the final listing rule (79 FR 53851, September 10, 2014) that indicates NMFS's previous effects determinations regarding the potential impacts of the snapper-grouper fishery on *Acropora* were incorrect.

The final listing rule published on September 10, 2014, listed 20 new coral species under the ESA. Five of those new species occur in the Caribbean (including Florida) and all of these are listed as threatened. In a memorandum dated September 11, 2014, NMFS evaluated the effects of continued authorization of the snapper-grouper fishery on those newly listed coral species. NMFS concluded that any adverse effects on these species from the snapper-grouper fishery are extremely unlikely to occur and are therefore discountable.

Additionally, on July 10, 2014, NMFS designated 5 habitat types across 38 marine areas in the Gulf of Mexico and South Atlantic that encompassed the 15 primary constituent elements (PCEs) of critical habitat for the northwest Atlantic Ocean (NWA) loggerhead sea turtle DPS. In a memorandum dated September 16, 2014, NMFS evaluated the potential impacts all federally managed fisheries in the Gulf of Mexico and South Atlantic regions may have on the NWA loggerhead sea turtle DPS critical habitat. The evaluation concluded the snapper-grouper fishery uses fishing methods and gear types that will either have no effect or are highly unlikely to adversely affect any of the PCEs; thus, any adverse effects from this fishery are discountable.

1.5 Executive Order 12612: Federalism

E.O. 12612 requires agencies to be guided by the fundamental federalism principles when formulating and implementing policies that have federalism implications. The purpose of the Order is to guarantee the division of governmental responsibilities between the federal government and the states, as intended by the framers of the Constitution. No federalism issues have been identified relative to the actions proposed in this document and associated regulations. Therefore, preparation of a Federalism assessment under E.O. 13132 is not necessary.

1.6 Executive Order 12866: Regulatory Planning and Review

E.O. 12866, signed in 1993, requires federal agencies to assess the costs and benefits of their proposed regulations, including distributional impacts, and to select alternatives that maximize net benefits to society. To comply with E.O. 12866, NMFS prepares a Regulatory Impact Review (RIR) for all fishery regulatory actions that implement a new fishery management plan (FMP) or that significantly amend an existing plan. RIRs provide a comprehensive analysis of the costs and benefits to society associated with proposed regulatory actions, the problems and policy objectives prompting the regulatory proposals, and the major alternatives that could be used to solve the problems. The reviews also serve as the basis for the agency's determinations as to whether proposed regulations are a "significant regulatory action" under the criteria provided in E.O. 12866 and whether proposed regulations will have a significant economic impact on a substantial number of small entities in compliance with the Regulatory Flexibility Act. A regulation is significant if it is likely to result in an annual effect on the economy of at least \$100,000,000 or if it has other major economic effects.

In accordance with E.O. 12866, the following is set forth by the South Atlantic Council: (1) this rule is not likely to have an annual effect on the economy of more than \$100 million or to adversely affect in a material way the economy, a sector of the economy, productivity, jobs, the environment, public health or safety, or state, local, or tribal governments or communities; (2) this rule is not likely to create any serious inconsistencies or otherwise interfere with any action taken or planned by another agency; (3) this rule is not likely to materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights or obligations of recipients thereof; (4) this rule is not likely to raise novel or policy issues arising out of legal mandates, or the principles set forth in the Executive Order; and (5) this rule is not controversial.

This amendment includes the RIR as **Appendix G**.

1.7 Executive Order 12898: Environmental Justice

E.O. 12898 requires that “to the greatest extent practicable and permitted by law...each federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies and activities on minority populations and low-income populations in the United States and its territories and possessions....”

The alternatives being considered in this document are not expected to result in any disproportionate adverse human health or environmental effects to minority populations or low-income populations of Florida, North Carolina, South Carolina, or Georgia, rather the impacts would be spread across all participants in the snapper grouper fishery regardless of race or income. A detailed description of the communities impacted by the actions contained in this document and potential socioeconomic impacts of those actions are contained in **Chapters 3** and **4** of this document.

1.8 Executive Order 12962: Recreational Fisheries

E.O. 12962 requires federal agencies, in cooperation with states and tribes, to improve the quantity, function, sustainable productivity, and distribution of U.S. aquatic resources for increased recreational fishing opportunities through a variety of methods. Additionally, the Order establishes a seven-member National Recreational Fisheries Coordination Council responsible for, among other things, ensuring that social and economic values of healthy aquatic systems that support recreational fisheries are considered by federal agencies in the course of their actions, sharing the latest resource information and management technologies, and reducing duplicative and cost-inefficient programs among federal agencies involved in conserving or managing recreational fisheries. The National Recreational Fisheries Coordination Council also is responsible for developing, in cooperation with federal agencies, states and tribes, a Recreational Fishery Resource Conservation Plan - to include a five-year agenda. Finally, the Order requires NMFS and the U.S. Fish and Wildlife Service to develop a joint agency policy for administering the ESA.

The alternatives considered in this document are consistent with the directives of E.O. 12962.

1.9 Executive Order 13089: Coral Reef Protection

E.O. 13089, signed by President William Clinton on June 11, 1998, recognizes the ecological, social, and economic values provided by the Nation's coral reefs and ensures that federal agencies are protecting these ecosystems. More specifically, the Order requires federal agencies to identify actions that may harm U.S. coral reef ecosystems, to utilize their program and authorities to protect and enhance the conditions of such ecosystems, and to ensure that their actions do not degrade the condition of the coral reef ecosystem.

The alternatives considered in this document are consistent with the directives of E.O. 13089.

1.10 Executive Order 13158: Marine Protected Areas (MPAs)

E.O. 13158 was signed on May 26, 2000, to strengthen the protection of U.S. ocean and coastal resources through the use of Marine Protected Areas. The E.O. defined MPAs as "any area of the marine environment that has been reserved by federal, state, territorial, tribal, or local laws or regulations to provide lasting protection for part or all of the natural and cultural resources therein". It directs federal agencies to work closely with state, local and non- governmental partners to create a comprehensive network of MPAs "representing diverse U.S. marine ecosystems, and the Nation's natural and cultural resources".

The alternatives considered in this document are consistent with the directives of E.O. 13158.

1.11 Marine Mammal Protection Act (MMPA)

The MMPA established a moratorium, with certain exceptions, on the taking of marine mammals in U.S. waters and by U.S. citizens on the high seas. It also prohibits the importing of marine mammals and marine mammal products into the United States. Under the MMPA, the Secretary of Commerce

(authority delegated to NMFS) is responsible for the conservation and management of cetaceans and pinnipeds (other than walruses). The Secretary of the Interior is responsible for walruses, sea otters, polar bears, manatees, and dugongs. Part of the responsibility that NMFS has under the MMPA involves monitoring populations of marine mammals to make sure that they stay at optimum levels. If a population falls below its optimum level, it is designated as “depleted”. A conservation plan is then developed to guide research and management actions to restore the population to healthy levels.

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

Under the MMPA, to legally fish in a Category I and/or II fishery, fishermen must obtain a marine mammal authorization certificate. Fishermen are automatically registered and should receive an authorization certificate in the mail or instructions for how to obtain one. They are also required to accommodate an observer if requested (50 CFR 229.7(c)), comply with any applicable take reduction plans, and report any incidental mortality or injury of marine mammals that occurs as a result of commercial fishing operations within 48 hours. The commercial hook-and-line components of the South Atlantic snapper grouper fishery (i.e., bottom longline, bandit gear, and handline), which targets snapper grouper species are listed as part of a Category III fishery (79 FR 77919, 28 January 2015). The black sea bass pot component of the South Atlantic snapper grouper fishery is part of the Atlantic mixed species trap/pot fishery, a Category II fishery, in the final 2015 LOF (79 FR 77919, 28 January 2015). The actions in this EA are not expected to negatively impact the provisions of the MMPA

1.12 National Environmental Policy Act (NEPA)

This document has been written and organized in a manner that meets NEPA requirements, and thus is a consolidated NEPA document, including an EA, as described in NOAA Administrative Order (NAO) 216- 6, Section 6.03.a.2.

Purpose and Need for Action

The purpose and need for this action are described in **Chapter 1**.

Alternatives

The alternatives for this action are described in **Chapter 2**.

Affected Environment

The affected environment is described in **Chapter 3**.

Impacts of the Alternatives

The impacts of the alternatives on the environment are described in **Chapter 4**.

1.13 National Marine Sanctuaries Act (NMSA)

Under the NMSA (also known as Title III of the Marine Protection, Research and Sanctuaries Act of 1972), as amended, the U.S. Secretary of Commerce is authorized to designate National Marine Sanctuaries to protect distinctive natural and cultural resources whose protection and beneficial use requires comprehensive planning and management. The National Marine Sanctuary Program is administered by the Sanctuaries and Reserves Division of NOAA. The NMSA provides authority for comprehensive and coordinated conservation and management of these marine areas. The National Marine Sanctuary Program currently comprises 13 sanctuaries around the country, including sites in American Samoa and Hawaii. These sites include significant coral reef and kelp forest habitats, and breeding and feeding grounds of whales, sea lions, sharks, and sea turtles. The three sanctuaries in the South Atlantic exclusive economic zone are the USS Monitor, Gray's Reef, and Florida Keys National Marine Sanctuaries.

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

1.14 Paperwork Reduction Act (PRA)

The purpose of the PRA is to minimize the burden on the public. The PRA is intended to ensure that the information collected under the proposed action is needed and is collected in an efficient manner (44 U.S.C. 3501 (1)). The authority to manage information collection and record keeping requirements is vested with the Director of the Office of Management and Budget (OMB). This authority encompasses establishment of guidelines and policies, approval of information collection requests, and reduction of paperwork burdens and duplications. The PRA requires NMFS to obtain approval from the OMB before requesting most types of fishery information from the public. Actions in this document are not expected to affect PRA.

1.15 Regulatory Flexibility Act (RFA)

The RFA of 1980 (5 U.S.C. 601 et seq.) requires federal agencies to assess the impacts of regulatory actions implemented through notice and comment rulemaking procedures on small businesses, small organizations, and small governmental entities, with the goal of minimizing adverse impacts of burdensome regulations and record-keeping requirements on those entities. Under the RFA, NMFS must determine whether a proposed fishery regulation would have a significant economic impact on a substantial number of small entities. If not, a certification to this effect must be prepared and submitted to the Chief Counsel for Advocacy of the Small Business Administration. Alternatively, if a regulation is determined to significantly impact a substantial number of small entities, the RFA requires the agency to prepare an initial and final Regulatory Flexibility Analysis to accompany the proposed and final rule, respectively. These analyses, which describe the type and number of small businesses, affected, the nature and size of the impacts, and alternatives that minimize these impacts while accomplishing stated objectives, must be published in the *Federal Register* in full or in summary for public comment and submitted to the chief counsel for advocacy of the Small Business Administration. Changes to the RFA in June 1996 enable small entities to seek court review of an agency's compliance with the RFA's provisions.

As NMFS has determined whether a proposed fishery regulation would have a significant economic impact on a substantial number of small entities, a certification to this effect will be prepared and submitted to the Chief Counsel for Advocacy of the Small Business Administration.

This amendment includes the RFA as **Appendix H**.

1.16 Small Business Act (SBA)

Enacted in 1953, the SBA requires that agencies assist and protect small-business interests to the extent possible to preserve free competitive enterprise. The objectives of the SBA are to foster business ownership by individuals who are both socially and economically disadvantaged; and to promote the competitive viability of such firms by providing business development assistance including, but not limited to, management and technical assistance, access to capital and other forms of financial assistance, business training, and counseling, and access to sole source and limited competition federal contract opportunities, to help firms achieve competitive viability. Because most businesses associated with fishing are considered small businesses, NMFS, in implementing regulations, must make an assessment of how those regulations will affect small businesses.

1.17 Public Law 99-659: Vessel Safety

Public Law 99-659 amended the Magnuson-Stevens Fishery Conservation and Management Act to require that a FMP or FMP amendment must consider, and may provide for, temporary adjustments (after consultation with the U.S. Coast Guard and persons utilizing the fishery) regarding access to a fishery for vessels that would be otherwise prevented from participating in the fishery because of safety concerns related to weather or to other ocean conditions. No vessel would be forced to participate in South Atlantic fisheries under adverse weather or ocean conditions as a result of the imposition of management regulations proposed in this amendment. No concerns have been raised by South Atlantic

fishermen or by the U.S. Coast Guard that the proposed management measures directly or indirectly pose a hazard to crew or vessel safety under adverse weather or ocean conditions.

Appendix D. History of Management

History of Management of the South Atlantic Snapper Grouper Fishery

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

Document	All Actions Effective By:	Proposed Rule Final Rule	Major Actions. Note that not all details are provided here. Please refer to Proposed and Final Rules for all impacts of listed documents.
FMP (1983)	08/31/83	PR: 48 FR 26843 FR: 48 FR 39463	-12" total length (TL) limit – red snapper, yellowtail snapper, red grouper, Nassau grouper -8" limit – black sea bass -4" trawl mesh size -Gear limitations – poisons, explosives, fish traps, trawls -Designated modified habitats or artificial reefs as Special Management Zones (SMZs)
Regulatory Amendment #1 (1987)	03/27/87	PR: 51 FR 43937 FR: 52 FR 9864	-Prohibited fishing in SMZs except with hand-held hook-and-line and spearfishing gear. -Prohibited harvest of goliath grouper in SMZs.
Amendment #1 (1988a)	01/12/89	PR: 53 FR 42985 FR: 54 FR 1720	-Prohibited trawl gear to harvest fish south of Cape Hatteras, NC and north of Cape Canaveral, FL. -Directed fishery defined as vessel with trawl gear and ≥200 lbs s-g on board. -Established rebuttable assumption that vessel with s-g on board had harvested such fish in the exclusive economic zone (EEZ).
Regulatory Amendment #2 (1988b)	03/30/89	PR: 53 FR 32412 FR: 54 FR 8342	-Established 2 artificial reefs off Ft. Pierce, FL as SMZs.
Notice of Control Date	09/24/90	55 FR 39039	-Anyone entering federal wreckfish fishery in the EEZ off S. Atlantic states after 09/24/90 was not assured of future access if limited entry program developed.
Regulatory Amendment #3 (1989)	11/02/90	PR: 55 FR 28066 FR: 55 FR 40394	-Established artificial reef at Key Biscayne, FL as SMZ. Fish trapping, bottom longlining, spear fishing, and harvesting of Goliath grouper prohibited in SMZ.
Amendment #2 (1990a)	10/30/90	PR: 55 FR 31406 FR: 55 FR 46213	-Prohibited harvest/possession of goliath grouper in or from the EEZ -Defined overfishing for goliath grouper and other species

Document	All Actions Effective By:	Proposed Rule Final Rule	Major Actions. Note that not all details are provided here. Please refer to Proposed and Final Rules for all impacts of listed documents.
Emergency Rule	8/3/90	55 FR 32257	-Added wreckfish to the fishery management unit (FMU) -Fishing year beginning 4/16/90 -Commercial quota of 2 million pounds -Commercial trip limit of 10,000 pounds per trip
Fishery Closure Notice	8/8/90	55 FR 32635	- Fishery closed because the commercial quota of 2 million pounds was reached
Emergency Rule Extension	11/1/90	55 FR 40181	-extended the measures implemented via emergency rule on 8/3/90
Amendment #3 (1990b)	01/31/91	PR: 55 FR 39023 FR: 56 FR 2443	-Added wreckfish to the FMU -Defined optimum yield and overfishing -Required permit to fish for, land or sell wreckfish -Required catch and effort reports from selected, permitted vessel; -Established control date of 03/28/90 -Established a fishing year for wreckfish starting April 16 -Established a process to set annual quota, with initial quota of 2 million pounds; provisions for closure -Established 10,000 pound trip limit -Established a spawning season closure for wreckfish from January 15 to April 15 -Provided for annual adjustments of wreckfish management measures
Notice of Control Date	07/30/91	56 FR 36052	-Anyone entering federal snapper grouper fishery (other than for wreckfish) in the EEZ off S. Atlantic states after 07/30/91 was not assured of future access if limited entry program developed.

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Amendment #4 (1991)	01/01/92	PR: 56 FR 29922 FR: 56 FR 56016	<ul style="list-style-type: none"> -Prohibited gear: fish traps except black sea bass traps north of Cape Canaveral, FL; entanglement nets; longline gear inside 50 fathoms; bottom longlines to harvest wreckfish; powerheads and bangsticks in designated SMZs off S. Carolina -defined overfishing/overfished and established rebuilding timeframe: red snapper and groupers ≤ 15 years (year 1 = 1991); other snappers, greater amberjack, black sea bass, red porgy ≤ 10 years (year 1 = 1991) -Required permits (commercial & for-hire) and specified data collection regulations -Established an assessment group and annual adjustment procedure (framework) -Permit, gear, and vessel id requirements specified for black sea bass traps -No retention of snapper grouper spp. caught in other fisheries with gear prohibited in snapper grouper fishery if captured snapper grouper had no bag limit or harvest was prohibited. If had a bag limit, could retain only the bag limit -8” TL limit – lane snapper -10” TL limit – vermilion snapper (recreational only) -12” TL limit – red porgy, vermilion snapper (commercial only), gray, yellowtail, mutton, schoolmaster, queen, blackfin, cubera, dog, mahogany, and silk snappers -20” TL limit – red snapper, gag, and red, black, scamp, yellowfin, and yellowmouth groupers. -28” fork length (FL) limit – greater amberjack (recreational only) -36” FL or 28” core length – greater amberjack (commercial only) -bag limits – 10 vermilion snapper, 3 greater amberjack -aggregate snapper bag limit – 10/person/day, excluding vermilion snapper and allowing no more than 2 red snappers -aggregate grouper bag limit – 5/person/day, excluding Nassau and goliath grouper, for which no retention (recreational & commercial) is allowed -spawning season closure – commercial harvest greater amberjack > 3 fish bag prohibited in April south of Cape Canaveral, FL -spawning season closure – commercial harvest mutton snapper > snapper aggregate prohibited during May and June -charter/headboats and excursion boat possession limits extended

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Amendment #5 (1992a)	04/06/92	PR: 56 FR 57302 FR: 57 FR 7886	-Wreckfish: established limited entry system with individual transferable quotas (ITQs); required dealer to have permit; rescinded 10,000 lb. trip limit; required off-loading between 8 am and 5 pm; reduced occasions when 24-hour advance notice of offloading required for off-loading; established procedure for initial distribution of percentage shares of total allowable catch (TAC)
Emergency Rule	8/31/92	57 FR 39365	-Black Sea Bass (bsb): modified definition of bsb pot; allowed multi-gear trips for bsb; allowed retention of incidentally-caught fish on bsb trips
Emergency Rule Extension	11/30/92	57 FR 56522	-Black Sea Bass: modified definition of bsb pot; allowed multi-gear trips for bsb; allowed retention of incidentally-caught fish on bsb trips
Regulatory Amendment #4 (1992b)	07/06/93	FR: 58 FR 36155	-Black Sea Bass: modified definition of bsb pot; allowed multi-gear trips for bsb; allowed retention of incidentally-caught fish on bsb trips
Regulatory Amendment #5 (1992c)	07/31/93	PR: 58 FR 13732 FR: 58 FR 35895	-Established 8 SMZs off S. Carolina, where only hand-held, hook-and-line gear and spearfishing (excluding powerheads) was allowed
Amendment #6 (1993)	07/27/94	PR: 59 FR 9721 FR: 59 FR 27242	-Set up separate commercial TAC levels for golden tilefish and snowy grouper -Established commercial trip limits for snowy grouper, golden tilefish, speckled hind, and warsaw grouper -Included golden tilefish in grouper recreational aggregate bag limits -Prohibited sale of warsaw grouper and speckled hind -100% logbook coverage upon renewal of permit -Creation of the <i>Oculina</i> Experimental Closed Area -Data collection needs specified for evaluation of possible future individual fishing quota system
Amendment #7 (1994a)	01/23/95	PR: 59 FR 47833 FR: 59 FR 66270	-12" FL – hogfish -16" TL – mutton snapper -Required dealer, charter and headboat federal permits -Allowed sale under specified conditions -Specified allowable gear and made allowance for experimental gear -Allowed multi-gear trips in NC -Added localized overfishing to list of problems and objectives -Adjusted bag limit and crew specs. for charter and head boats -Modified management unit for scup to apply south of Cape Hatteras, NC -Modified framework procedure
Regulatory Amendment #6 (1994b)	05/22/95	PR: 60 FR 8620 FR: 60 FR 19683	-Established actions which applied only to EEZ off Atlantic coast of FL: Bag limits – 5 hogfish/person/day (recreational only), 2 cubera snapper/person/day > 30" TL; 12" TL – gray triggerfish
Notice of Control Date	04/23/97	62 FR 22995	-Anyone entering federal bsb pot fishery off S. Atlantic states after 04/23/97 was not assured of future access if limited entry program developed

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Amendment #8 (1997)	12/14/98	PR: 63 FR 1813 FR: 63 FR 38298	<ul style="list-style-type: none"> -Established program to limit initial eligibility for snapper grouper fishery: Must demonstrate landings of any species in the snapper grouper (SG) FMU in 1993, 1994, 1995 or 1996; and have held valid SG permit between 02/11/96 and 02/11/97 -Granted transferable permit with unlimited landings if vessel landed \geq 1,000 pounds (lbs) of snapper grouper species in any of the years -Granted non-transferable permit with 225 lb trip limit to all other vessels -Modified problems, objectives, optimum yield (OY), and overfishing definitions -Expanded Council's habitat responsibility -Allowed retention of snapper grouper species in excess of bag limit on permitted vessel with a single bait net or cast nets on board -Allowed permitted vessels to possess filleted fish harvested in the Bahamas under certain conditions.
Regulatory Amendment #7 (1998a)	01/29/99	PR: 63 FR 43656 FR: 63 FR 71793	-Established 10 SMZs at artificial reefs off South Carolina.
Interim Rule Request	1/16/98		-Council requested all Amendment 9 measures except black sea bass pot construction changes be implemented as an interim request under the Magnuson-Stevens Act
Action Suspended	5/14/98		-NMFS informed the Council that action on the interim rule request was suspended
Emergency Rule Request	9/24/98		-Council requested Amendment 9 be implemented via emergency rule
Request not Implemented	1/22/99		-NMFS informed the Council that the final rule for Amendment 9 would be effective 2/24/99; therefore they did not implement the emergency rule

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Amendment #9 (1998b)	2/24/99	PR: 63 FR 63276 FR: 64 FR 3624	<p>-<u>Red porgy</u>: 14" TL (recreational and commercial); 5 fish rec. bag limit; no harvest or possession > bag limit, and no purchase or sale, in March and April</p> <p>-<u>Black sea bass</u>: 10" TL (recreational and commercial); 20 fish rec. bag limit; required escape vents and escape panels with degradable fasteners in bsb pots</p> <p>-<u>Greater amberjack</u>: 1 fish rec. bag limit; no harvest or possession > bag limit, and no purchase or sale, during April; quota = 1,169,931 lbs; began fishing year May 1; prohibited coring</p> <p>-Specified size limits for several snapper grouper species (indicated in parentheses in inches TL): including yellowtail snapper (12), mutton snapper (16), red snapper (20); red grouper, yellowfin grouper, yellowmouth grouper, and scamp (20)</p> <p>-<u>Vermilion snapper</u>: 11" TL (recreational), 12" TL commercial</p> <p>-<u>Gag</u>: 24" TL (recreational); no commercial harvest or possession > bag limit, and no purchase or sale, during March and April</p> <p>-<u>Black grouper</u>: 24" TL (recreational and commercial); no harvest or possession > bag limit, and no purchase or sale, during March and April</p> <p>-<u>Gag and Black grouper</u>: within 5 fish aggregate grouper bag limit, no more than 2 fish may be gag or black grouper (individually or in combination)</p> <p>-<u>All snapper grouper without a bag limit</u>: aggregate recreational bag limit 20 fish/person/day, excluding tomtate and blue runner</p> <p>-<u>Vessels with longline gear</u> aboard may only possess snowy, warsaw, yellowedge, and misty grouper, and golden, blueline and sand tilefish</p>
Amendment #9 (1998b) resubmitted	10/13/00	PR: 63 FR 63276 FR: 65 FR 55203	-Commercial trip limit for greater amberjack
Emergency Interim Rule	09/08/99, expired 08/28/00	64 FR 48324 and 65 FR 10040	-Prohibited harvest or possession of red porgy
Emergency Action	9/3/99	64 FR 48326	-Reopened the Amendment 8 permit application process
Amendment #10 (1998c)	07/14/00	PR: 64 FR 37082 and 64 FR 59152 FR: 65 FR 37292	-Identified essential fish habitat (EFH) and established habitat areas of particular concern (HAPC) for species in the snapper grouper FMU

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Amendment #11 (1998d)	12/02/99	PR: 64 FR 27952 FR: 64 FR 59126	<p>-Maximum sustainable yield (MSY) proxy: goliath and Nassau grouper = 40% static spawning potential ratio (SPR); all other species = 30% static SPR</p> <p>-OY: hermaphroditic groupers = 45% static SPR; goliath and Nassau grouper = 50% static SPR; all other species = 40% static SPR</p> <p>-Overfished/overfishing evaluations: BSB: overfished (minimum stock size threshold (MSST)=3.72 mp, 1995 biomass=1.33 mp); undergoing overfishing (maximum fishing mortality threshold (MFMT)=0.72, F1991-1995=0.95) Vermilion snapper: overfished (static SPR = 21-27%). Red porgy: overfished (static SPR = 14-19%). Red snapper: overfished (static SPR = 24-32%) Gag: overfished (static SPR = 27%) Scamp: no longer overfished (static SPR = 35%) Speckled hind: overfished (static SPR = 8-13%) Warsaw grouper: overfished (static SPR = 6-14%) Snowy grouper: overfished (static SPR = 5-15%) White grunt: no longer overfished (static SPR = 29-39%) Golden tilefish: overfished (couldn't estimate static SPR) Nassau grouper: overfished (couldn't estimate static SPR) Goliath grouper: overfished (couldn't estimate static SPR)</p> <p>-overfishing level: goliath and Nassau grouper = $F > F_{40\%}$ static SPR; all other species: = $F > F_{30\%}$ static SPR Approved definitions for overfished and overfishing. $MSST = [(1-M) \text{ or } 0.5 \text{ whichever is greater}] * B_{MSY}$. $MFMT = F_{MSY}$</p>
Regulatory Amendment #8 (2000a)	11/15/00	PR: 65 FR 41041 FR: 65 FR 61114	-Established 12 SMZs at artificial reefs off Georgia; revised boundaries of 7 existing SMZs off Georgia to meet CG permit specs; restricted fishing in new and revised SMZs
Amendment #12 (2000b)	09/22/00	PR: 65 FR 35877 FR: 65 FR 51248	-Red porgy: MSY=4.38 mp; OY=45% static SPR; MFMT=0.43; MSST=7.34 mp; rebuilding timeframe=18 years (1999=year 1); no sale of red porgy during Jan-April; 1 fish bag limit; 50 lb. bycatch comm. trip limit May-December; modified management options and list of possible framework actions
Amendment #13A (2003)	04/26/04	PR: 68 FR 66069 FR: 69 FR 15731	-Extended for an indefinite period the regulation prohibiting fishing for and possessing snapper grouper spp. within the <i>Oculina</i> Experimental Closed Area
Notice of Control Date	10/14/05	70 FR 60058	-The Council is considering management measures to further limit participation or effort in the commercial fishery for snapper grouper species (excluding wreckfish)
Amendment #13C (2006)	10/23/06	PR: 71 FR 28841 FR: 71 FR 55096	- End overfishing of snowy grouper, vermilion snapper, black sea bass, and golden tilefish. Increase allowable catch of red porgy. Year 1 = 2006. 1. Snowy Grouper Commercial: Quota = 151,000 lbs gutted weight (gw) in year 1, 118,000 lbs gw in year 2,

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			<p>and 84,000 lbs gw in year 3 onwards. Trip limit = 275 lbs gw in year 1, 175 lbs gw in year 2, and 100 lbs gw in year 3 onwards</p> <p>Recreational: Limit possession to one snowy grouper in 5 grouper per person/day aggregate bag limit.</p> <p>2. Golden Tilefish Commercial: Quota of 295,000 lbs gw, 4,000 lbs gw trip limit until 75% of the quota is taken when the trip limit is reduced to 300 lbs gw. Do not adjust the trip limit downwards unless 75% is captured on or before September 1.</p> <p>Recreational: Limit possession to 1 golden tilefish in 5 grouper per person/day aggregate bag limit.</p> <p>3. Vermilion Snapper Commercial: Quota of 1,100,000 lbs gw.</p> <p>Recreational: 12" TL size limit.</p> <p>4. Black Sea Bass Commercial: Commercial quota of 477,000 lbs gw in year 1, 423,000 lbs gw in year 2, and 309,000 lbs gw in year 3 onwards. Require use of at least 2" mesh for the entire back panel of black sea bass pots effective 6 months after publication of the final rule. Require black sea bass pots be removed from the water when the quota is met. Change fishing year from calendar year to June 1 – May 31.</p> <p>Recreational: Recreational allocation of 633,000 lbs gw in year 1, 560,000 lbs gw in year 2, and 409,000 lbs gw in year 3 onwards. Increase minimum size limit from 10" to 11" in year 1 and to 12" in year 2. Reduce recreational bag limit from 20 to 15 per person per day. Change fishing year from the calendar year to June 1 through May 31.</p> <p>5. Red Porgy Commercial and recreational:</p> <ol style="list-style-type: none"> 1. Retain 14" TL size limit and seasonal closure (retention limited to the bag limit); 2. Specify a commercial quota of 127,000 lbs gw and prohibit sale/purchase and prohibit harvest and/or possession beyond the bag limit when quota is taken and/or during January through April; 3. Increase commercial trip limit from 50 lbs ww to 120 red porgy (210 lbs gw) during May through December; 4. Increase recreational bag limit from one to three red porgy per person per day.
Notice of Control Date	3/8/07	72 FR 60794	-The Council may consider measures to limit participation in the snapper grouper for-hire sector
Amendment #14 (2007)	2/12/09	PR: 73 FR 32281 FR: 74 FR 1621	-Establish eight deepwater Type II marine protected areas (MPAs) to protect a portion of the population and habitat of long-lived deepwater snapper grouper species
Amendment #15A (2008a)	3/14/08	73 FR 14942	- Establish rebuilding plans and status determination criteria for snowy grouper, black sea bass, and red porgy
Amendment #15B (2008b)	2/15/10	PR: 74 FR 30569 FR: 74 FR 58902	<p>-Prohibit the sale of bag-limit caught snapper grouper species</p> <p>-Reduce the effects of incidental hooking on sea turtles and smalltooth sawfish</p> <p>-Adjust commercial renewal periods and transferability</p>

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			<ul style="list-style-type: none"> requirements -Implement plan to monitor and assess bycatch -Establish reference points for golden tilefish -Establish allocations for snowy grouper (95% com & 5% rec) and red porgy (50% com & 50% rec)
Amendment #16 (SAFMC 2009a)	7/29/09	PR: 74 FR 6297 FR: 74 FR 30964	<ul style="list-style-type: none"> -Specify status determination criteria for gag and vermilion snapper -For gag: Specify interim allocations 51% com & 49% rec; rec & com shallow water grouper spawning closure January through April; directed com quota= 352,940 lbs gw; -reduce 5-fish aggregate grouper bag limit, including tilefish species, to a 3-fish aggregate -Captain and crew on for-hire trips cannot retain the bag limit of vermilion snapper and species within the 3-fish grouper aggregate -For vermilion snapper: Specify interim allocations 68% com & 32% rec; directed com quota split Jan-June=315,523 lbs gw and 302,523 lbs gw July-Dec; reduce bag limit from 10 to 5 and a rec closed season November through March -Require dehooking tools
Amendment #19 (Comprehensive Ecosystem-Based Amendment 1; SAFMC 2009b)	7/22/10	PR: 75 FR 14548 FR: 75 FR 35330	<ul style="list-style-type: none"> -Provide presentation of spatial information for EFH and EFH-HAPC designations under the Snapper Grouper FMP - Designation of deepwater coral HAPCs
Amendment #17A (SAFMC 2010a)	12/3/10 red snapper closure; circle hooks March 3, 2011	PR: 75 FR 49447 FR: 75 FR 76874	<ul style="list-style-type: none"> -Required use of non-stainless steel circle hooks when fishing for snapper grouper species with hook-and-line gear north of 28 deg. N latitude in the South Atlantic EEZ -Specify an ACL and an AM for red snapper with management measures to reduce the probability that catches will exceed the stocks' ACL -Specify a rebuilding plan for red snapper -Specify status determination criteria for red snapper -Specify a monitoring program for red snapper
Emergency Rule	12/3/10	75 FR 76890	<ul style="list-style-type: none"> - Delay the effective date of the area closure for snapper grouper species implemented through Amendment 17A
Amendment #17B (SAFMC 2010b)	January 31, 2011	PR: 75 FR 62488 FR: 75 FR 82280	<ul style="list-style-type: none"> -Specify ACLs, ACTs, and AMs, where necessary, for 9 species undergoing overfishing -Modify management measures as needed to limit harvest to the ACL or ACT -Update the framework procedure for specification of total allowable catch -Prohibited harvest of 6 deepwater species seaward of 240 feet to curb bycatch of speckled hind and warsaw grouper
Notice of Control Date	12/4/08	74 FR 7849	<ul style="list-style-type: none"> -Establishes a control date for the golden tilefish portion of the snapper grouper fishery in the South Atlantic

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Notice of Control Date	12/4/08	74 FR 7849	-Establishes control date for black sea bass pot sector in the South Atlantic
Regulatory Amendment #10 (SAFMC 2010c)	5/31/11	PR: 76 FR 9530 FR: 76 FR 23728	-Eliminate closed area for snapper grouper species approved in Amendment 17A
Regulatory Amendment #9 (SAFMC 2011a)	Bag limit: 6/22/11 Trip limits: 7/15/11	PR: 76 FR 23930 FR: 76 FR 34892	- Establish trip limits for vermilion snapper and gag, increase trip limit for greater amberjack, and reduce bag limit for black sea bass
Regulatory Amendment #11 (2011b)	5/10/12	PR: 76 FR 78879 FR: 77 FR 27374	- Eliminate 240 ft harvest prohibition for six deepwater species
Amendment # 25 (Comprehensive ACL Amendment) (SAFMC 2011c)	4/16/12	PR: 76 FR 74757 Amended PR: 76 FR 82264 FR: 77 FR 15916	-Establish acceptable biological catch (ABC) control rules, establish ABCs, annual catch limits (ACLs), and accountability measures (AMs) for species not undergoing overfishing -Remove some species from South Atlantic FMU and designate others as ecosystem component species -Specify allocations between the commercial and, recreational sectors for species not undergoing overfishing -Limit the total mortality for federally managed species in the South Atlantic to the ACLs
Amendment #24 (SAFMC 2011d)	7/11/12	PR: 77 FR 19169 FR: 77 FR 34254	-Specify MSY, rebuilding plan (including ACLs, AMs, and OY), and allocations for red grouper
Amendment #23 (Comprehensive Ecosystem-based Amendment 2; SAFMC 2011e)	1/30/12	PR: 76 FR 69230 FR: 76 FR 82183	- Designate the Deepwater MPAs as EFH-HAPCs - Limit harvest of snapper grouper species in SC SMZs to the bag limit - Modify sea turtle release gear
Amendment #18A (SAFMC 2012a)	7/1/12	PR: 77 FR 16991 FR: 77FR3 2408	- Limit participation and effort in the black sea bass sector - Modifications to management of the black sea bass pot sector - Improve the accuracy, timing, and quantity of fisheries statistics
Amendment #20A (SAFMC 2012b)	10/26/12	PR: 77 FR 19165 FR: 77 FR 59129	-Redistribute latent shares for the wreckfish ITQ program.

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Regulatory Amendment #12 (SAFMC 2012c)	10/9/12	FR: 77 FR 61295	-Adjust the ACL and OY for golden tilefish -Consider specifying a commercial Annual Catch Target (ACT) -Revise recreational AMs for golden tilefish
Amendment #18B (SAFMC 2013a)	5/23/13	PR: 77 FR 75093 FR: 77 FR 23858	-Limit participation and effort in the golden tilefish commercial sector through establishment of a longline endorsement -Modify trip limits -Specify allocations for gear groups (longline and hook and line)
Regulatory Amendment #13 (SAFMC 2013b)	7/17/13	PR: 78 FR 17336 FR: 78 FR 36113	-Revise the ABCs, ACLs (including sector ACLs), and ACTs implemented by the Comprehensive ACL Amendment (SAFMC 2011c). The revisions may prevent a disjunction between the established ACLs and the landings used to determine if AMs are triggered.
Regulatory Amendment #15 (SAFMC 2013c)	9/12/13	PR: 78 FR 31511 FR: 78 FR 49183	-Modify the existing specification of OY and ACL for yellowtail snapper in the South Atlantic -Modify the existing gag commercial ACL and AM for gag that requires a closure of all other shallow water groupers (black grouper, red grouper, scamp, red hind, rock hind, graysby, coney, yellowmouth grouper, and yellowfin grouper) in the South Atlantic when the gag commercial ACL is met or projected to be met
Amendment #27 (SAFMC 2014)	1/27/14	FR: 78 FR 78770	-Establish the South Atlantic Council as the responsible entity for managing Nassau grouper throughout its range including federal waters of the Gulf of Mexico -Modify the crew member limit on dual-permitted snapper grouper vessels -Modify the restriction on retention of bag limit quantities of some snapper grouper species by captain and crew of for-hire vessels -Minimize regulatory delay when adjustments to snapper grouper species' ABC, ACLs, and ACTs are needed as a result of new stock assessments -Address harvest of blue runner by commercial fishermen who do not possess a South Atlantic Snapper Grouper Permit
Amendment #28 (SAFMC 2013d)	8/23/13	PR: 78 FR 25047 FR: 78 FR 44461	-Establish regulations to allow harvest of red snapper in the South Atlantic
Regulatory Amendment #18 (SAFMC 2013e)	9/5/13	PR: 78 FR 26740 FR: 78 FR 47574	-Adjust ACLs for vermilion snapper and red pogy, and remove the 4-month recreational closure for vermilion snapper

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Regulatory Amendment #19 (SAFMC 2013f)	ACL: 9/23/13 Pot closure: 10/23/13	PR: 78 FR 39700 FR: 78 FR 58249	-Adjust the ACL for black sea bass and implement an annual closure on the use of black sea bass pots from November 1 to April 30
Amendment #20B	TBD	TBD	-Update wreckfish ITQ according to reauthorized Magnuson-Stevens Act
Regulatory Amendment #14	12/8/2014	PR: 79 FR 22936 FR: 79 FR 66316	-Modify the fishing year for greater amberjack -Modify the fishing year for black sea bass -Revise the AMs for vermilion snapper and black sea bass -Modify the trip limit for gag
Amendment # 26 (Comprehensive Ecosystem-Based Amendment 3)	TBD	TBD	-Modify bycatch and discard reporting for commercial and for-hire vessels
Regulatory Amendment #16	TBD	TBD	-Consider removal of the November-April prohibition on the use of black sea bass pots
Amendment #36	TBD	TBD	-Establish special management zones to enhance protection for snapper grouper species in spawning condition including speckled hind and warsaw grouper
Amendment #32	3/30/2015	PR: 80 FR 3207 FR: 80 FR 16583	-Adjust management measures and ACLs for blueline tilefish
Regulatory Amendment #20	8/20/2015	PR: 80 FR 18797 FR: 80 FR 43033	-Increased the recreational and commercial ACLs for snowy grouper; -Adjusted the rebuilding strategy; -Increased the commercial trip limit; -Modified the recreational fishing season.
Amendment # 29	7/1/2015	NOA:79 FR 69819 PR: 79 FR 72567 FR: 80 FR 30947	-Updated the Council's ABC control rule to incorporate methodology for determining the ABC of unassessed species, adjust ABCs for fourteen unassessed snapper-grouper species, adjust ACLs and ACTs for three species complexes and four snapper-grouper species based on revised ABCs; -Modified and implement gray triggerfish minimum size limits; -Established a commercial split season and commercial trip limits for gray triggerfish.

Document	All Actions Effective By:	Proposed Rule Final Rule	Major Actions. Note that not all details are provided here. Please refer to Proposed and Final Rules for all impacts of listed documents.
Regulatory Amendment #22	Effective September 11, 2015, except for the amendments to §§ 622.190(b) and 622.193(r)(1) which were effective August 12, 2015	PR:80 FR 31880 FR:80 FR 48277	-Adjusted ACLs and OY for gag and wreckfish; -Modified the gag bag limit within the aggregate grouper bag limit.
Amendment #35	TBD	TBD	-Remove four species from the Snapper Grouper FMP and address golden tilefish longline endorsement issue.
Amendment # 33 Dolphin Wahoo Amendment 7 and Snapper Grouper Amendment 33	12/28/2015	PR:80 FR 60601 FR:80 FR 80686	-Allowed dolphin and wahoo fillets to enter the U.S. EEZ after lawful harvest in The Bahamas; -Specified the condition of any dolphin, wahoo, and snapper-grouper fillets; -Described how the recreational bag limit is determined for any fillets; -Explicitly prohibited the sale or purchase of any dolphin, wahoo, or snapper-grouper recreationally harvested in The Bahamas; -Specified the required documentation to be onboard any vessels that have these fillets; -Specified transit and stowage provisions for any vessels with fillets.
Amendment #34 Generic Accountability Measures and Dolphin Allocation Amendment (Snapper Grouper 34)	2/22/2016	PR:80 FR 58448	-Modify AMs for snapper-grouper species -Modify the AM for commercial golden crab fishery -Adjust sector allocations for dolphin.

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**Summary of Comments Received on the DEIS for
Regulatory Amendment 16 to the FMP for the Snapper-Grouper Fishery of the South Atlantic Region**
Prepared by Rick DeVictor, NMFS SERO

The following represents a summary of the comments received on the DEIS for Regulatory Amendment 16. The comments in their entirety may be found at <http://www.regulations.gov/#!docketDetail;D=NOAA-NMFS-2013-0165>.

Comment 1 from N/A

- There commercial sector minimum size should be no less than 13". However, it would make more sense for commercial and recreational limits to be raised to 14".
-

Comment 2 from David Pierce, Massachusetts Division of Marine Fisheries

- The Division of Marine Fisheries has been an appointed member of the Atlantic Large Whale Take Reduction Team since its inception.
- Marine Fisheries does not support any of the alternatives offered under Action 1 as the Council did not include an option to fully remove the closure.
- By limiting the number of pots and actively tending them during short soak times, the risk to right whales will be minimal.
- In Action 2, we support Alternative 3 and 4 which would require 400 pound weak links on all buoy lines and would implement a dual-color marking system for black sea bass pots.

Comment 3 from Joyce Stanley, United States Department of the Interior

- No comments at this time

Comment 4 from Rusty Hudson, Directed Sustainable Fisheries, Inc

- Stated see the attached letter but there is no attachment

Comment 5 from Russell Hudson, Directed Sustainable Fisheries, Inc

- Since October 23, 2013, the 32 Endorsement Permit holders have suffered an area and time prohibition for the BSB pot fishery after the SAFMC SG RA-19 final rule became effective.
- Snapper-Grouper Regulatory Amendment 19 cost the BSB Pot Endorsement Permit owners significant loss of income across three winter seasons.

- DSF clients support the following two alternatives for a final rule to become effective during 2016: Preferred Alternative 11 (Action 1) and Preferred Alternative 4 (Action 2).

Comment 6 from Sharon Young, The Humane Society of the United States

- The letter contains multiple signatures from multiple organizations/universities.
- All of the signatories of this letter are federally appointed members of the Atlantic Large Whale Take Reduction Team.
- We continue to support maintaining the status quo closure but do not offer strenuous objection to Alternative 11 as the preferred alternative under Action 1.
- We suggest that NMFS will need to re-initiate consultation on the BiOp that was issued in conjunction with the recent revisions to the ALWTRP that did not consider the existence of this fishery when risk from vertical lines was evaluated.
- The preferred alternative under Action 2 must include a requirement for lower breaking strengths of line since the best available science clearly indicates it is warranted and this was a preferred alternative under the original DEIS.
- NMFS and the Council must also address the plethora of errors and insufficiencies in analysis that we identified in these and our prior comments on this Amendment.

The following is a more detailed summary of their comments:

Action 1

- The preferred alternative identified in the DEIS would re-open the risk-prone black sea bass trap/pot fishery in key calving areas for critically endangered North Atlantic right whales (*Eubalaena glacialis*).
- Supports the “No Action” alternative under Action 1 (thus obviating the need for most of the proposals in Action 2). However, we find the Council’s preferred alternative under Action 1 to be preferable to most of the other proposed alternatives. We continue to support maintaining the status quo closure but do not offer strenuous objection to Alternative 11 as the preferred alternative under Action 1.
- NMFS will need to re-initiate consultation on the BiOp that was issued in conjunction with the recent revisions to the ALWTRP that was intended to reduce the number of vertical lines posing risk to large whales.
- The Council should prohibit black sea bass trap/pot fishing in the full area that is proposed for expanded critical habitat. Alternative 11, the Preferred Alternative, largely encompasses the area proposed for expanded critical habitat.

Action 2

- We have concerns with the sufficiency of the preferred alternative under Action 2.
- If NMFS selects Alternative 11 rather than the no action alternative that would maintain the current seasonal closure, the Council and NMFS must adopt as part of Amendment 16, reduced breaking strengths for the line (1,200 pounds) as proposed in sub-Alternative 2B.
- The failure to reduce breaking strength of rope or to consider lowering weak link breaking strength can have tragic consequences for the mothers, calves and juveniles found in the Action area.
- The Council and NMFS cannot reasonably choose Sub-alternative 2A or the status quo or any alternative with a breaking strength of greater than 1,700 pounds, which the DEIS itself acknowledges is more risk-prone since the best available science indicates that there is a more protective alternative that was previously proposed as a “preferred alternative” by the Council in the initial draft of a DEIS and is only now dropped for consideration as “preferred” but with no explanation for the change.
- The current requirement in the ALWTRP for a rope breaking strength of 2,500 lbs., as is the status quo in South Carolina, Georgia, and Florida, is entirely unacceptable when there is ample and more recent scientific evidence that this breaking strength is highly risk prone.
- Simply identifying the entangling gear is most assuredly not a risk reduction measure. Simply enhancing gear marking will not meet the purpose of “reduc[ing] the adverse effects on whales if entangled” as it will not reduce the likelihood of entanglement nor will it reduce adverse effects on whales once entangled in the gear, it will merely, as the DEIS acknowledges, “help identify black sea bass pot lines used in the South Atlantic.”

Other comments

- *Timing:* Not only will this Amendment be discussed and/or approved just a few days after the close of public comments but, again, a mere 60 minutes has been allotted on the agenda for its discussion. This limited review time is insufficient to review and amend any part of the DEIS as a result of public comments—essentially mooted all comments—as there is insufficient time for their review and analysis or time to amend the DEIS.
- *Federal Waters:* While environmental conditions may not be as favorable to black sea bass in state waters (within 3 nautical miles from the beach), any shift in environmental variables or other natural or anthropogenic factors that influence the distribution of fishing effort may result in risk-prone gear being used in the area of state waters that will remain unprotected. We also note that take reduction measures in the Northeast generally extend to the shoreline unless a specific exemption is granted. NMFS must address this potential risk inside of state waters and provide a detailed explanation and analysis of its chosen boundaries.
- *Proposed Boundary:* The northern boundary of the area proposed for the DEIS’ protective measures in North Carolina is drawn at the jurisdictional boundary, not necessarily where risk to right whales from the black sea bass fishery no longer pertains. NMFS should consider with the relevant Council(s), whether similar protective measures should be imposed north of the

northern extent of the proposed boundary in Alternative 11, which is the preferred alternative under Action 1.

- *Purpose and Need:* The Council itself is not clear on what needs to be remedied in lifting the seasonal prohibition of black sea bass trap/pot fishing. There are two entirely different purposes and any economic gain for the trap/pot fishers appears to come at the expense of other gear types.
- *Unaddressed Concerns Raised During Scoping:* Many of the substantive issues we raised in those comments remain unaddressed, including the acknowledgement of missing, outdated or incorrect information. If NMFS is not addressing substantive comments, it should in some manner provide a rationale for rejecting previous comments provided to the Agency. Other portions of the DEIS that were identified as problematic in our prior comments remain essentially unchanged despite specific and substantive comment include: poor economic justification of the need to re-opening this fishery; failure to justify the need to enrich the trap/pot fishery at the potential economic expense of other gear types targeting black sea bass; the inappropriate analysis and weighing of the economics of saving right whales against the profits of the industry; and, reliance on the ALWTRP to achieve risk reduction, despite the fact that it has already failed in its approach to reducing excessive mortality and did not even consider the existence of this fishery when rulemaking was finalized.

Comment 7 from David Bush, North Carolina Fisheries Association, Inc.

- NC Fisheries Association endorses the recommendations of Directed Sustainable Fisheries (DFS), and contained within the letter written by Russell Howard Hudson, President (DFS), dated 06 December 2015.
- Black sea bass are most available to NC fishermen during the current closure period, significantly impacting NC fishermen and affecting the availability of black sea bass to NC consumers.
- With no expected interaction and with the current breakaway lines used on the pots, such a fishery would pose minimal risk to whales.
- NC Fisheries Association requests your consideration in opening a day pot fishery for black sea bass.

Comment 8 from Christine Koczera, South Carolina Department of Health and Environmental Control

- Coastal Zone Consistency staff has determined that Amendment 16 of the respective FMP is consistent to the maximum extent practicable as required by 15 CFR § 930, Subpart C.

Comment 9 from Christopher A. Militscher, United States Environmental Protection Agency

- The EPA supports the proposed actions to the Regulatory Amendment 16 to the Snapper Grouper Fishery Management Plan.

- The EPA has rated this DEIS as “LO” or Lack of Objections. The EPA has not identified any potential environmental impacts to the proposed action that would require substantive changes to the proposal.
- This DEIS has addressed climate change in general. The South Atlantic Fishery Management Council might wish to consider collecting and including a more thorough analysis and how climate change may or may not affect a particular species of fish.

Comment 10 from A.G. “Spud” Woodward, Georgia Department of Resources

- Amendment 16 is consistent with the applicable enforceable policies of the Georgia Coastal Management Program and the Program is supportive of this action.

Appendix F. Bycatch Practicability Analysis

1.1 Population Effects for the Bycatch Species

Background

The South Atlantic Fishery Management Council (Council) is proposing to reduce the temporal and spatial scope of the annual prohibition on the use of commercial black sea bass pot gear in the South Atlantic from November 1 through April 30. The Council is also enhancing buoy line/weak link gear requirements and buoy line rope marking for black sea bass pots required by the Atlantic Large Whale Take Reduction Plan

1.2 Finfish Bycatch Mortality

The South Atlantic snapper grouper fisheries are characterized by moderately high discards, especially of yellowtail snapper and black sea bass (Table F-1). The most discards originate from handline/electric rig and trap gears, with some discards from trolling gear and relatively low discards from other gears. It is possible that trip-level reporting leads to the relatively high discard estimates from trolling gear; these may be sets using another gear on a trip declared as a trolling gear trip. It is difficult to compare the ratio of commercial landings to commercial discards (Table F-1), because commercial landings are reported in pounds and discards are reported in numbers of fish; however black sea bass, gray snapper, and yellowtail snapper discards appear to be high relative to landed commercial catch.

Table F-1. Top ten stocks with mean estimated South Atlantic commercial discards (#fish) during snapper grouper trips (defined as trips with >50% of landings from snapper grouper stocks), sorted from largest to smallest, by gear, for the 2009-2013 period. Source: SEFSC Commercial Logbook (accessed May 2015) and Commercial Discard Logbook (accessed November 2014).

Stock	Bouy Gear	Stock	Diver	Stock	Handline /Electric	Stock	Longline	Stock	Trap	Stock	Trolling
snowy grouper	1.9	black sea bass	27.7	yellowtail snapper	5483.2	shark dogfish smooth	52.6	black sea bass	3708.8	black sea bass	946.7
gag	1.9	red snapper	23.1	gray snapper	1887.4	shark sandbar	26.1	pinfish spottail	59.0	greater amberjack	771.9
red snapper	1.0	gag	12.5	black sea bass	1274.6	hake atlantic red & white	4.5	gray triggerfish	54.8	black grouper	475.5
		red porgy	6.3	red snapper	1132.6	hammerhead	3.2	white grunt	43.6	almaco jack	423.0
		shark atlantic sharpnose	4.7	vermilion snapper	721.6	snowy grouper	0.5	grunts	32.7	scamp	194.3
		almaco jack	3.6	red porgy	640.7	rays unc	0.3	scup	30.8	gag	68.4
		finfishes unc for food	3.4	gag	492.3	shark blue	0.2	red porgy	27.6	shark unc	56.5
		spanish mackerel	2.7	unc amberjack	172.2	skates	0.1	finfishes unc	8.3	barracuda	56.3
		vermilion snapper	1.7	unc groupers	143.9	shark unc	0.0	gag	8.2	red snapper	32.2
		unc amberjack	1.6	unc snappers	130.9	shark dogfish unc	0.0	vermilion snapper	5.8	red porgy	19.1

Source: SEFSC Commercial Logbook (accessed May 2015) and Commercial Discard Logbook (accessed November 2014).

Recreational discards of several Snapper-Grouper stocks are higher than the landings for certain modes of fishing (Table F-2). Red grouper, black grouper, gag, and yellowtail snapper discards, especially, are many times higher than their landings across most modes. The magnitude of Private mode discards across all Reef Fish stocks is much higher than for the Headboat or Charter modes.

Table F-2. South Atlantic snapper grouper headboat, charter, private, and commercial mean estimates of landings and discards (2009-2013).

Species	HEADBOAT			CHARTER			PRIVATE			COMMERCIAL	
	Landings (N)	Discards (N)	Ratio (D:L)	Landings (N)	Discards (N)	Ratio (D:L)	Landings (N)	Discards (N)	Ratio (D:L)	Landings (lbs)	Discards (N)
Almaco jack	3,276	246	8%	2,581	1,211	47%	3,900	6,108	157%	197,432	800
Atlantic spadefish	133	35	27%	262	48	18%	101,741	114,598	113%	27,045	0
Banded rudderfish	15,614	2,665	17%	2,658	2,428	91%	7,603	6,474	85%	68,163	115
Bank sea bass	5,607	0	0%	792	2,084	263%	2,708	10,135	374%	540	0
Bar jack	341	59	17%	0	141		2,818	8,995	319%	4,457	0
Black grouper	337	1,339	397%	900	8,002	889%	6,589	24,499	372%	51,616	1,351
Black sea bass	165,443	553,232	334%	62,295	182,704	293%	257,417	2,682,646	1042%	510,102	60,568
Black snapper	0	0	0%	0	0		0	0		9	0
Blackfin snapper	79	59	75%	68	0	0%	1,843	0	0%	1,546	0
Blue runner	19,715	9,236	47%	10,749	15,023	140%	627,727	658,209	105%	227,134	1,762
Blueline tilefish	4,148	78	2%	9,576	459	5%	19,680	650	3%	341,160	234
Coney	50	51	101%	11	19	181%	723	174	24%	54	3
Cottonwick	13	0	0%	0	0		148	0	0%	0	0
Cubera snapper	367	19	5%	4	0	0%	1,960	111	6%	4,395	0
Dog snapper	48	12	25%	57	0	0%	822	0	0%	308	0
Gag	2,479	4,678	189%	2,688	16,025	596%	14,258	80,697	566%	471,689	7,004
Golden crab	0	0		0	0		0	0		634,192	0
Golden tilefish	8,868	0	0%	120,672	30,875	26%	904,657	520,822	58%	472,484	12
Goliath grouper	0	30	14966%	0	0		0	8,054		0	215
Gray snapper	43,916	6,465	15%	16,081	1,236	8%	279,017	1,292,452	463%	122,538	26,114
<i>Gray triggerfish</i>	57,539	12,135	21%	35,115	7,709	22%	92,990	111,012	119%	401,615	2,138
Graysby	1,604	1,306	81%	1,136	418	37%	5,467	10,518	192%	618	23
Greater amberjack	3,448	1,811	53%	16,390	6,814	42%	20,143	23,684	118%	897,173	1,635

Hogfish	140	231	165%	41	3	7%	29,102	3,190	11%	42,219	41
Jolthead porgy	6,690	114	2%	3,014	0	0%	10,681	1,240	12%	5,055	0
Knobbed porgy	5,562	182	3%	727	0	0%	7,769	326	4%	22,913	0
Lane snapper	18,673	2,290	12%	11,644	3,506	30%	45,257	130,718	289%	3,057	210
Lesser amberjack	207	31	15%	12	0	0%	51	0	0%	17,374	23
Longspine porgy	6	0	0%	0	0		290	170	59%	0	0
Mahogany snapper	45	4	8%	0	0		35	0	0%	45	0
Margate	765	206	27%	188	59	32%	3,436	3,952	115%	3,876	23
Misty grouper	0	0		0	0		0	0		655	1
Mutton snapper	13,001	3,436	26%	19,547	8,826	45%	75,902	113,500	150%	73,908	597
Ocean triggerfish	729	0	0%	304	77	25%	4,107	3,769	92%	0	0
Queen snapper	5	0	0%	1	0	0%	0	0		3,087	84
Red grouper	1,373	10,547	768%	945	5,631	596%	18,781	52,502	280%	258,312	1,614
Red hind	212	64	30%	85	0	0%	460	564	123%	7,781	47
Red porgy	20,697	14,510	70%	9,527	3,034	32%	16,657	5,350	32%	170,004	9,800
Red snapper	5,398	44,889	832%	4,246	16,805	396%	20,521	94,894	462%	82,133	13,272
Rock hind	1,319	574	44%	83	18	22%	517	2,324	450%	13,147	11
Rock sea bass	8	0	0%	177	238	134%	2,524	6,330	251%	389	16
Sailors choice	286	0	0%	37	1,367	3740%	16,170	12,371	77%	0	0
Sand tilefish	796	952	120%	396	3,439	868%	4,863	22,423	461%	995	159
Saucereye porgy	148	1	0%	0	0		1,462	0	0%	0	0
Scamp	2,547	2,016	79%	2,275	1,361	60%	4,080	2,406	59%	194,931	740
Schoolmaster	244	0	0%	2	0	0%	4,873	2,435	50%	30	0
Scup	9,968	1,866	19%	294	28	9%	647	1,508	233%	0	414
Silk Snapper	1,322	108	8%	276	34	12%	153	855	558%	10,166	7
Snowy grouper	151	51	34%	984	341	35%	861	331	38%	86,858	264
Tomtate	51,944	59,693	115%	1,159	6,544	565%	65,439	227,285	347%	176	620

Vermilion snapper	145,661	87,183	60%	37,198	18,308	49%	52,666	50,317	96%	966,504	9,033
White grunt	143,151	36,412	25%	19,706	9,601	49%	195,099	184,863	95%	108,712	389
Whitebone porgy	4,910	159	3%	2,893	9	0%	9,109	1,088	12%	13	0
Yellowedge grouper	20	2	9%	35	0	0%	44	0	0%	15,619	6
Yellowfin grouper	13	5	42%	0	0		97	0	0%	3,275	6
Yellowmouth grouper	12	5	43%	15	0	0%	0	0		204	0
Yellowtail snapper	99,863	33,144	33%	179,508	76,571	43%	287,217	715,637	249%	1,216,264	71,453

Sources: MRIP data from SEFSC Recreational ACL Dataset (Jan 2015), Headboat data from SEFSC Headboat Logbook CRNF files (expanded; July 2014), Commercial landings data from SEFSC Commercial ACL Dataset (July 2014) with discard estimates from expanded SEFSC Commercial Logbook (Nov 2014) and Commercial Discard Logbook (Nov 2014).

Note: Commercial gray triggerfish includes "triggerfishes, unclassified" category; commercial white grunt includes "grunts, unclassified" category.

Release Mortality Rates

Release mortality rates are unknown for many 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 17 (2008) recommended a release mortality rate for vermilion snapper of 41% for the commercial sector and 38% for the recreational sector. The recent stock assessment for yellowtail snapper chose a rate of 10% release mortality as an approximation for the lower bound on release mortality for yellowtail snapper (FWRI 2012). SEDAR 10 (2006) estimated release mortality rates of 40% and 25% for gag taken by commercial and recreational fishermen, respectively. SEDAR 24 (2010) used release mortality rates of 48% commercial; 41% for-hire, and 39% private recreational for red snapper. Commercial and recreational release mortality rates were estimated as 20% for black grouper and red grouper in SEDAR 19 (2010). SEDAR 15 (2008) estimated a 20% release mortality rate for greater amberjack. SEDAR 32, which is under development, assumes a 12.5% release mortality rate for gray triggerfish. Snowy grouper are primarily caught in water deeper than 300 feet and golden tilefish are taken at depths greater than 540 feet; therefore, release mortality of the species are probably near 100% (SEDAR 4 2004, SEDAR 25 2011). Release mortality of black sea bass is considered to be low (7% for the recreational sector and 1% for the commercial sector) (SEDAR 25 2011) indicating minimum size limits are probably an effective management tool for black sea bass. Commercial sector discard mortality for red porgy is 35%, and 8% for the recreational sector (SEDAR Update 2012). SEDAR 32 (2013), estimates discard mortality for blueline tilefish is 100%, consistent with other deep-water species (i.e., snowy grouper, and golden tilefish); however, if new management is implemented to reduce the discard mortality rate, it might be appropriate for population projections to consider something lower than 100% (SEDAR 32 2013).

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

Expected Impacts on Bycatch for the Proposed Action

Bycatch in the pot fishery consists of two components: landed and discarded bycatch. The landed bycatch was analyzed using logbook data reported by fishermen for trips with landings of black sea bass reported. The total number of trips catching black sea bass, total catch of each species or category, and catch per trip was summarized. The catch per trip was simply the total landings for each market category divided by the total number of trips. Data on landed bycatch might have changed over time due to seasonal restrictions, desirability of the species, gear restrictions, and improved reporting. It cannot be determined if a change in landings or average catch per trip is due to regulation effects or population effects. The bycatch landings are associated with the pot fishery; however, the species could have been harvested using other gear. The landed bycatch which averaged greater than 2 pounds per trip associated with the black sea bass pot fishery from 2000 to 2011 consisted of white grunt (*Haemulon plumieri*), king and

cero mackerel (*Scomberomorus* spp), triggerfishes (*Balistes* spp.), king mackerel (*Scomberomorus cavalla*), blueline tilefish (*Caulolatilus microps*) and unclassified scups or porgies (*Calamus*, *Diplodus*, and *Stenotomus* spp.) (**Figure F-1**). The average landings of bycatch per trip was 78 pounds from 2000 to 2011 while the average catch of black sea bass per trip was 629 pounds. The time period was selected was based on the timing of the pot endorsement becoming effective in 2012.

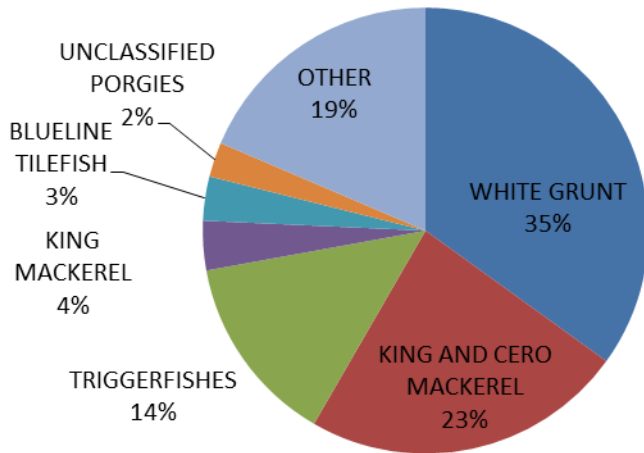


Figure F-1. Percentage of landed bycatch in the black sea bass pot fishery for landings categories from 2000 to 2011.

In 2012 and 2013, the landed bycatch which averaged greater than 2 pounds per trip associated with the black sea bass pot component of the snapper grouper fishery consisted of white grunt, triggerfishes, greater amberjack (*Seriola drumerili*), red porgy (*Pagrus pagrus*), wahoo (*Acanthocybium solanderi*), king mackerel, bluefish (*Pomatomus saltatrix*), gag (*Mycteroperca microlepis*), and red snapper (*Lutjanus campechanus*) (**Figure F-2**). The average landings of bycatch per trip was 63 pounds from 2012 and 2013. The average landings of black sea bass pot fishery was 645 pounds. In both time periods, white grunt, triggerfish, and king mackerel were common landed bycatch associated with the black sea bass pot fishery. The remaining species varied over the time period. The change in the landed species could have resulted from different seasons of fishing, restrictions on the pot fishery, change in the distribution of the pot fishery, change in abundance, or change in desirability of different species. It cannot be determined the effect of the different alternatives on the landed bycatch. If the black sea bass pot fishermen shift to hook and line fishery, the hook and line fishery has a much higher diversity in landing categories although it is difficult to determine the targeted species in a multi-species fishery.

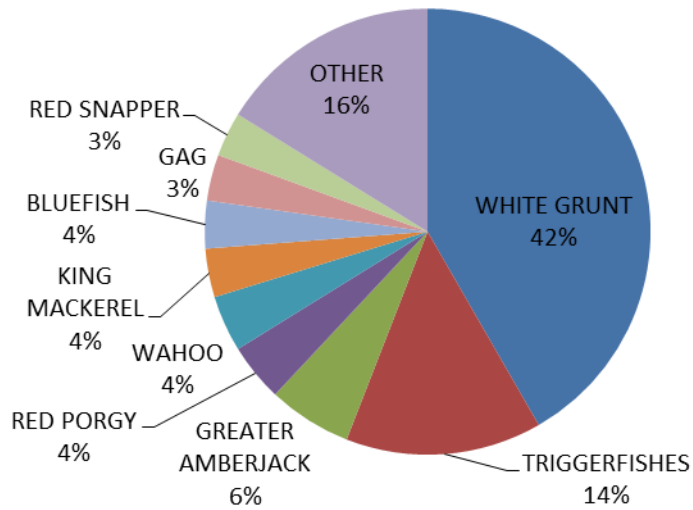


Figure F-2. Percentage of landed bycatch in the black sea bass pot fishery for landings categories from 2012 and 2013.

The discarded bycatch greater than 10 fish per trip included black sea bass, spottail pinfish (*Diplodus holbrooki*), gray triggerfish (*Balistes capricus*), white grunt, and scup (*Stenotomus* spp) (**Table F-3**). The greatest number of fish discard was black sea bass and averaged 3709 fish per year. Fishermen did not report discarding greater than 100 fish per year for any other species.

Table F-3. Top ten stocks with mean estimated South Atlantic commercial discards (#fish) during snapper grouper trips (defined as trips with >50% of landings from snapper grouper stocks), sorted from largest to smallest, by gear, for the 2009-2013 period. Source: SEFSC Commercial Logbook (accessed May 2015) and Commercial Discard Logbook (accessed November 2014).

Stock	Handline /Electric	Stock	Trap
yellowtail snapper	5483.2	black sea bass	3708.8
gray snapper	1887.4	pinfish spottail	59
black sea bass	1274.6	gray triggerfish	54.8
red snapper	1132.6	white grunt	43.6
vermilion snapper	721.6	grunts	32.7
red porgy	640.7	scup	30.8
gag	492.3	red porgy	27.6
unc amberjack	172.2	finfishes unc	8.3
unc groupers	143.9	gag	8.2
unc snappers	130.9	vermilion snapper	5.8

Source: SEFSC Commercial Logbook (accessed May 2015) and Commercial Discard Logbook (accessed November 2014).

Past, Current, and Future Actions to Prevent Bycatch and Improve Monitoring of Harvest, Discards, and Discard Mortality.

The Comprehensive Ecosystem-Based Amendment 2 (CE-BA 2; SAFMC 2011g) included actions that removed harvest of octocorals off Florida from the Coral, Coral Reefs, and Live/Hard Bottom Habitat Fishery Management Plan (Coral FMP); set the octocoral ACL for Georgia, South Carolina, and North Carolina equal to 0; modified management of special management zones (SMZs) off South Carolina; revised sea turtle release gear requirements for the snapper grouper fishery that were established in Amendment 15B to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (Snapper Grouper FMP; SAFMC 2008); and designated new essential fish habitat (EFH) and EFH-Habitat Areas of Particular Concern in the South Atlantic. There is no bycatch associated with octocoral harvest within the management area of the Coral FMP since harvest is prohibited. CE-BA 2 also included an action that limited harvest and possession of snapper grouper and coastal migratory pelagics (CMP) species to the bag limit in SMZs off South Carolina. This action could reduce bycatch of regulatory discards around SMZs by restricting commercial harvest in the area, but it would probably have very little effect on the magnitude of overall bycatch of snapper grouper species in the South Atlantic.

Other actions have been taken in recently implemented amendments that could reduce bycatch of and bycatch mortality of federally-managed species in the South Atlantic. Amendment 13C to Snapper Grouper FMP (SAFMC 2006) required the use of 2 inch mesh in the back panel of black sea bass pots, which has likely reduced the magnitude of regulatory discards. Amendment 16 to the Snapper Grouper FMP (SAFMC 2009) required the use of dehooking devices, which could help reduce bycatch mortality of vermilion snapper, black sea bass, gag, red grouper, black

grouper, and red snapper. Dehooking devices can allow fishermen to remove hooks with greater ease and more quickly from snapper grouper species without removing the fish from the water. If a fish does need to be removed from the water, dehookers could still reduce handling time in removing hooks, thus increasing survival (Cooke et al. 2001). Furthermore, Amendment 17A to the Snapper Grouper FMP (SAFMC 2010a) required circle hooks for snapper grouper species north of 28 degrees latitude, which is expected to reduce bycatch mortality of snapper grouper species. Amendment 17B to the Snapper Grouper FMP (SAFMC 2010b) established ACLs and AMs and address overfishing for eight species in the snapper grouper management complex: golden tilefish, snowy grouper, speckled hind, warsaw grouper, black sea bass, gag, red grouper, black grouper, and vermilion snapper. Overfishing is no longer occurring for golden tilefish, black sea bass, snowy grouper, red grouper, black grouper, and vermilion snapper.

The Comprehensive ACL Amendment (SAFMC 2011b) implemented ACLs and AMs for species not undergoing overfishing in the Fishery Management Plans for snapper grouper, dolphin and wahoo, golden crab and *Sargassum*, in addition to other actions such as allocations and establishing annual catch targets for the recreational sector. The Comprehensive ACL Amendment (SAFMC 2011b) also established additional measures to reduce bycatch in the snapper grouper fishery with the establishment of species complexes based on biological, geographic, economic, taxonomic, technical, social, and ecological factors. ACLs were assigned to these species complexes, and when the ACL for the complex is met or projected to be met, fishing for species included in the entire species complex is prohibited for the fishing year. ACLs and AMs will likely reduce bycatch of target species and species complexes as well as incidentally caught species.

Amendment 18A to the Snapper Grouper FMP (SAFMC 2011f), included actions that could reduce bycatch of black sea bass and the potential for interactions with protected species. Actions in Amendment 18A limited the number of participants in the black sea bass pot sector, required fishermen bring pots back to port at the completion of a trip, and limited the number of pots a fishermen can deploy. Amendment 24 to the Snapper Grouper FMP (SAFMC 2011h) established a rebuilding plan for red grouper, which was overfished and undergoing overfishing. Red grouper is no longer undergoing overfishing or overfished. Amendment 24 (SAFMC 2011h) also established ACLs and AMs for red grouper, which could help to reduce bycatch of red grouper and co-occurring species.

The final rule (78 FR 23858; April 23, 2013) for Amendment 18B to the Snapper-Grouper FMP (SAFMC 2012), established an endorsement program for the commercial golden tilefish longline sector, which could have positive effects for habitat and protected species. Regulatory Amendment 14 to the Snapper Grouper FMP, which has been approved by the Council, includes actions that could adjust management measures for a number of snapper grouper species, some of which could reduce the magnitude of discards. The final rule (78 FR 49183; September 12, 2013) for Regulatory Amendment 15 to the Snapper Grouper FMP included actions for yellowtail snapper and gag that are expected to reduce bycatch of snapper-grouper species. Amendment 36 to the Snapper Grouper FMP, which is under development, includes actions that affect marine protected areas, and could reduce bycatch of many snapper grouper species, especially speckled hind and warsaw grouper.

The Council's For-Hire Reporting Amendment, which went into effect on January 27, 2014, has changed the reporting frequency for landings by headboats from monthly to weekly, and requires that reports be submitted electronically. The action is expected to provide more timely information on landings and discards. Improved information on landings would help ensure ACLs are not exceeded. Furthermore, more timely and accurate information would be expected to 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, 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.

The Council is developing an amendment to require that all federally-permitted charter vessels reporting landings information to the Southeast Fisheries Science Center (SEFSC) electronically. Additionally, these two Councils will also begin development of a joint amendment to require that all federally-permitted commercial fishing vessels in the southeast also report their logbook landings information electronically. These future actions will help to improve estimates on the composition and magnitude of catch and bycatch of snapper grouper species, as well as all other federally-managed species in the southeast region.

Additional information on fishery related actions from the past, present, and future considerations can be found in **Chapter 5** (Cumulative effects) of the environmental assessment.

1.4 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. As mentioned in the above section, actions have been taken, and are underway to reduce bycatch and enhance data reporting for snapper grouper species. 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, 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.

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

It cannot be determined the effect of the different alternatives on the landed bycatch. If the black sea bass pot fishermen shift to hook and line fishery, the hook and line fishery has a much higher diversity in landing categories although it is difficult to determine the targeted species in a multi-

species fishery. See **Section 1.3** for a description of bycatch associated with the black sea bass pot component of the snapper grouper fishery.

1.6 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. Of the gear utilized within the snapper grouper fishery, only the black sea bass pot is considered to pose an entanglement risk to marine mammals. The southeast U.S. Atlantic black sea bass pot sector is included in the grouping of the Atlantic mixed species trap/pot fisheries, which the 2015 LOF classifies as a Category II (79 FR 77919, December 29, 2014). Gear types used in these fisheries are determined to have occasional incidental mortality and serious injury of marine mammals. For the South Atlantic snapper grouper fishery, the best available data on protected species interactions are from the SEFSC Supplementary Discard Data Program (SDDP) initiated in July of 2000. The SDDP sub-samples 20% of the vessels with an active permit. Since August 2001, only three interactions with marine mammals have been documented; each was taken by handline gear and each released alive (McCarthy SEFSC database). The longline and hook-and-line gear components of the snapper grouper in the South Atlantic are classified in the 2015 LOF as Category III fisheries.

Although the black sea bass pot sector can pose an entanglement risk to large whales due to their distribution and occurrence, sperm, fin, sei, and blue whales are unlikely to overlap with the black sea bass pot sector operated within the snapper grouper fishery since it is executed primarily off North Carolina and South Carolina in waters ranging from 70-120 feet deep (21.3-36.6 meters). There are no known interactions between the black sea bass pot sector and large whales. NMFS' biological opinion on the continued operation of the South Atlantic snapper grouper fishery determined the possible adverse effects resulting from the fishery are extremely unlikely. Thus, the continued operation of the snapper grouper fishery in the southeast U.S. Atlantic exclusive economic zone is not likely to adversely affect sperm, fin, sei, and blue whales (NMFS 2006).

North Atlantic right and humpback whales may overlap both spatially and temporally with the black sea bass pot sector. 2007 Revisions to the Atlantic Large Whale Take Reduction Plan folded the Atlantic mixed species trap/pot fisheries into the plan (72 FR 193; October 5, 2007).

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 US Fish and Wildlife Service 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 snapper grouper fishery. Thus, it is believed that the snapper grouper fishery is not likely to negatively affect the Bermuda petrel and the roseate tern.

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

Research and monitoring is ongoing to understand the effectiveness of proposed management measures and their effect on bycatch. In 1990, the Southeast Fisheries Science Center (SEFSC) initiated a logbook program for vessels with federal permits in the snapper grouper fishery from the Gulf of Mexico and South Atlantic. Approximately 20% of commercial fishermen 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. The SEFSC is developing electronic logbooks, which could be used to enable fishery managers to obtain information on species composition, size distribution, geographic range, disposition, and depth of fishes that are released. Further, the Joint Commercial Logbook Reporting Amendment is being developed by the South Atlantic Council and the Gulf of Mexico Council, which would require electronic reporting of landings information by federally-permitted commercial vessels to increase the timeliness and accuracy of landings and discard data.

Recreational discards are obtained from MRIP and logbooks from the NMFS headboat program. Additional data collection activities for the recreational sector are being considered by the South Atlantic Council that could allow for a better monitoring of snapper grouper bycatch in the future. Some observer information has been provided by Marine Fisheries Initiative and Cooperative Research Programs (CRP), but more is desired for the snapper grouper fishery. In December 2012, the Southeast Region Headboat Survey underwent a transition from paper logbooks to electronic logbooks, which is expected to improve the quality of data in that sector. As of January 1, 2013, the paper logbook form has been replaced by a new electronic logbook. The form is available through a password protected Web site on the internet, which can be accessed by personal computer, computer tablet, or “smart phone”. The South Atlantic Council approved the For-Hire Amendment at their March 2013 meeting, which was approved and implemented in January 2014. This amendment requires weekly electronic reporting by the headboat sector.

Cooperative research projects between science and industry are being used to a limited extent to collect bycatch information on the snapper grouper fishery in the South Atlantic. For example, Harris and Stephen (2005) characterized the entire (retained and discarded) catch of reef fishes from a selected commercial fisherman in the South Atlantic including total catch composition and disposition of fishes that were released. The Gulf and South Atlantic Fisheries Foundation, Inc. conducted a fishery observer program within the snapper grouper vertical hook-and-line (bandit rig) fishery of the South Atlantic United States. Through contractors they randomly

placed observers on cooperating vessels to collect a variety of data quantifying the participation, gear, effort, catch, and discards within the fishery.

In the spring 2010, Archipelago Marine Research Ltd. worked with North Carolina Sea Grant and several South Atlantic Unlimited Snapper Grouper Permit holders to test the effectiveness of electronic video monitoring to measure catch and bycatch. A total of 93 trips were monitored with video monitoring, 34 by self-reported fishing logbooks, and 5 by observers. Comparisons between electronic video monitoring data and observer data showed that video monitoring was a reliable source of catch and bycatch data.

Research funds for observer programs, as well as gear testing and testing of electronic devices are also available each year in the form of grants from the 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.

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

1.8 Changes in Fishing Practices and Behavior of Fishermen

Social effects of the proposed actions are addressed in **Chapter 4** of the amendment. The proposed actions may result in a shift gear use to black sea bass pots to hook and line fishery.

Fishermen can be educated about methods to reduce bycatch and enhance survival of regulatory discards. While this may be advantageous for mid-shelf species, deepwater species experience nearly 100% mortality from depth related trauma. Furthermore, it is not clear that changes in behavior could substantially affect the amount of bycatch incurred. Gear changes such as hook type or hook size could have some effect on reducing bycatch mortality. Furthermore, closed seasons, new or reduced quotas, reduced trip limits, and increased size limits could cause some commercial and recreational fishermen to reduce effort.

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

Research and monitoring is ongoing to understand the effectiveness of proposed management measure 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 of Mexico and South Atlantic Fishery Management Councils). 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.

Additional data collection activities for the recreational sector of the snapper grouper, dolphin wahoo, and CMP fisheries are being considered by the Council that could allow for a better monitoring of bycatch in the future. The Council is also developing an amendment to improve commercial logbook reporting for these fisheries. Some observer information for the snapper grouper fishery has been provided by the SEFSC, Marine Fisheries Initiative, and Cooperative Research Programs (CRP), but more is desired for the snapper grouper, dolphin wahoo, and CMP fisheries. Currently, for the snapper grouper fishery, headboats are required to carry observers, if selected.

Cooperative research projects between science and industry are being used to a limited extent to collect bycatch information on the snapper grouper fishery in the South Atlantic. For example, Harris and Stephen (2005) characterized the entire (retained and discarded) catch of reef fishes from a selected commercial fisherman in the South Atlantic including total catch composition and disposition of fishes that were released. The Gulf and South Atlantic Fisheries Foundation, Inc. (Foundation) conducted a fishery observer program within the snapper grouper vertical hook-and-line (bandit rig) fishery of the South Atlantic United States. Through contractors they randomly placed observers on cooperating vessels to collect a variety of data quantifying the participation, gear, effort, catch, and discards within the fishery.

In the spring 2010, Archipelago Marine Research Ltd. worked with North Carolina Sea Grant and several South Atlantic Unlimited Snapper Grouper Permit holders to test the effectiveness of electronic video monitoring to measure catch and bycatch. A total of 93 trips were monitored with video monitoring, 34 by self-reported fishing logbooks, and 5 by observers. Comparisons between electronic video monitoring data and observer data showed that video monitoring was a reliable source of catch and bycatch data.

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

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

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

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

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

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

Any changes in economic, social, or cultural values from the proposed actions are discussed in **Chapter 4** of the environmental assessment.

1.11 Changes in the Distribution of Benefits and Costs

The distribution of benefits and costs expected from proposed actions in the environmental assessment are discussed in **Chapter 3**. Economic and social effects of the proposed actions are addressed in **Chapter 4** of this document.

1.12 Social Effects

The social effects of all the measures are described in **Chapter 4** of the environmental assessment.

1.13 Conclusion

This section evaluates the practicability of taking additional action to minimize bycatch and bycatch mortality using the ten factors provided at 50 CFR section 600.350(d)(3)(i). In summary, the effect of the different alternatives on the landed bycatch cannot be determined. If the black sea bass pot fishermen shift to hook and line fishery, the hook and line fishery has a much higher diversity in landing categories although it is difficult to determine the targeted species in a multi-species fishery.

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APPENDIX G. REGULATORY IMPACT REVIEW

Introduction

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

The RIR also serves as the basis for determining whether any proposed regulations are a "significant regulatory action" under certain criteria provided in Executive Order 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.

Problems and Objectives

The purpose and need, issues, problems, and objectives of these actions are presented in Chapter 1, Section 1.4, and is incorporated herein by reference.

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.

Description of the Fishery

A description of the snapper grouper fishery is contained in Chapter 3 and is incorporated herein by reference.

Effects of Management Measures

These actions will directly apply to the businesses that own and/or operate commercial fishing vessels that harvest black sea bass, a part of the larger snapper grouper fishery in the South Atlantic Exclusive Economic Zone (EEZ).

Commercial vessels that participate in the black sea bass pot sector must have a valid commercial snapper grouper permit and a black sea bass pot endorsement. Both the snapper grouper permit and the black sea bass pot endorsement are limited entry. There are 32 black sea bass pot endorsements and therefore, no more than 32 vessels may operate in the fishery in the South Atlantic EEZ.

Action 1

The **Preferred Alternative 11** for **Action 1** allows fishing with black sea bass pots from November 1 through April 30 each year with limits on where the pots may be placed. Allowable pot placement was determined largely by where it was highly unlikely that the fishing gear would be encountered by north Atlantic right whales, a critically endangered species. There have been no documented interactions between black sea bass pot gear and north Atlantic right whales; however, it is possible that undocumented interactions may have occurred in the past. Two different time series of landings (2000-2013 versus 2010-2013) were used to estimate economic effects of this action because the fishing conditions put into effect by **Preferred Alternative 11** have not occurred historically. It was assumed that the actual economic effects would be between the two scenarios. Assuming the entire annual catch limit for black sea bass will be reached each year, it is estimated that allowing the fishers who have the proper permits and endorsements to use pot gear from November through April would increase the expected positive direct economic effect between \$43,541 and \$46,367 (2014 S using estimates based on 2000-2013 landings) or between \$43,889 and \$46,53 (2014 S using estimates based on 2010-2013).

Action 2

The **Preferred Alternative 4** of Action 2 would require black sea bass pot endorsement holders to put three 12 inch purple markings on each pot buoy line adjacent to the already required colors. The marks can be made with either paint, or surveyor's tape. As there are 32 black sea bass pot endorsements and each endorsement is limited to 35 pots; thus, a maximum of 1,120 pots can be used. If all the fishermen use surveyor's tape to mark their lines, the cost to the black sea bass pot sector would be between \$96 and \$352 based on a range of costs for purchasing surveyors tape. If all the fishermen used paint to mark their lines, the cost to the pot sector would be approximately \$1,515.

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 action include, but are not limited to Council costs of documentation 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 from \$100,000 to \$150,000 before annual law enforcement costs, if any.

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.

This rule would not have an adverse economic effect of \$100 million or more, create a serious inconsistency or otherwise interfere with an action taken by another agency, materially alter the budgetary impact of programs or rights or obligations of recipients, or raise novel legal or policy issues. Hence, it is not a significant regulatory action.

APPENDIX H. REGULATORY FLEXIBILITY ACT ANALYSIS

Introduction

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

With certain exceptions, the RFA requires agencies to conduct a regulatory flexibility analysis for each proposed rule. The regulatory flexibility analysis is designed to assess the impacts various regulatory alternatives would have on small entities, including small businesses, and to determine ways to minimize those impacts. In addition to analyses conducted for the RIR, the regulatory flexibility analysis provides: 1) A statement of the reasons why action by the agency is being considered; 2) a succinct statement of the objectives of, and legal basis for the proposed rule; 3) a description and, where feasible, an estimate of the number of small entities to which the proposed rule will apply; 4) a 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 requirements of the report or record; 5) an identification, to the extent practical, of all relevant Federal rules which may duplicate, overlap, or conflict with the proposed rule; and, 6) a description of any significant alternatives to the proposed rule which accomplish the stated objectives of applicable statutes and which minimize any significant economic impact of the proposed rule on small entities.

Additional information on the description of affected entities may be found in **Chapter 3**, and additional information on the expected economic effects of the proposed rule may be found in **Chapter 4**.

Statement of Need for, Objectives of, and Legal Basis for the Rule

The purpose and need of the proposed rule are presented in **Chapter 1**. The purpose of this proposed rule is to reevaluate the annual November 1 through April 30 prohibition on the use of black sea bass pot gear and enhance buoy line/weak link gear requirements and buoy line rope marking for black sea bass pots required by the Atlantic Large Whale Take Reduction Plan (ALWTRP). The need for this proposed rule is to reduce the adverse socioeconomic impacts resulting from the annual November 1 through April 30 prohibition on the use of black sea bass pot gear and increase the flexibility of black sea bass pot endorsement holders to fish with this

gear while continuing to protect Endangered Species Act-listed whales in the South Atlantic region; and reduce the adverse effects on whales if entangled and help identify black sea bass pot lines used in the South Atlantic.

The Magnuson-Stevens Fishery Conservation and Management Act provides the statutory basis for this proposed rule.

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

No duplicative, overlapping, or conflicting Federal rules have been identified with this proposed rule.

Description and Estimate of the Number of Small Entities to Which the Proposed Rule will Apply

This proposed rule is expected to directly affect federally permitted commercial fishermen fishing for black sea bass in the South Atlantic. The Small Business Administration established size criteria for all major industry sectors in the U.S. including fish harvesters and for-hire operations. A business involved in fish harvesting is classified as a small business if independently owned and operated, is not dominant in its field of operation (including its affiliates), and its combined annual receipts are not in excess of \$20.5 million (NAICS code 114111, finfish fishing) for all of its affiliated operations worldwide.

There are currently 32 holders of black sea bass trap endorsement. From 2000/2001 through 2013/2014, these endorsement holders used an average of 31 vessels fishing for black sea bass using traps. These vessels generated revenues (2014 dollars) of \$732,717 from black sea bass, \$228,468 from other species jointly landed with black sea bass, and \$248,662 from all other species in trips where black sea bass was not caught. The average revenue per vessel from all species, including black sea bass, landed by these vessels was \$38,715 (2014 dollars). During the same time period, an average of 215 vessels using other gear landed at least 1 pound of black sea bass. These vessels generated dockside revenues (2014 dollars) of \$199,574 from black sea bass, \$3.838 million from other species jointly landed with black sea bass, and \$7.680 million from all other species in trips where black sea bass was not caught. The average revenue per vessel from all species, including black sea bass, landed by these vessels was \$54,651 (2014 dollars). Vessels that caught and landed black sea bass may also operate in other fisheries, the revenues of which are not known and are not reflected in these totals. Based on revenue information, all commercial vessels affected by the proposed rule may be assumed to be small entities.

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

In general, the proposed rule would not introduce any changes to reporting and record-keeping and other compliance requirements which are currently required. However, fishermen fishing for black sea bass pots would be required to mark three 12-inch bands on each buoy line. Currently the ALWTRP requires three 12-inch color marks at the top, midway, and bottom sections of the buoy line specified for the individual management area in which the gear are deployed. This alternative will require an additional 12-inch wide purple band be added at the end of each required 12-inch colored mark. Each of the three marks would be a total of 24 inches in length. The additional gear marking of this action are required in federal waters from November 15 through April 15 (Southeast Restricted Area North), September 1 through May 31 (Offshore Trap/Pot Area), and September 1 through May 31 (Southern Nearshore Trap/Pot Waters Area). This requirement would cost each of the 32 black sea bass pot endorsement holders approximately \$3 to \$11 if a surveyor's tape is used, or \$47.35 if paint is used for marking.

Substantial Number of Small Entities Criterion

All directly affected entities have been determined, for the purpose of this analysis, to be small entities. Therefore, the proposed rule would affect a substantial number of small entities.

Significant Economic Impact Criterion

The outcome of "significant economic impact" can be ascertained by examining two issues: disproportionality and profitability.

Disproportionality: Do the regulations place a substantial number of small entities at a significant competitive disadvantage to large entities?

All entities that are expected to be affected by this proposed rule are considered small entities, so the issue of disproportional effects on small versus large entities does not presently arise.

Profitability: Do the regulations significantly reduce profit for a substantial number of small entities?

The proposed rule would modify the November 1 through April 30 prohibition on the use of black sea bass pot gear by allowing black sea bass pot fishing at depths greater than 25 meters from November 1 through April 30 from approximately Cape Canaveral, Florida to the Georgia/South Carolina border; at depths greater than 25 meters from November 1 through 30 and from April 1 through 30 off North and South Carolina; and, at depths greater than 30 meters from December 1 through March 31 off North and South Carolina. In addition, the proposed rule would require black sea bass pot endorsement holders to put three 12 inch purple markings on each pot buoy line adjacent to the already required colors. The marks can be made with either paint, or surveyor's tape.

The proposed modification to the current prohibition on the use of black sea bass pot gear would have contrasting economic effects on the two major groups of participants in the commercial harvest of black sea bass. The proposed action would benefit those using pots for harvesting

black sea bass, but given that the commercial annual catch limit is predicted to be fully taken, some of the benefits to users of pot gear would be taken away from those using other gear types. The combined dockside revenues (2014 dollars) for all pot gear vessels are estimated to increase between \$113,964 and \$185,068 based on 2000-2013 average black sea bass price, or between \$163,606 and \$260,355 based on 2011-2013 average black sea bass price. In contrast, the combined dockside revenues (2014 dollars) for all non-pot gear vessels are estimated to decrease between \$68,323 and \$141,527 based on 2000-2013 average black sea bass price, or between \$116,650 and \$241,631 based on 2011-2013 average black sea bass price. The net revenue change for all vessels combined would be between \$43,541 and \$46,367 based on 2000-2013 average price for black sea bass, or between \$43,889 and \$46,553 based on 2010-2013 average price for black sea bass. Assuming that revenue increases for users of pot gear would be equally distributed among the 32 endorsement holders, revenues per pot endorsement holder would increase between \$3,561 and \$5,783, or between \$5,113 and \$8,136. On the other hand, revenue per vessel for the 215 users of non-pot gear would decrease between \$318 and \$658, or between \$543 and \$1,124. For vessels using pot gear, revenue increases would be approximately 9 to 21 percent of their average revenue of \$38,715. On the other hand, revenue losses to the other vessels would be between 1 and 2 percent of their average revenue of \$54,651. It would appear that, on a per vessel basis, the revenue gains to the pot endorsement holders could potentially be substantial whereas the revenue losses to the other gear users would be relatively small. The proposed requirement on black sea bass pot endorsement holders to put three 12-inch purple markings on each pot buoy line adjacent to the already required colors would cost each endorsement holder \$3 to \$11 if a surveyor's tape is used, or \$47.35 if paint is used instead. This cost appears to be relatively small.

Description of Significant Alternatives

Twelve alternatives, including the preferred alternative as described above, were considered for modifying the November 1 through April 30 prohibition on the use of black sea bass pot gear. The first alternative, the no action alternative, would maintain the current economic benefits to all participants in the fishery as well as provide the least likelihood of right whales getting entangled with black sea bass pot lines. However, this alternative would not address the need to reduce the adverse socioeconomic effects of the current prohibition on the use of black sea bass pot gear.

The second alternative would apply the black sea bass closure to the area currently designated as North Atlantic right whale critical habitat from November 15 through April 15. This alternative would provide slightly more increases in overall revenues to commercial vessels than the preferred alternative, but it would also pose the highest threat of right whale entanglement with pot buoy lines.

The third alternative would apply the black sea bass pot closure from approximately Ponce Inlet, Florida (29°00' N), to Cape Hatteras, North Carolina (35°15' N) annually from November 1 through April 30. Relative to the preferred alternative, this alternative would result in relatively higher overall revenue increases but lower protection to right whales from getting entangled with pot buoy lines.

The fourth alternative would apply the black sea bass pot closure from approximately Cape Canaveral, Florida (28°21' N), to Cape Hatteras, North Carolina (35°15' N) annually from November 1 through April 30. Although this alternative would provide higher protection to right whales from entanglement with pot buoy lines, it would result in slightly lower overall revenue increases than the preferred alternative.

The fifth alternative would apply the black sea bass pot closure from approximately Daytona Beach, Florida (29°13' N), to Cape Hatteras, North Carolina (35°15' N) annually from November 1 through April 30. Relative to the preferred alternative, this alternative would provide slightly more increases in overall revenues to commercial vessels but would provide less protection to right whales from entanglement with pot buoy lines.

The sixth alternative would apply the black sea bass pot closure from approximately Sebastian, Florida (27°51' N), to Cape Hatteras, North Carolina (35°15' N) annually from November 1 through April 30. Although this alternative would provide second highest protection to right whales from entanglement with pot buoy lines, it would result in slightly lower overall revenue increases than the preferred alternative.

The seventh alternative would apply the black sea bass pot closure from approximately North of the Altamaha River, Georgia (28°00' N), to Cape Hatteras, North Carolina (35°15' N) annually from November 1 through December 15 and March 15 through April 30; or annually from November 1 through December 15 and March 15 through April 30 for the area off North Carolina and South Carolina, and from November 15 through April 15 for the area off Georgia and Florida; or annually from February 15 through April 30 for the area off North Carolina and South Carolina, and from November 15 through April 15 for the area off Georgia and Florida. Relative to the preferred alternative, this alternative and its sub-alternatives would result in relatively higher overall revenue increases but would afford a much lower protection to right whales from entanglement with pot buoy lines.

The eighth alternative would apply the black sea bass pot closure from approximately Daytona Beach, Florida (29°13' N), to Cape Hatteras, North Carolina (35°15' N) annually from November 1 through April 15; or annually from November 1 through December 15 and February 15 through April 30 for the area off North Carolina and South Carolina, and from November 15 through April 15 for the area off Georgia and Florida. Relative to the preferred alternative, this alternative and its sub-alternatives would result in relatively higher overall revenue increases but would afford a much lower protection to right whales from entanglement with pot buoy lines.

The ninth alternative would apply the black sea bass pot closure from approximately Daytona Beach, Florida (29°13' N), to Cape Hatteras, North Carolina (35°15' N) annually from November 1 through April 15; or annually from November 1 through December 15 and February 15 through April 30 for the area off North Carolina and South Carolina, and from November 15 through April 15 for the area off Georgia and Florida. Relative to the preferred alternative, this alternative and its sub-alternatives would result in relatively higher overall revenue increases but would afford a much lower protection to right whales from entanglement with pot buoy lines.

The tenth alternative would apply the black sea bass pot closure from approximately Georgia/South Carolina State Line (29°13' N), to Cape Hatteras, North Carolina (35°15' N) annually from November 1 through December 15, with the following provision: from February 15 through April 30, the black sea bass pot closure applies to waters inshore of points 1-28 listed in **Table 2.1.9**, approximately Georgia/South Carolina State Line, to Cape Hatteras, North Carolina; from December 16 through February 14, there would be no closure off of the Carolinas; from November 15 through April 15, the black sea bass pot closure applies to waters inshore of points 20-28 listed in **Table 2.1.8**, approximately Georgia/South Carolina State Line, to approximately Daytona Beach, Florida. Relative to the preferred alternative, this alternative would result in relatively higher overall revenue increases but would afford a much lower protection to right whales from entanglement with pot buoy lines.

The eleventh alternative would apply the black sea bass pot closure from approximately Cape Canaveral, Florida (28°21' N), to Cape Hatteras, North Carolina (35°15' N) annually from November 1 through April 30. Relative to the preferred alternative, this alternative would result in relatively higher overall revenue increases but would afford a slightly lower protection to right whales from entanglement with pot buoy lines.

Four alternatives, including the preferred alternative, were considered for enhancing the existing ALWTRP buoy line/weak link gear requirements and buoy line rope marking for black sea bass pots in the South Atlantic. The first alternative, the no action alternative, would not impose any additional cost on fishermen when fishing for black sea bass using pots but it would not meet the need for the action. The second alternative, with two sub-alternatives, would enhance the current ALWTRP buoy line requirements from November 1 through April 30 in federal waters in the South Atlantic EEZ (50 CFR § 622.189). The first sub-alternative would require that the breaking strength for buoy lines not exceed 2,200 lbs and the second sub-alternative, 1,200 lbs. The first sub-alternative is currently required in South Carolina, Georgia, and Florida and so would affect only about 17 fishermen in North Carolina. The estimated cost to each of these 17 fishermen is a maximum of \$716. The second sub-alternative would impose the same cost per of \$716 but would affect all 32 pot endorsement holders. The third alternative would require that the breaking strength of the weak links of the buoy lines must not exceed 400 lbs for black sea bass pots in the South Atlantic EEZ. This alternative is a step down from the current requirement of 600 lbs, and is estimated to cost each of the 32 pot endorsement holders \$65. All these alternatives, except the no action alternative, would impose higher costs to fishermen using black sea bass pots than the preferred alternative.

Appendix I. Additional Analysis Supporting Action 1 Economic Effects

This appendix contains additional analyses that support the calculation of the **Action 1** economic effects, but are not directly relevant to the comparison of the expected economic effects of the alternatives and, therefore, are not included in **Section 4.1.2**. The appendix combines information from both the Chapter 3 Economic Environment section (**Sections 3.3.1**) and from the **Action 1** Economic Effects section (**Section 4.1.2**) and expands on it in greater detail to supplement further the economic effects analysis for **Action 1**.

The approach employed in **Section 4.1.2** assessed the effects of the proposed measure emphasizing the use of revenue and its key components such as price per pound, projected closures, and both historical and projected landings. The analyses contained in this appendix provide an alternative statistical regression modeling approach to calculate price per pound, a market grade analysis based on North Carolina trip ticket data in an attempt to tease out additional factors that influence price per pound (e.g. gear and seasonality effects), limited trip cost data, and other fishing activity by black sea bass pot fishermen. Each section explains the utility of the analyses in supporting the economic effects analysis of **Section 4.1.2**.

Fishing gear used in the commercial black sea bass fishery

The primary gears used to commercially harvest black sea bass traditionally have been black sea bass fish pots and hook and line. However, black sea bass also occasionally are harvested with other commercial gears. **Table Q.1** shows the additional gears used to harvest black sea bass commercially from 2000 through 2013 and the percentage of total landings made up by those gears collapsed across all the years in the series. From 2000 through 2013, other gears accounted for 5.7% of the total commercial black sea bass landings. However, not all of these gears were used in each year and in most years landings, and associated ex-vessel revenues (revenues), by these other gears are considered confidential data. Therefore, in this economic analysis, landings (and revenues) from these other gears are combined with the totals for hook and line.

Table Q.1. Percent black sea bass landings in the South Atlantic with gears other than pots and hook and line, 2000-2013.

Other Gears	% Landings
Gill Net	0.3%
Longline	0.5%
Powerhead/Bang Stick	0.6%
Spear Gun	1.6%
Trolling	2.7%

Source: Southeast Fisheries Science Center (SEFSC)/Social Science Research Group (SSRG) Economic Panel Data.

Price per pound by month

Monthly black sea bass ex-vessel price (price) per pound was generated by taking averages over a period of years. Two periods, 2000-2013 and 2011-2013, were chosen for the present

analysis. These two series were chosen because the first is a long time series and a long time series may smooth out any unusual effects such as a natural disaster on price that could have occurred in a given season, and the second because it reflects the most recent fishing years and, therefore, may be more representative of future conditions. However, any choice of years for analyzing prices has advantages and drawbacks. Using 2000-2013 is good for showing what has occurred on average over the long period, but the understanding of any changes in prices may be confounded by more frequent changes in management measures. Using 2011-2013 shows most recent trends, but prices for June through October may be depressed due to a glut in the market caused by a derby in the pot component and inflate the price of fish caught in the winter months when few black sea bass were available.

Figure 4.1.2.1 shows the average price per pound (gw) by month for each time series. From 2000- 2013, average monthly price per pound varied approximately \$0.57 from lowest month to highest month. The average price ranged from a low of \$2.41 (2013 dollars) in October to a high of \$2.98 (2013 dollars) in April. The average annual price per pound (weighted by the amount of product sold) was \$2.55 (in 2013 dollars).

From 2011-2013, the black sea bass price per pound averaged \$3.87 (2013 dollars) in April. The lowest price per pound value was in October, averaging \$2.44 (2013 dollars). The average annual price per pound was \$2.63 (2013 dollars). Note that the commercial fishing season for black sea bass closed early on October 7, 2010, July 15, 2011, and October 8, 2012 for the three fishing years used in the analysis. Prices for months after the closure were based on relatively low landings that could affect the prices. This analysis assumes prices will remain constant even if landings increase in months where there was little data to estimate the average price per pound.

No historic time series for calculating monthly price per pound for black sea bass can be considered completely accurate because the current management constraints did not exist in the past. The two time series used for calculating average monthly price per pound were used as probable high and low ranges for the actual values. The actual monthly price per pound values most likely to occur in the future is probably somewhere between the estimates provided by the 2000–2013 and 2011–2013 estimates from the SEFSC/SSRG Economic Panel Data. For example, monthly prices were calculated for the 2006 – 2009 fishing years. Those were the last three fishing years in which the commercial black sea bass fishery was open all year. The estimates of monthly values from 2006 – 2009 largely fell between the two ranges used in this analysis.

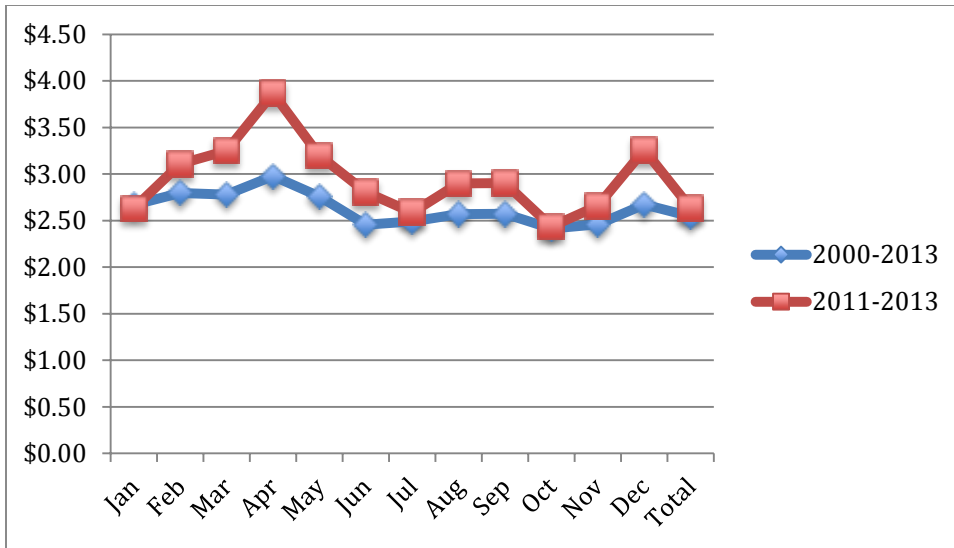


Figure 4.1.2.1. Average price per pound (gw) in the South Atlantic region for black sea bass by month for 2000 – 2013 and 2011 – 2013 (in 2013 dollars).

Source: SEFSC/SSRG Economic Panel Data, ACL_Tables_07102914

Additional statistical price per pound calculations

Statistical methods can be employed to examine changes in the ex-vessel price (price) per pound other than monthly averages across years. A simple 2 x 2 Analysis of Variance (ANOVA) model (pots versus other gear, November through April versus May through October) for landings data from 2000 through 2013 reveals highly statistically significant overall model differences ($F = 28.228, p < 0.001, df_A = df_B = df_{AxB} = 1$; IBM SPSS 2011). The model shows that black sea bass harvested with pots bring a statistically significant higher price than if harvested with other gears, predominantly hook and line, ($F_A = 25.254, p < 0.001, df_A = 1$). Also, the price per pound for black sea bass was statistically higher in the months of November through April compared to the months of May through October ($F_B = 22.710, p < 0.001, df_B = 1$). The interaction between gear and season was also significant. Pot gear brings in statistically higher prices than other gears during November through April, while other gears bring in statistically higher prices than pots during May through October ($F_{AxB} = 32.588, p < 0.001, df_{AxB} = 1$). However, a limitation of this approach is an assumption that the data points used in the ANOVA are statistically independent of each other. That assumption cannot be assured because much of the data represent multiple trips by a group of fishery participants that does not remain constant over time. Reasons why the price per pound is higher for black sea bass in November through April are because the fish are larger and darker in color during these months. Also, during May through October there is market competition from black sea bass harvested north of Cape Hatteras. Black sea bass caught in pots tend to bring a higher ex-vessel value per pound compared to black sea bass landed with other gears due to quality issues, such as damaged caused by hooks. More of the higher quality fish were caught by pot gear November through October, perhaps indicating a confounding between gear type and seasonality.

The Socio-economic Panel of the South Atlantic Council’s Scientific and Statistical Committee recommended analysis of the impact of past management changes on average price per pound based on gear and season. A simple linear regression model was constructed using IBM SPSS

(2011). The dependent variable modeled was price per pound. The independent variables modeled were: 1) gear (pots versus other gears); 2) landings period (November through April versus May through October); 3) whether or not the landings occurred prior to the implementation of Amendment 13c (10/23/2006; ACL step-down from 447,000 lbs gw to 308,000 lbs gw); 4) whether or not the landings occurred prior to the implementation of Amendment 18a (7/1/2012; reduced participation to 32 endorsements, 1,000 lbs gw trip limit, maximum 35 pots per vessel, increased size limit to 11”, and pots must be brought to shore at the end of a trip); 5) number of pounds of black sea bass landed on the trip; and 6) total pounds of all species landed on the trip. Because the data used for the model only included 2000 through 2013, the management measures from Amendment 9 (12/24/1999) and Amendment 11 (2/2/1999) were already in place for all the years in the analysis. Likewise, Regulatory Amendment 19 (increase ACL to 780,020 lbs ww, pot closure from November through April) did not go into place until fall of 2013, shortly before the closure of that season, so the effects of those management measures could not be captured and were not included in the regression modeling.

The final regression model used to determine the effects of gear, closure periods, pounds landed, and management effects of Amendments 13c and 18a on the price per pound for black sea bass, the following model was estimated:

$$price = \alpha + \beta 13c + \gamma 18a + \delta C + \varepsilon G + \zeta T + e$$

Price refers to price per pound of black sea bass (in 2013 dollars), 13c is a dummy variable representing whether or not Amendment 13c was in effect at the time of landings, 18a is a dummy variable representing whether or not the Amendment 18a was in effect at the time of landings, C refers to whether or not the landings occurred during one of the current closure months (November – April), G is a reference to which gear was used to land black sea bass (pots versus other gears, predominantly hook and line), and T is the total pounds landed of all species on the trip. The letter ‘e’ in the equation represents the combined measurement error for all of the variables in the model. A sample size of 52,987 vessel trips for the years 2000 through 2013 was used in this regression analysis.

All of the variables in the model were statistically significant with $p < 0.001$. Stepwise regression was used. To enter the model, the significance level was set to $p \leq 0.05$. To stay in the model, the significance level was set to $p \leq 0.10$. The variables are listed in **Table Q.2** in the order in which they went into the model. The only variable that did not make it into the model was the number of pounds landed of black sea bass. The correlation between total pounds landed and the pounds of black sea bass landed was $r = 0.17$. Although not a large correlation value, it was statistically significant ($p < 0.001$). When two variables are significantly correlated, the variable that contributes to the most variance explained is the one included in model, as regression models tend to treat significantly correlated variables as interchangeable. The “total pounds landed” variable, which was statistically significant, added very little to the estimated value of a price per pound of black sea bass (\$0.0000146). The stepwise regression procedure did not remove any variables. The total amount of variance for price per pound of black sea bass as explained by the model is relatively low ($r^2 = 0.056$), accounting for only \$0.11 of the total average price per pound (in 2013 dollars) of \$2.52. The

combined error value for the variables in the model is \$0.058. The model is 95% confident that the true value of an average price of one pound of black sea bass as predicted by the full model is between \$2.46 and \$2.58.

Table Q.2. Regression model statistics for predicting price per pound of black sea bass (2013 dollars) based on data from 2000-2013.

Dependent Variable = Black Sea Bass Price/lb (mean = \$2.52 in 2013 dollars)						
Variable	Label	Mean	Coeff.	S.E.	t	sig.
Intercept			2.410	0.004	598.166	0.000
Amend13c	1 = A13c in effect	0.2265	0.217	0.006	37.335	0.000
Amend18a	1= A18a in effect	0.0596	0.198	0.010	19.090	0.000
Closure						
Period	1 = Nov - Apr closed period	0.4607	0.058	0.005	12.815	0.000
Gear	1 = BSB pots	0.3021	0.032	0.005	6.668	0.000
Pounds	Of all species landed on trip	193.193	0.00001461	0.000	5.902	0.000

N = 52,987

Source: SEFSC/SSRG Economic Panel Data.

The sample size for this regression model was rather large at 52,987, which likely accounts for the high level of statistical significance for the variables included in the model. The differences based on the data are robust. It is interesting to note that implementation of Amendment 13c had the largest effect on increasing price per pound followed by Amendment 18a. Both amendments had a greater effect on increasing the price per pound of black sea bass than did the temporal variable of November through April versus May through October, or which gear was used.

In summary, the final model can be used to predict the price per pound of black sea bass on any given day under any of the alternatives of **Action 1** in 2013 dollars, and is shown below:

$$\text{Price/lb.} = \$2.825 + \$0.058 \text{ (if landed during the months of November through April)} + \$0.032 \text{ (if landings were from pot gear)} + ((\$1.461 \times 10^{-5}) \times \text{total pounds of all species landed on the trip.})$$

As the model shows, black sea bass landed from November through April bring on average approximately a \$0.06 per pound premium over fish landed May through October. In addition, black sea bass harvested with pot gear bring approximately a \$0.03 per pound premium over fish landed using other gears.

Because the predictive value of the model is relatively low ($r^2 = 0.056$), caution should be used when applying the model. Using the regression model, when aggregated on a monthly level, the average black sea bass prices differ only slightly from the average price per pound by month for the fishery for the 2013 commercial fishing season, or those shown in **Figure 4.1.2.1**. To maintain consistency with the relative risk analysis (NMFS 2015) and because the overall lower reliability of the regression model for determining predictive value, the same methods used to determine relative risk and not the regression model presented here were used for the economic analyses provided in **Section 4.1.2**.

The alternatives proposed under **Action 1** result in different expected dates when the commercial ACL would be reached. The results of the analyses have several implications. To maximize economic return (ex-vessel revenue) to the black sea bass pot fishery, based on 2000 through 2013 historical trends, the pot fishery brings higher economic returns during November through April than May through October. Additionally, the returns from the pot fishery are higher than the returns from the hook and line fishery during the same months (November through April). Conversely, the hook and line fishery brings higher economic returns during May through October compared to November through April, and returns from the hook and line fishery are higher than those from the pot fishery during these months (May through October).

Landings by Month

The commercial black sea bass sector was closed prior to the end of the fishing year in 2008/2009, on May 15, 2009, when the commercial ACL was met. Prior to that season, the fishery operated without closures. **Figure 4.1.2.2** shows the average percent of total annual commercial black sea bass landings by month from June 2000-May 2009, the most recent seasons prior to years when there were ACL-related closures. When operating without closures, the months of June through September saw the fewest commercial landings of black sea bass, ranging from 2-4% each month, while landings tended to increase in November with an average of 11% of the landings. However, fall through spring months saw the highest percentage of annual landings. Highest average annual percentage of total landings occurred in December and January at approximately 18% in each month.

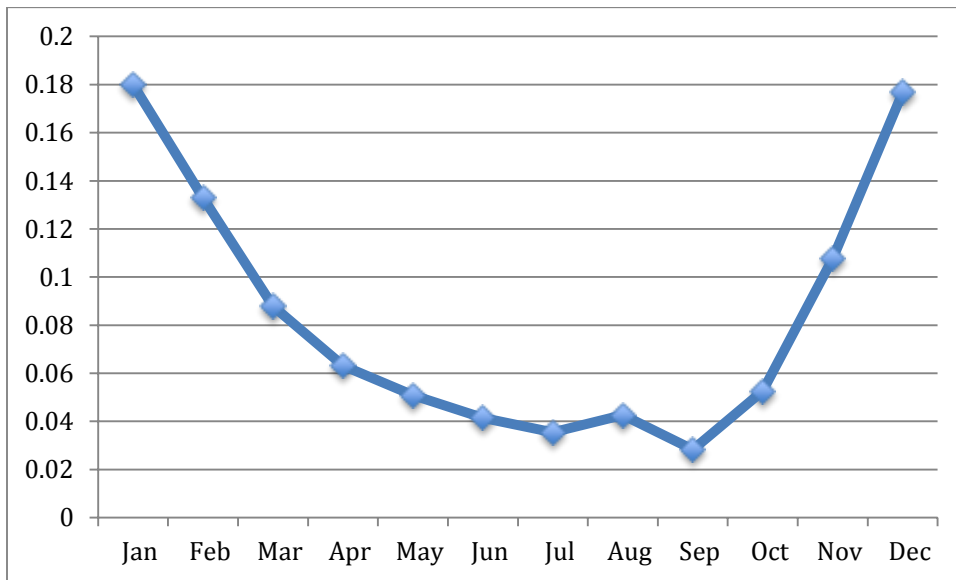


Figure 4.1.2.2 Percent of average annual commercial black sea bass landings by month from June 2000-May 2009.

Source: SEFSC/SSRG Economic Panel Data

Expected closure date alone does not give the best estimate of expected value because the price per pound changes from month to month and is influenced also by which gears are being used at the time. The highest expected ex-vessel value will come when the expected landings are

highest in months with the highest price per pound. Various estimates of average monthly price per pound, daily expected catch rates, and anticipated closure dates were used to calculate estimated annual dockside values for black sea bass. Estimates are shown for the four catch rate scenarios used in the SERO-LAPP-2014-09 (**Appendix Q**) analysis and are based on the assumption that spatial location of gear in future years will mirror the average of the 2006/2007-2008/2009 fishing seasons where there was no closure in the commercial black sea bass season.

North Carolina Market Grade Analysis

Since 2011, the price per pound for black sea bass has changed due to changes in the amount of product available on the market as well as changes in the condition of the fish. With the rebuilding of the black sea bass stock, larger fish are now landed that were not available in previous years (Personal Comm. Jack Cox, January 16, 2015). The price of black sea bass in the South Atlantic region is also affected by the the amount of black sea bass harvested from the Mid-Atlantic region trawl fishery. When the Mid-Atlantic trawl season and the South Atlantic seasons are open at the same time, prices tend to be lower. The market quality of the fish is also higher in winter months because the fish sold tend to be larger and darker in color, both of which lead to a higher price per pound. Taken together, prices received by fishermen for North Carolina (and presumably the entire South Atlantic) black sea bass are highest when the fish are caught in traps during winter months as long as the market is not affected by black sea bass caught in Mid-Atlantic trawls.

Trip ticket data from North Carolina allow for temporal analysis of commercial landings for black sea bass by gear and market grade. **Table Q.3** shows North Carolina commercial landings of black sea bass by year, market grade, pounds landed, percent of annual landings by market grade, and annual average price per pound by market grade for hook and line landings. All dollar amounts are in 2013 dollars. Additionally, average values are shown for the 2000 through 2013 time series as well as the 2011 through 2013 time series. **Table Q.4** shows the same information as **Table Q.3**, except the data represent only pot landings. A small percentage of landings from several of the years in the series were unclassified according to grade. Those landings were not included in the analysis as the data are considered confidential.

Table Q.3. Summary of North Carolina landings of black sea bass, revenue, and average price per lb, and percent by market grade, hook and line gear, 2000–2013.

Year	Jumbo				Large				Medium				Small			
	Lbs	Percent	Revenue	Price/lb	Lbs	Percent	Revenue	Price/lb	Lbs	Percent	Revenue	Price/lb	Lbs	Percent	Revenue	Price/lb
2000	10,270	15%	\$41,846	\$ 4.07	22,725	32%	\$ 77,508	\$ 3.41	24,662	35%	\$ 49,548	\$ 2.01	12,768	18%	\$ 15,498	\$ 1.21
2001	6,105	12%	\$20,122	\$ 3.30	16,847	33%	\$ 48,813	\$ 2.90	17,746	35%	\$ 37,433	\$ 2.11	10,415	20%	\$ 14,758	\$ 1.42
2002	8,112	12%	\$23,062	\$ 2.84	19,735	30%	\$ 48,415	\$ 2.45	24,885	38%	\$ 46,405	\$ 1.86	12,721	19%	\$ 16,740	\$ 1.32
2003	4,009	7%	\$11,557	\$ 2.88	16,005	26%	\$ 39,800	\$ 2.49	25,896	42%	\$ 46,174	\$ 1.78	15,110	25%	\$ 21,775	\$ 1.44
2004	5,433	9%	\$14,756	\$ 2.72	17,814	28%	\$ 40,756	\$ 2.29	26,268	41%	\$ 47,684	\$ 1.82	13,842	22%	\$ 20,696	\$ 1.50
2005	5,407	13%	\$15,905	\$ 2.94	13,467	33%	\$ 33,660	\$ 2.50	14,928	36%	\$ 28,518	\$ 1.91	7,252	18%	\$ 11,007	\$ 1.52
2006	4,946	14%	\$17,306	\$ 3.50	10,533	30%	\$ 29,340	\$ 2.79	13,449	39%	\$ 29,048	\$ 2.16	5,803	17%	\$ 10,774	\$ 1.86
2007	4,074	12%	\$17,417	\$ 4.28	10,835	32%	\$ 32,997	\$ 3.05	13,843	41%	\$ 30,573	\$ 2.21	4,968	15%	\$ 9,139	\$ 1.84
2008	4,342	12%	\$18,582	\$ 4.28	11,282	31%	\$ 34,418	\$ 3.05	16,143	44%	\$ 34,235	\$ 2.12	5,011	14%	\$ 8,764	\$ 1.75
2009	4,235	7%	\$19,583	\$ 4.62	15,851	27%	\$ 50,666	\$ 3.20	27,360	46%	\$ 58,785	\$ 2.15	11,728	20%	\$ 20,500	\$ 1.75
2010	2,483	9%	\$10,777	\$ 4.34	9,803	36%	\$ 29,615	\$ 3.02	10,325	38%	\$ 19,219	\$ 1.86	4,814	18%	\$ 8,215	\$ 1.71
2011	2,418	12%	\$ 6,887	\$ 2.85	7,187	37%	\$ 16,643	\$ 2.32	7,291	38%	\$ 10,832	\$ 1.49	2,471	13%	\$ 2,974	\$ 1.20
2012	3,736	10%	\$15,120	\$ 4.05	16,475	44%	\$ 49,221	\$ 2.99	15,957	42%	\$ 33,673	\$ 2.11	1,379	4%	\$ 2,667	\$ 1.93
2013	11,300	15%	\$41,935	\$ 3.71	29,728	39%	\$ 79,569	\$ 2.68	34,175	45%	\$ 65,883	\$ 1.93	1,135	1%	\$ 2,189	\$ 1.93
2000 - 2013 Average	5,491	11%	\$19,632	\$ 3.58	15,592	32%	\$ 43,673	\$ 2.80	19,495	40%	\$ 38,429	\$ 1.97	7,816	16%	\$ 11,836	\$ 1.51
2011 - 2013 Average	5,818	12%	\$21,314	\$ 3.54	17,797	40%	\$ 48,477	\$ 2.66	19,141	42%	\$ 36,796	\$ 1.84	1,662	6%	\$ 2,610	\$ 1.69

Source: North Carolina (NC) Division of Marine Fisheries (DMF) Trip Ticket Program.

Table Q.4. Summary of North Carolina landings of black sea bass using pot gear by market grade, 2000-2013.

Year	Jumbo				Large				Medium				Small			
	Lbs	Percent	Revenue	Price/lb	Lbs	Percent	Revenue	Price/lb	Lbs	Percent	Revenue	Price/lb	Lbs	Percent	Revenue	Price/lb
2000	6,971	2%	\$ 29,482	\$ 4.23	45,233	13%	\$ 156,359	\$ 3.46	136,980	40%	\$ 273,250	\$ 1.99	149,841	44%	\$177,448	\$ 1.18
2001	10,701	3%	\$ 36,776	\$ 3.44	57,331	14%	\$ 156,450	\$ 2.73	173,751	41%	\$ 343,180	\$ 1.98	179,162	43%	\$245,291	\$ 1.37
2002	9,978	3%	\$ 28,792	\$ 2.89	55,140	15%	\$ 127,208	\$ 2.31	136,281	38%	\$ 239,440	\$ 1.76	160,247	44%	\$206,352	\$ 1.29
2003	8,412	2%	\$ 24,189	\$ 2.88	54,350	13%	\$ 131,821	\$ 2.43	169,206	41%	\$ 308,540	\$ 1.82	181,541	44%	\$255,399	\$ 1.41
2004	8,342	2%	\$ 22,693	\$ 2.72	58,365	13%	\$ 133,097	\$ 2.28	161,964	37%	\$ 281,545	\$ 1.74	212,030	48%	\$293,668	\$ 1.39
2005	6,554	2%	\$ 19,425	\$ 2.96	35,243	13%	\$ 85,836	\$ 2.44	99,301	36%	\$ 180,282	\$ 1.82	137,780	49%	\$198,829	\$ 1.44
2006	10,024	2%	\$ 34,228	\$ 3.41	51,639	13%	\$ 144,131	\$ 2.79	150,163	37%	\$ 318,970	\$ 2.12	189,791	47%	\$336,843	\$ 1.77
2007	6,567	3%	\$ 28,526	\$ 4.34	37,539	15%	\$ 119,649	\$ 3.19	89,902	37%	\$ 204,165	\$ 2.27	109,196	45%	\$200,112	\$ 1.83
2008	6,130	3%	\$ 27,372	\$ 4.47	34,050	14%	\$ 104,630	\$ 3.07	97,574	41%	\$ 205,467	\$ 2.11	98,357	42%	\$169,495	\$ 1.72
2009	7,374	2%	\$ 32,945	\$ 4.47	55,103	15%	\$ 170,917	\$ 3.10	169,145	45%	\$ 353,321	\$ 2.09	146,465	39%	\$246,479	\$ 1.68
2010	6,884	3%	\$ 30,398	\$ 4.42	56,782	21%	\$ 176,321	\$ 3.11	134,532	51%	\$ 245,766	\$ 1.83	67,050	25%	\$110,454	\$ 1.65
2011	2,525	2%	\$ 7,456	\$ 2.95	35,884	23%	\$ 82,796	\$ 2.31	84,173	55%	\$ 123,415	\$ 1.47	31,121	20%	\$ 37,445	\$ 1.20
2012	5,271	3%	\$ 21,808	\$ 4.14	40,193	26%	\$ 117,421	\$ 2.92	103,735	67%	\$ 218,199	\$ 2.10	6,578	4%	\$ 12,212	\$ 1.86
2013	7,209	5%	\$ 27,786	\$ 3.85	43,303	27%	\$ 120,259	\$ 2.78	103,685	65%	\$ 213,662	\$ 2.06	4,879	3%	\$ 7,908	\$ 1.62
2000 - 2013																
Average	7,353	2%	\$ 26,563	\$ 3.65	47,154	16%	\$ 130,492	\$ 2.78	129,314	43%	\$ 250,657	\$ 1.94	119,574	36%	\$178,424	\$ 1.53
2011 - 2013																
Average	5,001	3%	\$ 19,017	\$ 3.65	39,793	25%	\$ 106,826	\$ 2.67	97,198	62%	\$ 185,092	\$ 1.88	14,193	9%	\$ 19,189	\$ 1.56

Source: NC DMF Trip Ticket Program.

Tables Q.3 and Q.4 show that larger market grades bring higher prices per pound than lower market grades. The data show less than \$0.10 per pound regardless of market grade between fish caught using pots versus hook and line. However, in most cases where there was a difference, black sea bass harvested with pots received the higher average price for jumbo and large market grades, while black sea bass harvested using hook and line gear received a higher price per pound for medium and small grade fish.

Table Q.5 shows the average landings by market grade by month for black sea bass landed in North Carolina for two different time series, 2000-2013 and from 2011-2013. From the table, it can be seen that the average size of black sea bass increased throughout the time series. This is very evident from the hook and line landings because the landings stream is more complete (no black sea bass harvested by pot gear were recorded for January through May or December in any of the years during 2011-2013). However, when comparing black sea bass pot harvests over the two time series, there were months where the use of black sea bass pots were greatly restricted during much of the year due to the ACL having been met. In the 2000 through 2013 time series, small fish made up about 17% of hook and line landings and 39% of pot landings, but in the 2011 through 2013 time series, the small market grade decreased to 2% for the hook and line fishery and 6% for the pot fishery. Likewise, in the 2000 through 2013 time series, jumbo market grade fish made up about 11% of hook and line landings and 2% of pot landings, but in the 2011 through 2013 time series, the jumbo market grade increased to 17% for the hook and line fishery and 8% for the pot fishery. Larger fish bring a higher price per pound (**Table Q.4**) which may account for the general increase in price per pound when controlling for inflation in the 2011 through 2013 time series compared to the 2000 through 2013.

Black sea bass landed using pot gear tend to be smaller, yet bring a higher price per pound. An explanation for this inconsistency may be historically in North Carolina black sea bass pots were used primarily in cooler months. Hook and line gear primarily land black sea bass in warmer months as part of multi-species trips. Black sea bass caught in pots, while smaller on average overall than those caught on hook and line, tend to be their largest in winter months and are darker in color which is more desirable to the market (Personal Comm. Jack Cox, January 16, 2015).

Table Q.5. Percent of black sea bass landings from North Carolina by market grade and gear for 2000-2013.

2000-2013	Hook and Line Landings				Pot Landings			
	Jumbo	Large	Medium	Small	Jumbo	Large	Medium	Small
January	19%	34%	34%	14%	3%	18%	37%	42%
February	19%	34%	32%	15%	4%	20%	37%	38%
March	13%	31%	37%	19%	3%	16%	39%	42%
April	14%	34%	32%	19%	2%	12%	39%	46%
May	12%	33%	35%	20%	2%	10%	41%	47%
June	12%	35%	37%	16%	2%	18%	51%	30%
July	10%	34%	40%	16%	2%	18%	54%	26%
August	9%	34%	42%	16%	2%	16%	51%	31%
September	8%	33%	44%	15%	2%	18%	51%	29%
October	4%	22%	52%	21%	1%	12%	46%	41%
November	7%	26%	45%	22%	1%	9%	37%	53%
December	11%	31%	44%	14%	3%	16%	39%	42%
Average	11%	32%	40%	17%	2%	15%	44%	39%
2011-2013	Jumbo	Large	Medium	Small	Jumbo	Large	Medium	Small
January	0%	0%	0%	0%	0%	0%	0%	0%
February	0%	0%	0%	0%	0%	0%	0%	0%
March	12%	42%	45%	0%	0%	0%	0%	0%
April	45%	50%	5%	0%	0%	0%	0%	0%
May	27%	51%	19%	3%	0%	0%	0%	0%
June	19%	40%	35%	6%	3%	26%	57%	14%
July	13%	42%	39%	6%	3%	23%	64%	10%
August	12%	48%	39%	1%	4%	26%	66%	4%
September	7%	42%	50%	1%	4%	28%	65%	3%
October	9%	40%	50%	0%	3%	25%	67%	4%
November	15%	48%	37%	0%	34%	42%	23%	0%
December	10%	33%	55%	2%	0%	0%	0%	0%
Average	17%	44%	38%	2%	8%	29%	57%	6%

Source: NC DMF Trip Ticket Program

Trip costs

The net profitability of a fishing trip is determined by subtracting the trip costs (fuel, bait, gear, crew payments, etc.) and apportioning sunk (fixed) costs (insurance, loan payments, license/permits, etc.) across all trips. Sunk costs will occur regardless of the trip characteristics and are constant in the short term. Individual trip characteristics affect individual trip costs. For example, the distance a vessel must travel will influence fuel needed for the trip.

Perruso and Waters (2005) estimated trip costs for hook and line and trap (pot) vessels catching snapper grouper species based on effort (number of traps), days away (trip

duration), and pounds landed. Crew expenses were excluded from the model because crewmembers were assumed to be compensated through a share payment system. Black sea bass is the only snapper grouper species harvested regularly using pot gear and the gear rarely lands any other snapper grouper species. Based on this model, and assuming the average trip characteristics for black sea bass endorsement holders has not changed, the estimated cost of fishing using black sea bass pots is \$386 (2013 dollars) per day. Using the data provided by Perruso and Waters (2005), it is not possible to estimate hook and line daily trip expenses for just black sea bass trips. In general, however, the estimated daily cost of a snapper grouper trip using hook and line is \$56 (2013 dollars).

Fewer trips are needed to land the commercial ACL when landings per trip increase. **Table Q.6** shows the average landings per trip by year and month for all participants in the black sea bass pot fishery. However, current landings per trip are constrained by the trip limit of 1,000 lbs gw that went into effect July 1, 2012 (SAFMC 2012). Net profit for a trip will increase when the landings per trip are higher assuming trip costs remain relatively the same regardless of when a black sea bass pot trip occurs up until the trip limit is reached. The months of November through March have the potential for greater profitability per trip because of the higher average landings per trip in these months. The months of April through October had the lowest average landings per trip.

Table Q.6. Landings of black sea bass per trip using pot gear by year and month for 2001–2013 (lbs gw).

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Average
January	735	584	531	893	955	636	625	648	758					707
February	592	470	529	757	770	597	635	651	657					629
March	412	418	499	653	658	450	566	588	593					538
April	368	269	427	626	581	416	412	334	331					418
May	315	298	357	436	491	301	344	566	Conf.					389
June	365	244	375	395	264	333	340	536	612	739	1229		648	507
July	344	227	382	406	266	361	Conf.	402	641	670	971	663	634	497
August	257	242	552	653	283	364	216	621	735	840		685	629	506
September	223	243	395	452	Conf.	239	Conf.	309	645	896		595	590	459
October	243	362	481	509	339	434	262	502	618	1005		715	609	507
November	383	453	668	591	475	653	446	786	689					571
December	441	676	1036	760	505	735	576	877	720	1255				758

Source: SEFSC/SSRG Economic Panel Data.

Other fishing activity

Alternative 1 (No Action) limits fishermen to a 6-month period during which all black sea bass pot fishing must occur. Even with no restrictions on where pots may be set from May 1 through October 31, the commercial sector is not expected to be able to reach its ACL each year (SERO 2014). In years past, when the black sea bass commercial sector fishery was open all year, pot fishermen tended to take fewer trips in the summer months (**Table Q.7**). In years where there were closures due to the ACL being reached, a summer derby took place. The commercial portion of the ACL was caught earlier each year as the black sea bass stock recovered and the ACL remained fixed. The months of

November through April had the highest average number of trips in years when fishing occurred in those months. The months of May through October had the lowest average number of trips.

Table Q.7. Number of trips landing black sea bass using pot gear by year and month for 2001–2013.

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Average
January	112	199	85	104	90	111	81	115	101					111
February	72	92	54	95	66	89	110	76	99					84
March	86	63	55	100	40	59	100	43	59					67
April	115	54	50	68	63	57	52	46	48					61
May	83	34	88	62	67	71	23	21	Conf.					56
June	53	34	28	37	57	54	24	13	49	112	163		92	60
July	27	40	39	32	22	26	Conf.	23	41	68	58	110	78	47
August	67	24	63	17	13	38	12	20	55	68		124	59	47
September	56	31	26	19	Conf.	33	Conf.	10	74	54		57	62	42
October	98	29	57	67	18	63	21	31	65	12		25	61	46
November	127	64	83	92	53	74	54	57	72					75
December	187	119	130	117	88	102	96	66	63	77				105

Source: SEFSC/SSRG Economic Panel Data.

Assuming the commercial black sea bass fishery would remain open all year, or nearly all year due to the increased ACL from Regulatory Amendment 19 (2013), the fishery is currently less likely to operate as a derby. As a result, black sea bass pot fishermen might choose to participate in other fisheries that might have a higher net return than they would in previous years when the ACL was more limiting and length of the black sea bass season shorter.

Table Q.8 shows the number of trips taken by month where black sea bass were landed using a gear other than pots, primarily hook and line. The black sea bass sector of the snapper grouper fishery began to experience early closures beginning in the 2009/2010 fishing season. In 2010, 2011, and 2013, the season for black sea bass began on June 1. In 2012, it began on July 1. Prior to the years when there were early closures due to the ACL being met early in the fishing year, the number of hook and line trips taken were fairly constant.

Table Q.8. Number of trips that landed black sea bass that were from gear other than pots, 2001-2013.

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Average
January	100	168	74	81	118	108	78	92	101	7	7	3	Conf.	78
February	111	123	77	55	73	95	78	69	97	5	Conf.	Conf.	3	71
March	83	128	76	82	93	68	85	61	86	7	0	4	Conf.	64
April	145	139	111	136	99	83	90	106	130	8	3	0	3	81
May	219	190	169	179	198	169	153	173	86	22	11	5	13	122
June	204	221	192	133	170	146	161	180	235	208	256	9	238	181
July	168	188	147	179	195	143	126	183	196	224	154	334	304	195
August	215	171	149	143	143	137	159	162	207	229	10	306	294	179
September	147	103	101	79	97	102	94	69	176	197	7	218	273	128
October	157	112	154	168	71	136	87	107	149	14	Conf.	50	272	123
November	171	139	137	188	118	125	126	140	155	7	Conf.	Conf.	94	127
December	165	140	106	149	113	122	148	101	61	44	Conf.	4	92	104

Table Q.9 shows the average monthly revenue for black sea bass and total ex-vessel revenue of landings (2013 dollars) from all species harvested by black sea bass endorsement holders on all trips (not just trips on which black sea bass were harvested) from 2000-2013 and recorded by the federal finfish logbook program. These fishermen may harvest other species, such as state managed species, that are not captured by this data collection program. These harvests, and associated revenues, are not available at this time. The data are grouped into two categories, one showing 2000-2009 when the fishery was a year-around fishery and from 2010-2013 when the fishery was constrained by the ACL and was closed for at least part of the year. From 2000-2009, approximately 29 endorsement holders fished each year. The average black sea bass revenue per endorsement for this period was \$23,399 and the total average annual revenue from all species harvested by these endorsement holders was \$53,280. The average black sea bass revenue per endorsement from 2000-2009 was \$25,958 and the total average annual revenue from all species harvested by endorsement holders was \$47,104. From 2010-2013, approximately 27 black sea bass pot endorsement holders fished each year.

Table Q.9. Average revenue (2013 dollars) from black sea bass and total revenue from all species by month by black sea bass pot endorsement holders, 2000–2013.

	2000 - 2009			2010 - 2013		
	BSB Revenue	Total Revenue	% Rev from BSB	BSB Revenue	Total Revenue	% Rev from BSB
January	\$144,312	\$176,279	82%	\$0	\$87,510	0%
February	\$104,550	\$134,354	76%	\$0	\$52,838	0%
March	\$76,271	\$130,874	58%	\$0	\$36,094	0%
April	\$56,530	\$98,924	57%	\$0	\$34,417	0%
May	\$39,442	\$105,963	37%	\$888	\$103,130	1%
June	\$27,617	\$98,862	28%	\$169,497	\$223,667	76%
July	\$22,588	\$79,336	28%	\$144,861	\$265,855	54%
August	\$29,740	\$84,068	35%	\$123,302	\$199,221	62%
September	\$21,031	\$63,657	33%	\$81,475	\$161,669	50%
October	\$39,789	\$98,367	40%	\$48,027	\$93,752	51%
November	\$39,789	\$98,367	40%	\$995	\$51,195	2%
December	\$140,732	\$178,132	79%	\$56,874	\$115,902	49%
Annual	\$742,391	\$1,347,182	55%	\$625,919	\$1,425,251	44%

Source: SEFSC/SSRG Economic Panel Data and SERO Permits Database.

Given the increased ACL implemented in Regulatory Amendment 19 (SAFMC 2013), the fishing season is expected to last much longer regardless of which alternative is chosen as the preferred alternative for **Action 1** compared to the years 2010 through 2013. Prior to 2010, the black sea bass pot fishery occurred all year long. As restrictive ACLs went into effect, a derby developed and the fishery lasted for as little as two months in 2011. The lowest monthly black sea bass revenues for 2000-2009 occurred in June through August. Once the ACLs started shortening the season, the majority of black sea bass fishing shifted to June through September.

The data shown in **Table Q.10** are different from the data shown in **Table Q.9**. As there is no endorsement for landing black sea bass from non-pot gear, it is not possible to show all landings for all species by non-black sea bass pot endorsement holders. The revenues in **Table Q.10** show only revenues from trips where black sea bass were landed by gear other than pots. It is likely that the percentage of revenue from black sea bass shown here is an overestimate of the reliance of no-pot fishermen, as they are likely to have trips in which no black sea bass are caught. Comparing the results of **Tables Q.9** and **Q.10**, it can be seen that black sea bass pot endorsement holders historically were more reliant on black sea bass as a greater percentage of their overall landings.

Table Q.10. Revenue from trips that landed black sea bass and percent of total trip revenue from black sea bass using gear other than pots by month for 2000-2009 and 2010-2013.

	2000 - 2009			2010 - 2013		
	BSB Revenue	Total Revenue	% Rev from BSB	BSB Revenue	Total Revenue	% Rev from BSB
January	\$14,671	\$194,482	8%	\$719	\$8,929	8%
February	\$13,744	\$158,431	9%	\$887	\$4,435	20%
March	\$10,168	\$214,800	5%	\$1,039	\$5,452	19%
April	\$11,064	\$285,052	4%	\$895	\$4,522	20%
May	\$11,295	\$407,703	3%	\$2,886	\$47,791	6%
June	\$9,563	\$439,975	2%	\$48,167	\$406,906	12%
July	\$9,802	\$448,754	2%	\$63,768	\$698,222	9%
August	\$9,897	\$409,311	2%	\$43,302	\$586,130	7%
September	\$5,836	\$281,285	2%	\$23,925	\$465,454	5%
October	\$7,101	\$313,929	2%	\$14,959	\$183,005	8%
November	\$9,595	\$324,648	3%	\$7,088	\$59,397	12%
December	\$13,106	\$239,739	5%	\$28,244	\$52,772	54%
Annual	\$125,842	\$3,718,106	3%	\$235,878	\$2,523,015	9%

Table Q.11 has two categories of pot fishermen: historical black sea bass pot landings by endorsement holders and historical black sea bass pot landings by all fishermen regardless of whether or not the fisherman eventually had an endorsement to use pot gear. An endorsement has been required since 2012 to land black sea bass using pot gear. The information in **Table Q.11** indicates there has been a shift in the annual percent of landings and dockside revenue (2013 dollars) between black sea bass caught in pots versus all other gears since 2012. The ACL increased to 780,000 lbs ww in 2013 from 309,000 lbs ww, or an increase of 471,020 lbs ww. From 2012 to 2013, black sea bass pot endorsement holders increased their landings by just over 2,000 lbs ww. However, landings of black sea bass harvested by all other gears (primarily hook and line) increased by over 65,000 lbs ww, an increase of over 50% from the previous year's landings.

Table Q.11. Pounds landed and revenue (2013 dollars) of black sea bass landed from 2000-2013 by endorsement holders (pots only landings), all landings by pots (including endorsement holders), and all landings by all other gears (not black sea bass pots).

	Endorsement Holders		All Pot Fishermen		All Other Gears	
	Pounds	Revenue	Pounds	Revenue	Pounds	Revenue
2000	204,436	\$538,858	402,475	\$1,077,881	67,652	\$184,532
2001	249,915	\$596,232	442,115	\$1,073,488	69,902	\$169,700
2002	242,962	\$542,892	361,034	\$804,127	64,168	\$149,288
2003	294,477	\$676,505	441,871	\$1,018,357	64,444	\$149,105
2004	388,906	\$858,743	524,262	\$1,168,114	74,942	\$165,333
2005	291,896	\$719,028	333,153	\$818,833	57,057	\$140,779
2006	363,667	\$1,018,508	395,025	\$1,108,578	51,431	\$142,683
2007	261,299	\$791,825	307,182	\$924,528	40,404	\$119,743
2008	277,394	\$790,753	326,514	\$924,070	45,346	\$127,522
2009	386,543	\$1,025,710	473,896	\$1,259,066	64,636	\$171,413
2010	304,176	\$789,048	342,530	\$892,347	49,156	\$130,358
2011	180,508	\$412,161	256,589	\$549,130	46,204	\$96,760
2012	206,678	\$598,888	211,773	\$612,118	90,964	\$267,628
2013	208,862	\$613,044	220,915	\$644,546	156,700	\$463,714

Source: SEFSC/SSRG Economic Panel Data.

Black sea bass endorsement holders are also able to fish for black sea bass using other gears at any time the commercial black sea bass season is open, even if pots are not allowed. **Table Q.12** shows landings of black sea bass harvested with pots by pot endorsement holders as well as their landings of black sea bass harvested using other gears. From 2000-2012, only 1 to 4% of their revenue from black sea bass came from gears other than pots. However, 2013 was the exception with 7% of the black sea bass revenue for endorsement holders coming from gears other than black sea bass pots.

Table Q.12. Revenue (in 2013 dollars) of black sea bass landed from 2000 through 2013 by gear by black sea bass endorsement holders.

Year	Pots			Other Gear		
	# Trips	BSB rev.	%	# Trips	BSB rev.	%
2000	407	\$538,858	97%	304	\$13,832	3%
2001	582	\$596,232	97%	421	\$20,436	3%
2002	462	\$542,892	96%	447	\$21,032	4%
2003	548	\$676,505	97%	336	\$23,802	3%
2004	595	\$858,743	98%	271	\$16,872	2%
2005	474	\$719,028	96%	264	\$26,823	4%
2006	675	\$1,018,508	97%	233	\$30,571	3%
2007	457	\$791,825	97%	324	\$26,259	3%
2008	430	\$790,753	97%	299	\$21,519	3%
2009	581	\$1,025,710	97%	254	\$27,305	3%
2010	346	\$789,048	99%	233	\$11,696	1%
2011	146	\$412,161	99%	311	\$4,909	1%
2012	312	\$598,888	99%	428	\$6,777	1%
2013	330	\$613,044	93%	377	\$49,669	7%

Source: SEFSC/SSRG Economic Panel Data.

If the commercial black sea bass season is open all year, as occurred in 2014, derby conditions and associated effects would not occur. Fishermen may go back to participating in fisheries similar to what they did prior to the ACL closures. Assuming the entire black sea bass ACL is landed each year, black sea bass pot endorsement holders might be more likely to increase participation in other fisheries, primarily in the months of June through August and putting additional fishing pressure on those stocks. This could have the effect of reducing landings and ex-vessel values for other snapper grouper vessels. **Table Q.13** shows the predominant other federally managed fisheries (non-black sea bass fisheries) black sea bass pot endorsement holders participated in by month for the years 2000-2009 and 2010-2013. A table similar to **Table Q.13** cannot be constructed for non-black sea bass pot endorsement holders who have landed black sea bass due to data limitations that make such an analysis not possible.

Table Q.13. Predominant non-black sea bass federally managed fisheries participation by month for 2000-2009 and 2010-2013 by black sea bass pot endorsement holders.

	2000 - 2009	2010 - 2013
January	king mackerel	vermilion, triggerfish, king mack, tilefish
February	king mackerel	vermilion, triggerfish, king mack, tilefish
March	king mackerel	vermilion, triggerfish, king mackerel
April	king mack, gag, triggerfish, vermilion	king mackerel
May	shallow water groupers, king mack	shallow water groupers, king mackerel
June	shallow water groupers, vermilion	shallow water groupers, grunts, porgies
July	shallow water groupers, vermilion	jacks, vermilion, shallow water groupers
August	shallow water groupers, vermilion	jacks, vermilion, shallow water groupers
September	shallow water groupers, vermilion	jacks, vermilion, shallow water groupers
October	shallow water groupers, vermilion	jacks, grunts, shallow water groupers
November	shallow water groupers, vermilion	grunts, jacks, king mackerel
December	shallow water groupers, king mack	king mackerel

Source: SEFSC/SSRG Economic Panel Data.

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SAFMC (South Atlantic Fishery Management Council). 2013. Regulatory Amendment 19 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region with Final Environmental Assessment, Regulatory Flexibility Analysis, Regulatory Impact Review, and Social Impact Assessment/Fishery Impact Statement.

South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201,
Charleston, S.C. 29405.

Appendix J. Essential Fish Habitat and Move to Ecosystem Based Management

South Atlantic Fishery Management Council Habitat Conservation, Ecosystem Coordination and Collaboration

The Council, using the Essential Fish Habitat Plan as the cornerstone, adopted a strategy to facilitate the move to an ecosystem-based approach to fisheries management in the region. This approach required a greater understanding of the South Atlantic ecosystem and the complex relationships among humans, marine life, and the environment including essential fish habitat. To accomplish this, a process was undertaken to facilitate the evolution of the Habitat Plan into a Fishery Ecosystem Plan (FEP), thereby providing a more comprehensive understanding of the biological, social, and economic impacts of management necessary to initiate the transition from single species management to ecosystem-based management in the region.

Moving to Ecosystem-Based Management

The Council adopted broad goals for Ecosystem-Based Management to include maintaining or improving ecosystem structure and function; maintaining or improving economic, social, and cultural benefits from resources; and maintaining or improving biological, economic, and cultural diversity. Development of a regional FEP (SAFMC 2009a) provided an opportunity to expand the scope of the original Council Habitat Plan and compile and review available habitat, biological, social, and economic fishery and resource information for fisheries in the South Atlantic ecosystem. The South Atlantic Council views habitat conservation as the core of the move to EBM in the region. Therefore, development of the FEP was a natural next step in the evolution and expands and significantly updates the SAFMC Habitat Plan (SAFMC 1998a) incorporating comprehensive details of all managed species (SAFMC, South Atlantic States, ASMFC, and NOAA Fisheries Highly Migratory Species and Protected Species) including their biology, food web dynamics, and economic and social characteristics of the fisheries and habitats essential to their survival. The FEP therefore serves as a source document and presents more complete and detailed information describing the South Atlantic ecosystem and the impact of fisheries on the environment. This FEP updated information on designated Essential Fish Habitat (EFH) and EFH-Habitat Areas of Particular Concern; expanded descriptions of biology and status of managed species; presented information that will support ecosystem considerations for managed species; and described the social and economic characteristics of the fisheries in the region. In addition, it expanded the discussion and description of existing research programs and needs to identify biological, social, and economic research needed to fully address ecosystem-based management in the region. It is anticipated that the FEP will provide a greater degree of guidance by fishery, habitat, or major ecosystem consideration of bycatch reduction, prey-predator interactions, maintaining biodiversity, and spatial management needs. This FEP serves as a living source document of biological, economic, and social information for all Fishery Management Plans (FMP). Future Environmental Assessments and Environmental Impact Statements associated with subsequent amendments to Council FMPs will draw from or cite by reference the FEP.

The Fishery Ecosystem Plan for the South Atlantic Region encompasses the following volume structure:

- FEP Volume I - Introduction and Overview of FEP for the South Atlantic Region
- FEP Volume II - South Atlantic Habitats and Species
- FEP Volume III - South Atlantic Human and Institutional Environment
- FEP Volume IV - Threats to South Atlantic Ecosystem and Recommendations
- FEP Volume V - South Atlantic Research Programs and Data Needs
- FEP Volume VI - References and Appendices

Comprehensive Ecosystem-Based Amendment (CE-BA) 1 (SAFMC 2009b) is supported by this FEP and updated EFH and EFH-HAPC information and addressed the Final EFH Rule (e.g., GIS presented for all EFH and EFH-HAPCs). Management actions implemented in CE-BA 1 established deepwater Coral HAPCs to protect what is thought to be the largest continuous distribution (>23,000 square miles) of pristine, deepwater coral ecosystems in the world.

The Fishery Ecosystem Plan, slated to be revised every 5 years, will again be the vehicle to update and refine information supporting designation and future review of EFH and EFH-HAPCs for managed species. Planning for the update is being conducted in cooperation with the Habitat Advisory Panel during the fall and winter of 2013 with initiation during 2014.

Ecosystem Approach to Deepwater Ecosystem Management

The South Atlantic Council manages coral, coral reefs and live/hard bottom habitat, including deepwater corals, through the Fishery Management Plan for Coral, Coral Reefs and Live/Hard Bottom Habitat of the South Atlantic Region (Coral FMP). Mechanisms exist in the FMP, as amended, to further protect deepwater coral and live/hard bottom habitats. The SAFMC's Habitat and Environmental Protection Advisory Panel and Coral Advisory Panel have supported proactive efforts to identify and protect deepwater coral ecosystems in the South Atlantic region. Management actions in Comprehensive Ecosystem-Based Amendment (CE-BA 1) (SAFMC 2009b) established deepwater coral HAPCs (C- HAPCs) to protect what is thought to be the largest continuous distribution (>23,000 square miles) of pristine deepwater coral ecosystems in the world. In addition, CE-BA 1 established areas within the CHAPC, which provide for traditional fishing in limited areas, which do not impact deepwater coral habitat. CE-BA 1, supported by the FEP, also addressed non-regulatory updates for existing EFH and EFH- HAPC information and addressed the spatial requirements of the Final EFH Rule (i.e., GIS presented for all EFH and EFH-HAPCs). Actions in this amendment included modifications in the management of the following: octocorals; special management zones (SMZs) off the coast of South Carolina; and sea turtle release gear requirements for snapper grouper fishermen. The amendment also designated essential fish habitat (EFH) and EFH-Habitat Areas of Particular Concern (EFH-HAPCs).

CE-BA 2 established annual catch limits (ACL) for octocorals in the South Atlantic as well as modifying the Fishery Management Unit (FMU) for octocorals to remove octocorals off the coast of Florida from the FMU (SAFMC 2011). The amendment also limited the possession of

managed species in the SMZs off South Carolina to the recreational bag limit for snapper grouper and coastal migratory pelagic species; modified sea turtle release gear requirements for the snapper grouper fishery based upon freeboard height of vessels; amends Council fishery management plans (FMPs) to designate or modify EFH and EFH-HAPCs, including the FMP for Pelagic Sargassum Habitat; amended the Coral FMP to designate EFH for deepwater Coral HAPCs designated under CE-BA 1; and amended the Snapper Grouper FMP to designate EFH-HAPCs for golden and blueline tilefish and the deepwater Marine Protected Areas. The final rule was published in the federal register on December 30, 2011, and regulations became effective on January 30, 2012.

Building from a Habitat to an Ecosystem Network to Support the Evolution

Starting with our Habitat and Environmental Protection Advisory Panel, the Council expanded and fostered a comprehensive Habitat network in our region to develop the Habitat Plan of the South Atlantic Region completed in 1998 to support the EFH rule. Building on the core regional collaborations, the Council facilitated an expansion to a Habitat and Ecosystem network to support development of the FEP and CE-BA as well as coordinate with partners on other regional efforts.

Integrated Ocean Observing System (IOOS) and Southeast Coastal and Ocean Observing Regional Association (SECOORA)

The Integrated Ocean Observing System (IOOS®) is a partnership among federal, regional, academic, and private sector parties that works to provide new tools and forecasts to improve safety, enhance the economy, and protect our environment. IOOS supplies critical information about our Nation's oceans, coasts, and Great Lakes. Scientists working to understand climate change, governments adapting to changes in the Arctic, municipalities monitoring local water quality, and industries affected by coastal and marine spatial planning all have the same need: reliable, timely, and sustained access to data and information that inform decision making. Improving access to key marine data and information supports several purposes. IOOS data sustain national defense, marine commerce, and navigation safety. Scientists use these data to issue weather, climate, and marine forecasts. IOOS data are also used to make decisions for energy siting and production, economic development, and ecosystem-based resource management. Emergency managers and health officials need IOOS information to make decisions about public safety. Teachers and government officials rely on IOOS data for public outreach, training, and education.

SECOORA is one of 11 Regional Associations established nationwide through the US IOOS whose primary source of funding is through a 5-year cooperative agreement titled "Coordinated Monitoring, Prediction, and Assessment to Support Decision-Makers Needs for Coastal and Ocean Data and Tools". However, SECOORA was recently awarded funding via a NOAA Regional Ocean Partnership grant through the Governors' South Atlantic Alliance. SECOORA is the regional solution to integrating coastal and ocean observing data in the Southeast United States to inform decision makers and the general public. The SECOORA region encompasses 4 states, over 42 million people, and spans the

coastal ocean from North Carolina to the west Coast of Florida and is creating customized products to address these thematic areas: Marine Operations; Coastal Hazards; Ecosystems, Water Quality, Living Marine Resources; and Climate Change. The Council is a voting member and Council staff was recently re-elected to serve on the Board of Directors for the Southeast Coastal Regional Ocean Observing Association (SECOORA) to guide and direct priority needs for observation and modeling to support fisheries oceanography and integration into stock assessments through SEDAR. Cooperation through SECOORA is envisioned to facilitate the following:

- Refining current or water column designations of EFH and EFH-HAPCs (e.g., Gulf Stream and Florida Current).
- Providing oceanographic models linking benthic, pelagic habitats, and food webs.
- Providing oceanographic input parameters for ecosystem models.
- Integration of OOS information into Fish Stock Assessment process in the SA region.
- Facilitating OOS system collection of fish and fishery data and other research necessary to support the Council's use of area-based management tools in the SA Region including but not limited to EFH, EFH-HAPCs, Marine Protected Areas, Deepwater Coral Habitat Areas of Particular Concern, Special Management Zones, and Allowable Gear Areas.
- Integration of OOS program capabilities and research Needs into the South Atlantic Fishery Ecosystem Plan.
- Collaboration with SECOORA to integrate OOS products with information included in the Council's Habitat and Ecosystem Web Services and Atlas to facilitate model and tool development.
- Expanding Map Services and the Regional Habitat and Ecosystem Atlas in cooperation with SECOORAs Web Services that will provide researchers access to data or products including those collected/developed by SA OOS partners.

SECOORA researchers are developing a comprehensive data portal to provide discovery of, access to, and metadata about coastal ocean observations in the southeast US. Below are various ways to access the currently available data.

One project recently funded by SECOORA initiated development of species specific habitat models that integrate remotely sensed and in situ data to enhance stock assessments for species managed by the Council. The project during 2013/2014 was initiated to address red porgy, gray triggerfish, black seabass, and vermilion snapper. Gray triggerfish and red porgy are slated for assessment through SEDAR in 2014/15 and 2015/16 respectively.

National Fish Habitat Plan and Southeast Aquatic Resource Partnership (SARP)

In addition, the Council serves on the National Habitat Board and, as a member of the Southeast Aquatic Resource Partnership (SARP), has highlighted this collaboration by including the Southeast Aquatic Habitat Plan (SAHP) and associated watershed conservation restoration targets into the FEP. Many of the habitat, water quality, and water quantity conservation needs identified in the threats and recommendations Volume of the FEP are directly addressed by on-

the-ground projects supported by SARP. This cooperation results in funding fish habitat restoration and conservation intended to increase the viability of fish populations and fishing opportunity, which also meets the needs to conserve and manage Essential Fish Habitat for Council managed species or habitat important to their prey. To date, SARP has funded 53 projects in the region through this program. This work supports conservation objectives identified in the SAHP to improve, establish, or maintain riparian zones, water quality, watershed connectivity, sediment flows, bottoms and shorelines, and fish passage, and addresses other key factors associated with the loss and degradation of fish habitats. SARP also developed the Southern Instream Flow Network (SIFN) to address the impacts of flow alterations in the Southeastern US aquatic ecosystems which leverages policy, technical experience, and scientific resources among partners based in 15 states. Maintaining appropriate flow into South Atlantic estuarine systems to support healthy inshore habitats essential to Council managed species is a major regional concern and efforts of SARP through SIFN are envisioned to enhance state and local partners ability to maintain appropriate flow rates.

Governor's South Atlantic Alliance (GSAA)

Initially discussed as a South Atlantic Eco-regional Compact, the Council has also cooperated with South Atlantic States in the formation of a Governor's South Atlantic Alliance (GSAA). This will also provide regional guidance and resources that will address State and Council broader habitat and ecosystem conservation goals. The GSAA was initiated in 2006. An Executive Planning Team (EPT), by the end of 2007, had created a framework for the Governors South Atlantic Alliance. The formal agreement between the four states (NC, SC, GA, and FL) was executed in May 2009. The Agreement specifies that the Alliance will prepare a "Governors South Atlantic Alliance Action Plan" which will be reviewed annually for progress and updated every five years for relevance of content. The Alliance's mission and purpose is to promote collaboration among the four states, and with the support and interaction of federal agencies, academe, regional organizations, non-governmental organizations, and the private sector, to sustain and enhance the region's coastal and marine resources. The Alliance proposes to regionally implement science-based actions and policies that balance coastal and marine ecosystems capacities to support both human and natural systems. The GSAA Action Plan was released in December 2010 and describes the four Priority Issue Areas that were identified by the Governors to be of mutual importance to the sustainability of the region's resources: Healthy Ecosystems; Working Waterfronts; Clean Coastal and Ocean Waters; and Disaster-Resilient Communities. The goals, objectives, actions, and implementation steps for each of these priorities were further described in the GSAA Implementation Plan released in July 2011. The final Action Plan was released on December 1, 2010 and marked the beginning of intensive work by the Alliance Issue Area Technical Teams (IATTs) to develop implementation steps for the actions and objectives. The GSAA Implementation Plan was published July 6, 2011, and the Alliance has been working to implement the Plan through the IATTs and two NOAA-funded Projects. The Alliance also partners with other federal agencies, academia, non-profits, private industry, regional organizations, and others. The Alliance supports both national and state-level ocean and coastal policy by coordinating federal, state, and local entities to ensure the sustainability of the region's economic, cultural, and natural resources. The Alliance has organized itself around the founding principles outlined in the

GSAA Terms of Reference and detailed in the GSAA Business Plan. A team of natural resource managers, scientists, and information management system experts have partnered to develop a Regional Information Management System (RIMS) and recommend decision support tools that will support regional collaboration and decision-making. In addition to regional-level stakeholders, state and local coastal managers and decision makers will also be served by this project, which will enable ready access to new and existing data and information. The collection and synthesis of spatial data into a suite of visualization tools is a critical step for long-term collaborative planning in the South Atlantic region for a wide range of coastal uses. The Council's Atlas presents the spatial representations of Essential Fish Habitat, managed areas, regional fish and fish habitat distribution, and fishery operation information and it can be linked to or drawn on as a critical part of the collaboration with the RIMS.

South Atlantic Landscape Conservation Cooperative

One of the more recent collaborations is the Council's participation as Steering Committee member for the newly establish South Atlantic Landscape Conservation Cooperative (SALCC). Landscape Conservation Cooperatives (LCCs) are applied conservation science partnerships focused on a defined geographic area that informs on-the-ground strategic conservation efforts at landscape scales. LCC partners include DOI agencies, other federal agencies, states, tribes, non-governmental organizations, universities, and others. The newly formed Department of Interior Southeast Climate Services Center (CSC) has the LCCs in the region as their primary clients. One of the initial charges of the CSCs is to downscale climate models for use at finer scales.

The SALCC developed a Strategic Plan through an iterative process that began in December 2011. The plan provides a simple strategy for moving forward over the next few years. An operations plan was developed under direction from the SALCC Steering Committee to redouble efforts to develop version 1.0 of a shared conservation blueprint by spring-summer of 2014. The SALCC is developing the regional blueprint to address the rapid changes in the South Atlantic including but not limited to climate change, urban growth, and increasing human demands on resources which are reshaping the landscape. While these forces cut across political and jurisdictional boundaries, the conservation community does not have a consistent cross-boundary, cross-organization plan for how to respond. The South Atlantic Conservation Blueprint will be that plan. The blueprint is envisioned to be a spatially-explicit map depicting the places and actions need to sustain South Atlantic LCC objectives in the face of future change. The steps to creating the blueprint include development of: indicators and targets (shared metrics of success); the State of the South Atlantic (past, present, and future condition of indicators); and a Conservation Blueprint. Potential ways the blueprint could be used include: finding the best places for people and organizations to work together; raising new money to implement conservation actions; guiding infrastructure development (highways, wind, urban growth, etc.); creating incentives as an alternative to regulation; bringing a landscape perspective to local adaptation efforts; and locating places and actions to build resilience after major disasters (hurricanes, oil spills, etc.). Integration of connectivity, function, and threats to river, estuarine and marine systems supporting Council managed species is supported by the SALCC and enhanced by the Council being a voting member of

its Steering Committee. In addition, the Council's Regional Atlas presents spatial representations of Essential Fish Habitat, managed areas, regional fish and fish habitat distribution, and fishery operation information and it be linked to or drawn on as a critical part of the collaboration with the recently developed SALCC Conservation Planning Atlas.

Building Tools to support EBM in the South Atlantic Region

The Council has developed a Habitat and Ecosystem Section of the website <http://www.safmc.net/ecosystem/Home/EcosystemHome/tabid/435/Default.aspx> and, in cooperation with the Florida Wildlife Research Institute (FWRI), developed a Habitat and Ecosystem Internet Map Server (IMS). The IMS was developed to support Council and regional partners' efforts in the transition to EBM. Other regional partners include NMFS Habitat Conservation, South Atlantic States, local management authorities, other Federal partners, universities, conservation organizations, and recreational and commercial fishermen. As technology and spatial information needs evolved, the distribution and use of GIS demands greater capabilities. The Council has continued its collaboration with FWRI in the now evolution to Web Services provided through the regional SAFMC Habitat and Ecosystem Atlas (http://ocean.floridamarine.org/safmc_atlas/) and the SAFMC Digital Dashboard (http://ocean.floridamarine.org/safmc_dashboard/). The Atlas integrates services for the following:

Species distribution and spatial presentation of regional fishery independent data from the SEAMAP-SA, MARMAP, and NOAA SEFIS systems; SAFMC Fisheries: (http://ocean.floridamarine.org/SA_Fisheries/)

Essential Fish Habitat and Essential Fish Habitat Areas of Particular Concern; SAFMC EFH: (http://ocean.floridamarine.org/sa_efh/)

Spatial presentation of managed areas in the region; SAFMC Managed Areas: (http://ocean.floridamarine.org/safmc_managedareas/)

An online life history and habitat information system supporting Council managed, State managed, and other regional species was developed in cooperation with FWRI. The Ecospecies system is considered dynamic and presents, as developed, detailed individual species life history reports and provides an interactive online query capability for all species included in the system: <http://atoll.floridamarine.org/EcoSpecies>

Web Services System Updates:

- Essential Fish Habitat (EFH) – displays EFH and EFH-HAPCS for SAFMC managed species and NOAA Fisheries Highly Migratory Species.
- Fisheries - displays Marine Resources Monitoring, Assessment, and Prediction (MARMAP) and Southeast Area Monitoring and Assessment Program South Atlantic (SEAMAP-SA) data.
- Managed Areas - displays a variety of regulatory boundaries (SAFMC and Federal) or management boundaries within the SAFMC’s jurisdiction.
- Habitat – displays habitat data collected by SEADESC, Harbor Branch Oceanographic Institute (HBOI), and Ocean Exploration dives, as well as the SEAMAP shallow and ESDIM deepwater bottom mapping projects, multibeam imagery, and scientific cruise data.
- Multibeam Bathymetry - displays a variety of multibeam data sources and scanned bathymetry charts.
- Nautical Charts – displays coastal, general, and overview nautical charts for the SAFMC’s jurisdictional area.

Ecosystem Based Action, Future Challenges and Needs

The Council has implemented ecosystem-based principles through several existing fishery management actions including establishment of deepwater Marine Protected Areas for the Snapper Grouper fishery, proactive harvest control rules on species (e.g., dolphin and wahoo) which are not overfished, implementing extensive gear area closures which in most cases eliminate the impact of fishing gear on Essential Fish Habitat, and use of other spatial management tools including Special Management Zones. Pursuant to development of the Comprehensive Ecosystem-Based Amendment, the Council has taken an ecosystem approach to protect deepwater ecosystems while providing for traditional fisheries for the Golden Crab and Royal Red shrimp in areas where they do not impact deepwater coral habitat. The stakeholder based process taps in on an extensive regional Habitat and Ecosystem network. Support tools facilitate Council deliberations and with the help of regional partners, are being refined to address long-term ecosystem management needs.

One of the greatest challenges to the long-term move to EBM in the region is funding high priority research, including but not limited to, comprehensive benthic mapping and ecosystem model and management tool development. In addition, collecting detailed information on fishing fleet dynamics including defining fishing operation areas by species, species complex, and season, as well as catch relative to habitat is critical for assessment of fishery, community, and habitat impacts and for Council use in place based management measures. Additional resources need to be dedicated to expand regional coordination of modeling, mapping, characterization of species use of habitats, and full funding of regional fishery independent surveys (e.g., MARMAP, SEAMAP, and SEFIS) which are linking directly to addressing high priority management needs. Development of ecosystem information systems to support Council management should build on existing tools (e.g., Regional Habitat and Ecosystem GIS and Arc Services) and provide resources to regional cooperating partners for expansion to address long-term Council needs.

The FEP and CE-BA 1 complement, but do not replace, existing FMPs. In addition, the FEP serves as a source document to the CE-BAs. NOAA should support and build on the regional coordination efforts of the Council as it transitions to a broader management approach. Resources need to be provided to collect information necessary to update and refine our FEP and support future fishery actions including but not limited to completing one of the highest priority needs to support EBM, the completion of mapping of near-shore, mid-shelf, shelf edge, and deepwater habitats in the South Atlantic region. In developing future FEPs, the Council will draw on SAFEs (Stock Assessment and Fishery Evaluation reports) which NMFS is required to provide the Council for all FMPs implemented under the Magnuson-Stevens Act. The FEP, which has served as the source document for CE-BAs, could also meet some of the NMFS SAFE requirements if information is provided to the Council to update necessary sections.

EFH and EFH-HAPC Designations Translated to Cooperative Habitat Policy Development and Protection

The Council actively comments on non-fishing projects or policies that may impact fish habitat. **Appendix A** of the Comprehensive Amendment Addressing Essential Fish Habitat in Fishery Management Plans of the South Atlantic Region (SAFMC 1998b) outlines the Council's comment and policy development process and the establishment of a four-state Habitat Advisory Panel. Members of the Habitat Advisory Panel serve as the Council's habitat contacts and professionals in the field. AP members bring projects to the Council's attention, draft comment letters, and attend public meetings. With guidance from the Advisory Panel, the Council has developed and approved policies on:

1. Energy exploration, development, transportation, and hydropower re-licensing;
2. Beach dredging and filling and large-scale coastal engineering;
3. Protection and enhancement of submerged aquatic vegetation;
4. Alterations to riverine, estuarine, and nearshore flows;
5. Marine aquaculture;
6. Marine Ecosystems and Non-Native and Invasive Species: and
7. Estuarine Ecosystems and Non-Native and Invasive Species.

NOAA Fisheries, State and other Federal agencies apply EFH and EFH-HAPC designations and protection policies in the day-to-day permit review process. The revision and updating of existing habitat policies and the development of new policies is being coordinated with core agency representatives on the Habitat and Coral Advisory Panels. Existing policies are included at the end of this Appendix.

The Habitat and Environmental Protection Advisory Panel, as part of their role in providing continued policy guidance to the Council, is during 2013/14, reviewing and proposing revisions and updates to the existing policy statements and developing new ones for Council consideration. The effort is intended to enhance the value of the statements and support cooperation and collaboration with NOAA Fisheries Habitat Conservation Division and State and Federal partners in better addressing the Congressional mandates to the Council associated with designation and conservation of EFH in the region.

South Atlantic Bight Ecopath Model

The Council worked cooperatively with the University of British Columbia and the Sea Around Us project to develop a straw-man and preliminary food web models (Ecopath with Ecosim) to characterize the ecological relationships of South Atlantic species, including those managed by the Council. This effort was envisioned to help the Council and cooperators in identifying available information and data gaps while providing insight into ecosystem function. More importantly, the model development process provides a vehicle to identify research necessary to better define populations, fisheries, and their interrelationships. While individual efforts are still underway in the South Atlantic, only with significant investment of new resources through other programs will a comprehensive regional model be further developed.

The latest collaboration builds on the previous Ecopath model developed through the Sea Around Us project for the South Atlantic Bight with a focus on beginning a dialogue on the implications of potential changes in forage fish populations in the region that could be associated with environmental or climate change or changes in direct exploitation of those populations.

Essential Fish Habitat and Essential Fish Habitat Areas of Particular Concern

Following is a summary of the current South Atlantic Council's EFH and EFH-HAPCs. Information supporting their designation was updated (pursuant to the EFH Final Rule) in the Council's Fishery Ecosystem Plan and Comprehensive Ecosystem Amendment:

Snapper Grouper FMP

Essential fish habitat for snapper grouper species includes coral reefs, live/hard bottom, submerged aquatic vegetation, artificial reefs, and medium to high profile outcroppings on and around the shelf break zone from shore to at least 600 feet (but to at least 2,000 feet for wreckfish) where the annual water temperature range is sufficiently warm to maintain adult populations of members of this largely tropical complex. EFH includes the spawning area in the water column above the adult habitat and the additional pelagic environment, including *Sargassum*, required for larval survival and growth up to and including settlement. In addition the Gulf Stream is an essential fish habitat because it provides a mechanism to disperse snapper grouper larvae.

For specific life stages of estuarine dependent and nearshore snapper grouper species, essential fish habitat includes areas inshore of the 100-foot contour, such as attached macroalgae; submerged rooted vascular plants (seagrasses); estuarine emergent vegetated wetlands (saltmarshes, brackish marsh); tidal creeks; estuarine scrub/shrub (mangrove fringe); oyster reefs and shell banks; unconsolidated bottom (soft sediments); artificial reefs; and coral reefs and live/hard bottom.

Areas which meet the criteria for EFH-HAPCs for species in the snapper-grouper management unit include medium to high profile offshore hard bottoms where spawning normally occurs; localities of known or likely periodic spawning aggregations; nearshore hard bottom areas; The

Point, The Ten Fathom Ledge, and Big Rock (North Carolina); The Charleston Bump (South Carolina); mangrove habitat; seagrass habitat; oyster/shell habitat; all coastal inlets; all state-designated nursery habitats of particular importance to snapper grouper (e.g., Primary and Secondary Nursery Areas designated in North Carolina); pelagic and benthic *Sargassum*; Hoyt Hills for wreckfish; the *Oculina* Bank Habitat Area of Particular Concern; all hermatypic coral habitats and reefs; manganese outcroppings on the Blake Plateau; and Council-designated Artificial Reef Special Management Zones (SMZs). In addition, the Council through CEBA 2 (SAFMC 2011) designated the deepwater snapper grouper MPAs and golden tilefish and blueline tilefish habitat as EFH-HAPCs under the Snapper Grouper FMP as follows:

EFH-HAPCs for golden tilefish to include irregular bottom comprised of troughs and terraces inter-mingled with sand, mud, or shell hash bottom. Mud-clay bottoms in depths of 150-300 meters are HAPC. Golden tilefish are generally found in 80-540 meters, but most commonly found in 200-meter depths.

EFH-HAPC for blueline tilefish to include irregular bottom habitats along the shelf edge in 45-65 meters depth; shelf break or upper slope along the 100-fathom contour (150-225 meters); hardbottom habitats characterized as rock overhangs, rock outcrops, manganese-phosphorite rock slab formations, or rocky reefs in the South Atlantic Bight; and the Georgetown Hole (Charleston Lumps) off Georgetown, SC.

EFH-HAPCs for the snapper grouper complex to include the following deepwater Marine Protected Areas (MPAs) as designated in Snapper Grouper Amendment 14: Snowy Grouper Wreck MPA, Northern South Carolina MPA, Edisto MPA, Charleston Deep Artificial Reef MPA, Georgia MPA, North Florida MPA, St. Lucie Hump MPA, and East Hump MPA.

Deepwater Coral HAPCs designated in Comprehensive Ecosystem-Based Amendment 1 are designated as Snapper Grouper EFH-HAPCs: Cape Lookout Coral HAPC, Cape Fear Coral HAPC, Blake Ridge Diapir Coral HAPC, Stetson-Miami Terrace Coral HAPC, and Poutalés Terrace Coral HAPC.

Shrimp FMP

For penaeid shrimp, Essential Fish Habitat includes inshore estuarine nursery areas, offshore marine habitats used for spawning and growth to maturity, and all interconnecting water bodies as described in the Habitat Plan. Inshore nursery areas include tidal freshwater (palustrine), estuarine, and marine emergent wetlands (e.g., intertidal marshes); tidal palustrine forested areas; mangroves; tidal freshwater, estuarine, and marine submerged aquatic vegetation (e.g., seagrass); and subtidal and intertidal non-vegetated flats. This applies from North Carolina through the Florida Keys.

For rock shrimp, essential fish habitat consists of offshore terrigenous and biogenic sand bottom habitats from 18 to 182 meters in depth with highest concentrations occurring between 34 and 55 meters. This applies for all areas from North Carolina through the Florida Keys. Essential fish habitat includes the shelf current systems near Cape Canaveral, Florida, which provide

major transport mechanisms affecting planktonic larval rock shrimp. These currents keep larvae on the Florida Shelf and may transport them inshore in spring. In addition, the Gulf Stream is an essential fish habitat because it provides a mechanism to disperse rock shrimp larvae.

Essential fish habitat for royal red shrimp include the upper regions of the continental slope from 180 meters (590 feet) to about 730 meters (2,395 feet), with concentrations found at depths of between 250 meters (820 feet) and 475 meters (1,558 feet) over blue/black mud, sand, muddy sand, or white calcareous mud. In addition, the Gulf Stream is an essential fish habitat because it provides a mechanism to disperse royal red shrimp larvae.

Areas which meet the criteria for EFH-HAPCs for penaeid shrimp include all coastal inlets, all state-designated nursery habitats of particular importance to shrimp (for example, in North Carolina this would include all Primary Nursery Areas and all Secondary Nursery Areas), and state-identified overwintering areas.

Coastal Migratory Pelagics FMP

Essential fish habitat for coastal migratory pelagic species includes sandy shoals of capes and offshore bars, high profile rocky bottom, and barrier island ocean-side waters, from the surf to the shelf break zone, but from the Gulf Stream shoreward, including *Sargassum*. In addition, all coastal inlets and all state-designated nursery habitats of particular importance to coastal migratory pelagics (for example, in North Carolina this would include all Primary Nursery Areas and all Secondary Nursery Areas).

For Cobia essential fish habitat also includes high salinity bays, estuaries, and seagrass habitat. In addition, the Gulf Stream is an essential fish habitat because it provides a mechanism to disperse coastal migratory pelagic larvae.

For king and Spanish mackerel and cobia essential fish habitat occurs in the South Atlantic and Mid-Atlantic Bights.

Areas which meet the criteria for EFH-HAPCs include sandy shoals of Capes Lookout, Cape Fear, and Cape Hatteras from shore to the ends of the respective shoals, but shoreward of the Gulf stream; The Point, The Ten-Fathom Ledge, and Big Rock (North Carolina); The Charleston Bump and Hurl Rocks (South Carolina); The Point off Jupiter Inlet (Florida); *Phragmatopoma* (worm reefs) reefs off the central east coast of Florida; nearshore hard bottom south of Cape Canaveral; The Hump off Islamorada, Florida; The Marathon Hump off Marathon, Florida; The “Wall” off of the Florida Keys; Pelagic *Sargassum*; and Atlantic coast estuaries with high numbers of Spanish mackerel and cobia based on abundance data from the ELMR Program. Estuaries meeting this criteria for Spanish mackerel include Bogue Sound and New River, North Carolina; Bogue Sound, North Carolina (Adults May-September salinity >30 ppt); and New River, North Carolina (Adults May-October salinity >30 ppt). For Cobia they include Broad River, South Carolina; and Broad River, South Carolina (Adults & juveniles May-July salinity >25ppt).

Golden Crab FMP

Essential fish habitat for golden crab includes the U.S. Continental Shelf from Chesapeake Bay south through the Florida Straits (and into the Gulf of Mexico). In addition, the Gulf Stream is an essential fish habitat because it provides a mechanism to disperse golden crab larvae. The detailed description of seven essential fish habitat types (a flat foraminiferan ooze habitat; distinct mounds, primarily of dead coral; ripple habitat; dunes; black pebble habitat; low outcrop; and soft-bioturbated habitat) for golden crab is provided in Wenner et al. (1987). There is insufficient knowledge of the biology of golden crabs to identify spawning and nursery areas and to identify HAPCs at this time. As information becomes available, the Council will evaluate such data and identify HAPCs as appropriate through the framework.

Spiny Lobster FMP

Essential fish habitat for spiny lobster includes nearshore shelf/oceanic waters; shallow subtidal bottom; seagrass habitat; unconsolidated bottom (soft sediments); coral and live/hard bottom habitat; sponges; algal communities (*Laurencia*); and mangrove habitat (prop roots). In addition the Gulf Stream is an essential fish habitat because it provides a mechanism to disperse spiny lobster larvae.

Areas which meet the criteria for EFH-HAPCs for spiny lobster include Florida Bay, Biscayne Bay, Card Sound, and coral/hard bottom habitat from Jupiter Inlet, Florida through the Dry Tortugas, Florida.

Coral, Coral Reefs, and Live/Hard Bottom Habitats FMP

Essential fish habitat for corals (stony corals, octocorals, and black corals) incorporate habitat for over 200 species. EFH for corals include the following:

- A. Essential fish habitat for hermatypic stony corals includes rough, hard, exposed, stable substrate from Palm Beach County south through the Florida reef tract in subtidal waters to 30 m depth; subtropical (15°-35° C), oligotrophic waters with high (30-35‰) salinity and turbidity levels sufficiently low enough to provide algal symbionts adequate sunlight penetration for photosynthesis. Ahermatypic stony corals are not light restricted and their essential fish habitat includes defined hard substrate in subtidal to outer shelf depths throughout the management area.
- B. Essential fish habitat for *Antipatharia* (black corals) includes rough, hard, exposed, stable substrate, offshore in high (30-35‰) salinity waters in depths exceeding 18 meters (54 feet), not restricted by light penetration on the outer shelf throughout the management area.
- C. Essential fish habitat for octocorals excepting the order Pennatulacea (sea pens and sea pansies) includes rough, hard, exposed, stable substrate in subtidal to outer shelf depths within a wide range of salinity and light penetration throughout the management area.

- D. Essential fish habitat for Pennatulacea (sea pens and sea pansies) includes muddy, silty bottoms in subtidal to outer shelf depths within a wide range of salinity and light penetration.

Areas which meet the criteria for EFH-HAPCs for coral, coral reefs, and live/hard bottom include: The 10-Fathom Ledge, Big Rock, and The Point (North Carolina); Hurl Rocks and The Charleston Bump (South Carolina); Gray's Reef National Marine Sanctuary (Georgia); The *Phragmatopoma* (worm reefs) reefs off the central east coast of Florida; Oculina Banks off the east coast of Florida from Ft. Pierce to Cape Canaveral; nearshore (0-4 meters; 0-12 feet) hard bottom off the east coast of Florida from Cape Canaveral to Broward County); offshore (5-30 meter; 15-90 feet) hard bottom off the east coast of Florida from Palm Beach County to Fowey Rocks; Biscayne Bay, Florida; Biscayne National Park, Florida; and the Florida Keys National Marine Sanctuary. In addition, the Council through CEBA 2 (SAFMC 2011) designated the Deepwater Coral HAPCs as EFH-HAPCs under the Coral FMP as follows:

Deepwater Coral HAPCs designated in Comprehensive Ecosystem-Based Amendment 1 as Snapper Grouper EFH-HAPCs: Cape Lookout Coral HAPC, Cape Fear Coral HAPC, Blake Ridge Diapir Coral HAPC, Stetson-Miami Terrace Coral HAPC, and Pourtalés Terrace Coral HAPC.

Dolphin and Wahoo FMP

EFH for dolphin and wahoo is the Gulf Stream, Charleston Gyre, Florida Current, and pelagic *Sargassum*. This EFH definition for dolphin was approved by the Secretary of Commerce on June 3, 1999 as a part of the South Atlantic Council's Comprehensive Habitat Amendment (SAFMC 1998b) (dolphin was included within the Coastal Migratory Pelagics FMP at that time).

Areas which meet the criteria for EFH-HAPCs for dolphin and wahoo in the Atlantic include The Point, The Ten-Fathom Ledge, and Big Rock (North Carolina); The Charleston Bump and The Georgetown Hole (South Carolina); The Point off Jupiter Inlet (Florida); The Hump off Islamorada, Florida; The Marathon Hump off Marathon, Florida; The "Wall" off of the Florida Keys; and Pelagic *Sargassum*. This EFH-HAPC definition for dolphin was approved by the Secretary of Commerce on June 3, 1999 as a part of the South Atlantic Council's Comprehensive Habitat Amendment (dolphin was included within the Coastal Migratory Pelagics FMP at that time).

Pelagic *Sargassum* Habitat FMP

The Council through CEBA 2 (SAFMC 2011) designated the top 10 meters of the water column in the South Atlantic EEZ bounded by the Gulfstream, as EFH for pelagic *Sargassum*.

Actions Implemented That Protect EFH and EFH-HAPCs

Snapper Grouper FMP

- Prohibited the use of the following gears to protect habitat: bottom longlines in the EEZ inside of 50 fathoms or anywhere south of St. Lucie Inlet, Florida; bottom longlines in the wreckfish fishery; fish traps; bottom tending (roller- rig) trawls on live bottom habitat; and entanglement gear.
- Established the *Oculina* Experimental Closed Area where the harvest or possession of all species in the snapper grouper complex is prohibited.
- Established deepwater Marine Protected Areas (MPAs) as designated in Snapper Grouper Amendment 14: Snowy Grouper Wreck MPA, Northern South Carolina MPA, Edisto MPA, Charleston Deep Artificial Reef MPA, Georgia MPA, North Florida MPA, St. Lucie Hump MPA, and East Hump MPA.

Shrimp FMP

- Prohibition of rock shrimp trawling in a designated area around the *Oculina* Bank,
- Mandatory use of bycatch reduction devices in the penaeid shrimp fishery,
- Mandatory Vessel Monitoring System (VMS) in the Rock Shrimp Fishery.
- A mechanism that provides for the concurrent closure of the EEZ to penaeid shrimping if environmental conditions in state waters are such that the overwintering spawning stock is severely depleted.

Pelagic Sargassum Habitat FMP

- Prohibited all harvest and possession of *Sargassum* from the South Atlantic EEZ south of the latitude line representing the North Carolina/South Carolina border (34° North Latitude).
- Prohibited all harvest of *Sargassum* from the South Atlantic EEZ within 100 miles of shore between the 34° North Latitude line and the Latitude line representing the North Carolina/Virginia border.
- Harvest of *Sargassum* from the South Atlantic EEZ is limited to the months of November through June.
- Established an annual Total Allowable Catch (TAC) of 5,000 pounds landed wet weight.
- Required that an official observer be present on each *Sargassum* harvesting trip. Require that nets used to harvest *Sargassum* be constructed of four inch stretch mesh or larger fitted to a frame no larger than 4 feet by 6 feet.

Coastal Migratory Pelagics FMP

- Prohibited of the use of drift gillnets in the coastal migratory pelagic fishery.

Golden Crab FMP

- In the northern zone, golden crab traps can only be deployed in waters deeper than 900 feet; in the middle and southern zones traps can only be deployed in waters deeper than 700 feet.

Northern zone - north of the 28°N. latitude to the North Carolina/Virginia border;
Middle zone - 28°N. latitude to 25° N. latitude; and
Southern zone - south of 25°N. latitude to the border between the South Atlantic and Gulf of Mexico Fishery Management Councils.

Coral, Coral Reefs and Live/Hard Bottom FMP

- Established an optimum yield of zero and prohibiting all harvest or possession of these resources which serve as essential fish habitat to many managed species.
- Designated the *Oculina* Bank Habitat Area of Particular Concern.
- Expanded the *Oculina* Bank Habitat Area of Particular Concern (HAPC) to an area bounded to the west by 80°W. longitude, to the north by 28°30' N. latitude, to the south by 27°30' N. latitude, and to the east by the 100 fathom (600 feet) depth contour.
- Established the following two Satellite *Oculina* HAPCs: (1) Satellite *Oculina* HAPC #1 is bounded on the north by 28°30'N. latitude, on the south by 28°29'N. latitude, on the east by 80°W. longitude, and on the west by 80°3'W. longitude; and (2) Satellite *Oculina* HAPC #2 is bounded on the north by 28°17'N. latitude, on the south by 28°16'N. latitude, on the east by 80°W. longitude, and on the west by 80°3'W. longitude.
- Prohibited the use of all bottom tending fishing gear and fishing vessels from anchoring or using grapples in the *Oculina* Bank HAPC.
- Established a framework procedure to modify or establish Coral HAPCs.
- Established the following five deepwater CHAPCs:
 - Cape Lookout Lophelia Banks CHAPC;
 - Cape Fear Lophelia Banks CHAPC;
 - Stetson Reefs, Savannah and East Florida Lithoherms, and Miami Terrace (Stetson- Miami Terrace) CHAPC;
 - Pourtales Terrace CHAPC; and
 - Blake Ridge Diapir Methane Seep CHAPC.
- Within the deepwater CHAPCs, the possession of coral species and the use of all bottom damaging gear are prohibited including bottom longline, trawl (bottom and mid-water), dredge, pot or trap, or the use of an anchor, anchor and chain, or grapple and chain by all fishing vessels.

South Atlantic Council Policies for Protection and Restoration of Essential Fish

Habitat

SAFMC Habitat and Environmental Protection Policy

In recognizing that species are dependent on the quantity and quality of their essential habitats, it is the policy of the SAFMC to protect, restore, and develop habitats upon which fisheries species depend; to increase the extent of their distribution and abundance; and to improve their productive capacity for the benefit of present and future generations. For purposes of this policy, “habitat” is defined as the physical, chemical, and biological parameters that are necessary for continued productivity of the species that is being managed. The objectives of the SAFMC policy will be accomplished through the recommendation of no net loss or significant environmental degradation of existing habitat. A long-term objective is to support and promote a net-gain of fisheries habitat through the restoration and rehabilitation of the productive capacity of habitats that have been degraded, and the creation and development of productive habitats where increased fishery production is probable. The SAFMC will pursue these goals at state, Federal, and local levels. The Council shall assume an aggressive role in the protection and enhancement of habitats important to fishery species, and shall actively enter Federal, decision making processes where proposed actions may otherwise compromise the productivity of fishery resources of concern to the Council.

SAFMC EFH Policy Statements

In addition to implementing regulations to protect habitat from fishing related degradation, the Council in cooperation with NOAA Fisheries, actively comments on non-fishing projects or policies that may impact fish habitat. The Council adopted a habitat policy and procedure document that established a four-state Habitat Advisory Panel and adopted a comment and policy development process. Members of the Habitat Advisory Panel serve as the Council’s habitat contacts and professionals in the field. With guidance from the Advisory Panel, the Council has developed and approved a number of habitat policy statements which are available on the Habitat and Ecosystem section of the Council website (<http://www.safmc.net/ecosystem/Home/EcosystemHome/tabid/435/Default.aspx>).

References:

SAFMC (South Atlantic Fishery Management Council). 1998a. Habitat Plan for the South Atlantic Region. South Atlantic Fishery Management Council, 1 Southpark Cir., Ste 306, Charleston, S.C. 29407-4699.

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Wenner, E. L., G. F. Ulrich, and J. B. Wise. 1987. Exploration for golden crab, *Geryon fenneri*, in the south Atlantic Bight: distribution, population structure, and gear assessment. *Fishery Bulletin* 85:547-560.

Appendix K. Other Effects (Unavoidable Adverse Effects, Relationship Between Short-Term Uses and Long-Term Productivity, Mitigation, Monitoring, and Enforcement Measures, and Irreversible and Irrecoverable Commitments of Resources)

1.1 Unavoidable Adverse Impacts

There are no unavoidable adverse effects on the human environment that may result from the implementation of Regulatory Amendment 16 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (Regulatory Amendment 16).

Actions considered in this regulatory amendment should not have adverse effects on public health or safety because these measures should not alter actual fishing practices, just how, when, and where activities can occur. Unique characteristics of the geographic area are highlighted in **Chapters 3 and 6**. These sections conclude little impact on the physical environment should occur from actions proposed in this document.

1.2 Effects of the Fishery on Essential Fish Habitat

The 1996 amendments to the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) require the National Marine Fisheries Service (NMFS) and the Councils to describe and identify Essential Fish Habitat (EFH) for each life stage of each managed species. The Magnuson-Stevens Act also directs NMFS and the Councils to identify actions to encourage the conservation and enhancement of EFH and identify measures to minimize to the extent practicable the adverse effects of fishing on EFH.

The biological and administrative impacts of the proposed actions are described in **Section 4.0**, including impacts on habitat. No actions proposed in this document are anticipated to have any adverse impact on EFH or EFH-Habitat Areas of Particular Concern (HAPC) for managed species including species in the snapper grouper complex. No additional impacts of fishing on EFH were identified during the public hearing process. Therefore the South Atlantic Fishery Management Council (Council) has determined no new measures to address impacts on EFH are necessary at this time.

Although the proposed actions are not considered to have an adverse impact on EFH requiring consultation, having particular habitat types designated as EFH for multiple life stages of multiple species provides a relative indicator of the overall value of a particular habitat which serve to strengthen the basis of NMFS EFH Conservation Recommendations. However, because the proposed action will not result in any individual habitat type or geographic area previously identified as EFH to lose that designation, the Councils' intent to protect and conserve EFH and NMFS's authority to implement that conservation mandate through the EFH consultation process is not considered to be eliminated.

The Council's adopted habitat policies, which may directly affect the area of concern, are available for download through the Habitat/Ecosystem section of the Council's website: <http://www.safmc.net/EcosystemManagement/HabitatProtection/HabitatPolicies/tabid/245/Default.aspx>.

NOTE: The Final EFH Rule, published on January 17, 2002, (67 FR 2343) replaced the interim Final Rule of December 19, 1997 on which the original EFH and EFH-HAPC designations were made. The Final Rule directs the Councils to periodically update EFH and EFH-HAPC information and designations within fishery management plans. As was done with the original Habitat Plan, a series of technical workshops were conducted by Council habitat staff and a draft plan that includes new information has been completed pursuant to the Final EFH Rule.

1.3 Damage to Ocean and Coastal Habitats

The alternatives and proposed actions are not expected to have any adverse effect on the ocean and coastal habitat.

Management measures implemented in the original Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (Snapper Grouper FMP) through Amendment 7 to the Snapper Grouper FMP (SAFMC 1983; 1988; 1990a; 1990b; 1991; 1992; 1993; 1994) combined have significantly reduced the impact of the snapper grouper fishery on EFH. The Council has reduced the impact of the fishery and protected EFH by prohibiting the use of poisons and explosives; prohibiting use of fish traps and entanglement nets in the exclusive economic zone; banning use of bottom trawls on live/hard bottom habitat north of Cape Canaveral, Florida; restricting use of bottom longline to depths greater than 50 fathoms north of St. Lucie Inlet; and prohibiting use of black sea bass pots south of Cape Canaveral, Florida. These gear restrictions have significantly reduced the impact of the fishery on coral and live/hard bottom habitat in the South Atlantic Region.

Additional management measures in Amendment 8 to the Snapper Grouper FMP (SAFMC 1997), including specifying allowable bait nets and capping effort, have protected habitat by making existing regulations more enforceable. Establishing a controlled effort program limited overall fishing effort and to the extent there is damage to the habitat from the fishery (e.g. black sea bass pots, anchors from fishing vessels, impacts of weights used on fishing lines and bottom longlines), limited such impacts.

In addition, measures in Amendment 9 to the Snapper Grouper FMP (SAFMC 1998b), that include further restricting longlines to retention of only deepwater species and requiring that black sea bass pot have escape panels with degradable fasteners, reduce the catch of undersized fish and bycatch and ensure that the pot, if lost, will not continue to “ghost” fish. Amendment 13C to the Snapper Grouper FMP (SAFMC 2006) increased mesh size in the back panel of pots, which has reduced bycatch and retention of undersized fish. Amendment 15B to the Snapper Grouper FMP (SAFMC 2008) implemented sea turtle bycatch release equipment requirements, and sea turtle and smalltooth sawfish handling protocols and/or guidelines in the permitted commercial and for-hire snapper grouper sectors.

Amendment 16 to the Snapper Grouper FMP (SAFMC 2009), implemented an action to reduce bycatch by requiring fishermen to use dehooking devices. Limiting the overall fishing mortality reduces the likelihood of over-harvesting of species with the resulting loss in genetic diversity, ecosystem diversity, and sustainability.

Measures adopted in the Coral and Shrimp fishery management plans (FMPs) have further restricted access by fishermen that had potential adverse impacts on essential snapper grouper habitat. These measures include the designation of the *Oculina* Bank HAPC and the rock shrimp closed area (see the Shrimp and Coral FMP/Amendment documents for additional information).

The Council's Comprehensive Habitat Amendment (SAFMC 1998a) contains measures that expanded the *Oculina* Bank HAPC and added two additional satellite HAPCs. Amendment 14 to the Snapper Grouper FMP (SAFMC 2007), established marine protected areas where fishing for or retention of snapper grouper species would be prohibited. Furthermore, the Comprehensive Ecosystem Based Amendment 1 (CE-BA 1) (SAFMC 2010) established deepwater coral habitat of particular concern to protect what is believed to be the largest distribution (>23,000 square miles) of pristine deepwater coral ecosystems in the world. CE-BA 1 also created allowable gear areas for the golden crab fishery and shrimp fishery access areas for deepwater shrimp. The establishment of these areas allows for the continuation of these fisheries in their historical fishing grounds with little or no negative impacts to protected deepwater coral habitat.

Amendment 8 to the FMP for Coral, Coral Reefs, and Live/Hard bottom Habitats of the South Atlantic Region (SAFMC 2013) expanded the Stetson-Miami Terrace Deepwater Coral HAPC, the Cape Lookout Deepwater Coral HAPC, the *Oculina* Bank HAPC, while implementing a transit provision through the *Oculina* Bank HAPC.

Management measures implemented in the FMP for the Golden Crab Fishery of the South Atlantic Region (Golden Crab FMP; SAFMC 1995) has reduced the impact of the golden crab fishery on EFH. The Golden Crab FMP set up a management program for the golden crab fishery in the South Atlantic exclusive economic zone, established a limited entry system, and divided the fishery into three zones.

The FMP for the Dolphin and Wahoo Fishery of the Atlantic (Dolphin Wahoo FMP; SAFMC 2003a) has reduced the impact of the dolphin and wahoo fishery on EFH. The final rule for the Dolphin Wahoo FMP prohibited the use of longline for dolphin and wahoo in areas closed to the use of such gear for highly migratory pelagic species, and specified EFH and EFH-HAPC.

1.4 Relationship of Short-Term Uses and Long-Term Productivity

The relationship between short-term uses and long-term productivity will not be affected by Regulatory Amendment 16. The effects of **Alternatives 2-12** on fishermen and associated communities vary with the temporal and spatial characteristics of the closures, and effects will be different for pot fishermen and hook and line fishermen. In general, allowing harvest with pots in any way during the winter would be beneficial to pot fishermen, but could have negative effects all black sea bass fishermen if an increased rate of harvest causes an in-season closure.

Additionally, allowing pots during the winter could affect access to the black sea bass commercial annual catch limit (ACL) for hook and line fishermen, since pots are more efficient gear and could use up more of the commercial ACL.

1.5 Irreversible and Irretrievable Commitments of Resources

Irreversible commitments are defined as commitments that cannot be reversed, except perhaps in the extreme long-term, whereas irretrievable commitments are lost for a period of time. There are no irreversible and irretrievable commitments in Regulatory Amendment 16.

1.6 Unavailable or Incomplete Information

The Council on Environmental Quality, in its implementing regulations for the National Environmental Policy Act (NEPA), addressed incomplete or unavailable information at 40 CFR 1502.22 (a) and (b). There are two tests to be applied: 1) Does the incomplete or unavailable information involve “reasonable foreseeable adverse effects...;” and 2) is the information about these effects “essential to a reasoned choice among alternatives...”.

Stock assessments have been conducted for black sea bass. Status determinations for black sea bass were derived from the Southeast Data Assessment and Review (SEDAR) process, which involves a series of three workshops designed to ensure each stock assessment reflects the best available scientific information. The findings and conclusions of each SEDAR workshop are documented in a series of reports, which are ultimately reviewed and discussed by the South Atlantic Council and their Scientific and Statistical Committee (SSC). SEDAR participants, the Council advisory committees, the Council, and NMFS staff reviewed and considered any concerns about the adequacy of the data. The Council’s SSC determined that the black sea bass assessment is based on the best available data.

While stock assessment findings can be associated with different degrees of uncertainty, there is no reason to assume such uncertainty leads to unrealistically optimistic conclusions about stock status. Rather, the stock could be in worse shape than indicated by the stock assessment. Uncertainty due to unavailable or incomplete information should not be used as a reason to avoid taking action. Therefore, there are reasonable foreseeable significant adverse effects of not taking action in Regulatory Amendment 16. Failure to take action would not meet the purpose and need as stated in the environmental impact statement.

1.6 References

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SAFMC (South Atlantic Fishery Management Council). 1988. Amendment Number 1 and Environmental Assessment and Regulatory Impact Review to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 1 Southpark Cir., Suite 306, Charleston, S.C. 29407-4699. 63 pp.

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SAFMC (South Atlantic Fishery Management Council). 1990b. Amendment Number 3, Regulatory Impact Review, Initial Regulatory Flexibility Analysis and Environmental Assessment for the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 1 Southpark Cir., Suite 306, Charleston, S.C. 29407-4699.

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SAFMC (South Atlantic Fishery Management Council). 1998a. Comprehensive Amendment Addressing Essential Fish Habitat in Fishery Management Plans of the South Atlantic Region (Amendment 10 to the Snapper Grouper Fishery Management Plan). South Atlantic Fishery Management Council, 1 Southpark Cir., Suite 306, Charleston, S.C. 29407-4699.

SAFMC (South Atlantic Fishery Management Council). 2003. Final Environmental Assessment, Initial Regulatory Flexibility Analysis/Regulatory Impact Review, and Social Impact Assessment/Fishery Impact Statement for the Fishery Management Plan for the Dolphin and Wahoo Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 1 Southpark Cir., Ste 306, Charleston, S.C. 29407-4699. 386 pp.

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SAFMC (South Atlantic Fishery Management Council). 2008. Amendment 15B, Final Environmental Impact Statement, Initial Regulatory Flexibility Analysis/Regulatory Impact Review, and Social Impact Assessment/Fishery Impact Statement for the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place, Ste 201, North Charleston, S.C. 29405.

SAFMC (South Atlantic Fishery Management Council). 2009. Amendment 16, Final Environmental Impact Statement, Initial Regulatory Flexibility Analysis/Regulatory Impact Review, and Social Impact Assessment/Fishery Impact Statement for the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place, Ste 201, North Charleston, S.C. 29405.

SAFMC (South Atlantic Fishery Management Council). 2010. Comprehensive Ecosystem Based Amendment 1, Final Environmental Impact Statement, Initial Regulatory Flexibility Analysis/Regulatory Impact Review, and Social Impact Assessment/Fishery Impact Statement for South Atlantic Region (Amendment 19 to the Snapper Grouper FMP). South Atlantic Fishery Management Council, 4055 Faber Place, Ste 201, North Charleston, S.C. 29405. 286 pp.

SAFMC (South Atlantic Fishery Management Council). 2013. Amendment 8, Final Environmental Impact Statement, Initial Regulatory Flexibility Analysis/Regulatory Impact Review, and Social Impact Assessment/Fishery Impact Statement for the Fishery Management Plan for Coral, Coral Reefs, and Live/Hardbottom Habitats of the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place, Ste 201, North Charleston, S.C. 29405.

Appendix L.



Black Sea Bass Pot Endorsement Holders Fishing Portfolios

*Kari MacLauchlin, Council Staff
Snapper Grouper Committee
South Atlantic Fishery Management Council
Hilton Head Island SC, September 2015*

Introduction

- Talked to fishermen during public hearing process
- Detailed discussions with fishermen about the winter closure and how yearly fishing plans have changed
- 30 people
 - Phone and in-person
- Covers 27 endorsements
- Endorsement holders, captains, dealers



General Info about Fishermen

- 32 endorsements
 - **6 Florida**- most around Port Orange/Ponce Inlet
 - **2 Georgia**- Townsend
 - **10 South Carolina** (2 with holders in FL)- McClellanville, Murrells Inlet and Little River
 - **14 North Carolina**- Sneads Ferry, Newport, Cape Carteret, Wrightsville Beach, Harkers Island, Manteo
- 21 with landings in 2015
 - From discussions, 8 respondents only fished a few trips
- Several recent transfers
- Range of vessel sizes



General Info about Fishermen

- Permit Portfolios
 - All endorsement holders have multiple permits
 - Typical portfolio: SG1, Dolphin Wahoo, KM, SM
 - Most participate in SG targeting vermilion, triggerfish, jacks, groupers
 - Some participate in mackerel, shark, shrimp, shellfish, and charter
 - Some have non-fishery alternative income



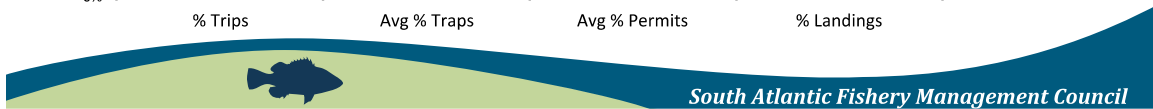
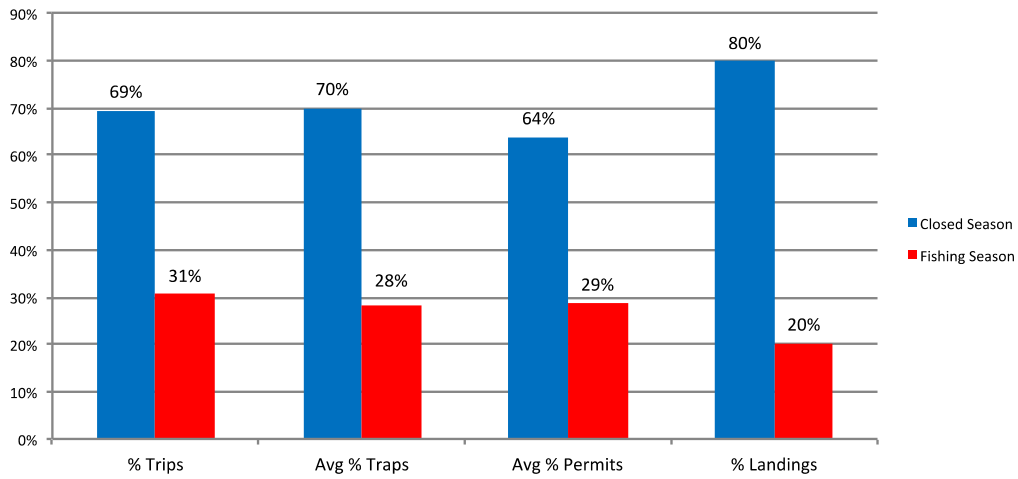
Overview of Comments

- Winter Pot Fishery ≠ Summer Pot Fishery
- Hook and line not feasible for everyone
- BSB pot fishermen participate in several other fisheries
- Outcome of Reg Amendment 16 will affect decision to keep or sell endorsements, and will affect the value of endorsement
- Benefits of any modifications to the closure depends on vessel size and location



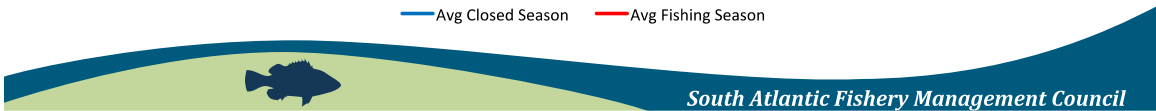
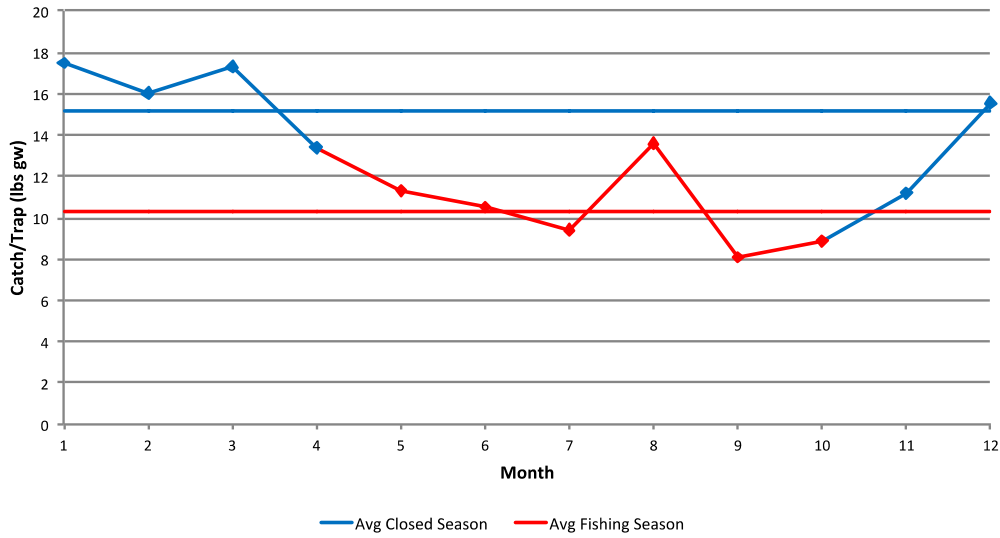
Effort by Season

Historical Differences in Effort and Landings between Closed (Nov-Apr) and Fishing (Jun-Oct, May) Seasons for Endorsement Holders (2000-2009)



Catch/Trap by Month

Avg Catch/Trap of Endorsement Holders by Month



Comparing Winter and Summer

Winter Pot Fishery

Search time (lower trip costs)

- BSB are easier to locate
- Can return to the same locations

Pot efficiency

- BSB congregate and easier to pot
- Shorter soak time, less sets to get trip limit

Trip characteristics

- Less distance than for winter H&L species
- Safer trips– no anchor, weather, no multi-day trips
- Efficient day trips supply local and regional markets for fresh fish
- Less user conflict (fewer recreational in the winter)

Market

- Larger and darker fish– more \$/ lb
- Local fish supply for winter tourism in Florida
- Other species closed in winter



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Comparing Winter and Summer

Summer Pot Fishery

Search time

- BSB are harder to find, more spread out
- BSB do not stay at same locations

Pot efficiency

- BSB are spread out
- Longer soak time for fewer fish
- More regulatory discards (size limit)

Market

- Smaller fish, not as dark in color
- Other species more desirable to target in the summer
- Less BSB coming into the market, helps the price
- Several fishermen reported that the years with high summer catch are part of a cycle in which an upwelling of cold water increases catchability of BSB— but this is not predictable (possibly every 4 or 5 years)



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Comparing BSB Pots and BSB H&L in Winter

Pots	H&L
- More efficient – not as much time to meet the trip limit	- More input to catch trip limit OR - 300-lb trip limit too low
- Shorter distance to fish	- Longer distance to fish
- Single day fishing	- May require multi-day trips
- Less specialized crew needed	- Experienced and efficient crew needed
- Vessel size and gear capability	- Vessel size may not work; may not be geared for H&L
- Some vessels cannot gear up for pot and H&L combo trips	- Would rather target other species if fishing H&L
- Fewer discards	- More discards (regulatory)



Fishing Portfolios

- Commercial Fishermen commonly hold several permits and work various fisheries throughout the year.



- In the literature:
 - Environmental, economic, regulatory factors affect **decisions to switch**
 - Comparison to **financial portfolios** (minimize risk, maximize returns)
 - In the context of **ecosystem-based fisheries management**
 - Portfolio fishing is not unique to the South Atlantic, but is characteristic of the region



Single-species
Multi-species/Ecosystem



~~Single fishery participation~~
~~Multi-fishery participation~~

Portfolio fishing can:

- Allow fishermen to respond to changes in the market, environment, etc.
 - Reduce regulatory impact
 - Maximize profit with variety of products
 - Improve resilience of fishing businesses and communities
- Diversify!



The black sea bass pot fishery presents an ideal application of the portfolio approach to management decisions



Fishing Portfolios and Yearly Business Plans

Maximize Returns

- Target species based on higher periods of demand or periods with less competition
- Fish availability
- Lowest input (most efficient trips)
 - Trip costs (e.g., gas for travel to fishing area)
 - Efficient gear for that time of year
 - Lowest effort/time to catch trip limit
- Efficient trips for vessel size



Minimize Risk

Risk: variation in returns- due to factors that affect the asset's ability to make/lose \$\$

Environmental

- Availability and accessibility of the species
- Weather or other fishing conditions

No trip or target another species if: the fish are not available/easy to get to; or weather makes the trip unsafe/not profitable.

Market

- Larger supply and/or lower demand
- Competition from other species

No trip or target another species if: the profits will not be high enough to make the trip worthwhile.

Regulatory

- Trip limit too low
- Fishery closed (ACL, seasonal closure, fishing grounds closed)
- Minimum size limit increases discards and reduces landings



An Example [Ideal] Yearly Business Plan

- **Jan- April:** BSB Pots as weather permits
- **May:** start targeting groupers
- **June:** vermilion/triggerfish until they close
- **Summer/Fall** also includes jacks, grouper, king mackerel until they close
- **Late Oct – end of year :** BSB pots as weather and holidays permit

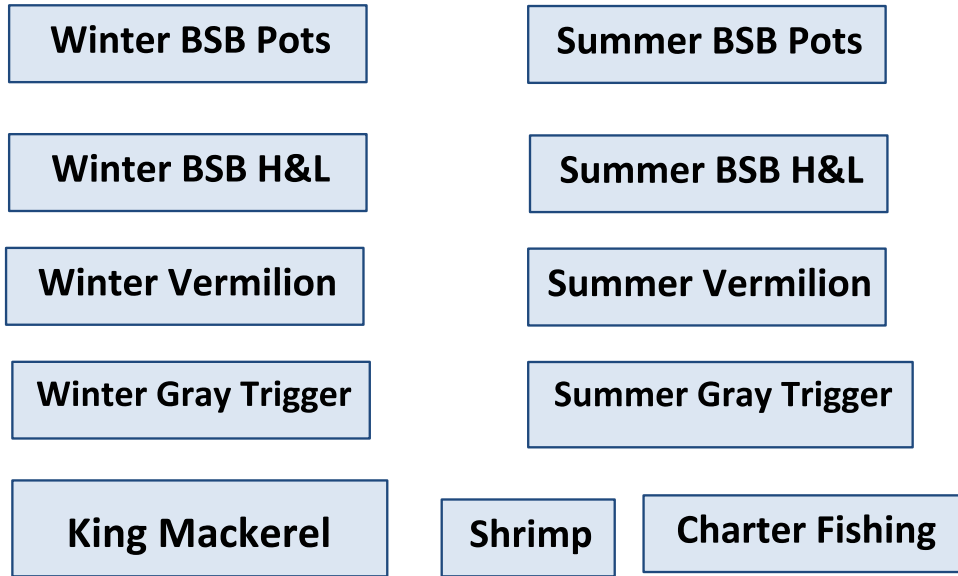


Other Examples

- **Jan- May:** BSB Pots as weather permits
- **June into Sept:** charter fishing, shrimp, king mackerel, shellfish
- **Early Fall:** break
- **Late Oct – end of year :** BSB pots as weather and holidays permit



Portfolio “Assets”



Fishermen achieve the most profitable portfolios by utilizing the assets when and if they can maximize returns and minimize risk (biggest bang for the buck)



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How The Winter Pot Closure Affects Portfolios

- No access to BSB pot fishery when BSB are most available, accessible and marketable
- To utilize the endorsement, have to fish during a less ideal time of year (summer) or when other species/fisheries are more profitable
- Winter BSB pot fishery balances out variable profits from other assets
- For some endorsement holders, the BSB pot endorsement was or could be the most important asset to maximize portfolios



Other Considerations From Discussions

- Almost all reported that if the closure was modified to allow access to fishing grounds, they would definitely participate in the winter BSB pot fishery over other winter fisheries
- The efficient winter pot fishery helps keep consistent supply to market when other species are not available/ closed – effects on fish houses
- Endorsements may lose value if winter remains closed
- Smaller vessels to maintain efficiency– affects ability to participate in some other winter fisheries
- Can affect ability to have steady work for crew

**Maximized and profitable portfolios→
Efficient and stable fishing businesses**



South Atlantic Fishery Management Council

Other Comments

- A few fishermen did not support the winter opening (gear conflict, market gluts, short season)
- Perception of unfairness for pot fishermen– already have regulations to minimize risk of whale interaction
- Most fishermen said they have seen no or one/two whales in their fishing careers; if they had seen whales, they were closer inshore than where pots are set
- Some fishermen mentioned illegal trapping is occurring
- Waiting on the decision for the closure → negative effects

All Comments will be Summarized and Included in the Public Comment Summary in the Regulatory Amendment 16

Appendix M. Additional Large Whale Information

North Atlantic Right Whales

Two populations of the North Atlantic right whale (*Eubalaena glacialis*), an eastern and a western, are typically recognized. However, animals are sighted so infrequently in the eastern Atlantic, it is unclear whether a viable population still exists (NMFS 1991a). The descriptions contained within this document focus on the western North Atlantic population of right whales, which occurs in the proposed action area.

Current Protections for North Atlantic Right Whales

The North Atlantic right whale is protected and listed as endangered under the Endangered Species Act (ESA). Under the ESA, a Recovery Plan was published in 1991 and revised in 2005. The most recent 5-year status review was completed in September 2012. Based on an analysis of the best scientific and commercial data available and after taking into consideration current population trends and abundance, demographic risk factors affecting the continued survival of the species, and ongoing conservation efforts, the National Marine Fisheries Service (NMFS) determined that the North Atlantic right whale is in danger of extinction throughout its range because of: (1) overutilization for commercial, recreational scientific, or educational purposes; (2) the inadequacy of existing regulatory mechanisms; and (3) other natural and manmade factors affecting its continued existence.

The North Atlantic right whale is also protected under the Marine Mammal Protection Act (MMPA). Under the jurisdiction of the MMPA, NMFS implemented the Atlantic Large Whale Take Reduction Plan (ALWTRP) to reduce injuries and deaths of large whales due to incidental entanglement in fishing gear. The ALWTRP is an evolving plan that changes as NMFS learns more about why whales become entangled and how fishing practices might be modified to reduce the risk of entanglement. It has several components including restrictions on where and how gear can be set; research into whale populations and whale behavior, as well as fishing gear interactions and modifications; outreach to inform and collaborate with fishermen and other stakeholders; and a large whale disentanglement program.

Other Threats to North Atlantic Right Whales

- *Decreased Reproductive Rate:* Healthy reproduction is critical for the recovery of the North Atlantic right whale (Kraus et al. 2007); however, some suggest that the population has been affected by a decreased reproductive rate (Best et al. 2001, Kraus et al. 2001). Possible factors affecting the North Atlantic right whale reproductive rate include reduced genetic diversity (and/or inbreeding), contaminants, biotoxins, disease, and nutritional stress (see sections on Reduced Genetic Diversity, Environmental Contamination, Biotoxins, Disease, and Food Limitations for information on those topics).
- *Reduced Genetic Diversity:* The dramatic reduction in the North Atlantic right whale population believed to have been caused by commercial whaling may have resulted in a loss of genetic diversity which could affect the ability of the current population to

successfully reproduce (see section on Reduced Genetic Diversity, i.e., decreased conceptions, increased abortions, and increased neonate mortality). One hypothesis is that the low level of genetic variability in this species produces a high rate of mate incompatibility and unsuccessful pregnancies (Frasier et al. 2007). Analyses are currently underway to assess this relationship further as well as the influence of genetic characteristics on the potential for species recovery (Frasier et al. 2007). Studies by Schaeff et al. (1997) and Malik et al. (2000) indicate that North Atlantic right whales are less genetically diverse than South Atlantic right whales (*Eubalaena australis*). However, several apparently healthy populations of cetaceans, such as sperm whales and pilot whales, have even lower genetic diversity than observed for western North Atlantic right whales (IWC 2001).

- *Environmental Contamination*: Similarly, while contaminant studies have confirmed that North Atlantic right whales are exposed to and accumulate contaminants, researchers could not conclude that these contaminant loads were negatively affecting North Atlantic right whale reproductive success since concentrations were lower than those found in marine mammals proven to be affected by polychlorinated biphenyls (PCBs), and dichlorodiphenyltrichloroethane (DDT) (Weisbrod et al. 2000). Another suite of contaminants (i.e., antifouling agents and flame retardants) that have been proven to disrupt reproductive patterns and have been found in other marine animals, have raised new concerns (Kraus et al. 2007). Recent data also support a hypothesis that chromium, an industrial pollutant, may be a concern for the health of the North Atlantic right whales and that inhalation may be an important exposure route (Wise et al. 2008).
- *Biotoxins*: Impacts of biotoxins on marine mammals are also poorly understood, yet data is showing that marine algal toxins may play significant roles in mass mortalities of large whales (Rolland et al. 2007). Although there are no published data concerning the effects of biotoxins on North Atlantic right whales, researchers are now certain that North Atlantic right whales are being exposed to measurable quantities of paralytic shellfish poisoning toxins and domoic acid via trophic transfer through the presence of these biotoxins in prey upon which they feed (Durbin et al. 2002, Rolland et al. 2007).
- *Nutritional Stress*: Data indicating whether North Atlantic right whales are food-limited are difficult to evaluate (Kraus et al. 2007). North Atlantic right whales seem to have thinner blubber than right whales living in the southern Atlantic ocean (i.e., south of the equator) (Kenney 2002, Miller et al. 2011). Miller et al. (2011) suggests that lipids in the blubber are used as energetic support for reproduction in female North Atlantic right whales. In the same study, blubber thickness was also compared among years of differing prey abundances. During a year of low prey abundances, North Atlantic right whales had significantly thinner blubber than during years of greater prey abundances. The results suggest that blubber thickness is indicative of North Atlantic right whale energy balance and that the marked fluctuations in the North Atlantic right whale reproduction have a nutritional component (Miller et al. 2011).

Modeling work by Caswell et al. (1999) and Fujiwara and Caswell (2001) suggests that the North Atlantic Oscillation (NAO), a naturally occurring climatic event, affects the survival of

mothers and the reproductive rate of mature females, and it also seems to affect calf survival (Clapham et al. 2002). Greene et al. (2003) described the potential oceanographic processes linking climate variability to the reproduction of North Atlantic right whales. Climate-driven changes in ocean circulation have had a significant impact on the plankton ecology of the Gulf of Maine, including effects on *Calanus finmarchicus*, a primary prey resource for North Atlantic right whales. Researchers found that during the 1980s, when the NAO index was predominately positive, *C. finmarchicus* abundance was also high; when a record drop occurred in the NAO index in 1996, *C. finmarchicus* abundance levels also decreased significantly. Greene et al. (2003) examined right whale calving rate patterns since the early 1980s and found that major multi-year declines in right whale calving rates have tracked major multi-year declines in *C. finmarchicus* abundance since 1982.

- *Interspecific Competition:* Interspecific competition with either sei whales (*Balaenoptera borealis*) or planktivorous fish may limit northern right whale prey consumption (Mitchell 1975; Kraus et al. 1988; Payne et al. 1990). There is also speculation about competition with certain species of fish in the Gulf of Maine, including sand lance (*Ammodytes* spp.), herring (*Clupea* spp.), Atlantic mackerel (*Scomber scombrus*), river herrings (shad, blueback; *Alosa* spp.), menhaden (*Brevoortia tyrannus*), and basking sharks (*Cetorhinus maximus*). While the potential for interference competition exists for right whales, direct evidence is essentially absent. As noted by Clapham and Brownell (1996), assertions regarding interspecific competition are rarely well defined or ecologically based.
- *Climate Change:* There is a large and growing body of literature on past, present, and future impacts of global climate change, exacerbated and accelerated by human activities. Some of the likely effects commonly mentioned are increased frequency of severe weather events, changes in sea temperatures and salinity (due to melting ice and increased rainfall), ocean currents, and ocean acidification. NOAA's climate information portal provides basic background information on these and other measured or anticipated effects (see <http://www.climate.gov>)

North Atlantic right whales currently have a range of sub-polar to sub-tropical waters. An increase in water temperature would likely result in a northward shift of range, with both the northern and southern limits moving poleward. The northern limit, which may be determined by feeding habitat and the distribution of preferred prey, may shift to a greater extent than the southern limit, which requires ideal temperature and water depth for calving. This may result in an unfavorable effect on the North Atlantic right whale due to an increase in the length of migrations (Macleod 2009), or a favorable effect by allowing them to expand their range. However, a northward shift in the suitable calving grounds off the southeast United States based on optimal temperatures would involve calving in waters that are generally rougher and thus more hazardous for newborn calves.

Global climate change may affect the marine plankton species—a vital food source of North Atlantic right whales. Studies have demonstrated adverse impacts from ocean acidification via a reduction in the ability of marine algae and free-swimming zooplankton to maintain protective shells, as well as a reduction in the survival of larval marine species (Lewis et al. 2013). A

decline in the marine plankton could have serious consequences for the marine food web upon which North Atlantic right whales rely.

Global climate change may affect the timing and extent of population movements, abundance, recruitment, distribution, and species composition of prey (Learmonth et al. 2006). Changes in distribution including displacement from ideal habitats, decline in fitness of individuals, population size due to the potential loss of foraging opportunities, abundance, migration, community structure, susceptibility to disease and contaminants, and reproductive success are all possible effects that may occur as the result of climate change (Macleod 2009). Global climate change may also result in changes to the range and abundance of competitors and predators, which will also indirectly affect marine mammals (Learmonth et al. 2006). However, more information is needed to better determine the full and entire suite of impacts of climate change on North Atlantic right whales (Learmonth et al. 2006).

Humpback Whales

Current Protections for Humpback Whales

In June 1970, humpback whales were designated as “endangered” under the Endangered Species Conservation Act (ESCA). In 1973, the Endangered Species Act (ESA) replaced the ESCA, and continued to list humpbacks as endangered. Also, under the MMPA, threats to humpbacks are mitigated by regulations implementing the Pacific Offshore Cetacean Take Reduction Plan and the ALWTRP. NMFS implemented the ALWTRP to reduce injuries and deaths of large whales due to incidental entanglement in fishing gear. The ALWTRP is an evolving plan that changes as NMFS learns more about why whales become entangled and how fishing practices might be modified to reduce the risk of entanglement. It has several components including restrictions on where and how gear can be set; research into whale populations and whale behavior, as well as fishing gear interactions and modifications; outreach to inform and collaborate with fishermen and other stakeholders; and a large whale disentanglement program.

Other Threats to Humpback Whales

Humpback whales, like other baleen whales, may be adversely affected by habitat degradation, habitat exclusion, acoustic trauma, harassment, or reduction in prey resources attributable to commercial fishing, coastal development, vessel traffic, and other influences. However, explicit evidence of these influences is limited. Changes in humpback distribution in the Gulf of Maine have been found to be associated with changes in herring, mackerel, and sand lance abundance associated with local fishing pressures (Payne et al. 1986). Likewise, there are strong indications that a mass mortality of humpback whales in the southern Gulf of Maine in 1987/1988 was the result of the consumption of mackerel whose livers contained high levels of a red-tide toxin (Geraci et al. 1989). It has been suggested that red tides are related to increased freshwater runoff from coastal development, but there are insufficient data to link these effects directly with humpback whale mortality (Clapham et al. 1999).

APPENDIX N: EVALUATION OF BLACK SEA BASS POT GEAR CLOSURE ALTERNATIVES IN SOUTH ATLANTIC SNAPPER-GROUPER REGULATORY AMENDMENT 16



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SUMMARY

Since 2012, the South Atlantic Fishery Management Council (SAFMC) has made several changes to the management of black sea bass (*Centropristis striata*) in federal waters, including a pot gear endorsement program, pot gear limits, over a twofold increase to the annual catch limit (ACL), trip limits, and a change in the fishing season from June-May to Jan-Dec. Through Regulatory Amendment 16 to the Snapper-Grouper Fishery Management Plan (Reg-16), the SAFMC is considering opening the commercial black sea bass pot season when federally-protected whales occur in the mid-Atlantic and Southeast regions (i.e., Nov 1-Apr 30). The western North Atlantic right whale (*Eubalaena glacialis*) is one of the most endangered large whales in the world, with as few as 455 individuals remaining. As entanglement in fixed fishing gear, such as pot gear, is a leading cause of human-induced right whale mortality, the SAFMC has proposed a variety of spatiotemporal closure alternatives that may potentially mitigate this risk. This analysis simulated the potential landings of black sea bass pot endorsement holders during a winter season under each of the proposed alternatives. Factoring in landings by other gears, the date the ACL would be met under each scenario was predicted. The analysis also considered the seasonal distribution of black sea bass pot gear and North Atlantic right whales to compare the relative risk of right whale entanglements under each of the proposed spatial closure alternatives. Because pot gear hasn't been fished during the Nov-Apr time period since a two-week opening in Dec 2010, uncertainty in possible pot gear winter catch rates under current regulations was addressed using four proxies for winter catch rates. Similarly, uncertainty in the location of winter fishing effort under current regulations was addressed using three different proxies for winter fishing effort. Monthly whale distributions off FL-SC were modeled following Gowan and Ortega-Ortiz (2014) under mean, warmer-than-average, and colder-than-average conditions. Due to limited sightings effort off NC, whale distributions off NC were modeled using all months combined following a similar regression approach as Gowan and Ortega-Ortiz (2014); annual and monthly NC models were developed by fitting the final model to mean Nov-Apr environmental conditions and mean monthly conditions, respectively. Within model uncertainty was addressed using the upper and lower confidence bounds of the model predicted fits. The entanglement risk to right whales from pot gear was modeled as the co-occurrence of black sea bass effort and right whale relative abundance on a relative scale from 0 (no pot gear opening) to 100 (complete opening to pot gear). Although a broad range of sensitivity runs were considered, the relative differences between alternatives were consistent. Most Reg-16 proposed alternatives are anticipated to result in-season quota closures to prevent the ACL from being exceeded. Of the proposed alternatives, Alternatives 1, 7b, 8b, 9b, 6, 4, 5, and 7c would result in the longest fishing seasons (listed in order). Alternatives 1, 6, and 4 would result in the lowest relative entanglement risk for right whales. Alternatives 7c, 7b, 2, 9b, and 7a would result in the highest relative entanglement risk.

INTRODUCTION

The South Atlantic Fishery Management Council (SAFMC) manages black sea bass (*Centropristis striata*) in federal waters from the Florida Keys to Cape Hatteras, North Carolina. The current allocation is 57% recreational and 43% commercial. For the past several years, the fishing year for black sea bass ran from June 1-May 31. In the past several years, recreational and commercial black sea bass fishing has been subject to quota closures shortening the fishing year (e.g., recreational: 12 Feb 2011, 17 Oct 2011; commercial: 15 May 2009, 20 Dec 2009, 7 Oct 2010, 15 July 2011, and 8 Oct 2012). In 2012, the SAFMC implemented Snapper-Grouper Amendment 18A, which established a black sea bass pot endorsement program where a commercial vessel with an Unlimited Snapper-Grouper Permit may harvest black sea bass using pot gear only if the vessel also has a black sea bass pot endorsement (SAFMC 2012). Amendment 18A also implemented a limit of 35 black sea bass pot tags issued to each of the 32 black sea bass pot gear endorsement holders each permit year, a 1,000 pound (lb) gutted weight (gw) trip limit, an increase in the commercial minimum size limit from 10 inches to 11 inches total length, and a requirement that pots be returned to shore at the end of each trip. In 2013, the SAFMC implemented Regulatory Amendment 19 (Reg-19), which increased the black sea bass commercial annual catch limit (ACL) from 309,000 lb gw to 661,034 lb gw (in 2015) based on the results of the latest stock assessment (SAFMC 2013). In 2014, the SAFMC implemented Regulatory Amendment 14 (Reg-14), which changed the commercial fishing season for black sea bass to Jan 1-Dec 31 (starting in 2015), implemented a 300-lb gw hook-and-line trip limit for Jan-Apr, and a 1,000-lb gw hook-and-line trip limit for May 1-Dec 31. See Appendix A for a visual on management history.

Due to the substantial increase in the ACL via Reg-19, there was potential that the commercial black sea bass pot season would remain open when federally-protected whales occur in the mid-Atlantic and Southeast regions (i.e., Nov 1-Apr 30) for the first time since Dec 2010 (Figure A2). Entanglement in fixed fishing gear, such as pot gear, is a leading cause of human-induced western North Atlantic right whale (*Eubalaena glacialis*) mortality (Knowlton *et al.* 2012, Waring *et al.* 2014). To minimize the probability of entanglement of ESA-listed whales in black sea bass pot gear, Reg-19 implemented an annual prohibition on the use of black sea bass pots from Nov 1-Apr 30 in conjunction with the ACL increase.

The SAFMC, through Regulatory Amendment 16 (Reg-16), is currently considering shortening the black sea bass pot closure season and/or spatially designating the closure boundaries (SAFMC 2014). The purpose of Reg-16 is to reconsider the annual November 1 through April 30 prohibition on the use of black sea bass pot gear. The need for the amendment is to minimize socioeconomic impacts to black sea bass pot endorsement holders while considering the need to protect ESA-listed whales in the South Atlantic region. This analysis considers the potential landings of black sea bass as well as the risk to right whales that might occur under the alternatives of Reg-16 (Appendix B). This analysis does not address any reductions in entanglement risk that might result from Reg-16 Action 2, which proposes to modify buoy line/weak link gear requirements and buoy line rope marking for black sea bass pots required by the Atlantic Large Whale Take Reduction Plan (ALWTRP).

Black Sea Bass

Prior to the inception of the Southeast Data Assessment and Review (SEDAR) process, the SAFMC-managed stock of black sea bass was assessed using tuned virtual population analysis models. Using data through 1990, Vaughan et al. (1995) concluded that overfishing was occurring during the 1980s. Subsequently, with data through 1995, Vaughan et al. (1996) estimated that the rate of overfishing had increased during the 1990s. South Atlantic black sea bass was first assessed through the SEDAR process in 2002 (SEDAR-02). SEDAR (2002) applied a statistical catch-age formulation as the primary model. It estimated that the rate of overfishing had increased through the 1990s and that the stock was overfished. The SEDAR-02 assessment was updated in 2005 with data through 2003 (SEDAR Update Process #1). The update assessment estimated that the rate of overfishing continued to increase into the 2000s and that the stock remained overfished. The SEDAR 25 Update (2013) concluded that black sea bass were no longer overfished and that overfishing was not occurring. The stock was very close to B_{MSY} ($B_{2012}/B_{MSY}=0.96$) and the SSB in 2012 was just above SSB_{MSY} ($SSB_{2012}/SSB_{MSY}=1.032$). SSB in 2012 was estimated to be above SSB_{MSY} , indicating that the stock was rebuilt. Spawning stock biomass decreased significantly from the beginning of the assessment period, dropping below SSB_{MSY} in 1989, until finally stabilizing and remaining at a low level from 1994-2007. The SSB increased consistently since 2008, crossing SSB_{MSY} in the terminal year of the assessment. SEDAR-25 Update (2013) estimated current fishing mortality (F) was well below F_{MSY} ($F_{Current}/F_{MSY}=0.659$). The trend in F showed a rapid increase from the late-1970s until 1988, when it surpassed F_{MSY} by a significant amount. F remained above F_{MSY} , with large inter-annual variability, until it dropped below F_{MSY} in 2011. The rebuilding of the black sea bass stock allowed the SAFMC to increase the ACL over twofold via Reg-19.

North Atlantic Right Whale

The western North Atlantic right whale is one of the most endangered large whales in the world (Clapham et al. 1999). The species' known range extends from calving grounds in coastal waters of the southeastern United States to feeding grounds in New England waters and the Canadian Bay of Fundy, Scotian Shelf, and Gulf of St. Lawrence (Waring et al. 2014). The western North Atlantic right whale population size was estimated to be at least 455 individuals in 2010 (447 cataloged whales plus 8 not cataloged calves at the time the data were received) based on a census of individual whales identified using photo-identification techniques (Waring et al. 2014). The species is listed as "Endangered" under the Endangered Species Act, "Depleted" under the Marine Mammal Protection Act, and under CITES Appendix I throughout its range. As such, North Atlantic right whales are afforded many legal protections.

Right whales may be found from Florida to North Carolina from November 1 through April 30 (NMFS 2008). The coastal waters of the southeastern United States are a wintering ground and the sole known calving area for the North Atlantic right whale. Sighting records of right whales spotted in the core calving area off Georgia and Florida consist of mostly mother-calf pairs and juveniles but also some adult males and females without calves (Jackson et al. 2012a). Most

calves are likely born early in the calving season. As many as 243 right whales have been documented in the southeastern U.S. during one calving season (P. Hamilton, personal communication, April 11, 2014). Studies indicate that right whale concentrations are highest in the core calving area from November 15 through April 15 (NMFS 2008). Residency patterns for non-calving right whales are typically less than one month (A. Krzystan, June 2014 SEIT meeting) indicating a steady stream of right whales travel between habitats in the northeastern and southeastern U.S. during fall, winter, and spring. Thus, movements within and between habitats are extensive, with telemetry data and aerial observations suggesting the area off the mid-Atlantic states is an important migratory corridor (Brown and Marx 2000, Mate *et al.* 1997, Baumgartner and Mate 2005). Furthermore, systematic surveys conducted off the coast of North Carolina during the winters of 2001 and 2002 sighted eight calves, suggesting the calving grounds may extend as far north as Cape Fear (McLellan *et al.* 2004). Four of the calves were not sighted by surveys conducted farther south. One of the cows photographed was new to researchers, having effectively eluded identification over the period of its maturation (McLellan *et al.* 2004).

The small population size and low annual reproductive rate of North Atlantic right whales suggest that human sources of mortality may have a greater effect relative to population growth rates than for other whales (Waring *et al.* 2014). The principal factors believed to be retarding growth and recovery of the population are ship strikes and entanglement with fishing gear (Waring *et al.* 2014). Young whales, ages 0-4 years, are especially vulnerable (Kraus 1990), and an analysis of the population age structure suggests that it contains a smaller proportion of juvenile whales than expected (Hamilton *et al.* 1998; Best *et al.* 2001), which may reflect lowered recruitment and/or high juvenile mortality. Fishery entanglement is the largest known source of human-caused mortality and serious injury to right whales (Waring *et al.* 2014), and juveniles and calves entangle at a higher rate than adults (Knowlton *et al.* 2012). A recent study found that approximately 83% of all right whales have been entangled at least once, and 60% of those animals had been entangled multiple times (Knowlton *et al.* 2012). The authors further clarify that this is a minimum estimate (Knowlton *et al.* 2012).

The number of human caused serious injury and deaths caused by fishery entanglements alone far exceed the MMPA potential biological removal (PBR). The MMPA defines PBR as the maximum number of animals, not including natural mortalities, which may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population (16 U.S.C. 1362). For the Western Atlantic stock of the North Atlantic right whale, PBR is 0.9 (Waring *et al.* 2014). Based on data from 2007-2011, the minimum rate of annual human-caused mortality and serious injury to right whales averaged 4.05 per year; 3.25 per year were attributed to incidental fishery entanglement and 0.8 per year were attributed to vessel strike. These numbers represent the lower bound of estimated human caused mortality (Waring *et al.* 2014). Thus, the current rate of fishery entanglements averages 3.25 animals per year and is 3.6 times over PBR. Therefore, any serious injury or mortality for this stock is significant (Waring *et al.* 2014). NMFS is working to reduce serious injury and mortality through the ship speed limit rule and through the ALWTRP. Section 118 of the MMPA mandates that the ALWTRP reduce mortality and serious injury of right whales to below PBR.

Entanglements incidental to commercial fishing are the primary threat to right whales, however less is known about the source of entanglement. In a study of 31 right whale entanglements, Johnson et al. (2005) found 14 cases where gear type could be identified; pot gear represented 71% of these cases (8 lobster pots, 1 crab pot, 1 unknown pot). In a recent compilation of data from 2007-2014, there were 17 entangled whales and none of these were attributed to a specific fishery (Waring et al. 2014). As evidenced by these compilations, information from an entanglement event often does not include the detail necessary to assign the entanglements to a particular fishery or location, and scarring studies suggest the vast majority of entanglements are not observed (Waring et al. 2014). Consequently, while black sea bass gear has not been definitively identified in the few cases when gear was identified to fishery, it also cannot be ruled out as gear that has resulted in serious injuries or deaths to right whales.

Evaluation of Reg-16 Alternatives

The analysis simulates the potential landings of black sea bass pot endorsement holders during a winter season under each of the proposed alternatives. Factoring in landings by other gears, the date the ACL would be met under each scenario is predicted. The analysis also considers the seasonal distribution of black sea bass pot gear and North Atlantic right whales to compare the relative risk of right whale entanglements under each of the proposed spatial closure alternatives.

METHODS

Data Sources

Through the Southeast Fisheries Science Center (SEFSC) Logbook program (SEFSC Logbook, accessed 22 July 2014), federally-permitted commercial fishermen self-report landings on a trip level, providing species-specific landings (lb), primary gear used, and primary area fished. Primary depth of capture has also been reported from 2004 onward. A single area and depth of fishing is reported in the commercial logbooks for each species per trip, although fish may be encountered in many areas and depths during multiple sets. The SEFSC Commercial ACL dataset contains aggregated dealer records of monthly catch by gear and species, and includes landings from vessels with and without federal permits through 2013. The Atlantic Coastal Cooperative Statistics Program (ACCSP) assimilates dealer trip tickets into a database of monthly catch by gear and by species, including landings from vessels with and without federal permits (ACCSP Trip Ticket data, accessed by SEFSC 12 Sept 2014).

Landings using gear other than pot gear were summarized by fishing year and fishing month from 2002-2013 using the SEFSC ACL dataset and 2013-2014 from the ACCSP Trip Ticket data. Landings using pot gear were summarized by fishing year and fishing month from 1998-2014 for federally-permitted pot gear endorsement holders using SEFSC Logbook data. The 1,000 lb gw trip limit and 35-pot limit implemented by Amendment 18A were simulated in the time series. Any trip catching more than 1,000 lb gw was scaled down to 1,000 lb gw. Landings for trips

using greater than 35 pots were scaled down based on the average catch-per-pot multiplied by 35 pots. Trip and pot limits were not simulated for the 2012/13 or 2013/14 fishing years, as these regulations were already in place for that period. No additional simulations were performed to estimate additional trips that may have occurred in the past if pot and trip limit restrictions had been in place.

Spatial Distribution of Landings and Effort

Season and water depth are important drivers of the spatial distribution of landings and effort and are therefore important to consider when comparing the alternatives in Reg-16. Seasonal trends in catch rates per pot haul and depth of fishing were compared across fishing seasons. Using a Geographic Information System (GIS; ESRI ArcGIS 10.1), landings for 2013/14 (the most recent season), 2008/09 (the most recent Nov-Apr winter season), and 2006/07-2008/09 (the average of the last three winter seasons) were evaluated to compare spatial distribution of catch.

The impacts of the spatial closures in Reg-16 were evaluated by first assigning pot landings to area-depth grids. Landings were assumed to be homogenous within an area-depth grid. Logbook pot gear landings were then eliminated from the time series proportional to the amount of area covered by the proposed closure alternative during the closed season and the remaining landings were compared to Alternative 1, which assumed landings in 2015 would proceed at the same pace as 2013/14.

Three scenarios were tested: (A) based on the spatial distribution of pot gear endorsement holder landings under simulated Amendment 18A regulations for the Nov-May period of the 2008/09 season, (B) based on the spatial distribution of pot gear endorsement holder landings during the June-Oct period of the 2013/14 season, and (C) based on the spatial distribution of pot gear endorsement holder landings under simulated Amendment 18A regulations for the Nov-May period averaged across the 2006/07, 2007/08, and 2008/09 seasons. By comparing spatial closure impacts to the baselines of a 100% closure and a 100% opening for each scenario, and expressing these comparisons as a percentage, the analysis controls for changes in the magnitude of black sea bass landings through time. Scenario A assumes no change in the spatial distribution of pot gear fishing pressure would have taken place between the 2008/09 and projected 2015 season. Scenario B assumes no change in the spatial distribution of pot gear fishing pressure would take place between the June-Oct period of the recent 2013/14 season and the Nov-May period of the projected 2015 season. Scenario C assumes no change in the spatial distribution of pot gear fishing pressure between the projected 2015 season and the mean distribution of fishing pressure during the past three winter seasons (e.g., 2006/07 to 2008/09). As such, Scenarios A and C address winter/summer differences in spatial fishing pressure, and Scenario B addresses regional differences in fishing pressure that have emerged over the past 5 years where the black sea bass commercial pot gear fishery has been partially or completely closed during the Nov-May time period. Spatial distributions of pot gear prior to 2006 were not considered due to changes in the fishery and a lack of consistently reported depth of fishing in logbooks.

Catch Rate Projections

Projected landings were expressed as daily catch rates uniformly distributed within each fishing month. ACCSP Trip Ticket landings using gears other than pot gear (“other gear”) for June-May from the 2013/14 fishing year were used in projections because a substantial increase in “other gear” landings was observed following implementation of Amendment 18A, which restricted utilization of pot gear to federally-permitted endorsement holders only. Pot gear in ACCSP data was defined only as gear code 139 (“Pots and Traps, Fish”). Reg-14 will implement a 300-lb gw trip limit for Jan-Apr and a 1,000-lb gw trip limit for May-Dec for hook and line gears. The impacts of these trip limits were simulated by examining ACCSP Trip Ticket records from 2013/14 and setting any landings for hook and line gears exceeding the trip limit for a given month equivalent to the trip limit.

Under all scenarios, catch rates for pot gear for June-Oct were assumed equivalent to pot gear catch rates observed during the 2013/14 season. Since the months under consideration in the alternatives in Reg-16 have not been open to pot gear fishing for several years, four projection scenarios were developed to express the potential pot gear catch rates during Nov-May. Computations were performed using catch-per-pot rather than catch-per-pot-haul because the number of hauls prior to the 2013/14 season had some misreporting issues due to confusion on how to complete the commercial logbook forms (SEFSC, pers. comm.). Thus, catch rates reported below are cumulative and may reflect multiple hauls. Under Scenario 1, catch rates for pot gear from Nov-May were set equivalent to catch rates for the 2008/09 season (the last fully open winter season), computed as catch-per-pot for pot endorsement holders under a 35-pot limit and 1000-lb gw trip limit, multiplied by the number of pots that were used during 2008/09 under a simulated 35-pot limit. Under Scenario 2, catch rates for pot gear from Nov-May were computed assuming Nov-May effort would be equivalent to the number of pots that were used during 2008/09 under a simulated 35-pot limit, and catch-per-pot would be equivalent to 2013/14 observed Oct catch-per-pot scaled by the observed ratios of Oct 2008/09 catch-per-pot to Nov-May 2008/09 catch-per-pot. For example, October 2013 catch-per-pot was 26.94 lbs gw/pot, and October 2008/09 catch-per-pot haul was 15.00 lbs gw/pot, 52.78% of the maximum catch-per-pot observed in the 2008/09 season (January 2009’s 28.42 lbs gw per pot). The ratio-scaled January pot landings would be 103,871 lbs gw ($100\%/52.78\% \times 26.94 \text{ lbs gw/pot} \times 2,035 \text{ pots used in January 2009 under a simulated 35-pot limit per vessel-trip}$). Under Scenario 3, Nov-May catch rates were assumed equal to observed Oct 2013/14 catch rates. Under Scenario 4, Nov-May catch rates were assumed equal to mean Nov-May catch rates from the past three winter seasons (e.g., 2006/07-2008/09).

Right Whale Spatial Distribution Model

Season and habitat characteristics are important drivers of right whale occurrence and are important to consider under all Reg-16 alternatives to ensure adequate protection for endangered right whales. Gowan and Ortega-Ortiz (2014) developed a temporally dynamic habitat model to predict wintering right whale distribution between Florida and South Carolina

using a generalized additive model framework and aerial survey data (see Appendix D for link to free online manuscript). The model summarized whale sightings from surveys in the southeastern United States (SEUS Survey: 2003/04-2012/13), survey effort corrected for probability of whale detection, and environmental data at a semimonthly resolution. A generalized additive model (GAM) was used to relate the number of right whale sightings to predictor variables. Because the response variable, number of sighted whales, was overdispersed and zero-inflated due to the large number of sampling units (96%) with no sightings, Gowan and Ortega-Ortiz (2014) used a hurdle model. A quasibinomial distribution (to deal with excessive number of zeros) with a logit link was used to model presence-absence from all data, and a gamma distribution with a log link was used to model the number of whales from sampling units with whale sightings. Predicted relative abundance was calculated by multiplying the probability of occurrence, derived from the first model, by the expected number of whales, derived from the second model. Model selection was accomplished with a forward stepwise selection procedure, using the following evaluation criteria: model GCV scores, percentage of deviance explained, and analysis of deviance tests. Five-fold cross-validation was used to evaluate each candidate model's predictive ability, and was repeated five times, with mean average squared prediction error (ASPE) used to assist in model selection. Final specification of the selected best model used to estimate smoothing functions and create prediction maps was based on the complete dataset.

Under the best model specification, sea surface temperature (SST), water depth, and survey year were significant predictors of right whale relative abundance. Additionally, distance to shore, distance to the 22°C SST isotherm, and an interaction between time of year and latitude (to account for the latitudinal migration of whales) were also selected. Predictions from the model revealed that the location of preferred habitat differs within and between years in correspondence with variation in environmental conditions. Although cow-calf pairs were rarely sighted in the company of other whales, there was minimal evidence that the preferred habitat of cow-calf pairs was different than that of whale groups without calves at the scale of this study. The results of this updated habitat model were averaged by month, across all years, to represent right whale distribution, expressed as an encounter rate (i.e., expected number of whales sighted in each grid cell, given observed SST, annual sighting rate, and uniform survey effort). To bookend the spatial distribution of right whales under different environmental conditions, sensitivity runs were conducted for model-predicted spatial distributions under a warmer-than-average winter (i.e., 2011/12) and a colder-than-average winter (i.e., 2009/10).

An additional model was developed by T. Gowan (FWC/FWRI) for North Carolina using survey data collected by the University of North Carolina, Wilmington (UNCW Survey: 10/2005-4/2006, 12/2006-4/2007, 2/2008-4/2008). Survey effort data was obtained from OBIS-Seamap, and was expressed as the cumulative number of surveys per cell, across all survey months and years. The number of sightings was calculated as the cumulative number of right whales per cell, across all months and years. Distance to shore, depth, SST, and slope were calculated as in Gowan and Ortega-Ortiz (2014). Due to limited data, no temporal framework was introduced into the model; cumulative sightings and effort data were used with long-term winter SST. A generalized additive model (GAM) with a quasibinomial distribution (to handle excessive

zeroes) with a logit link was used to model presence-absence of right whale sightings, with $\log(\text{Surveys})$ used as an offset term. Predictor variables considered were $\log(\text{Depth})$, $\log(\text{Slope})$, distance to shore, and average SST. The basis dimension parameter was set to 3 and the gamma term was set to 1.4 to avoid overfitting. Following Gowan and Ortega-Ortiz (2014), model selection was accomplished with a forward stepwise selection procedure, using the following evaluation criteria: model generalized cross validation (GCV) scores, percentage of deviance explained, analysis of deviance tests, and average squared prediction error from a five-fold cross-validation. Predicted values from the North Carolina model did not have the same scale or interpretation as the predictions from the Florida-South Carolina model (Gowan and Ortega-Ortiz 2014), and were not directly comparable due to differences in survey design, resolution/quantification of survey effort, temporal components in the model, model framework (probability of presence vs. relative abundance), whale behavior (e.g. sighting availability bias in migratory corridor vs. calving grounds), etc. See Appendix C for further details on the North Carolina right whale sightings model.

Relative Risk of Right Whale Entanglement in Pot Gear Vertical Lines

The relative risk to right whales from pot gear was modeled by overlaying black sea bass effort and right whale relative abundance. Black sea bass pot gear effort was expressed as monthly totals of soak time across all vessels, assigned to commercial logbook area and binned into 5 m depth intervals. Because right whale entanglement rates in pot gear are unknown but greater than 0% and any vertical line in the water column has been determined to pose an entanglement risk (Johnson *et al.* 2005), this analysis assumes that the overlay of pot gear soak time and right whale distribution is a proxy for entanglement risk to right whales. Right whale encounter rates were modeled using the FL-SC and NC right whale spatial distribution models discussed above.

Three black sea bass effort distribution scenarios were considered; Scenario A was based on the winter of the 2008/09 fishing year, Scenario B was based on the summer of the 2013/14 fishing year, and Scenario C was based on the mean distribution during the winters of the 2006/07-2008/09 fishing years. Various reporting issues (discussed below) and substantial changes in fishing practices since the implementation of the 35-pot limit, the pot gear endorsement, and the requirement to bring pots in at the end of the trip made effort data (i.e., soak times and number of hauls) for black sea bass pot gear less reliable for previous seasons. Reliable effort data was obtained for the 2013/14 fishing year after a targeted reconciliation process (SEFSC, pers. comm.). Because pot fishing was prohibited in the winter of the 2013/14 fishing year, the spatial distribution of fishing effort for the 2013/14 scenario was treated as the total effort within area-depth bins across months with complete data that were open to pot fishing (i.e., June-Oct 2013).

The 2008/09 fishing year was the most recent period when pot fishing took place during Nov-Apr, but effort data for this fishing year ('Scenario A') and prior years ('Scenario C') was not considered reliably reported for pot gear due to misunderstandings among fishermen regarding how to report hauls and soak times (SEFSC, pers. comm.). To handle this concern, the spatial

distribution of pots from winter fishing seasons was utilized in Scenarios A and C, but pot soak-times were assigned to area-depth bins for these Scenarios using reconciled 2013/14 soak time data to approximate future soak times during Nov-Apr. For example, under Scenario A, effort data were back-filled for the 2008/09 fishing year by multiplying 2013/14 mean soak time per pot by the number of pots reported in 2008/09 for each area-depth grid. The number of pots used on a given trip in 2008/09 was retrospectively capped at 35 to reflect current regulations. Mean pot soak times were assigned by linkage under the following hierarchy: vessel+area+depth, vessel, owner, area+depth, area, region. This approach assumed that the soak-times of a given vessel in a given area-depth grid from summer 2013/14 would not differ substantially in a winter season. If a vessel fished in a given area-depth grid in 2008/09 but not in 2013/14, then the mean soak-time across all trips for that vessel in 2013/14 was multiplied by the number of pots reported in the given area-depth grid in 2008/09. If that vessel did not fish in 2013/14, but the owner of that vessel did fish, the owner's mean soak-time across all trips was used. If there were no matches for the vessel or the owner between the 2013/14 and 2008/09 fishing years, then the mean soak-time across all vessels in that area-depth grid in 2013/14 was used as the multiplier, and so forth. The monthly spatial distribution of recomputed soak-times for the 2008/09 fishing year was summed by area-depth grid for Nov-Apr.

The three effort distribution scenarios were entered into a GIS geodatabase. Effort was assigned to area-depth grids using a generalized 5 m bathymetric bin polygon layer developed using the NGDC Coastal Relief Model sliced by the South Atlantic commercial logbook grid layer. The FL-SC and NC right whale encounter rate models were also input into the geodatabase. In the area where the FL-SC model predictions and the NC model predictions overlapped, the NC model predictions were removed in favor of the more statistically robust FL-SC model. All models were projected as Albers Equal Area Conic. The areas of all polygon cells were computed. The right whale encounter models (i.e. predicted sightings/habitat models) were clipped to the commercial area-depth grids, and the areas within each right whale encounter sub-grid were computed. Right whale encounter rate was summarized as a weighted mean within area-depth grids, with the weights based upon the areas of the right whale encounter sub-grids. For each area-depth grid, the weighted mean of right whale encounters was then multiplied by the total commercial pot gear effort within the area-depth grid. The products of mean encounter rates and commercial effort were summed across all depth-grids and used as the baseline for the analysis of the impacts of the spatial closure alternatives on potential right whale interactions with pot gear vertical lines. This baseline assumes a complete opening of SAFMC waters to pot gears; the maximum possible daily exposure of right whales to entanglement risk until a quota closure is reached. Thus, the comparison of Alternatives would range from 0% (Alternative 1: EEZ closed Nov-Apr) to 100% (no closed area) relative right whale risk. To evaluate the impacts of different spatial closure alternatives, the area-depth grid layer was clipped to each spatial closure alternative, and the products of mean encounter rate and commercial effort were summed across remaining depth-grids and compared to the baseline to determine the relative potential encounter risk remaining. As many area-depth grids were only partially contained by spatial closure alternatives, weighted mean encounter rates and effort

were recomputed for each alternative. Effort was multiplied by the ratio of the percent of area remaining to the total area of the area-depth grid.

Cumulative Effects

To evaluate the cumulative effects of spatial closure alternatives upon landings and relative right whale entanglement risk, daily catch rates were forward-projected in Microsoft Excel for a future Jan-Dec fishing season. This analysis was performed for spatial distribution scenarios A-C and catch rate scenarios 1-4 for all eight Reg-16 alternatives. Additionally, two sensitivity runs were performed for a warm and cold winter distribution of right whales. Cumulative relative right whale risk was tracked under each scenario-alternative combination from Jan 1-Apr 30 and Nov 1-Dec 31, or the season closure date (whichever came sooner). Total catch relative to the ACL, closure date and total days open, and cumulative relative right whale risk were all output from the model. Total landings and season length were compared to Alternative 1 (status quo). Because the entanglement rate for North Atlantic right whales is unknown, risk was expressed as relative risk units (RRU). Daily relative right whale risk units were scaled from 0 RRU (Alternative 1: EEZ closed Nov-Apr) to 100 RRU (no closed area). Under all scenarios, daily relative right whale risk is eliminated when a quota closure is imposed to avoid an ACL overage, because the fishery would be closed to all gears. Daily relative right whale risk might exceed 100 RRU under scenarios where the proposed closed area slows catch rates enough for the fishery to stay open later than it would with no closed area to pot gear but fails to sufficiently mitigate right whale risk during the additional days open. Risk levels were categorized to facilitate distinction between alternatives (Low <25 RRU, Moderate 26-50, High 51-75, Very High >75). Right whale risk for the FL-SC and NC models was handled separately due to differences in model construction. A sensitivity run incorporating a dynamic monthly model of whale distributions off NC was performed (Appendix E). To evaluate whether the differences between alternatives were significant, within-model uncertainty was evaluated using modeled 95% confidence limits (Appendix F).

Impacts on other Large Whales

Other species of large whales protected under the Marine Mammal Protection Act are periodically observed by the SEUS Survey and UNCW Survey, including humpback whales (*Megaptera novaeangliae*) and fin whales (*Balaenoptera physalus*). Sightings of these large whales were plotted relative to proposed closed areas to determine if proposed closed areas might provide potential reductions in entanglement risk for large whales other than right whales.

RESULTS

Spatial Distribution of Landings and Effort

From 2004/05-2008/09, pot gear effort during months completely open to pot gear fishing averaged 2126 ± 1410 pots/month (mean \pm SD), with an average of 3038 ± 1219 pots/month

from Nov-Apr. Since the implementation of Amendment 18A, the 32 pot gear endorsement holders have averaged 2122 ± 653 pots/month (range 1503-3148 pots/month) during months completely open to pot gear fishing. In the 2013/14 season, number of pots per trip averaged 24.9 ± 9.7 , with 52.3 ± 36.4 hauls per trip. Trips averaged 1.4 ± 0.6 days. Soaktimes averaged 4.4 ± 4.0 hours per trap (range 0.33-28.0 hours). Total soaktime per trip averaged 245.8 ± 337.6 hours (range 5.3-5040.0 hours).

Commercial black sea bass pot endorsement holders tended to fish between 15-40 m depth (Figure 1). Analyses of seasonal fishing trends indicated little overall trend in reported depth of fishing using pot gear for black sea bass for Florida and North Carolina, but an inshore movement of the fishery during winter months was apparent for South Carolina (Figure 2). A comparison of Nov-May pot gear endorsement holder landings from the 2008/09 season (Scenario A) to June-Oct pot gear endorsement holder landings from the 2013/14 (Scenario B) showed higher proportional landings off SC under Scenario A, and higher proportional landings off NC and FL under Scenario B (Figure 3). Landings and effort in the 2008/09 winter months covered a narrower geographic range than the 2013/14 summer season (Figure 3). In the 2008/09 winter months, fishing activity shifted from nearshore NC (Nov-Dec: Figures 3A-B) to South Carolina (Dec-Feb: Figures 3B-D) and then farther offshore of both NC and SC (Feb-Apr: Figures 3D-F). This spatial shifting was not observed in Scenario B due to the static treatment of the summer 2013/14 landings and effort data (Figure 3G). The spatial extent of landings and effort under Scenario C (Figures 3H-M) was similar to Scenario A; however, landings and effort averaged across the three winters were more diffuse with fewer obvious 'hot-spots.'

Catch Rate Projections

Between 2006/07 and 2013/14, black sea bass catch-per-trip for endorsement holders was within 50 pounds of the 1000-lb gw trip limit on average 24% of trips, with a peak of 56% in 2011/12 and a minimum of 10% in the most recent 2013/14 season. Catch-per-pot haul in the commercial black sea bass fishery was historically higher during the winter months, but this trend shifted towards the summer months as derby conditions emerged (Figure 4). Daily catch rates for projection Scenarios 1-4 are presented in Table 1. Winter catch rates were highest under Scenario 2 and lowest under Scenario 3. Scenarios 1, 2, and 4 showed a dome-shaped catch rate with peaks in Dec-Feb (Figure 5). The abundance of black sea bass vulnerable to pot gears has nearly doubled since the 2008/09 season (Figure 6).

Right Whale Spatial Distribution Model

Wintering habitat models were developed to predict right whale distribution for FL-SC (Gowan and Ortega-Ortiz 2014) and NC (Gowan, unpublished data) over time. The FL-SC model predicts a seasonal trend in right whale distribution (Figure 7). In December and March (Figures 7A and 7D), the model predicts right whales to be distributed farther north than in January and February (Figures 7B and 7C). The data informing the NC model were not sufficiently robust to construct monthly models of right whale abundance; however, the model predicted right whales might be sighted across a relatively broad area, with the highest encounter rates

relatively close to the NC shoreline and off Pamlico Sound. As illustrated in Appendix D, under the 'warm' winter scenario, the distribution compressed closer to shore, in the relatively shallow, cooler waters west of the Gulf Stream; under the 'cold' winter scenario, the distribution was more concentrated farther south (Gowan and Ortega-Ortiz 2014).

Relative Risk of Right Whale Entanglement in Pot Gear Vertical Lines

Figure 8 shows effort-weighted relative right whale risk of interactions with pot gear vertical lines under gear distribution Scenarios A (pot gear distribution based on observed 2008/09 winter deployments) and B (pot gear distribution based on observed 2013/14 summer deployments). Because the NC right whale distribution model and the pot distribution in Scenario B are not time-dynamic, modeled risk of NC for Scenario B did not vary by month. For Scenario B, from Nov-Apr, right whale weighted entanglement risk was highest between 5-30 m between Wilmington and Jacksonville (Figures 8A-F).

In November (Figure 8A), weighted entanglement risk for right whales in FL-SC was highest off Murrell's Inlet, South Carolina and Daytona Beach, Florida under Scenario A; risk off NC was highest between 5-30 m from Jacksonville to Wilmington, North Carolina. Under Scenario B, weighted entanglement risk in FL-SC was highest off Charleston, South Carolina, followed by Murrell's Inlet, South Carolina, and Daytona Beach, Florida; off NC, risk was slightly higher offshore of Jacksonville than in Scenario A (Figure 8A). In December, under both Scenarios, weighted risk was highest off Charleston, South Carolina; followed by Murrell's Inlet, South Carolina, and Daytona Beach, Florida (Figure 8B). In December, off North Carolina, under both Scenarios, weighted risk was highest from Wilmington to Jacksonville in waters <30 m. From January-February, under both Scenarios, weighted risk was highest off Charleston, South Carolina and Daytona Beach, Florida; followed by Murrell's Inlet, South Carolina (Figures 8C-D). In January-February off North Carolina, Scenario A shows much more broadly distributed relative risk than Scenario B (Figures 8C-D). From March-April, under Scenario A, weighted risk was highest off Murrell's Inlet, South Carolina and, in April, Daytona Beach, Florida (Figure 8E-F). Under Scenario B, weighted risk was highest off Charleston, South Carolina; followed by Murrell's Inlet, South Carolina, and Daytona Beach, Florida. In March-April, Scenario A predicts much more broadly distributed relative risk off North Carolina than Scenario B (Figure 8E-F). In general, black sea bass fishing pressure and associated right whale entanglement risk off Florida to South Carolina are more broadly distributed under Scenario B, and more broadly distributed off North Carolina under Scenario A. Because pot distribution under Scenario C was similar to that under Scenario A, it was not depicted in Figure 8.

Cumulative Effects

Different catch rate and closure scenarios resulted in different projected closure dates for the commercial black sea bass fishery to avoid an ACL overage (Figure 9). Table 2 and Figure 10 show the interplay of projected black sea bass fishing season lengths and cumulative relative risk of right whales to entanglement in vertical lines associated with black sea bass pot gear. Under all alternatives except Alternative 1 (status quo) and a few scenarios for Alternatives 7b,

8b, 9b, and 10, a quota closure was anticipated to avoid a quota overage. A quota closure would reduce relative right whale risk by reducing the number of days pot gear is in the water.

Under warmer than average conditions, the predicted right whale distribution was located closer to shore and most depth-based spatial closure alternatives are more effective in reducing relative risk of entanglement (Table 2B). Some permutations suggested Alternative 7B could be less effective even than opening the entire EEZ to pot gear fishing Nov-Apr under warmer than average conditions because it would allow two additional months of fishing during right whale season. Under colder than average conditions, the predicted right whale distribution was farther south and more broadly distributed offshore, making most depth-based closure Alternatives less effective than under average conditions (Table 2C). A sensitivity run using monthly SST data to generate monthly predictions of right whale abundance off NC found minimal differences compared to the time-averaged model approach presented in Table 2 (see Appendix E).

Table 3 shows relative risk of right whale entanglement ranked by alternative, ranging from Alternative 1 (most protective) to Alternative 2 (least protective). Figure 11 shows the clustering of sensitivity run output by alternatives for relative right whale risk and fishing season length. Alternatives 4 and 6 provide the least additional right whale risk of any pot gear opening under consideration (Table 3), while also providing the longest fishing seasons (Figure 11). Alternatives 2, 7a, and 7b provide similarly high relative right whale risk and shorter seasons than the other alternatives (Figure 11). Within-model uncertainty was relatively low, and the separation between the most protective and least protective alternatives was significant (see Appendix F).

Under Alternative 1, no quota closure was projected. Alternative 1 was projected to catch 97% of the ACL while maintaining the six-month seasonal closure to pot gear fishing and providing no increased risk of vertical line entanglement for right whales. Under Alternative 2, a quota closure date was projected for 4 Aug-2 Oct. Alternative 2 increases relative right whale risk by 100 RRU over status quo. Under Alternative 3, a quota closure date was projected for 4 Oct-5 Dec. Alternative 3 results in a low to moderate increase in relative right whale risk off NC (+10-26 RRU) and a low to high increase in relative right whale risk off FL-SC (+16-52 RRU). Under Alternative 4, a quota closure date was projected for 7-30 Dec. Alternative 4 results in a low increase in relative right whale risk off NC (+2-8 RRU) and a low increase in relative right whale risk off FL-SC (+0-3 RRU). Under Alternative 5, a quota closure date was projected for 1-24 Dec. Alternative 5 results in a low increase in relative right whale risk off NC (+1-2 RRU) and a low to high increase in relative right whale risk off FL-SC (+11-58 RRU). Under Alternative 6, a quota closure date was projected for 7-29 Dec. Alternative 6 results in a low increase in relative right whale risk off NC (+2-8 RRU) and no additional right whale risk off FL-SC (0 RRU). Under Alternative 7a, a quota closure was projected for 18 Aug-12 Oct. Alternative 7a results in a high increase in relative right whale risk off NC (+69-74 RRU) and very high increase in relative right whale risk off FL-SC (+77-96 RRU). Under Alternative 7b, the ACL was projected to be met between 17-30 Dec. Alternative 7b results in a very high increase in relative right whale risk off NC (+77-89 RRU) and a high to very high increase in relative right whale risk off FL-SC (+70-106

RRU). Under Alternative 8a, a quota closure was projected for 17 Oct-11 Dec. Alternative 8a results in a low to moderate increase in relative right whale risk off NC (+13-36 RRU) and a low to high increase in relative right whale risk off FL-SC (+13-64 RRU). Under Alternative 8b, the ACL was projected to be met late in the fishing season (18 Dec or later). Alternative 8b results in a high increase in relative risk off NC (+51-68 RRU) and a high to very high increase in relative risk off FL-SC (+61-89 RRU). Under Alternative 9a, a quota closure was projected for 15 Sept-9 Nov. Alternative 9a results in a moderate increase in relative right whale risk off NC (+26-51 RRU) and moderate to high increase in relative right whale risk off FL-SC (+30-72 RRU). Under Alternative 9b, the ACL was projected to be met as early as 14 Dec. Alternative 9b results in a high to very high increase in relative right whale risk off NC (+61-87 RRU) and high to very high increase in relative right whale risk off FL-SC (+67-94 RRU). Alternative 10 falls between Alternatives 8b and 9b, with a projected closure date as early as 16 Dec, a moderate to high increase in relative right whale risk off NC (+55-75 RRU) and high to very high increase in relative right whale risk off FL-SC (+62-89 RRU).

Impacts on other Large Whales

Maps of aerial survey observations confirmed the presence of humpback whales and fin whales within several of the proposed Reg-16 closure areas (Figure 12). From 2005-2014, a total of 135 humpback whale sightings were recorded by the two surveys, of which six were confirmed dead. A total of 21 fin whales were also recorded. Number of observations was highest in areas of highest survey effort. Some of these sightings may represent multiple sightings of the same individual.

DISCUSSION

During the 2013/14 season, SEFSC in-season quota monitoring projected 99.6% of the ACL was caught with no pot gear fishing during the Nov-Apr period. Analyses of Reg-16 alternatives indicated that nearly all scenarios would result in the ACL being achieved. These analyses are based heavily upon data from the recent 2013/14 season because the black sea bass commercial fishery is in a dynamic state. Trends in catch per pot haul (see Figure 4) reveal a full-season fishery with peak catches in winter during the first part of the past decade that shifted to a derby fishery in the past 5 years, characterized by high summer catch rates and early quota closures. The 2008/09 season was the last season with no quota closure during right whale season (Nov 1-Apr 30). Despite effort restrictions implemented under Amendment 18A and the substantial increase in ACL implemented by Reg-19, the commercial fishery caught over 99% of their ACL during the 2013/14 season. Even with the hook-and-line gear trip limits imposed by Reg-14, they are projected to catch 97% of their ACL under Alternative 1 for the 2014/15 season. The derby condition may have relaxed somewhat, as landings in 2012/13 and 2013/14 were more evenly distributed through the fishing season; however, it is too early to definitively state that the derby conditions have ended. Furthermore, the implementation of Reg-14 will shift the season start date from June 1 to Jan 1, guaranteeing at least some pot gear fishing during the Nov 1-Apr 30 right whale season with the implementation of any alternative under Reg-16, excluding the no action alternative. The pot endorsement requirement

implemented by Amendment 18A substantially reduced participation in the pot gear fishery, which historically has shown higher daily catch rates than other gears. Because participation is limited and the ACL has been substantially increased, the incentives for derby fishing have diminished, and may be further diminished by communication between fishermen. The reduction in pot gear fishery participation has been partially offset by increases in the number of participants using other gears. During the 2013/14 season, 68% of the commercial harvest originated from gears other than pots, as compared to an average of 28% from 2004-2013.

Given the substantial changes in the fishery in the last two fishing seasons and the lack of fishing (due to quota closures) in the Nov-Apr time period of greatest concern for federally-protected large whale species, it is challenging to predict the impacts of the various Alternatives under consideration by Reg-16. To encompass the range of realistic possibilities, four scenarios were evaluated for catch rate, and three scenarios were evaluated for the spatial distribution of fishing. Projected closure dates for each alternative across scenarios varied by as much as 59 days; however, the relative differences between alternatives were consistent across scenarios. Catch rate projection Scenario 1 does not account for the rebuilding of the black sea bass stock, because it is based on 2008/09 catch rates, but it does feature winter catch rates on par with those observed in summer months during the 2013/14 season. Scenario 2 does not account for a potential decline in catch rate during winter months due to high pressure during summer months, which would likely result in localized depletion. The catch rates predicted by Scenario 2 have been observed in a single month in previous seasons, but never in multiple consecutive months as predicted. The sum of anticipated pot catches across the season in Scenario 2 exceeds the highest observed catches for every month by 5%; however, the abundance of black sea bass available to the pot gear fishery is projected to be substantially higher than observed since pre-1998 (Figure 6), and the reconfiguration of the commercial season to Jan-Dec by Reg-14 increases the likelihood of high Jan-Apr catch rates and reduces concerns about the impacts of localized depletion on projected catch rates in the first few months of the season. In summary, Scenario 2 may capture this increasing abundance trend, or it may overestimate catch rates that could be achieved in future seasons. Scenario 3 maintains a constant Oct 2013/14 catch rate through Nov-May; as such, it does not account for any temporal dynamics of catch rate which might be caused by fish movement or adverse weather conditions reducing the number of potential trips that could be taken. Scenario 4 accounts for potential impacts of the economic crash and high fuel prices in 2008/09 by averaging catch rates across the last three open winter seasons (2006/07-2008/09).

Of the spatial closure scenarios evaluated, Scenarios A and C do not account for recent shifts in the core distribution of fishing pressure. The stock may have shifted in regional abundance to localized recruitment pulses or localized depletion, and some pot gear endorsement holders may have moved or dropped out of the fishery since past winter seasons. Similarly, Scenario B does not account for inshore/offshore dynamics for winter months, because it is based on 2013/14 data from June-Oct. Off South Carolina, there are some indications of an inshore shift in fishing pressure during the winter months; however, from a statistical standpoint, this shift was insignificant based on the reported depth of fishing. If there is a shift in fishing depths during winter months, this would not be captured by Scenario B. Accurately predicting the

impacts of spatial closures is further challenged because area and depth of fishing are reported at the trip level. Multiple sets may be made during a single trip; therefore, there may be depths and areas fished that are not accurately represented in the logbook. This is less of a concern with commercial black sea bass pot gear than for many other fisheries due to the relatively low trip limit constraining the number of sets that might be made during a single trip. The model assumes landings during May-Oct will proceed equivalent to 2013/14 observations. Reduced catch rates prior to Nov would result in longer winter seasons for all scenario-alternative combinations with projected quota closures, leading to increased cumulative relative right whale risk.

Removing the closed area for pot gear would provide the fastest path towards achieving the ACL, as it removes all spatiotemporal restrictions on the use of pot gear to harvest black sea bass. Reg-16 Alternative 2 has minimal spatial overlap with black sea bass pot fishing effort, and results in nearly identical outcomes to removing the closed area entirely with regards to landings achieved. The spatial overlap of black sea bass fishing effort with the proposed closed areas in Alternatives 4 and 6 is robust to the assumed distribution of fishing pressure. By contrast, the spatial overlap of black sea bass fishing effort with the proposed closed areas in Alternatives 3, 5, 7a, 8a, and 9a is more dependent upon assumptions about the spatial distribution of fishing pressure.

The Alternatives proposed in Reg-16 differ in their abilities to maintain protections (i.e. prevent or minimize an increase in relative risk of entanglement) for ESA-listed whales in the South Atlantic Region. All alternatives, excluding Alternative 1 (the No Action Alternative), result in an increase in relative risk of entanglement to right whales. Alternative 1 best maintains protections for ESA-listed whales in the South Atlantic region because it maintains the seasonal closure to pot gear fishing, resulting in no increased risk of vertical line entanglement for large whales from black sea bass pot gear. Conversely, removing the closed area entirely would fail to maintain protections for ESA-listed whale species because it would eliminate the seasonal closure to pot gear fishing implemented to protect endangered large whales from entanglement in black sea bass pot gear, exposing right whales to the maximum possible daily vertical line entanglement risk (i.e., 100% on the relative scale described in the Methods).

Alternatives 2, 7b, 7c, 9b, and 8b maintain little to no protection for ESA-listed whales in the South Atlantic Region. Alternative 2 greatly increases the relative risk of entanglement to right whales off North Carolina and between Florida and South Carolina. Alternative 2 represents the current North Atlantic right whale critical habitat designated for North Atlantic right whales in 1994. This area was originally based on 303 sightings from 1950-1989. However, North Atlantic right whale critical habitat is currently undergoing a revision based on more current data. Proposed changes were published 17 Feb 2015 at [80 FR 9313](#). The very high relative risk associated with Alternative 2 is because predicted right whale presence is high outside of the spatial boundaries of the Alternative 2 management area (i.e., the area proposed in Alternative 2 is insufficient to protect right whales from an increase in relative risk of entanglement). Alternatives 7b, 7c, 8b, and 9b greatly increase the relative risk of right whale entanglement over the status quo for temporal (does not account for year-round presence of right whales off

North and South Carolina) and spatial reasons (does not account for spatial use of right whales off Florida). Alternative 7a, 8a, and 9a are slightly more protective because they prohibit pot gear fishing for more of the right whale season across a broader geographic range.

Alternative 3 would result in a low to moderate increase in relative risk to right whales from potential entanglement off North Carolina and a moderate to high increase in relative risk between Florida and South Carolina. This increase in relative risk is likely because the area proposed in Alternative 3 is based on habitat features preferred by pregnant female right whales and mother/calf pairs only (Good 2008, Keller et al. 2012), and does not consider juveniles, non-reproducing adults, or account for the north/south migratory behavior of right whales (i.e. whales may occur outside of predicted areas due to behavioral reasons). Juvenile right whales are a particularly important demographic segment to consider since they are most prone to entanglement (Knowlton et al. 2012).

Of all the alternatives in Reg-16, Alternatives 4 and 6 result in the least increase in relative risk to right whales, followed by Alternative 5. Alternative 4 is based on 2005/06-2012/13 right whale Early Warning System (EWS) and South Carolina/Georgia aerial survey data and 2001/02, 2005/06, and 2006/07 surveys by the University of North Carolina-Wilmington (Garrison 2014). This is a more expansive and recent database than that used by Keller et al. (2012) and particularly is more robust off the state of South Carolina. Alternative 4 includes all right whale demographic segments (i.e., mother/calf pairs, pregnant females, non-reproducing females, adult males, and juveniles). The area in this alternative captures 97% and 96% of right whale sightings in the NC/SC region and the FL/GA region, respectively.

Alternative 5 results in a low increase in relative risk off North Carolina but a greater increase in relative risk from Florida to South Carolina. In particular, the increase in relative risk from Florida to South Carolina is the result of estimated commercial pot gear effort south and east of the proposed area from St. Augustine to Cape Canaveral, Florida. Alternative 5 is based on joint comments received from non-government organizations (dated January 3, 2014) in response to NMFS' December 4, 2013, *Federal Register* Notice of Intent to Prepare this Draft Environmental Impact Statement (DEIS) (78 FR 72868). The area, also included in a Center for Biological Diversity et al. petition in 2009 for right whale critical habitat, is off the coasts of Georgia and Florida and based on calving right whale habitat modeling work of Garrison (2007) and Keller et al. (2012). This area represents the 75th percentile of right whale sightings (91% of historical sightings included in their study) off Florida and Georgia (Garrison 2007, and Keller et al. 2012). This alternative provides less protection in the core calving area because the protected area likely does not extend far enough into South Florida waters to capture the full extent of right whale habitat usage.

Alternative 6 would result in a low increase in relative risk to whales off North Carolina and no additional entanglement risk to right whales off Florida to South Carolina. The Alternative 6 area extends substantially further offshore of Florida and Georgia than areas included in other alternatives. Consequently, similar to Alternative 1, Alternative 6 would result in no increase in relative risk to right whales off Florida and Georgia and, arguably, negligible increase in relative

risk off South Carolina. Alternative 6 is also based on joint comments received from a number of environmental groups (dated January 3, 2014) in response to NMFS's December 4, 2013, *Federal Register* Notice of Intent (78 FR 72868). This area represents an existing management area, the Southeast Seasonal Gillnet Restricted Area, under the ALWTRP; and an additional area off North Carolina. The area off North Carolina is northward of the designated ALWTRP Southeast Restricted Area and includes waters shallower than 30 m. Overall, aside from Alternative 1, Alternative 6 results in the least amount of increase in relative risk to right whales from entanglement.

There is uncertainty in the predicted distribution of right whales, especially off North Carolina, where limited data with relatively few sightings were available. However, limited data should not be confused with limited right whale use of the area. Both the FL-SC and NC models implicitly assume that detectability of right whales (and therefore number of sightings) is equivalent across the spatial domain; however, it is widely accepted that detectability can vary. Richardson et al. (1995) found migrating bowhead whales (closely related to right whales) spent an especially low percentage of time at the surface and reasoned that the low percent of surface time explained low sightability of bowheads during aerial surveys of migrating whales. Likewise, the mid-Atlantic is used by right whales as a migratory corridor, among other uses, including calving grounds. Some of the more common behaviors off North and South Carolina may lead to right whale presence being underestimated by visual detection surveys. Additionally, the model was constructed based on right whale distribution on their primary wintering grounds not in their migratory corridor. Due to a lack of survey data, December distributions were used to represent November, and March model distributions were used to represent April. There may be differences between modeled distribution and actual distribution during these periods. Preliminary data demonstrate that the majority of right whales that frequent the calving area are present there for only a period of a few weeks (A. Krzystan, June 2014 SEIT meeting). As many as 243 right whales have been sighted in the Southeast U.S. wintering habitat in one winter. If most of these whales were present for a period of weeks and other whales are short-stopping off South and North Carolina, there is likely a steady, constant presence of right whales in the mid-Atlantic during the Nov-Apr period.

The modeled distribution used in this report averages across years with relatively low and high sighting frequency. It is unlikely this averaging would have a substantial impact upon the projected relative risk associated with each spatial closure alternative. Additionally, the modelling approach described in this report uses the overlay of black sea bass pot gear fishing effort (expressed in line-hours) and predicted right whale distribution to determine right whale relative risk of entanglement. This is a frequently used approach in whale risk assessment (Vanderlaan *et al.* 2009, Williams & O'Hara 2010, Murray & Orphanides 2013, Brown *et al.* 2015), because estimation of absolute risk is often impractical (Fonnesbeck *et al.* 2008, Redfern *et al.* 2013). This approach implicitly assumes that right whale entanglement rates do not vary by gender, size, space or time; however, certain behaviors or size classes of whales in certain locations at certain times might be more inherently vulnerable to entanglement than others (Knowlton *et al.* 2012). A sensitivity run using right whale distributions under warmer than average conditions showed most spatial closures would be more effective if the right whale

distribution is compressed close to shore. Under colder than average conditions, most proposed closure alternatives become less effective, because the right whale population is located farther south and more broadly distributed offshore beyond the closure boundaries. Alternatives 4 and 6 both provided very little additional entanglement risk to right whales off Florida to South Carolina under all sensitivity runs. Insufficient data were available to explore the impacts of warmer or colder than average conditions on right whale distributions off North Carolina, and no assumptions were made regarding the redistribution of the black sea bass population or associated fishing effort under these different temperature regimes. Average temperature conditions are more appropriate for forecasting risk when future temperature conditions are unknown.

The modeling approach did not assume an inherent rate of right whale entanglement relative to vertical line hours. Instead, all comparisons were made relative to the cumulative right whale risk assuming no closed area within each spatial distribution and catch rate scenario. Because all comparisons were performed in a relative framework, potential differences in the magnitude of exposure to risk between scenarios are not possible, nor would they be appropriate given that each scenario operates independently. For example, it would not be appropriate to compare the total exposure to risk assuming a summer distribution of pot gear in Alternative 2 to the total exposure to risk assuming a winter distribution of pot gear in Alternative 4. Although we were constrained by available data to apply 2013/14 mean pot soak times to historical spatial distributions of pot gear, this scalar is washed out by the relative framework of comparison. Thus, if winter wind and sea state conditions are such that shorter soak times are used, shorter soak times would reduce the total magnitude of right whale risk for each alternative, but the impact on relative comparisons would be dampened and only have an impact when an Alternative allowed fishing longer into the winter season than having no closed area. In this instance, the projected relative risk under the closure alternative with more time fishing under shorter soak times would be less than projected in this report.

The analysis does not consider the potential for effort shifting into open areas during the Nov-Apr time period. Few of the areas that would remain open have been fished for black sea bass, and most of them have not been fished in the Nov-Apr time period for five years or more. As such, it is difficult to determine how much effort might shift to open areas, which open areas would receive new effort, whether fishing opportunities exist in areas outside the closure, and what catch rates might be in those areas. Although estimating the impacts of effort shifting is challenging, the directional impacts of any effort shifting are relatively easy to describe. If effort shifting into open areas occurs, the projections may underestimate the potential catch rates of black sea bass if deeper portions of the stock can be caught outside the closed areas. The fuel costs associated with reaching open areas farther offshore combined with the requirement to bring pot gear back to shore under a 1000-lb gw trip limit might serve as a financial disincentive for commercial pot fishers to shift effort into deeper water offshore. If effort shifting takes place, quota closures would take place sooner than projected in this report. Relative entanglement risk for right whales in open areas would increase if effort shifted into those areas, although for some closure alternatives the areas of highest risk would be closed and effort would shift into low risk areas. Additionally, some right whale risk might be offset by

reductions in season length due to earlier ACL quota closures. This is likely to apply only to the Nov 1-Dec 31 period following implementation of Reg-14. Alternative 3 provides greater opportunities for effort shifting offshore of Daytona Beach and Charleston than Alternatives 4-6; as such, the relative risk under Alternative 3 may be higher than estimated in Table 2.

Aerial survey observations indicate humpback whales and fin whales are found within areas historically used by the black sea bass pot gear fishery. As such, they may also be at risk of entanglement and may be impacted by alternatives being considered by Reg-16. The federally-protected North Atlantic humpback whale is assumed to use the mid-Atlantic as a migratory pathway to and from their calving/mating grounds in the West Indies. Furthermore, biologists theorize that non-reproductive humpbacks may be establishing a winter feeding range in the mid-Atlantic since they are not participating in reproductive behavior in the Caribbean (Barco *et al.* 2002). As with right whales, a major known source of human-caused mortality and injury of humpback whales is commercial fishing gear entanglements. Sixty percent of closely investigated mid-Atlantic humpback whale mortalities showed signs of entanglement or vessel collision (Wiley *et al.* 1995). A scar-based study of Gulf of Maine humpback whales indicated that over half of the population had experienced a previous entanglement, and 8-25% received new injuries each year (Robbins and Mattila 2004). From 2006 through 2010, there were at least 29 serious injuries and mortalities attributed to entanglement for humpback whales (Waring *et al.* 2014). The impacts of Reg-16 alternatives for other large whales such as humpback whales and fin whales could not be quantified due to a lack of detailed mid-Atlantic distribution data.

In summary, the lack of recent winter fishing challenges predicting future fisher behavior, and the unknown dynamics of serial depletion make it challenging to predict future black sea bass catch rates, especially in the Nov-Apr time period. Our analyses provide a broad range of possible scenarios to highlight the uncertainty in predicted catch rates. Analyses indicated that proposed pot gear closed areas do not cover all reported historical pot gear fishing grounds and cover varying proportions of areas where right whales are predicted to be found. Increased fishing pressure early in the season similar to derby conditions observed in the past, pot gear effort shifting into deeper water outside a closed area, removing the hook and line gear trip limit, and allowing additional pot gear participation could all increase the probability of attaining the ACL sooner than projected.

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Table 1. Estimated daily catch rates (lb gw) for Scenario 1 (observed 2008/09), Scenario 2 (monthly ratio 2008/09 applied to 2013/14 Oct catch rate), Scenario 3 (constant Oct 2013/14 catch rate), and Scenario 4 (mean observed 2006/07-2008/09) by fishing month.

Month	Status Quo	Scenario 1	Scenario 2	Scenario 3	Scenario 4	"Other Gear"
Jan	0	1,866	3,351	1,214	2,013	875
Feb	0	1,669	2,998	1,214	1,633	1,535
Mar	0	1,051	1,888	1,214	1,196	628
Apr	0	384	690	1,214	1,229	903
May	0	315	566	1,214	1,214	1,028
June	2,013	2,013	2,013	2,013	1,146	2,007
July	1,633	1,633	1,633	1,633	2,092	1,547
Aug	1,196	1,196	1,196	1,196	1,791	1,027
Sept	1,229	1,229	1,229	1,229	2,046	842
Oct	1,214	1,214	1,214	1,214	1,108	733
Nov	0	1,266	2,274	1,214	548	193
Dec	0	1,384	2,485	1,214	207	2,381

Table 2. Projected commercial black sea bass closure dates, percent of ACL reached, and risk of right whale entanglement in pot gear vertical lines (in relative risk units) under proposed Alternatives in Regulatory Amendment 16.

MEAN CONDITION	Alt1 SQ	No Closure				Alt2				Alt3				Alt4				Alt5				Alt6				Alt7a					
		S1	S2	S3	S4	S1	S2	S3	S4	S1	S2	S3	S4	S1	S2	S3	S4	S1	S2	S3	S4	S1	S2	S3	S4	S1	S2	S3	S4		
Scenario A	Closure Date	n/a	10/2	8/4	9/20	9/27	10/2	8/4	9/20	9/27	12/5	10/12	10/28	12/3	12/30	12/22	12/18	12/30	12/24	12/11	12/11	12/23	12/29	12/21	12/18	12/29	10/11	8/18	10/6	10/7	
	%ACL	97%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
	RW Risk (NC)	0	100	100	100	100	100	100	100	100	14	10	10	14	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	RW Risk (FL-SC)	0	100	100	100	100	100	100	100	100	48	47	47	48	0	0	0	0	37	37	37	37	0	0	0	0	94	94	94	94	
Scenario B	Closure Date	n/a	10/2	8/4	9/20	9/27	10/2	8/4	9/20	9/27	12/3	10/17	11/4	12/2	12/28	12/19	12/18	12/29	12/18	12/2	12/8	12/17	n/a	12/25	12/20	n/a	10/12	8/20	10/9	10/9	
	%ACL	97%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
	RW Risk (NC)	0	100	100	100	100	100	100	100	100	26	21	21	26	8	8	8	8	2	1	1	2	8	8	8	8	69	69	69	69	
	RW Risk (FL-SC)	0	100	100	100	100	100	100	100	100	30	29	29	30	2	2	2	2	43	42	42	43	0	0	0	0	77	77	77	77	
Scenario C	Closure Date	n/a	10/2	8/4	9/20	9/27	10/2	8/4	9/20	9/27	11/26	10/4	10/26	11/19	12/20	12/7	12/11	12/19	12/16	12/1	12/6	12/15	12/20	12/7	12/10	12/19	10/11	8/18	10/6	10/7	
	%ACL	97%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
	RW Risk (NC)	0	100	100	100	100	100	100	100	100	17	13	13	16	4	3	3	3	2	2	2	2	4	3	3	3	71	71	71	71	
	RW Risk (FL-SC)	0	100	100	100	100	100	100	100	100	44	43	43	44	1	1	1	1	34	33	33	34	0	0	0	0	84	84	84	84	
MEAN CONDITION	Alt1 SQ	Alt7b				Alt7c				Alt8a				Alt8b				Alt9a				Alt9b				Alt10					
Scenario A	Closure Date	n/a	n/a	12/30	12/21	n/a	12/28	12/17	12/14	12/29	12/11	10/24	10/31	12/9	n/a	12/30	12/21	n/a	10/31	9/20	10/15	10/27	n/a	12/28	12/20	n/a	n/a	12/29	12/20	n/a	
	%ACL	97%	99%	100%	100%	99%	100%	100%	100%	100%	100%	100%	100%	100%	99%	100%	100%	98%	100%	100%	100%	100%	99%	100%	100%	99%	99%	100%	100%	99%	
	RW Risk (NC)	0	81	80	77	81	80	76	75	81	14	13	13	14	55	54	51	55	26	26	26	26	65	64	61	65	59	58	55	59	
	RW Risk (FL-SC)	0	98	97	92	98	91	85	83	92	40	38	38	39	81	79	74	81	62	62	62	62	90	87	83	90	81	79	74	81	
Scenario B	Closure Date	n/a	12/28	12/18	12/17	12/28	12/22	12/9	12/11	12/23	12/7	10/25	11/5	12/6	12/29	12/20	12/18	12/29	11/9	9/27	10/19	11/3	12/26	12/15	12/14	12/26	12/27	12/17	12/16	12/28	
	%ACL	97%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
	RW Risk (NC)	0	86	78	77	86	92	82	83	93	36	30	31	36	68	61	59	68	51	48	48	49	87	78	78	87	74	66	65	75	
	RW Risk (FL-SC)	0	73	70	70	73	70	67	67	71	50	48	49	50	65	62	61	65	57	56	56	56	71	68	68	71	65	62	62	66	
Scenario C	Closure Date	n/a	n/a	12/27	12/19	n/a	12/27	12/16	12/13	12/28	12/6	10/17	10/29	12/5	n/a	12/28	12/20	n/a	10/28	9/15	10/13	10/24	12/31	12/24	12/17	n/a	n/a	12/25	12/18	n/a	
	%ACL	97%	99%	100%	100%	99%	100%	100%	100%	100%	100%	100%	100%	100%	99%	100%	100%	99%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	99%	
	RW Risk (NC)	0	89	84	77	89	96	86	83	97	19	17	17	19	65	60	53	65	35	35	35	35	82	77	70	82	71	71	71	71	
	RW Risk (FL-SC)	0	92	89	84	92	85	78	76	86	37	36	36	37	76	74	68	76	56	56	56	56	84	79	74	84	77	72	68	77	

WARM CONDITION	Alt1 SQ	No Closure				Alt2				Alt3				Alt4				Alt5				Alt6				Alt7a				
		S1	S2	S3	S4	S1	S2	S3	S4	S1	S2	S3	S4	S1	S2	S3	S4	S1	S2	S3	S4	S1	S2	S3	S4	S1	S2	S3	S4	
Scenario A	Closure Date	n/a	10/2	8/4	9/20	9/27	10/2	8/4	9/20	9/27	12/5	10/12	10/28	12/3	12/30	12/22	12/18	12/30	12/24	12/11	12/11	12/23	12/29	12/21	12/18	12/29	10/11	8/18	10/6	10/7
	%ACL	97%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	RW Risk (NC)	0	100	100	100	100	100	100	100	100	14	10	10	14	2	2	2	2	2	2	2	2	2	2	2	2	74	74	74	74
	RW Risk (FL-SC)	0	100	100	100	100	100	100	100	100	33	32	32	33	0	0	0	0	13	12	12	13	0	0	0	0	96	96	96	96
Scenario B	Closure Date	n/a	10/2	8/4	9/20	9/27	10/2	8/4	9/20	9/27	12/3	10/17	11/4	12/2	12/28	12/19	12/18	12/29	12/18	12/2	12/8	12/17	n/a	12/25	12/20	n/a	10/12	8/20	10/9	10/9
	%ACL	97%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	RW Risk (NC)	0	100	100	100	100	100	100	100	100	26	21	21	26	8	8	8	8	2	1	1	2	8	8	8	8	69	69	69	69
	RW Risk (FL-SC)	0	100	100	100	100	100	100	100	100	17	16	16	17	1	1	1	1	15	15	15	15	0	0	0	0	82	82	82	82
Scenario C	Closure Date	n/a	10/2	8/4	9/20	9/27	10/2	8/4	9/20	9/27	11/26	10/4	10/26	11/19	12/20	12/7	12/11	12/19	12/16	12/1	12/6	12/15	12/20	12/7	12/10	12/19	10/11	8/18	10/6	10/7
	%ACL	97%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	RW Risk (NC)	0	100	100	100	100	100	100	100	100	17	13	13	16	4	3	3	3	2	2	2	2	4	3	3	3	71	71	71	71
	RW Risk (FL-SC)	0	100	100	100	100	100	100	100	100	31	30	30	31	0	0	0	0	11	11	11	11	0	0	0	0	91	91	91	91
WARM CONDITION	Alt1 SQ	Alt7b				Alt7c				Alt8a				Alt8b				Alt9a				Alt9b				Alt10				
	S1 <th>S2</th> <th>S3</th> <th>S4</th> <th>S1</th> <th>S2</th> <th>S3</th> <th>S4</th> <th>S1</th> <th>S2</th> <th>S3</th> <th>S4</th> <th>S1</th> <th>S2</th> <th>S3</th> <th>S4</th> <th>S1</th> <th>S2</th> <th>S3</th> <th>S4</th> <th>S1</th> <th>S2</th> <th>S3</th> <th>S4</th> <th>S1</th> <th>S2</th> <th>S3</th> <th>S4</th>	S2	S3	S4	S1	S2	S3	S4	S1	S2	S3	S4	S1	S2	S3	S4	S1	S2	S3	S4	S1	S2	S3	S4	S1	S2	S3	S4		
Scenario A	Closure Date	n/a	n/a	12/30	12/21	n/a	12/28	12/17	12/14	12/29	12/11	10/24	10/31	12/9	n/a	12/30	12/21	n/a	10/31	9/20	10/15	10/27	n/a	12/28	12/20	n/a	n/a	12/29	12/20	n/a
	%ACL	97%	99%	100%	100%	99%	100%	100%	100%	100%	100%	100%	100%	100%	99%	100%	100%	98%	100%	100%	100%	100%	99%	100%	100%	99%	99%	100%	100%	99%
	RW Risk (NC)	0	81	80	77	81	80	76	75	81	14	13	13	14	55	54	51	55	26	26	26	26	65	64	61	65	59	58	55	59
	RW Risk (FL-SC)	0	106	105	99	106	96	89	87	97	14	13	13	14	84	83	77	84	46	46	46	46	90	88	82	90	84	82	77	84
Scenario B	Closure Date	n/a	12/28	12/18	12/17	12/28	12/22	12/9	12/11	12/23	12/7	10/25	11/5	12/6	12/29	12/20	12/18	12/29	11/9	9/27	10/19	11/3	12/26	12/15	12/14	12/26	12/27	12/17	12/16	12/28
	%ACL	97%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	RW Risk (NC)	0	86	78	77	86	92	82	83	93	36	30	31	36	68	61	59	68	51	48	48	49	87	78	78	87	74	66	65	75
	RW Risk (FL-SC)	0	84	80	80	84	82	77	78	83	22	21	21	22	68	64	63	68	31	30	30	30	72	67	67	72	68	64	64	69
Scenario C	Closure Date	n/a	n/a	12/27	12/19	n/a	12/27	12/16	12/13	12/28	12/6	10/17	10/29	12/5	n/a	12/28	12/20	n/a	10/28	9/15	10/13	10/24	12/31	12/24	12/17	n/a	n/a	12/25	12/18	n/a
	%ACL	97%	99%	100%	100%	99%	100%	100%	100%	100%	100%	100%	100%	100%	99%	100%	100%	99%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	99%
	RW Risk (NC)	0	89	84	77	89	96	86	83	97	19	17	17	19	65	60	53	65	35	35	35	35	82	77	70	82	71	71	71	71
	RW Risk (FL-SC)	0	103	99	92	103	99	91	88	100	14	13	13	14	89	86	79	89	41	41	41	41	93	87	82	94	89	84	78	89

COLD CONDITION	Alt1 SQ	No Closure				Alt2				Alt3				Alt4				Alt5				Alt6				Alt7a				
		S1	S2	S3	S4	S1	S2	S3	S4	S1	S2	S3	S4	S1	S2	S3	S4	S1	S2	S3	S4	S1	S2	S3	S4	S1	S2	S3	S4	
Scenario A	Closure Date	n/a	10/2	8/4	9/20	9/27	10/2	8/4	9/20	9/27	12/5	10/12	10/28	12/3	12/30	12/22	12/18	12/30	12/24	12/11	12/11	12/23	12/29	12/21	12/18	12/29	10/11	8/18	10/6	10/7
	%ACL	97%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	RW Risk (NC)	0	100	100	100	100	100	100	100	100	14	10	10	14	2	2	2	2	2	2	2	2	2	2	2	2	74	74	74	74
	RW Risk (FL-SC)	0	100	100	100	100	100	100	100	100	52	51	51	52	0	0	0	0	52	52	52	52	0	0	0	0	95	95	95	95
Scenario B	Closure Date	n/a	10/2	8/4	9/20	9/27	10/2	8/4	9/20	9/27	12/3	10/17	11/4	12/2	12/28	12/19	12/18	12/29	12/18	12/2	12/8	12/17	n/a	12/25	12/20	n/a	10/12	8/20	10/9	10/9
	%ACL	97%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	RW Risk (NC)	0	100	100	100	100	100	100	100	100	26	21	21	26	8	8	8	8	2	1	1	2	8	8	8	8	69	69	69	69
	RW Risk (FL-SC)	0	100	100	100	100	100	100	100	100	37	36	36	37	3	3	3	3	58	57	58	58	0	0	0	0	82	82	82	82
Scenario C	Closure Date	n/a	10/2	8/4	9/20	9/27	10/2	8/4	9/20	9/27	11/26	10/4	10/26	11/19	12/20	12/7	12/11	12/19	12/16	12/1	12/6	12/15	12/20	12/7	12/10	12/19	10/11	8/18	10/6	10/7
	%ACL	97%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	RW Risk (NC)	0	100	100	100	100	100	100	100	100	17	13	13	16	4	3	3	3	2	2	2	2	4	3	3	3	71	71	71	71
	RW Risk (FL-SC)	0	100	100	100	100	100	100	100	100	51	51	51	51	1	1	1	1	48	48	48	48	0	0	0	0	87	87	87	87
COLD CONDITION	Alt1 SQ	Alt7b				Alt7c				Alt8a				Alt8b				Alt9a				Alt9b				Alt10				
		S1	S2	S3	S4	S1	S2	S3	S4	S1	S2	S3	S4	S1	S2	S3	S4	S1	S2	S3	S4	S1	S2	S3	S4	S1	S2	S3	S4	
Scenario A	Closure Date	n/a	n/a	12/30	12/21	n/a	12/28	12/17	12/14	12/29	12/11	10/24	10/31	12/9	n/a	12/30	12/21	n/a	10/31	9/20	10/15	10/27	n/a	12/28	12/20	n/a	n/a	12/29	12/20	n/a
	%ACL	97%	99%	100%	100%	99%	100%	100%	100%	100%	100%	100%	100%	100%	99%	100%	100%	98%	100%	100%	100%	100%	99%	100%	100%	99%	99%	100%	100%	99%
	RW Risk (NC)	0	81	80	77	81	80	76	75	81	14	13	13	14	55	54	51	55	26	26	26	26	65	64	61	65	59	58	55	59
	RW Risk (FL-SC)	0	92	92	89	92	86	83	82	86	54	53	53	54	82	82	79	82	72	72	72	72	89	88	85	89	83	82	79	83
Scenario B	Closure Date	n/a	12/28	12/18	12/17	12/28	12/22	12/9	12/11	12/23	12/7	10/25	11/5	12/6	12/29	12/20	12/18	12/29	11/9	9/27	10/19	11/3	12/26	12/15	12/14	12/26	12/27	12/17	12/16	12/28
	%ACL	97%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	RW Risk (NC)	0	86	78	77	86	92	82	83	93	36	30	31	36	68	61	59	68	51	48	48	49	87	78	78	87	74	66	65	75
	RW Risk (FL-SC)	0	74	72	72	74	71	70	70	72	64	63	63	64	72	70	70	72	69	68	68	69	76	75	75	76	72	70	70	72
Scenario C	Closure Date	n/a	n/a	12/27	12/19	n/a	12/27	12/16	12/13	12/28	12/6	10/17	10/29	12/5	n/a	12/28	12/20	n/a	10/28	9/15	10/13	10/24	12/31	12/24	12/17	n/a	n/a	12/25	12/18	n/a
	%ACL	97%	99%	100%	100%	99%	100%	100%	100%	100%	100%	100%	100%	100%	99%	100%	100%	99%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	99%
	RW Risk (NC)	0	89	84	77	89	96	86	83	97	19	17	17	19	65	60	53	65	35	35	35	35	82	77	70	82	71	71	71	71
	RW Risk (FL-SC)	0	88	87	84	88	82	78	77	82	52	51	51	52	78	76	73	78	67	67	67	67	83	81	78	83	78	75	73	78

Sensitivity Runs: Mean, warm, and cold conditions whale distributions, catch rate projection scenarios 1-4 (i.e., observed 2008/09 winter catch rates, observed 2013/14 summer catch rates scaled to account for higher winter CPUE, observed 2013/14 summer catch rates, and mean observed 2006/07-2008/09 winter catch rates) and spatial fishing distribution scenarios A-C (i.e., based on Nov-Apr 2008/09 pot distribution with 2013/14 soak times, based on 2013/14 June-October pot distribution and soak times, based on mean Nov-Apr 2006/07-2008/09 pot distribution with 2013/14 soak times).

Table 3. Ranked projected risk of right whale entanglement in pot gear vertical lines (in relative risk units; RRU) under proposed Alternatives in Regulatory Amendment 16.

NARW Protection	Alternative
Most Protective	Alternative 1: no relative risk of entanglement (0 RRU)
	Alternative 6: low increase in relative risk off NC (+2-8 RRU); no additional risk off FL-SC (0 RRU).
	Alternative 4: low increase in relative risk off NC (+2-8 RRU); low increase in relative risk off FL-SC (+0-3 RRU).
	Alternative 5: low increase in relative risk off NC (+1-2 RRU); low to high increase in relative risk off FL-SC (+11-58 RRU).
	Alternative 3: low to moderate increase in relative risk off NC (+10-26 RRU); low to high increase in relative risk off FL-SC (+16-52 RRU).
	Alternative 8a: low to moderate increase in relative risk off NC (+13-36 RRU); low to high increase in relative risk off FL-SC (+13-64 RRU).
	Alternative 9a: moderate to high increase in relative risk off NC (+26-51 RRU); moderate to high increase in relative risk off FL-SC (+30-72 RRU).
	Alternative 7a: high increase in relative risk off NC (+69-74 RRU); very high increase in relative risk off FL-SC (+77-96 RRU).
	Alternative 8b: high increase in relative risk off NC (+51-68 RRU); high to very high increase in relative risk off FL-SC (+61-89 RRU).
	Alternative 10: high to very high increase in relative risk off NC (+55-75 RRU); high to very high increase in relative risk off FL-SC (+62-89 RRU).
	Alternative 9b: high to very high increase in relative risk off NC (+61-87 RRU); high to very high increase in relative risk off FL-SC (+67-94 RRU).
	Alternative 7c: high to very high increase in relative risk off NC (+75-97 RRU) and off FL-SC (+67-100 RRU).
	Alternative 7b: very high increase in relative risk off NC (+77-89 RRU); high to very high increase in relative risk off FL-SC (+70-106 RRU).
Least Protective	Alternative 2: very high increase in relative risk off NC (+100 RRU over status quo) and off FL-SC (+100 RRU).
Risk Classification	1-25 RRU = low, 26-50 RRU = moderate, 51-75 RRU= high, 76-100+ RRU = very high

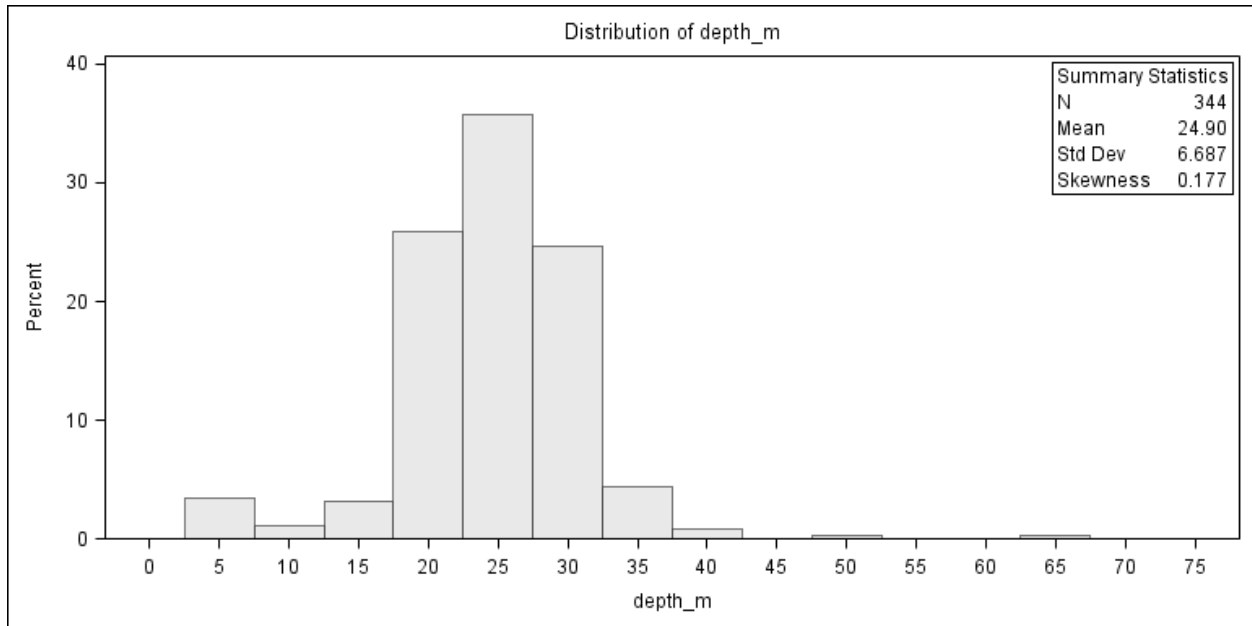


Figure 1. Histogram of reported depth of fishing (m) by commercial black sea bass pot gear endorsement holders for the 2012/13 and 2013/14 fishing seasons.

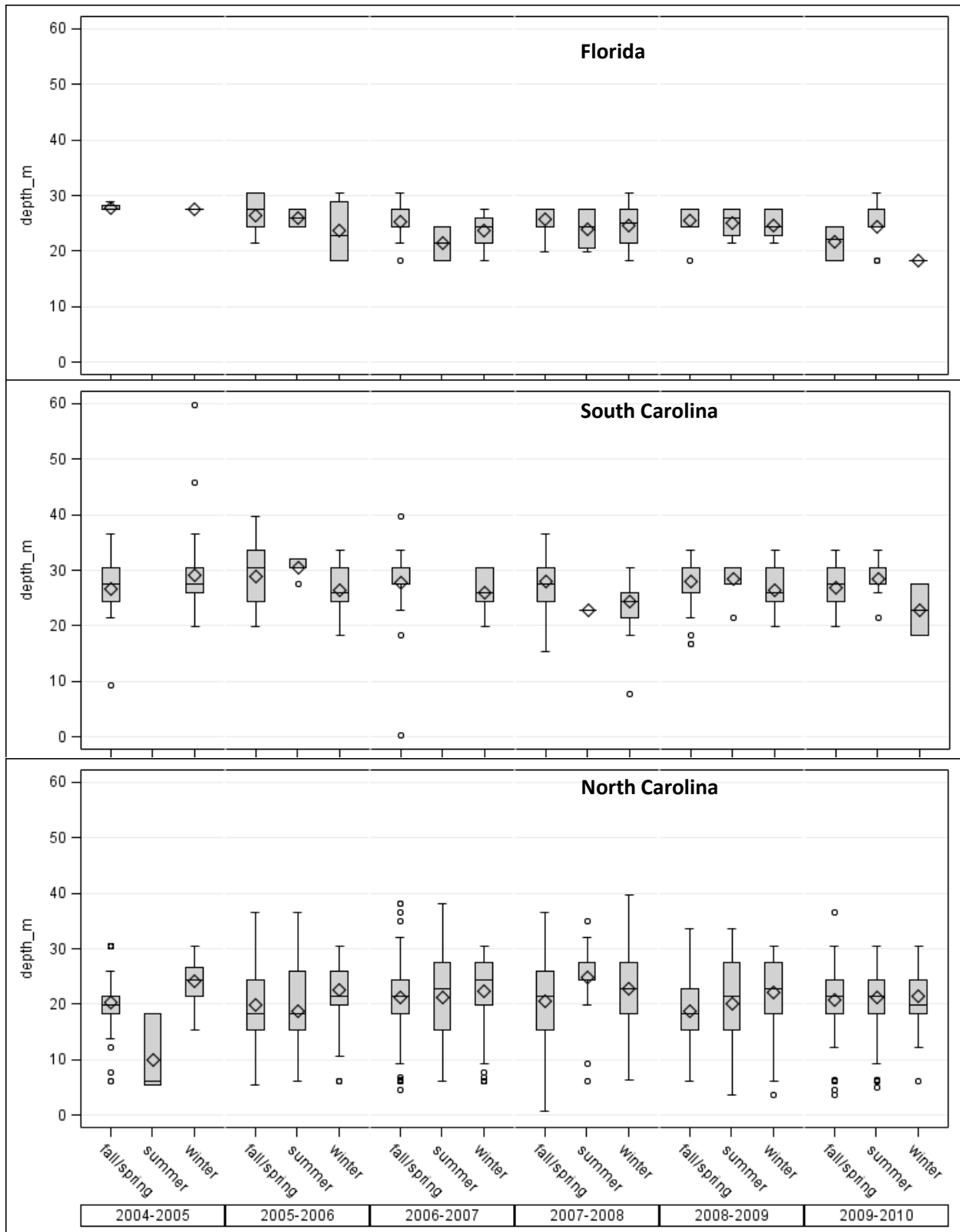


Figure 2. Boxplots of captain-reported depth of fishing (ft) for black sea bass pot gear endorsement holders, by state, fishing year, and season (summer: Jul-Aug, winter: Dec-Feb, fall/spring: Mar-Jun, Sept-Nov).

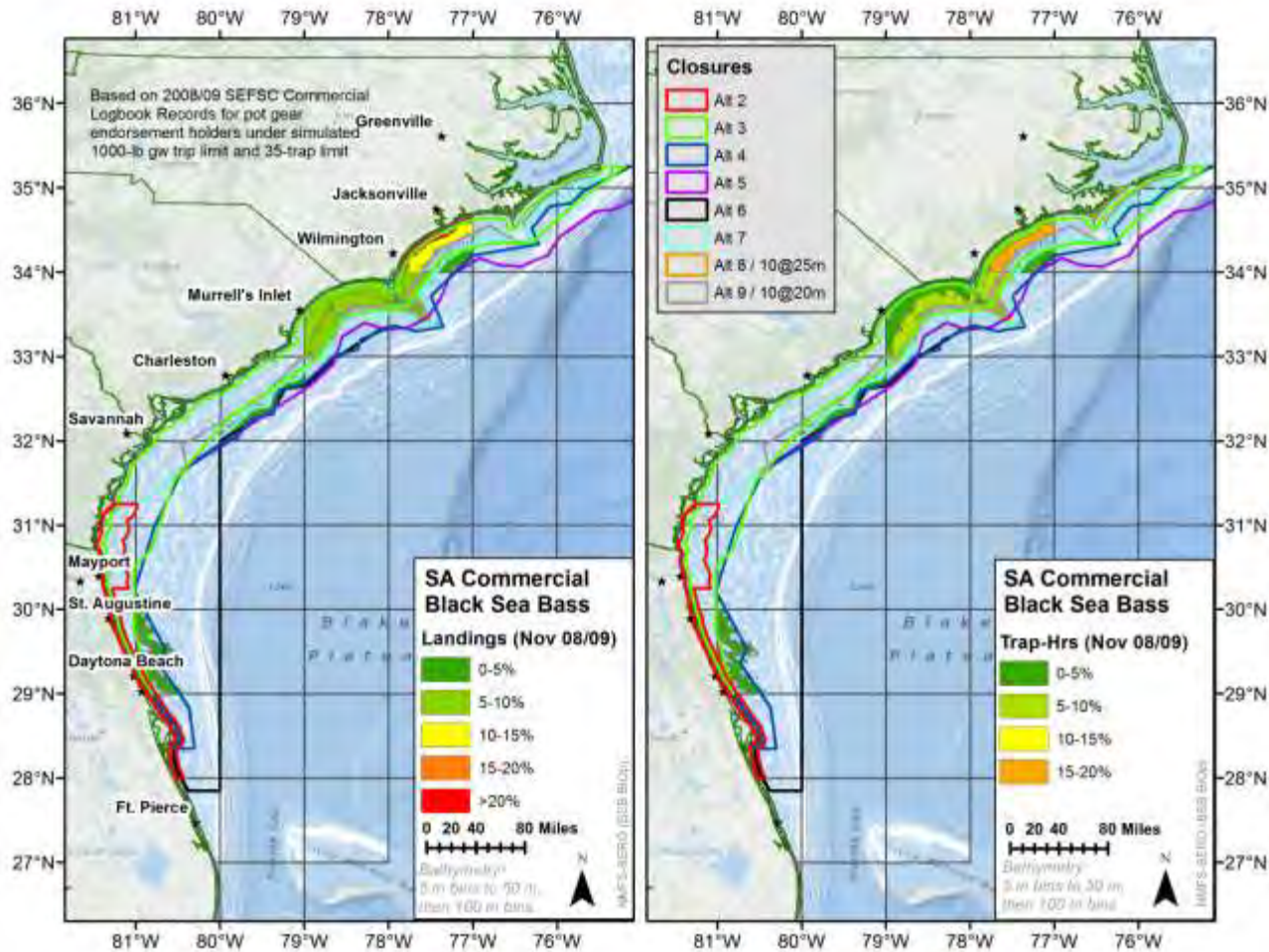


Figure 3: Scenario A (November). Spatial distribution of reported South Atlantic commercial black sea bass pot gear endorsement holder landings and effort under Amendment 18A regulations, by area and depth, for (A)-(F) most recent winter season (2008/09; by month) [‘Scenario A’], (G) most recent season (2013/14) [‘Scenario B’], and (H)-(M) mean of last three (2006/07-2008/09) winter seasons [‘Scenario C’]. Landings and effort are aggregated into 5-m wide by 1° tall bins and expressed as percentages of the total to maintain confidentiality. Bathymetry and shoreline courtesy ESRI Ocean Basemap.

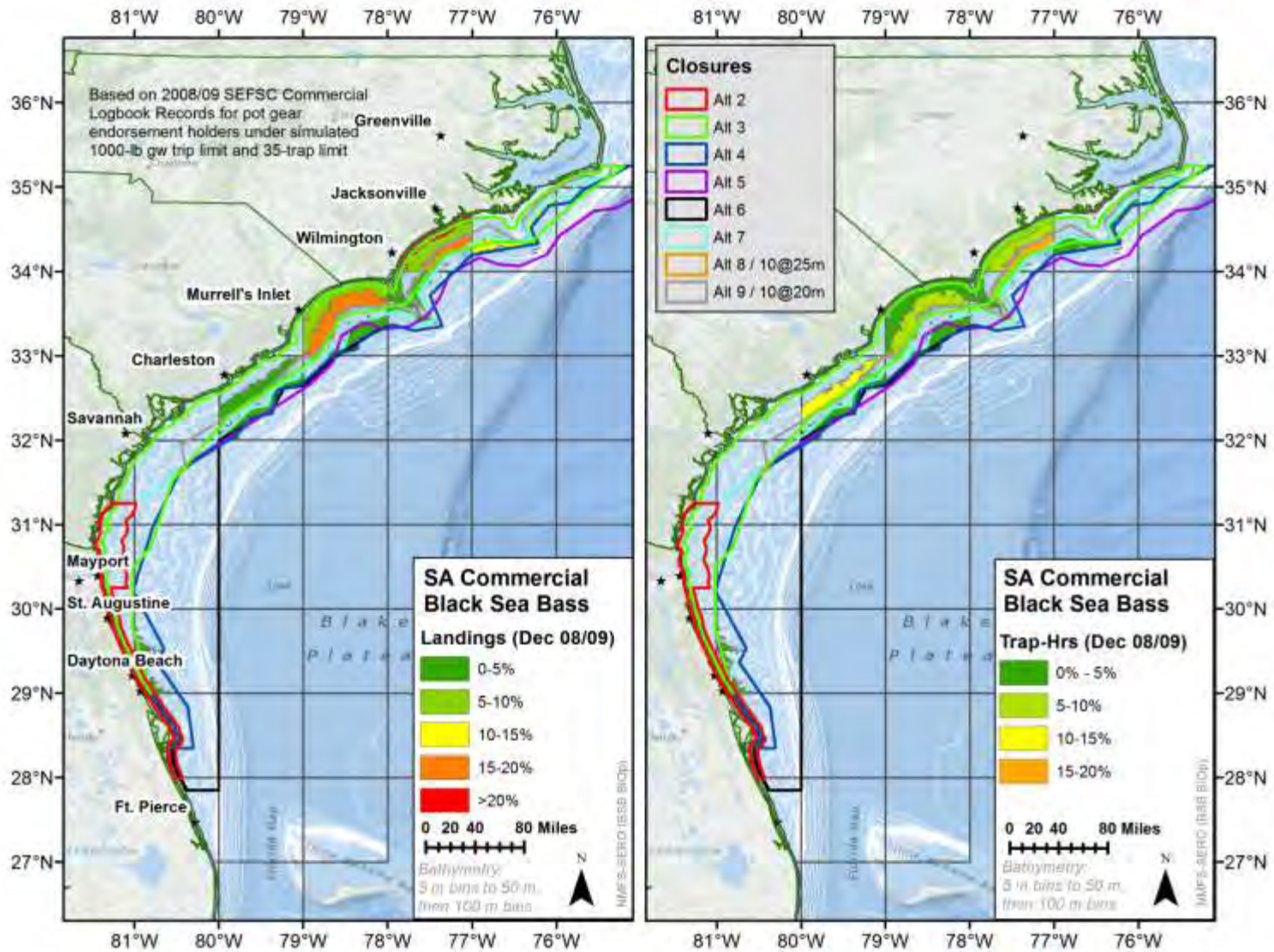


Figure 3B: Scenario A (December)

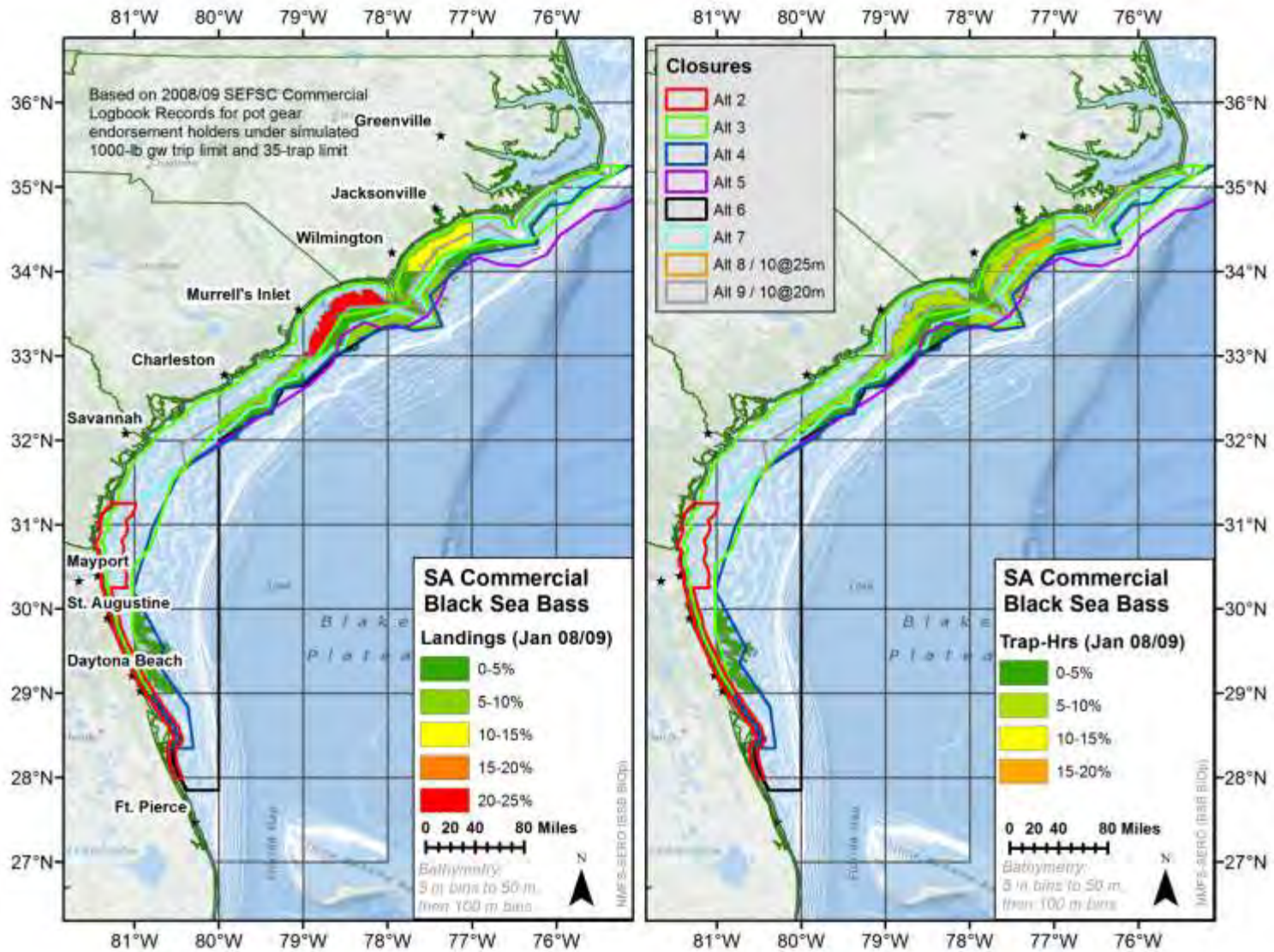


Figure 3C: Scenario A (January)

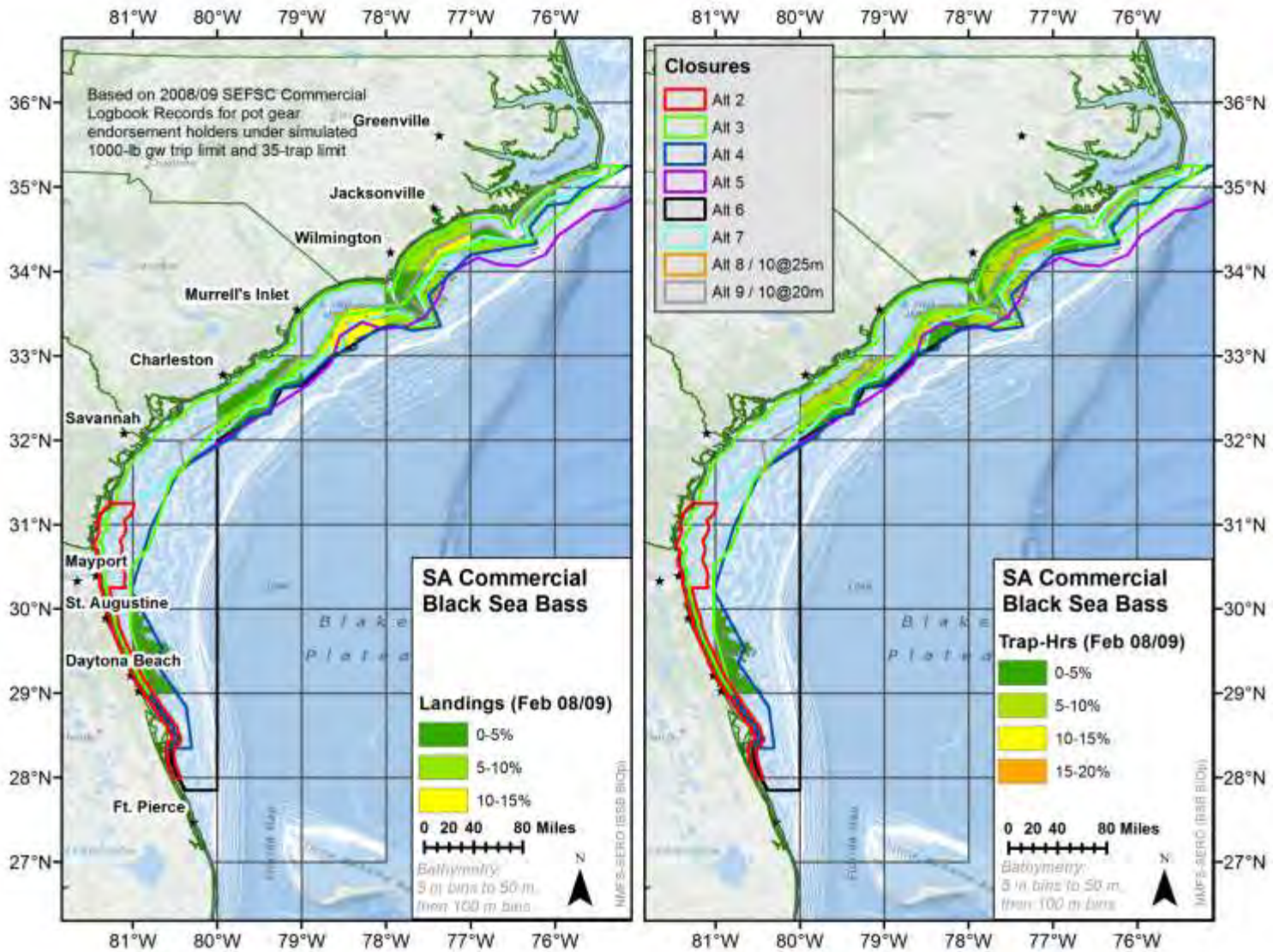


Figure 3D: Scenario A (February)

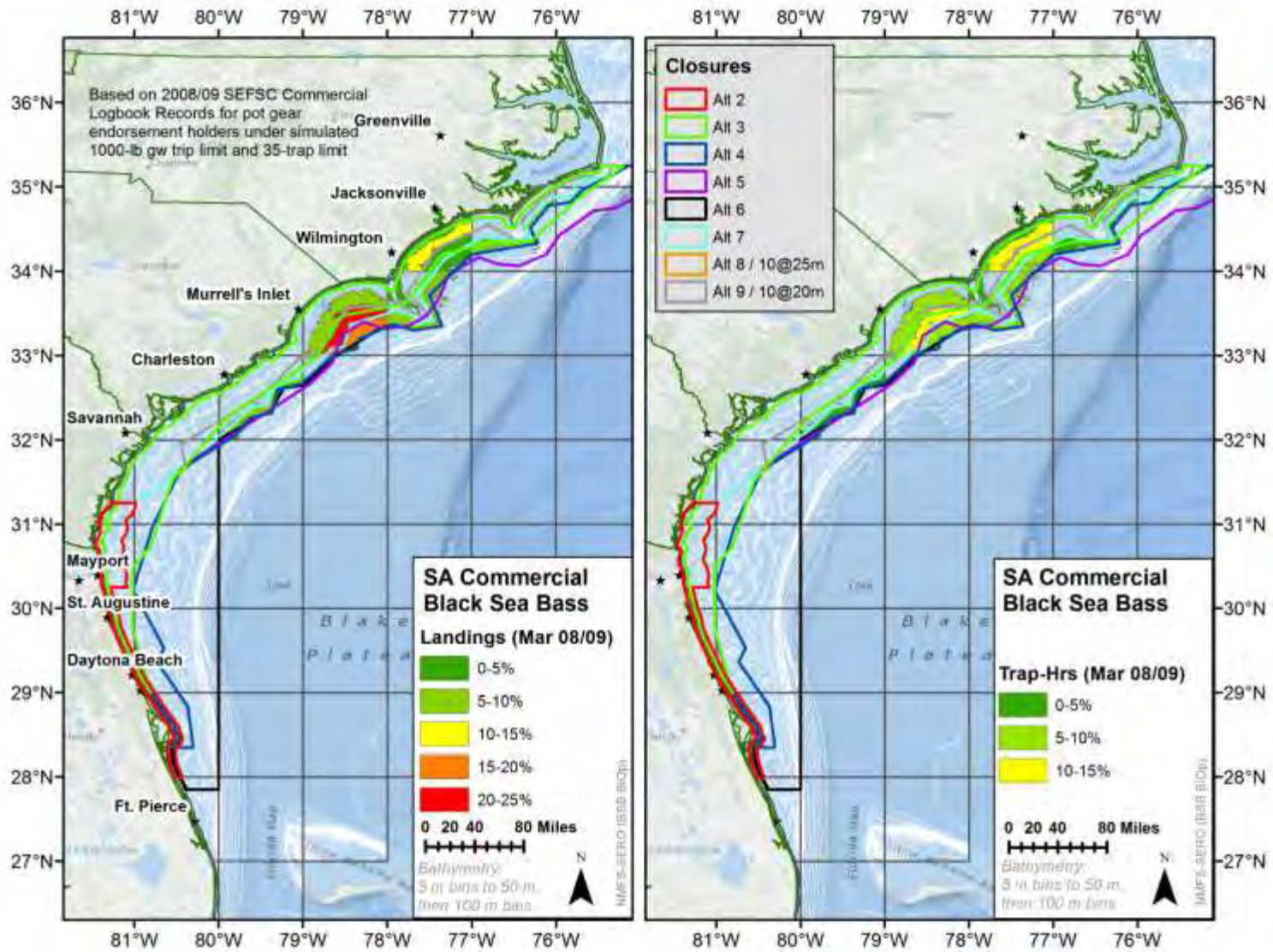


Figure 3E: Scenario A (March)

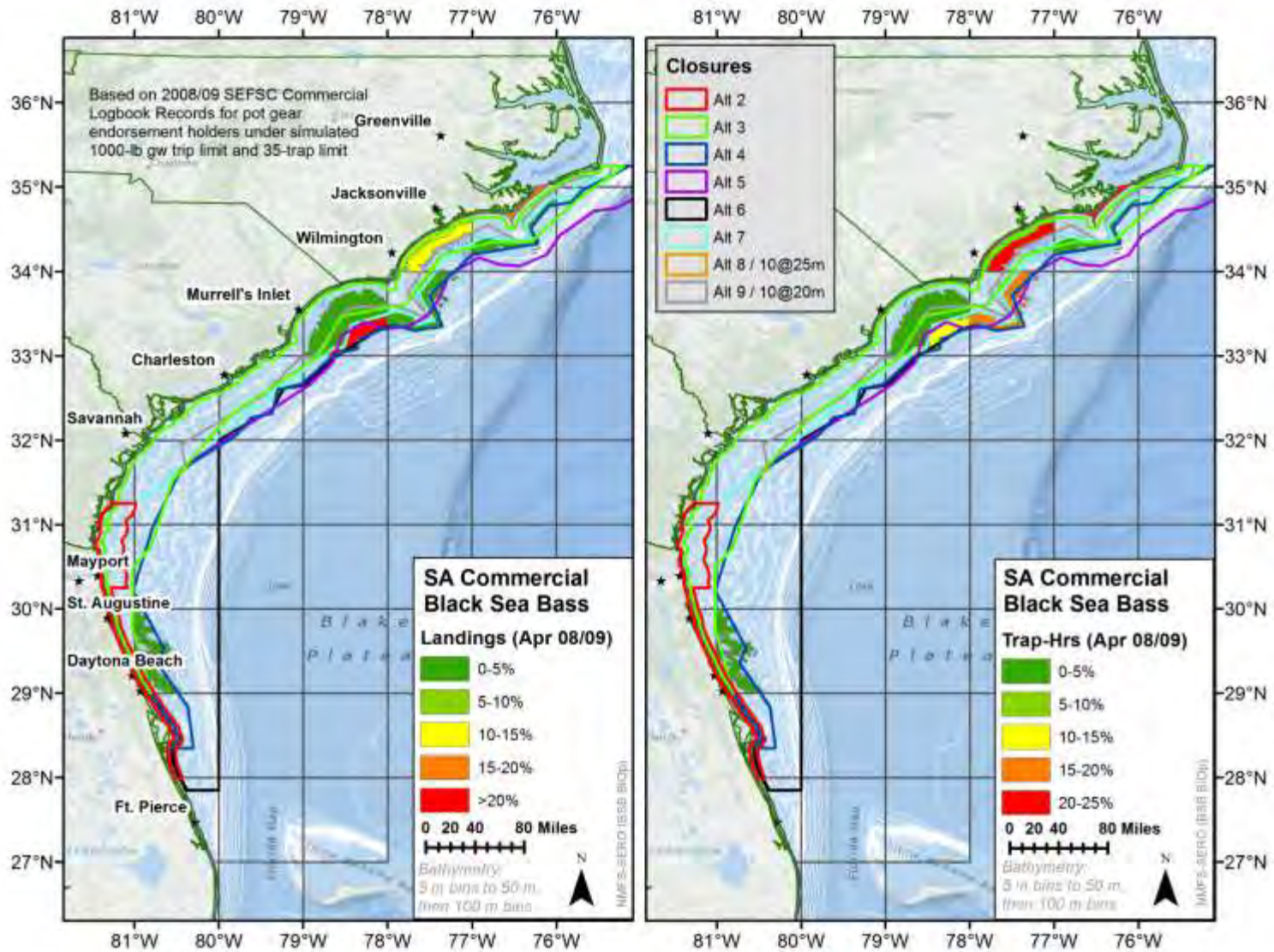


Figure 3F: Scenario A (April)

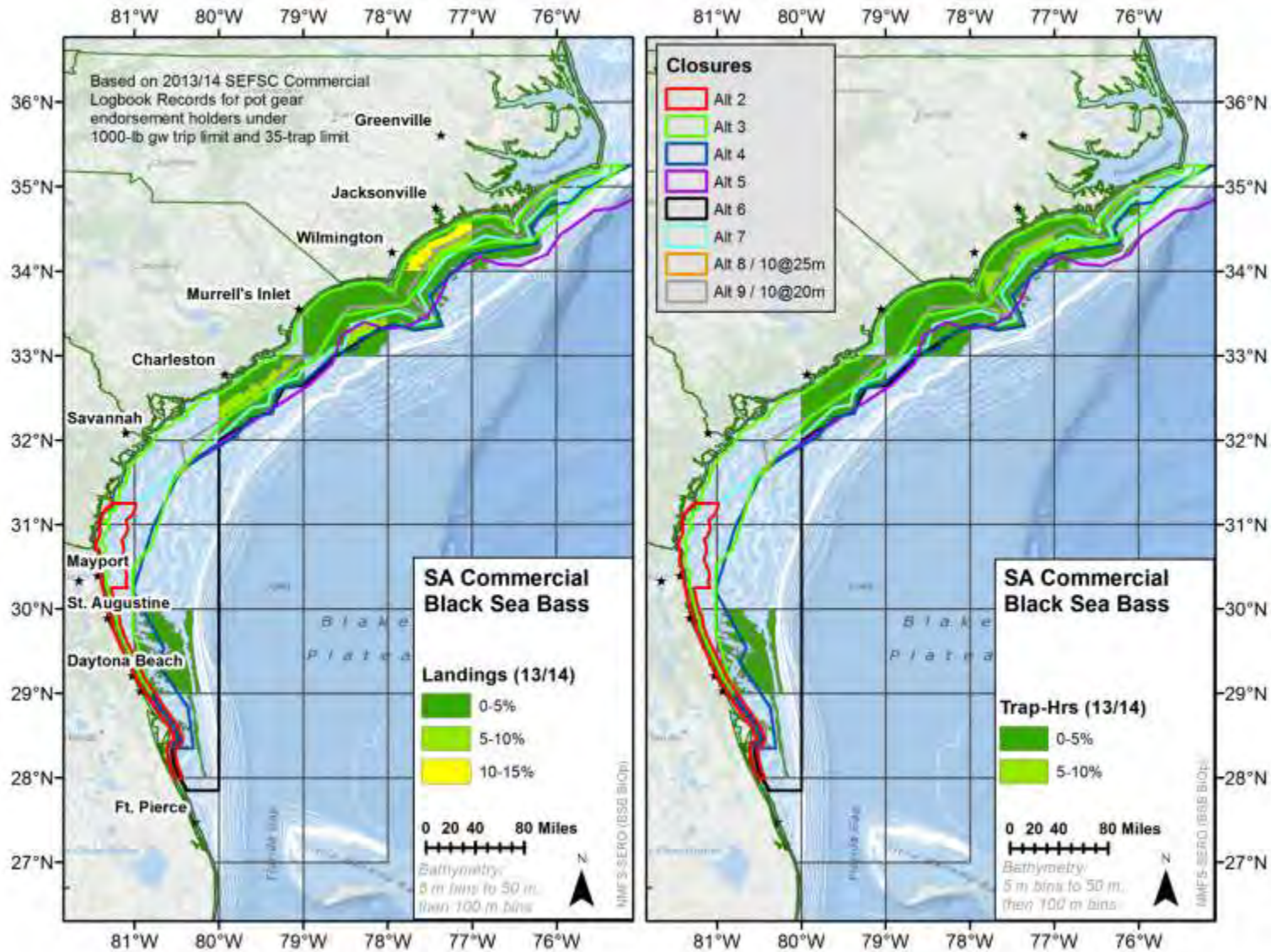


Figure 3G: Scenario B (Nov-Apr)

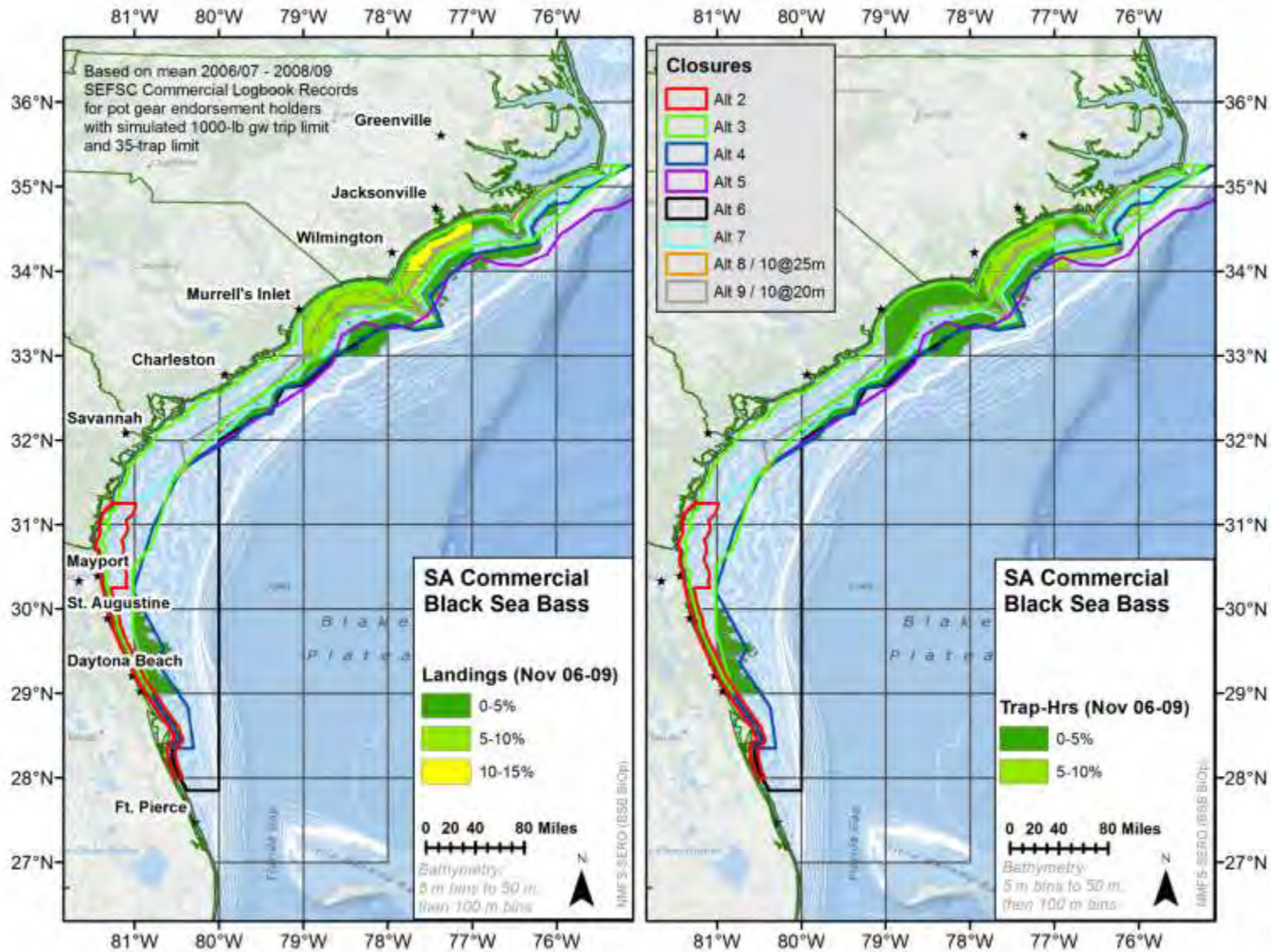


Figure 3H: Scenario C (November)

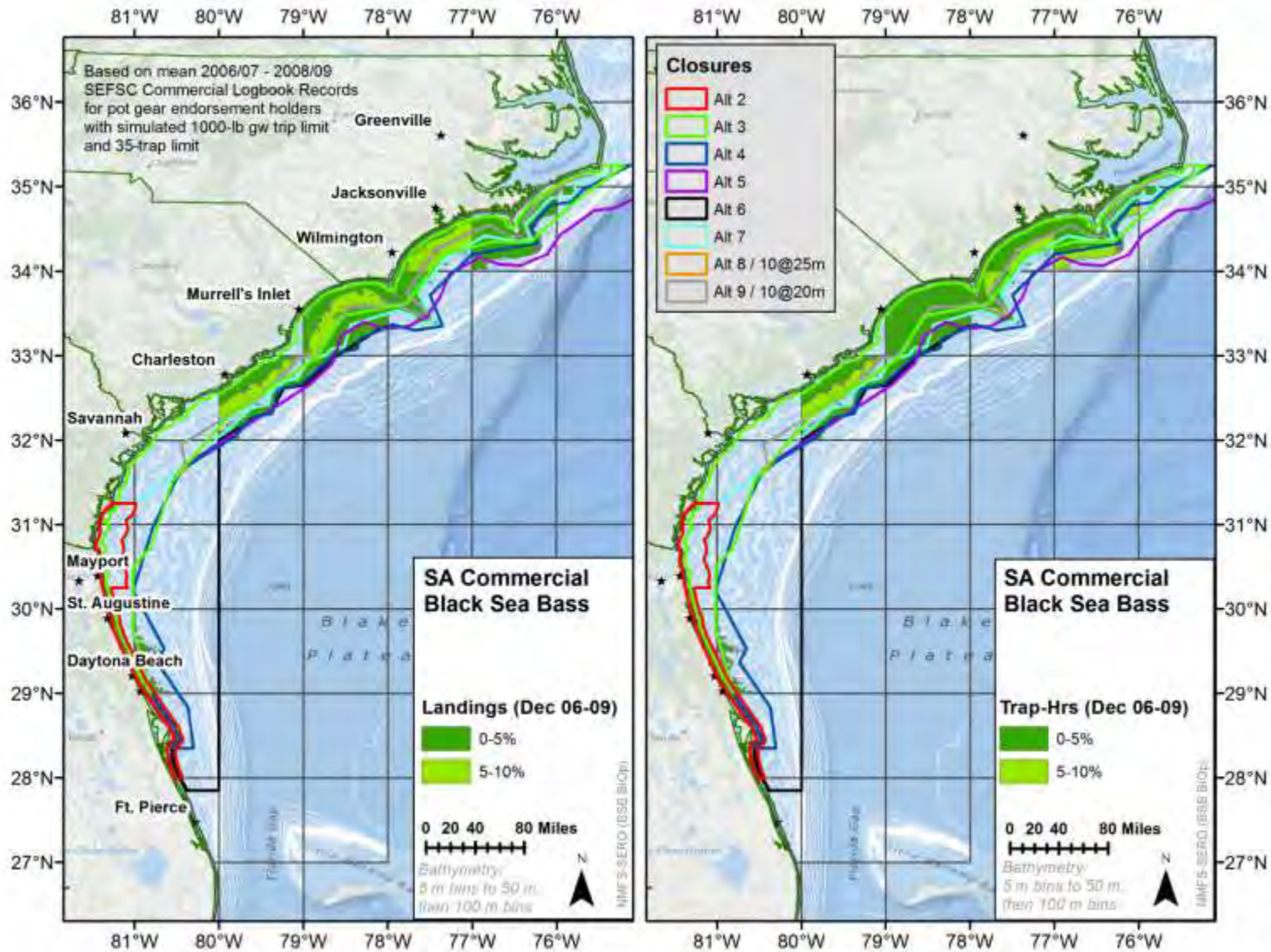


Figure 3I: Scenario C (December)

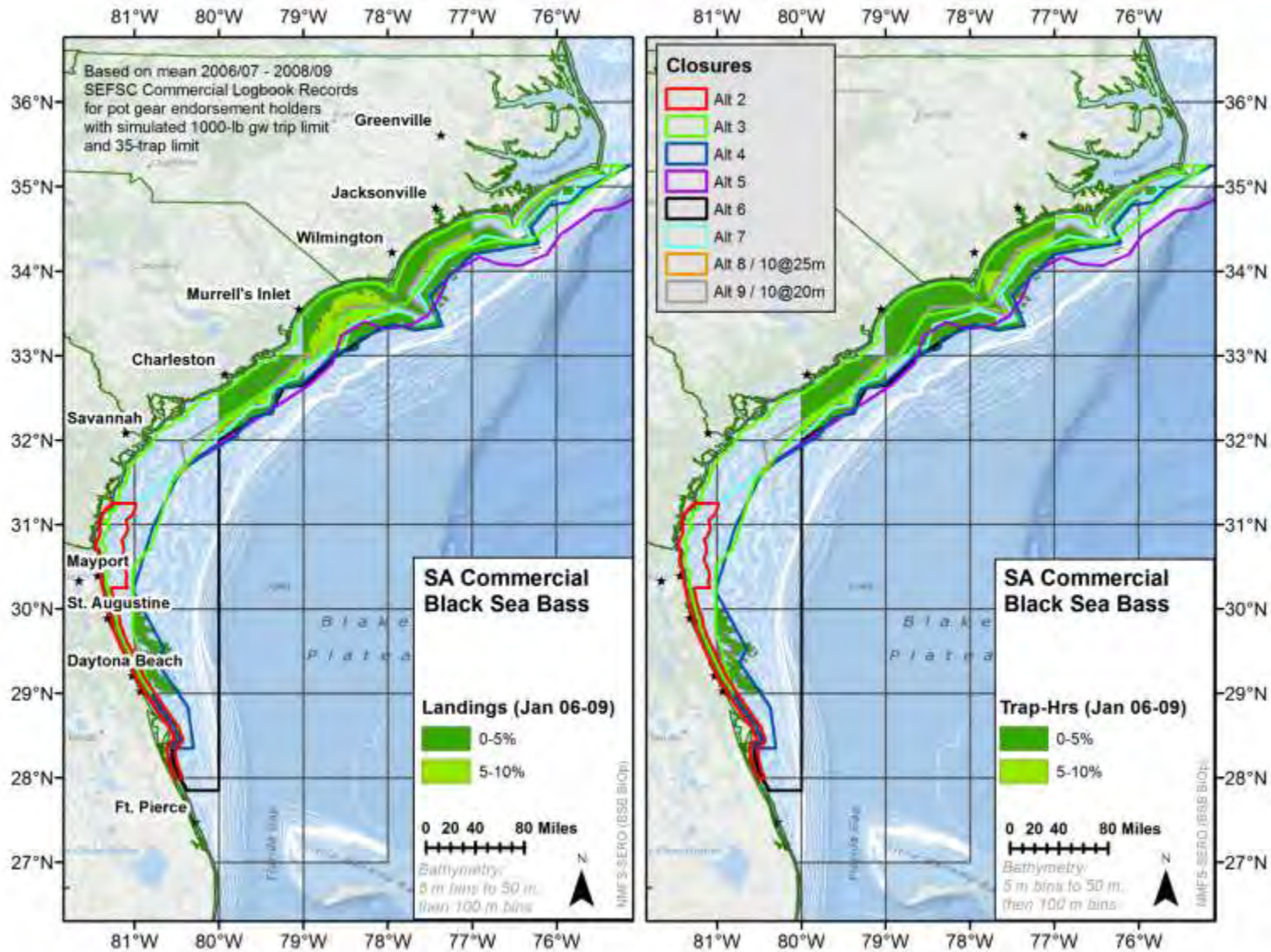


Figure 3J: Scenario C (January)

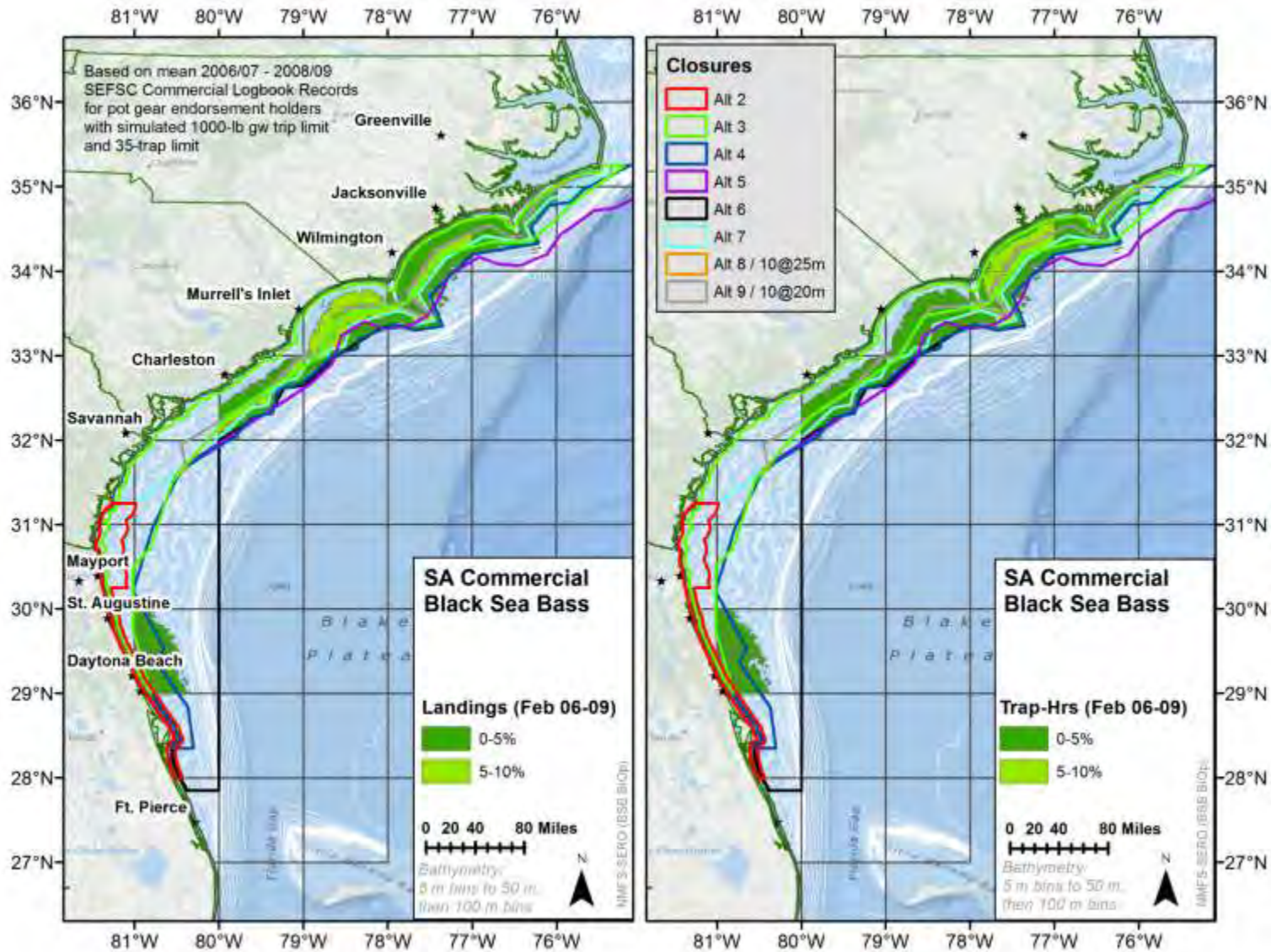


Figure 3K: Scenario C (February)

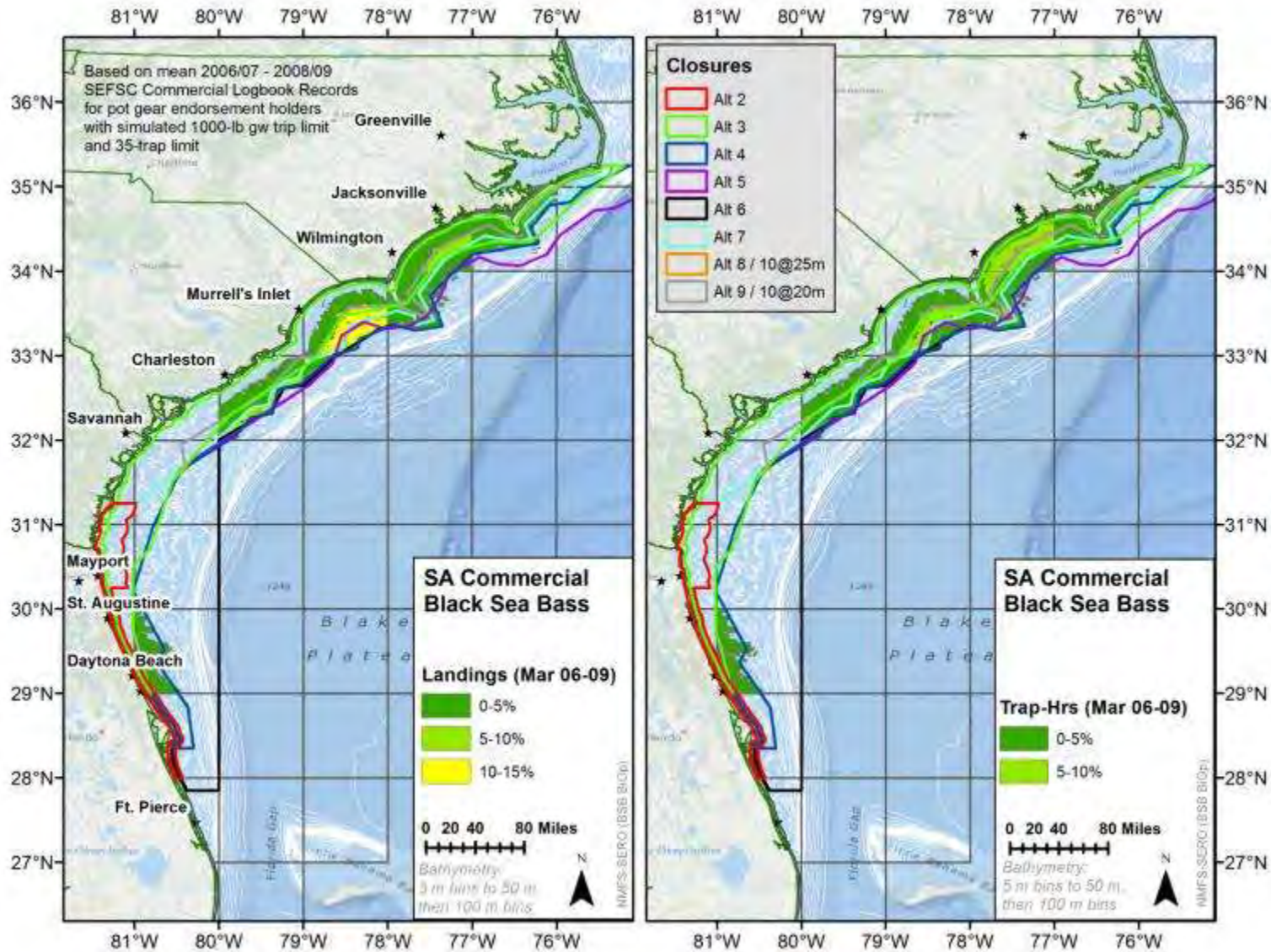


Figure 3L: Scenario C (March)

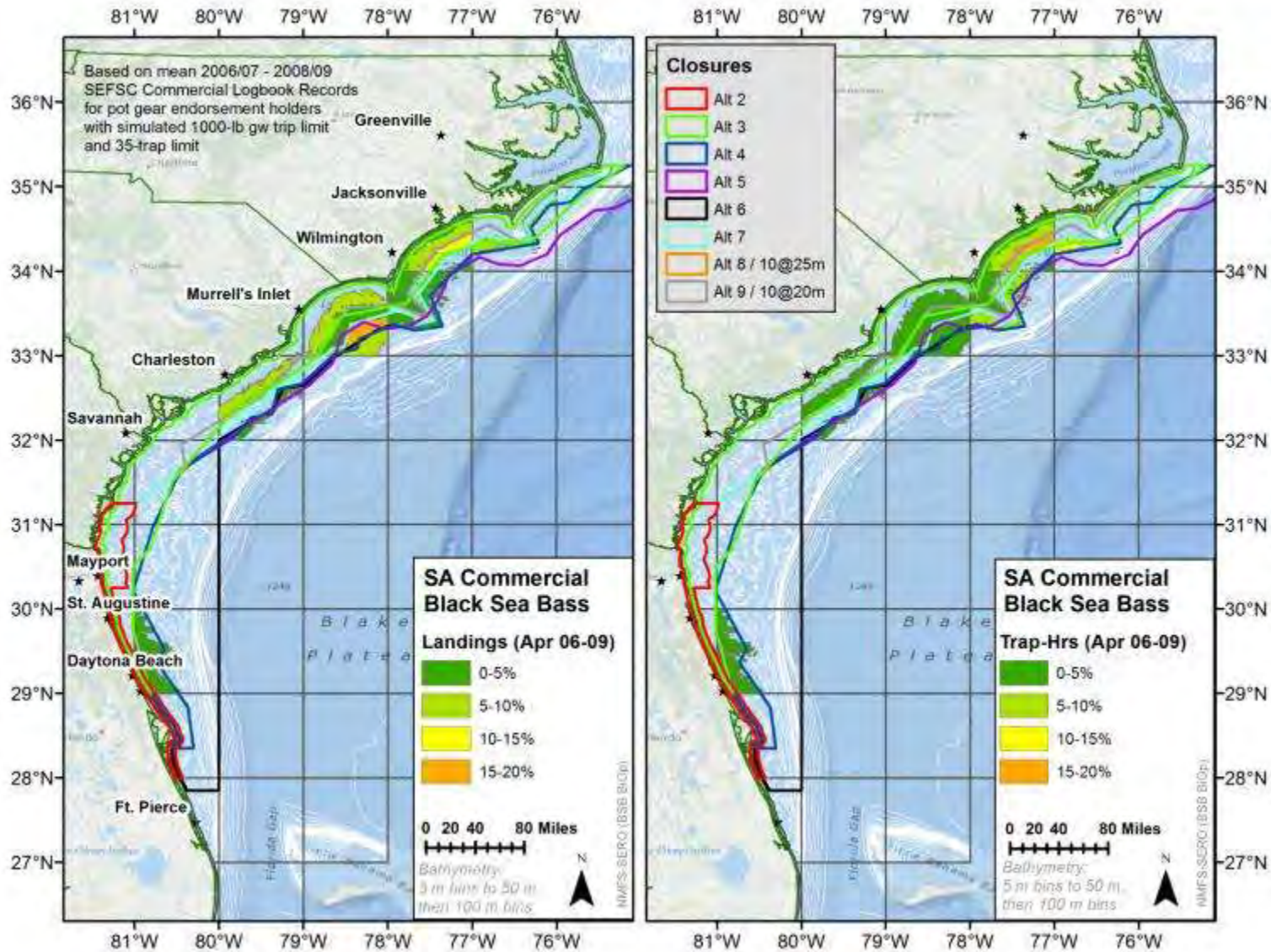


Figure 3M: Scenario C (Apr)

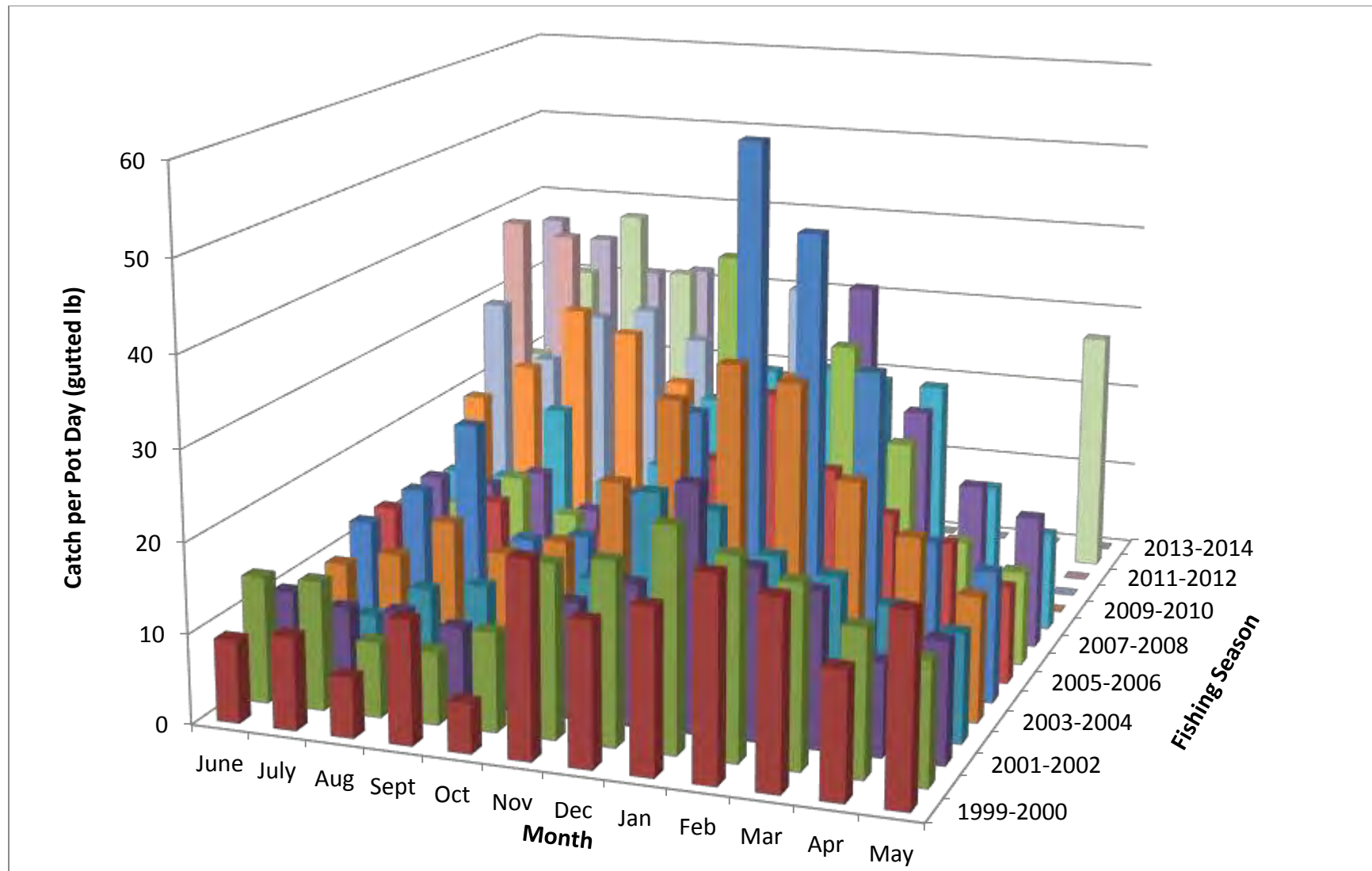


Figure 4. Catch-per-pot day by commercial black sea bass pot gear endorsement holders by fishing month and season, as reported to SEFSC Commercial Logbooks (accessed 20 Feb 2014). Note the shift from high winter catch rates to high summer catch rates as derby conditions emerged in the later years.

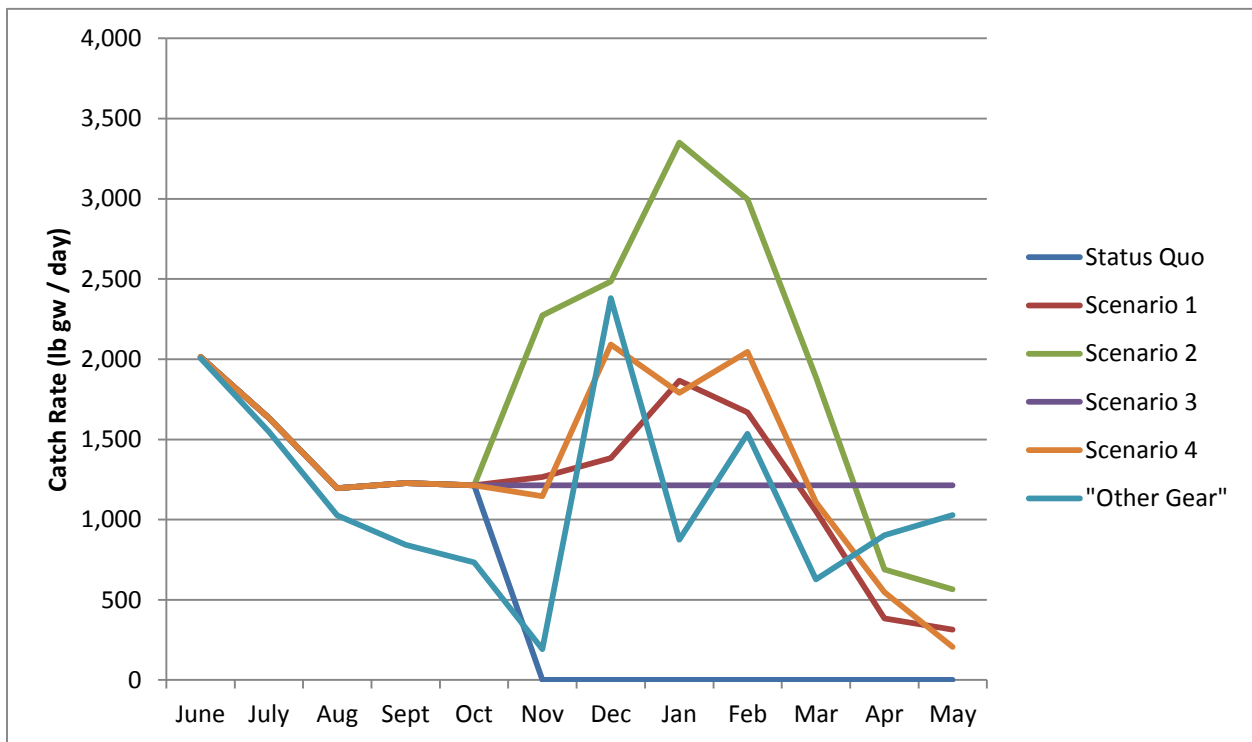


Figure 5. Black sea bass commercial pot endorsement holder projected catch rate, expressed as landings in gutted pounds per day of fishing, for three scenarios as well as status quo and other gear catch rate.

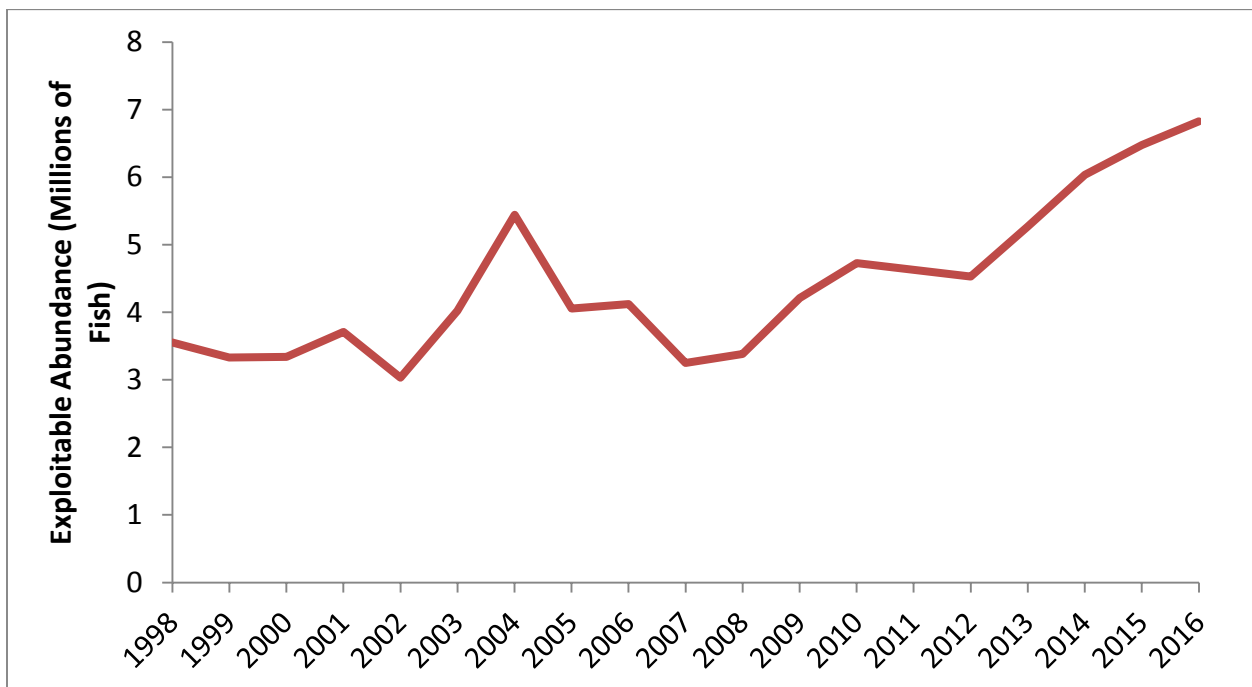


Figure 6. Abundance (in millions of fish) available to black sea bass commercial pot gear, from SEDAR-25 (2012) assessment.

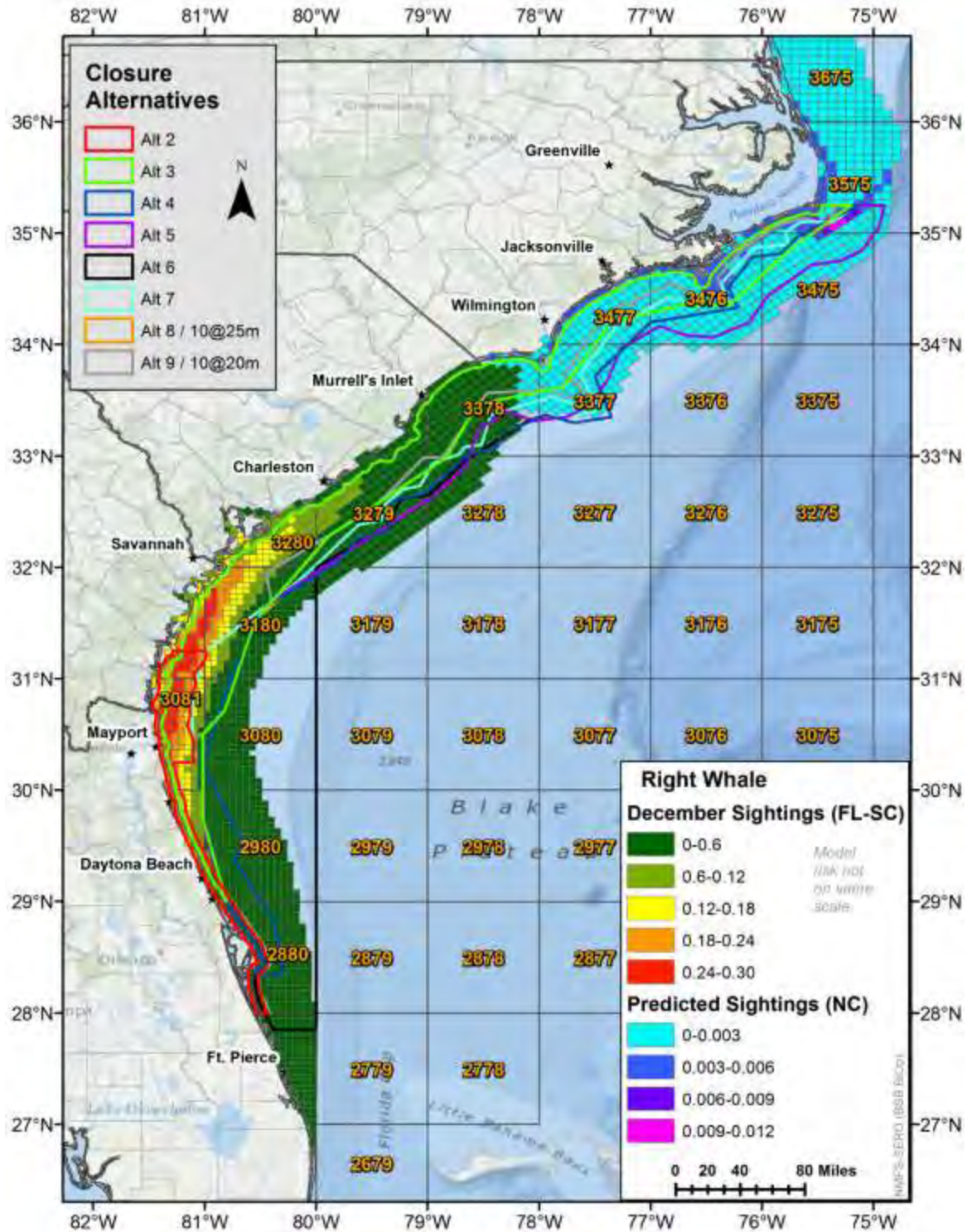


Figure 7A. December right whale predicted distribution based on modeled right whale habitat from right whale sightings from 2003/2004 through 2012/2013 (Gowan and Ortega-Ortiz 2014, Gowan pers. comm.). Note NC model is not time-dynamic due to limited sampling. Note December abundance was used as a proxy for November, which was not modeled due to limited sampling. National Marine Fisheries Service commercial logbook reporting grids are labeled in orange. Bathymetry and shoreline courtesy ESRI Ocean Basemap. NC and FL-SC predictions are not directly comparable in scale.

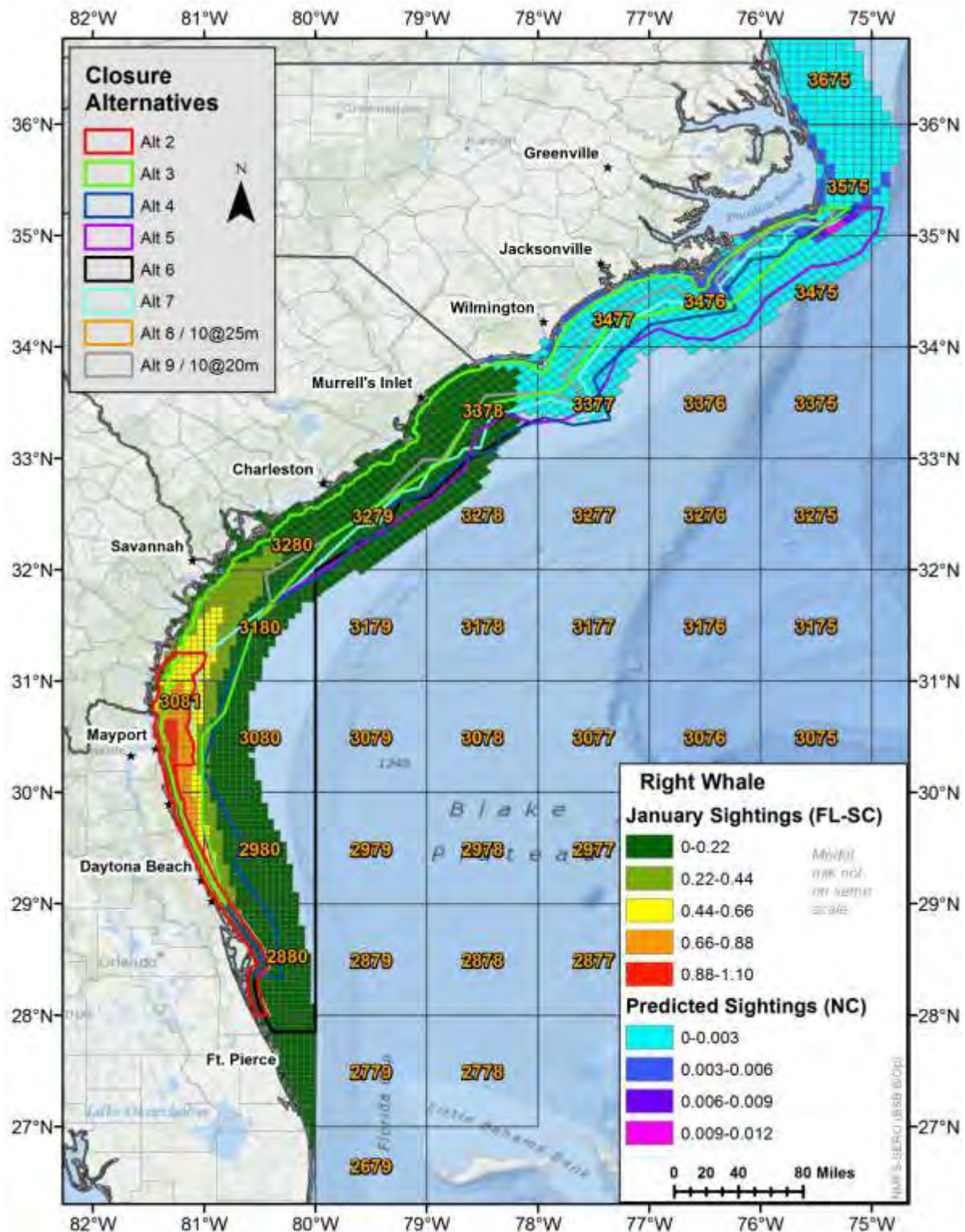


Figure 7B. January right whale predicted distribution based on modeled habitat from right whale sightings from 2003/2004 through 2012/2013. Note NC model is not time-dynamic due to limited sampling. National Marine Fisheries Service commercial logbook reporting grids are labeled in orange. Bathymetry and shoreline courtesy ESRI Ocean Basemap. NC and FL-SC predictions are not directly comparable in scale.

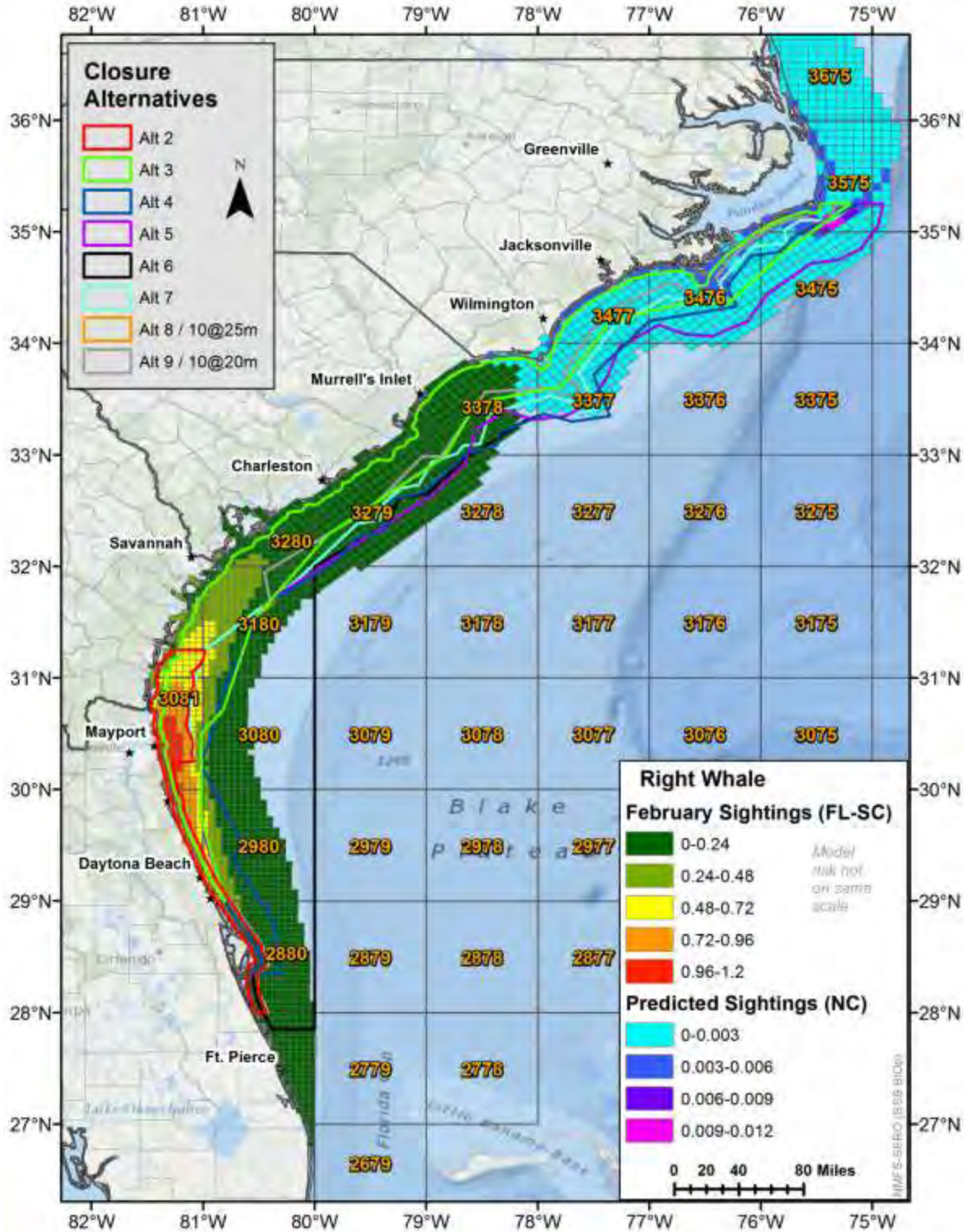


Figure 7C. February right whale predicted distribution based on modeled habitat from right whale sightings from 2003/2004 through 2012/2013. Note NC model is not time-dynamic due to limited sampling. National Marine Fisheries Service commercial logbook reporting grids are labeled in orange. Bathymetry and shoreline courtesy ESRI Ocean Basemap. NC and FL-SC predictions are not directly comparable in scale.

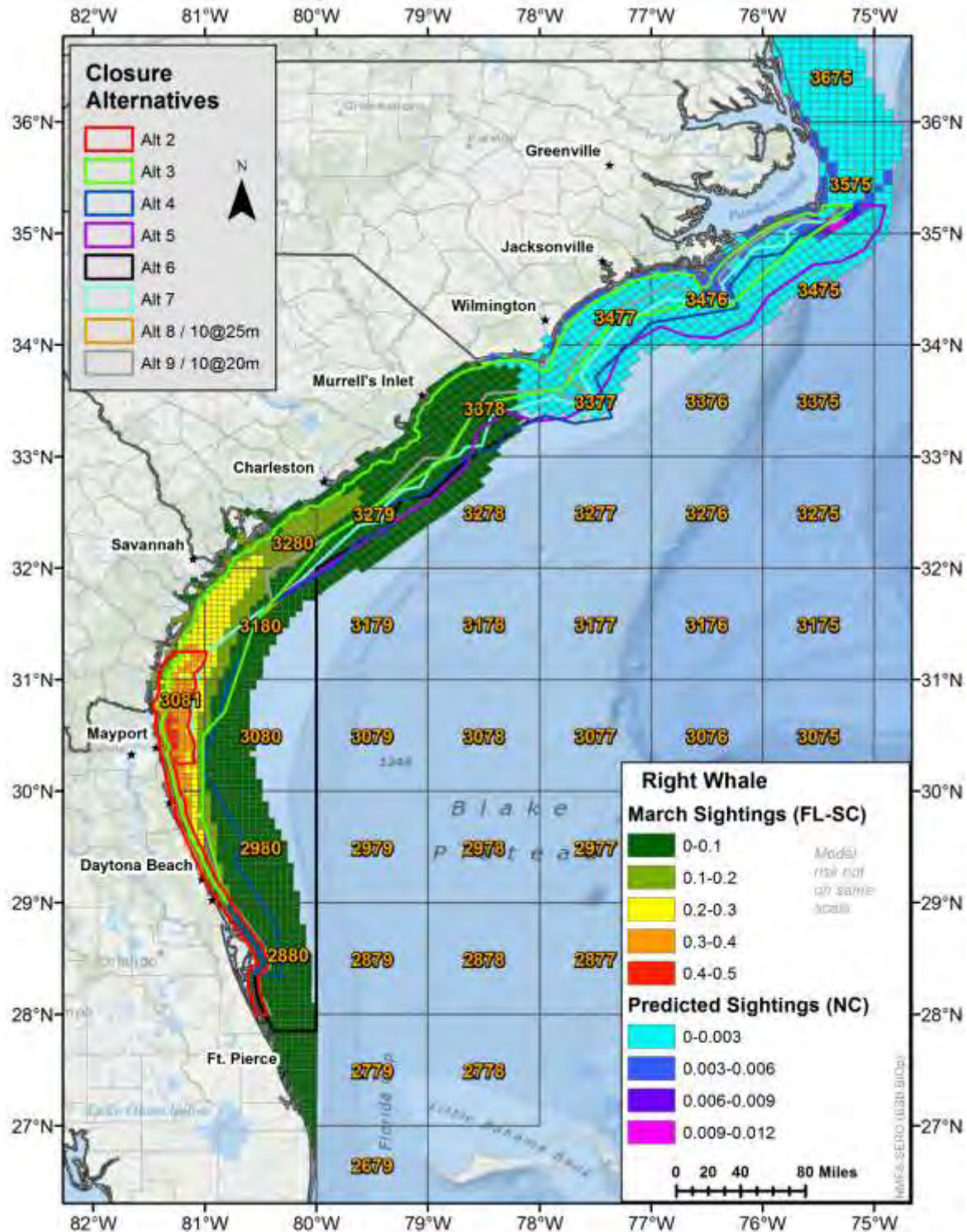


Figure 7D. March right whale predicted distribution based on modeled habitat from right whale sightings from 2003/2004 through 2012/2013. Note NC model is not time-dynamic due to limited sampling. Note March abundance was used as a proxy for April, which was not modeled due to limited sampling. National Marine Fisheries Service commercial logbook reporting grids are labeled in orange. Bathymetry and shoreline courtesy ESRI Ocean Basemap. NC and FL-SC predictions are not directly comparable in scale.

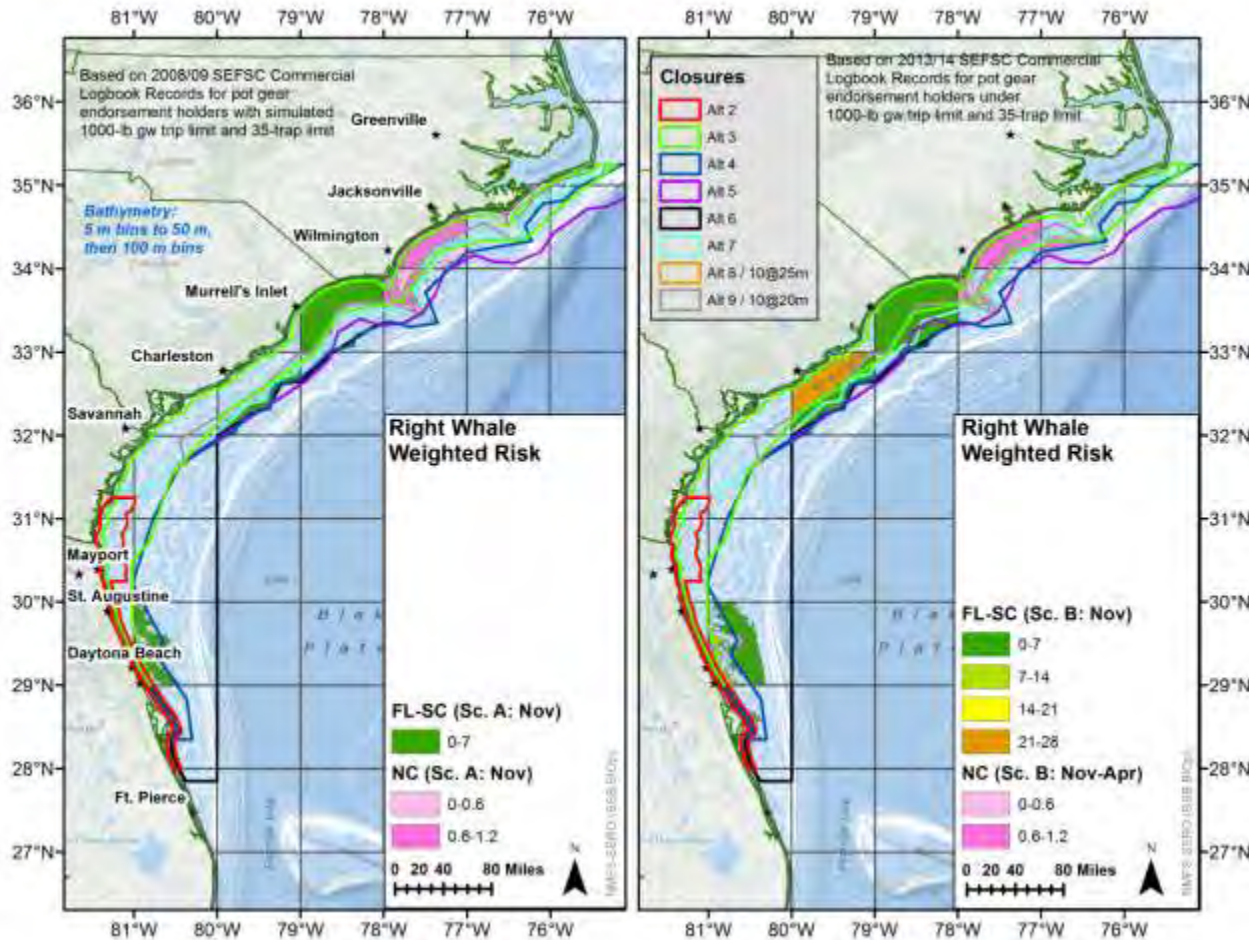


Figure 8A: November. Right whale predicted monthly relative risk based on right whale habitat models and estimated commercial pot gear effort by area-depth grid. Under Scenario A (left), spatial distribution of effort is based on observations from the 2008/09 winter fishing season. Under Scenario B (right), spatial distribution of pot effort is based on observations from the summer 2013/14 season. Note underlying NC right whale ‘relative abundance’ model is not time-dynamic due to limited sampling. Bathymetry and shoreline courtesy NOAA NGDC Coastal Relief Model and ESRI Ocean Basemap. Note weighted risk is a unitless, relative scalar. NC and FL-SC modeled risk are not directly comparable. Note Scenario C relative risk was similar to Scenario A and is not depicted.

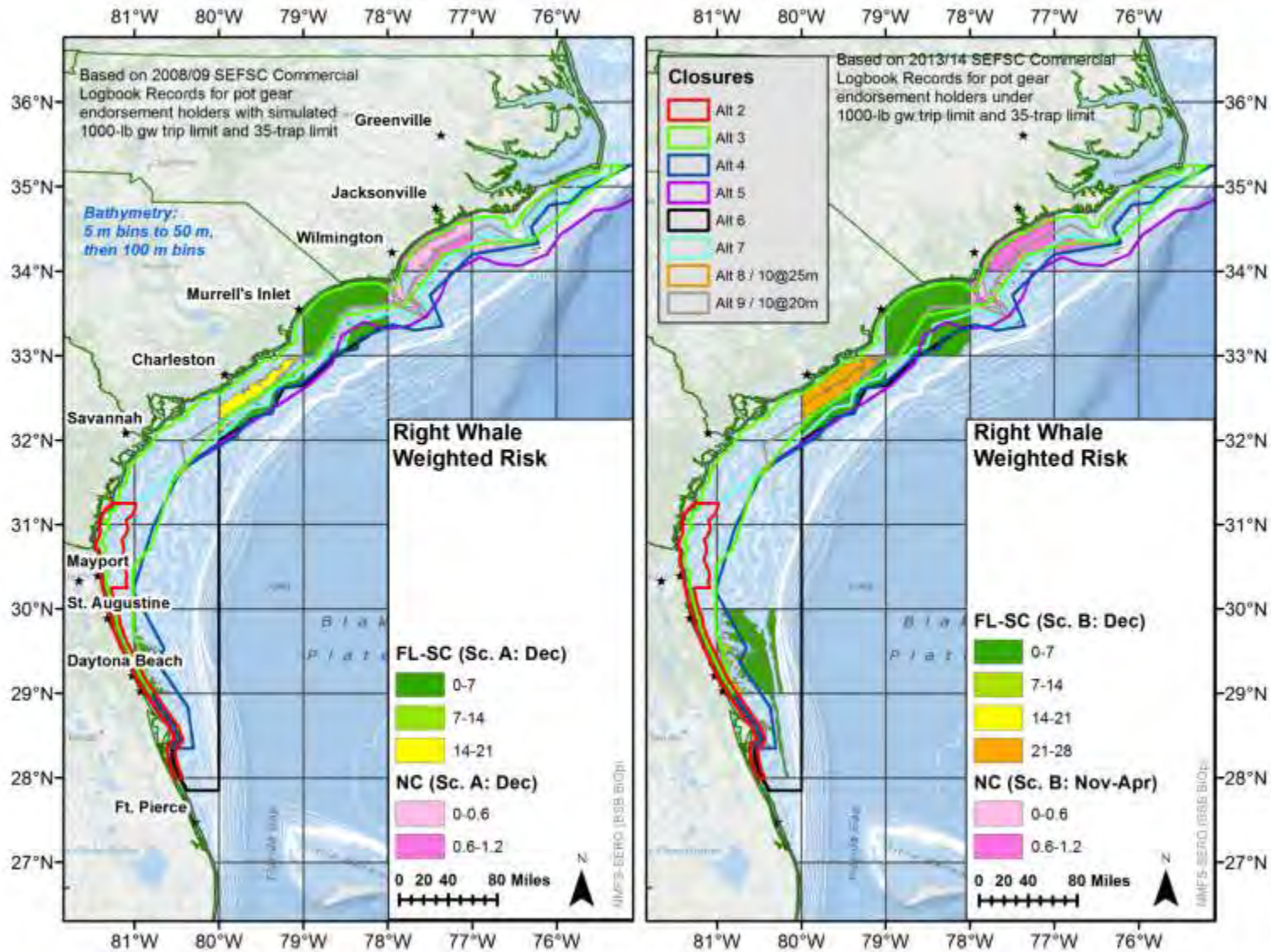


Figure 8B: December

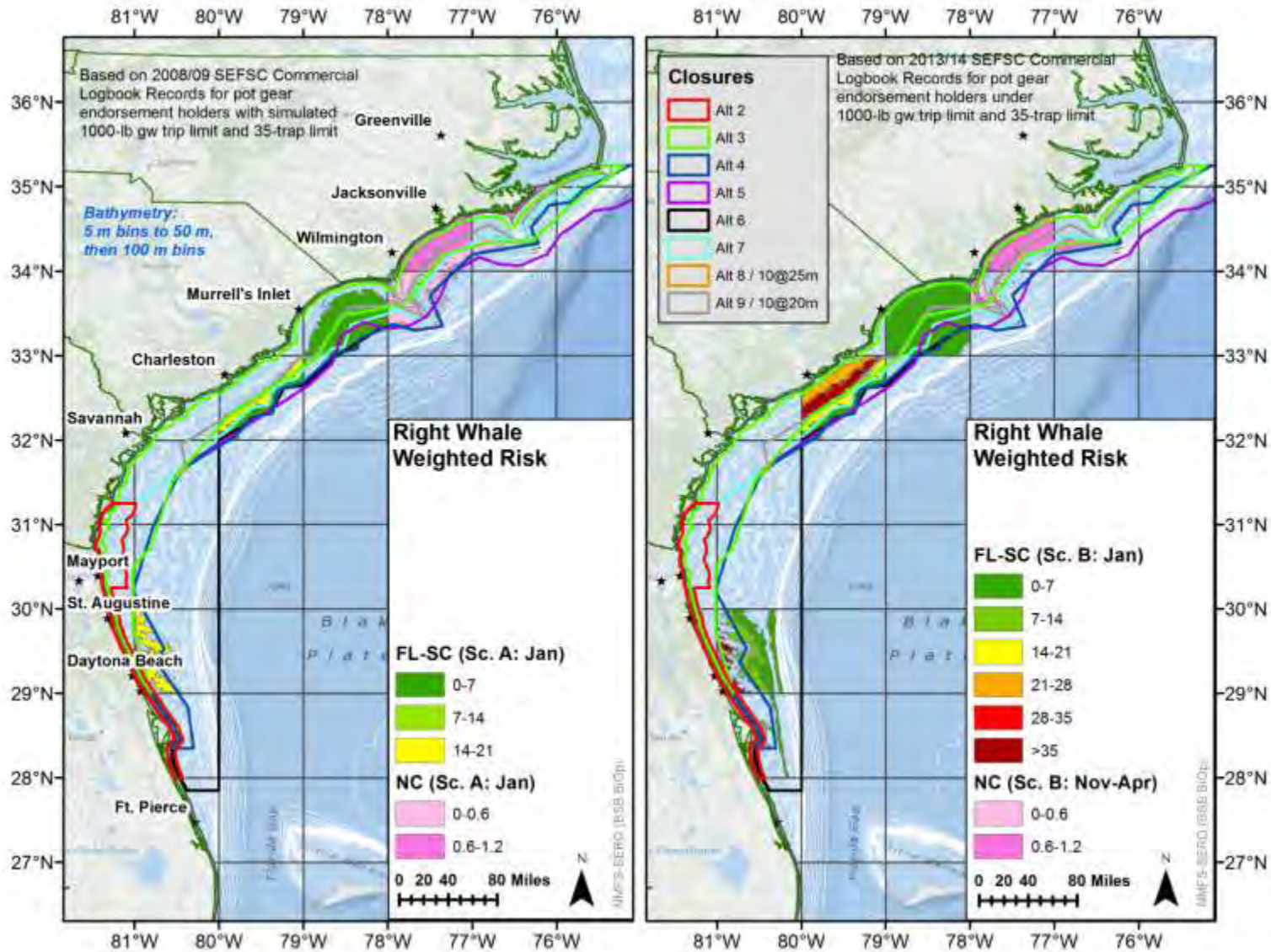


Figure 8C: January

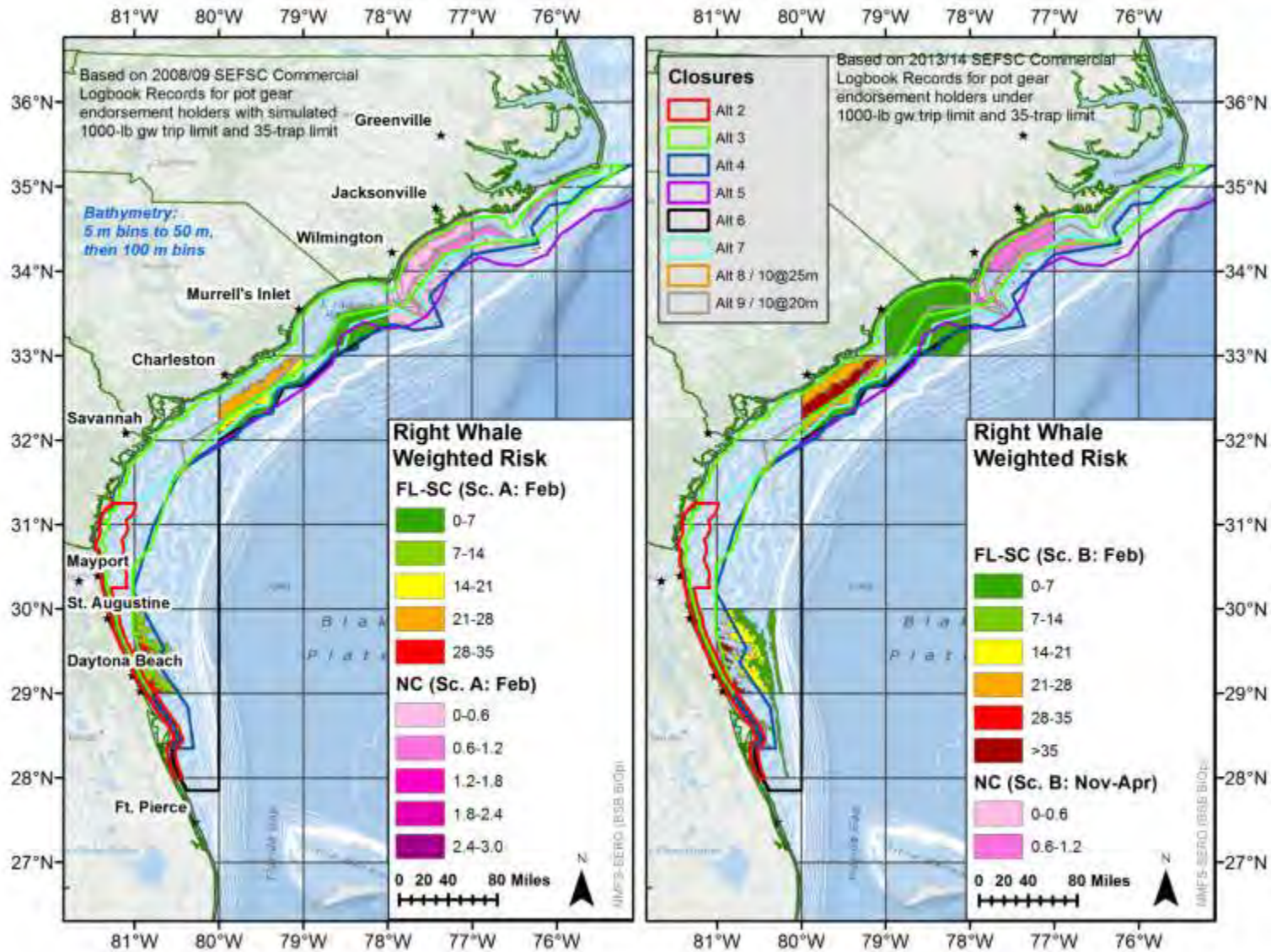


Figure 8D: February

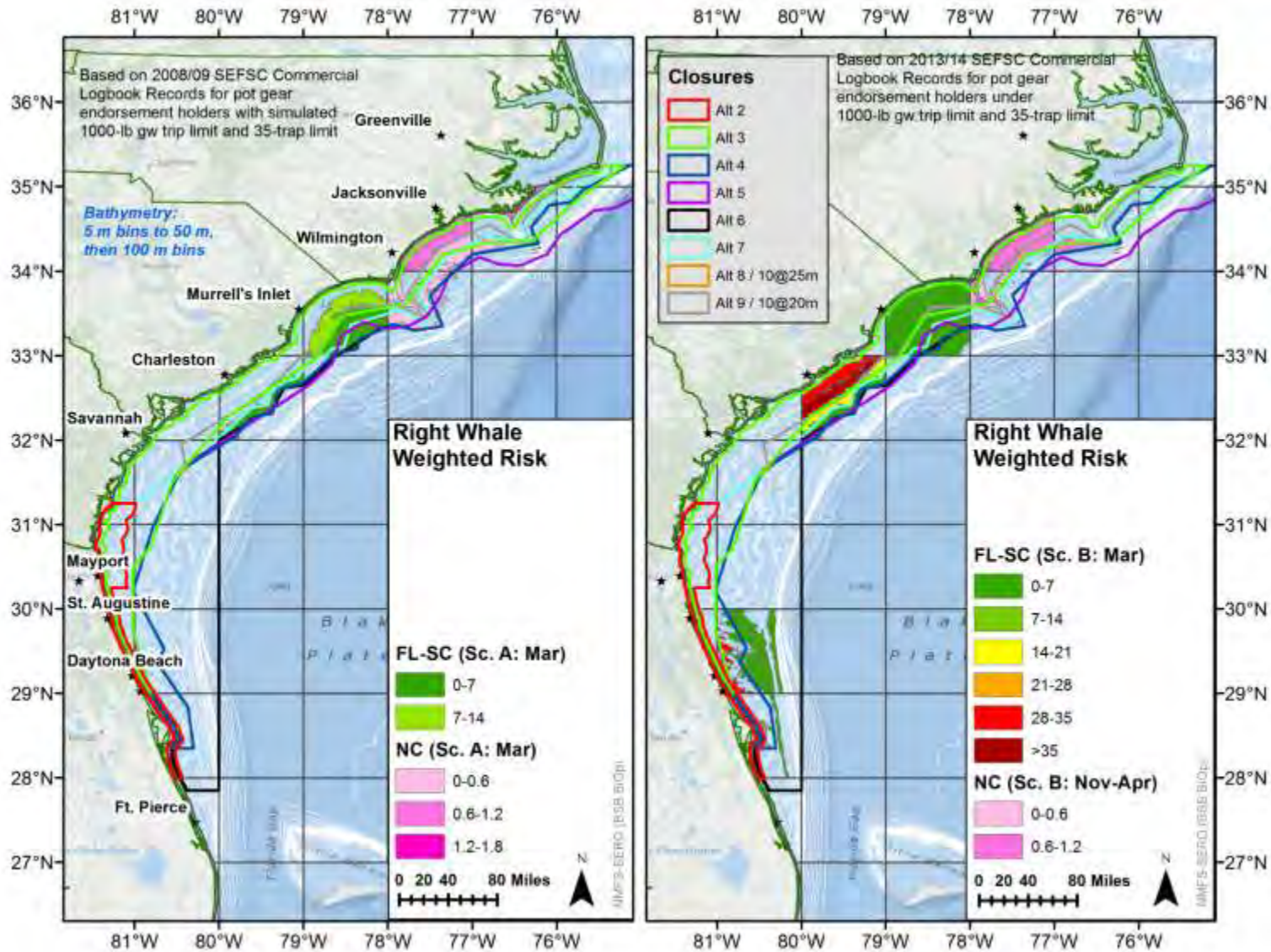


Figure 8E: March

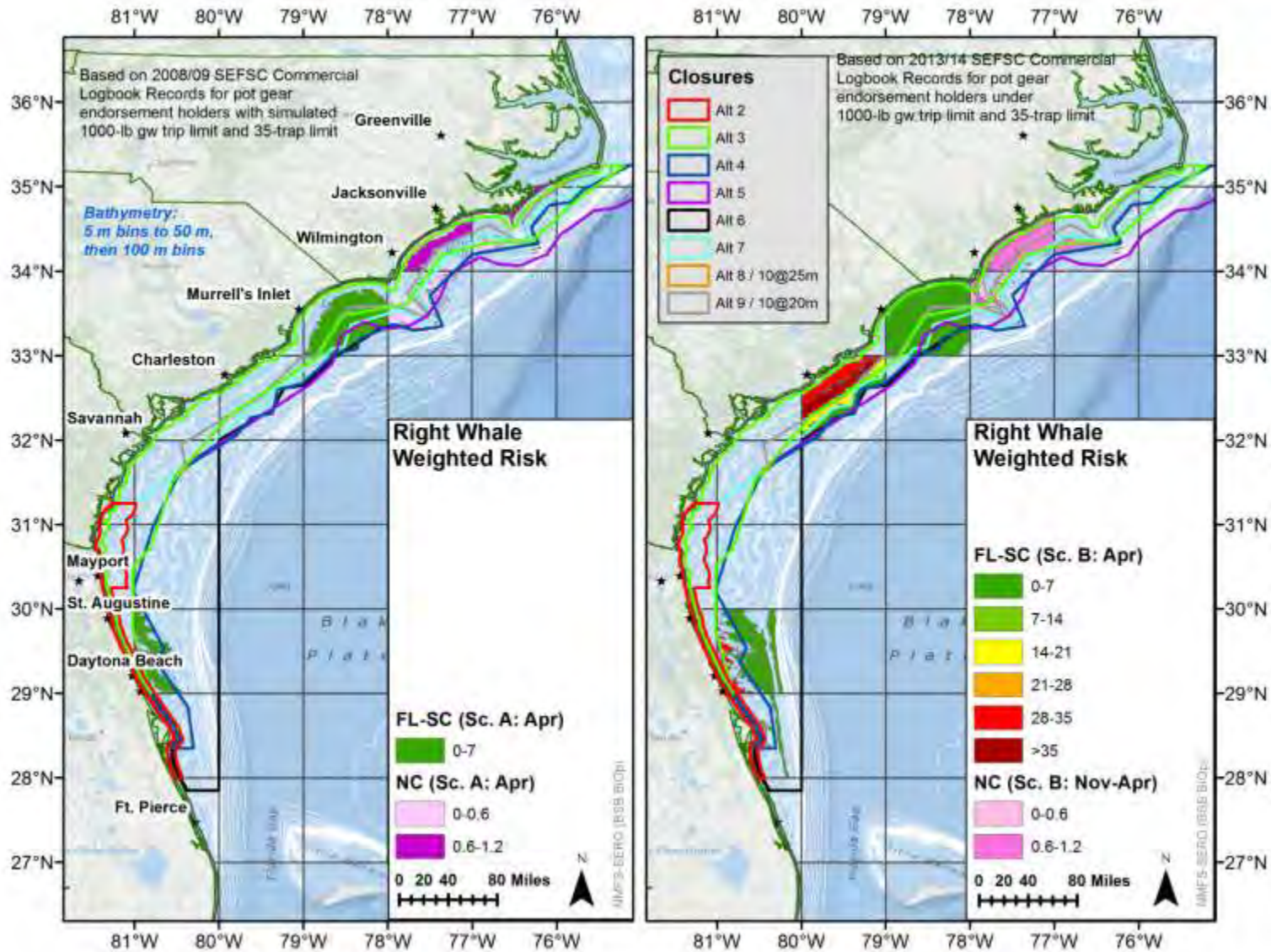


Figure 8F: April

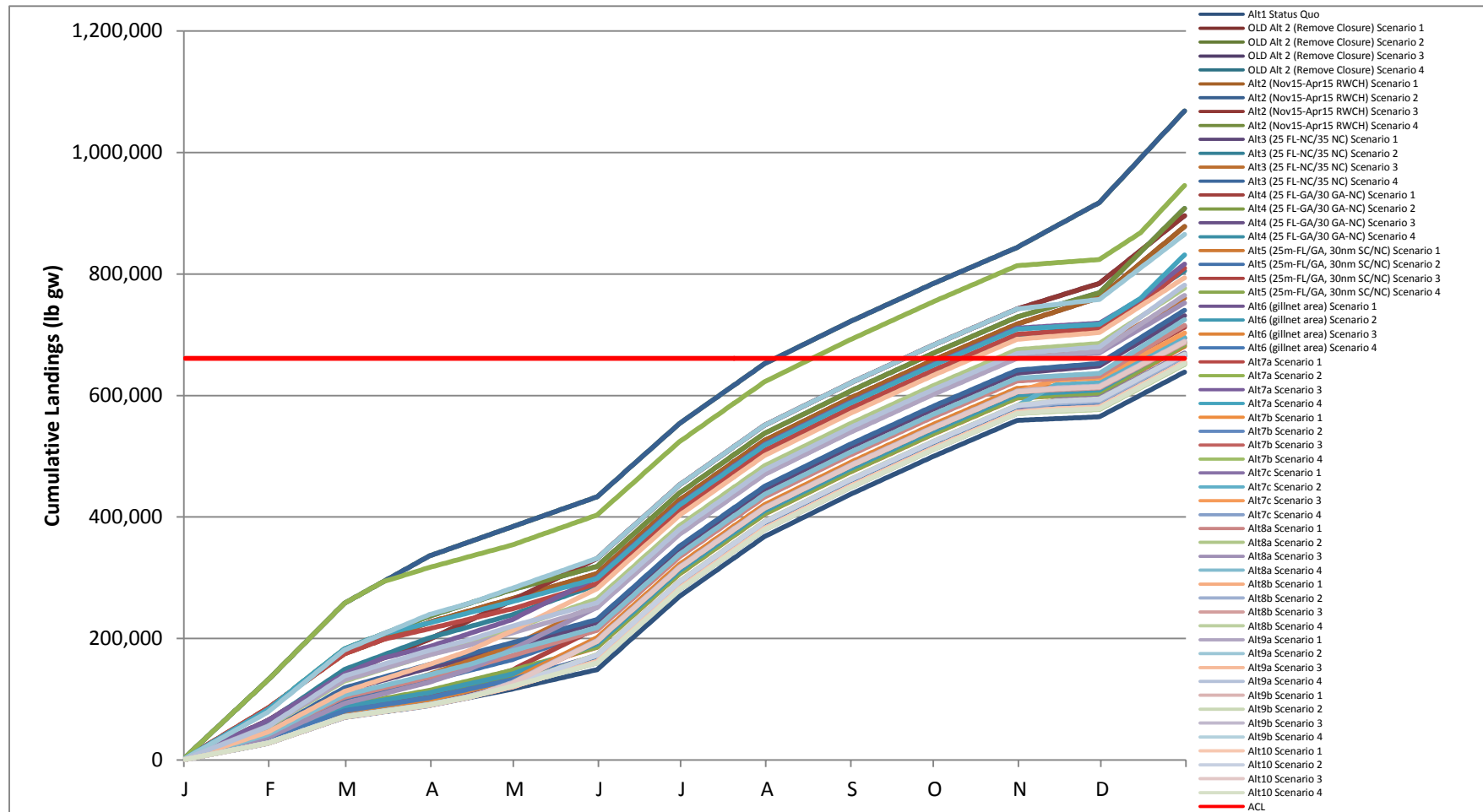


Figure 9. Cumulative landings forecasts for the commercial black sea bass fishery (all gears) under different Regulatory Amendment 16 spatial closure alternatives and different catch rate assumptions (Scenario 1: Observed 2008/09 Nov-Apr catch rates, Scenario 2: Observed 2013/14 catch rates scaled to account for historically higher Nov-Apr catch rates, Scenario 3: Observed 2013/14 catch rates, and Scenario 4: Observed mean 2006/07-2008/09 Nov-Apr catch rates), assuming A) winter 2008/09, B) summer 2013/14, and C) mean of winters 2006/07-2008/09 distribution of pot gear during any fishing in November-April. All figures assume right whale distribution under mean conditions.

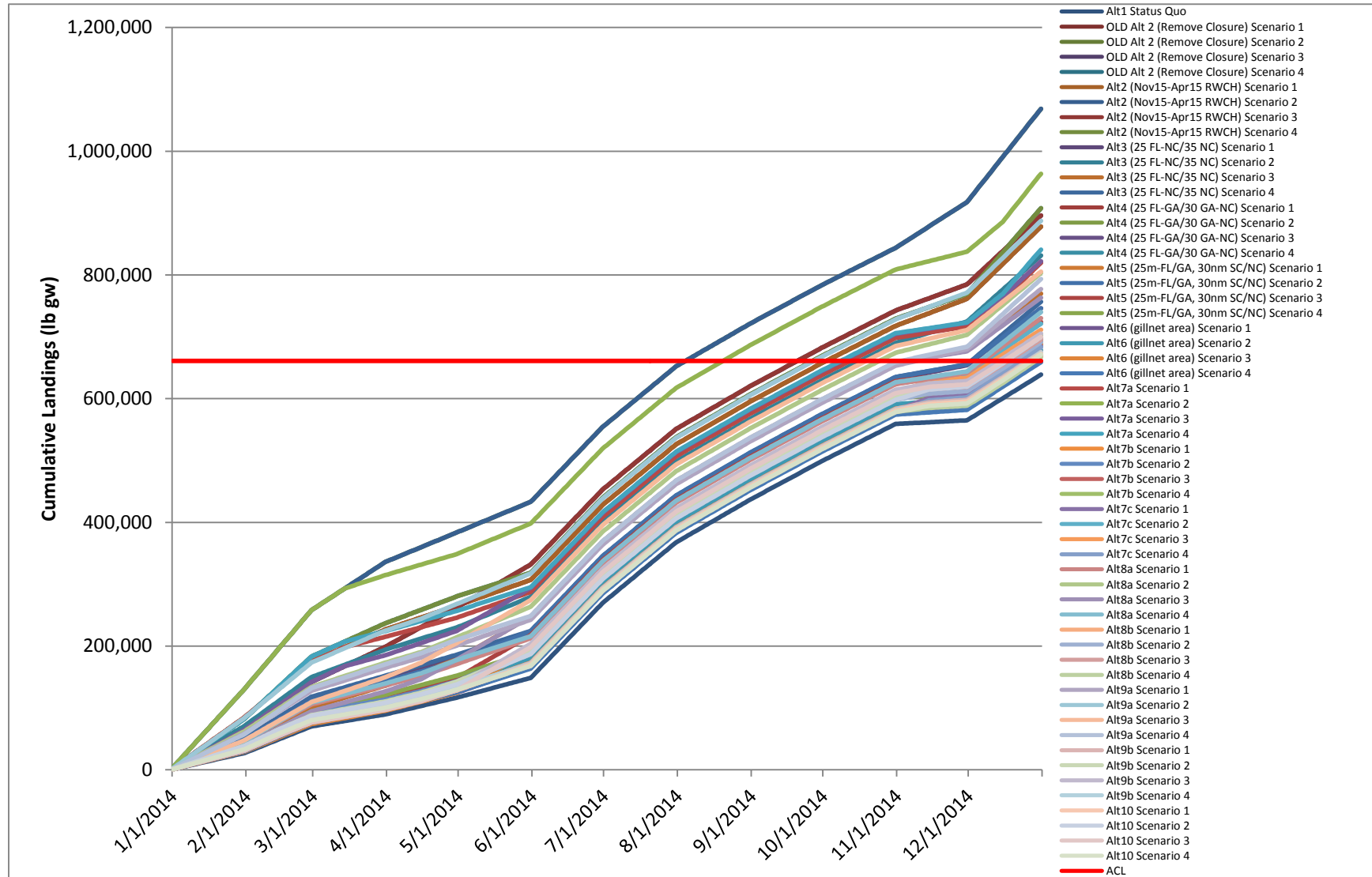


Figure 9B.

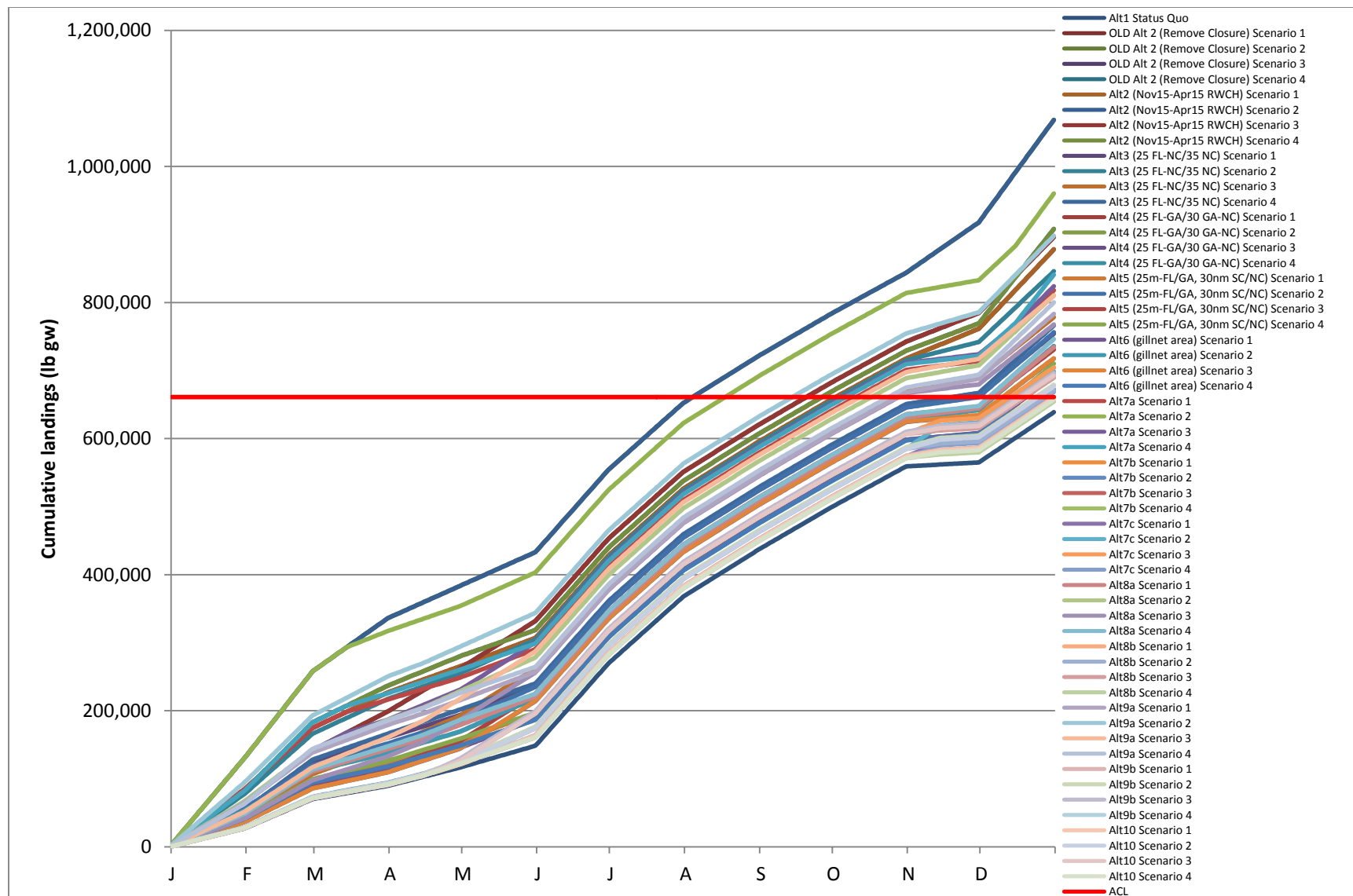


Figure 9C.

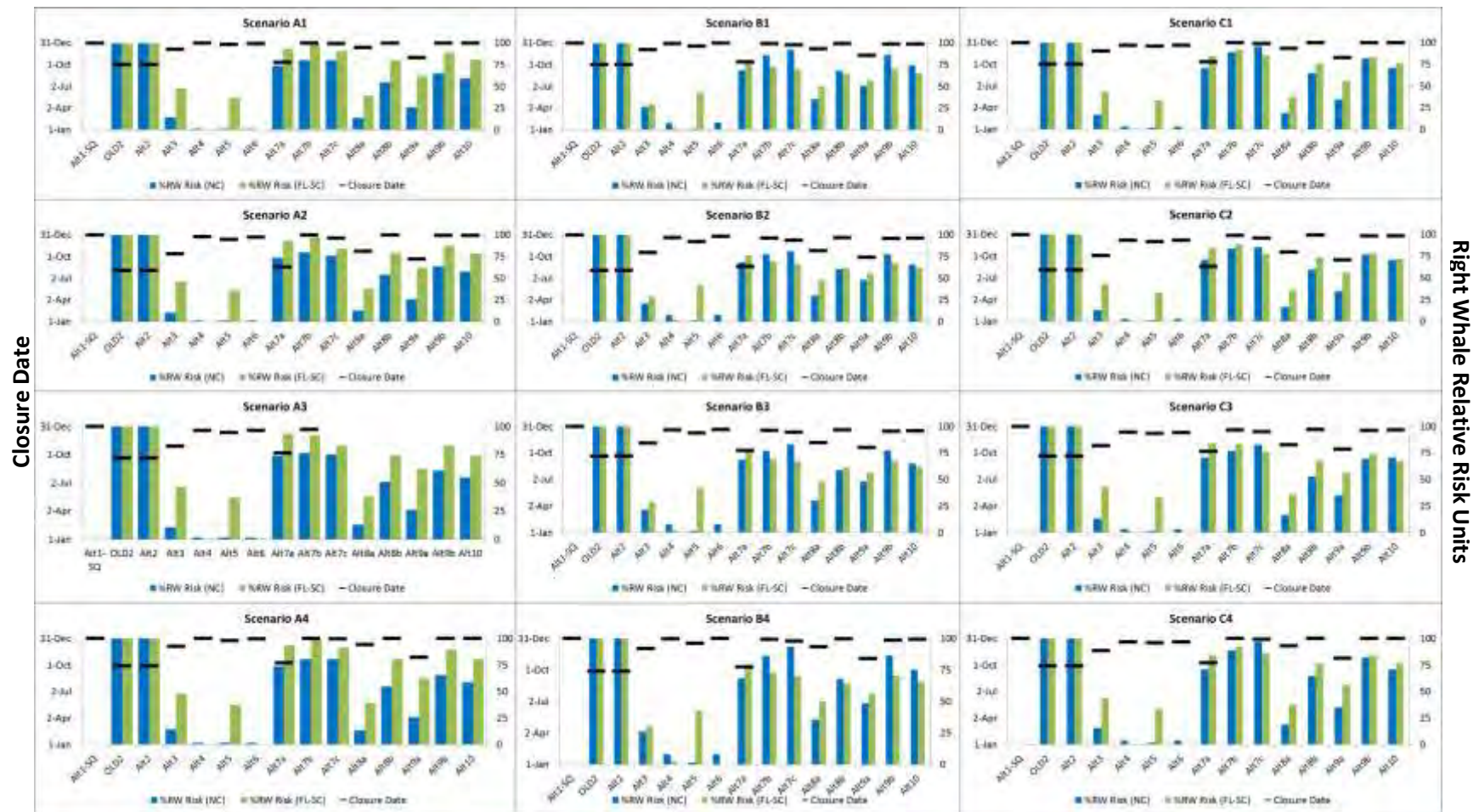


Figure 10. South Atlantic commercial black sea bass projected closure dates (black dashes) and relative right whale risk of pot gear vertical line entanglement off North Carolina (blue bars) and Florida to South Carolina (green bars) under 2008/09 winter (Scenario A), 2013/14 summer (Scenario B), and mean 2006/07-2008/09 winter (Scenario C) spatial pot distributions for catch rate Scenarios 1-4.

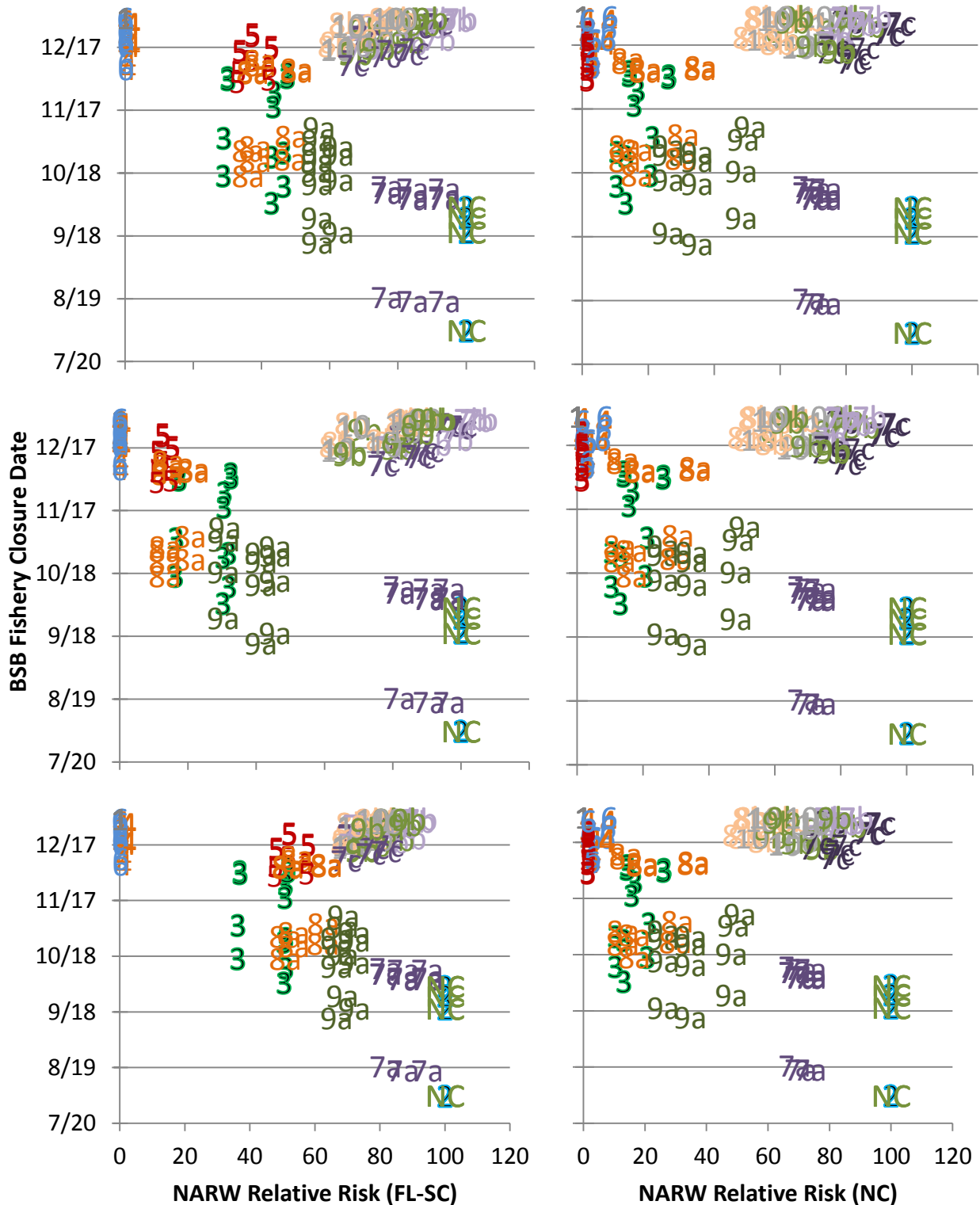


Figure 11. North Atlantic right whale (NARW) relative risk versus projected black sea bass (BSB) fishery closure date, by alternative (colored numbers), across catch rate and spatial pot gear distribution scenarios, for right whale distributions under mean (top), warm (middle), and cold conditions (bottom). Number/letter combinations included in the graphs correspond to alternatives in Reg-16.

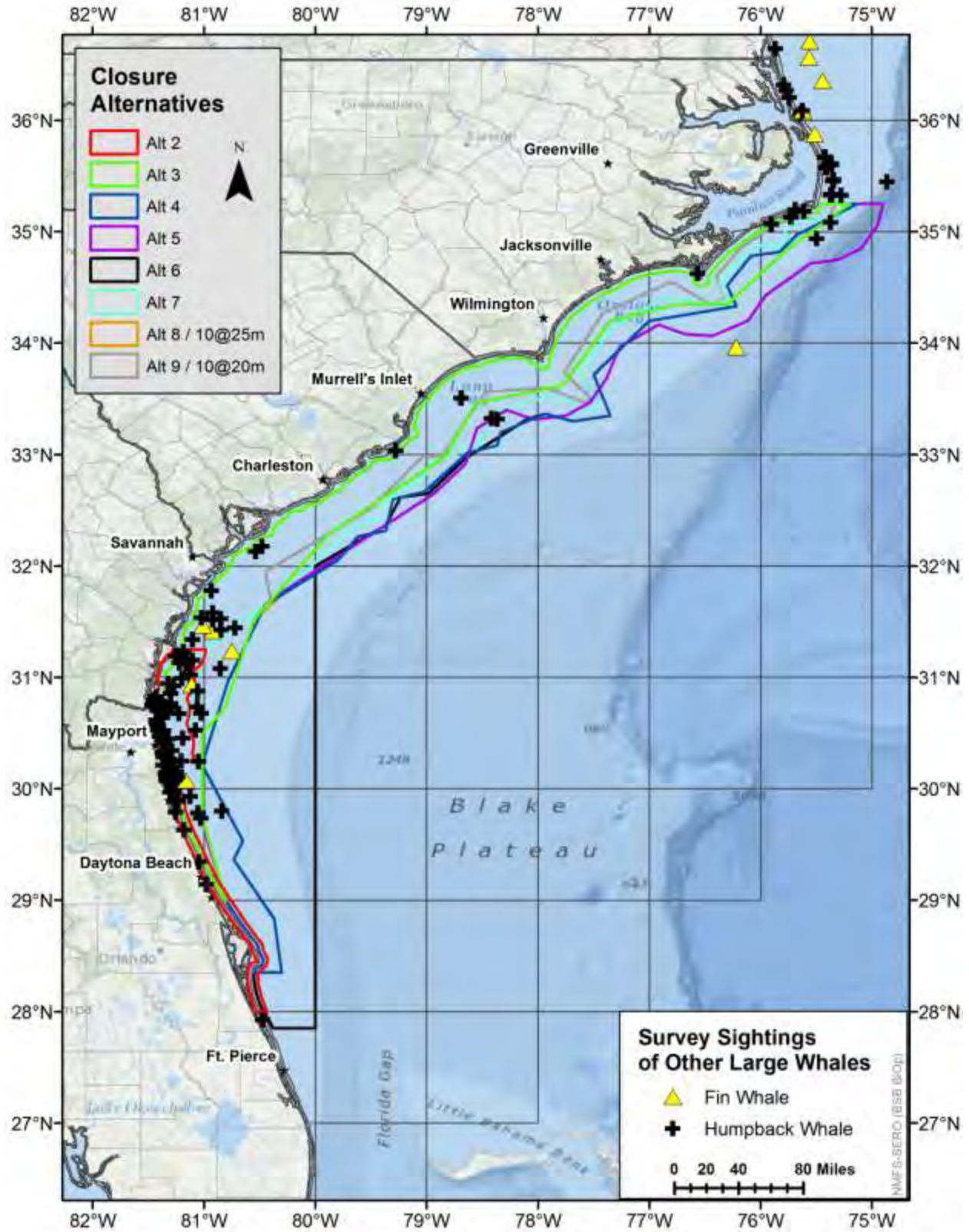


Figure 12. Aerial survey observations (2005-2014) of humpback whales and fin whales within the SAFMC jurisdiction relative to Reg-16 proposed closure alternatives.

APPENDIX A: MANAGEMENT HISTORY

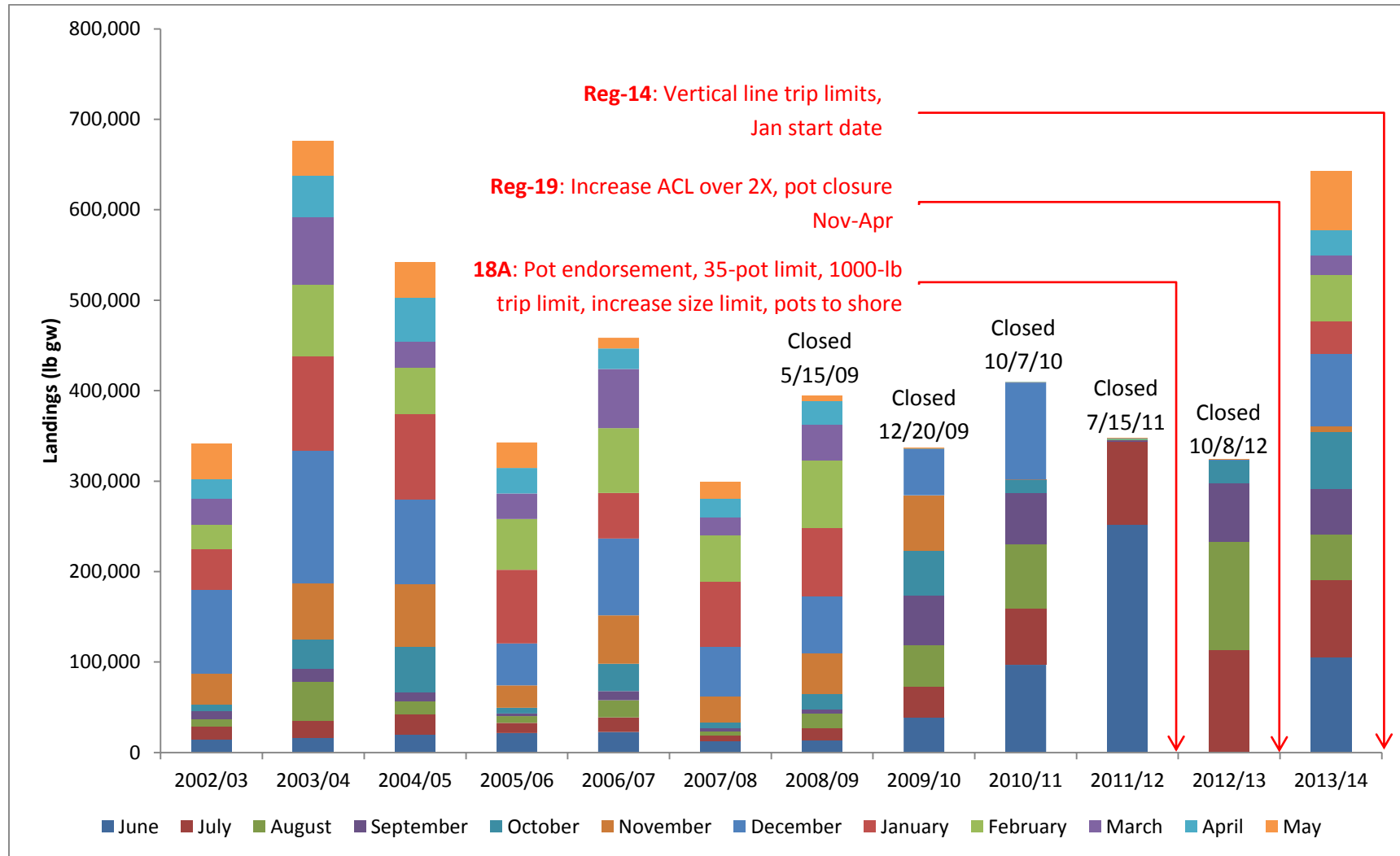


Figure A.1. Commercial black sea bass landings by fishing year and month, relative to management history. Sources: SEFSC Commercial ACL Data (July 2014) and SEFSC Trip Ticket Data (Sept 2014 – for the 2013/14 season).

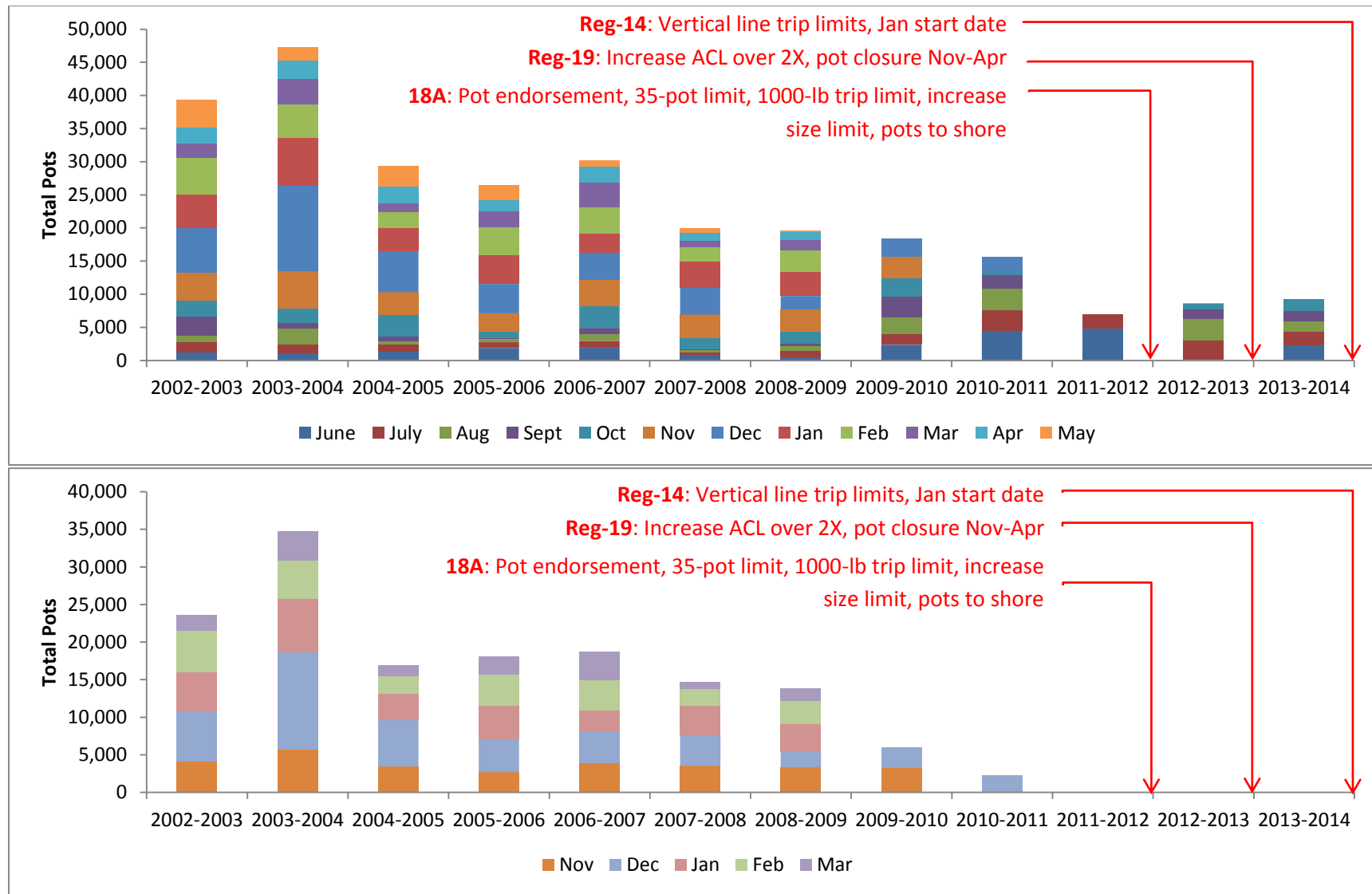


Figure A.2. Commercial black sea bass effort (number of pots) by fishing year and month, relative to management history for full season (top) and winter only (bottom). Sources: SEFSC Commercial Logbook Data (July 2014).

APPENDIX B: REG-16 CLOSURE ALTERNATIVES

Highlighting denotes areas where Council clarification is needed.

Alternative 1 (No Action). Retention, possession, and fishing for black sea bass is prohibited using black sea bass pot gear, annually, from November 1 through April 30.

Alternative 2. The black sea bass pot closure applies to the area currently designated as North Atlantic right whale critical habitat (Figure B2.1.1). North Atlantic right whale critical habitat encompasses waters between 31° 15'N, (approximately the mouth of the Altamaha River, Georgia) and 30° 15'N (approximately Jacksonville, Florida) from the shoreline out to 15 nautical miles offshore; and the waters between 30° 15'N and 28 °00'N, (approximately Sebastian Inlet, Florida) from the shoreline out to 5 nautical miles. The closure applies to the area annually from November 15 through April 15.

Note: Federal regulations would only apply to that portion of the area within the South Atlantic EEZ. The states will be asked to implement compatible regulations within state waters.



Note: This area represents North Atlantic right whale critical habitat in the South Atlantic region designated on June 3, 1994. The map below provides location of the critical habitat boundary. The critical habitat designation did not provide waypoints for the boundary. The boundary would not automatically change if the boundary for the right whale critical habitat were to change.

Figure B2.1.1. Area for the proposed black sea bass pot closure in Alternative 2.

The following is language describing the North Atlantic right whale critical habitat area from 50 CFR 226: “Southeastern United States: The area designated as critical habitat in these waters encompasses waters between 31 deg.15'N (approximately located at the mouth of the Altamaha River, GA) and 30 deg.15'N (approximately Jacksonville, FL) from the shoreline out to 15 nautical miles offshore; and the waters between 30 deg.15'N and 28 deg.00'N (approximately Sebastian Inlet, FL) from the shoreline out to 5 nautical miles.” Note: North Atlantic right whale critical habitat is currently undergoing a revision based on more current data. Proposed changes are published at [80 FR 9313](#).

Alternative 3. The black sea bass pot closure applies to waters inshore of points 1-15 listed below (Table B2.1.1); approximately Ponce Inlet, Florida, to Cape Hatteras, North Carolina (Figure B2.1.2). The closure applies to the area annually from November 1 through April 30.

Note: Federal regulations would only apply to that portion of the area within the South Atlantic EEZ. The states will be asked to implement compatible regulations within state waters.

Note: This area likely represents North Atlantic right whale calving habitat. The area identified from Cape Fear, North Carolina, southward to 29°N (approximately Ponce Inlet, Florida) is based on model outputs (i.e., Garrison 2007, Keller et al. 2012, Good 2008). The area from Cape Fear, North Carolina, to Cape Hatteras, North Carolina, is an extrapolation of those model outputs and based on sea surface temperatures and bathymetry.

Table B2.1.1. Eastern boundary coordinates for proposed black sea bass pot closure in Alternative 3.

Point	N Latitude	W Longitude
1	35°15' N	State/EEZ boundary
2	35°15'	75°12'
3	34°51'	75°45'
4	34°21'	76°18'
5	34°21'	76°45'
6	34°12'	77°21'
7	33°37'	77°47'
8	33°28'	78°33'
9	32°59'	78°50'
10	32°17'	79°53'
11	31°31'	80°33'
12	30°43'	80°49'
13	30°30'	81°01'
14	29°45'	81°01'
15	29°00'	State/EEZ boundary

Note that federal regulations would only include the waters of the South Atlantic EEZ. The states will be asked to comply by implementing complementary regulations in state waters.

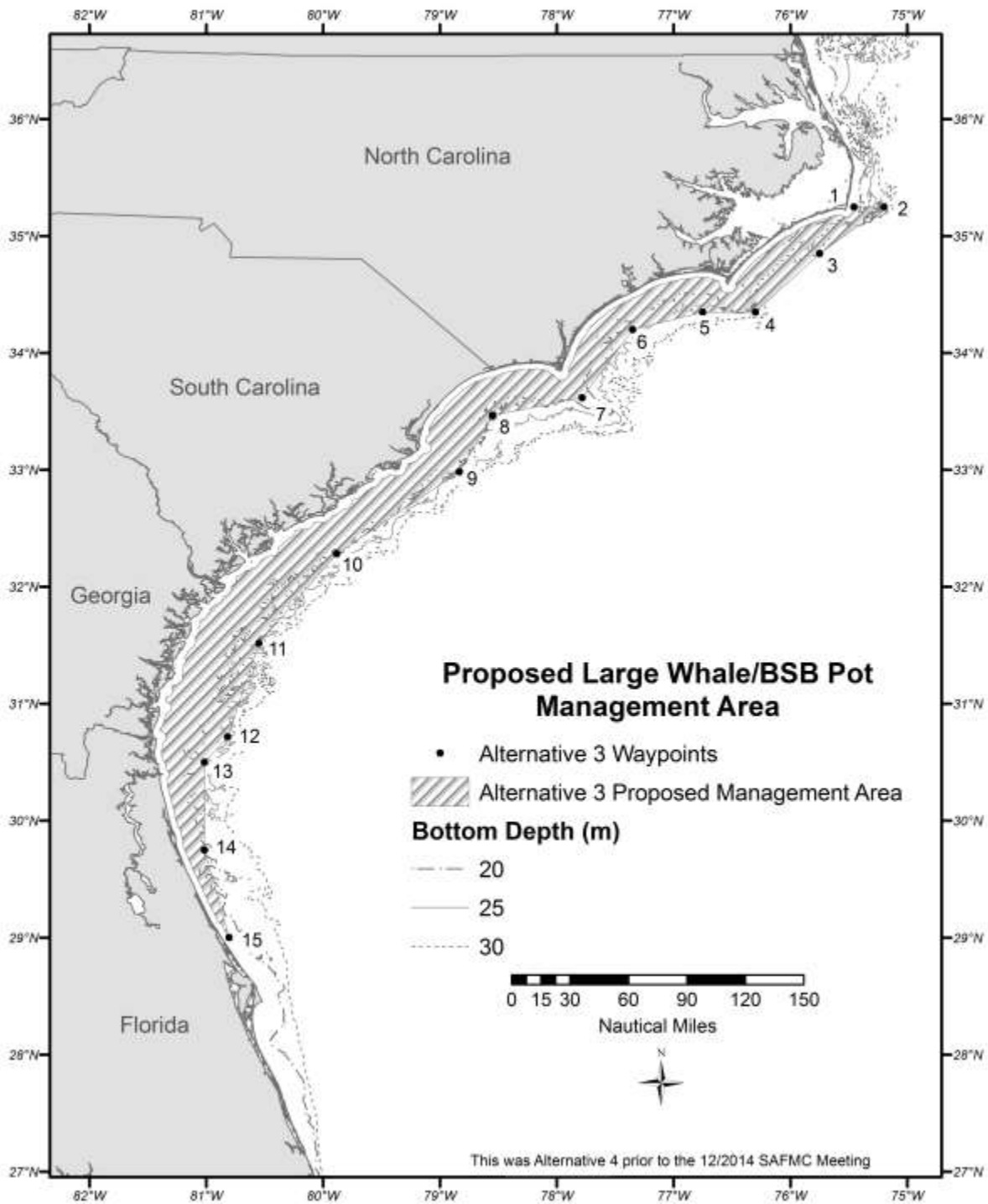


Figure B2.1.2. Area for the proposed black sea bass pot closure in Alternative 3.

Alternative 4. The black sea bass pot closure applies to waters inshore of points 1-28 listed below (Table B2.1.2), approximately Cape Canaveral, Florida, to Cape Hatteras, North Carolina (Figure B2.1.3). The closure applies to the area annually from November 1 through April 30.

Note: Federal regulations would only apply to that portion of the area within the South Atlantic EEZ. The states will be asked to implement compatible regulations within state waters.

Note: This area generally represents waters 25 m or shallower from 28° 21' N (approximately Cape Canaveral, Florida) to Savannah, Georgia; from the Georgia/South Carolina border to Cape Hatteras, North Carolina, the closure applies to waters under Council management that are 30 m or shallower. This bathymetric area is based on right whale sightings (all demographic segments) and sightings per unit of effort (proxy of density) by depth and captures 97% and 96% of right whale sightings off the North Carolina/South Carolina area, and Florida/Georgia area, respectively. The map below provides an approximate location of the proposed boundary.

Table B2.1.2. Eastern boundary coordinates for proposed black sea bass pot closure in Alternative 4.

Point	N Latitude	W Longitude
1	35° 15'	State/EEZ boundary
2	35° 15'	75° 08'
3	34° 58'	75° 41'
4	34° 49'	75° 50'
5	34° 47'	76° 05'
6	34° 31'	76° 18'
7	34° 20'	76° 13'
8	34° 12'	77° 00'
9	33° 43'	77° 30'
10	33° 21'	77° 21'
11	33° 18'	77° 41'
12	33° 22'	77° 56'
13	33° 12'	78° 20'
14	33° 05'	78° 22'
15	33° 01'	78° 38'
16	32° 40'	79° 01'
17	32° 36'	79° 18'
18	32° 19'	79° 22'
19	32° 16'	79° 37'
20	32° 03'	79° 48'
21	31° 39'	80° 27'
22	30° 58'	80° 47'
23	30° 13'	81° 01'
24	29° 32'	80° 39'
25	29° 22'	80° 44'
26	28° 50'	80° 22'
27	28° 21'	80° 18'
28	28° 21'	State/EEZ boundary

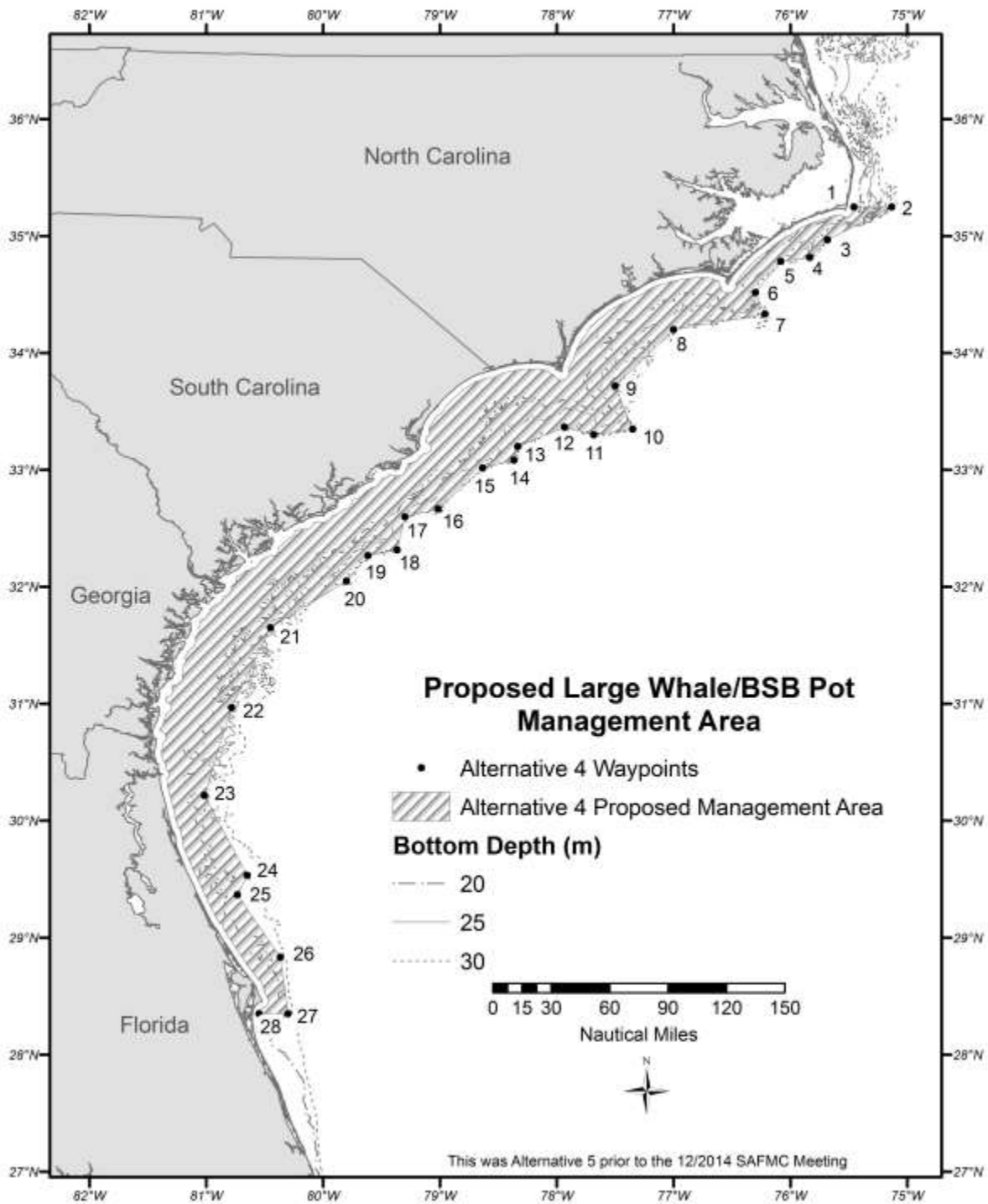


Figure B2.1.3. Area for the proposed black sea bass pot closure in Alternative 4.

Alternative 5. The black sea bass pot closure applies to waters inshore of points 1-28 listed below (Table B2.1.3); approximately Daytona Beach, Florida, to Cape Hatteras, North Carolina (Figure B2.1.4). The closure applies to the area annually from November 1 through April 30.

Note: Federal regulations would only apply to that portion of the area within the South Atlantic EEZ. The states will be asked to implement compatible regulations within state waters.

Note: This area is based on joint comments received from non-government organizations (dated January 3, 2014) in response to NMFS' December 4, 2013, Federal Register Notice of Intent to Prepare this Draft Environmental Impact Statement (DEIS) (78 FR 72868). The non-government organizations proposed the area as a reasonable alternative for consideration. The area, also included in a Center for Biological Diversity et al. petition in 2009 for right whale critical habitat, is off the coasts of Georgia and Florida and based on calving right whale habitat modeling work of Garrison (2007) and Keller et al. (2012). This area represents the 75th percentile of sightings (91% of historical sightings included in their study) off Florida and Georgia (Garrison 2007 and Keller et al. 2012). Off the coasts of North Carolina and South Carolina, the closure extends from the coastline to 30 nautical miles offshore. The map below provides approximate location of proposed boundary.

Table B2.1.3. Eastern boundary coordinates for proposed black sea bass pot closure in Alternative 5.

Point	N Latitude	W Longitude
1	35°15'	State/EEZ Boundary
2	35°15'	74°54'
3	35°03'	74°57'
4	34°51'	75°06'
5	34°45'	75°18'
6	34°43'	75°33'
7	34°26'	75°57'
8	34°12'	76°07'
9	34°04'	76°26'
10	34°05'	76°41'
11	34°10'	76°55'
12	33°58'	77°16'
13	33°41'	77°23'
14	33°28'	77°32'
15	33°21'	77°45'

16	33°19'	78°02'
17	33°24'	78°17'
18	33°14'	78°33'
19	32°55'	78°39'
20	32°39'	78°56'
21	31°42'	80°24'
22	31°31'	80°33'
23	30°43'	80°49'
24	30°30'	81°01'
25	29°45'	81°01'
26	29°31'	80°58'
27	29°13'	80°52'
28	29°13'	State/EEZ boundary

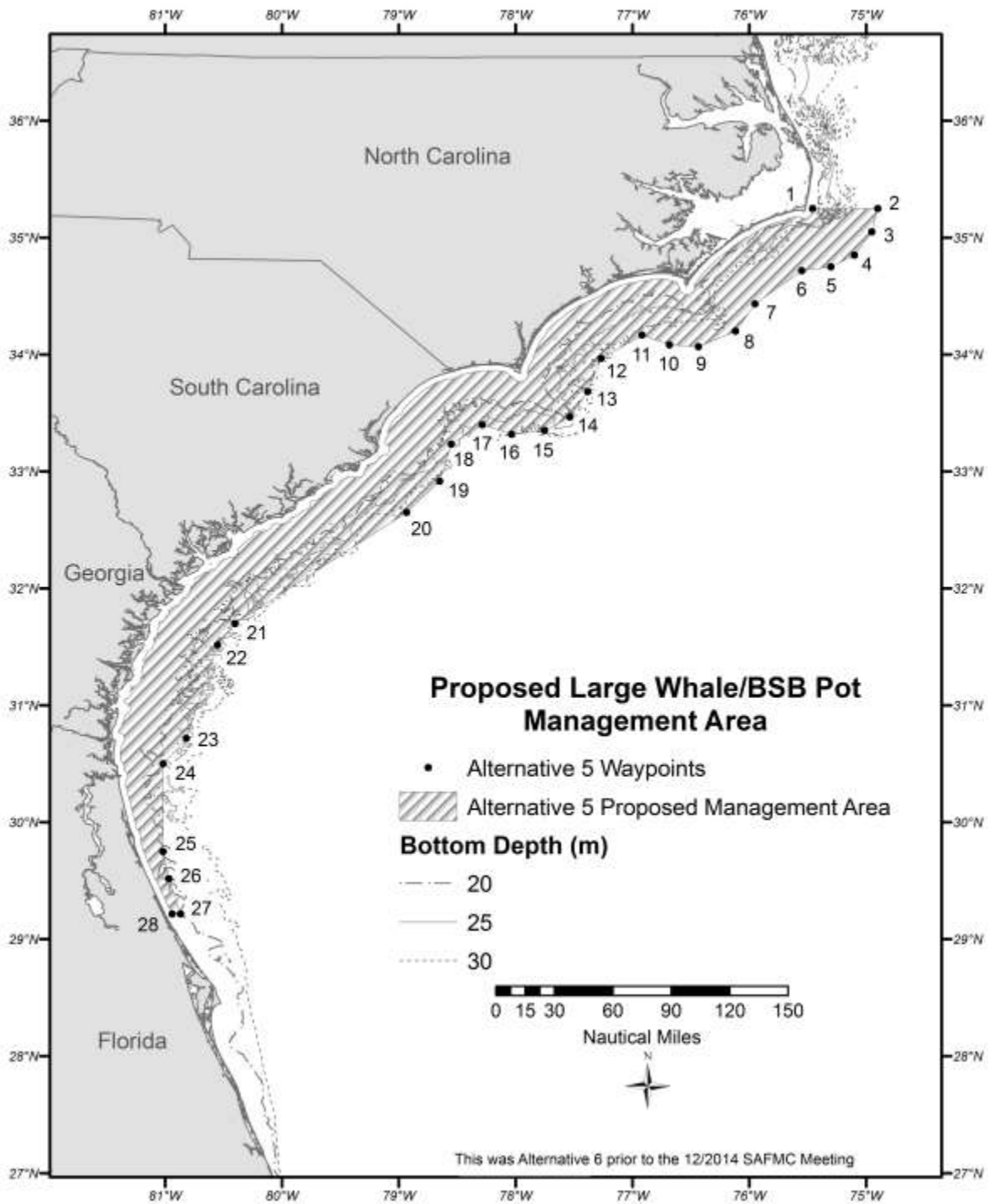


Figure B2.1.4. Area for the proposed black sea bass pot closure in Alternative 5.

Alternative 6. The black sea bass pot closure applies to waters inshore of points 1-20 listed below (Table 2.1.4), approximately Sebastian, Florida, to Cape Hatteras, North Carolina. The closure applies to the area annually from November 1 through April 30.

Note: Federal regulations would only apply to that portion of the area within the South Atlantic EEZ. The states will be asked to implement compatible regulations within state waters.

Note: This area is also based on joint comments received from a number of environmental groups (dated January 3, 2014) in response to NMFS' December 4, 2013, Federal Register Notice of Intent to Prepare this DEIS (78 FR 72868). The environmental groups proposed the area as a reasonable alternative for consideration. This area represents an existing management area, the Southeast Seasonal Gillnet Restricted Area, under the ALWTRP; and an additional area off North Carolina. The area off North Carolina includes waters shallower than 30 meters and is northward of the designated ALWTRP Southeast Restricted Area.

Table B2.1.4. Eastern boundary coordinates for the proposed black sea bass pot closure in Alternative 6.

Point	N. Latitude	W Longitude
1	35° 15'	State/EEZ Boundary
2	35° 15'	75° 08'
3	34° 58'	75° 41'
4	34° 49'	75° 50'
5	34° 47'	76° 05'
6	34° 31'	76° 18'
7	34° 20'	76° 13'
8	34° 12'	77° 00'
9	33° 43'	77° 30'
10	33° 21'	77° 21'

11	33° 18'	77° 41'
12	33° 22'	77° 56'
13	33° 19'	78° 06'
14	32° 58'	78° 39'
15	32° 39'	78° 59'
16	32° 37'	79° 14'
17	32° 22'	79° 22'
18	32° 00'	80° 00'
19	27° 51'	80° 00'
20	27° 51'	State/EEZ Boundary

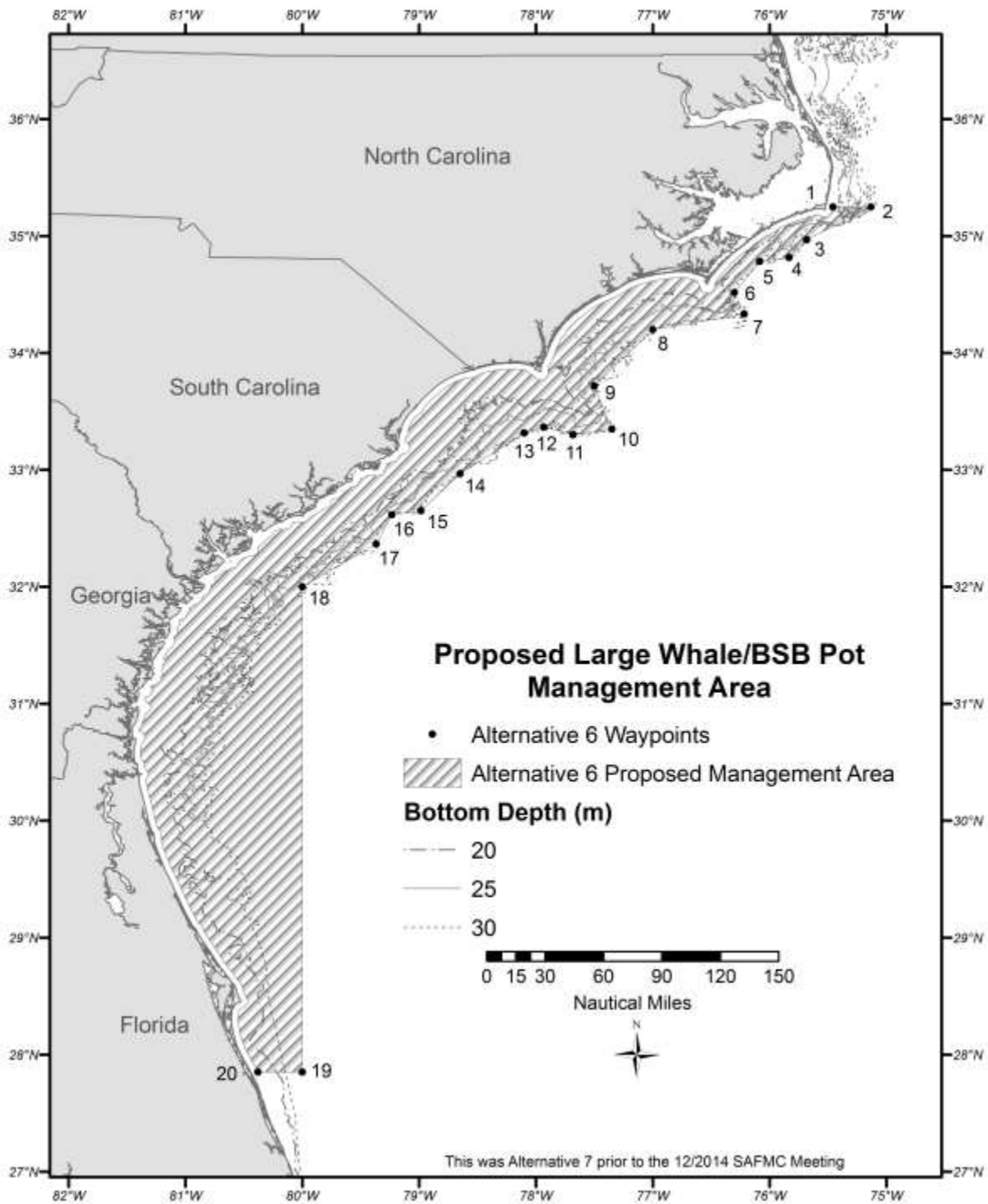


Figure B2.1.5. Area for the proposed black sea bass pot closure in Alternative 6.

Alternative 7. The black sea bass pot closure applies to the area currently designated as North Atlantic right whale critical habitat, in addition to waters inshore of points 1-29 listed below (Table B2.1.5), approximately North of the Altamaha River, Georgia, to Cape Hatteras, North Carolina (Figure B2.1.6).

Sub-alternative 7a. The black sea bass pot closure applies to the area annually from November 1 through December 15 and March 15 through April 30.

Sub-alternative 7b. For the area off North Carolina and South Carolina, the black sea bass pot closure applies annually from November 1 through December 15 and March 15 through April 30. For the area off Georgia and Florida, the black sea bass pot closure applies annually from November 15 through April 15.

Sub-alternative 7c. For the area off North Carolina and South Carolina, the black sea bass pot closure applies annually from February 15 through April 30. For the area off Georgia and Florida, the black sea bass pot closure applies annually from November 15 through April 15.

Note: Federal regulations would only apply to that portion of the area within the South Atlantic EEZ. The states will be asked to implement compatible regulations for the portion of the area within state waters.

Note: This area represents North Atlantic right whale critical habitat in the South Atlantic region designated on June 3, 1994. However, the closure dates are inconsistent with the critical habitat listing since right whales inhabit southeastern waters from 1 Nov-30 Apr. Off North Carolina and South Carolina, the black sea bass pot closure applies in the exclusive economic zone in waters shallower than 25 meters. The eastern boundary of the closure between these two areas was formed by drawing a straight line from the southeastern corner waypoint of the northern portion (NC/SC) to the northeastern corner waypoint of the southern section (FL/GA).

The following is language describing the North Atlantic right whale critical habitat area from 50 CFR 226:

Southeastern United States: The area designated as critical habitat in these waters encompasses waters between 31 deg.15'N (approximately located at the mouth of the Altamaha River, GA) and 30 deg.15'N (approximately Jacksonville, FL) from the shoreline out to 15 nautical miles offshore; and the waters between 30 deg.15'N and 28 deg.00'N (approximately Sebastian Inlet, FL) from the shoreline out to 5 nautical miles.

Table B2.1.5. Eastern boundary coordinates for proposed black sea bass pot closure Alternative 7.

Point	N. Latitude	W Longitude
1	35° 15'	State/EEZ boundary
2	35° 15'	75° 09'
3	35° 06'	75° 22'
4	35° 06'	75° 39'
5	35° 01'	75° 47'
6	34° 54'	75° 46'
7	34° 52'	76° 04'
8	34° 33'	76° 22'
9	34° 23'	76° 18'
10	34° 21'	76° 27'
11	34° 25'	76° 51'
12	34° 09'	77° 19'
13	33° 44'	77° 38'
14	33° 25'	77° 27'
15	33° 22'	77° 40'
16	33° 28'	77° 41'
17	33° 32'	77° 53'
18	33° 22'	78° 26'
19	33° 06'	78° 31'
20	33° 05'	78° 40'

21	33° 01'	78° 43'
22	32° 56'	78° 57'
23	32° 44'	79° 04'
24	32° 42'	79° 13'
25	32° 34'	79° 23'
26	32° 25'	79° 25'
27	32° 23'	79° 37'
28	31° 53'	80° 09'
29	31° 15'	80° 59'
30	30° 56'	81° 05'
31	30° 42'	81° 07'
32	30° 15'	81° 05'
33	30° 15'	81° 17'
34	29° 40'	81° 07'
35	29° 08'	80° 51'
36	28° 36'	80° 28'
37	28° 26'	80° 25'
38	28° 20'	80° 31'
39	28° 11'	80° 30'
40	28° 00'	80° 25'
41	28° 00'	State/EEZ Boundary

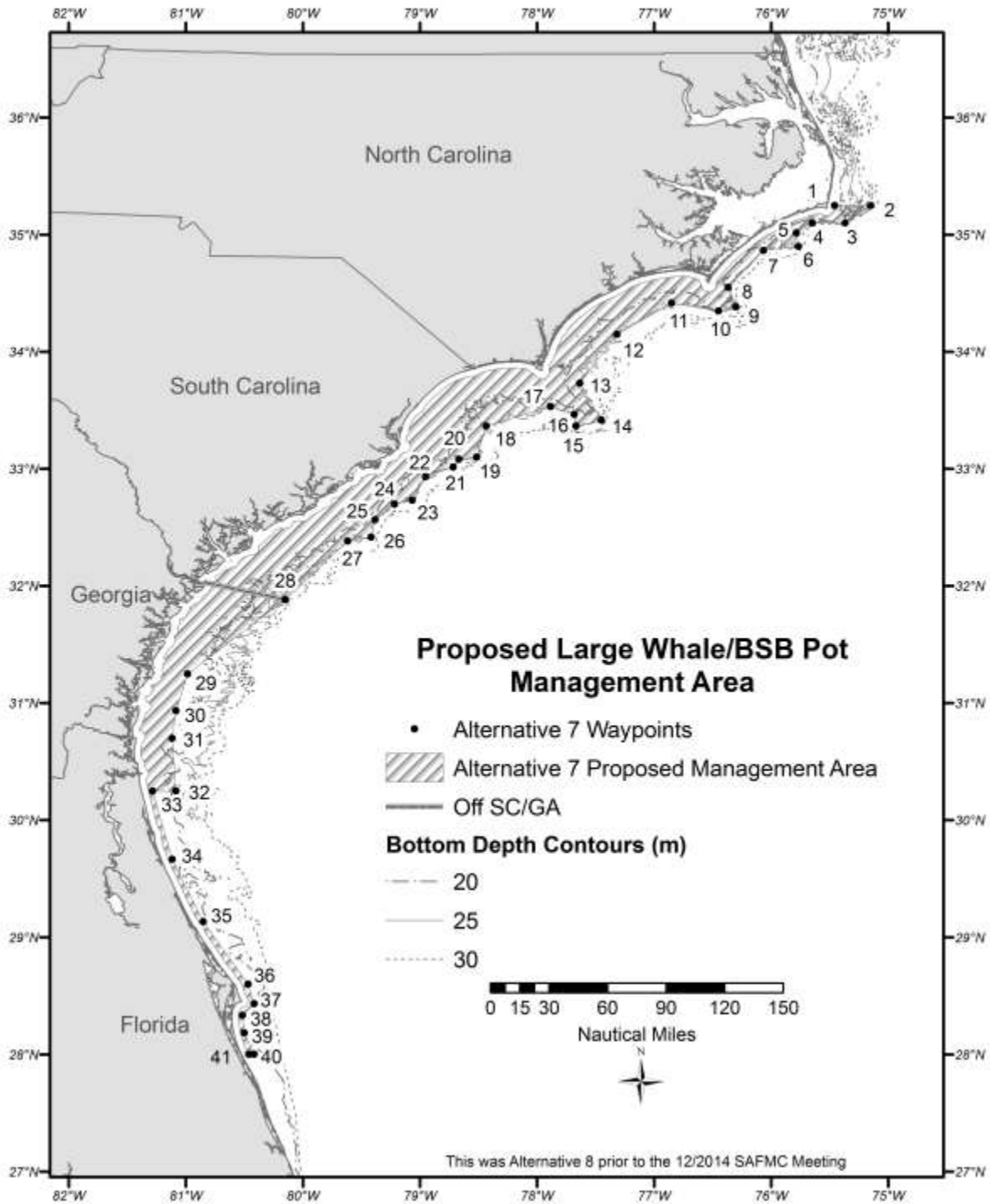


Figure B2.1.6. Area for the proposed black sea bass pot closure in Alternative 7.

Alternative 8. The black sea bass pot closure applies to waters inshore of points 1-35 listed below (Table B2.1.6), approximately Daytona Beach, Florida, to Cape Hatteras, North Carolina (Figure B2.1.7).

Sub-alternative 8a. The black sea bass pot closure applies to the area annually from November 1 through April 15.

Sub-alternative 8b. For the area off North Carolina and South Carolina, the black sea bass pot closure applies annually from November 1 through December 15 and February 15 through April 30. For the area off Georgia and Florida, the black sea bass pot closure applies annually from November 15 through April 15.

Note: Federal regulations would only apply to that portion of the area within the South Atlantic EEZ. The states will be asked to implement compatible regulations for the portion of the area within state waters.

Note: In Alternative 8, the boundaries off Florida and Georgia are identical to the boundaries in Alternative 5. Off North Carolina and South Carolina, the black sea bass pot closure applies in the exclusive economic zone in waters shallower than 25 meters.

Table B2.1.6. Eastern boundary coordinates for proposed black sea bass pot closure in Alternative 8.

Point	N. Latitude	W Longitude
1	35° 15'	State/EEZ Boundary
2	35° 15'	75° 09'
3	35° 06'	75° 22'
4	35° 06'	75° 39'
5	35° 01'	75° 47'
6	34° 54'	75° 46'
7	34° 52'	76° 04'
8	34° 33'	76° 22'
9	34° 23'	76° 18'
10	34° 21'	76° 27'
11	34° 25'	76° 51'
12	34° 09'	77° 19'
13	33° 44'	77° 38'
14	33° 25'	77° 27'
15	33° 22'	77° 40'
16	33° 28'	77° 41'
17	33° 32'	77° 53'
18	33° 22'	78° 26'
19	33° 06'	78° 31'
20	33° 05'	78° 40'
21	33° 01'	78° 43'
22	32° 56'	78° 57'
23	32° 44'	79° 04'
24	32° 42'	79° 13'
25	32° 34'	79° 23'

26	32° 25'	79° 25'
27	32° 23'	79° 37'
28	31° 53'	80° 09'
29	31° 31'	80° 33'
30	30° 43'	80° 49'
31	30° 30'	81° 01'
32	29° 45'	81° 01'
33	29° 31'	80° 58'
34	29° 13'	80° 52'
35	29° 13'	State/EEZ Boundary

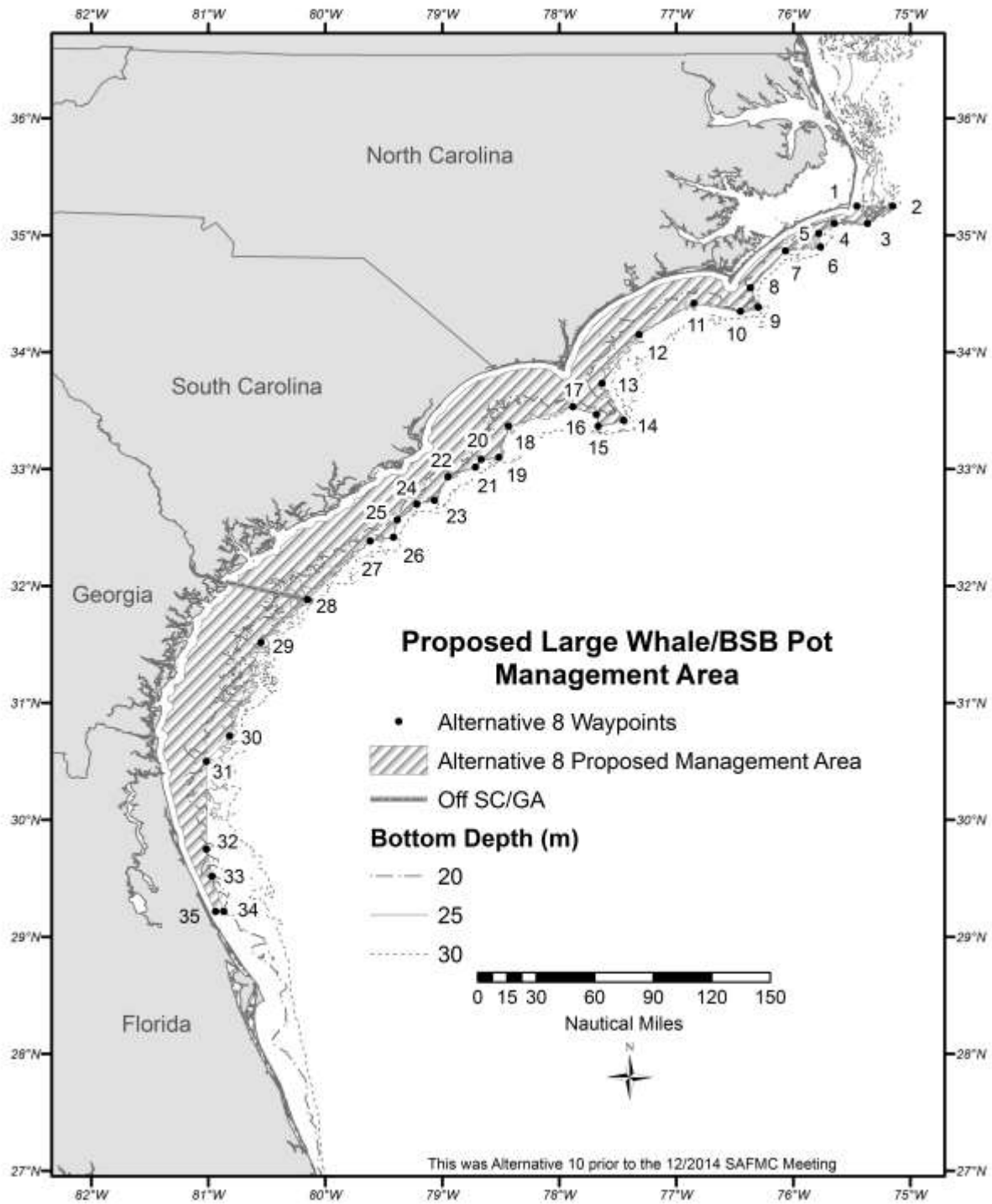


Figure B2.1.7. Area for the proposed black sea bass pot closure in Alternative 8.

Alternative 9. The black sea bass pot closure applies to waters inshore of points 1-18 listed below (Table B2.1.7), approximately Daytona Beach, Florida, to Cape Hatteras, North Carolina (Figure B2.1.8).

Sub-alternative 9a. The black sea bass pot closure applies to the area annually from November 1 through April 15.

Sub-alternative 9b. For the area off North Carolina and South Carolina, the black sea bass pot closure applies annually from November 1 through December 15 and February 15 through April 30. For the area off Georgia and Florida, the black sea bass pot closure applies annually from November 15 through April 15.

Note: Federal regulations would only apply to that portion of the area within the South Atlantic EEZ. The states will be asked to implement compatible regulations for the portion of the area within state waters.

Note: In Alternative 9, the boundaries off Florida and Georgia are identical to the boundaries in Alternative 5. Off North Carolina and South Carolina, the black sea bass pot closure applies in the exclusive economic zone in waters shallower than 20 meters.

Table B2.1.7. Eastern boundary coordinates for the proposed black sea bass pot closure in Alternative 9.

Point	N. Latitude	W Longitude
1	35° 15'	State/EEZ Boundary
2	35° 15'	75° 20'
3	35° 05'	75° 24'
4	35° 08'	75° 38'
5	35° 04'	75° 52'
6	34° 51'	76° 11'
7	34° 36'	76° 24'
8	34° 24'	76° 19'
9	34° 21'	76° 27'
10	34° 33'	76° 48'
11	34° 16'	77° 25'
12	33° 44'	77° 46'
13	33° 30'	77° 31'
14	33° 28'	77° 35'
15	33° 36'	77° 55'
16	33° 34'	78° 28'
17	32° 59'	78° 52'
18	32° 59'	79° 02'
19	32° 31'	79° 30'
20	31° 57'	80° 27'
11	31° 42'	80° 24'
12	31° 31'	80° 33'
13	30° 43'	80° 49'
14	30° 30'	81° 01'
15	29° 45'	81° 01'

16	29° 31'	80° 58'
17	29° 13'	80° 52'
18	29° 13'	State/EEZ Boundary

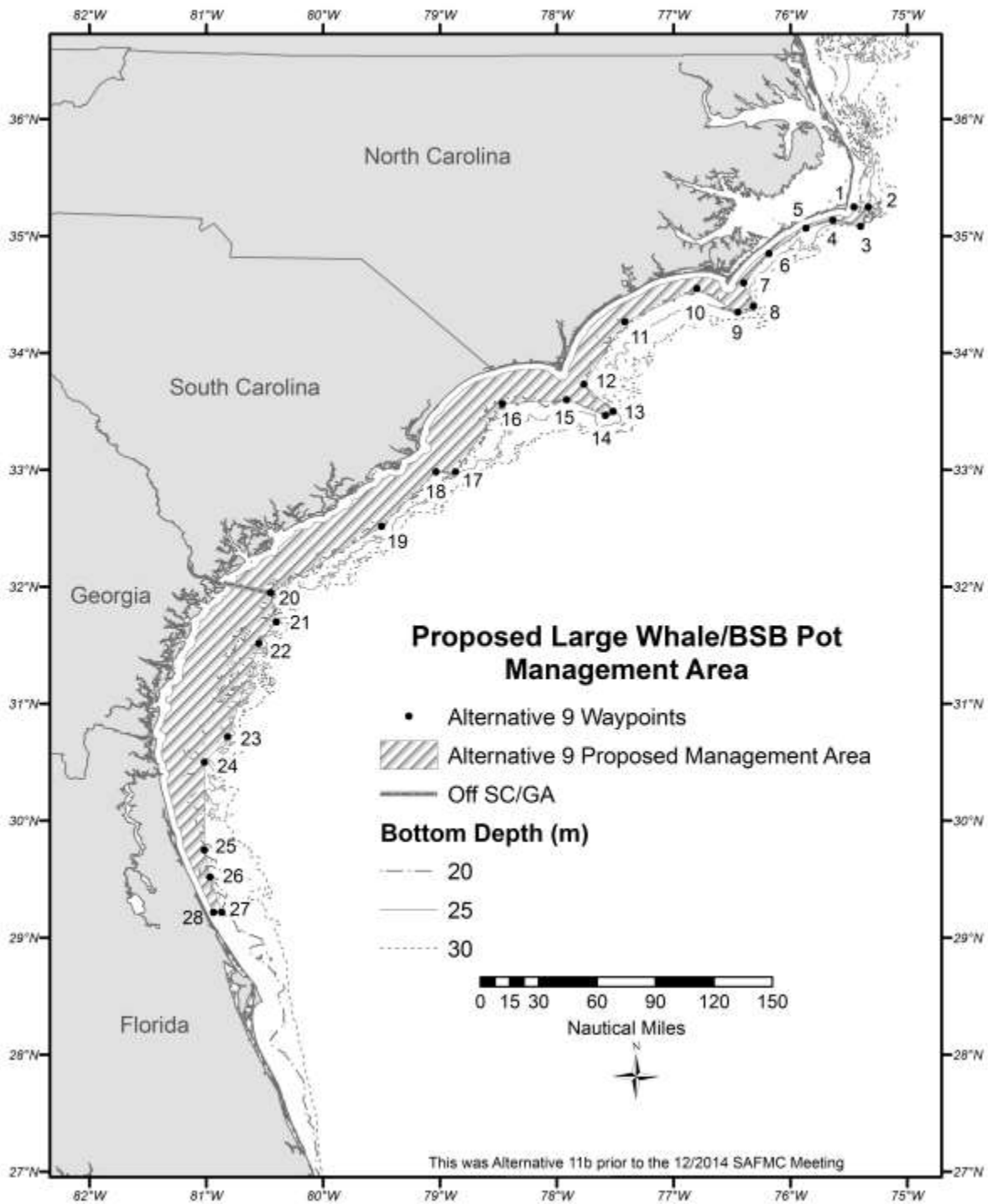


Figure B2.1.8. Area for the proposed black sea bass pot closure in Alternative 9.

Alternative 10. From **November 1 through December 15**, the black sea bass pot closure applies to waters inshore of points 1-20 listed below (**Table 2.1.8**), approximately Georgia/South Carolina State Line, to Cape Hatteras, North Carolina (**Figure 2.1.9**).

From **February 15 through April 30**, the black sea bass pot closure applies to waters inshore of points 1-28 listed below (**Table 2.1.9**), approximately Georgia/South Carolina State Line, to Cape Hatteras, North Carolina (**Figure 2.1.10**).

From December 16 through February 14, there would be no closure off of the Carolinas.

From November 15 through April 15, the black sea bass pot closure applies to waters inshore of points 20-28 listed below (**Table 2.1.8**), approximately Georgia/South Carolina State Line, to approximately Daytona Beach, Florida (**Figure 2.1.9**).

Note: In Alternative 10, the boundaries off Florida and Georgia are identical to the boundaries in Alternative 5. Off North Carolina and South Carolina, the black sea bass pot closure applies in the exclusive economic zone in waters shallower than 20 meters from **November 1 through x** and 25 meters from **x through** April 30..

Table B2.1.8. Eastern boundary coordinates for the proposed black sea bass pot closure in Alternative 10 for **November 1 through x**.

Point	N. Latitude	W Longitude
1	35° 15'	State/EEZ Boundary
2	35° 15'	75° 20'
3	35° 05'	75° 24'
4	35° 08'	75° 38'
5	35° 04'	75° 52'
6	34° 51'	76° 11'
7	34° 36'	76° 24'
8	34° 24'	76° 19'
9	34° 21'	76° 27'
10	34° 33'	76° 48'
11	34° 16'	77° 25'
12	33° 44'	77° 46'
13	33° 30'	77° 31'
14	33° 28'	77° 35'
15	33° 36'	77° 55'

16	33° 34'	78° 28'
17	32° 59'	78° 52'
18	32° 59'	79° 02'
19	32° 31'	79° 30'
20	31° 57'	80° 27'
11	31° 42'	80° 24'
12	31° 31'	80° 33'
13	30° 43'	80° 49'
14	30° 30'	81° 01'
15	29° 45'	81° 01'
16	29° 31'	80° 58'
17	29° 13'	80° 52'
18	29° 13'	State/EEZ Boundary

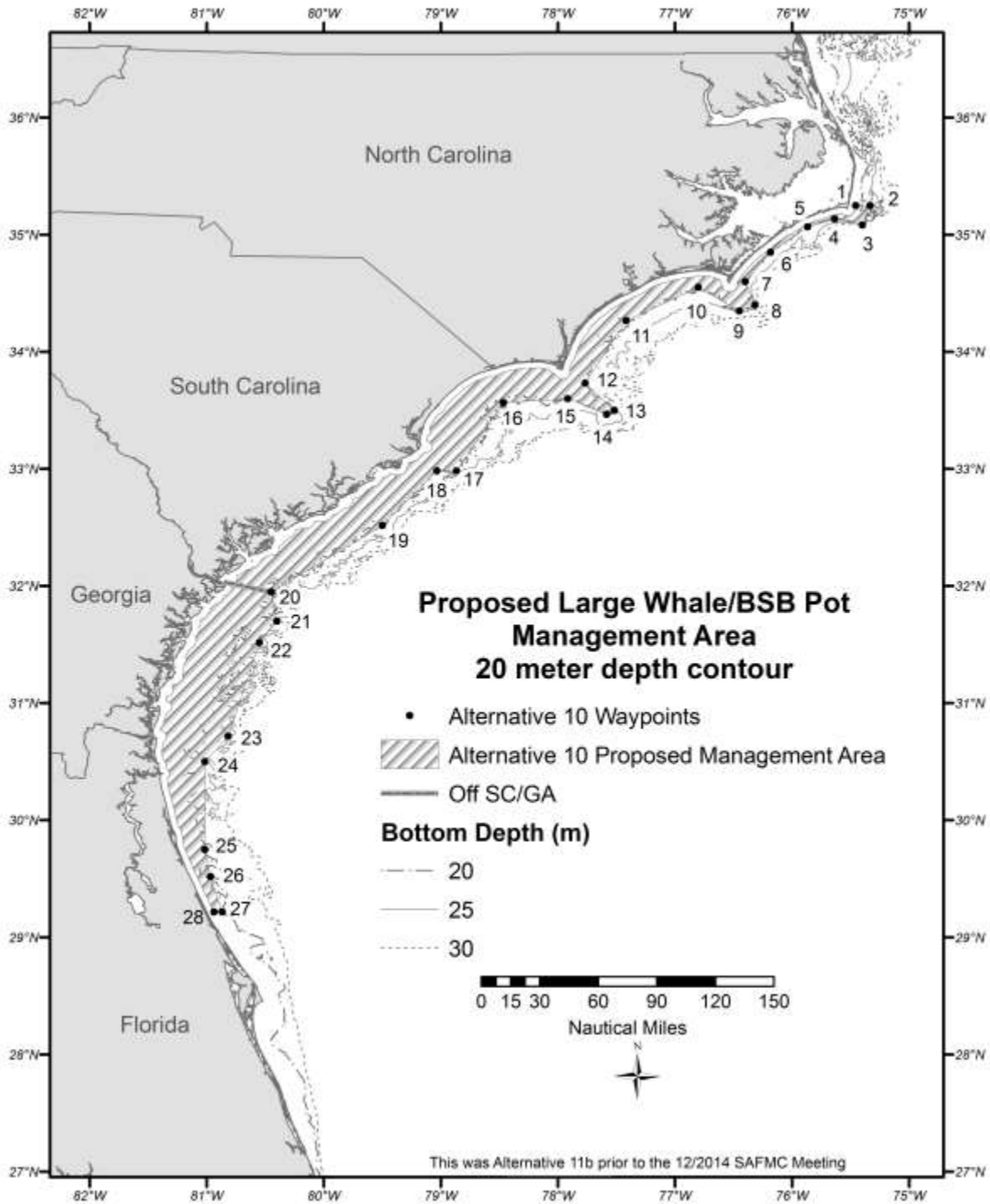


Figure B2.1.9. Area for the proposed black sea bass pot closure in Alternative 10 from November 1 through X.

Table B2.1.9. Eastern boundary coordinates for the proposed black sea bass pot closure in Alternative 10 for **x through April 30**.

Point	N. Latitude	W Longitude
1	35° 15'	State/EEZ Boundary
2	35° 15'	75° 09'
3	35° 06'	75° 22'
4	35° 06'	75° 39'
5	35° 01'	75° 47'
6	34° 54'	75° 46'
7	34° 52'	76° 04'
8	34° 33'	76° 22'
9	34° 23'	76° 18'
10	34° 21'	76° 27'
11	34° 25'	76° 51'
12	34° 09'	77° 19'
13	33° 44'	77° 38'
14	33° 25'	77° 27'
15	33° 22'	77° 40'
16	33° 28'	77° 41'
17	33° 32'	77° 53'

18	33° 22'	78° 26'
19	33° 06'	78° 31'
20	33° 05'	78° 40'
21	33° 01'	78° 43'
22	32° 56'	78° 57'
23	32° 44'	79° 04'
24	32° 42'	79° 13'
25	32° 34'	79° 23'
26	32° 25'	79° 25'
27	32° 23'	79° 37'
28	31° 53'	80° 09'
29	31° 31'	80° 33'
30	30° 43'	80° 49'
31	30° 30'	81° 01'
32	29° 45'	81° 01'
33	29° 31'	80° 58'
34	29° 13'	80° 52'
35	29° 13'	State/EEZ Boundary

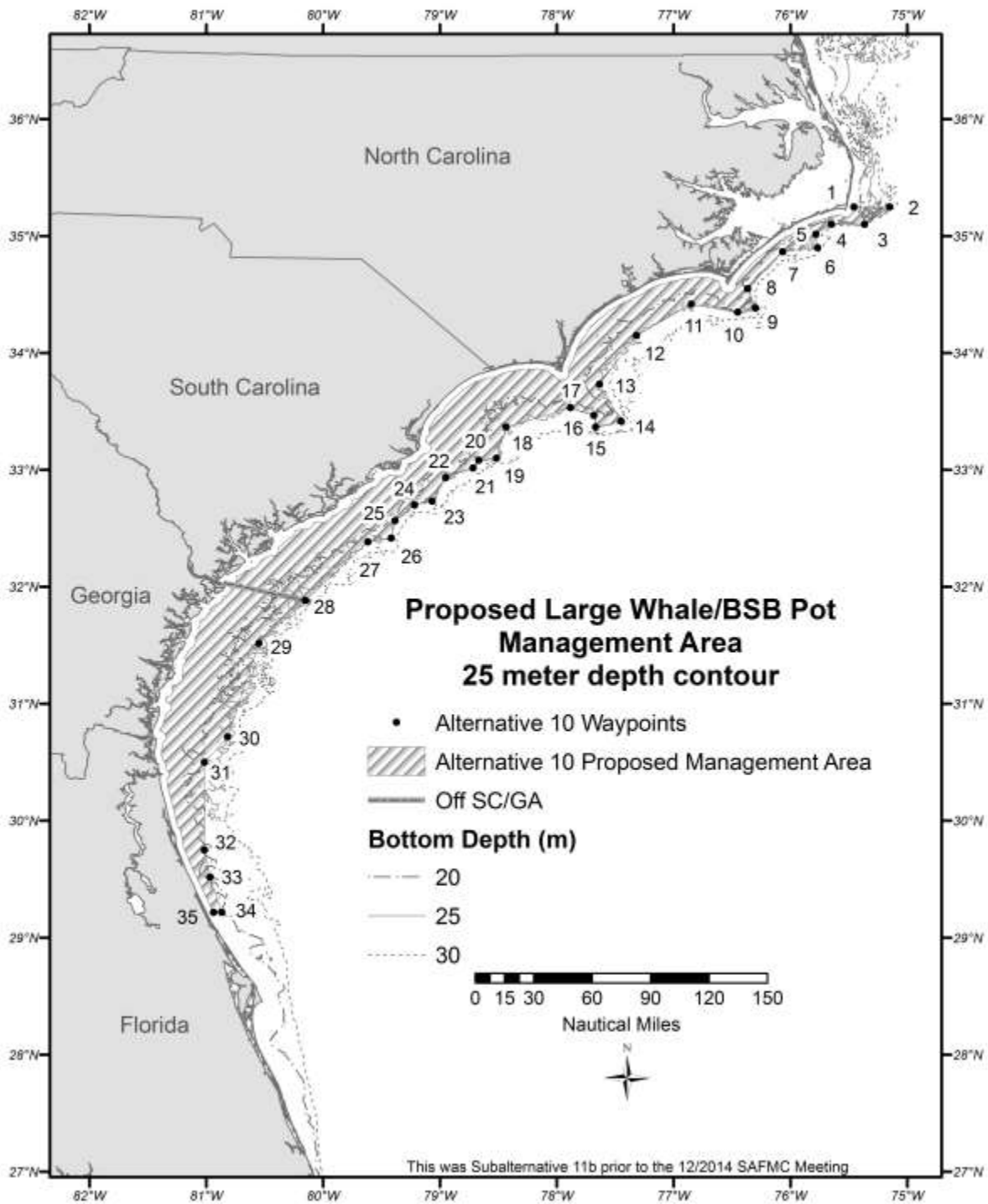


Figure B2.1.10. Area for proposed black sea bass pot closure in Alternative 10 from X through April 30.

APPENDIX C: NORTH CAROLINA RIGHT WHALE SIGHTINGS MODEL

Tim Gowan
 FWC/FWRI
 6/17/2014

Training data

Survey data from UNC Wilmington surveys (10/2005-4/2006, 12/2006-4/2007, and 2/2008-4/2008), obtained from OBIS-Seamap. Survey effort calculated as cumulative number of surveys (flights) per cell, across all survey months and years. Number of sightings calculated as cumulative number of right whales per cell, across all months and years.

Environmental data:

Distance to shore, depth, and slope calculated as in Gowan and Ortega-Ortiz 2014. SST summarized into semi-monthly averages (as in Gowan and Ortega-Ortiz 2014), then 'countSST' (number of semi-monthly periods with available data) and 'avgSST' calculated from 80 semi-monthly periods (Dec03-Mar13).

Started with 5642 sampling units/cells (22 cells with sightings, 24 groups, 48 whales). Removed cells with no surveys; where DistToShore=-999 (on land); where slope=0.00 (null); and where 'countSST' < 15 (623 cells remaining for analysis, 23 groups, 45 whales).

Model framework and selection

Note that there is no temporal component to this model – just used cumulative sightings and effort (across all months and years with survey data) and long-term winter SST – due to limited data.

Used a GAM with quasibinomial distribution (to deal with excessive number of zeros) with a logit link to model presence-absence of right whale sightings. log(Surveys) used as offset term in model; log(Depth), log(Slope), DistToShore, and avgSST considered as predictor variables; basis dimension parameter set to 3 and gamma term set to 1.4 to avoid overfitting.

Model selection was accomplished with a forward stepwise selection procedure, using the following evaluation criteria: model GCV scores (Table 1), percentage of deviance explained (Table 1), analysis of deviance tests (Table 2), and average squared prediction error from a five-fold cross-validation (Table 1) [all as in Gowan and Ortega-Ortiz 2014].

Table 1

Step	Model	% Deviance	GCV	mean ASPE
1	Null	0.0	0.3003	0.03032
2	s(log(Depth))	1.84	0.2962	0.03031
2	s(DistToShore)	3.74	0.2904	0.03031
2	s(log(Slope))	3.61	0.2920	0.03029
2	s(avgSST)	2.93	0.2940	0.03031
3	s(DistToShore) + s(log(Depth))	4.38	0.2907	0.03030

3	s(DistToShore) + s(log(Slope))	6.88	0.2844	0.03028
3	s(DistToShore) + s(avgSST)	5.17	0.2885	0.03031
4	s(DistToShore) + s(log(Slope)) + s(log(Depth))	8.05	0.2817	0.03027
4	s(DistToShore) + s(log(Slope)) + s(avgSST)	8.42	0.2812	0.03028
5	s(DistToShore) + s(log(Slope)) + s(avgSST) + s(log(Depth))	9.11	0.2800	0.03027

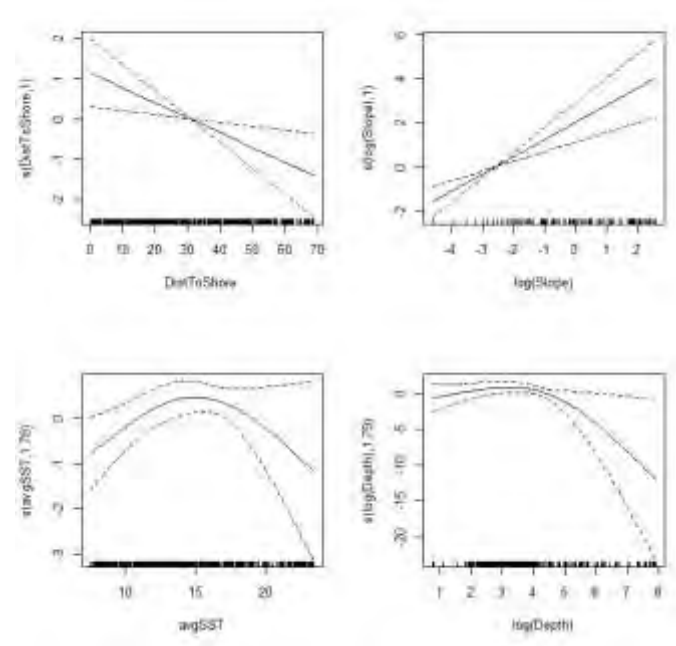
Table 2

Model	Estimated df	Residual Deviance	Reduction in Deviance	<i>F</i>	<i>p</i>
null	1.00	186.3			
Step2	2.00	179.3	6.96	24.1	<0.001
Step3	4.67	173.5	5.86	7.8	<0.001
Step4	5.89	170.6	2.87	8.5	<0.01
Step5	6.57	169.3	1.28	6.8	<0.05

Results

Selected model, as formulated in R:

gam(Presence ~ s(DistToShore,k=3) + s(log(Slope),k=3) + s(avgSST,k=3) + s(log(Depth),k=3), family=quasibinomial(link='logit'), offset=log(Surveys), gamma=1.4)

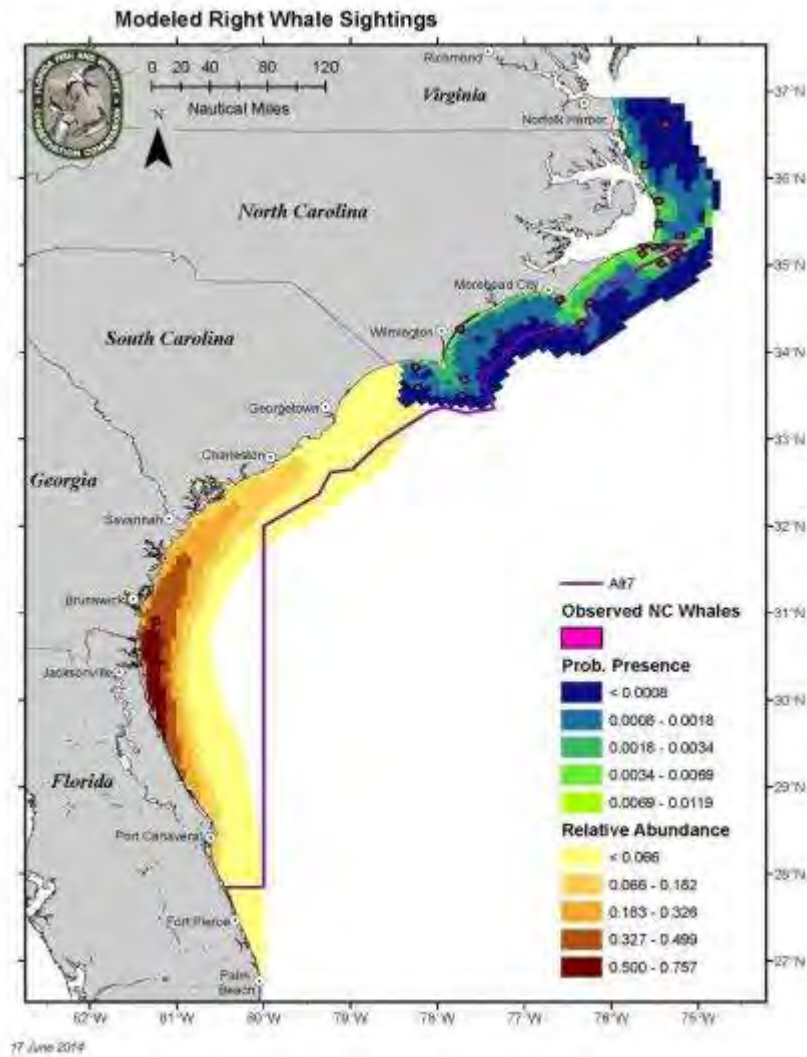


Predictions

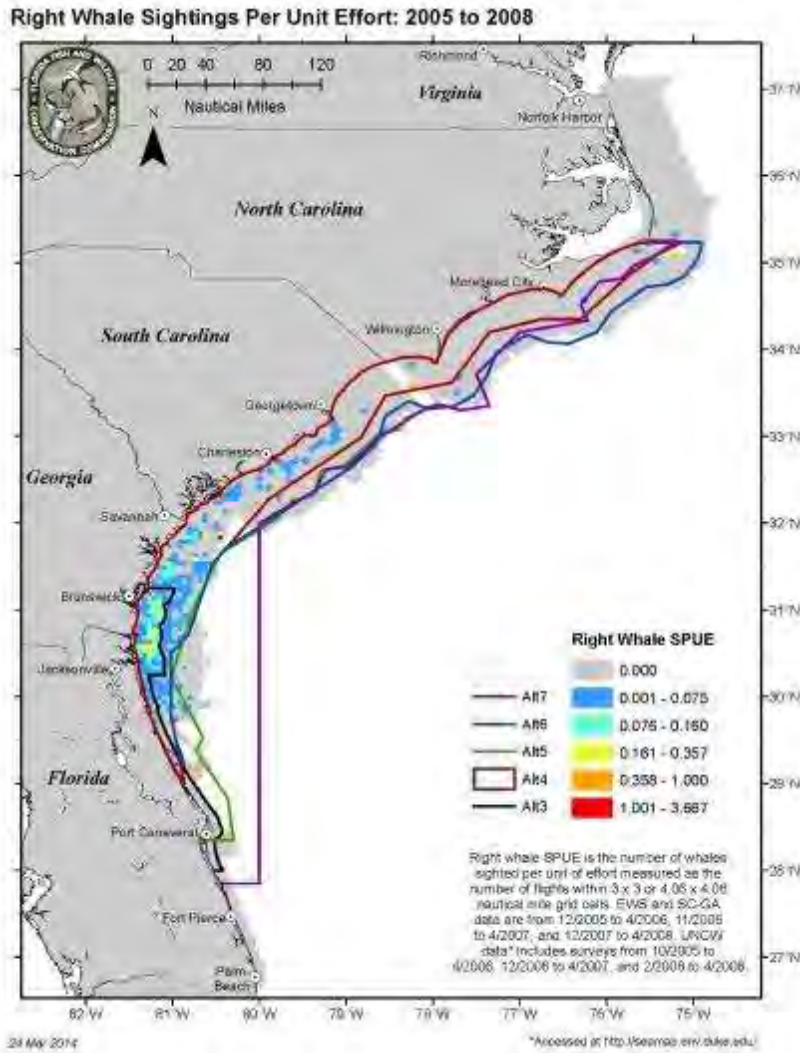
Only made predictions within the range of the training data [$(0 < \text{DistToShore} \leq 69)$ and $(2 < \text{Depth} < 2742)$ and $(33.38 \leq \text{Lat} \leq 36.89)$ and $(-78.42 \leq \text{Long} \leq -74.79)$ and $(0 < \text{Slope} \leq 13.21)$ and $(\text{countSST} \geq 15)$] – in 704 cells.

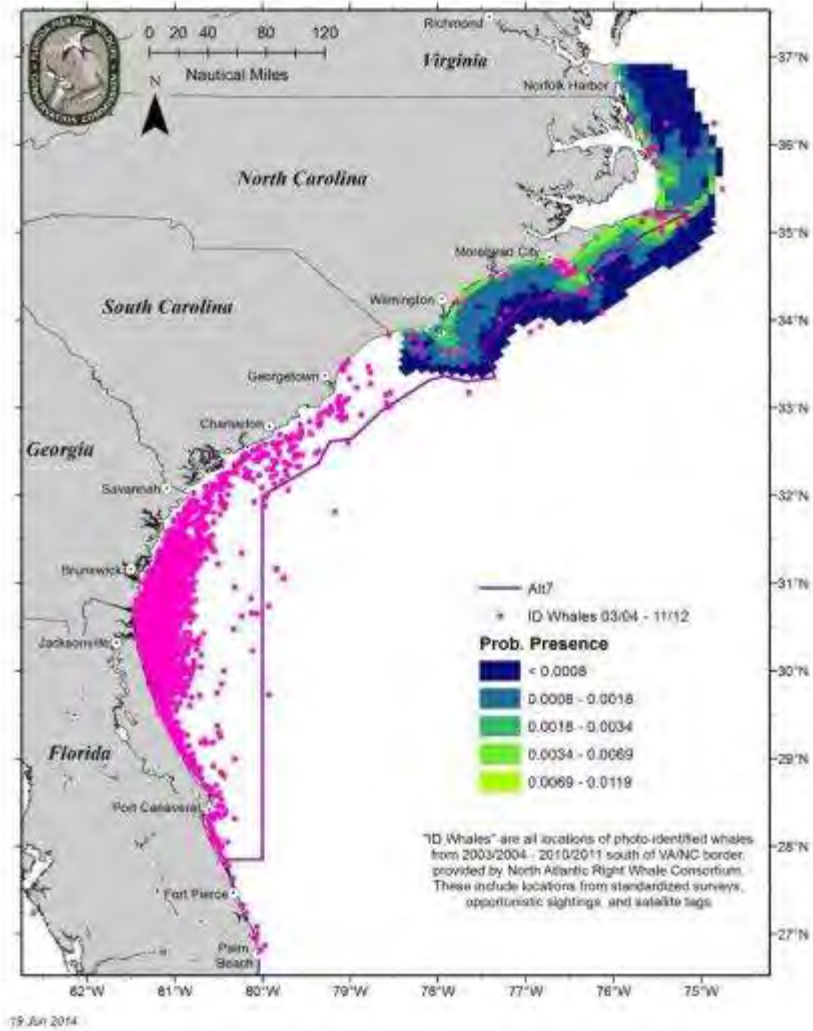
Survey data, environmental data, predicted probability of right whale presence ('pres'), and standard errors around predictions ('pres_se').

***Note: Predicted values from this NC model do not have the same scale or interpretation as the values from the SEUS model (Gowan and Ortega-Ortiz 2014) and are not directly comparable. Differences include survey design, resolution/quantification of survey effort, temporal components in the model, model framework (probability of presence vs. relative abundance), whale behavior (e.g. sighting availability bias in migratory corridor vs. calving grounds), etc.

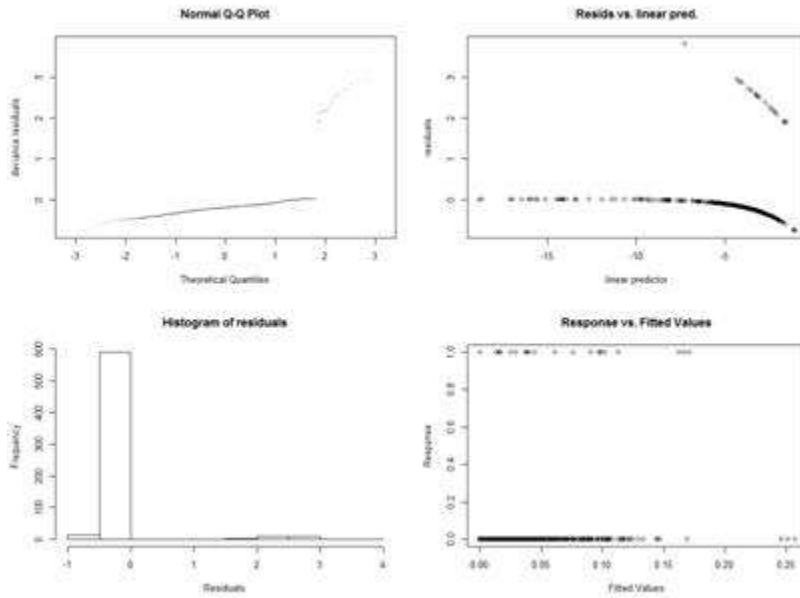


Comparing Predictions to Observations





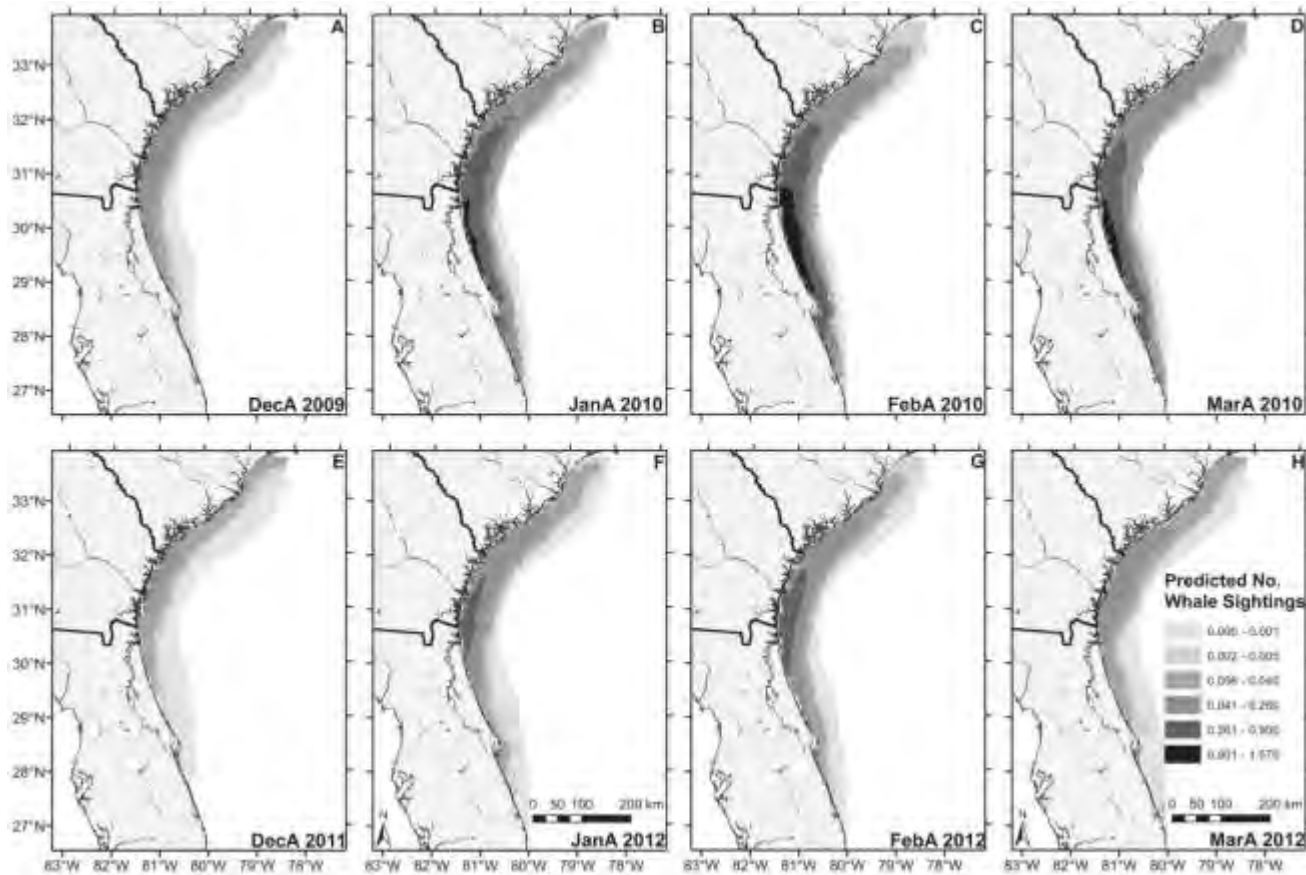
Residual plots for zero-inflated model fits



APPENDIX D: Gowan and Ortega-Ortiz (2014)

{AVAILABLE FREE AT: <http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0095126>}

Warm/Cold Winter Right Whale Distribution

**FIGURE 5: Predicted right whale relative abundance.**

Values represent predicted number of sighted right whales per grid cell (assuming uniform survey effort) during the 2009/2010 calving season (a relatively cold season with high sighting rates) for December 1–15 (A), January 1–15 (B), February 1–15 (C), and March 1–15 (D); and during the 2011/2012 calving season (a relatively warm season with low sighting rates) for December 1–15 (E), January 1–15 (F), February 1–15 (G), and March 1–15 (H).

doi: 10.1371/journal.pone.0095126.g005

APPENDIX E: Sensitivity Run – Monthly North Carolina Whale Distribution Model**Introduction**

Insufficient right whale sightings data off North Carolina were available to directly fit a model comparable to the Gowan & Ortiz-Ortega (2014) model for FL-SC. As described in Appendix C, Dr. Gowan fit the NC model using the same modeling approach as described in Gowan & Ortega-Ortiz (2014), but aggregated right whale sightings data across all months (Dec-Mar) to obtain sufficient sample size for a statistically robust approach.

The SAFMC SSC requested additional analysis of monthly trends off NC, if possible. Dr. Gowan determined the data could support this approach if driven by whale responses to the most dynamic environmental factor (SST) rather than by the monthly sightings data. The model described in Appendix C was used to generate monthly predictions by using monthly means for SST rather than a long term Dec-Mar average of SST as in the original analysis. Thus, monthly differences in predictions are based solely on predicted whale responses to monthly differences in SST and not on modeled whale abundance/migration.

Methods*Training data*

Survey data from UNC Wilmington surveys (10/2005-4/2006, 12/2006-4/2007, and 2/2008-4/2008), obtained from OBIS-Seamap. Survey effort calculated as cumulative number of surveys (flights) per cell, across all survey months and years. Number of sightings calculated as cumulative number of right whales per cell, across all months and years.

Environmental data:

Distance to shore, depth, and slope calculated as in Gowan and Ortega-Ortiz 2014. SST summarized into semi-monthly averages (as in Gowan and Ortega-Ortiz 2014), then 'countSST' (number of semi-monthly periods with available data) and 'avgSST' calculated from 80 semi-monthly periods (Dec03-Mar13).

Started with 5642 sampling units/cells (22 cells with sightings, 24 groups, 48 whales). Removed cells with no surveys; where DistToShore=-999 (on land); where slope=0.00 (null); and where 'countSST' < 15 (623 cells remaining for analysis, 23 groups, 45 whales).

Model framework and selection

Note that there is no temporal component to this model – just used cumulative sightings and effort (across all months and years with survey data) and long-term winter SST – due to limited data.

Used a GAM with quasibinomial distribution (to deal with excessive number of zeros) with a logit link to model presence-absence of right whale sightings. log(Surveys) used as offset term in model; log(Depth), log(Slope), DistToShore, and avgSST considered as predictor variables; basis dimension parameter set to 3 and gamma term set to 1.4 to avoid overfitting.

Model selection was accomplished with a forward stepwise selection procedure, using the following evaluation criteria: model GCV scores (Table E1), percentage of deviance explained (Table E1), analysis of deviance tests (Table E2), and average squared prediction error from a five-fold cross-validation (Table E1) [all as in Gowan and Ortega-Ortiz 2014].

Table E1

Step	Model	% Deviance	GCV	mean ASPE
1	Null	0.0	0.3003	0.03032
2	s(log(Depth))	1.84	0.2962	0.03031
2	s(DistToShore)	3.74	0.2904	0.03031
2	s(log(Slope))	3.61	0.2920	0.03029
2	s(avgSST)	2.93	0.2940	0.03031
3	s(DistToShore) + s(log(Depth))	4.38	0.2907	0.03030
3	s(DistToShore) + s(log(Slope))	6.88	0.2844	0.03028
3	s(DistToShore) + s(avgSST)	5.17	0.2885	0.03031
4	s(DistToShore) + s(log(Slope)) + s(log(Depth))	8.05	0.2817	0.03027
4	s(DistToShore) + s(log(Slope)) + s(avgSST)	8.42	0.2812	0.03028
5	s(DistToShore) + s(log(Slope)) + s(avgSST) + s(log(Depth))	9.11	0.2800	0.03027

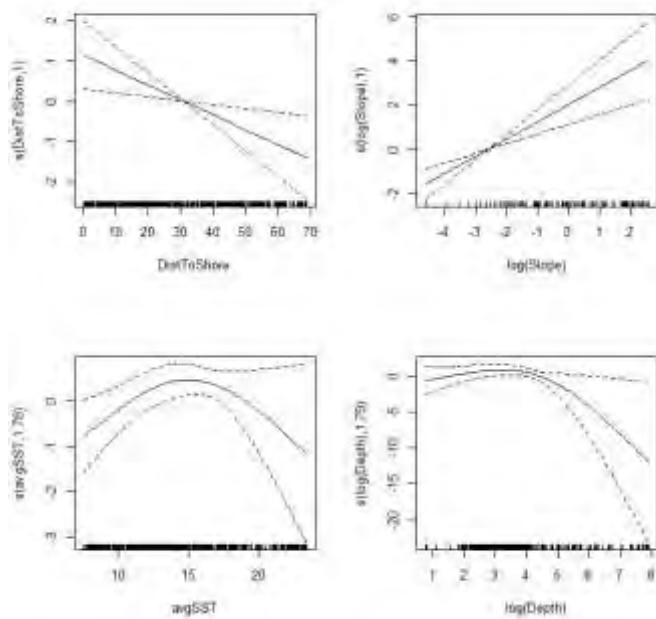
Table E2

Model	Estimated df	Residual Deviance	Reduction in Deviance	<i>F</i>	<i>p</i>
null	1.00	186.3			
Step2	2.00	179.3	6.96	24.1	<0.001
Step3	4.67	173.5	5.86	7.8	<0.001
Step4	5.89	170.6	2.87	8.5	<0.01
Step5	6.57	169.3	1.28	6.8	<0.05

Final Model

Selected model, as formulated in R:

```
gam(Presence ~ s(DistToShore,k=3) + s(log(Slope),k=3) + s(avgSST,k=3) + s(log(Depth),k=3),
family=quasibinomial(link='logit'), offset=log(Surveys), gamma=1.4)
```



Results

Predictions were made within the range of the training data [(0 < DistToShore <= 69) and (2 < Depth < 2742) and (33.38 <= Lat <= 36.89) and (-78.42 <= Long <= -74.79) and (0 < Slope <= 13.21) and (countSST >= 15)] – in 704 cells. Long-term mean monthly SST was calculated from 10 years of data (December 2003 – March 2013) and used to generate monthly predictions.

Summary Outputs from Sensitivity Run:

The Reg-16 analysis was re-run using the monthly NC right whale distribution model data for Dec-Mar, with Dec used as a proxy for Nov and Mar used as a proxy for Apr. Projected closure dates and relative right whale entanglement risk were summarized by spatial scenario, catch rate scenario, and Reg-16 proposed alternative (Table E3, Figure E1). The incorporation of monthly data for NC right whale distribution had very little impact on the projected effects of Reg-16 alternatives with regards to relative right whale risk (Table E4). Impacts ranged from 0-5 relative risk units. The greatest impact was observed for Alternatives 7c, which showed slightly reduced risk under this sensitivity run. By contrast, Alternatives 8b and 9b showed slightly increased risk. It is important to note that this model is based on predicted right whale responses to mean monthly sea surface temperature. Due to data limitations, the model was unable to account for temporally unique right whale behavioral dynamics.

Note: Predicted values from this NC model do not have the same scale or interpretation as the values from the SEUS model (Gowan and Ortega-Ortiz 2014) and are not directly comparable. Differences include survey design, resolution/quantification of survey effort, temporal components in the model, model framework (probability of presence vs. relative abundance), whale behavior (e.g. sighting availability bias in migratory corridor vs. calving grounds), etc.

Table E3. Monthly NC Model sensitivity run projected commercial black sea bass closure dates, percent of ACL reached, and risk of right whale entanglement in pot gear vertical lines (in relative risk units) under proposed Alternatives in Regulatory Amendment 16.

MEAN CONDITIONS		Alt1 SQ	No Closure				Alt2				Alt3				Alt4				Alt5				Alt6				Alt7a				
			S1	S2	S3	S4	S1	S2	S3	S4	S1	S2	S3	S4	S1	S2	S3	S4	S1	S2	S3	S4	S1	S2	S3	S4	S1	S2	S3	S4	
Scenario A	Closure Date	n/a	10/2	8/4	9/20	9/27	10/2	8/4	9/20	9/27	12/5	10/12	10/28	12/3	12/30	12/22	12/18	12/30	12/24	12/11	12/11	12/23	12/29	12/21	12/18	12/29	10/11	8/18	10/6	10/7	
	%ACL	97%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
	RW Risk (NC)	0	100	100	100	100	100	100	100	100	15	11	11	15	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	RW Risk (FL-SC)	0	100	100	100	100	100	100	100	100	48	47	47	48	0	0	0	0	37	37	37	37	0	0	0	0	94	94	94	94	
Scenario B	Closure Date	n/a	10/2	8/4	9/20	9/27	10/2	8/4	9/20	9/27	12/3	10/17	11/4	12/2	12/28	12/19	12/18	12/29	12/18	12/2	12/8	12/17	n/a	12/25	12/20	n/a	10/12	8/20	10/9	10/9	
	%ACL	97%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
	RW Risk (NC)	0	100	100	100	100	100	100	100	100	27	21	22	26	8	8	8	8	2	1	2	2	8	8	8	8	66	66	66	66	
	RW Risk (FL-SC)	0	100	100	100	100	100	100	100	100	30	29	29	30	2	2	2	2	43	42	42	43	0	0	0	0	77	77	77	77	
Scenario C	Closure Date	n/a	10/2	8/4	9/20	9/27	10/2	8/4	9/20	9/27	11/26	10/4	10/26	11/19	12/20	12/7	12/11	12/19	12/16	12/1	12/6	12/15	12/20	12/7	12/10	12/19	10/11	8/18	10/6	10/7	
	%ACL	97%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
	RW Risk (NC)	0	100	100	100	100	100	100	100	100	17	14	14	16	3	3	3	3	2	2	2	2	3	3	3	3	68	68	68	68	
	RW Risk (FL-SC)	0	100	100	100	100	100	100	100	100	44	43	43	44	1	1	1	1	34	33	33	34	0	0	0	0	84	84	84	84	
MEAN CONDITIONS		Alt1 SQ	Alt7b				Alt7c				Alt8a				Alt8b				Alt9a				Alt9b				Alt10				
Scenario A	Closure Date	n/a	n/a	12/30	12/21	n/a	12/28	12/17	12/14	12/29	12/11	10/24	10/31	12/9	n/a	12/30	12/21	n/a	10/31	9/20	10/15	10/27	n/a	12/28	12/20	n/a	n/a	12/29	12/20	n/a	
	%ACL	97%	99%	100%	100%	99%	100%	100%	100%	100%	100%	100%	100%	100%	99%	100%	100%	98%	100%	100%	100%	100%	99%	100%	100%	99%	99%	100%	100%	99%	
	RW Risk (NC)	0	79	78	74	79	84	79	78	85	15	14	14	15	54	53	49	54	27	27	27	27	64	63	59	64	58	57	53	58	
	RW Risk (FL-SC)	0	98	97	92	98	91	85	83	92	40	38	38	39	81	79	74	81	62	62	62	62	90	87	83	90	81	79	74	81	
Scenario B	Closure Date	n/a	12/28	12/18	12/17	12/28	12/22	12/9	12/11	12/23	12/7	10/25	11/5	12/6	12/29	12/20	12/18	12/29	11/9	9/27	10/19	11/3	12/26	12/15	12/14	12/26	12/27	12/17	12/16	12/28	
	%ACL	97%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
	RW Risk (NC)	0	84	75	74	84	94	82	84	95	37	31	32	37	67	58	57	67	52	50	50	50	85	76	75	85	73	64	63	74	
	RW Risk (FL-SC)	0	73	70	70	73	70	67	67	71	50	48	49	50	65	62	61	65	57	56	56	56	71	68	68	71	65	62	62	66	
Scenario C	Closure Date	n/a	n/a	12/27	12/19	n/a	12/27	12/16	12/13	12/28	12/6	10/17	10/29	12/5	n/a	12/28	12/20	n/a	10/28	9/15	10/13	10/24	12/31	12/24	12/17	n/a	n/a	12/25	12/18	n/a	
	%ACL	97%	99%	100%	100%	99%	100%	100%	100%	100%	100%	100%	100%	100%	99%	100%	100%	99%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	99%		
	RW Risk (NC)	0	88	82	74	88	101	90	87	102	20	18	18	20	64	59	51	64	36	36	36	36	82	77	68	82	71	71	71	71	
	RW Risk (FL-SC)	0	92	89	84	92	85	78	76	86	37	36	36	37	76	74	68	76	56	56	56	56	84	79	74	84	77	72	68	77	

Sensitivity Runs: Mean conditions whale distribution, catch rate projection scenarios 1-4 (i.e., observed 2008/09 winter catch rates, observed 2013/14 summer catch rates scaled to account for higher winter CPUE, observed 2013/14 summer catch rates, and mean observed 2006/07-2008/09 winter catch rates) and spatial fishing distribution scenarios A-C (i.e., based on Nov-Apr 2008/09 pot distribution with 2013/14 soak times, based on 2013/14 June-October pot distribution and soak times, based on mean Nov-Apr 2006/07-2008/09 pot distribution with 2013/14 soak times).

Table E4. Differences in North Atlantic right whale relative risk units between annual (see Table 2A) and monthly NC model (see Table E3).

Catch Rate	Trap Distribution	1	NC	2	3	4	5	6	7a	7b	7c	8a	8b	9a	9b	10
1	A	0	0	0	0	0	0	0	3	2	-4	-1	1	-1	1	1
	B	0	0	0	0	0	0	0	2	2	-2	-1	2	-1	1	2
	C	0	0	0	0	0	0	0	3	1	-5	-1	0	-1	0	0
2	A	0	0	0	-1	0	0	0	3	2	-3	-1	1	-1	1	1
	B	0	0	0	-1	0	0	0	2	3	-1	-2	2	-1	2	2
	C	0	0	0	-1	0	0	0	3	2	-4	-1	1	-1	0	0
3	A	0	0	0	-1	0	0	0	3	3	-3	-1	2	-1	2	2
	B	0	0	0	-1	0	0	0	2	3	-1	-1	2	-1	2	2
	C	0	0	0	-1	0	0	0	3	3	-4	-1	2	-1	1	0
4	A	0	0	0	0	0	0	0	3	2	-4	-1	1	-1	1	1
	B	0	0	0	0	0	0	0	2	2	-2	-1	2	-1	1	2
	C	0	0	0	0	0	0	0	3	1	-6	-1	0	-1	0	0

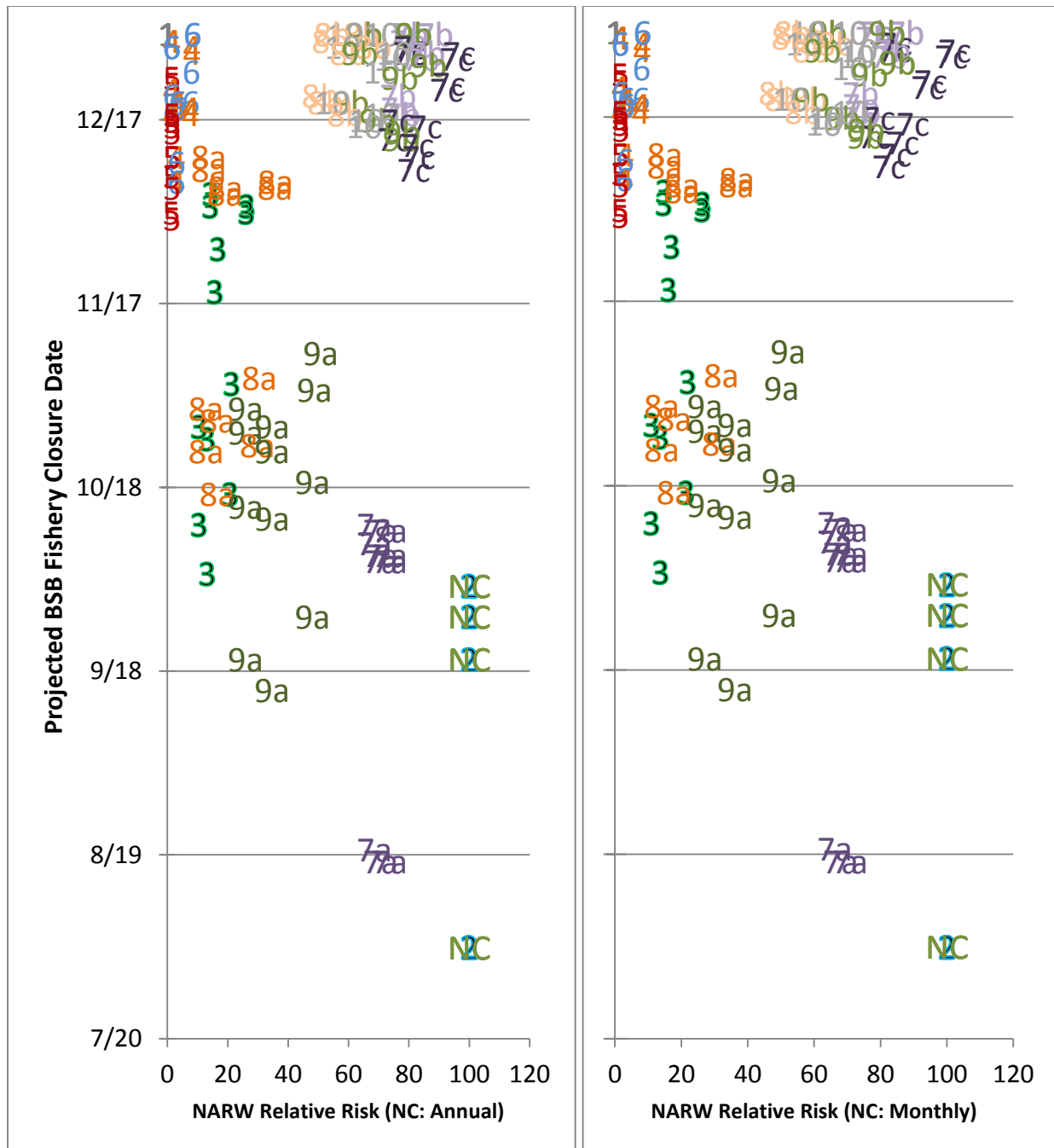


Figure E1. Projected closure date versus North Atlantic right whale (NARW) relative risk off North Carolina for Annual (left) and Monthly (right) models, by alternative (colored numbers), across catch rate scenarios 1-4 and spatial pot gear distribution scenarios A-C, for right whale distributions under mean conditions. Number/letter combinations included in the graph correspond to alternatives in Reg-16. North Carolina data modeled based on monthly predictions of right whale distribution based on mean monthly sea surface temperatures (SST).

APPENDIX F: Evaluation of Within-Scenario Uncertainty

At their October 2014 meeting, the SAFMC SSC recommended within scenario model uncertainty be evaluated to determine if projected differences between alternatives were statistically robust. SERO staff worked with Tim Gowan (FWC) to generate 95% confidence intervals (based on the inter-annual variation in modeled whale relative abundance) for the FL-SC and NC right whale models presented in the main body of this report. Within-scenario uncertainty was evaluated using these confidence limits for the right whale distribution model. Lower confidence limits were bounded at zero within model cells, consistent with the use of a quasibinomial distribution (Gowan & Ortega-Ortiz 2014, Gowan pers. comm.). The other components of the model (distribution of fishery effort, fishery catch rate) were treated as deterministic within-scenarios, with uncertainty in these components evaluated exclusively through the ‘bookending’ of a range of realistic scenarios. In general, within-model uncertainty was low, and model-projected differences between alternatives appeared to be statistically robust (Figure F1). Within-model uncertainty was highest for Alternatives 3, 5, and 7b-9b; however, these alternatives remained distinctly separated from Alternatives 4 and 6, which provided the lowest relative right whale risk of any pot gear fishery opening considered in Reg-16.

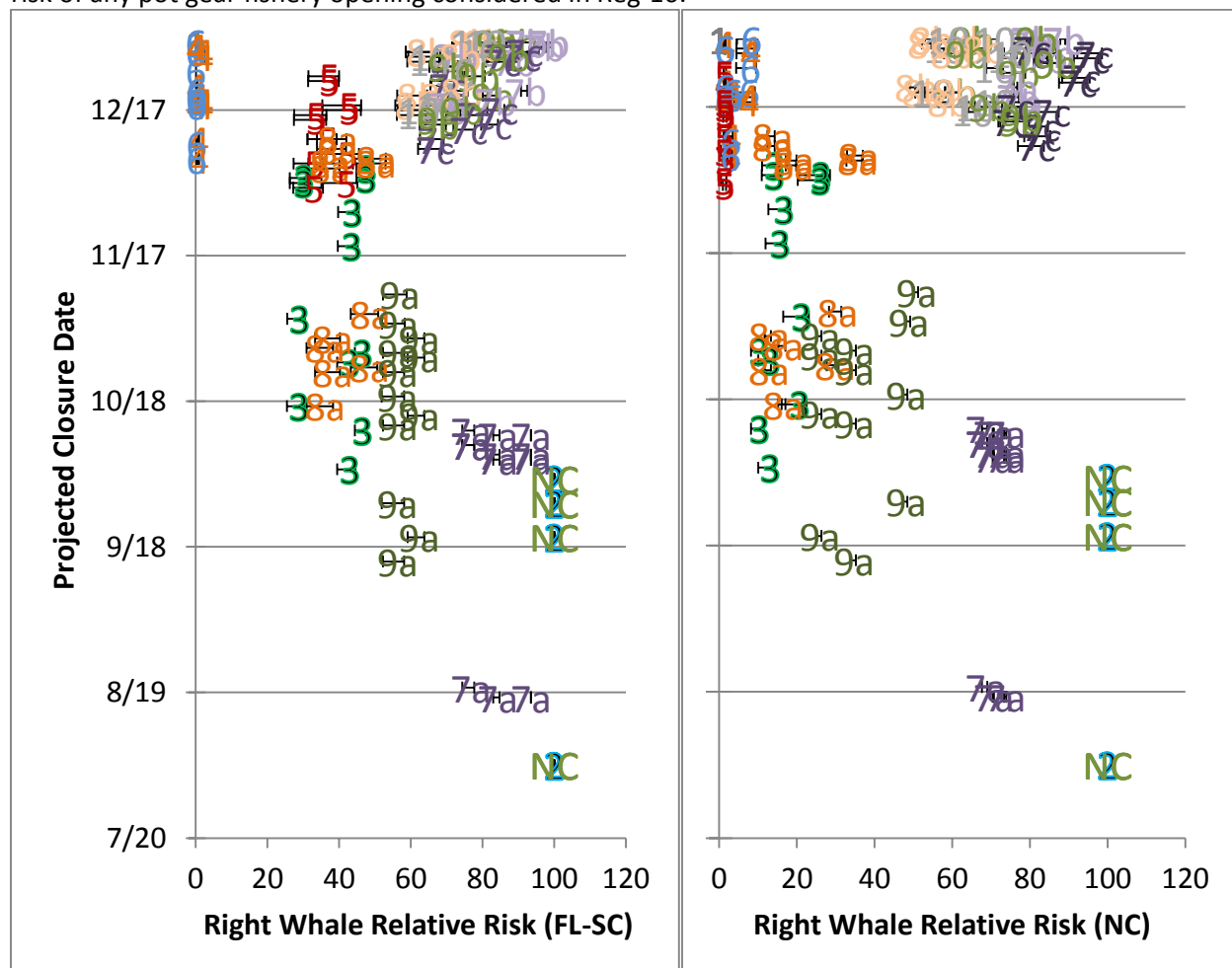
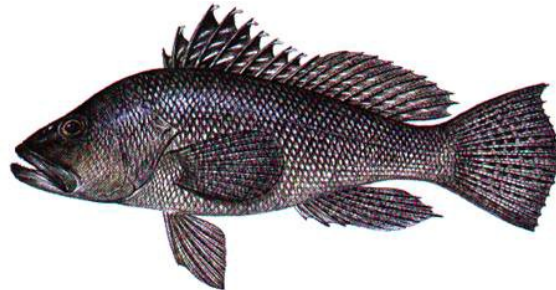


Figure F1. Projected closure date versus relative right whale risk, by alternative (colored numbers), across catch rate scenarios 1-4 and spatial pot gear distribution scenarios A-C, for right whale distributions under mean conditions. Number/letter combinations included in the graph correspond to alternatives in Reg-16. Error bars denote 95% confidence limits. Compare to Figure 11A.



MAGNUSON – STEVENS ACT/NEPA SCOPING DOCUMENT



Regulatory Amendment 16 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (revised 1-10-14)

JANUARY 2014

South Atlantic Fishery Management Council
4055 Faber Place Drive, Suite 201
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A publication of the South Atlantic Fishery Management Council pursuant to
National Oceanic and Atmospheric Administration Award Number NA05NMF4410004

Regulatory Amendment 16 contains an action to address the prohibition on the use of black sea bass pots annually from November 1 through April 30 that was implemented through Regulatory Amendment 19 (SAFMC 2013) and became effective on October 23, 2013. The prohibition was a precautionary measure to prevent interactions between black sea bass pot gear and whales listed under the Endangered Species Act (ESA) during large whale migrations and the right whale calving season off the southeastern coast. The South Atlantic Fishery Management Council (Council), through Regulatory Amendment 16, is considering removal of the closure, shortening of the timeframe, and spatially designating the closure boundaries. The goal is to minimize socio-economic impacts to black sea bass pot endorsement holders while maintaining protection for ESA-listed whales in the South Atlantic region.

This document outlines the background information and reason for action, the proposed changes to regulations, and how to submit comment and by when. **Please note that scoping is where the Council first brings proposed changes to management regulations to the public and requests comment. The document outlines a wide range of changes; no decisions have been made, and your input is important.** Scoping meetings are less formal than public hearings and occur prior to the Council taking any position on a management issue. When the Council is considering the need for management, scoping meetings provide an opportunity for members of the public to make suggestions BEFORE the Council has made any decisions.

The Council is considering the following action in Regulatory Amendment 16:

- Address the prohibition on the use of black sea bass pots annually from November 1 through April 30 that was implemented through Regulatory Amendment 19 and became effective on October 23, 2013.

BACKGROUND

At their June 2013 meeting, the Council reviewed draft Regulatory Amendment 16, which contained an action to implement management measures to lengthen the golden tilefish commercial season and diminish derby conditions. After receiving input from golden tilefish longline endorsement holders, however, the Council voted to stop development of Regulatory Amendment 16.

The Council approved the following within the Timing and Task Motion for the Snapper Grouper FMP: **PREPARE A DRAFT REGULATORY AMENDMENT TO REMOVE THE BLACK SEA BASS POT CLOSURE (IF REGULATORY AMENDMENT 19 IS APPROVED AND IMPLEMENTED). BRING THE DRAFT DOCUMENT TO THE COUNCIL IN SEPTEMBER 2013.**

Hence, Regulatory Amendment 16 contains an action to analyze the impacts of removing the black sea bass pot closure implemented through Regulatory Amendment 19 (SAFMC 2013). The latter increased the black sea bass ACL according to the latest stock assessment and prohibited the use of black sea bass pots annually from November 1 through April 30, which corresponds to the large whale migration and the right whale calving season in the South Atlantic. The prohibition was a precautionary measure to prevent interactions between black sea bass pot gear and ESA-listed whales. The ACL increase was effective on September 23, 2013 and the gear prohibition became effective on October 23, 2013.

Amendment 18A, implemented in July 2012, established a black sea bass pot endorsement program that capped the number of vessels utilizing pot gear at 32. In addition, the amendment implemented the following requirements that reduced the potential for interactions with protected species:

- Limit of 35 pots per vessel
- Pots must be brought back to shore after each trip
- Commercial trip limit of 1,000 lbs gw
- Increased commercial size limit from 10 inches (") total length (TL) to 11" TL
- Increased recreational size limit from 12" to 13" TL

NEED FOR ACTION

The *purpose* of Regulatory Amendment 16 is to address the balance between ESA-listed whales protection and the socioeconomic impacts imposed on black sea bass pot fishermen initiated by the annual November 1 to April 30 prohibition on the use of black sea bass pot gear.

The *need* for the amendment is to minimize socio-economic impacts to black sea bass pot endorsement holders while maintaining protection for ESA-listed whales in the South Atlantic region.

PROPOSED ACTION

Action 1. Modify the annual November 1 to April 30 prohibition on the use of black sea bass pot gear

(Multiple preferred alternatives may be chosen.)

Alternative 1 (No Action). Retention, possession, and fishing for black sea bass is prohibited using black sea bass pot gear, annually, from November 1 through April 30.

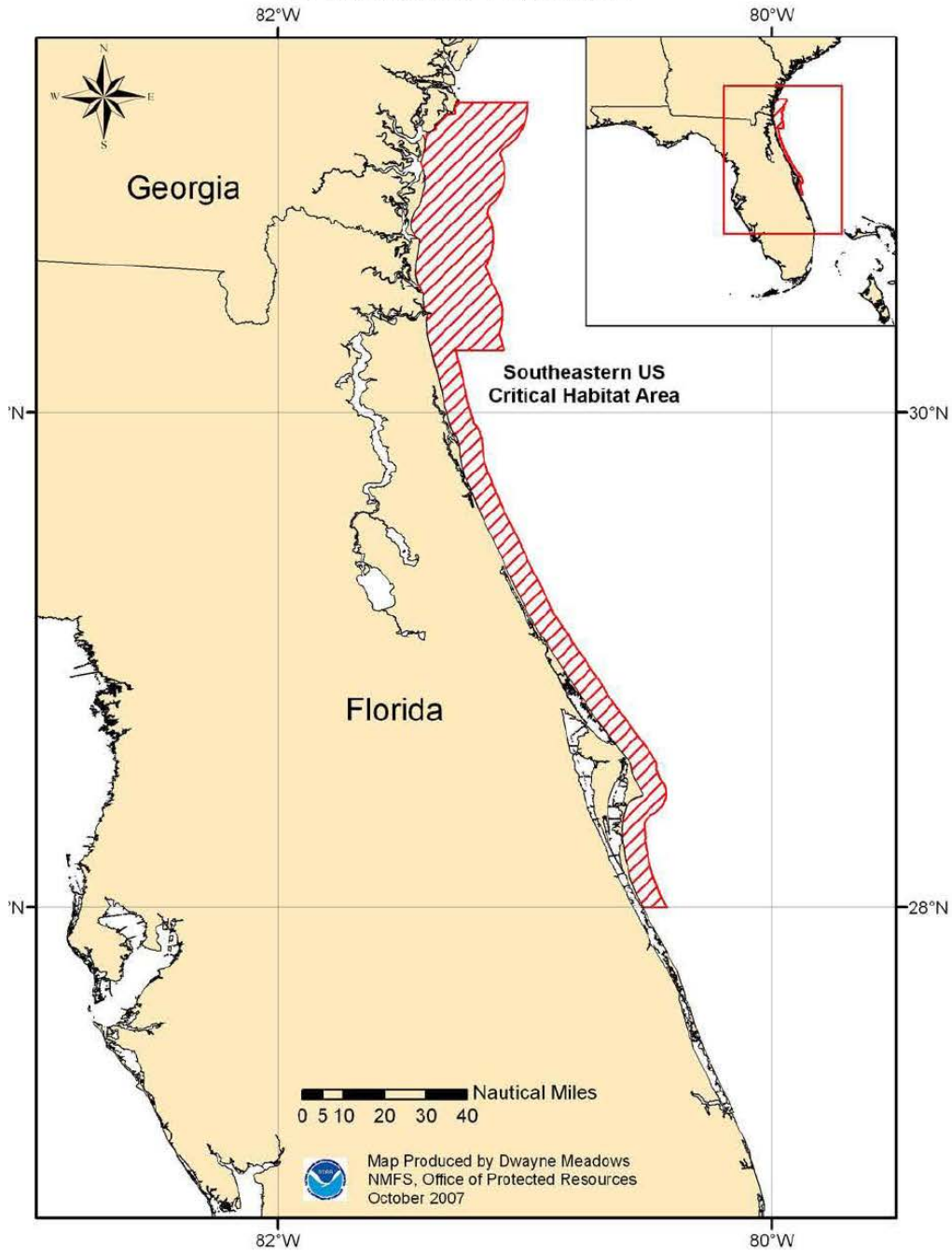
Alternative 2. Remove the annual November 1 to April 30 prohibition on the retention, possession, and fishing for black sea bass using black sea bass pot gear.

Alternative 3. Prohibit retention, possession, and fishing for black sea bass using black sea bass pot gear, annually, from November 15 through April 15.

(alternatives continue on next pages)

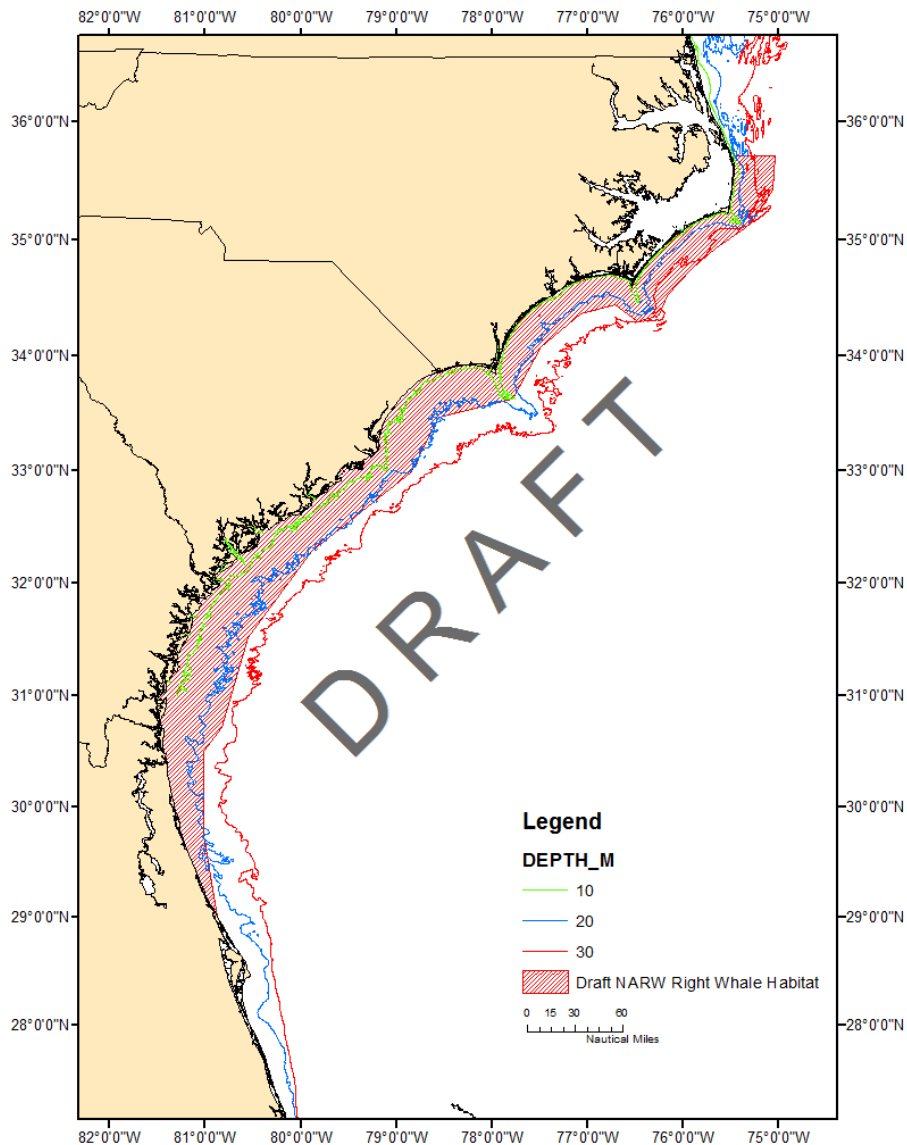
Alternative 4. The black sea bass pot closure applies only in designated right whale critical habitat in the South Atlantic region.

Northern Right Whale Critical Habitat: Southeast Atlantic



******NOTE: This alternative was approved by the South Atlantic Council in December 2013 to be included in the Scoping Document for this amendment. However, clarifications to the language and the spatial representation were subsequently made by the NMFS Protected Resources Division team to improve its presentation. The revised Alternative 5 is presented in the following page.******

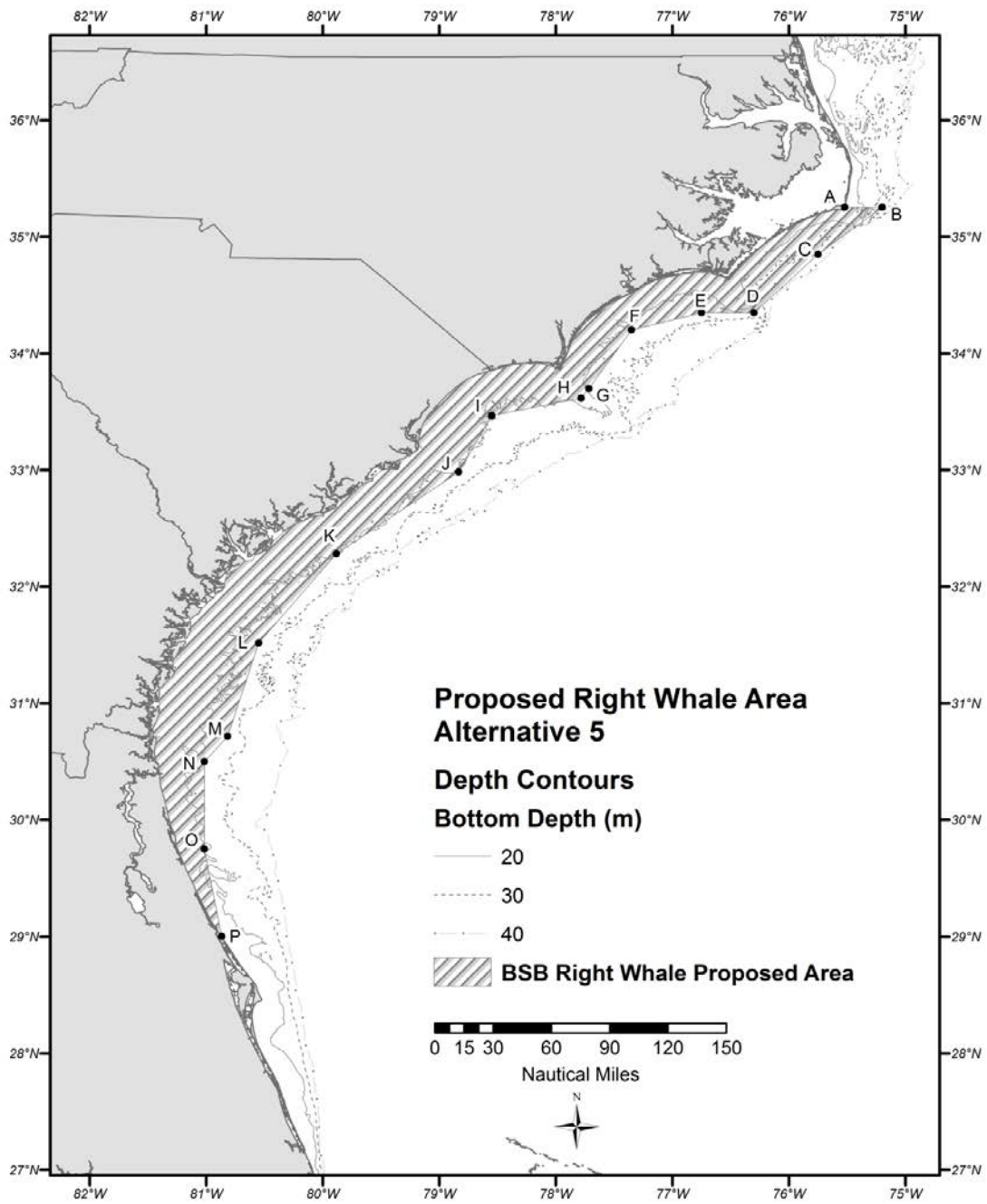
Alternative 5. The black sea bass pot closure applies to waters 25 m or shallower from 29°N (approximately Ponce Inlet, Florida) to Cape Lookout, North Carolina. From Cape Lookout, North Carolina, north the closure applies to waters under SAFMC management that are shallower than 35 m (see map below). The closure applies to all areas annually from November 1-April 30.



REVISED Alternative 5. The black sea bass pot closure applies to waters inshore of points A-P listed below; approximately Ponce Inlet, Florida, to Cape Hatteras, North Carolina. The closure applies to all areas annually from November 1-April 30.

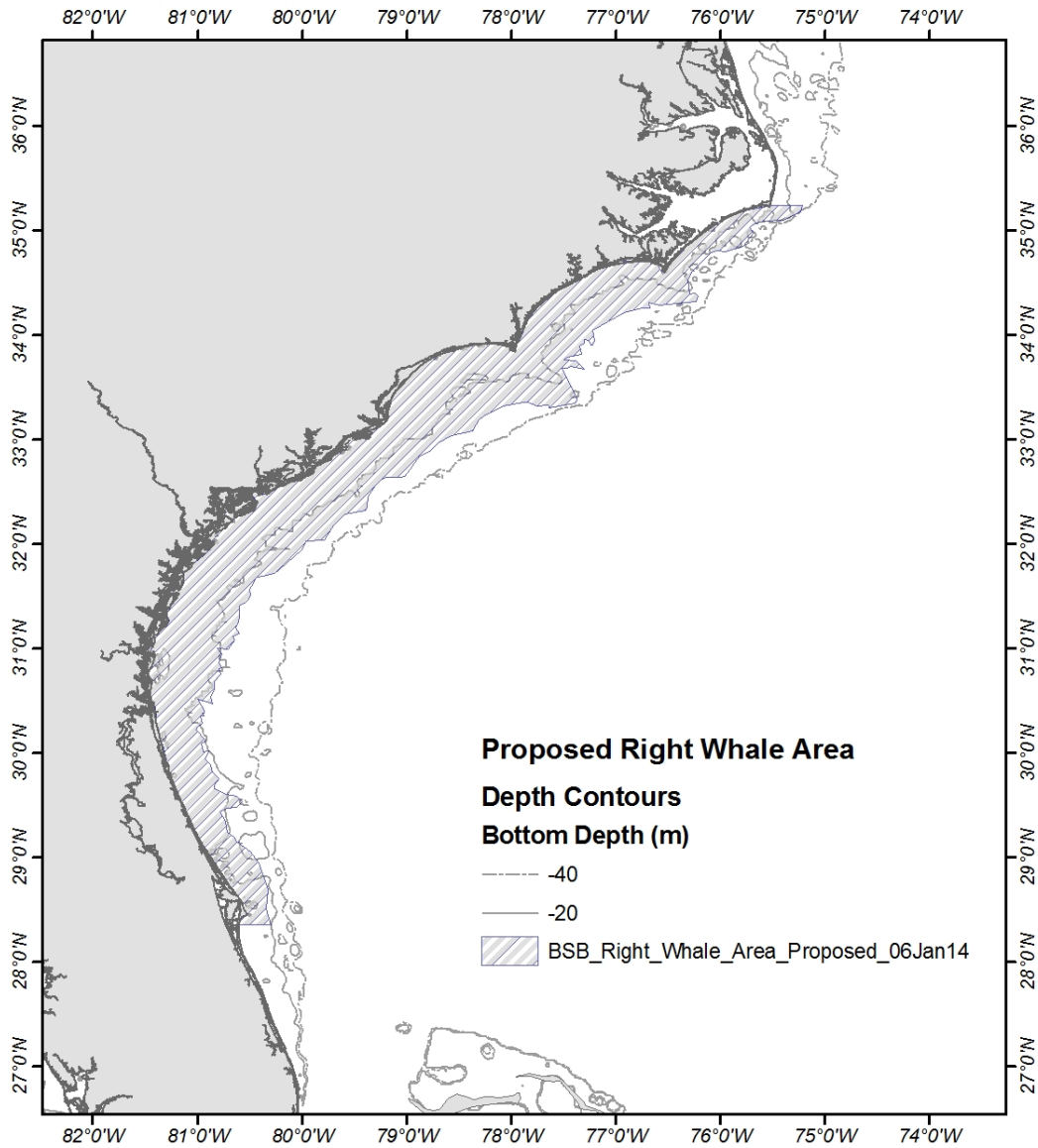
Western Boundary Coordinates for the Proposed Black Sea Bass Pot Closure

Point	N Latitude	W Longitude
A	35°15.19' N	at shoreline
B	35°15.19'	75°12'
C	34°51'	75°45'
D	34°21'	76°18'
E	34°21' N	76°45'
F	34°12'	77°21'
G	33°42'	77°43'
H	33°37'	77°47'
I	33°28'	78°33'
J	32°59'	78°50'
K	32°17'	79°53'
L	31°31'	80°33'
M	30°43'	80°49'
N	30°30'	81°01'
O	29°45'	81°01'
P	29°00'	at shoreline



******NOTE: The alternative below was proposed by the NMFS Protected Resources team after the South Atlantic Council had already approved the document for scoping. Hence the South Atlantic Council has not discussed this alternative but it is included in this scoping document for purposes of soliciting public input. The South Atlantic Council will consider inclusion of this alternative in the amendment at their March 2014 meeting.******

NEW Alternative 6. The black sea bass pot closure applies to waters 25 m or shallower from 28° 21.5'' N (approximately Cape Canaveral, Florida) to Savannah, Georgia. From the Georgia/South Carolina border to Cape Hatteras, North Carolina, the closure applies to waters under SAFMC management that are shallower than 30 m. The closure applies to all areas annually from November 1-April 30. The map below provides approximate location of proposed boundary.



SNAPPER GROUPE AP RECOMMENDATIONS:

The AP discussed the feasibility of the pot closure only applying to within designated Right Whale Critical Habitat. Some of the AP members from North Carolina indicated that migratory whales are frequently encountered in water 30-60 feet deep off the NC coast. Migrating whales are distributed from the Gulf of Maine south in spring and fall and congregate at calving grounds. The number of black sea bass pots the whales encounter in the South Atlantic is minuscule relative to the number of pots in the Gulf of Maine. The AP made the following motions:

MOTION: RECOMMEND ALTERNATIVE 4 AS PREFERRED

Alternative 4. Prohibit retention, possession, and fishing for black sea bass using black sea bass pot gear, annually, from November 1 to April 30, in designated right whale critical habitat in the South Atlantic region.

APPROVED

Scoping Meeting Dates and Locations

Meetings will be held from 4 - 7 p.m. in the following locations:

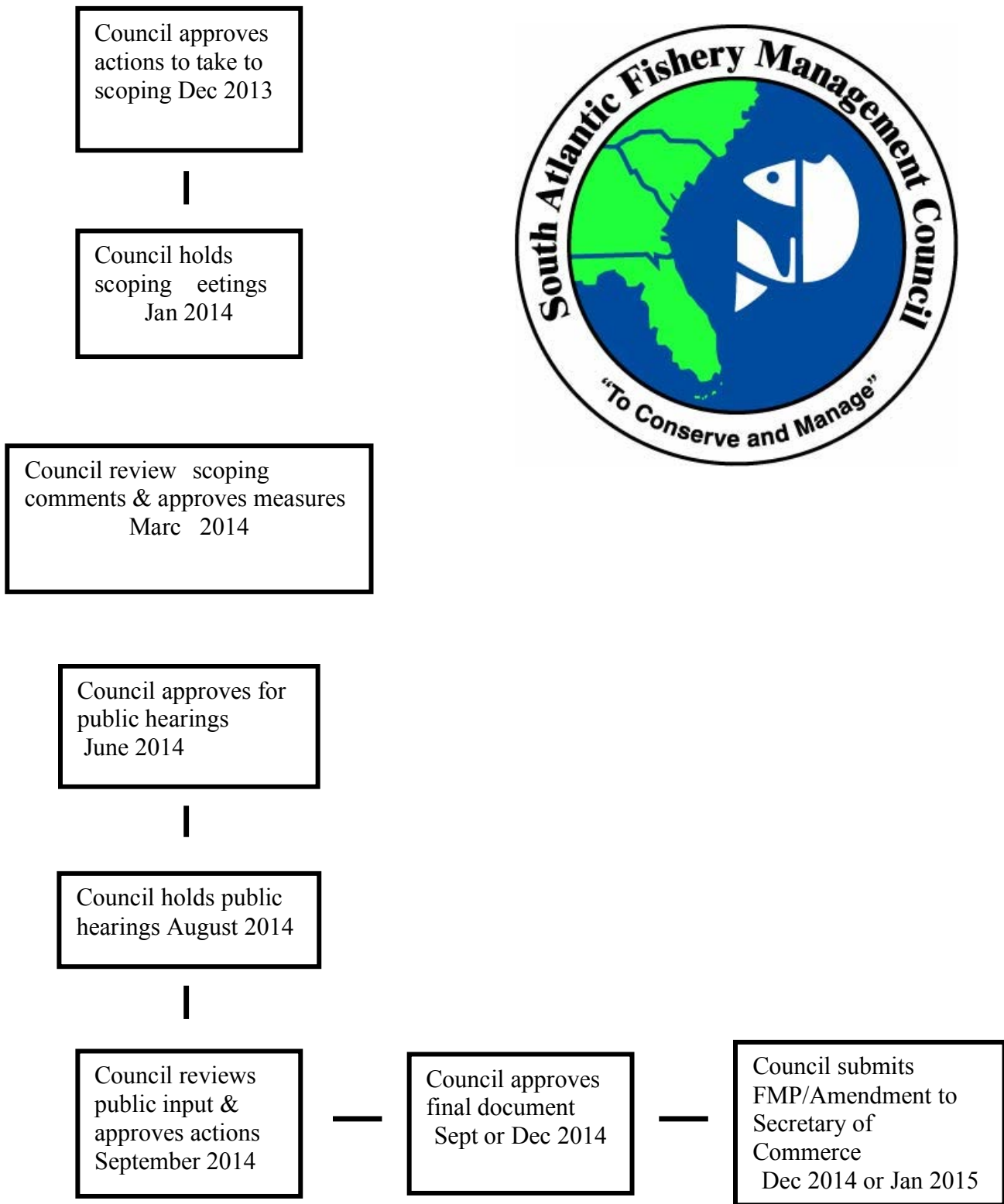
January 21, 2014 Bay Watch Resort & Conference Center 2701 S. Ocean Boulevard N. Myrtle Beach, SC 29582 Phone: 843-272-4600	January 22, 2014 DoubleTree by Hilton Atlantic Beach Oceanfront 2717 West Fort Macon Road Atlantic Beach, NC 28512 Phone: 252-240-115
January 27, 2014 Key West Marriott Beachside 3841 N. Roosevelt Boulevard Key West, FL 33040 Phone: 305-296-8100	January 28, 2014 DoubleTree by Hilton Cocoa Beach Oceanfront 2080 N. Atlantic Avenue Cocoa Beach, FL 32931 Phone: 321-783-9222
January 29, 2014 Wyndham Jacksonville Riverwalk 1515 Prudential Drive Jacksonville, FL 32207 Phone: 904-396-5100	January 30, 2014 Mighty Eighth Air Force Museum 175 Bourne Avenue Pooler, GA 31322 Phone: 912-743-8888

Please send written comments to:
Bob Mahood, Executive Director
South Atlantic Fishery Management Council
4055 Faber Place Drive, Suite 201
North Charleston, SC 29405

Please e-mail comments to: SGRegAmend16Comments@safmc.net

**All comments must be received
by 5 p.m. on February 3, 2014**

A Simplified Schematic of the Council Process.



Summary of Public Scoping Comments on Snapper Grouper Regulatory Amendment 16 (black sea bass pot closure)

- 10 written comments (as of Feb 6, 2014).
- Humane Society supported No Action and suggested two additional alternatives for analysis.
- The NPS suggested a combination of Alternatives 4 and 5 as presented in the scoping document combined with the addition of all National Park areas.
- North Carolina fishermen strongly support removing the black sea bass pot closure since the winter fishery is their most profitable.
- Pot fishermen feel they are already complying with ALWTRP measures that protect whales and the annual closure on pots is unnecessary.
- Measures implemented through Snapper Grouper Amendment 18A have minimized the potential of interaction between whales and pot gear. These measures have not been taken into consideration.
- General support for constraining the closure spatially as proposed in Alternatives 4-6.
- The quality of the black sea bass harvested during winter months is superior to that of fish caught in the summer. There is more demand and better price for winter-caught fish.
- Support for maintaining the closure outside of the Right Whale Critical Habitat (Alternative 4).
- The Council should consider establishing an area where the use of black sea bass pots is allowed (15 to 20 miles offshore). For-hire fleet has a 13-inch minimum size limit and they claim that pots are catching most of the 13-inch fish before the for-hire fleet has access to them.
- Concern about restriction on black sea bass pots possibly affecting a future pot fishery for lionfish.
- The Council should address threats to migrating whales separately from threats to calving. The November 1 to April 30 closure encompasses a longer period than what has been documented to be the primary calving season for right whales.

Gentlemen:

Either maintain the status quo or open only for summer and early fall. Once floured season opens north of here and BSB are a by catch, the price on these fish drops out of sight. Opening in the winter will allow Florida boats to dominate the fishery because their weather is so much better in the winter than ours. Leave it alone. There's only one good year class of Bass that accounts for the increase in the population and allowing a year round fishery will put us right back where we started...Tony Austin

Dear Sir,

I have just read in the Carteret County News-Times about the SAFMC meeting at Atlantic Beach last Wednesday. I was unaware of the meeting until I read about it or I would have attended.

Before the restrictions on these winter black bass pots, it was hard to catch a legal-sized black bass in the waters off the Crystal Coast. When regulators finally but wisely closed the season on black bass and instituted the pot restrictions, the black bass population came back strong. All our local fishermen have benefited from these regulations and the species has recovered.

Why would we want to go back to the practices that put black bass in that predicament in the first place? What you folks did was the right thing and it worked. Please don't undo your good work.

Thank you for listening. Boyd M Brown, Bogue, N. C.

My name is Scott Buff and I am the owner/operator of 6 snapper/grouper boats and 1 retail/wholesale market. I wanted to try and make you aware of one thing that I think you are missing when you close these fisheries. The restaurants that purchase our fish take those particular fish off of their menus and once they reopen it takes weeks to get the market back to its full potential. I also believe that being there has NOT been a study done - that the quota should be upped a minimum of 100,000 lbs because this was the only fishery that kept our boats running and our crews working during certain parts of the season.

I understand the concept of a 12 month fishery - I want it worse than you do. I also think that there should be a 10 box trip limit of Triggerfish as well.

Seabass pots -

Closing the sea bass traps from Nov - June is devastating to our fishery because that is the prime season that it is profitable. As far as the whales go - we already met the criteria for the break aways and the sinking rope - and most of the trapping is done IN SHORE in shallower water.

Thank you for your time!

Best Regards

Scott Buff
Buff Builders, Inc.
Oak Island, NC
Mobile: 910-294-1463
Fax: 910-278-1386
www.buffbuilders.com



January 18, 2014

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

Dear Chairman Hartig,

Thank you for the opportunity to provide input on a number of proposed fishery management plan amendments that are up for either scoping or public hearings this month

Below are our comments for council consideration.

Snapper Grouper Regulatory Amendment 16 (Scoping):

Black sea bass pot fishery closure November 1 through April 30 -

We believe the actions the fishery council took in Snapper-Grouper Amendment 18A in 2012, such as capping the number of vessels utilizing pot gear at 32, limiting vessel to 35 pots, requiring that pots be brought back to shore after each trip and establishing a commercial trip limit of 1,000 lb., reduced the potential for any interactions with right whales, even though there never have been any documented interactions between whales and pot gear.

The CFSF supports allowing a black sea bass pot fishery November 1 through April 30, even if it is restricted to areas outside the defined right whale critical habitat, such as considered in new Alternative 6 of the proposed Amendment.

Snapper Grouper Amendment 29 (Public Hearing):

Only Reliable Catch Stocks (ORCS) Approach -

We support amending the fishery council's ABC Control Rule proposed in Action 1, Alternative 2, to adopt the SSC's recommended approach to determine ABC values for Only Reliable Catch Stocks.

Action 2: We support the application of the revised ABC Control Rule to the selected unassessed snapper-grouper species in the low, moderate and high risk categories using the Risk Tolerance scalars in Sub-alternatives 2b, 3b and 4b.

Fishermen would benefit for the higher ACLs that would result from the amended ABC control rule and the application of the higher Risk Tolerance scalars.

OPTIMIZATION AND SUSTAINABILITY
FOR THE RECREATIONAL AND COMMERCIAL FISHING INDUSTRY

Gray Triggerfish –

Action 3: We support Alternative 4, which would specify a minimum size limit for gray triggerfish of 14 inches fork length in federal waters off North Carolina, South Carolina, Georgia, and east Florida.

From the standpoint of yield from a 12 inch or smaller triggerfish, it is not large enough to benefit commercial markets and is small even for personal consumption. We think the fishery would benefit from a minimum size limit of 14 inches.

Action 4: We support Alternative 2, which would change the allocation of the commercial ACL to 50 percent from January 1 through June 30 and the other 50 percent from July 1 through December 31 each year. The gray triggerfish seasons would then mirror the seasons for vermilion snapper and since these are co-occurring species that are caught together, this Alternative would reduce bycatch of both species.

Action 5: We support the use of trip limits to manage commercial fisheries, however this action needs more alternatives for analysis.

Consideration should be given to establishing a trip limit for gray triggerfish that is combined with a step-down trip limit when 75 percent of the commercial ACL is met or is projected to be met. A range of step-down trip limits such as 50 lb., 75 lb., 100 lb., and 150 lb. should be considered.

Coastal Migratory Pelagics Amendment 24 (Scoping):

Modifying sector allocations for Atlantic migratory group Spanish mackerel and Gulf migratory group king mackerel -

The CFSF supports optimization of fishery ACLs. It's clear that in both fisheries, the total ACLs have never been landed in the 10 year time series within Tables S-1 and S-2 in the scoping document, and that the commercial sector has exceeded its ACL while the recreational sector has landed decreasingly lower proportions of its ACL.

The fishery council should consider reallocation alternatives in both fisheries.

Coastal Migratory Pelagics (Mackerel) Framework Amendment 1 (Public Hearing):

Modify the Annual Catch Limit (ACL) for Atlantic and Gulf Spanish mackerel migratory groups -

The CFSF supports the alternatives that would increase the ACLs for these fishery groups.

Consideration of our comments is appreciated.

Respectfully,


Wayne Mershon
President

my name is jeff emery, I hold an unlimited snapper/grouper permit. I have been commercial fishing/diving offshore Daytona beach since 1980. I would like to see the hook and line fishery be able to fish for seabass before the pot fishing season opens. to give us a fair chance before they have their 1200 pound trips greatly decreasing the population. I support the pot closure from November through april.. thanks,
jeff emery

please send me a return email so I know you have received this, thanks...

F/V HULL'S SEA LOVER

Mr. Robert Mahood, Executive Director
South Atlantic Fishery Management Council
4055 Faber Place Drive, Suite 201
North Charleston, SC 29405

SGRegAmend16Comments@safmc.net

Date: Saturday January 18, 2014

Mr. Mahood,

I thank you for the opportunity to comment to the South Atlantic Fishery Management Council (Council) about the Snapper Grouper (SG) Fishery Management Plan (FMP) Regulatory Amendment (RA) 16, which is considering the removal of the Black Sea Bass (BSB) pot fishery closure, shortening of the prohibition temporally, and spatially, either by depth and/or distance, to designate the potential closure boundaries for the BSB pot fishery. The Council goal should be to minimize socio-economic impacts to BSB pot endorsement holders, while maintaining protection for the Endangered Species Act (ESA) listed Right whales in the South Atlantic Council region.

As a long time participant and endorsement holder in the BSB pot fishery I would like to comment on SG FMP RA-16 and the Preferred Alternative 4 for Action 1. Since 1990, I have been using BSB pots at the very southern end of the BSB pot fishing range by federal regulation. This is an area where the south end of the range starts at a line due east of the Cape Canaveral NASA Vertical Assembly Building (VAB) and we can fish north to St. Augustine Inlet and beyond normally. The bottom fished for BSB in this area is from 60 to 100 feet of depth and very productively robust.

I have traditionally fished BSB pots in the winter months because of the winter movement of fish inshore and southward. The winter BSB stock caught are very different than the summer BSB pot fish. They are larger, fatter and more abundant. I would not want to BSB pot fish in the summer months if I could fish in the winter instead. The prohibition on the use of BSB pots annually from November 1 through April 30 has caused great economic harm to the BSB pot fishermen, consumers and coastal fishing businesses.

With the current BSB stock status recently found to be rebuilt, and the annual catch limit (ACL) significantly increased, we need the opportunity to harvest BSB in the winter months with our BSB pots. The goal and *need* for this SG FMP RA-16 is to minimize socio-economic impacts to BSB pot endorsement holders and provide an optimum yield (OY) for consumers to use, while maintaining protection for the ESA-listed Right whales found in our Council region. I believe the Council is right on target and has already done the job to accomplish this goal.

With the recent BSB endorsement program implemented with the SG Amendment 18A the following requirements that reduced the potential for interactions with protected species became effective:

- Limit of 35 pots per vessel
- Pots must be brought back to shore after each trip
- Commercial trip limit of 1,000 pounds (lbs) gutted weight (gw)

All that is needed is to eliminate the prohibition on winter pot fishing **outside** of the current Right whale critical habitat area as seen in the chart pasted below. In my entire life of fishing off Ponce de Leon Inlet, Florida, I have never seen a Right whale further off shore than two to three miles. In fact, of the dozen or so Right whales I have seen most have been closer to the surf line. With the Right whale migration route and calving area along the shore line within 2 to 3 miles of shore there is no need for a prohibition of BSB

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ORMOND BEACH, FLORIDA 32174-6303
HULLSSEAFOOD@aol.com

F/V HULL'S SEA LOVER

pot fishing for whale protection, except near the beaches. I fish BSB pots from 10 to 20-miles offshore of the beach and I prefer Alternative 4 for Action 1 based on a distance offshore of approximately 7 miles and not a depth contour.

"PROPOSED ACTION"

"Action 1. Modify the annual November 1 to April 30 prohibition on the use of black sea bass pot gear"

*I would prefer to see Alternative 4 for Action 1 as the **Council Preferred Alternative** as pasted below. Also, the Snapper Grouper Advisory Panel chose Alternative 4 as their Preferred choice.*

Identification as to the spatial representation is needed. Obviously the closer to shore and shallower the depth of water of the eastern boundary of the Right whale critical habitat, the better it is for fishermen and seafood consumers. The Right whales migrate along the shoreline normally in less than 60 feet of water depth and within 3 miles of the beach. I prefer to have the critical habitat boundary based on miles off the beach. The critical habitat offshore of Central Florida appears to extend approximately 7-miles offshore of the beach down to the south end of the BSB pot fishing range potential. This would extend protection for whales along the beach in the calving area from vertical lines and open up the BSB pot fishery offshore of the critical habitat when it is most productive during the winter months each year. This would also be much easier to enforce and still allow BSB pot fishing on our traditional bottom.

"Action 1"

[Preferred] "Alternative 4. The black sea bass pot closure applies only in designated right whale critical habitat in the South Atlantic region."

The Council has done a good job understanding how and where we BSB pot fish, and also how and where Right whales are calving annually. With the SG FMP RA-16 **[Preferred]** Alternative 4 we can accomplish the stated goals.

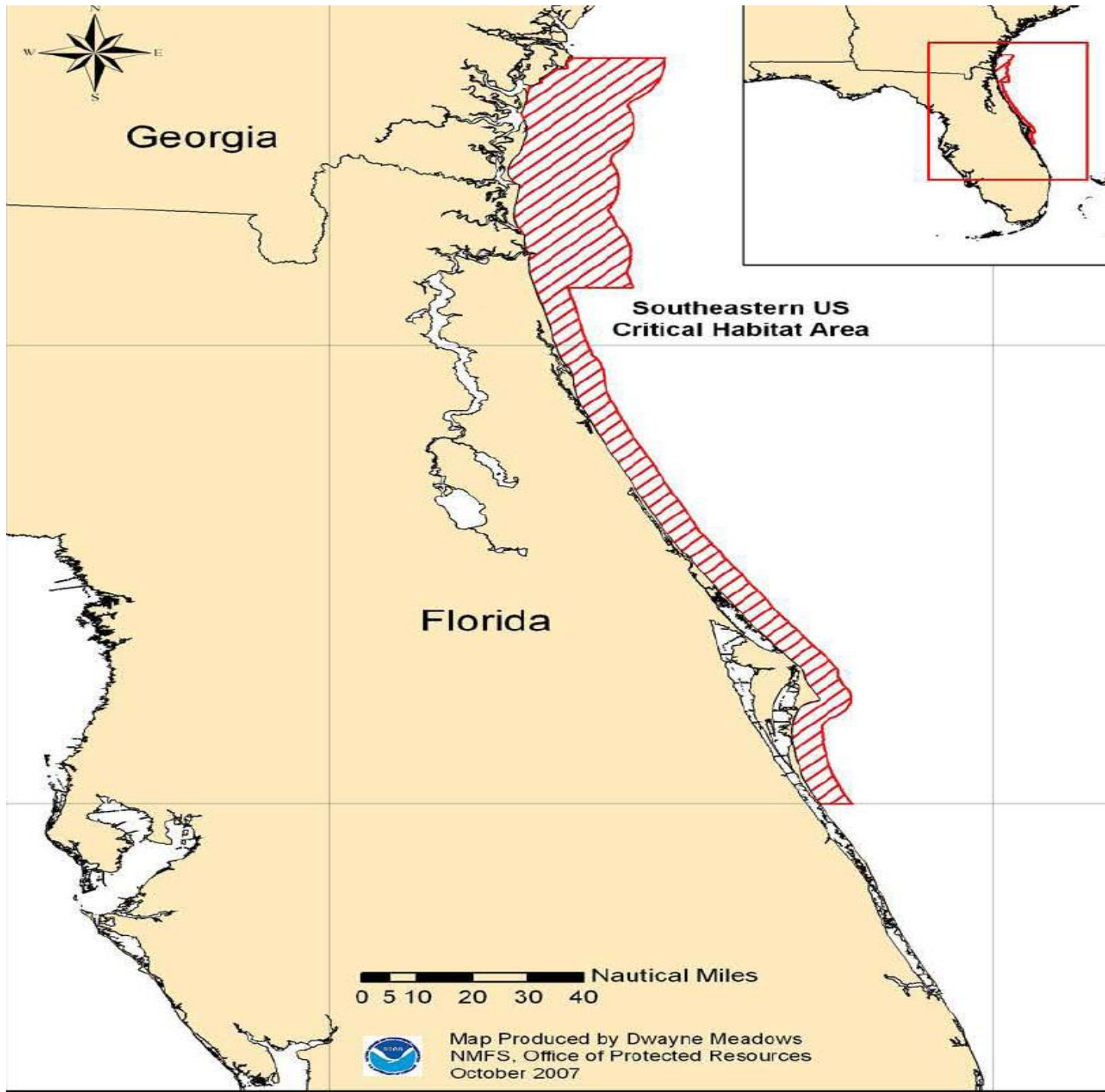
Thank you,

Jimmy Hull

F/V Hull's Sea Lover
BSB pot endorsement holder
Snapper Grouper AP member
SEDAR 25 BSB Assessment Workshop panelist
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Mr. Mahood, I am submitting comment on Amendment 16 considering the removal of the black sea bass closure.

On Action 1, I like Alternative 4. The closure only applies to the designated right whale critical habitat area in the South Atlantic region.

Nelson (Blood Line Fishing)

Thankyou. Paul

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Submitted via: www.regulations.gov

January 3, 2014.

RE: Notice of Intent to Prepare a Draft Environmental Impact Statement [NOAA-NMFS-2013-0165]

Dear Mr. DeVictor,

The following comments on your Notice of Intent (NOI) to prepare a Draft Environmental Impact Statement (DEIS) and the accompanying scoping document [78 Fed. Reg. 72868, December 4, 2013] are submitted on behalf of the seventeen organizations signed below and our millions of members and constituents. We support the “no action” alternative: the seasonal prohibition that was established under Amendment 19 to the snapper-grouper management plan. Four of the five alternatives that were put forward are inadequate to meet the stated need for action, which includes “maintaining protection for ESA-listed whales in the South Atlantic region.” (SAFMC 2012) However, we must also point out that reasonable alternatives were omitted from the scoping document and must be analyzed for the Draft Environmental Impact Statement (DEIS).

The Agency Must Ensure Adequate Protection of Right Whales

Many of the signatories of these comments are appointed members of the National Marine Fisheries Service (NMFS) Atlantic Large Whale Take Reduction Team (TRT) whose charge under the Marine Mammal Protection Act (MMPA) is to “immediate[ly]” reduce risk of entanglement to Endangered Species Act (ESA) listed large whales to levels below Potential Biological Removal (PBR) in order to reduce, within 5 years, incidental mortality and serious injury “to insignificant levels approaching a zero mortality and serious injury rate.” 16 U.S.C. § 1387(f)(2). While the TRT is concerned with reducing entanglement risk for a number of species of endangered large whales, including humpback whales, the focus of the TRT’s concerns in the southeast is the North Atlantic right whale. Despite the existence of the TRT since 1997, entanglement of large whales, including right whales, have continued and continue to exceed the PBR.

Where a cause of death can be determined, over half of all right whale deaths are a result of entanglement in commercial fishing gear (NMFS 2012). NMFS has found that there is no level of mortality, however low, that can be considered “insignificant” to this imperiled population (*id.*). Yet the observed level of serious injury and mortality for right whales from entanglement *doubles* the PBR for the species (*id.*), and estimated entanglement rates based on scarification indicate serious injury and mortality may be even higher (Knowlton *et al.* 2012). Because serious injury and mortality of right whales exceeds PBR and vastly exceeds insignificant levels approaching zero, the recovery rate for the stock will be retarded, by definition, and will preclude the species from reaching its optimum sustainable

population as also required by the MMPA. 16 U.S.C. §§ 1361(6), 1362(9). Both trap/pot gear and gillnets are involved in entangling right whales. Though it is not always possible to determine the origin of line entangling whales, where the gear could be identified, rope associated with vertical lines and trap/pot gear was more frequently found on entangled right whales than rope associated with gillnets (Johnson *et al.* 2005). These entanglements are impeding attainment of the MMPA's mandate to reach ZMRG and the ESA's recovery mandate for the North Atlantic right whale and other endangered whales, 16 U.S.C. § 1531(b).

In addition, the ESA prohibits the unpermitted "take" of an endangered species. *Id.* §§ 1538(a)(1), (g) (also prohibiting any entity, including an agency, from "caus[ing] take"). The ESA defines take as conduct that will "harass, harm . . . wound, kill, [or] trap" an individual of a listed species. *Id.* § 1532(19). Similarly, the MMPA establishes a "moratorium on the taking" of marine mammals and specifically prohibits "any person . . . or any vessel [from] tak[ing] any marine mammal." *Id.* §§ 1371(a), 1372(a). The statute broadly defines take to mean "to harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal." *Id.* § 1362(13). Although both the ESA and the MMPA contain provisions to authorize take incidental to an otherwise lawful activity, including commercial fishing, *see* 16 U.S.C. §§ 1536(b)(4), 1371(a)(5)(E), 1387(a), NMFS has not invoked these limited exceptions to permit incidental take of MMPA-protected whales by commercial fisheries in the Atlantic. Nevertheless, commercial fisheries continue to operate, entangle, and kill endangered whales. In other words, more protections – not fewer -- are needed to reduce the risk of entanglements and to ensure that fisheries operate in compliance with applicable laws. Changing or removing the seasonal prohibition on the black sea bass fishery would be a step in the wrong direction.

Tragically, right whale calves and juveniles are more likely to become entangled than adults (Knowlton *et al.* 2012). It is well documented and acknowledged by the agency that this species travels to and gives birth in the waters off the southeastern United States, from Florida to at least as far north as Cape Fear, North Carolina (NMFS 2012). Some, but not all of these waters are within designated critical habitat. In 2007, the NMFS Southeast Fisheries Science Center issued a Technical Memorandum to assist in the agency's consideration of revisions to the boundaries of the southeast right whale critical habitat that included most of these waters (Garrison 2007). Based largely on that report, NMFS enacted broad time and area restrictions to protect right whales from entanglement within the seasonal gillnet restricted area. [72 Fed.Reg. 34632, 34636; June 25, 2007] In designating the restricted area, NMFS characterized the waters within the boundaries of the southeast gillnet restricted area, which extends to the southern border of North Carolina, as a "*substantial and core portion of the right whale calving area*" [emphasis added].

Despite the paucity of sighting effort, in recent years, there has been increasing evidence of right whales outside of this restricted area apparently using the waters of North Carolina for calving. Systematic surveys that had been conducted off the coast of North Carolina during the winters of 2001 and 2002 sighted at least eight calves, suggesting the calving grounds may extend as far north as Cape Fear. Four of the calves were not sighted by surveys conducted further south. One of the mothers photographed was new to researchers, having effectively eluded identification over the period of its maturation (McLellan *et al.* 2004). NMFS itself suggests that calving likely extends into the waters of southern North Carolina (NMFS 2012). There are also more recent media reports of newborns off North Carolina. In

December 2008, a newborn right whale “stranded off the coast of Avon, N.C. It was less than a week old and had failed to thrive.” (WAVY 2008). A female right whale nicknamed “Calvin” is believed to have given birth twice off North Carolina, in the years 2004 and 2008, with one of the instances apparently just off Wrightsville Beach, North Carolina (StarNews 2008). Two mothers with small calves were seen in North Carolina in March of this year (NOAA/NMFS, undated). The area from Florida through North Carolina requires increased vigilance and precaution.

In September 2013, NMFS presented information to the South Atlantic Fishery Management Council (SAFMC) to inform the Council’s consideration of risk to right whales. (NMFS 2013 A) In this PowerPoint presentation, the agency provided information on the perilous status of the population, limits on our understanding of temporal and spatial distribution based solely on sightings, the preponderance of buoy line entanglements, and limits on detectability of entanglements. The agency also provided results of recent modeling by Good (2008) and Keller (2012) that indicated broader distribution of vital habitat than previously considered. (*Id.*) This information, based on the best available scientific and commercial information, does not appear to have been given proper consideration in the current proposals contained in Amendment 16.

The need for precaution in protecting right whales was further underscored by both the Council and NMFS in the Amendment 19 regulations increasing the Annual Catch Limits (ACL) for black sea bass. NMFS stated in this rulemaking that right and other large endangered whales migrate through the area targeted by the black sea bass pot fishery starting November 1, thus necessitating protections beginning on that date. In the past several years, largely due to quota restrictions, the fishery has not operated after that date; however, with the dramatically increased ACL, we may expect the pot fishery to remain active after November 1, as the ACL will likely not have been reached prior to that date. In the Amendment 19 rulemaking to increase the ACL and institute a seasonal prohibition to protect right whales, NMFS reiterated that the right whale calving season in the South Atlantic occurs from approximately November 1 through April 30 each year in the southeastern US. [78 FR 58249, September 23, 2013]

The Best Available Scientific and Commercial Evidence Supports the Status Quo Alternative

The Status Quo alternative proposed in the scoping document leaves in place the Amendment 19 seasonal prohibition on the use of black sea bass pots in the southeast region between November 1 and April 30 annually. As NMFS acknowledges in the Federal Register notice, Regulatory Amendment 19 established higher ACL for black sea bass fishery while imposing this seasonal prohibition on the use of black sea bass pots or possession of black sea bass by vessels with pot gear aboard. [78 FR 58249, September 23, 2013] In establishing the prohibition, NMFS stated that it had “determined that the increase in the commercial ACL contained in this rule could extend the commercial black sea bass fishing season beyond November 1 and into a time period when a higher concentration of endangered whales are known to migrate through black sea bass fishing grounds.” [*Id.* at 58250] The agency went on to say that “a seasonal black sea bass pot prohibition, along with the existing regulations related to pot gear, *are necessary to prevent interactions* between black sea bass pot gear and whales during periods of

large whale migrations and during the right whale calving season off the U.S. southeastern coast. The large whale migration period and the right whale calving season in the South Atlantic occurs from approximately November 1 through April 30, each year.”[*Id.*, emphasis added] This risk and concomitant concern have not changed in the past three months since the September promulgation of the prohibition.

In the 2013 Draft Environmental Impact Statement (DEIS) issued in conjunction with proposed amendments to the Atlantic Large Whale Take Reduction Plan (ALWTRP), NMFS stated in the section on Purpose and Need that, “[d]ue to the continuing risk of serious injury and mortality of large whales since the most recent revisions of the ALWTRP have gone into effect, NMFS believes additional modifications to the ALWTRP are needed to meet the goals of the MMPA and the ESA.” (NMFS 2013) In addition, in its proposed rule, the agency specifically stated that, with regard to black sea bass pots in the southeast, recent changes in fishery management have reduced risk to right whales, saying “[m]ost notably, the black sea bass fishing season has not co-occurred with the right whale season for the last four years.” [78 Fed. Reg. 42654, July 16, 2013] The fact that the fishery has not operated after November 1 resulted in NMFS itself essentially counting on a seasonal prohibition as a key baseline underpinning of its strategy to reduce risk to right whales. Given the stated need in the DEIS to reduce the number of vertical lines—and the assumption that black sea bass fishing would not occur within the right whale season in the southeast—it would be counterproductive to allow increased use of vertical lines by this fishery during the winter season. Indeed, it would call into question the assumptions on which the DEIS and proposed amendments to the ALWTRP are premised. The status quo prohibition should be maintained.

Finally, although the Federal Register notice for the NOI states that the intent is “to minimize socio-economic impacts to black sea bass pot fishers while maintaining protection for whales in the South Atlantic region that are listed as endangered and threatened under the Endangered Species Act,” we do not see the need to modify the prohibition on the basis of the economics of the fishery. When it promulgated Amendment 19 and instituted the broad area prohibition, NMFS stated that the fishery has not traditionally been operating after November 1st, but if a closure became necessary, other types of gear could be used. Further, the economic analysis section of the regulation stated that “revenues foregone by vessels using black sea bass pots will likely be gained by vessels using other gear types. Thus the black sea bass pot prohibition will mainly have distributional effects within the commercial sector, *with the overall industry revenues and likely profits expected to increase.*” [78 FR at 58251, emphasis added] There is no reason to suspect that this economic analysis has changed just in the past three months and thus there is no evidence of an adverse economic impact to the overall black sea bass fishery as a result of maintaining the prohibition.

All of the foregoing clearly indicate the need to maintain the prohibition put in place under Amendment 19. It is clearly unnecessary to lift all or part of the prohibition to ensure a profitable industry and it would unnecessarily place critically endangered North Atlantic right whales at elevated risk of potentially fatal entanglements in vertical lines.

The Proposed Alternatives are Inadequately Protective

In the scoping document that NMFS provided in the NOI, there are five alternatives considered. Other than the status quo alternative that would maintain the extant prohibition, the alternatives presented all would increase risk to whales and fail to meet the NMFS Office of Protected Resources regulatory goal of reducing vertical lines in areas of significant risk, thereby violating the agency's duty to conserve and recover the species under both the MMPA and ESA. 16 U.S.C. §§ 1361(6), 1531(b).

Alternative 2 would simply repeal the prohibition on trap/pot fishing that was put in place to protect right whales. As previously discussed, this will dramatically increase risk and undermine current efforts to reduce vertical lines being undertaken by the NMFS Office of Protected Resources, and is unnecessary for the economics of the fishery.

Alternative 3 would reduce the amount of time the prohibition is in place by 30 days. The prohibition would begin on November 15 instead of November 1 and would end on April 15 instead of April 30. Yet Amendment 19 and the NMFS ALWTRP both document this time frame as critical for right whale protection. Similarly, rules that have been in place since 2008 to slow large vessels traversing the area establish protective measures during this same time period [78 FR 73726, December 6, 2013]. Right whales are in the area from at least November 1 through April 30. To reduce the period of time during which they are protected not only increases risk to whales, but is also counter to NMFS findings in other rulemakings.

Alternative 4 would maintain the prohibition only within the right whale's currently designated critical habitat. Again this is insufficiently protective. As we have noted, the NMFS stock assessment documents calving as far north as Cape Fear, NC (NMFS, 2012). The southeast gillnet restricted area designates a far larger area as being "core" right whale calving habitat and seeks to reduce risk of entanglement in this area. [72 Fed.Reg. 34632, 34636, June 25, 2007] A number of signatory groups to these comments co-authored an ESA petition for revisions to the boundaries of critical habitat. In response, the agency made a positive 12 month finding that the petition presented substantial evidence that the boundaries of existing critical habitat do not conform to the findings in the most recent scientific information. In the Federal Register notice, the agency committed to "completing our ongoing rulemaking" that is considering revised critical habitat boundaries. [75 Fed. Reg. 61690, October 6, 2010] Beginning as far back as 2007, the agency's own scientists have published research demonstrating the need for much broader areas of protection than the currently designated but outdated boundaries of critical habitat in the southeast (Garrison 2007; Keller *et al.* 2012) Shockingly, the scoping document indicates that the meager area outlined in Alternative 4 is the Council's preferred alternative to date.

Alternative 5 would provide for a prohibition only in waters shallower than 25 meters of depth (although the illustrative map in the scoping document only shows the 30 meter bathymetric contour). We believe that this water depth was chosen based on published research that examined right whale visual sightings that found that "peak sighting rates occurring at water temperatures of 13 to 15°C and water depths of 10 to 20 m." (Keller *et al.* 2012). However, the graphic in the scoping document clearly

indicates that this shallow water prohibition would not protect the entire designated right whale critical habitat. This is entirely inappropriate. Indeed, this does not even cover the existing critical habitat, which as just described, is also inadequate. Further, the area outlined in the scoping graphic in Alternative 5 does not include the areas in Georgia and Florida that were suggested by NMFS researchers as needing broader protection (*id.*) At the very least, if relying on the 2007 Technical Memorandum by Garrison and on Keller's 2012 published research, the protected area should include the much broader area that includes the 75th percentile of sightings off Georgia and Florida suggested by Garrison and by Keller (*id.* at page 83) rather than simply cutting off protection seaward at 25 meters of depth. It should also provide protection in shallow water inside the 30 meter depth contour that is outlined in Alternative 5 extending northward through North Carolina.

The Agency Must Consider Other Feasible Alternatives that Meet the Stated Need While Adequately Protecting Right Whales

The agency and the SAFMC have clearly failed to consider all reasonable alternatives due to their sole consideration of alternatives that fail to meet the NMFS Office of Protected Resources' regulatory goal of reducing vertical lines in areas of significant risk. However, pursuant to its duties under the National Environmental Policy Act, NMFS must provide a "detailed statement of alternatives" to the proposed action. 42 U.S.C. § 4332(2)(c). The CEQ describes the alternatives requirement as the heart of the environmental analysis. 40 C.F.R. § 1502.14. The purpose of this section is "to insist that no major federal project should be undertaken without intense consideration of other more ecologically sound courses of action, including shelving the entire project, or of accomplishing the same result by entirely different means." *Env'tl Defense Fund v. U.S. Army Corps of Eng'rs*, 492 F.2d 1123, 1135 (5th Cir. 1974). The analysis should address "the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for the choice among options by the decision maker and the public" and must "rigorously explore and objectively evaluate all reasonable alternatives." 40 C.F.R. § 1502.14. While an agency is not obliged to consider every alternative to every aspect of a proposed action, reviewing courts have insisted that the agency "consider such alternatives to the proposed action as may partially or completely meet the proposals goal." *Nat. Resources Defense Council, Inc. v. Callaway*, 524 F.2d 79, 93 (2d Cir. 1975).

Here, the agency's scoping document does not offer a sufficient range of alternatives, particularly alternatives that adequately maintain protection for ESA-listed whales in the South Atlantic region. We offer two other alternatives that utilize NMFS Science Center data in delineating the boundaries of protected waters. These alternatives, based on the best available scientific information, merit the agency's current attention and full analysis in its coming NEPA documentation.

A. Closure in Petitioned Critical Habitat

The first alternative the agency should consider is a prohibition on black sea bass traps within the area that was petitioned for critical habitat in 2009 (CBD *et al.*, 2009). That petition, which NMFS found presented substantial information demonstrating that a revision of critical habitat may be warranted, relied on the best scientific evidence available at that time to redefine right whale critical habitat to capture sightings at the 75th percentile (Garrison at Figure 19, Keller *et al.* at page 83). The petition, and

thus this alternative, would adopt the boundary proposed in the Garrison and Keller papers and extend the protection northward from the shore of South Carolina through North Carolina out to 30 nautical miles. This distance from shore was chosen because a focal study of the area found 94.1% of sightings occurred within 30 nm of the coast during migrations (Knowlton 2002). Under this alternative, there would be a prohibition on black sea bass trap/pot fishing would be in place throughout this area from Florida through North Carolina from November 1 through April 30 annually to comport with published data delineating the dates and areas in which right whales are expected to be present in southeastern U.S waters.

A graphic illustrating boundaries of the seasonal trap/pot area that would be included in this proposed alternative is below (Fig. 1).



Figure 1. Closure in Petitioned Critical Habitat

B. Southeast Seasonal Gillnet Restricted Area

The second additional alternative the agency should evaluate is to prohibit black sea bass fishing in waters already designated as a southeast seasonal gillnet restricted area that was put in place by NMFS in 2007 to prevent entanglement of right whales in high use areas off Florida and Georgia. [72 Fed.Reg. 34632, 34636; June 25, 2007] This area is already delineated in regulations and, as such, is familiar to commercial fishermen. To protect migratory and other high value seasonal habitat, this proposed alternative would also prohibit black sea bass pot gear in waters shallower than 30 meters in depth northward from the designated seasonal restricted area off Georgia through North Carolina along the area outlined in Alternative 5 north of the Restricted Fishing Area. Again, the prohibition would be in place from November 1 through April 30 to comport with published NMFS data on the regular presence of right whales in the southeast.

A graphic illustrating boundaries of the seasonal trap/pot area that would be included in this proposed alternative is below (Fig. 2).



Figure 2. Southeast Seasonal Gillnet Restricted Area

Procedural Issues

Finally, we briefly note our concern with NMFS’ decision making process for this action. NEPA requires agencies to consider all phases of a project together as part of a single review so that all those decisions can be made with a full consideration of environmental impacts of the project as a whole. *See* 40 C.F.R. § 1508.25(a). Here, through Amendment 19, NMFS increased the black sea bass commercial and recreational ACLs, but even as the agency developed this Amendment, the Council was considering proposing to remove the seasonal closure. 78 FR 58249 (Sept. 23, 2013). NEPA prohibits this type of piecemeal decision making.

Conclusion

Right whales are a fragile population of only around 450 individuals. They migrate seasonally through waters in which black sea bass fishing has occurred, though the trap/pot season has generally terminated before their arrival starting November 1. The increased ACL makes it likely that the fishery will operate past that date. The extant prohibition that NMFS put in place under Amendment 19 was designed to prevent adverse interactions between right whales and entangling trap/pot gear in this migratory and calving area that is key to the species’ survival. In September 2013, the economic impact analysis for Amendment 19 indicated no adverse consequences to the black sea bass fishery as a result of the prohibition. The scoping document accompanying the NOI clearly indicates a desire on the part of the Council to lift the black sea bass pot prohibition at a time when right whales are most vulnerable to entanglement. With the exception of the no action alternative, the alternatives presented are

inadequate to ensure reduced risk of entanglement and death. We have suggested that the NOI and a DEIS should provide two additional alternatives to the five inadequately protective alternatives presented in the council scoping document. However, we maintain that the no action alternative must be selected as preferred alternative. This alternative maintains the prohibition that NMFS itself said in regulations issues only three months ago was necessary to protect right whales.

Sincerely,



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Green Vegans

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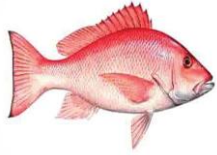
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SOUTHEASTERN FISHERIES ASSOCIATION (SFA)



EAST COAST FISHERIES SECTION (ECFS)

Mr. Robert Mahood, Executive Director
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Date: Saturday January 25, 2014

Re: Snapper Grouper Fishery Management Plan Regulatory Amendment 16 to consider the removal of the Black Sea Bass Pot Fishery Closure

Mr. Mahood,

The Southeastern Fisheries Association (SFA), East Coast Fisheries Section (ECFS) submits this written comment to the South Atlantic Fishery Management Council (Council) about the Snapper-Grouper (SG) Fishery Management Plan (FMP) Regulatory Amendment (RA) 16. The SG FMP RA-16 action is considering the removal of the Black Sea Bass (BSB) pot fishery closure, shortening of the prohibition temporally, and spatially, either by depth and/or distance, to designate the potential closure boundaries for the BSB pot fishery. The Council goal should be to minimize socio-economic impacts to BSB pot endorsement holders, while maintaining protection for the Endangered Species Act (ESA) listed Right whales in the South Atlantic Council region, based on their current critical habitat as designated.

The BSB endorsement program implemented by the SG FMP Amendment 18A (SG FMP 18A) became effective with requirements greatly reducing the potential for protected species interaction by a:

- Limit of 35 pots per vessel
- Pots must be brought back to shore after each trip
- Commercial trip limit of 1,000 pounds (lbs) gutted weight (gw)

The SFA ECFS wants the Council to eliminate the prohibition on winter BSB pot fishing **outside** of the **current ESA Right whale critical habitat area** as illustrated in the chart pasted below. The BSB Pot fishermen stay close to their fishing gear while fishing since SG FMP 18A became effective, and return the same gear home each trip as required by law. This fishing gear has no known interactions with the Right whales, and are not like the American lobster traps fished to the north of the South Atlantic Council region with known interactions.

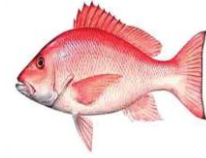
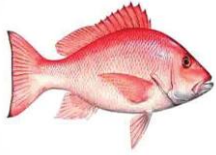
The SAFMC has proposed the following Action, with Alternatives, including Alternative 4, Preferred by the SFA ECFS;

"PROPOSED ACTION"

"Action 1. Modify the annual November 1 to April 30 prohibition on the use of black sea bass pot gear"

"Alternative 4. The black sea bass pot closure applies only in designated right whale critical habitat in the South Atlantic region."

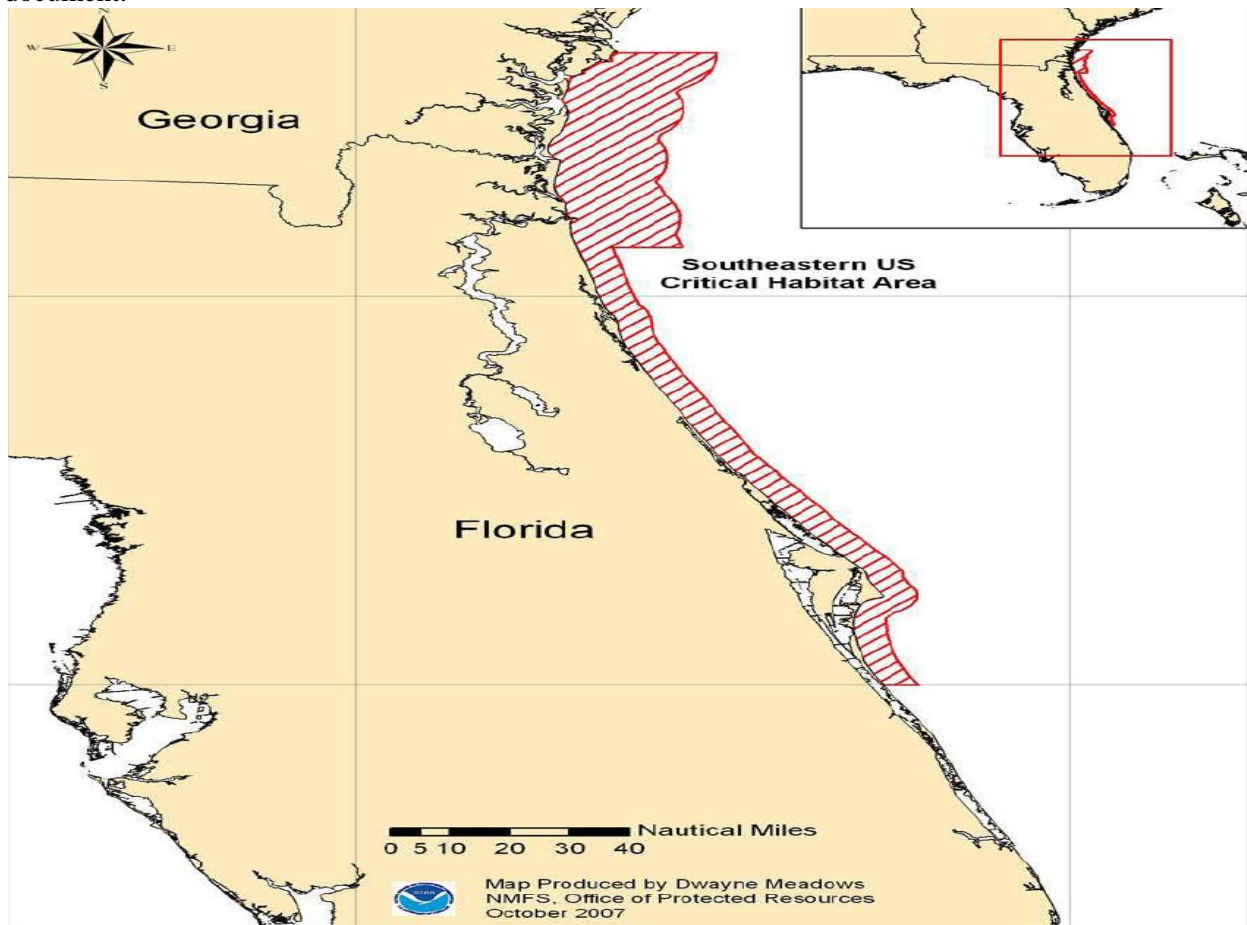
SOUTHEASTERN FISHERIES ASSOCIATION (SFA)



EAST COAST FISHERIES SECTION (ECFS)

*The SFA ECFS prefers to see Alternative 4 for Action 1 as the **Council Preferred Alternative** as pasted below. The Snapper Grouper Advisory Panel chose Alternative 4 as their Preferred choice.*

See the following NMFS image below, copied and pasted from the SG FMP RA-16 scoping document.



Finally, SFA ECFS is opposed to the revised Alternative 5 and the new Alternative 6 recently submitted from the NMFS Protected Resources Division using the 25-meter (>82-feet) of depth for the offshore contour. Even depths of less than 20-meters (<66-feet) would create a bigger closure than does the SFA ECFS "**Preferred**" Alternative 4 by using the **historical Right whale critical habitat** as produced recently by Dwayne Meadows with NMFS, Office of Protected Resources.

Latitude and longitude **coordinates should be based** on the **distance from shore of the current eastern boundary for the Right whale critical habitat** as designated by the NMFS, and seen above. The SAFMC needs to finish this work so that November 01, 2014 allows the BSB Pots to keep fishing after that date outside the Right whale critical habitat.

Jimmy Hull, Chairman
SFA ECFS
jgh/rhh

The National Park Service has reviewed ER 13/0755 Amendment 16 to FMP for the Snapper-Grouper Fishery of the South Atlantic Region (Prohibition on the use of Black Sea Bass Pots in EEZ) and offer the following comments:

The National Park Service manages numerous marine areas in the South Atlantic region with grouper-snapper habitat including: Dry Tortugas National Park, Biscayne National Park, Canaveral National Seashore, Timucuan Ecological and Historic Preserve, Cumberland Island National Seashore, Cape Hatteras National Seashore, Cape Lookout National Seashore, Fort Sumter National Monument, Fort Pulaski National Monument. Dry Tortugas National Park and Biscayne National Park are the national park units most likely to provide deep-water snapper-grouper fishing. The US Congress specified The Secretary of the Interior shall permit fishing in the founding legislation of the following park along with administering these areas in accordance with the laws of the National Park System: Cape Hatteras National Seashore Recreation Area (16 USC 459a), Cape Lookout National Seashore (16 USC 459g-3), Cumberland Island National Seashore (16 USC 459i-4), Canaveral National Seashore (16 USC 459j-3), and Timucuan Ecological and Historic Preserve (16 USC 698n). Fishing in Biscayne National Park is determined by the Secretary of the Interior in consultation with state officials and by Florida state law (16 USC410gg-2). The Secretary of the Interior shall administer Dry Tortugas National Park in accordance with the law generally applicable to units of the national park system and manage the park to protect populations of fish and wildlife (16 USC 410xx-1). However, commercial fishing is generally prohibited in in national park areas, except where specifically authorized by Federal statutory law (36 CFR 2.3(d)(4)) and will be allowed only when specifically authorized by federal law or treaty right.

We support the NMFS Southeast Region and the South Atlantic Fishery Management Council's consideration of alternatives to the prohibition on the use of black sea bass pots in the South Atlantic exclusive economic zone (EEZ) annually from November 1 through April 30 and to reduce interactions between fishing gear and marine mammals including northern right whales.

Alternative 4 in the scoping document is not clear as to the duration of the proposed closure; no start and end dates are listed for this alternative in the scoping document.

The National Park Service supports a combination of Alternatives 4 and 5 as presented in the scoping document combined with the addition of all National Park areas. The specific combination of areas remaining closed November 1 through April 30 being 1) designated right whale habitat, 2) waters 25m or shallower from 28°N to Cape Lookout, North Carolina 3) waters 35m or shallower north of Cape Lookout, and 4) all areas within national park boundaries. The 28°N boundary is from the northern right whale critical habitat figure in the scoping document.

We recommend that the Council and NOAA also consider an alternative that:

- includes individual NPS boundaries in the amendment or FMP;

- does not alter the November 1 through April 30 prohibition on the use of black sea bass pots within any national park area that allows commercial fishing for black sea bass with pots;
- does not alter the November 1 through April 30 prohibition on the use of black sea bass pots within any national park area that allows recreational fishing for black sea bass with pots;
- does not alter the November 1 through April 30 prohibition on the use of black sea bass pots within any national park area that allows subsistence and treaty fishing for black sea bass with pots.

Thank you for the opportunity to comment on the South Atlantic snapper-grouper FMP, black sea bass pot restriction Amendment 16. Please contact Karl Brookins, Natural Resource Stewardship and Science Directorate, Water Resources Division at karl_brookins@nps.gov, 970 267-7208 or Anita Barnett, Environmental Protection Specialist, Environmental Planning and Compliance Division, Southeast Region at 404-507-5706 for any additional information, clarification or consultation regarding these comments.

Comments on Regulatory Amendment 16

The prohibition on the use of Black Sea Bass pots (Nov-April) was a precautionary measure to prevent interactions with whales during large whale migration and calving off the Southeast US coast.

These are two separate issues and should be dealt with separately. According to the *North Atlantic Right Whale Sightings Map* the first mother and calf were sighted this calving season off Georgia the 17th of December 2013. From what I read this is not an uncommon time or place for the first sighting of a mother and calf. When the November-April time frame is used to describe the calving season these dates should be used as goal posts meaning the earliest record of a calf born and the last and that the core calving time (80% of calves born) would be a 2 month time frame within the Nov-April calving season. And that means that up until that date (Dec 17th) this has been a migration issue and issues like this have been addressed by the *Atlantic Large Whale Take Reduction Team* and are now part of the *Atlantic Large Whale Take Reduction Plan*.

The late fall and winter are an important time to fish for BSB because this is when fish start moving into the southeast. Cooler weather and cold fronts move fish into our area on a regular basis with larger fish and larger catches more consistently. This trend will continue into the winter.

The last two weeks of the 2013 BSB Trap Season the fish started to show up with larger fish and increased catches in my area of Onslow Bay, NC. This was well inshore of the revised points for Alternative 5. In December 2013 80% of all the BSB caught in my area of NC (Onslow bay) were caught inside of the revised points in Alternative 5. The BSB were not offshore of this line they were all inshore. It was common in years past to fish inshore of this line in late fall and early winter because this is where the water cools off first. The cooler water works its way from inshore to offshore as the winter progresses and we also work our way offshore.

I have also enclosed North Carolinas consistency and review letter that was sent on Regulatory Amendment 19.

Tom Burgess
Sneads Ferry, NC



North Carolina Department of Environment and Natural Resources

Division of Marine Fisheries

Dr. Louis B. Daniel III

Director

Pat McCrory
Governor

John E. Skvarla, III
Secretary

MEMORANDUM

TO: Stephen Rynas, AICP; Federal Consistency Coordinator

THROUGH: Anne Deaton, Habitat Protection Section Chief

FROM: Michelle Duval

RE: Regulatory Amendment 19 to the Snapper Grouper Fishery Management Plan (DCM #20130054)

While we agree that the actions proposed in Regulatory Amendment 19 to the Snapper Grouper Fishery Management Plan (FMP) may be consistent with the relevant policies of North Carolina's coastal zone management program, we question the information used to determine the necessity of the November 1 through April 30 prohibition on the use of black sea bass pots. We share the concerns of NOAA Fisheries regarding potential interactions of endangered north Atlantic right whales with pot gear, but do not believe the existing information warrants a seasonal closure.

The current biological opinion for the snapper grouper fishery was issued in June 2006 and initiated in conjunction with development of Amendment 13C to the Snapper Grouper FMP. It concluded "Thus, there have been no documented interactions between black sea bass pots and any marine mammals in the South Atlantic. The lack of evidence suggesting interactions between black sea bass pots and marine mammals, and the proposed provisions under the amendment to the Atlantic Large Whale Take Reduction Plan, lead us to conclude that any adverse affects resulting from the continued authorization of the South Atlantic snapper-grouper fishery are extremely unlikely to occur and are discountable." (NMFS 2006). Regulatory Amendment 19 specifically states that there are no known interactions of north Atlantic right whales with the black sea bass pot fishery (SAFMC 2013).

The stated purpose of the proposed prohibition on the use of pots is to prevent *potential* interactions with right whales due to the possibility of the fishery extending into the calving season (November 1 through April 30) because of the large increase in the ACL. However, since the 2006 biological opinion was issued, there has been a dramatic reduction in gear and effort in the black sea bass pot fishery. Between 2005 and 2010, the average number of vessels participating in the pot fishery was 247, with no limit on the number of pots used (SAFMC 2012). In July 2012, Amendment 18A to the Snapper Grouper FMP implemented a number of measures which significantly reduced effort:

- An endorsement program that allows only 32 vessels to legally use pots to harvest black sea bass
- A limit of 35 pots per vessel
- A requirement that all pots be brought in at the end of a trip
- A trip limit of 1,000 pounds gutted weight
- An increase in the commercial minimum size limit from 10" to 11" total length

As a result of these measures, the maximum number of black sea bass pots deployed at any one time in the entire south Atlantic region is currently 1,120. Furthermore, pots are required to adhere to the gear configurations of the Atlantic Large Whale Take Reduction Plan (ALWTR) to reduce the potential for interactions. By contrast, in the American lobster fishery (also subject to the gear requirements in the ALWTR) anywhere from 1,400 to 1,900 lobster pots are allowed *per vessel*, and there are approximately 2,800 permit holders (NMFS 2012a). We question the inconsistent treatment of these two fisheries, especially as lobster pots are much larger and heavier than black sea bass pots. Additionally, the western north Atlantic population of right whales has increased from an estimated 361 individuals in 2005 to at least 396 individuals in 2010 (NMFS 2012b). Finally, we note that although the commercial fishery has closed prior to the onset of the calving season since 2010, it was re-opened for two weeks in December 2010 to allow unharvested quota to be caught

(http://sero.nmfs.noaa.gov/fishery_bulletins/bulletin_archives/2010/documents/pdfs/fb10-100_black_sea_bass.pdf). This occurred during the calving season and when there was a much greater level of effort and gear in the water. Given these facts, we do not believe the existing information supports the proposed seasonal prohibition of black sea bass pots throughout the region.

We are also concerned that the increase in the ACL for black sea bass will be negatively impacted by the failure of Florida, Georgia and South Carolina to complement federal closures of the recreational black sea bass fishery within state waters. This appears to be a violation of Section 306(b)(1)(B) of the Magnuson Stevens Act. North Carolina is currently the only state to complement federal measures for the recreational black sea bass fishery within state waters. The inaction of other states impacts the black sea bass resource, and unfairly puts North Carolina's recreational fishermen and associated industry at a disadvantage.

Citations

National Marine Fisheries Service (NMFS). 2006. The Continued Authorization of Snapper-Grouper Fishing in the U.S. South Atlantic Exclusive Economic Zone (EEZ) as Managed under the Snapper-Grouper Fishery Management Plan (SGFMP) of the South Atlantic Region,, including Amendment 13C to the SGFMP. National Marine Fisheries Service, Southeast Regional Office, 263 13th Avenue South, St. Petersburg, FL 33701-5505. 127 pp.

National Marine Fisheries Service (NMFS). 2012a. Endangered Species Act Section 7 Consultation on the Continued Implementation of Management Measures for the American Lobster Fishery. [Consultation No. F/IER/20 1 21 01 456]. National Marine Fisheries Service, Northeast Regional Office, 55 Great Republic Drive, Gloucester, MA, 01930-2276. 197 pp.

National Marine Fisheries Service (NMFS). 2012b. North Atlantic Right Whale (*Eubalaena glacialis*) 5-Year Review: Summary and Evaluation. National Marine Fisheries Service, Northeast Regional Office, 55 Great Republic Drive, Gloucester, MA, 01930-2276. 34 pp.

South Atlantic Fishery Management Council (SAFMC). 2012. Amendment 18A to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place, Ste 201, North Charleston, S.C. 29405.

South Atlantic Fishery Management Council (SAFMC). 2013. Regulatory Amendment 19 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place, Ste 201, North Charleston, S.C. 29405.

**PUBLIC HEARING
DOUBLE TREE BY HILTON
ATLANTIC BEACH, NORTH CAROLINA
JANUARY 22, 2013**

MR. HAWKINS: Thank you for the opportunity to provide comment. I am not representing anyone but myself. As a North Carolinian, I really appreciate the opportunity that the council makes for local meetings. A lot of people can't get away and travel to the centralized meetings, so thank you very much. I have several comments. Just going through the advertisements that the council had put out; one is the adjustments for the allowable biological catch for unassessed species. Is it correct you are taking comments on that? Just a simple recommendation; if you have no doubt on those, in the state of North Carolina we've looked at a running average over the last ten years when we didn't have biological data on a species. I just recommend you look back and you set the ABC again as a technique capping that at a running average over the last ten years. Then I recommend that the council flag those or prioritize those species, and then ask the NOAA staff or the states, because the states might have enough interest in a particular species that they might be willing to try to do an assessment at least for the data they have collected.

I'll just move on if that is all right. Also on the gray triggerfish, that is one of the more valuable – as you two know and I'm sure Anna knows – one of the more valuable bottom fish we have in North Carolina. I would ask that the council consider doing away with size limits – some countries are doing that – and set a cap or a poundage limit. Then when they approach the poundage limit, scale it down and would stagger trip limits to make it so it is cost prohibitive for the commercial person to go out; and also consider a closure again for the recreational fisherman and put out educational material for the recreational fishermen and for the commercial fishermen. I don't prefer a split commercial season.

I would rather have state-by-state quotas. Better yet, I would ask the council to consider as a long-range thing to recommend setting a target mortality rate for each state and let each state develop the step-by-step measures that best fit its state to try to manage that fish within the fisheries that exist within that state. For example, the fishery for gray triggers off North Carolina might be entirely different than the fishery for gray triggers off Florida. Allowing that flexibility for each state; hold the states accountable for those mortality rates; let them actually show a fishing plan where the council could quantitatively evaluate the measures that the states are proposing, somewhat similar to the concept that the Atlantic States Marine Fisheries Commission where each state provides fishing plans on how to comply with the enacted or the proposed Atlantic States Marine Fisheries Commission plans for a particular species.

I recommend on gray triggers setting a commercial limit and then stair casing or knocking down the landings to still allow some small landings and not a complete closure; because what happens, as the council is aware, when we manage intense quotas in North Carolina, you have underage's and overages. On an underage, then I would allow the staggered-down trip limit will allow at least the council or the state to allow some limited landings. Then when it reaches to the point where you are running the risk of overing the total allowable catch, then apply the surplus to the following year as a penalty.

Then if it is an underage, also carry that over to the following year. In the past a lot of states and some management agencies have considered letting that go to the resource as a buffer, but again

these fisheries are so intensely managed, I would treat it more like a business plan where if you go over you're penalized; if you go under, you're actually not penalized. Okay, on Spanish mackerel, I would recommend that the council defer to the ASMFC for management of Spanish mackerel in the state of North Carolina – most Spanish mackerel are caught within state waters – somewhat as what the council did for red drum. The council could work with ASMFC if they have any recommendations on or any total overall objectives on how to deal with Spanish at least on the Atlantic coast. I can't speak for the Gulf Coast; but again off North Carolina most Spanish are landed within three miles.

If they decide to continue trying to conserve and to manage Spanish mackerel in the South Atlantic, then I recommend state-by-state quotas also on that. State-by-state quotas allow more flexibility for each state; and again it recognizes the diversities between each state. If you have administrative or bureaucratic issues between certain states not having the accurate inventory system, then I recommend that NOAA hold those states accountable and not penalize a state such as North Carolina that has an accurate inventory system. We are penalized if some other state or some entity does not. I strongly recommend state-by-state quota if the South Atlantic decides to continue managing Spanish.

DR. DUVAL: Jess, just to let you know, the council took final action – I think it was back in September – to actually establish a northern regional quota and a southern regional quota for Spanish. I think from North Carolina's perspective, we advocated for state-by-state quotas, which I know that you are aware of that. I just wanted to let you know sort of where that finally ended up was that northern regional from North Carolina north, and then southern regional from South Carolina south; quotas for both king and Spanish mackerel. I just wanted to make sure you knew about that.

MR. HAWKINS: Thank you and thank you for your efforts, both of you and also Anna for trying to again provide more flexibility for the geographical difference between how these species are landed and how they utilize the coast off those particular states. Then on the scoping documents; again, I saw where the council was taking comments on king mackerel. Okay, somewhat to mimic my Spanish mackerel comments, I recommend strongly state-by-state quotas and I would recommend separate permits for Spanish and king. They are entirely different species, as the council knows. Off our state they inhabit most of the time distinct areas. A Spanish fisherman, whether he's a recreational or commercial, will generally go to certain areas; again with Spanish nearshore; king, 5 to 10 to 15, depending on what water temperatures are here. I would recommend separate permits.

It is usually a different type – and I'm sure the council is aware of this – different fishing platforms are utilized to try to harvest these fish. A less wealthier recreational fisherman will be more apt to try to fish for Spanish than they would for a high speed, elongated recreational boat to try to access the king mackerel stocks off North Carolina, which are usually again 10 to 15 miles. On the snapper grouper, on the black sea bass; I would urge that the council do what it can do to try to allow for a winter season off North Carolina. That is the prime fishing time. I realize if you are trying to cut mortality and harvest, that you might target peak fishing times, but that is when there is – if you look at overall efficiency of the fisheries in North Carolina, that is a time when our bottom fishermen could utilize access to that resource, and so stricter limits might be appropriate during that time. But again I just as a general statement urge that the council consider allowing North Carolina to have some type of winter season, both recreationally and

commercially for black sea bass. To repeat some of my earlier comments, I just urge the council to try to allow each respective state more flexibility in how they manage those particular stocks and stay under the overfishing levels; hold those states under a strong standard so that they know there is accountability, but again give those states the flexibility. We're blessed in our state in that we have a lot of fishery-dependent sampling, and that we have an excellent inventory program for recreational and commercial. Our state managers, such as Dr. Duval and our Marine Fisheries Commission; we do have a governance set up and we do have the professional staff to allow us to professionally manage our fisheries off our state.

Thank you very much for the opportunity to comment. It is nice that our government allows its citizens to comment on measures that are being considered and even measures that are just being talked about. I am really thankful that the council holds scoping meetings and just encourage them to continue to do that, because a lot of people are misinformed. A lot of people aren't as well informed about it as you council members are or as in your job Michelle, in the scoping aspects. I strongly encourage the council and all fishery management agencies to try to do so.

MR. MOORE: My name is Brian Moore. I just want to comment on Amendment 29, on the gray triggerfish amendment. I feel like as a dealer the best move they can make is split the seasons and allow trip limits of, say, 1,000 pounds until they get to the last 25 percent and then go to 500 pound trip limits. This would allow for the best production for the resource as far as money produced; because once the market floods, the prices drop and fishermen don't get the most bang for the buck. This would allow a continuous supply throughout the whole year, I hope.

DR. DUVAL: That was 1,000 pounds and then go down to 500 pounds once –

MR. MOORE: When there is only 25 percent left. You would split the seasons, too, just like the vermilion snappers. Then just mimic the same season. That way they have enough they can make a living, but it still allows for a continuous supply all year long so it doesn't flood the market at any one time. I also want to comment on the recreational and commercial sectors. As a vessel in the South Atlantic Council, and it is in the South Atlantic is commercial, it should be commercial and not recreational. A vessel should either be recreational or commercial, one or the other and not both. That causes a lot of problems on the dealer side, because you have a lot of recreational-caught fish that are being sold when the commercial seasons are closed, because a boat can get away with it. That is the loophole in the federal regulations and not the state regulations in North Carolina.

DR. DUVAL: Brian, you are saying that vessels that are dually permitted, they will –

MR. MOORE: Well, no, you should only be permitted – if you are federally permitted, you should be able to catch the commercial quota if your commercial vessel and not the recreational quota. When you leave the dock that day, you are commercial or you are recreational, one of the two. You are not both.

DR. DUVAL: That is the way it is supposed to operate right now. What you're saying is that is not the way it is actually operating.

MR. MOORE: It is that way in the state but not in the federal regulations. Also, the last thing I want to comment on is the lesser amberjacks. That category needs to be divided up among the bar jacks, the lesser jacks and the banded rudderfish; just kind of like the shallower complexes with the groupers. That needs to be divided up among each species and not be controlled by having them all go up into one species. That's all I have on my comments.

MR. BURGESS: Tom Burgess. I would like to comment on Amendment 16 and some of the things the council is working on. To my knowledge, when the council passed Regulatory Amendment 19, it was the intent of the council to revisit this to trigger a biological opinion. I was going through the scoping document today, and I saw that the council is considering, according to the scoping document, submitting Regulatory Amendment 16 in December of 2014. It is my understanding that a biological opinion has to be completed at that time to submit Amendment 16 to the secretary. It is my understanding that it cannot be submitted without a biological opinion to assess the threat to whales.

I guess you could say it is a deadline about when the council needs this biological opinion, and I really hope that Protected Resources has it prepared at that time and not to further stall this to being submitted. That is about all I have to say on that. As far as the November through April calving season; I was reading through some comments from Sharon Young of the Humane Society to the National Marine Fisheries Service on Amendment 16 scoping. It seems like they are thinking that November through April is the calving season; but I think from what I understand that, that would be just setting up say some goal posts about when the first documented calf might have been observed on the front end, November 1st, and also the latest one sometime in April.

But I think that the core calving is done – this would not be considered core calving. I would say 90 percent of the calves are born within a two-month timeframe, January and February. I will comment more on that on my written comments to the council. I think it is November through April is much too long. I think that this really comes into a migration situation when you start with November 1st. I would like to see the council separate these two issues, migration and calving, and deal with them separately. Now according to the information on calving this year, December 18th, to the best of my knowledge, is the first known calf that was born off of Georgia. If we had been fishing this year in November and in December here in North Carolina, it would have been a migration issue as compared to a calving issue.

That is about all I have to say right now at this time. I'm going to submit written comments before February 3rd, I think is the end period, and address these issues, the letter from Sharon Young; and she stated several times about the Atlantic Large Whale Take Reduction Team in her comments. I am a member of that team, and I didn't support those comments, and I didn't have anything to do with them. I would address that, also.

DR. DUVAL: Just to make sure I have the date down right, you said the first calf that was born this season was December 18th off Georgia?

MR. BURGESS: That is correct. There is information put out all the time on the calves, the survey information and all that; but I will go ahead and have that narrowed down for you in my written comments.

MR. COX: Tom, I've got a quick question for you while you're here. You are still on the whale take team, right? With all your experience bass potting, have you been able to show those guys and talk to them a little bit about your interaction with or seeing whales while you have done this as long as you've done it?

MR. BURGESS: Well, yes, the whale team is aware of what happened in Amendment 18A and as far as the decrease in effort. The head of the Northeast Protected Resources, Mary Colligan, the lead on the whale team, stated in front of the full team that they consider the southeast to be a very low risk to whales due to the density of gear and the sightings of whales. With that information, I think many members of the team realize what is going on as far as effort in the southeast, whale sightings off of North Carolina, or lack of sightings with the survey data and the co-occurrence, which is the relationship between gear and whales, is very low. That is where they are there.

MR. COX: Yes, with the experience that I had bass potting; I view that the whales that we have seen were just like they had told us in that critical area in that shallower water. It just seems like at some point there would be some wiggle room where you guys could do your work a little bit further out. I was just hoping that at some point you will be able to convince them that we see that there. But, anyway, thank you so much for showing up. I appreciate it.

MR. TUCKER: I'm David Tucker, you guys know me. I'm here representing myself as a South Atlantic permit holder and a fisherman, as well as a business owner in Blue Ocean Market, a local seafood market here in town that supplies local restaurants with seafood and regional customers with fresh local seafood. First I want to comment on a few of the amendments, some issues I have with them, and then I would like to make a couple comments on some general issues that I want you guys to take into consideration. I want to agree with what Brian said earlier about Amendment 29. I would like to see a separate ACL for almaco jacks and see that split up from banded rudders and lesser amberjacks instead of all grouped together. As far as the sea bass pot amendment, like what Jack was saying; that makes a lot of sense to me if we're having trouble with whales, let's move further out where we can fish, have some wiggle room where we can fish and do things.

I also want you to consider we're not even close to catching the sea bass quota this year; it has been limited to such few fishermen. You can't bass pot all winter. I want you guys to consider letting some of the people that were forced out of it back in, because some like myself, I mostly grouper fish, but sea bass pot was something I used to do some of in the wintertime to help get through closures in grouper season. Just because I didn't have a huge quota on my permit, I got cut out of it, a lot of fishermen did, because I was just taking a few pots and just catching a few at a time. Some fishermen don't have to be able to catch a load of sea bass to make it. Sometimes we can catch 3 or 4, or 500 pounds and have a good day doing it.

Then I want to discuss the trigger. I'm in favor of somewhere around 1,000 pound trip limit on that amendment. Maybe when the season gets 25 percent caught up and the quota is 25 percent caught, let's drop it to 500 pounds. That way we can have triggerfish more year round and maybe a split season like vermilion; I would be in favor of. It is really tough. I'm in restaurant sales, and it is mostly what I do. It is really tough. You have customers buying a product from you and then all of a sudden they go six months and don't have it; it is hard to pick them back up. I am seeing restaurants more and more – this isn't just on triggerfish – there are a lot of

different fish – they are moving more and more to frozen products, something they can count on because we've become so seasonal here. Last year, this time of year the weather was nice, and the boats were coming in with 2, 3, 4,000 pounds of triggerfish on the boats and the triggerfish market got flooded. The price went way down. That is not good for the fishermen. It is tough on the dealers, and we had more fish than we needed; but then all fall we had no triggerfish. If those fish could have been caught later in the year; it would have been better for everybody. It would be better for the restaurants, the fishermen the wholesalers, everybody.

I would also like to be in favor of a size limit on triggerfish, maybe around 14 inches, to get rid of the little guppy triggerfish that are coming in. There is really not a market for that. It is hard to do something with them. The fishermen think that a triggerfish eight inches long is the same thing as a triggerfish that is 18 inches long, but it is not. Nobody wants a piece of meat that is two or three inches long. I feel bad about even cleaning it. That is kind of what was on my mind about the amendments that you all are here for today.

I just want to talk about a couple more broad issues that affect me as somebody that fishes and does every aspect of the business. I mentioned earlier the availability of product is really tough, because we've become so seasonal in different things. It is hard to have something like vermilion for two or three months and then not have it for two or three months. People come in the retail market and they don't see stuff anymore; they don't know what to do. They just stop buying fish. Some people love to buy little vermilion snappers. They will come in every week and buy one or two of them. Then all of a sudden you go the middle of March through June you don't have them, then you lose those customers.

Another thing that is on my mind as a fisherman and as a wholesaler is we're on a quota system with grouper. The red grouper quota, we didn't even come close to getting met this year. It still closed up December 31st, and I don't even know if we caught half the quota. I mean you guys would know exact numbers, but I would love to see it keep going or something change so we could have grouper year round here. It is impossible. As soon as we close up, if you are on the east coast, the Gulf and importers know that, hey, these guys are closed up on the east coast, we can get whatever we want to for our fish; and that is no good, especially when we're not even coming close to catching these quotas that have come up.

One other thing I want to speak on is I do not like these little seasons that is in place, these little one-week American red snapper fishery seasons, this one week of triggerfish opening up; it is no good. American reds were open for a few weeks this fall; I didn't catch any. But on the last day I went fishing right before Christmas, I caught probably 100, 150 pounds of red snappers, six fish that were 20, 25 pound fish and I had to throw them all back. I am not asking to catch all the – I mean, I understand, I am all about rebuilding stock and helping the population out, but on a species like red snapper say, hey, we need bycatch, you can catch 50 pounds or 100 pounds of bycatch per trip, or maybe each fisherman is issued 20 tags or something. You can catch 20 red snappers to bring home through the course of the year. It is just awful to see 20-pound snappers floating off behind the boat. That is pretty much all I've got to say. Are there any questions?

MR. COX: David, I appreciate you stopping in and making comment. I hear what you're saying about all the quota left on the table is definitely something we need to look at.

DR. DUVAL: I was actually just looking at the red grouper ACL today; and at the end of December the latest numbers were – it was only 33 percent of the quota had been caught. That is a lot of fish on the table.

MR. TUCKER: You've got to consider other things like it might not be caught just because there haven't been that many people trying to catch them. I haven't been red grouper fishing in three years, because I've been catching – one reason is because I've got two little boys so I don't make as long days as I used to. But we're catching gags 2, 3, 400 pounds of gags a day inshore. It just makes sense to fish for that. That is what I have been doing; I haven't been running 50 miles to catch red grouper; but I went a couple times after gag season closed this fall and I had good days, without even being out there in years. I would love to see it – if we don't catch our quota, let it keep going. We don't interact. I understand closing for spawning seasons of gags and we need to help them out, but we rarely catch the two together up here. Now I can't speak for what is down south, but, anyway, thank you for hearing me.

MS. GASKILL: Sandra Gaskill, Harkers Island. Well, of all the things that has been taken away from commercial fishermen, gear changes, they've had quota put on them, bringing gear in and – well, for me it is taking away. There are a lot of commercial fishermen that have lost their permits; and my husband has black sea bassed for 45 years. Out of all the time he's been fishing, he has had pots and he has brought them in every day. He has never entangled a whale, never caught a whale. There are a lot of other commercial fishermen that were out there fishing, and they had more pots than what he had. They didn't bring their pots in; they had maybe 2 or 300 pots; they didn't bring them in; and they never encountered entanglement with a whale. There is something going on here that is not right. It is not on record anywhere that there is a problem with this is our area; so why punish these commercial fishermen for something they haven't done, just because it has come up. You've got all these things you've stopped; the pots are taken in every day, which my husband did, anyway.

They are right there all day long with those pots, and they can see if a whale comes up and they know they are not going to sit there and let a whale get entangled in a pot. As I have said before, the pots are 12 X 12 square; and up north they use large pots. They don't call them pots; they call them traps, and they weigh 1,000 pounds. They allow them to set them and there are whales going by every day or whatever, and they could catch them in the end but they are allowed to fish with a pot with the gear. Like I said before, I knew Dennis Spitsbergen, and he was one of our council members and a mighty fine man. He was fair to the fishermen and he was fair to the fish or the whales or whatever; he was concerned. He came up to me, it has been years back, and I will never forget it. He isn't on the council today. But he told me, he said "Sandy, whatever you do, don't call your husband's gear pots." I said – "No, don't call them traps. I said, "Well why; what is a trap?" I came to him and I said, "What is a trap?" He said, "Because we don't call them traps?" We didn't then; my husband called them pots like a crab pot.

He said, "Well, because they are large and they do many things that a little crab pot wouldn't do, especially with the little lines." He said, "And your husband's gear wouldn't do that." I know it to be the truth, because 45 years; if it was going to do it, it would have already been done and these whales would be entangled. But it is not true. Now after all these regulations they put on these commercial fishermen, I can't understand -- It is like I said; I understand it is not the council; but whoever is in charge of this – and I know everybody wants to protect the whales and so do I, but I don't want to protect them until it puts me, my husband and all them commercial

fishermen that do it for a living pot fishing out of the water, because they make most of their money in the wintertime. These months that are taken away from them are winter months, and that is when the fish are the best. Like I said before, my husband went black sea bassing, and I think it was July or August when he saw some bass. The way I understand, the man said the price will go down. He said, "Why is it going down?" He said, "Well, because the color is wrong." He said those are like a light gray color or whatever, and they need to be black in order to sell them and get a good market price for them. Well, to me that is crooked, because these fishermen – I mean, not what the dealer done, but what it has caused him to have to do. My husband wouldn't bother with it a lot of times in the summertime.

They didn't go out there and get in the way of a lot of people. Some people did, some people didn't, it is according to what you have to do. But these months are really needed by the commercial fishermen in the winter months. I say leave it alone. Open it all up and let these fishermen fish like they have all this time. My husband did it for 45 years and he has not been by himself. There are other people that do it, too. The thing about it is this is about making a living; and if you can't get nothing for your fish because of the time you go and everything, going out with it, I mean it is ridiculous. Just like my uncle said – and I've seen it, too, and I know a lot of you have. There is Deadliest Catch; you will see it on TV. Any of these people that are trying to put this in place, you watch Deadliest Catch. They tell how large their pots are, they are 1,000 pound pots. You also see them right there working, and you see the whales are blowing off from them with a great big line hooked to it. Now if there was any damage to be done, they could do it.

But nothing is said evidently, because they keep it up. But I don't think just because – and I was thinking maybe with all these regulations, maybe some of these people are sitting around these communities, or whoever these people are; they don't like it because some of their people has been taken out of the pot fishery with permits, and they say, "Okay, I'll get these fishermen back. I'll fix it so they can't go in the winter months." That is when they have the best fish. The best fish is in the winter months. In the summer a lot of times they head up north and you get what is left; and like I say when they change color, that proves something. It is very bad for the fishermen. It is taking money out of their pockets and it needs to be done right. Leave these fishermen alone and let them fish like they've been doing. Just because you've got all these regulations, give them more quotas, "My Lord, oh, we give them more quota; now what are we going to do; take them out of the water." It is not done right, and I appreciate your time. I hope everything works out better, but I say leave it alone, open it up and let these fishermen fish.

DR. DUVAL: Sandra, I just had one quick question for you. What is the shallowest that Albert has set his pots?

MS. GASKILL: I think it is 40 feet.

DR. DUVAL: How about the deepest?

MS. GASKILL: About 100.

MR. DAVIS: My name is Sonny Davis. I own the Captain Stacy Fishing Center, Captain Stacy Headboat and Charterboats. I have been in the fishing business a hundred years; probably over fifty years, I started in 1955. I've been trapping, bass potting, snapper grouper fishing, flounder

fishing north of Hatteras, fishing in the Gulf of Mexico. I have done it all. I tell you one thing about the bass fishing; we had two permits on two different boats, and we bass fished in the wintertime, wintertime only, because in the winter we caught bigger bass. I think the bass migrate north and south, and the winter was the best month to catch the prettiest bass. But we never used over 12 to 15 to 18 pots per boat. I've got an 80-foot boat; we could have put 100 pots on her. But you can't tend to over 20 pots and be right with it. But we did that every winter until the bluefin tunas showed up, and then we spent most of our time chasing bluefins. When the bluefins didn't show up the past few years, we went back to bass fishing. A couple years ago they came up with this regulation if you didn't use your pots a certain amount, you didn't catch a certain amount of fish, you would lose your pots.

They talk about protecting the fisheries. Now in my book that is not protecting a fishery. We've got two permits and we are lying to the dock or we're doing some other type fishing and not using these permits to catch sea bass; we are not hurting the stocks. But they took our license, anyway; in fact I think Jack lost his permits, too. That looks like to me that is just working backwards. But this winter we could use them very well if the weather would straighten out. Now we're snapper grouper fishing, which you can hardly get a day out there without the wind blowing. In fact, we've been out three days this whole year because of weather. If it wasn't for the weather being so bad, we could probably be doing some bass potting.

The price of bass should be up now, because in the wintertime we always got the best prices for our fish. They were better quality and all of that. The thing that gets me so bad is they talk about protecting the fisheries, and they take my two permits that I've had for years, ever since they started with the permits; take mine away from me because we're not using them. But they are talking about protecting the fisheries. If we're not using our permits we are not hurting the fisheries. That gives more stock for the people that are out there fishing with them. That gives the stock more to them where we're not hurting it at all. I think that is the worse rule that they've ever come up with. I guess that is all I've got to say about the sea bass. Thank you.

MR. McCAFFITY: I'm Chris McCaffity and I commercial snapper grouper fish. I want to talk about, first off, I guess the bass pots are a hot topic here at this meeting. I would like to say that I lost my bass pot tags. I never even set a bass pot, but I bought a permit that had tags and I renewed them every year just so that when the time was right. I was raising my family and everything and really didn't have the time to focus on it like I can now when I start back, Lord willing, in May. I wanted to be able to use those pots. It is a little disappointing or very disappointing that they were just arbitrarily taken away right before the stock doubled basically; the quota doubled that we could keep, and really negated the whole need for that endorsement scheme.

As the other fishermen have stated, the wintertime is when the bass pot fishery was the best, because that is when the fish were here, the price was high, the fish were big. That was something that you could do a little closer to shore in safer conditions than trying to go out there; out there to the break basically to target some of the other legal snapper grouper species. It does compromise our safety at sea as we are regulated out of one fishery after another and really forced to focus on just a few different species at a time. I mentioned at the other room there about I've never heard of any kind of a closure in New England for the lobster traps that are much larger than the bass pots, and many, many, more of them. I think that sometimes these rules are just kind of arbitrary. If not enough people say anything, they put them in place. If

enough people say, no, that is wrong, they will relook at it. At the very least, go to the critical habitat designation that they have for right whale and make that your closed area. That is pretty minimal impact to the fishermen and I think most people could live with that. The bass pots, if you are going to continue this closure like you have now in the wintertime, it is going to affect future pot fisheries that we could develop for lionfish. I went down to Florida for the Marine Resource Education Program this summer and talked to fishermen from the Caribbean that had developed a way to target nothing but lionfish, a very clean fishery, by using the female gonads as bait. They took nothing more than two milk crates, zip tied them together, cut a hole, put a flower pot, a plastic pot with the bottom cut out as the funnel going in with a couple of bricks and that bait in there. They said they would be slam full of male lionfish.

No other fish would go in there because the lionfish were in there and they didn't want to get harassed by them. I think we need to look at the very least allow those of us that lost our tags to kind of do an experimental fishery possibly for the lionfish. I'm not saying we should exclude anybody ultimately, but that would be a good place to start by giving back a little bit of something to those of us that have lost something. We really need to look at that lionfish thing. We need to thin them out if we can. They are an invasive species that are eating many of our juvenile fish. If we don't do something to put them in check, then the fishermen are going to suffer, the consumers are going to suffer. What you guys are doing, all of it will be for naught, because of something else that came in and destroyed the fishery. That is pretty much it for the black bass.

But the triggerfish thing, you guys are looking at removing size limits on a lot of fish based on the fact that you have quotas now. I understand the reason behind size limits. Before there were quotas in place, I was one of them that supported them when they came out. But now that you have quotas in place, like vermilion snapper, you are allocating 35,000 pounds of our quotas to dead discards. I believe that is for the post-closure discard mortality. With each species that has a size limit, there is a certain amount that is allocated from our quota, you are planning on a certain X number of fish dying based on the size limit. I just urge you to think about when these laws are passed – and these are laws that you're writing basically. They are enforced basically by the threat of force. Just because somebody catches a 12-inch triggerfish or 11.75 inch triggerfish, they really shouldn't have to worry about a fine or possibly having their property seized and being in prison if they can't pay the fine. That is really excessive to do that kind of thing. It is less than 5 percent of the catch on the commercial side that is actually under 12 inches based on the presentation that we just saw. The free market pretty much takes care of that; because most fishermen don't want to sit there and catch runt triggerfish. The market doesn't want to buy the runt triggerfish. There is really no need for that law.

I really encourage you to look at some of the others. At the very least go back to the very minimum size limit that it takes for the fish to breed once. A lot of these have been arbitrarily increased over the years and led to – like with silver snapper being 14 inches. That kind of hurt the market for the plate-sized silver snapper in restaurants when they were 12 inches. You affect a lot more than you realize with good intentions I understand with the size limit thing. I do hope that you will just not even put one on these triggerfish. Remove the circle hook mandate for these smaller fish like triggerfish. The grouper and snapper, I can understand that and the circle hook, it may have a positive benefit on that. I would also encourage the council, since that law was passed based on reducing the mortality of fish caught with the circle hook, with the gag grouper assessment coming up or being done now, you need to ask John Carmichael to relook at

what allocation or what percentage you are going to allocate to dead discards and reduce that based on the circle hook mandate that was not in place before or when the last stock assessment was done. I applaud looking at the split seasons and aligning it with vermilion snapper. I think that is a great way to do this. I think most of our fish really you need to have that split season. You need to manage each seasonal quota with appropriate possession limits to avoid the extended closures. I know a lot of boats – some of the bigger boats have argued that; well, we need more fish, the 1,000 pounds on B-liners is too restrictive. They may say the same thing if we go to a low poundage limit on triggerfish. Well, you could really not even have a poundage limit for the first 75 percent of the quota as long as that final 25 percent is considered a bycatch allowance with a possession limit that is low enough that you do not continue a targeted fishery; but you are still allowed to keep those that you accidentally catch while targeting those with a primary quota still available.

That is something we need to look at for all species that we avoid any extended closures, have everything legal at the same time, just some fish are going to have a higher limit than others based on the amount of quota available. For triggerfish, I think based on the options presented there, I think you should start with 500; but like I said, it really doesn't matter as long as you are going to go down to the level, like 100 pounds or possibly 75 so that you do extend that season. I think that pretty well covers it. I do applaud the council for listening to us. I think you're trying. I realize as I've gone through this process for several years now, that most of the people on the council are good people that want the best for the fishery.

It is really up to us as the stakeholders, through the visioning project, to present the council with our recommendations for what we want to see for the future of our fishery. Limiting waste is a big part of it, feeding more people, increasing the quotas by doing things like enhancing the fishery with artificial reef habitat and also protecting our freedoms. I hope the council will not consider any more vessel monitoring systems or anything like that that will restrict our freedom and violate our constitutional rights. I thank the council for listening to us and the outpouring of public comments that led to a unanimous vote opposing the vessel monitoring system.

MR. FREEMAN: My name is Robert Freeman. I operate Sunrise Charters for the last 30 years, and I have fished off of Morehead for 42 years now. Some of my comments are not directly covered in the presentation that was made today. I feel like the complexity of some of the data and information that was there is kind of overwhelming. Taken in order, I had heard some comments from council members recently that made it somewhat encouraging to think that there was going to be some action taken on eliminating the requirement for circle hooks in the snapper grouper fishery. My experience is we are damaging fish, tearing their jaws up, breaking their jaw. We actually had an American red last year gut-hooked with a circle hook. You just cannot get those hooks out without doing significant damage; and there is no way the fish is going to live from there.

Another vein I am opposed to from what I've seen creating the 12-inch size limit on the triggerfish; I would like for the council to also consider something a little bit novel in the creel limit for the bottom fish. If we're fishing 15 to 24 fathoms or so, we can anchor on one spot and catch B-liners, sea bass and triggers all on that one place. The sea bass are pretty aggressive biters; and usually we will catch the limit of them in the first two or three drops on that spot. Then you try to catch the B-liners and triggers off that same spot, you are going to kill ten times the creel limit of sea bass or you are going to be discarding a bunch of them and they float off; at

least a third of them don't go back down. I really think that something more constructive so far as the survival of the fishery out there is to let the fishermen say, okay, I'll take my 15, 20 fish whatever; I will let them all be sea bass – that is the end of the fishing for them – rather than 5 bass, 5 B-liners, 20 triggers or whatever. I do think that we are seeing too many of the fish float off and not being utilized; and it is not doing the fishery any good at all. We keep raising size limits. The sea bass went from 10 inch to 12 inch to 13 inch. If the customers wants to keep a 12-inch sea bass, let him keep a 12-inch sea bass and leave that 13 incher down there to put more eggs out. I think that is the areas that I wanted to comment on.

DR. DUVAL: Bobby, basically you are saying really just have sort of a 20-fish bag limit for the snapper grouper complex to try to cut down on some of those discards?

MR. FREEMAN: Well, you are allowed 5 sea bass, 5 B-liners, something today – if I was a Philadelphia lawyer or tried argue the point; I was reading some of the South Atlantic Council's material, and it said you could have 10 snapper. Well, I would like to argue that I want to catch and keep 10 B-liner snappers. Then it also says you can keep 5 B-liners in addition to the 10 snappers, so what is it? There needs to be some clarification there as to the 10 snapper that I'm going to be allowed to keep per person. The thing that has killed our charter business – and I hear more and more people getting out of the business or selling boats or giving it up, because the person in New York can no longer justify coming down here. I've seen my business drop from 127 trips six years ago to 95 trips last year. They can't do the cost that we have to keep going up on price because the fuel costs have doubled in the last five or six years. Then you cannot survive by not passing that on to the customer; but some of them get discouraged and decide they just can't drive down here from New York and they've got to buy that \$4.00 a gallon fuel also.

It is driving us out of business and discouraging anybody from new boats getting in the business. I know somebody recently said they had gone from like 13 charterboats to about 5 over on the Morehead waterfront. I don't see anything that is going to make it get better, because the fisherman wants to take fish home. That is what he's coming here for. Everybody is not coming down here to take a picture of a marlin. They want to catch fish and go home with something to eat. The limits, creel limits, size limits and all this is discouraging that from attracting the customers down here.

MR. COX: I just had a question for you. I was surprised – you do a lot of snowy fishing out there; so what are you seeing out there?

MR. FREEMAN: Well, I try to. That is something – you know, comments were over here that a blueline tilefish assessment had been made. I don't know whether it is finalized or not. I don't know whether there is anybody else that is at this meeting today that targets blueline tilefish other than maybe some of the commercial guys, and I don't know that is happening. Who is being interviewed or where is the data? How are they collecting the data that is being used in these assessments? I have been at it 42 years out there, 30 years running charters. I commercial fished in 1981. Yes, there is some decline in what is out there, because you can't drop on a place like we did one trip. Three boats of us anchored up and in a day and a half pulled 7,000 pound of grouper off of a spot without moving the boat. I don't know where a place like that exists today, but we were catching 20- to 30-plus-year-old fish. They won't come back in the remainder of my lifetime, but there are a lot of snowy grouper and tilefish out there.

The fact that some of the fishermen are not being interviewed in these assessments, it really bothers me. I called Dr. Crabtree last January and this 523 snowy grouper limit is an absolute travesty. It is ridiculous. I asked him, I said “Who is catching these fish?” “We don’t know.” “How do you count them?” “We don’t know how.” But June the 6th, I think it was, they shut it down, so obviously somebody thought they were being caught. Quite honestly, if we had kept all of them that we were catching, we will catch more than that in half of our season. You go out there on a given day and catch 40 or 50 of them. It is just not that difficult. I’m talking about 4 or 5 hours of actual fishing time with hooks in the water. You have got to go where they live and know where they live. We’ve got some spots, we’ll log it down; primarily tilefish here, so that is where we’ll go fishing now. We still go out there in a short period of time and get our three tilefish per person limit. A lot of them like them. That is what they want to go for.

MR. COX: I agree. I know you do a lot of snowy fishing, so I appreciate your commenting on that. It sounds like that stock is doing better, and I hope that some time in the near future we’ll see some flexibility in those limits.

MR. FREEMAN: We need something besides what we’ve got. We can’t go out there and catch the blueline without killing some snowies. They are just not going to come up from the depths they come from and survive. That ought to be allowed in a creel limit of some sort, and no more of that one fish per boat per trip. We’ll go out two days, you can have one snowy grouper; it is ludicrous.

DR. DUVAL: Bobby, I know that part of the reason that – well, the reason that the law required shutting down the snowy fishery early this year was because the regulation is written that if the running average of the catch exceeds that ACL for two or more years in a row; that is what happened with the snowy grouper, because obviously with 523 fish; I mean, there are just too many boats that are going to be able to catch the fish to stay within that. I mean there is no way to stay within that number of fish. That is one of the things the council is struggling with. That is why they had to close it down, because according to the information that the agency had, the quota had been exceeded by 300 percent. There were 1,500 snowy grouper that had been caught. That is a reason that had to be shut down.

Then blueline tilefish, I know that quite a few of the charterboats north of Hatteras actually will target blueline when the tuna aren’t biting. Up there it is kind of usual, because those fish are found on muddy bottom. It is a little different than down here where you are finding them a little bit mixed up. The other thing that I learned from this past year because we have been seeing the recreational catches of blueline tilefish go up; and mostly everyone has been assuming that is a North Carolina fishery, but there were actually a lot more blueline tilefish caught in Florida last year; at least according to the information that National Marine Fisheries Service had. That is just some stuff for you to take back. I know it is not a satisfactory answer necessarily.

MR. FREEMAN: No it isn’t. Thanks for the comment. It doesn’t make me feel better, but I continue to be bothered by the fact; you know, I don’t like paperwork, but anybody targeting those fish, so that there is some data that would be for me believable, was that each of us to fill out a catch report. You went out there and you caught these things or whatever. I know I have sang this sad song before, but probably 15 or 20 years ago I was submitting catch data to St. Petersburg. The idea was – and it was I think charterboats catch data; king mackerel, Spanish mackerel and the whole gamut of what is being caught from North Carolina to the Keys. Some

months – and I would get a monthly report. Some months the snowy grouper would be included in there and other months it would not. I'm thinking, well, I'm going every month, why is the data not there? But I was told the fact that there were less than three people submitting data on that one species, they couldn't use it. Well, I would a whole lot rather they use that than some number that has been made up on the computer by somebody that has probably never caught a snowy grouper. That is the thing that just troubles me immensely.

DR. DUVAL: One of the things that the council has talked about is looking at a harvest tag program for species like snowy grouper where there is such a low limit on them. I am hopeful that we could get that ACL changed so that there is more fish for the recreational sector, but that was one of the things that we were looking at. Like you are saying, you get a tag you catch a fish. The council has looked at – it has kind of backed off on that a little bit, because there has been a lot of feedback from folks that are not interested in having a harvest tag program. They feel like it is a catch share and they are not interested in that. We're kind of in a tough place, because having a harvest tag program would actually allow us to have better information and you know exactly who is catching the fish.

One of the other things that have been brought up is having like a snapper grouper stamp. You can't go fish for those species unless you have that stamp for the charter, for the private angler, so that we would know who to interview for the information. If you don't have that stamp, you wouldn't be able to fish for them. Those are some of the things that have been tossed around to try to get at better data. I know some of the charterboat captains in the Gulf are very interested in having electronic reporting. Kind of like the headboats do now; you can report on your phone, you can report on your iPad, you can go back to your computer and just log it right in. That is something that we're looking at as well. Are there any thoughts on any of this?

MR. FREEMAN: Well, I don't have a smart phone, because I am not smart enough to run one of them. But, yes, I would not have a problem with submitting the catch data or whatever if I felt like it is used for a constructive mechanism or I can see they are going to shut the fishery down, and they can show me, all right, you caught this and somebody else somewhere else caught it. But when you start talking about – I think it is close to 1,000 miles of coastline from North Carolina border to Key West, and our limit is 523 fish. That is one fish per two miles; ludicrous. Some of these guys that hunt and you tell them, okay, there is one deer out there per two miles; I don't think you would sell many hunting licenses.

It just is a credibility thing with me that I still haven't bought into the data that is used to basically put us out of business is compiled from real results. Some of the stuff that came out of the Expert Snapper Grouper Council where after the meeting in Pooler, there were blocks put on the map that were never mentioned by the group that was from North Carolina that they are going to shut down and create MPAs that were never part of what was even discussed by the representatives on our meetings. Jack, if you remember it otherwise, you tell me so. But there was a minority review submitted, and I don't know where that is at.

Basically it says you invited us down here because we have the experience and knowledge in these fisheries. I've still got the paperwork. I was cleaning out my closet this week and came across it. I think there are about eight places that over the years I had caught a Kitty Mitchell, and I had those coordinates and shared them with them. We came up and, all right, we're going to draw a box around that and you can no longer fish there. There were three of those boxes, and

you had told me since that they are not going to be on there. What that would have done was shut down almost a 20-mile long section of the break off here. There was just about a half to one mile gap between some of the boxes, but basically we were going to lose 20 miles of our fishing area out here, which is the closest to the inlet. None of us strike out in the morning saying, well, we're going to get paid by mileage today so let's go to the farthest place we can find to fish. It doesn't work that way. We need to be able to get to the shortest distance, give them the most fishing time, the least cost to the operation to the boat.

MR. COX: Bobby, I would just like to say this. You guys keep in mind that we have – while you guys are here – that we have our visioning meetings starting in March. I don't know if we know the exact data yet, but the council is very interested in ways that you guys want to change the process and ways that we might be able to move forward. I'm excited for being on the council during this process, because the council really is interested in it. I will tell you that all the council members are looking forward to input just like you're saying here now. Just keep that in mind.

MR. FREEMAN: Hopefully, I'm going to be in warm places in March. It needs to be different than what it is at. From my perspective – and I realize everybody hasn't built a career, what little reputation I've got, on catching the snowy grouper and all this. The guys call me still now; they have talked to somebody that used to fish with me, hey, we want to go catch those grouper. Sorry, buddy, we can't do that any longer. Well, why can't you? It is costing us business every year.

DR. DUVAL: Well, Bobby again, and like Jack said; hopefully even if you're not able to participate in one of the port meetings; we're looking at like the third week of March or something. There is going to be a flier going out to all permit holders, charter/headboat, and commercial permit holders about this visioning process. There are other ways for you to provide exactly that kind of input. What are some of the ways to manage the fishery that the council hasn't considered? I would appreciate it.

MR. FREEMAN: I'll be checking e-mail, but I've got some gaps I'll be gone.

MR. LAWING: My name is Andy Lawing; I live here in Atlantic Beach. I have been fishing the area here out of Atlantic Beach since the early 1970's. I have a lot of experience in the for-hire industry, currently captain of a snapper grouper boat here out of Atlantic Beach as well. Amendment 29 concerning the triggerfish; a few things that I'm hearing; one is that the triggerfish are being targeted more. That tends to happen, yes, in the fall and the winter when the B-liners close. As a snapper grouper captain and doing this solely for a living, if B-liners are closed, then we are looking for something to catch. The reds are closed, all the groupers are closed. Getting the 500 pounds of the B-liners we got helped us a lot. Anything that we can get to extend our season is what we're looking for, especially in multiples to try to keep from having so much bycatch; catching triggerfish and throwing back red grouper because they are out of season. We're fishing 250 foot of water. If I throw one back, no matter how I treat him, chances are not real good he is going to survive; and the same thing with the pinkies, the silver snappers.

I would really like to see in the trip limit scenario that you guys are talking about the triggerfish; you hear a lot of talk about all of these small catches, 100 to 500 pounds. Out of 600 and some snapper grouper permits, I would say at least 400 of those are day trips, people that have other

jobs and come out a day here or a day there; unlike boats like me that are out for three or four days trying to make a living at this would really like to see 1,000 pounds. If at some point during the season we have to drop it back as we get to a 75 percent, similar to what we did with the snapper this year; but don't take us to the 500, because that kills us. Try to extend this as much as you can.

On Amendment 16, the black bass; as of January the 9th, 55 percent of the ACL has been caught so far this year. I would really like the council to consider letting some of the bass pot endorsees that were taken away get an opportunity to reenter that fishery. There are so few things that we can fish for in the wintertime. As you've heard already today, black bass is a good wintertime fishery. I hope the council does at least consider having some reinstatements in that fishery as well. Also, the opening of the black bass pots in the winter time; it is my understanding that the right whale here is pretty much within the 60-foot depth limit. Give us the space outside of the 60 feet. That is all I had to comment on.

MR. TROUT: I'm Cliff Trout; Sea Trout II. I wanted to say about the pot fishing; I am one of the ones that still has a pot license. I would like to see it come back in the winter, because that is our best time for fish potting. Thirty-two guys can't hurt it. The whales; I've never seen a whale get in a small rope like that. I don't think anybody else ever has. We have the breakaways; we've done just about everything you guys have asked. That is about it on that part. The poundage; a big boat can't make any money with the poundage. That is one thing about it. I am going to a smaller boat. I also work on the Nancy Lee. We throw more – I wanted to say something about the circle hooks. I know a lot of guys disagree with me, but I'm there everyday watching it. We're throwing more dead fish back than I have ever seen. The black sea bass swallow the hooks. You can't get them out with a dehooker. By the time you do get them out, you have pulled the gills out of them. Small grouper are definitely swallowing the hooks. We're throwing a lot of them back dead. The sharks are loving it. I don't know too much about what else you guys were going to talk about on the permits or anything like that; the snapper grouper permits. I'll wait until we have the meetings where we get to talk about that, what, about in another two or three months?

DR. DUVAL: Those are actually for mackerel permits. What the council is looking at is right now king mackerel and Spanish mackerel commercial permits. It is one permit for all of the South Atlantic and Gulf of Mexico. What we're trying to get some input on is how people would feel about if we separated those permits by regions. In other words, you would have a South Atlantic king mackerel commercial permit and a Gulf king mackerel commercial permit. The same for Spanish mackerel, you have a permit for the South Atlantic and then a permit for the Gulf. One of the things; mackerel are managed jointly between the South Atlantic Council and the Gulf of Mexico Council. Sometimes it is a little bit of an unhappy marriage where we kind of want to do one thing in the South Atlantic and the Gulf wants to do another thing; but we all have to agree on what that thing should be in order for any action to move forward.

We've had a bit of a tough time with some amendments that we looked at earlier this year. There was some interest in looking at ways to try to I think reduce some of the number of inactive permits in the king mackerel fishery on the Atlantic side. There was some concern about the stock and if everybody who had a mackerel permit fished for mackerel, it would really overrun the quota. There is a new stock assessment that just started in December of this year, so hopefully that will be done by the end of 2014. But that is what we're trying to get some input

on is the commercial mackerel permits, both king and Spanish. There are some folks, particularly in Florida who fish both Atlantic and Gulf Coast for king mackerel. They go back and forth, and that is pretty much exclusively what they do.

MR. TROUT: I'm from the Keys so I did fish there; originally I was there. Okay, there is no way that we can fish for king mackerel here like they do in the Keys. Instead of doing that, why don't you break it up by giving South Carolina/North Carolina one type of fishing for the king mackerel, and doing something down there to the south, too; because we can't fish, they leave. That's it. As far as getting rid of some of the people, like the snapper grouper guys, we put out light lines and stuff, and we need those king mackerel. That helps with the fuel bill and everything else. We don't get the poundage that they can get, and we can't get that here.

DR. DUVAL: That as one of the things that I brought up is that these permits are a tool in the toolbox for our fishermen up here. The mackerel kind of come and go up at this end of the range. You are not always using the same tool all the time. Finding a way to make sure that the full-time commercial fisherman who needs that tool has it available when they need it is really key if we're going to look at something like that.

MR. TROUT: Right; it has got to be, because you keep taking everything away from them. If you take one more thing away, there are a lot of fishermen that just can't make it anymore. Like tonight, there would be more fishermen here, but Justin's working and he had to work his job. I mean, these guys have to have jobs now. They can't fish anymore this time of year. We can't afford to have much more taken away than has already been taken away. Just like over at the other meeting, it was brought up about the color of your sea bass. In the summer sometimes they will get a little bit lighter. Some of the dealers don't want to give you the price for the sea bass. They will say, well, you didn't have them on ice or you didn't do this or you didn't do that. No, we treat them the same every time. But you take one more thing away, we're done. I mean there are a lot of guys that are done.

Now like I said, I've been working on the headboats and stuff so I really don't have a lot of say so on what is really going on right now. But now that I've retired off the headboats, I am going to be full-time fishing. Now I'm going to be a little more interested in it. I know from talking to Scott and Chuck and all of us; we need every fish we can get that we can sell. We can't give up much more. Ralph had a bad year with the red grouper and things like that; but grouper move and fish have tails, and they're going to move. A lot of people don't quite understand that either, especially if they're not around. They do move, but, yes, it is just we can't give anymore up. For the king mackerel guys, I do understand the way they are in Florida; but here you can't run the same king mackerel law here as you do in Florida. I've fished for king mackerel down there and I brought a lot of king mackerel in. As far as the Gulf, it is different there, too. I think that that would be an alternative to break the areas up to where this would be something for us to do.

MR. ROBERTSON: I'm Jimmy Robertson; I run the Renegade II. I have been running the same boat for 10 years, the same owners. I guess I will start with the sea bass. We used to do the sea bass trapping until the quotas came out; and we just did it when the B-liners and basically the wintertime. We would do snapper grouper during the summer. The wintertime fishery was great for us, but we no longer can do it. I am very lucky to still have our bass trapping endorsement; like Sonny and some of the other people that had theirs taken away. To my knowledge, I am one of three boats, which I guess was Tony Austin and Mr. Gaskill who is

sitting over here behind me. It really puts a damper in our fishery if we can't fish for it. I would just like to say with the bass; when they turn white, you open them up in July. That is the hottest month. It is great for recreational fishermen, they can go out and catch them, but it is not good for a commercial fisherman.

If anything, pots should be opened up during the wintertime, at least from October right on. We should have a chance to fish. There are plenty of fish out there. These right whales, we don't fish but 20, 25 traps. That is all I fish. I've never had an interaction with a right whale. I've never heard of any interaction with right whales at all. It is pretty sickening that you put out the fishermen from doing their jobs and being able to make the money during the winter months over something that there is no scientific data even happening. Usually we are within five or ten miles of our traps either way, if we do split them up that far. Therefore, when we've got our traps out, we're right there with them. We don't leave them out there, they come in with us. That is the law now. Even if there was right whales coming through, we would be right there with our traps.

We're fishermen, we ain't trying to kill the fishery, but we're being treated as so. It really says something that we're not trusted to even take care of a whale. We're not trying to kill whales; we're not trying to kill turtles. We pay for bass tags every year and yet we don't use them, because the quota had been shut down before we even come into October and November. This past year I started up, got all my gear ready and was ready to go. They closed it down. It was November 1st where you couldn't do any potting at all. But the recreational was still open with plenty of quota. It is a lot of money being spent for us not to be able to do anything. We still run the risk of losing our endorsement. The lady I work for, Ms. Hill, she is worried about it every day whether we're going to lose it, because I worry about it. We can't put enough quota on there. If you all decide to go back and take our permit when the quota is set up to where we can't even fish it no way.

She is getting calls now from people in Florida wanting to buy her permit. I guess that has got a lot to do with trying to extend the season on the potting. She can't believe how much they are trying to offer, but we ain't getting rid of our permit. We just want something done so we can fish and everybody else can fish during the winter months and keep the fishery going, and we can make money during the wintertime. The tunas don't come in here so much that we can just – that is a gamble every time. But it is also a gamble we've got here making our money and then the season opens up for trawlers up north. They catch a boatload of bycatch, which drops our price, which does no good for anybody. We would love to see something done with that. I've got a lot to say I just don't know how to say it.

I also want to talk about the American red snapper. They should be at least a bycatch, some kind of bycatch. Every place you stop on, it ain't one type fish that is on that spot. If you stop there, you are going to catch a variety of fish. This summer we caught a lot. We stay away from the 8 and 900s up north; because the American snappers are so thick up there you can't catch a B-liner. You can't catch a jack; you can't catch a triggerfish or grouper because the snappers, they eat you alive. We ain't talking about small snappers either. These fish are 10, 12 pounds on up to 40 pounds. We're farmers of the sea. We don't like to see 30, 40 pound snappers float away because we can't keep them, and they don't live. You can deflate them, try to swim them and do all you can; it is just too much for the fish. That is just like going out there snowy fishing. You can't let snowy go out there.

Even if you vent them and everything, they just ain't going to make it to the bottom. I really think something needs to be done. We need a bycatch; I don't care if it is 100 or 200 pound bycatch. Something would be better than nothing is what we're getting right now. Also talking about in July, I think it was June of this year there were no more catching of the almaco jacks and no more triggerfish. Now evidently the ACL was set so low that it was caught up beforehand; but when you put split seasons on stuff and you put a quota on B-liners, and once those B-liners are caught up, there is nothing else for a fisherman to catch but go out there and target jacks, target triggers. That ain't a lot for us guys up here to North Carolina, because our weather is bad. We don't get to go out there and do that.

But those big boats down south and the guys get better weather in Florida; they are able to go out and they catch up all the quota. Come July when the B-liners, vermilion snappers open up for us to catch them, we're not allowed to catch the triggerfish or the almaco, so where does that leave us? We catch these B-liners and we're throwing over almaco, we're throwing over red snappers, we're throwing over triggerfish because we are not allowed to keep them. The ACL was set so low that it is being caught up. It really needs a split season, but it also needs more quota. There is no sense of catching fish and having to throw other fish back and not be able to keep them. If anything, we need a certain quota for each fish; 1,000 pound of triggerfish a trip along with 1,000 pound of B-liners and you give us – I don't know what is going on with the snowy groupers, I was hearing you guys talk about the 520 fish for the year. What is that?

DR. DUVAL: That is actually the recreational quota.

MR. ROBERTSON: It's the recreational? How is the commercial this year?

DR. DUVAL: The commercial quota is like 84,000 pounds and that was caught up – do you remember when that closed commercially?

MR. COX: It was sometime early summer, it seems like. If I remember right, it was summer, but I don't know exactly.

DR. DUVAL: I would have to go back and look online to see exactly when snowy grouper closed commercially, but they are back open now.

MR. ROBERTSON: I believe that was closed in June where we wasn't able to catch them all summer too, right? The same thing, because you've got the guys down south that go out and they targeted the tilefish and they targeted the snowy groupers. Come June and July there is no catching for them. Even the recreational guys can't go out and catch snowy groupers. You are going to catch your tilefish. You are allowed to catch your tilefish but you can't catch the snowies. When you can fish the deeper waters – sometimes the water is too cold inshore for us up here; we go to the deeper water and try to catch snowies, tilefish, B-liners. If we can't catch either, we're throwing a lot over and then you are just killing fish. You ain't helping the fishery at all. I understand what you are trying to do.

We are all trying to make this fishery last and we also want to make a living and make money; but we don't want to kill fish. That just makes less fish for us to make money on. I also understand there was a grouper quota left for the red grouper and scamps, and I see you all did take the gags off of that. I know that is closed down. I don't see why there ain't a bycatch on

that right along through the season, if there is plenty of quota left on that, why it should be shut down and taken away from us. The start of the B-liner season is January. I've caught four red grouper already. That was on small hooks. I wasn't even fishing for them. I don't think I caught that many during the summertime.

I want to talk about the size limit on triggerfish. You've already got a quota. If you are going to set up a quota system for 1,000 pounds or whatever it is a trip, I wouldn't suggest anything under 1,000 pounds because it is just ridiculous. There are plenty out there. The ACL was already set too low. A 12-inch size limit on triggerfish, any fishermen should know 12 inch is too small and they should be throwing it over. I understand you all want to put a quota on something, but you want to put a size limit. A size limit isn't going to help. If you've got a quota, it should be catch him, he is selling. It might not be that much, but it is better than throwing that fish back over and letting him die. To me you are just putting too much on it. You are just giving the marine fisheries man a right to come down here and start measuring out triggerfish to give you a ticket. As wide as a triggerfish is, 12 inches is a small triggerfish. Everybody should be throwing them over anyway. But a triggerfish is a hard thing to vent; they've got hard tough skin. It is hard to save them without stabbing them with a knife or something. You ain't sticking a needle through that hide.

MR. COX: Jimmy, let me ask you a question. When you are out in that deeper water, do you feel like your triggers are going back down if you do throw any of those back?

MR. ROBERTSON: Some of them are lively. If they are not all blown up when they come in, they will swim away. As far as venting them and throwing them over, I don't know, you are probably 50/50 on that. I just think it is better to have a little quota and catch what you catch. Once you catch that, that is it. Everybody should have enough commonsense in mind to know when they are getting close to that certain number and start staying away from them. But this summer it was ridiculous. You couldn't catch the triggerfish; you could not get away from them. Since it was closed, you all opened it up for the three weeks; I believe we got eight days of fishing; that was a 500 pound B-liner limits each trip that the triggerfish were open. We didn't get but eight days of fishing. But there are two guys in the back just like me; we had 50 to 55 boxes of fish in eight days of fishing. The fish were there, they had been biting, and we have been throwing them over all year long. The stock is there; we just need more. We need cooperation to get more. We don't mind helping you all out but we like to have our back rubbed, too. Thank you, I appreciate your time.

MR. DAVIS: While we're on this sea bass situation, I would like to see the bag limit raised from five to ten on the recreational part being they have come back so strong. If you go out on a half a day trip and catch five sea bass, you haven't got much to take home with you. I would like to see it be raised to ten if there is any possible way. Thank you.

MR. McPHERSON: My name is Ron McPherson; I'm a recreational fisherman turned charter captain. I've been fishing this area since the late fifties off and on. I finally got to retire down here about 10 years ago and set up my business. Now I do inshore charters. Just a few comments; I guess the one that is nearest and dearest to my heart is the black bass. I really appreciate the fact that you paid attention to the stock assessment. I'm glad that you got a stock assessment, and I'm glad that we are not having a closure this winter. That is very helpful. I would like for you to keep in mind that it wasn't but maybe four or five years ago when we could

keep 15 per person per day. I would very much like to see the 5 per person per day go up to 10 and see how the stock fares. If it doesn't seem to be hurting the stock, then at some later date, after we get our 10 and use that for a couple years, then maybe we go back to 15, which is where we were, what, five years ago I think, before somebody got all upset about the number of black bass that were out there.

I don't really think there was ever a problem. I think there were just problems. I don't think there was a problem with the fish; I think there was a problem with the data. Please let's get back to at least 10 per person per day. On the gray triggerfish, there was conversation about setting a bag limit of five recreationally and a 12-inch fork length size. I don't really have a problem with the 12 inches; in fact I'm not sure I would even keep a 12-inch one. You don't get that much meat off of a 12-inch fish. The five bag limit, I have a problem with that. I guess my question is has there been a stock assessment done on triggers?

DR. DUVAL: Last year there was a stock assessment that was started at the same time that they started the stock assessment for blueline tilefish. Unfortunately, they ran into some problems with the aging data. There were discrepancies. You use spines to age triggerfish, and they are very hard to read and there was a discrepancy between the two labs that were reading the spines. That is such important information for a stock assessment; it determines growth curves and natural mortality and things like that. They said, all right, we need to call a halt to this and start all over again. They are going to restart the gray triggerfish stock assessment. In August of this year is when the data workshop is going to be held. The council had some measures in Regulatory Amendment 14.

You might recall that was one that had a whole bunch of different sort of size, season, bag limit measures in there. We had some things on gray triggerfish like this measurement/size limit thing, and took them out because the stock assessment was going on. We figured we would wait until the stock assessment was done. Well, then we didn't have the stock assessment and then there has been some concern from the advisory panel and some other members of the public that triggerfish were really getting hammered and that maybe we needed to go ahead and put in place a minimum size limit and a trip limit in the interim, because the stock assessment won't be finished until sometime late in 2015. That is a very long answer to your question, but that is kind of where things stand right now.

MR. McPHERSON: Is this the one that the lady in the room next door was explaining; it is kind of a new system to look at determining how many pounds you can allocate? What are they calling it?

DR. DUVAL: The ORCS approach?

MR. McPHERSON: Yes, the ORCS.

DR. DUVAL: That is what has been used so far to set the total ACL for triggerfish right now, because we don't have a stock assessment. Once we have a stock assessment, they will look at basing the ACL on that stock assessment.

MR. McPHERSON: Okay. But I think she also said that the council didn't really want to proceed with setting a quota without a stock assessment. In other words, you all wanted to see a

stock assessment, but you were pushed into this ORCS or whatever you call it by fishermen who wanted to see some numbers, some quotas, right?

DR. DUVAL: The council is not pushed into the use of the ORCS approach, because that would be used for a whole bunch of species for which we only have landings' information. We don't necessarily have any other data, so that is kind of separate. I think maybe she was just referring to the fact that we included these gray triggerfish measures in this amendment that is also talking about using that other approach to set quotas, because there was concern from fishermen about the state of gray triggerfish, and that maybe we did need to do so something like at least impose a minimum size limit or something like that.

MR. McPHERSON: Okay, have the commercial landings gone down in the last couple years that would indicate that there is a problem with gray triggers?

DR. DUVAL: No, the gray triggerfish commercial ACL has been caught up the past few years early.

(Remark made off the record)

MR. McPHERSON: Okay, so from a commercial standpoint and the number of landings that you're doing commercially, it doesn't indicate that there is a problem with triggers, right?

(Remark made off the record)

MR. McPHERSON: How do you feel about the stock assessments that are being done these days; do you have confidence in them?

(Remark made off the record)

MR. COX: (Turned on microphone at this point) – where it is on triggerfish; and so Myra is answering those questions. I think it would probably do you some good to listen in on that as well on why some of the ACLs are set to were we have them now.

MR. McPHERSON: I listened to her and I saw the gyrations, the numbers that you have to go through with the multipliers and the percentages and all this stuff. I guess my concern is do we really need to do this? Do we really need to – if there is not a problem with our gray triggers, then why go through all these gyrations and have these quotas if it is not an issue, if they are not being overfished?

DR. DUVAL: We don't know that.

MR. McPHERSON: I guess my point is if it ain't broke, why do we need to try to fix it?

DR. DUVAL: Which part are you talking about? Are you talking about a minimum size limit, are you talking about a bag limit, are you talking about a trip limit?

MR. McPHERSON: I'm talking about the system that she went through over there that gave the poundage, and actually the poundage was going to go up slightly for gray triggers, but it is not a stock assessment. It is a scheme for figuring out something that you don't know the answer to.

DR. DUVAL: That is because the law requires that the council have an annual catch limit for every species. So what we're trying to do is –

MR. McPHERSON: Oh, hell, we're still fighting that; aren't we?

DR. DUVAL: That is why there are a number of different methodologies that the council's Scientific and Statistical Committee has looked at for species like gray triggerfish where we don't have a stock assessment. The method that Myra was talking about next door is for those species where we're like, okay, we have landings information and we feel like we have pretty good confidence in those landings; so how do you set it? The Scientific and Statistical Committee has previously used things like I think the third highest landings during a time span. They've used like the median, sort of what is the middle of the whole landing stream. This is a new method that has been used in other parts of the country to try to set these quotas, because the law requires it for those species that we don't have a stock assessment for.

Gray triggerfish is kind of in this weird middle place where we have a stock assessment that is coming up. We thought we were going to have one by now. Then as you maybe heard some of the commercial fishermen earlier talk about the fact that gray triggerfish have opened January 1st, and people have just kind of fished on the quota until it was gone; but people are catching triggerfish and B-liners at the same time, so they would really kind of like to see those species open at the same time; and for the commercial sector we have a split season for the B-liners. There is some desire on the part of at least a lot of the commercial guys to have a split season for triggerfish where it would match up with B-liners; so that when one is open, so is the other so that they are having to throw less fish back. When triggerfish closed early and folks were out B-liner fishing in the fall, triggerfish were closed so they were having to throw back so many triggerfish. That is a long answer to your question, but that is sort of how we got to where we are right now.

MR. McPHERSON: But for me the real answer is the – I can't remember the name of the law that we're operating under.

DR. DUVAL: The Magnuson Act.

MR. McPHERSON: The Magnuson Act that is so screwed up – well, it is, it is just screwed up. We could have made this a lot shorter conversation if I had realized that at the beginning, because I have run into that before. Until we can get that law changed, which I don't know if we'll ever live long enough to do that but we need to try. The other comment I would have is I was in Kari's presentation. We were talking about king mackerel, Spanish mackerel, and the fact that on the Spanish mackerel the commercial fishermen are catching more than their quota. I think the year before last it was 117 percent and last year it was 128 percent.

But the recreational did not catch their quota, so the two together didn't overrun so the commercial didn't have to pay anything back. One solution to this, that I guess it was part of your presentation, was that at some point in the year, let's say halfway through the year or two-

thirds of the way through the year, you run up the numbers that the recreational have caught, and if it doesn't appear that they are going to catch their quota, and the commercial have already caught their quota; you shift some of the quota over to the commercial during the year so that they don't overrun. In the recreational it doesn't look like in her presentation there were 10, 12 years and the recreational never caught 100 percent of theirs; so just give some of those to the commercial; and then when the new year rolls around, it all resets back to 55/45. It makes a lot of sense. I'm not 100 percent sure why we have to do that, but it would probably look better if the commercial won't overrun it. The point is if you move it over there, if you move it from the recreational to the commercial and you are not overrunning anyhow, does it really make a lot of difference? I'm not sure, but maybe you know why.

DR. DUVAL: Well, it really only makes a difference if there is a payback for that overage that is required. The council has – and that is called an accountability measure when you try to make sure that you are not overrunning your quota. The council has sort of a smorgasbord of accountability measures for its species where payback is only required if the total ACL, commercial and recreational combined, is exceeded and the stock is overfished. I think for black sea bass a payback is required no matter what the status of the stock. One of the things I think we're trying to do is sort of try to make all of our accountability measures consistent. But you are right, overall it really doesn't matter unless there is a payback required for that overage.

MR. McPHERSON: But if that will make the bean counters happy, then slide it around and keep the bean counters happy; because if they ain't happy, nobody is happy. I've also got some concerns – and this will be the last thing and I'll shut up – about the black bass pot fishermen and this right whale business. It seems so unfair to those pot fishermen that they can't get out and use their pots, because it is such an efficient, clean fishery. I mean it is like – Jack, is there any bycatch? Do you ever catch small bass in those pots?

MR. COX: Ron, we do, but we increased the size limit on the panels so a lot of those fish swim through the traps; but, no, it is a very clean fishery.

MR. McPHERSON: Yes, and it makes sense that you ought to be able to do that, to take fish, because it is not just about us. It is about the people that the commercial guys are feeding upstate and Kansas City or wherever. That is critical, and somehow we really need to come up with a better way to give those guys or gals – I don't know there may be some women in the fishery too. Sorry, but I think of it as a guy thing – a place to set their pots where they can catch black bass and not be worried about these whales. It is kind of amazing to me that all of the thousands and thousands of lobster pots that are in the water off of New England; I don't know that they are having to pull theirs out for this period of time when the right whales are coming through, do they?

MR. COX: No; and I'll say this Ronnie. I appreciate you being a recreational fisherman and understanding that we do need to catch those fish and provide those fish to the consumer. It is something that I didn't hear any comment on. But I would like to say it as you being a recreational guy; when I sea bass potted, I always liked that winter fishery, because we didn't interact with you guys that like to go out there on those pretty days and have to worry about our gear in things that you might be doing. Thank you.

MR. McPHERSON: It is a really good way to catch a fish and not have any bycatch, which keeps my buddy Chris back in the back there happy. You pull the pot up and there it is, and it is probably 95 percent of them are fine, they are the right size. I guess my comment is I don't know how we do this but maybe the mapping that showed coordinates on it that would say that the pot guys could go outside of that is the way to do it. I'm not sure how far that would push them out. It sounded like they would have to go out at least as far as Big 10, Little 10 or maybe further. I don't know where your best pot fishing is. It is important that we open it up so those guys can go out there and catch some fish. It is just so hard for a commercial guy to make a living in the wintertime, and that is one way he can do it. Thank you very much for listening to my comments.

Thank you for having it on Atlantic Beach instead of New Bern. This is Ron McPherson; and I am back for a second helping. Just one more thing that I thought of in the hall when I was out there talking to Chris; I think it is important – and this is sort of an overall comment – like on the black bass fishermen, the potters that didn't have enough poundage on their sales slips, they lost their license. I think as long as a person is willing to pay the fee to keep the license alive, you should never take it away from him. Because, if the guy has got six options of ways to catch fish and this year he uses Number 1 and Number 2 for whatever reason; the next year he uses Number 3 and 4, and then the next year he uses 5 and 6; well, he probably didn't make any poundage on 1 and 2 those last two years; but if he is willing to pay the license fee, then let him keep his license, because that leaves his options open so that he can go catch a fish and make a living. Don't take it away from him. That happens a lot. It has happened time after time after time. Sonny mentioned it next door. He had two boats that had a pot license and he started bluefin tuna fishing; and he didn't have any poundage and so he lost those licenses. It is not right.

MR. COX: I've got a question for you. That particular year that they started looking at reducing that, the sea bass fishery was caught in 45 days of fishing for that whole season, and they were trying to figure out a way to lengthen the season. There were somewhere around 50 sea bass potters that were catching about 85 percent of the ACL. How would you fairly distribute those bass tags to the folks? My question to you is what would you do? I am with you, because I am one of the guys that lost that fishery. How would you fairly keep people in the fishery, but at the same time extend the season?

MR. McPHERSON: The thing that comes to mind first that I don't like are catch shares; but I don't like catch shares. That doesn't work; at least it doesn't work for me.

DR. DUVAL: One of the options that some people have suggested is right now people who have that black sea bass pot endorsement can have a maximum of 35 pots. One suggestion has been, well, maybe you have a second type of endorsement to bring some of those folks back into the fishery that lost their ability to use pots, but you limit the number of pots that they can have to like 10 or 15 or something like that.

It is not as many, because like Jack said the concern from the council at the time as that the entire quota was being caught up in 45 days and then the next season it lasted like two months or something like that. Again, this was implemented before we had the new stock assessment and the quota doubled. That was just one of the examples of something that could be done, almost like a Level 2 endorsement or something like that for sea bass pots.

MR. McPHERSON: It sounds like a way to let people back in. That would make Sonny happy, because he was only running like 15 pots. I don't know if you can make enough money to make it worthwhile at that number.

MR. COX: There are guys that are making a living on it with 5 pots. But, anyway, yes, it makes you think on how hard the council's job is. When you've got those things and you've got to figure out a way to keep folks fishing and to limit participation; it is hard.

MR. McPHERSON: But I still think there ought to be a way to not take a license away from a guy if he's got it. I'm not sure; I'm not smart enough to know the answer.

MR. COX: Well, with the king mackerel the council decided not to do that; because they were looking at ways to limit participation in the king mackerel fishery, because there were so many permits; but they voted against that one. Everybody kept their permit that had it.

MR. McPHERSON: Then that is a good thing, because those are very expensive permits, if I remember right, \$10,000.

MR. COX: King mackerel permits are about four to \$6,000 is what they are selling for. Today a sea bass endorsement would cost you about \$30,000.

(Whereupon, the public hearing was adjourned.)

Transcribed By:
Graham Transcriptions, Inc.
January 2014



SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL
 4055 FABER PLACE DRIVE, SUITE 201
 NORTH CHARLESTON, SOUTH CAROLINA 29405

PUBLIC COMMENT ATTENDANCE RECORD

Public Hearing and Scoping

LOCATION OF MEETING (CITY & STATE)

Atlantic Beach, NC

DATE OF MEETING

January 22, 2014

YOUR NAME (PLEASE PRINT)

John Hedley

TELEPHONE NUMBER (& AREA CODE)

MAILING ADDRESS (PLEASE INCLUDE STREET OR BOX NO., CITY, STATE, & ZIP CODE)

125 Briar Patch Dr.

EMAIL ADDRESS

john.hedley@ncdenr.gov

BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE)

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TO MAKE A STATEMENT

Snapper Grouper Amendment 29 (ORCS & Triggerfish)

Mackerel Framework Amendment 1 (Spanish Mackerel)

Snapper Grouper Reg Amendment 16 (bsb pots)

Mackerel Amendment 24 (allocations)

Mackerel Amendment 26 (permits)



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Public Hearing and Scoping

LOCATION OF MEETING (CITY & STATE)

Atlantic Beach, NC

DATE OF MEETING

January 22, 2014

YOUR NAME (PLEASE PRINT)

WELLS BARKER

TELEPHONE NUMBER (& AREA CODE)

252-728-5637

MAILING ADDRESS (PLEASE INCLUDE STREET OR BOX NO., CITY, STATE, & ZIP CODE)

1857 Hwy 101 BEAUFORT, N.C. 28516

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wbarker1@ec.vr.com

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TO MAKE A STATEMENT

Snapper Grouper Amendment 29 (ORCS & Triggerfish)

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Public Hearing and Scoping

LOCATION OF MEETING (CITY & STATE) Atlantic Beach, NC		DATE OF MEETING January 22, 2014
YOUR NAME (PLEASE PRINT) David Tucker		TELEPHONE NUMBER (& AREA CODE)
MAILING ADDRESS (PLEASE INCLUDE STREET OR BOX NO., CITY, STATE, & ZIP CODE) 2010 Bridges Street. Morehead City, NC 28557		
EMAIL ADDRESS blueoceannc@gmail.com		
BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE) Blue Ocean market		
CHECK IF YOU WISH TO MAKE A STATEMENT		For Scoping:
For Public Hearing: <input checked="" type="checkbox"/> Snapper Grouper Amendment 29 (ORCS & Triggerfish) <input type="checkbox"/> Mackerel Framework Amendment 1 (Spanish Mackerel)		<input type="checkbox"/> Snapper Grouper Reg Amendment 16 (bsb pots) <input type="checkbox"/> Mackerel Amendment 24 (allocations) <input type="checkbox"/> Mackerel Amendment 26 (permits)



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YOUR NAME (PLEASE PRINT) Dunnie Smith		TELEPHONE NUMBER (& AREA CODE) 252 838-1001
MAILING ADDRESS (PLEASE INCLUDE STREET OR BOX NO., CITY, STATE, & ZIP CODE) 4900 Merrimon Rd Beaufort NC		
EMAIL ADDRESS		
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LOCATION OF MEETING (CITY & STATE)

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YOUR NAME (PLEASE PRINT)

DON HESSELMAN

TELEPHONE NUMBER (& AREA CODE)

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NC DMF

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LOCATION OF MEETING (CITY & STATE)

Atlantic Beach, NC

DATE OF MEETING

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YOUR NAME (PLEASE PRINT)

James Holden

TELEPHONE NUMBER (& AREA CODE)

252 646-4609

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103 mandy lane moreheadcity N.C.

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BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE)

Comm. fish

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LOCATION OF MEETING (CITY & STATE)

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DATE OF MEETING

January 22, 2014

YOUR NAME (PLEASE PRINT)

Randy Greary

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NCDMF

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Snapper Grouper Amendment 29 (ORCS & Triggerfish)

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LOCATION OF MEETING (CITY & STATE)

Atlantic Beach, NC

DATE OF MEETING

January 22, 2014

YOUR NAME (PLEASE PRINT)

Elbert C. Gaskill

TELEPHONE NUMBER (& AREA CODE)

252-728-2089

MAILING ADDRESS (PLEASE INCLUDE STREET OR BOX NO., CITY, STATE, & ZIP CODE)

565 Bayview Dr Harbor Island NC 28531

EMAIL ADDRESS

BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE)

Commercial Fishing

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TO MAKE A STATEMENT

Snapper Grouper Amendment 29 (ORCS & Triggerfish)

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LOCATION OF MEETING (CITY & STATE) Atlantic Beach, NC	DATE OF MEETING January 22, 2014
YOUR NAME (PLEASE PRINT) Jessica Lewis	TELEPHONE NUMBER (& AREA CODE)
MAILING ADDRESS (PLEASE INCLUDE STREET OR BOX NO., CITY, STATE, & ZIP CODE) 613 Pine St., Beaufort, NC 28516	
EMAIL ADDRESS j.olivia.lewis@gmail.com	
BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE)	
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LOCATION OF MEETING (CITY & STATE) Atlantic Beach, NC	DATE OF MEETING January 22, 2014
YOUR NAME (PLEASE PRINT) Jennell Gould	TELEPHONE NUMBER (& AREA CODE) 252-342-8322
MAILING ADDRESS (PLEASE INCLUDE STREET OR BOX NO., CITY, STATE, & ZIP CODE) P.O. Box 174 Morehead City, NC 28557	
EMAIL ADDRESS lgould@ec.nc.com	
BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE) Carolina Headboats, Inc.	
CHECK IF YOU WISH TO MAKE A STATEMENT	<p><u>For Public Hearing:</u></p> <input checked="" type="checkbox"/> Snapper Grouper Amendment 29 (ORCS & Triggerfish) <input checked="" type="checkbox"/> Mackerel Framework Amendment 1 (Spanish Mackerel)
	<p><u>For Scoping:</u></p> <input checked="" type="checkbox"/> Snapper Grouper Reg Amendment 16 (bsb pots) <input checked="" type="checkbox"/> Mackerel Amendment 24 (allocations) <input checked="" type="checkbox"/> Mackerel Amendment 26 (permits)



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LOCATION OF MEETING (CITY & STATE) Atlantic Beach, NC	DATE OF MEETING January 22, 2014		
YOUR NAME (PLEASE PRINT) Krista Shipley	TELEPHONE NUMBER (& AREA CODE)		
MAILING ADDRESS (PLEASE INCLUDE STREET OR BOX NO., CITY, STATE, & ZIP CODE) 117A Circle Dr, Beaufort, NC 28516			
EMAIL ADDRESS Kas92@duke.edu			
BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE) _____			
CHECK IF YOU WISH TO MAKE A STATEMENT <table border="0" style="width: 100%;"> <tr> <td style="text-align: center;"> For Public Hearing: <input type="checkbox"/> Snapper Grouper Amendment 29 (ORCS & Triggerfish) <input type="checkbox"/> Mackerel Framework Amendment 1 (Spanish Mackerel) </td> <td style="text-align: center;"> For Scoping: <input type="checkbox"/> Snapper Grouper Reg Amendment 16 (bsb pots) <input type="checkbox"/> Mackerel Amendment 24 (allocations) <input type="checkbox"/> Mackerel Amendment 26 (permits) </td> </tr> </table>		For Public Hearing: <input type="checkbox"/> Snapper Grouper Amendment 29 (ORCS & Triggerfish) <input type="checkbox"/> Mackerel Framework Amendment 1 (Spanish Mackerel)	For Scoping: <input type="checkbox"/> Snapper Grouper Reg Amendment 16 (bsb pots) <input type="checkbox"/> Mackerel Amendment 24 (allocations) <input type="checkbox"/> Mackerel Amendment 26 (permits)
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LOCATION OF MEETING (CITY & STATE) Atlantic Beach, NC	DATE OF MEETING January 22, 2014		
YOUR NAME (PLEASE PRINT) Joanna Marrufo	TELEPHONE NUMBER (& AREA CODE) 626-347-7757		
MAILING ADDRESS (PLEASE INCLUDE STREET OR BOX NO., CITY, STATE, & ZIP CODE) 919 Leonita St. Baldwin Park, CA 91706			
EMAIL ADDRESS JOANNA MARRUFO@gmail.com			
BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE) _____			
CHECK IF YOU WISH TO MAKE A STATEMENT <table border="0" style="width: 100%;"> <tr> <td style="text-align: center;"> For Public Hearing: <input type="checkbox"/> Snapper Grouper Amendment 29 (ORCS & Triggerfish) <input type="checkbox"/> Mackerel Framework Amendment 1 (Spanish Mackerel) </td> <td style="text-align: center;"> For Scoping: <input type="checkbox"/> Snapper Grouper Reg Amendment 16 (bsb pots) <input type="checkbox"/> Mackerel Amendment 24 (allocations) <input type="checkbox"/> Mackerel Amendment 26 (permits) </td> </tr> </table>		For Public Hearing: <input type="checkbox"/> Snapper Grouper Amendment 29 (ORCS & Triggerfish) <input type="checkbox"/> Mackerel Framework Amendment 1 (Spanish Mackerel)	For Scoping: <input type="checkbox"/> Snapper Grouper Reg Amendment 16 (bsb pots) <input type="checkbox"/> Mackerel Amendment 24 (allocations) <input type="checkbox"/> Mackerel Amendment 26 (permits)
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LOCATION OF MEETING (CITY & STATE) Atlantic Beach, NC	DATE OF MEETING January 22, 2014
YOUR NAME (PLEASE PRINT) <i>Viles Muller</i>	TELEPHONE NUMBER (& AREA CODE) <i>757 513 1432</i>
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EMAIL ADDRESS <i>mmn69@duke.edu</i>	
BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE)	
CHECK IF YOU WISH TO MAKE A STATEMENT	
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LOCATION OF MEETING (CITY & STATE) Atlantic Beach, NC	DATE OF MEETING January 22, 2014
YOUR NAME (PLEASE PRINT) <i>Jessica Bonamusa</i>	TELEPHONE NUMBER (& AREA CODE)
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EMAIL ADDRESS <i>jmb122@duke.edu</i>	
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YOUR NAME (PLEASE PRINT) Jennifer Imm	TELEPHONE NUMBER (& AREA CODE)
MAILING ADDRESS (PLEASE INCLUDE STREET OR BOX NO., CITY, STATE, & ZIP CODE)	
EMAIL ADDRESS jennifer.imm@duke.edu	
BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE) XXXXXX	
CHECK IF YOU WISH TO MAKE A STATEMENT	<p><u>For Public Hearing:</u></p> <input type="checkbox"/> Snapper Grouper Amendment 29 (ORCS & Triggerfish) <input type="checkbox"/> Mackerel Framework Amendment 1 (Spanish Mackerel)
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LOCATION OF MEETING (CITY & STATE) Atlantic Beach, NC	DATE OF MEETING January 22, 2014
YOUR NAME (PLEASE PRINT) DYLAN RAY	TELEPHONE NUMBER (& AREA CODE) 252 241 0148
MAILING ADDRESS (PLEASE INCLUDE STREET OR BOX NO., CITY, STATE, & ZIP CODE) 110 SUNSHINE CT, BEAUFORT, NC, 28516	
EMAIL ADDRESS DYLAN@THENEWSTIMES.COM	
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CHECK IF YOU WISH TO MAKE A STATEMENT	<p><u>For Public Hearing:</u></p> <input type="checkbox"/> Snapper Grouper Amendment 29 (ORCS & Triggerfish) <input type="checkbox"/> Mackerel Framework Amendment 1 (Spanish Mackerel)
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Public Hearing and Scoping

LOCATION OF MEETING (CITY & STATE) Atlantic Beach, NC	DATE OF MEETING January 22, 2014
YOUR NAME (PLEASE PRINT) Caitlin Hamer	TELEPHONE NUMBER (& AREA CODE) (252) 504-7631
MAILING ADDRESS (PLEASE INCLUDE STREET OR BOX NO., CITY, STATE, & ZIP CODE) 135 Duke Marine Lab Rd, Beaufort NC 28516	
EMAIL ADDRESS caitlin.hamer@duke.edu	
BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE) Fisheries Leadership & Sustainability Forum	
CHECK IF YOU WISH TO MAKE A STATEMENT	
<input type="checkbox"/> For Public Hearing: <input type="checkbox"/> Snapper Grouper Amendment 29 (ORCS & Triggerfish) <input type="checkbox"/> Mackerel Framework Amendment 1 (Spanish Mackerel)	<input type="checkbox"/> For Scoping: <input type="checkbox"/> Snapper Grouper Reg Amendment 16 (bsb pots) <input type="checkbox"/> Mackerel Amendment 24 (allocations) <input type="checkbox"/> Mackerel Amendment 26 (permits)



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LOCATION OF MEETING (CITY & STATE) Atlantic Beach, NC	DATE OF MEETING January 22, 2014
YOUR NAME (PLEASE PRINT) MIKE ORBACH	TELEPHONE NUMBER (& AREA CODE)
MAILING ADDRESS (PLEASE INCLUDE STREET OR BOX NO., CITY, STATE, & ZIP CODE) DUKE MARINE LAB, 135 DUKE MARINE LAB RD, BEAUFORT, NC 28516	
EMAIL ADDRESS MYOR@DUKE.EDU	
BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE) DUKE UNIV.	
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LOCATION OF MEETING (CITY & STATE) Atlantic Beach, NC	DATE OF MEETING January 22, 2014
YOUR NAME (PLEASE PRINT) R.R. (Ron) McPherson	TELEPHONE NUMBER (& AREA CODE) 252 723 6616
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EMAIL ADDRESS RRMCP221@earthlink.net	
BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE) Highlander Charters LLC	
CHECK IF YOU WISH TO MAKE A STATEMENT	<p>For Public Hearing:</p> <input checked="" type="checkbox"/> Snapper Grouper Amendment 29 (ORCS & Triggerfish) <input checked="" type="checkbox"/> Mackerel Framework Amendment 1 (Spanish Mackerel)
	<p>For Scoping:</p> <input checked="" type="checkbox"/> Snapper Grouper Reg Amendment 16 (bsb pots) <input checked="" type="checkbox"/> Mackerel Amendment 24 (allocations) <input type="checkbox"/> Mackerel Amendment 26 (permits)



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PUBLIC COMMENT ATTENDANCE RECORD

Public Hearing and Scoping

LOCATION OF MEETING (CITY & STATE) Atlantic Beach Atlantic Beach, NC	DATE OF MEETING January 22, 2014
YOUR NAME (PLEASE PRINT) Jimmy Robertson	TELEPHONE NUMBER (& AREA CODE) 252-515-4632
MAILING ADDRESS (PLEASE INCLUDE STREET OR BOX NO., CITY, STATE, & ZIP CODE) 111 Oyster Ct Beaufort N.C 28516	
EMAIL ADDRESS	
BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE)	
CHECK IF YOU WISH TO MAKE A STATEMENT	<p>For Public Hearing:</p> <input type="checkbox"/> Snapper Grouper Amendment 29 (ORCS & Triggerfish) <input type="checkbox"/> Mackerel Framework Amendment 1 (Spanish Mackerel)
	<p>For Scoping:</p> <input type="checkbox"/> Snapper Grouper Reg Amendment 16 (bsb pots) <input type="checkbox"/> Mackerel Amendment 24 (allocations) <input type="checkbox"/> Mackerel Amendment 26 (permits)



SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL
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LOCATION OF MEETING (CITY & STATE) Atlantic Beach, NC	DATE OF MEETING January 22, 2014
YOUR NAME (PLEASE PRINT) Jess Hawkins	TELEPHONE NUMBER (& AREA CODE)
MAILING ADDRESS (PLEASE INCLUDE STREET OR BOX NO., CITY, STATE, & ZIP CODE) 112 Hodges Street Morehead City NC 28557	
EMAIL ADDRESS j.hawkins@ec.nc.com	
BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE) N/A	
CHECK IF YOU WISH TO MAKE A STATEMENT	<p><u>For Public Hearing:</u></p> <input checked="" type="checkbox"/> Snapper Grouper Amendment 29 (ORCS & Triggerfish) <input checked="" type="checkbox"/> Mackerel Framework Amendment 1 (Spanish Mackerel)
	<p><u>For Scoping:</u></p> <input checked="" type="checkbox"/> Snapper Grouper Reg Amendment 16 (bsb pots) <input checked="" type="checkbox"/> Mackerel Amendment 24 (allocations) <input checked="" type="checkbox"/> Mackerel Amendment 26 (permits)



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LOCATION OF MEETING (CITY & STATE) Atlantic Beach, NC	DATE OF MEETING January 22, 2014
YOUR NAME (PLEASE PRINT) Clifford Trout	TELEPHONE NUMBER (& AREA CODE) 252 393-7253
MAILING ADDRESS (PLEASE INCLUDE STREET OR BOX NO., CITY, STATE, & ZIP CODE) 311 Dolphin St Cape Carteret NC 28584	
EMAIL ADDRESS	
BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE) Sea Trout II	
CHECK IF YOU WISH TO MAKE A STATEMENT	<p><u>For Public Hearing:</u></p> <input checked="" type="checkbox"/> Snapper Grouper Amendment 29 (ORCS & Triggerfish) <input type="checkbox"/> Mackerel Framework Amendment 1 (Spanish Mackerel)
	<p><u>For Scoping:</u></p> <input checked="" type="checkbox"/> Snapper Grouper Reg Amendment 16 (bsb pots) <input type="checkbox"/> Mackerel Amendment 24 (allocations) <input type="checkbox"/> Mackerel Amendment 26 (permits)



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LOCATION OF MEETING (CITY & STATE) Atlantic Beach, NC	DATE OF MEETING January 22, 2014
YOUR NAME (PLEASE PRINT) Andy Lawing	TELEPHONE NUMBER (& AREA CODE)
MAILING ADDRESS (PLEASE INCLUDE STREET OR BOX NO., CITY, STATE, & ZIP CODE) 217 Moonlight Dr Atlantic Beach NC 28512	
EMAIL ADDRESS Lawingenterprises@ec.nc.com	
BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE) Fishing Vessel Sea Cat	
CHECK IF YOU WISH TO MAKE A STATEMENT	For Scoping:
<input checked="" type="checkbox"/> Snapper Grouper Amendment 29 (ORCS & Triggerfish) <input type="checkbox"/> Mackerel Framework Amendment 1 (Spanish Mackerel)	<input checked="" type="checkbox"/> Snapper Grouper Reg Amendment 16 (bsb pots) <input type="checkbox"/> Mackerel Amendment 24 (allocations) <input type="checkbox"/> Mackerel Amendment 26 (permits)



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LOCATION OF MEETING (CITY & STATE) Atlantic Beach, NC	DATE OF MEETING January 22, 2014
YOUR NAME (PLEASE PRINT) ROBERT FREEMAN	TELEPHONE NUMBER (& AREA CODE) 252 726 9814
MAILING ADDRESS (PLEASE INCLUDE STREET OR BOX NO., CITY, STATE, & ZIP CODE) 221 SALTST. ATLANTIC BEACH, N.C. 28512	
EMAIL ADDRESS SUNRISE@COASTALNET.COM	
BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE) SUNRISE CHARTERS	
CHECK IF YOU WISH TO MAKE A STATEMENT	For Scoping:
<input checked="" type="checkbox"/> Snapper Grouper Amendment 29 (ORCS & Triggerfish) <input type="checkbox"/> Mackerel Framework Amendment 1 (Spanish Mackerel)	<input type="checkbox"/> Snapper Grouper Reg Amendment 16 (bsb pots) <input type="checkbox"/> Mackerel Amendment 24 (allocations) <input type="checkbox"/> Mackerel Amendment 26 (permits)



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LOCATION OF MEETING (CITY & STATE) Atlantic Beach, NC		DATE OF MEETING January 22, 2014
YOUR NAME (PLEASE PRINT) Brian Moore		TELEPHONE NUMBER (& AREA CODE) 252 342-4387
MAILING ADDRESS (PLEASE INCLUDE STREET OR BOX NO., CITY, STATE, & ZIP CODE) 104 Eudora Dr Newport NC 28570		
EMAIL ADDRESS		
BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE) Crysal Coast Fishery		
CHECK IF YOU WISH TO MAKE A STATEMENT		For Scoping:
<input checked="" type="checkbox"/> For Public Hearing: <input checked="" type="checkbox"/> Snapper Grouper Amendment 29 (ORCS & Triggerfish) <input type="checkbox"/> Mackerel Framework Amendment 1 (Spanish Mackerel)		<input type="checkbox"/> Snapper Grouper Reg Amendment 16 (bsb pots) <input type="checkbox"/> Mackerel Amendment 24 (allocations) <input type="checkbox"/> Mackerel Amendment 26 (permits)



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LOCATION OF MEETING (CITY & STATE) Atlantic Beach, NC		DATE OF MEETING January 22, 2014
YOUR NAME (PLEASE PRINT) Sandra Gastill		TELEPHONE NUMBER (& AREA CODE) 252-728-2089
MAILING ADDRESS (PLEASE INCLUDE STREET OR BOX NO., CITY, STATE, & ZIP CODE) 567 Bayview Dr		
EMAIL ADDRESS Hatter Island NC 28531		
BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE) Commercial Fisherman		
CHECK IF YOU WISH TO MAKE A STATEMENT		For Scoping:
<input type="checkbox"/> For Public Hearing: <input type="checkbox"/> Snapper Grouper Amendment 29 (ORCS & Triggerfish) <input type="checkbox"/> Mackerel Framework Amendment 1 (Spanish Mackerel)		<input checked="" type="checkbox"/> Snapper Grouper Reg Amendment 16 (bsb pots) <input type="checkbox"/> Mackerel Amendment 24 (allocations) <input type="checkbox"/> Mackerel Amendment 26 (permits)



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LOCATION OF MEETING (CITY & STATE) Atlantic Beach, NC		DATE OF MEETING January 22, 2014
YOUR NAME (PLEASE PRINT) <i>Chairs McCortney</i>		TELEPHONE NUMBER (& AREA CODE)
MAILING ADDRESS (PLEASE INCLUDE STREET OR BOX NO., CITY, STATE, & ZIP CODE) <i>110 S/W 1st ST Mccortney NC 28557</i>		
EMAIL ADDRESS		
BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE)		
CHECK IF YOU WISH TO MAKE A STATEMENT		For Scoping:
For Public Hearing: <input checked="" type="checkbox"/> Snapper Grouper Amendment 29 (ORCS & Triggerfish) <input type="checkbox"/> Mackerel Framework Amendment 1 (Spanish Mackerel)		<input checked="" type="checkbox"/> Snapper Grouper Reg Amendment 16 (bsb pots) <input type="checkbox"/> Mackerel Amendment 24 (allocations) <input type="checkbox"/> Mackerel Amendment 26 (permits)



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LOCATION OF MEETING (CITY & STATE) Atlantic Beach, NC		DATE OF MEETING January 22, 2014
YOUR NAME (PLEASE PRINT) <i>Tom Burgess</i>		TELEPHONE NUMBER (& AREA CODE)
MAILING ADDRESS (PLEASE INCLUDE STREET OR BOX NO., CITY, STATE, & ZIP CODE)		
EMAIL ADDRESS		
BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE)		
CHECK IF YOU WISH TO MAKE A STATEMENT		For Scoping:
For Public Hearing: <input type="checkbox"/> Snapper Grouper Amendment 29 (ORCS & Triggerfish) <input type="checkbox"/> Mackerel Framework Amendment 1 (Spanish Mackerel)		<input type="checkbox"/> Snapper Grouper Reg Amendment 16 (bsb pots) <input type="checkbox"/> Mackerel Amendment 24 (allocations) <input type="checkbox"/> Mackerel Amendment 26 (permits)



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PUBLIC COMMENT ATTENDANCE RECORD

Public Hearing and Scoping

LOCATION OF MEETING (CITY & STATE)

Atlantic Beach, NC

DATE OF MEETING

January 22, 2014

YOUR NAME (PLEASE PRINT)

SONNY DAVIS

TELEPHONE NUMBER (& AREA CODE)

726-4675

MAILING ADDRESS (PLEASE INCLUDE STREET OR BOX NO., CITY, STATE, & ZIP CODE)

P.O. Box 3013 Atlantic Beach N.C.

EMAIL ADDRESS

BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE)

Capt. Stacy IV + III INC.

CHECK IF YOU WISH TO MAKE A STATEMENT

For Public Hearing:

Snapper Grouper Amendment 29 (ORCS & Triggerfish)

Mackerel Framework Amendment 1 (Spanish Mackerel)

For Scoping:

Snapper Grouper Reg Amendment 16 (bsb pots)

Mackerel Amendment 24 (allocations)

Mackerel Amendment 26 (permits)

**PUBLIC HEARING
COCOA BEACH, FLORIDA
DOUBLETREE BY HILTON
JANUARY 28, 2014**

MR. HUDSON: Thank you, Mr. Chairman and Council Member John Jolley. Rusty Hudson; representing the East Coast Fisheries Section of the Southeastern Fisheries Association. Today I've have brought five written comments that East Coast Fisheries Section Board affirmed. If there are any further needs for changes, we'll do that with a February 3rd date. Right now consider these final unless some changes come up. As I also mentioned, several of the folks are going to be showing up in Jacksonville tomorrow, who are either fishing today or whatever; having to do other work so they couldn't make it here. The first thing I would like to comment on is Snapper Grouper Regulatory Amendment 16; the removal of the black sea bass pot fishery closure. In our desire for proposed action to modify the annual November 1st to April 30th prohibition, we choose Alternative 4; the black sea bass pot closure applies only in the designated right whale critical habitat in the South Atlantic Region. We feel that is preferable.

We have a very difficult time with revised Alternative 5 and the new Alternative 6 since they are using the idea of a 25 meter depth, which equals greater than 82 feet of depth. For the benefit of fishermen, any protected resources references to depth should be done also in feet and/or fathoms so that they can better understand it as opposed to meters. Even if they went to less than 20 meters, that would still be just under 66 foot. As you know, we have a lot of shelf area that extends far offshore of our region that is in the 60 to 80 something foot range. We like the idea of doing lat/long coordinates from the shore to the current eastern boundary of the right whale critical habitat. The last thing that we would like to emphasize about this is that we would like to see the council and National Marine Fisheries Service work as rapidly as possible, so that we do not lose two seasons; because right now we are going to completely lose this season for the black sea bass pots from November 1st through the April 30th. From some of what I have heard with the environmental impact statement, that could wind up dragging things along.

I know that they haven't reviewed Revised Alternative 5 and new Alternative 6 as thoroughly as they would like. You have copies of that in front of you. The other public hearing document is the Coastal Migratory Pelagics Fishery Management Plan Framework Amendment 1. We support the South Atlantic Preferred Alternative 2 to Action 1 with regards to the increased ABC and ACL and ACT in reference to the current levels. We appreciate that the Scientific and Statistical Committee wound up making some modifications that actually benefitted the fishermen. With regards to Action 2, the Gulf of Mexico will not even be meeting until next month in Texas. We felt like at this time we will reserve any further comment on that particular action until a future public hearing if that is part of the process for the secretary when we get those answers.

On scoping documents, the first one I'll start with is the Coastal Migratory Pelagics Amendment 24, which has to do with reviewing the allocations for the Atlantic migratory group Spanish mackerel and the Gulf migratory group king mackerel. As you know, I had participated with others at the data workshop for king mackerel recently in December. The fact that it looks like we're going to have a scientifically verified change to the mixing zones so that it will be 100 percent Atlantic king mackerel north of the Dade/Monroe County line; and that it will be a mixing zone from there south and west and all the way to the Tortugas, which will be a 50/50,

then anything else from north of Tortugas on west to Texas will from now on be 100 percent Gulf; and we support that potential change. I don't know how long it will take the council to pull it off, but we have made some suggestions for Atlantic Spanish mackerel migratory stock. It appears that a slight commercial percentage increase of between 5 and 10 percent could be done to change the 55/45 allocation due to the inability of the recreational to really focus on their fish for the last decade, plus.

Then with the king mackerel the same situation is going, although we don't have numbers broke out as per the current mixing zones, which could have been useful, too, since it is a scoping document, it is something that we might be able to see later; but the idea of increasing significantly the commercial percentage to 18 percent for that area, for what we term the Gulf migratory group that actually makes up a lot of our mixing zone currently; that 18 percent would make for a 50/50 split and still leave plenty of fish to land for the recreational sector. With the next scoping document, Coastal Migratory Pelagics 26, which deals with the idea of separating the commercial permits for both Spanish mackerel and king mackerel into a South Atlantic and a Gulf of Mexico Council permits; a lot of the king mackerel participants in particular on this side of the world have been very supportive of that change.

The scientific justification of the mixing zone changes I have included in this comment towards the end. I am not certain how it should work, but there should be the caveat that we've included here that any people that have commercial landings in both the Gulf and the South Atlantic Council regions should continue to be able to hold both permits. I am not certain what kind of control dates would be utilized, but usually the fresher the control dates the better. We want to keep as many fishermen fishing as we can simply because there are not many of us left supplying food for our consumers.

The last scoping document is the – and I hope I have this right – Snapper Grouper Amendment 29 with regards to the setting the new ACLs based on the ABCs using the new Level 4 approach; we are very supportive of all three or all of the council's preferred alternatives for the ORCS, because it definitely seems to benefit the fishermen. The only thing that was missing from this document, and I was told it could be included in a later document, was a breakdown of the commercial and recreational allocation percentages, which is actually currently found in the Comprehensive ACL Amendment. I didn't bother to go to that much trouble to try to determine who gets what. With that said, we are very supportive of all of the council's choices up through Preferred Subalternative 4A.

Then when we get into Action 3, modify the measurement method for gray triggerfish and establish a size limit; we have been fishing under a size limit offshore of the state waters of Florida's east coast for gray triggerfish for many years; no one else has. At the same time, we don't like regulatory discards and we would like to have seen an option that would have included the minimum size of 12-inch total length that is currently in place off of the east Florida EEZ; and then be able to also recognize that is equal to 10.46 or roughly 10.5 inch fork length. Then that alternative should have been made available for the entire council region. That way we would have been able to harmonize everybody, both in Florida state water east coast as well as from Florida's EEZ federal waters all the way up to North Carolina.

Action 4; establish a commercial split season; none of the East Coast Fishery Section Board seem to be satisfied with that idea. We would like to just stay with the calendar year. We do

recognize that under the increased quota that would come from the ORCS for gray triggerfish that there is a slight increase; but at the same time some folks at times have to focus on triggerfish, because of other closures like grouper, for example. Although I personally recognize that 40 percent of the gray triggerfish landings came in the first half of the year and 60 percent in the second half of the year; we went ahead and chose your Subalternative 2B, 1,000 pounds, as the preferred from East Coast Fishery Section for commercial trip limit with no step-downs. Until we can see that the Science Center can count their beans, we are just not trusting where we're at this moment with the electronic reporting. Furthermore, looking at the commercial and recreational landings updates, we feel like the Science Center appears to be running about a month behind. That is causing us some concerns, because we don't want to see massive overages especially in any kind of situation that could cause us to see some kind of takeaway as a result. With that said; that is pretty much my comments on behalf of the group. You will actually get to see some of their faces tomorrow. I was hoping somebody would show up today besides me, but thank you very much.

MR. HARTIG: Thank you Rusty. It has been several months now since the black sea bass pot fishery has closed. Have you looked at the landings of black sea bass recently so we can know how many?

MR. HUDSON: The last time was 52 percent or thereabouts, so we are going to wind up leaving quit a few unless, of course, somebody can really start banging them with a hook-and-line rack gear approach like you and I spoke about.

MR. HARTIG: That is really not going to happen to any large extent, at least based on my fishing of that species. It is just there is so much bycatch. The traps were good because they were able to selectively let the small animals out. The hook and line; the animals don't seem to segregate very well by size even going to the deepest water. I have a lot of discards. To me there is a cost of doing business with your discards. It is a fishery of last resort. It is the last thing I am going to be doing, because I just don't like to have that many discards. I don't know if it is the same up and down the coast. I would be interested to know the Carolina guys' perspective and what they're seeing. For us it is a mixed fishery all the way to 300 feet.

MR. HUDSON: With gray triggerfish?

MR. HARTIG: No; with black sea bass.

MR. HUDSON: With the gray triggerfish bycatch that went with some of the black sea bass pots, I have heard 100, 150 pounds on the 1,000 pound of black sea bass sometimes, and they make a great fish sandwich at that size. Jimmy will probably emphasize that because of his restaurant situation. One thing that we are concerned about and I don't know – having got away from the straight hooks; I know I hear a lot of folks talking about wanting circle hooks removed so they can go back to straight hooks, but I believe that gets you into another gray area with other fish. I just know that unless they are using the very smallest circle hook possible, because of the leathery skin they have some issues. You may have more harm be imparted on the gray triggerfish if they wind up having to discard under – like I have heard them wanting to push for like 14-inch fork lengths and stuff like that. You could wind up having some serious throwback, because based on the analysis I saw we're looking at 22 to 28 percent of our recreational guys off of the east coast of Florida that have normally been able to fish within that 12-inch total length.

If you went to 14- or 12-inch fork length, you are going to wind up having a whole lot more regulatory discards coming from that big user group. We would like to minimize those types of things.

If people are interested in releasing fish, they need to do it in the best method possible. Some of that may involve better equipment than using a pair of pliers to remove a hook or other types of things. There are solutions to it. And, of course, gray triggerfish are very hardy unlike some other fish that usually swim back. I was real happy to see the state of Florida just the other day announce the removal of the venting tool in the Gulf state waters. I had serious issues with the harm that was being caused not only to the fish, but also to people that would be accidentally on the wrong end of one of those needle strikes. With that said, the state of Florida did step up in that same announcement and make a good comment about descenders and stuff. I think that there are a lot of good tools coming down the pike in the future.

MR. HARTIG: Yes; one of the interesting comments that Myra had mentioned yesterday from some of the fishermen up to the north is that when we switched to circle hooks for gray triggers, we pretty much took the smaller animals out of the equation, because their mouth morphology at that size is small enough where they are not going to be hooked readily and very often. There is no way to account for that in the assessment or anything, but it will be accounted for in the survival of the stock over time. What we've seen, at least recently in the last couple years with the closures, this year in particular must have had a big year class come in as well; but the fishery just took off when it was reopened. There were incredible numbers of nice big gray triggers again. There are some things working there with that circle hook that could give us dividends as well.

MR. HUDSON: Agreed; I've been a circle hook proponent since 1980. They work really great. In fact, sometimes I would be fishing for the grouper with a big circle hook. I would take the sanding line, instead of cutting it, I would feed it back through and put in the smallest tuna circle hook on there. It would actually hold sows and black bellies, too, which I thought was really cool. As far as the fact that the hook-and-line guys are using those circle hooks; I believe that it has, as you said, benefited in some fashion the smaller animals in those regions. I know that our guys have seen a lot of bigger triggerfish using hook and line, but once you get to that – I think it was like a 13 inch or something like maybe fork length, the maximum that you would see get in a black sea bass pot.

But you are going to have a couple of the local experts here, and I assume that some of the North Carolina guys weighed in already much to the same. The main thing is being able to just have a sustainable stock and the science, of course. As you and I both know, the triggerfish got kind of nixed because of aging issues from SEDAR 32 and is now going to be part of the package, at least tentatively, with Red Snapper SEDAR 41. I am hoping that Panama City Lab can help open our eyes a little bit as to what kind of animals, aging and depths and stuff that was causing this concern in the first place. At that point, we'll know what kind of maybe – we might even see another increase for triggerfish could happen a couple years from now. Thank you. Got any questions, John?

MR. JOLLEY: Thanks, Rusty, I don't have any. I was glad to hear your comment on the new descending devices, though. Do you know any of the boys that are starting to bring them on board and use them on the boats yet?

MR. HUDSON: Well, some of these FWC trips, I think that they wanted to do some testing with some of that. I know we got some CRPs in place, and it would be great to be able to do that with this deepwater CRP, if indeed we get picked for it. That is something that I think was going to be worked through Marcel and SEFIS and the cooperative boats and stuff. I don't know where that is at right now. But the Sequalizer, when you see that descender that Gary Graham gave to me last June; then I made that available on Jimmy's boat, The Sea Lover; yes, they like these better mousetraps. I encourage any of that kind of work that we can do with our state and federal people and be able to get people educated. You know like I know historically whether you find some new mousetrap through the commercial or the recreational components; when one sees the benefits of it, they go and they embrace it. That is one of the things I really like about the private and the for-hire recreational is the fact that they do believe in that stuff.

In fact the 2012 Fisheries of the United States Document that just came out late last year had on Page 1 at the bottom left that 63 percent of all of the recreational-caught fish are released. That is a pretty strong statement for wanting to leave the animal in the best condition possible. We'll see how that goes for the education in the future, because you're doing a lot of that, too, with that MREP; that educational program. I've seen a lot of enthusiasm about that. It sounds to me like your visioning port meetings that are going to be coming up soon – as soon as I can get those dates, I can get that into the Version 3 of the calendar of events for everybody and get some people to show up and express their views.

MR. HARTIG: It sounds good Rusty; thank you very much.

(Whereupon, the public hearing was adjourned.)

Transcribed By:
Graham Transcriptions, Inc.
January 2014



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 4055 FABER PLACE DRIVE, SUITE 201
 NORTH CHARLESTON, SOUTH CAROLINA 29405

PUBLIC COMMENT ATTENDANCE RECORD

Public Hearing and Scoping

LOCATION OF MEETING (CITY & STATE) DATE OF MEETING
 Cocoa Beach, FL January 28, 2014

YOUR NAME (PLEASE PRINT) TELEPHONE NUMBER (& AREA CODE)

Barrett Colby

MAILING ADDRESS (PLEASE INCLUDE STREET OR BOX NO., CITY, STATE, & ZIP CODE)

1950 N TROPICAL TR MERRITT ISLAND FL 32953

EMAIL ADDRESS

BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE)

CHECK IF YOU WISH TO MAKE A STATEMENT For Public Hearing:

- Snapper Grouper Amendment 29 (ORCS & Triggerfish)
 Mackerel Framework Amendment 1 (Spanish Mackerel)

For Scoping:

- Snapper Grouper Reg Amendment 16 (bsb pots)
 Mackerel Amendment 24 (allocations)
 Mackerel Amendment 26 (permits)



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LOCATION OF MEETING (CITY & STATE) DATE OF MEETING
 Cocoa Beach, FL January 28, 2014

YOUR NAME (PLEASE PRINT) TELEPHONE NUMBER (& AREA CODE)

Michael Merrifield

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BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE)

Cape Canaveral Shrimpto

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Public Hearing and Scoping

LOCATION OF MEETING (CITY & STATE) Cocoa Beach, FL	DATE OF MEETING January 28, 2014
YOUR NAME (PLEASE PRINT) Ron Skelly	TELEPHONE NUMBER (& AREA CODE) 561-262-2766
MAILING ADDRESS (PLEASE INCLUDE STREET OR BOX NO., CITY, STATE, & ZIP CODE) 107 Duval St. Melb Beach FL 32951	
EMAIL ADDRESS _____	
BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE) Comm. Fisherman	
CHECK IF YOU WISH TO MAKE A STATEMENT	For Scoping:
<input type="checkbox"/> Snapper Grouper Amendment 29 (ORCS & Triggerfish)	<input type="checkbox"/> Snapper Grouper Reg Amendment 16 (bsb pots)
<input type="checkbox"/> Mackerel Framework Amendment 1 (Spanish Mackerel)	<input type="checkbox"/> Mackerel Amendment 24 (allocations)
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LOCATION OF MEETING (CITY & STATE) Cocoa Beach, FL	DATE OF MEETING January 28, 2014
YOUR NAME (PLEASE PRINT) DON COHRON	TELEPHONE NUMBER (& AREA CODE) 1-321-729-6290
MAILING ADDRESS (PLEASE INCLUDE STREET OR BOX NO., CITY, STATE, & ZIP CODE) 251 DEVLIN CT. SE. PALM BAY FL. 32909	
EMAIL ADDRESS _____	
BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE) _____	

CHECK IF YOU WISH TO MAKE A STATEMENT	For Public Hearing:	For Scoping:
<input type="checkbox"/> Snapper Grouper Amendment 29 (ORCS & Triggerfish)		<input type="checkbox"/> Snapper Grouper Reg Amendment 16 (bsb pots)
<input type="checkbox"/> Mackerel Framework Amendment 1 (Spanish Mackerel)		<input checked="" type="checkbox"/> Mackerel Amendment 24 (allocations)
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SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL
 4055 FABER PLACE DRIVE, SUITE 201
 NORTH CHARLESTON, SOUTH CAROLINA 29405

PUBLIC COMMENT ATTENDANCE RECORD

Public Hearing and Scoping

LOCATION OF MEETING (CITY & STATE) Cocoa Beach, FL		DATE OF MEETING January 28, 2014
YOUR NAME (PLEASE PRINT) James Turner		TELEPHONE NUMBER (& AREA CODE) 321-505-6317
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BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE)		
CHECK IF YOU WISH TO MAKE A STATEMENT		
For Public Hearing: <input type="checkbox"/> Snapper Grouper Amendment 29 (ORCS & Triggerfish) <input type="checkbox"/> Mackerel Framework Amendment 1 (Spanish Mackerel)		For Scoping: <input type="checkbox"/> Snapper Grouper Reg Amendment 16 (bsb pots) <input checked="" type="checkbox"/> Mackerel Amendment 24 (allocations) <input checked="" type="checkbox"/> Mackerel Amendment 26 (permits)



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YOUR NAME (PLEASE PRINT) Mason Bowen		TELEPHONE NUMBER (& AREA CODE) 772 410 0037
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BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE)		
CHECK IF YOU WISH TO MAKE A STATEMENT		
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LOCATION OF MEETING (CITY & STATE) Cocoa Beach, FL	DATE OF MEETING January 28, 2014
YOUR NAME (PLEASE PRINT) Michael Sappe	TELEPHONE NUMBER (& AREA CODE) 561-310-5287
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CHECK IF YOU WISH TO MAKE A STATEMENT	<p><u>For Public Hearing:</u></p> <p><input type="checkbox"/> Snapper Grouper Amendment 29 (ORCS & Triggerfish)</p> <p><input type="checkbox"/> Mackerel Framework Amendment 1 (Spanish Mackerel)</p> <p><u>For Scoping:</u></p> <p><input type="checkbox"/> Snapper Grouper Reg Amendment 16 (bsb pots)</p> <p><input checked="" type="checkbox"/> Mackerel Amendment 24 (allocations)</p> <p><input checked="" type="checkbox"/> Mackerel Amendment 26 (permits)</p>



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YOUR NAME (PLEASE PRINT) Keith Bowen	TELEPHONE NUMBER (& AREA CODE)
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CHECK IF YOU WISH TO MAKE A STATEMENT	<p><u>For Public Hearing:</u></p> <p><input type="checkbox"/> Snapper Grouper Amendment 29 (ORCS & Triggerfish)</p> <p><input type="checkbox"/> Mackerel Framework Amendment 1 (Spanish Mackerel)</p> <p><u>For Scoping:</u></p> <p><input type="checkbox"/> Snapper Grouper Reg Amendment 16 (bsb pots)</p> <p><input type="checkbox"/> Mackerel Amendment 24 (allocations)</p> <p><input type="checkbox"/> Mackerel Amendment 26 (permits)</p>



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Cocoa Beach, FL

DATE OF MEETING

January 28, 2014

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For Public Hearing:

For Scoping:

TO MAKE A STATEMENT

Snapper Grouper Amendment 29 (ORCS & Triggerfish)

Mackerel Framework Amendment 1 (Spanish Mackerel)

Snapper Grouper Reg Amendment 16 (bsb pots)

Mackerel Amendment 24 (allocations)

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LOCATION OF MEETING (CITY & STATE)

Cocoa Beach, FL

DATE OF MEETING

January 28, 2014

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SPA East Coast Fisheries Section

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For Public Hearing:

For Scoping:

TO MAKE A STATEMENT

Snapper Grouper Amendment 29 (ORCS & Triggerfish)

Mackerel Framework Amendment 1 (Spanish Mackerel)

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LOCATION OF MEETING (CITY & STATE)

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Florida Sport Fishing Association

CHECK IF YOU WISH TO MAKE A STATEMENT For Public Hearing:

- Snapper Grouper Amendment 29 (ORCS & Triggerfish)
- Mackerel Framework Amendment 1 (Spanish Mackerel)

For Scoping:

- Snapper Grouper Reg Amendment 16 (bsb pots)
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DATE OF MEETING

January 28, 2014

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Cocoa Beach, FL

DATE OF MEETING

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YOUR NAME (PLEASE PRINT)

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**PUBLIC HEARING
WYNDHAM JACKSONVILLE RIVERWALK
JACKSONVILLE, FLORIDA
JANUARY 29, 2014**

MR. GRUBBS: David Grubbs; commercial fisherman; Capped Off is the name of my boat. On Amendment 16, I like Action 1, Alternative 4 where the closure only applies in the designated right whale critical habitat area. Then on Amendment 29, on Action 1 go with the Alternative 2. On Action 2, Alternative 2 and Subalternative 2B; on Action 3, I like Alternative 1. Then on Action 4 for the gray triggerfish, a split season would be okay, but either way that it works out. On Action 5, I would like to keep the trip limit around 1,000 pounds if we can make that work; and I could still live with 500 I think if the 1,000 didn't work out. I wanted to bring up one thing about the vermilion landings, too, and the counting of the fish. I've been hearing on an e-mail today that we're already at 25 percent of the vermilion quota.

It seems to me, unless I don't really know what is going on with it, there is a lot of rough weather we've been having; and it is hard to believe they are catching that much. I mean I've fished a few times this month. I have a smaller boat. It just seems like it is being caught up awful quick with the weather that we had. I just wondered about the accountability for the counting of that and how that could be addressed as to how it is being counted, if it is being estimated or it is really being counted. We had a good week of fishing this week with the weather. We were able to get out a few times; and they haven't even counted these fish. It sounds like the quota is going to be caught up pretty quick even with the reduction in the trip limit. It seems like it is happening awful fast. I would just like to address that. Thank you.

MR. HANCOCK: My name is Tony Hancock; I'm a commercial fisherman; captain of the fishing vessel Number One. My home port is Mayport, but we fish up and down the coast up into Georgia, South Carolina, and North Carolina. I am also a board member on the Council for Sustainable Fisheries. I would like to reiterate the positions taken in a letter that we have written to Chairman Hartig there. I would also like to suggest that I know there is an assessment currently underway for red grouper. I would like to suggest you guys maybe take a look at doing something preemptive on that. They seem to be in pretty short supply to me. I also would like to suggest that in the future when you guys are doing the presentations that you could possibly do the data sampling size on the MRIPS just to let us know how many people are being interviewed for these things. It would probably help to give us a little bit of confidence in your numbers when you are giving them out. That is pretty much all I've got. Thanks.

MR. HEVERIN: My name is Shawn Heverin; I am also a board member with the Council of Sustainable Fisheries along with Tony. I have a couple boats here in Jacksonville, a commercial fisherman. I want to talk about Amendment 29 with the triggerfish. I am in favor of – for Action 2, talking about the bar jacks, I am with Preferred Subalternative 2B. I've been looking at this data here and I have it all confused now. Also in Action 4, talking about that one, I like the two seasons; the one that starts in January and then the other one that starts in July. The co-occurring species with B-Liners; when we're B-Liner fishing we catch a lot of triggerfish, as you know. Last year, for instance, in July when the second B-liner season opened up, I think the triggerfish were only opened for like a week or two before they closed. We are constantly throwing back probably an estimated five to ten boxes a trip of triggerfish while we're B-liner fishing. That continued all the way through I think the fall when you guys opened up triggerfish

for I think it was like a week or two. I think it was you had some overage in the calculation. I like the two seasons there that you would have with that action.

Also, talking about – I think you've got a trip limit. I'm okay with the ten boxes. I think five boxes would help keep it open a lot longer, especially all the way through September, October, and November when we're out there actually catching a ton of triggerfish. I think in your data you said that the highest landings over the course of the 12 months occurred in those months. I think it was August, September, October and November were the highest catches of triggerfish. I'm in favor of trying to keep the season open as long as we can. If we have to do trip limits, that is fine. With Action 3 or is it 2 talking about the size limits on triggerfish; is that Action 2 with the size limits of triggerfish? Okay, anyway, I'm okay with having the size limit universal throughout the southeast at 12 inches for North Carolina, South Carolina, Georgia and Florida. If you guys did go up to 14 inches, I wouldn't prefer that, but I would be okay with that because the yield on the smaller triggerfish is pretty small. If you have a restaurant or retail dealer paying a pretty high price for triggerfish and getting a small yield, it doesn't really benefit them that much.

The other species that you guys have that you are talking about putting the ABCs on; I like the alternative with the – I think it is risk tolerance scalar of 0.8 that has the highest amount for commercial fishermen. If you see on there that is the biggest difference, so we'll have the most amount of ABC that we can keep each year. I don't even think we'll even hit a lot of these ABCs each year, but it will be nice to have that as a cushion in case we do target one species over the other in a given year. Talking about the black sea bass pots; I am for the fishery being opened in the wintertime. I don't have a sea bass pot endorsement, but I don't think that the interaction between right whales and sea bass pots would really occur, especially with no data to back that up; so I'm okay with the sea bass pots in the wintertime. That's all I've got.

MR. HARTIG: Shawn, do you actually ever make trips to target black sea bass commercially in a part of your reef fish plan?

MR. HEVERIN: This year we went out there to kind of double up on our B-liners, to go out there and try to target sea bass on the way in. If we went out there and got our B-liners in like two or three days, on the way in we would stop about 10 miles closer from where we were B-liner fishing and try to get like a box or two of sea bass to go along with the B-liners. But I think it was closed up until June 15th of this year; is that right?

MR. HARTIG: I can't remember when it reopened.

MR. HEVERIN: I thought it was closed up until June 15th of this year when they did open it. Usually the best sea bass fishing in this area occurs during the colder months; but we haven't made a trip specific just for sea bass in our area. The prices that we get in Mayport aren't high enough to really justify going out there and trying to target them.

MR. HARTIG: I appreciate that. The interesting thing is you mentioned trying to somehow balance a trip limit of triggers to coincide with how long the vermilion season is going to be opened, because that dynamic of triggers and vermilions. Like you say, you are discarding a number of triggers once the triggerfish ACL was met; so trying to balance a trip limit through the entire vermilion season would help cut down on discard mortality, and then it would help you by

increasing the profitability of your trips to some degree. You would get probably the profit anyway, because you would be allowed to catch X amount of triggerfish. But if you can spread it out through the vermilion season, it seems to me that we may be able to address some of that discard mortality.

MR. HEVERIN: Yes; what happened last July and August, a lot of times during the day the vermilions didn't really bite that well. We would be just burning through a flat of bait a day on just discarding triggerfish. Our bait cost is higher because we had to burn through all these triggerfish and flats of bait there trying to get the B's. Then all the B-liners want to do is bite at night. We are kind of just fishing for fun during the day and just wasting bait on triggerfish we can't even keep.

MR. HARTIG: Yes, then, of course, you are not catching any triggers at night, because they are not biting at night.

MR. HEVERIN: Yes, they don't bite at night.

MR. HOUGHTON: My name is Bob Houghton. On Amendment 16, I am for not changing a thing on the black sea bass pots; leaving them out of the water from the first of November through April 30th. I am a member of the Offshore Sport Fishing Club. We have had to take our marker flags out of the water; and we leave them out of the water because of the right whale population. Just counting the number; you have 32 permits, you have 35 pots; that is 1,120 pots that could be in the water. There is just no reason for it if it is going to kill a right whale. They are a very endangered species. There are very few this year, fewer than there have been in the past. They are probably going to go extinct in our lifetime. We need to do everything we can to prevent that. I know you can say, well, they are not going to get hung up on them. Well, why can't we leave our marker flags in there, which were strictly a weight, a line and a marker on top? We can't leave them in the water for the same reason. I guess it could possibly snag a whale. I'm in favor of leaving it alone.

It is not going to affect that many fishermen, anyway. They have ample time during the rest of the year to use their pots. One of the things that I've always addressed is the red snapper population is out of control and you don't do a thing about it, and you need to. You need to get on the stick and let people catch red snapper. We don't have a lot of grouper. Maybe you got it backwards; maybe we should close grouper and open red snapper, because the inshore grouper fishing is poor even when it is open; but the red snapper are out of control. You go out sheepshead fishing now on the Jacks Wreck, and you end up catching red snapper. You can't catch sheepshead; because when you drop bait down and you're talking about dropping a fiddler crab or a piece of crab down there, a red snapper eats it.

You need to address the fact that there are a load of red snapper out there that are good eating fish, and they would really help the economy if you would open red snapper fishing. I have no comments on your king mackerel or Spanish mackerel other than I think you ought to take the size limit off Spanish mackerel for a recreational fisherman. They make darned good bait for people that go out wahoo fishing. When you catch a Spanish mackerel recreationally, he is dead. You can't release him live. The chance of his survival is probably less than 10 percent, so why not let me keep that 11-inch Spanish mackerel and count it towards my limit of the day? Thank you.

MR. JOHNSON: I am Robert Johnson; I am a charterboat operator in St. Augustine, Florida. I support under Amendment 29, Action 1, the South Atlantic Council's ABC Control Rule; I support Subalternative 2D. I am also the Chairman of the Snapper Grouper Advisory Panel, and I would need to mention that they thought that there needed to be a 0.50 risk tolerance level for hog snapper; a lot of concern, especially from the guys in the Carolinas about hog snapper. They also would like me to mention that they would love to see a minimum size to at least 14 inches, preferably 16 inches for hog snapper. I support Action 2, which modifies a measurement method for gray triggerfish. Personally I would like to see 14 inches fork length. I support the split season for the commercial sector that allocates 50 percent of the ACL between the two openings. I also support a reduction in the recreational bag limit to five fish a person. That is my personal preference. My mate doesn't want to clean more than five.

I don't want to see a situation where the Florida recreational fishermen are faced with an in-season closure on gray triggerfish. My goal is to have access for as many species as possible on a year-round basis. I also support a 500 pound trip limit for the commercial sector. On Snapper Grouper Regulatory Amendment 16, I support Alternative 4, which is no change to current sea bass pot fishing season. But if the biological opinion does allow for a year-round pot fishery, then I would request that the council look at a separate hook-and-line allocation for the commercial sector for the vessels that did not receive a sea bass pot endorsement, much like what was done in the golden tilefish fishery. Other concerns that I have; I know the council has been talking about a recreational fish tag program. I don't really support that. I do see some benefits maybe for some species like wreckfish or even snowy grouper; but we know that snowy grouper are rebuilding nicely. The problem for the recreational angler there is a very low allocation; I think it is 3 percent. I do not support any kind of tag program for red snapper or shallow water grouper species. I think we need to give the management time to work.

I do support – I know you all have heard me mention this before – the establishment of a recreational reef fish stamp modeled after the federal duck stamp program. I had some discussion with Darby Forbes out in Seattle a couple weeks ago about this. It would definitely help MRIP be able to estimate recreational landings, if they could just narrow down that sampling universe. We've made this recommendation time and time again. It needs to happen; it would definitely help. On the issue of MPAs, I was happy to see at least they did do a summer cruise this year. I think that is the first one in a while. I think they need to do more of those. We need to find out what is going on inside these existing MPAs, and we need to have a more targeted approach when we're talking about identifying areas that focus on maybe critical areas of spawning aggregations versus these big large boxes that fishermen hate. That is all I have; thank you.

MR. NELSON: Paul Nelson; Ponce Inlet, Florida, commercial fisherman. When I first started bass pot fishing, there was a 200 pot limit, I think approximately, and there were 80 bass pot fishermen. We were allowed to leave our pots out unlimited for a week at a time; two weeks, however long you wanted to leave them. There was no documented interaction with right whales. Now we're down to 30 boats, roughly 35 pots per boat, and we have got to tend our traps, we have to bring them in every night. I support Action 1 to modify a November 1st to April 30th closure, and then Alternative 4 to which applies to the critical habitat closure for the right whales. As far as the ORCS, on Action 1, we prefer Alternative 2; and on Action 2, preferred alternative 0.90 tolerance on the bar jack. On Alternative 3, 0.80 on the Subalternative 3B of 0.80; and then Subalternative 4A, a 0.70. On the gray triggerfish I would like to leave it

alone the way it is right now, no action. We're trying to do away with discards. If we change the size limit, we're going to be throwing back a lot of triggerfish, especially pot fishing. As far as the split season goes, I can personally go with either/or; either leave it the way it is or have a split season, it doesn't matter to me; and 1,000 pound trip limit is what I prefer on that. That is all I've got. I'll have to write my king mackerel comments, because I didn't study enough on it.

MR. HULL: Jimmy Hull. Thanks for the opportunity to come, and I've submitted written comment on all of these amendments and actions. I wanted to touch base on the oral comment on a couple of things that are real important to me. As far as the black sea bass pot fishery, the council has done a great job in understanding how we pot fish and where we pot fish. The actions that have been taken already as far as with the endorsement program; I was not for reduction in pot fishermen, but as it happened and the way they have reduced the amount of pots that can be fished per vessel and they have to be brought back to shore at the end of your trip; you have eliminated any risk to the right whale. With the Action 1, Alternative 4 is what I support at this time. I know this is still being developed; but if you look at the map, the chart that Protected Resources has put forth in that; it shows an area that looks to be approximately 7 to 10 miles offshore of the southern end of the range. Then up off of North Florida into Georgia, it looks to be maybe 20 miles.

I have a lot of questions; I know this has to be developed about this particular option. First of all, what is the actual distance offshore represented here? You have to just judge by this graph that they have. For distance offshore, this critical area; it shouldn't be for depth contour. I have lived and fished out of Ponce Inlet my entire life. I am one of the first pot fishermen from Florida. As far as seeing right whales offshore further than two or three miles off the beach, we don't see that. The migration route is along the beach. That is where they are calving. You can go up from Ormond Beach and drive up A1A when the whales are here – and they are not always here. It has to do with water temperature. When they are calving around March and April, you will see some whales right there off the beach. It is a beautiful sight. I would never want to hurt a whale. Where we fish is not in the right whale migration area, so there is no reason for eliminating us from pot fishing in our traditional areas where we pot fish. It really should be taken to the Protected Resources. This pot fishery should be taken out of their perusal.

They shouldn't even be considering it. The way we fish now, it is almost like hook-and-line fishing. There is as much chance of catching a whale dropping a rod and a reel as there is dropping a sea bass pot, in my opinion, because we are tending our gear. We are moving our pots continuously. It is not like it was where you could lay pots out there and you could winter them out there. You could just let them stay, just like crab fishery. It is not that way. We're tending this gear. It is much like a hook-and-line fishery, if anything. It doesn't take long for those fish to pot up. I know there is a lot to be decided on this. I have a lot more questions. Hopefully, they will go with a distance off the beach instead of a depth contour.

As far as triggerfish, I fish out of Ponce Inlet; and if you go southeast of Ponce Inlet, you catch a lot of 12-inch triggerfish and smaller. We're going to have an awful lot of discards if you increase the size limit of triggerfish, much bigger than what it is now. I know that up the line north of Florida, they haven't had any size limits. They obviously catch a lot bigger triggerfish up that way. But if you put something like a 14-inch commercial size limit on triggerfish, it is really going to be detrimental to the industry off of my area. As far as a yield of a triggerfish, hey, I've cleaned a lot of triggerfish and they all yield about the same amount. It is about 30

percent. Small triggerfish eat just as good as big triggerfish. If you catch triggerfish, we should be for not discarding fish; we should be for retaining what we catch.

Commercial fishermen don't have time to resuscitate fish and make sure that they get back alive. We've got time to catch fish, re-bait our hook and catch some more. We need to catch our ACL. As far as the king mackerel, I want to keep my mackerel permit. I use my mackerel permit. No, I am not a full-time king mackerel fisherman with just that permit in my possession; and when it gets shut down, I have no other options. I feel for those guys; they should probably have some type of protection. But I should also have the chance to use my permit and catch some kingfish when I need to catch them. I would not want to lose my king mackerel permit, but I do agree that there could be some discussion to try to protect and help the full-time king mackerel fishermen that are trying to catch kingfish every day of the year.

As far as some of the allocation issues, when you look at some of the information that was provided, you have, for instance, on the mackerel, where you have the recreational sector allocation, I'm not exactly sure of the number, but they are catching maybe 50 percent average year round or less of their allocation. On the commercial side we've gone over it a couple times, but we're usually catching our ACL. We need optimum yield. When you have an ACL on mackerel or whatever species, and you divided it up into the sectors, and one sector is not obtaining optimal yield and the other sector is using up their portion of it; something needs to be done. We need to harvest these fish if they are available. It is hard enough to get the ACL to get fish given to the general public. We need to be able to use it. That could go the other way, too.

If the commercial side is not using their ACL up and the recreational side is using a lot of fish, then you should let them use them. These fish need to be harvested and used for the general public – that is who owns them – and for the economic value in these fish. I know that it gets very controversial when you start dealing with the different sectors; but everybody can hopefully get through with common sense. Maybe we can all go look – common sense says we have these fish allotted to us to catch. This sector is not catching them and hasn't caught them for the last however many years. We're going to shift the allocation over here and then in, say, three years, look at it again. Every three years or something, let's look at it again and adjust it. That way we should be able to obtain optimum yield.

Just quickly going over those, of course, the ORCS, I don't have any specific values to give you; but just overall I think it is a much better approach than what we've been doing. For instance, like the one example on bar jacks; bar jacks are shutting down our almaco fishery in that complex, so a lot of those fish in that complex, when they were being caught, it is shutting down the fish that are very valuable. You know the issue with the almaco and the amberjack. There are problems there in the mixture of how they have been reported. One other thing would be I am a seafood dealer. As far as the generic seafood dealer amendment that is moving along, just one comment; I was really not for the generic amendment, because I think that we have enough permitting already in place. All they really had to do was enforce the dealers to report on a timely fashion. I know that this generic amendment does that. Some of what I read looked pretty bad. It looked like that they were putting a boot on the dealers' throats, and if they missed reporting by one day, they were going to put their permit in limbo. They would have to go through some procedure to get back in business. I think that is rather harsh if that is true. They need to have some type of a phone call or some type of an e-mail, and maybe have a buffer of about a week, and say, look, you've gotten your warning to report and if you haven't reported

then, then you could sanction them. I agree that they should be forced to report; because there are too many dealers that are not reporting, which is causing us to get closed down early, because they are making assumptions for all these dealers that are not reporting. I guess that is about it.

MR. HARTIG: One of the things you brought up about allocation is you said maybe every three years you could relook at it. I think that is one thing that we need to start doing. We need to be more fluid in these allocations. We need to look at, as you say, both recreational and commercial on a more regular basis and see how the fisheries are changing and if we can move fish from one to the other in some of these circumstances. I think that would be a much better way to look at these allocations than having these things set in stone. Since 1985 we haven't even looked at the king mackerel stuff.

MR. HULL: Like I said, the ACL is set. These are the fish that we are allowed to catch every year. We need to figure out the way to use them and catch them and not let them just sit. The economy needs it. The people of the country deserve to be able to get these fish, whichever sector it is that needs to catch them.

MR. LLOYD: I'm Vic Lloyd; I'm a commercial fisherman; Fishing Vessel Reef Rider II and Charlotte Marie out of Mayport, Florida. I will make a couple quick comments about the triggerfish. I support no change in the size limit. I am kind of up in the air about the commercial split season. I am in favor of a commercial trip limit. I recommend 1,000 pounds with no step-downs. The reason for my action on no step-downs is because of the premature vermilion snapper closure on 12/03/13 and the failure of NMFS to adjust the projected landings of the 500 pound trip limit resulting in the loss of almost 38,000 pounds to commercial fishermen in the South Atlantic. For this reason I can no longer support any ACL quota with a trip limit step-down in it. Also, I would like to go on the record; there has been some talk about red snapper here tonight. You and I have had this discussion before. Red snapper should have never been closed. The council needs to see some way – I know you say your hands are tied – find some way to untie these hands and get this fishery opened up.

The red snapper went into rebuilding mode when it was closed down, and the council can take some pride in having some of those results; one being size limit. The most greatly was the recreational bag limit. That stopped all the recreational fishermen, myself included when I was a recreational fisherman, from going out and catching 100 red snapper a day. That one item has brought red snapper back. I appreciate your time and you coming here.

MR. HAGAN: My name is Dave Hagan and I used to commercial fish. I am in support of a universal size on the triggerfish, be it 12 or 14, but they need a universal size for the triggerfish. I support a trip limit on triggerfish, and I would suggest 7 boxes, 700 pounds. I would like to talk about the king mackerel permits. If there is a problem with the permits, I would suggest that you make them two-for-one, make all the original permits or the permits that are out there now designated as A permits; and anybody that buys two As and turns them into the government gets back a permit, it should be a B permit. The B permit should be able to be traded one-for-one since they've already been reduced once. The going rate for a king mackerel permit is about \$5,000 right now. If you had to buy two of them, you would be at \$10,000. It would still be the cheapest permit out there. It is by far the most traded permit there is. It is bought and sold more than any other permit. I heard this nice young lady over there talking about going up on the TAC on the sea bass, and that is why the right whales were getting involved.

The way I understand it, it is almost if we didn't go up on the TAC we could trap bass year round or leave the TAC where it was and let us trap bass all year. Another thing that I would like to recommend is that you make sea bass traps with an endorsement, a gear group, so that you could fish it from November 1st to whenever, April 30th or whenever you all decide; that you could bandit reel fish those things as long as you didn't have any pot wrap or high fliers on your boat, that you could fish them off your bandit reel. I have fished a number of years out there. I have seen right whales. I've seen them in five miles off the beach; I've seen them 40 miles off the beach. I've never seen one under my boat, so you could fish them like that and you wouldn't have any interaction. I imagine every bandit fisherman here has probably seen a whale, but they've never seen one go under his boat. I'm in favor of upping the size limit on the hogfish to 16 inches. I think that would help the fisheries. I spearfished for a number of years and that is how we harvested them, but I do have a vessel that fishes up in the Carolinas that catches them on a hook and line. I think that would help increase the amount of hogfish that are there to be taken. If you don't have any questions, I'm ready.

MR. HARTIG: No, you are pretty clear in your comments. You did a good job as always, and I appreciate you coming. Are there any other comments from the audience? Thank you all for coming. Jimmy, do you have something else to say or are you waving bye? I appreciate you all participating in our process.

(Whereupon, the public hearing was adjourned.)

Transcribed By:
Graham Transcriptions, Inc.
February 2014



SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL
 4055 FABER PLACE DRIVE, SUITE 201
 NORTH CHARLESTON, SOUTH CAROLINA 29405

PUBLIC COMMENT ATTENDANCE RECORD

Public Hearing and Scoping

LOCATION OF MEETING (CITY & STATE) Jacksonville, FL		DATE OF MEETING January 29, 2014
YOUR NAME (PLEASE PRINT) CHUCK DARNER		TELEPHONE NUMBER (& AREA CODE) 904-268-6321
MAILING ADDRESS (PLEASE INCLUDE STREET OR BOX NO., CITY, STATE, & ZIP CODE) 11448 SCOTT MILL RD JACKSONVILLE, FL 32223		
EMAIL ADDRESS CR.DARNER@ATT.NET		
BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE) JACKSONVILLE SPORT FISHING CLUB, GREATER JACKSONVILLE, K.F.T		
CHECK IF YOU WISH TO MAKE A STATEMENT		For Scoping:
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BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE) Jacksonville CFSHore Fishing Club		
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YOUR NAME (PLEASE PRINT)

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YOUR NAME (PLEASE PRINT)

Brian F. Lloyd

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EMAIL ADDRESS VicLloyd@bellsouth.net		
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EMAIL ADDRESS cnich56@yahoo.com		
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EMAIL ADDRESS VEND005@YAHOO.COM		
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EMAIL ADDRESS v_parks@bellsouth.net		
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Public Hearing and Scoping

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YOUR NAME (PLEASE PRINT)

Susan Shipman

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920 ~~Front~~ Rose Cottage SBI 31522

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William Wilderott - 904-703-6741

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YOUR NAME (PLEASE PRINT) Donald Whittall	TELEPHONE NUMBER (& AREA CODE) 904-612-7769
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EMAIL ADDRESS dwhittall@seagood@harbor-fresh, Inc.	
BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE) Harbor Fresh, Inc	
CHECK IF YOU WISH TO MAKE A STATEMENT	For Public Hearing: <input type="checkbox"/> Snapper Grouper Amendment 29 (ORCS & Triggerfish) <input type="checkbox"/> Mackerel Framework Amendment 1 (Spanish Mackerel)
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YOUR NAME (PLEASE PRINT) LAVEA Whittall	TELEPHONE NUMBER (& AREA CODE) 904-891-9684
MAILING ADDRESS (PLEASE INCLUDE STREET OR BOX NO., CITY, STATE, & ZIP CODE) 4053 Greenwillow Ln W - Jacksonville, FL 32277	
EMAIL ADDRESS linfo@aboutbuildingwinners.com	
BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE) Harbor Fresh	
CHECK IF YOU WISH TO MAKE A STATEMENT	For Public Hearing: <input type="checkbox"/> Snapper Grouper Amendment 29 (ORCS & Triggerfish) <input type="checkbox"/> Mackerel Framework Amendment 1 (Spanish Mackerel)
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YOUR NAME (PLEASE PRINT) Emily Helmick	TELEPHONE NUMBER (& AREA CODE) 52010103397								
MAILING ADDRESS (PLEASE INCLUDE STREET OR BOX NO., CITY, STATE, & ZIP CODE)									
EMAIL ADDRESS ehelmick@pewtrusts.org									
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YOUR NAME (PLEASE PRINT) Anthony Bresnen	TELEPHONE NUMBER (& AREA CODE)								
MAILING ADDRESS (PLEASE INCLUDE STREET OR BOX NO., CITY, STATE, & ZIP CODE)									
EMAIL ADDRESS anthony.bresnen@myFWL.com									
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CHECK IF YOU WISH TO MAKE A STATEMENT	<table border="0"> <tr> <td style="text-align: center;"><u>For Public Hearing:</u></td> <td style="text-align: center;"><u>For Scoping:</u></td> </tr> <tr> <td><input type="checkbox"/> Snapper Grouper Amendment 29 (ORCS & Triggerfish)</td> <td><input type="checkbox"/> Snapper Grouper Reg Amendment 16 (bsb pots)</td> </tr> <tr> <td><input type="checkbox"/> Mackerel Framework Amendment 1 (Spanish Mackerel)</td> <td><input type="checkbox"/> Mackerel Amendment 24 (allocations)</td> </tr> <tr> <td></td> <td><input type="checkbox"/> Mackerel Amendment 26 (permits)</td> </tr> </table>	<u>For Public Hearing:</u>	<u>For Scoping:</u>	<input type="checkbox"/> Snapper Grouper Amendment 29 (ORCS & Triggerfish)	<input type="checkbox"/> Snapper Grouper Reg Amendment 16 (bsb pots)	<input type="checkbox"/> Mackerel Framework Amendment 1 (Spanish Mackerel)	<input type="checkbox"/> Mackerel Amendment 24 (allocations)		<input type="checkbox"/> Mackerel Amendment 26 (permits)
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Jimmy Hull

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HULLS SEAFOOD CO. AOL.COM

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736 Mercimec Dr. Port Orange, FL 32127

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CANDPAUL1966@aol.com

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MAILING ADDRESS (PLEASE INCLUDE STREET OR BOX NO., CITY, STATE, & ZIP CODE) 804 Shore Dr St Augustine FL 32086		
EMAIL ADDRESS slfishery@gmail.com		
BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE) Jodie Lynn Charters		
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LOCATION OF MEETING (CITY & STATE) Jacksonville, FL		DATE OF MEETING January 29, 2014
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For Public Hearing: <input checked="" type="checkbox"/> Snapper Grouper Amendment 29 (ORCS & Triggerfish) <input type="checkbox"/> Mackerel Framework Amendment 1 (Spanish Mackerel)		<input checked="" type="checkbox"/> Snapper Grouper Reg Amendment 16 (bsb pots) <input type="checkbox"/> Mackerel Amendment 24 (allocations) <input type="checkbox"/> Mackerel Amendment 26 (permits)



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~~DAVID GRUBBS~~

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**PUBLIC COMMENT SESSION
KEYWEST MARRIOTT BEACHSIDE HOTEL
KEY WEST, FLORIDA
JANUARY 27, 2014**

MR. KELLY: Chairman Hartig, Mr. Jolley, my name is Bill Kelly. I represent the Florida Keys Commercial Fishermen's Association, the largest trade association in the Florida Keys representing commercial fishermen, fish houses, restaurants and other interested parties. I will take these in order, I suppose. We'll start with Amendment 24 to the joint fishery management plan. Just very briefly, with regard to allocation; we would like to see you examine the catch history over a long period of time in fairness to the fishermen. There have been a number of changes that are taking place lately with regard to no sale provisions by the for-hire sector. In that regard, probably some adjustments are likely to increase the commercial allocation that would fill that void. It is also my understanding that the recreational sector has consistently underfished their allocation; and so a periodic review of allocations is in order and needs to be addressed by the council. With regard to Amendment 26, joint fisheries management plan for coastal migratory pelagics; this has been a contentious issue here with regard to both hook-and-lines permits and gillnet permits.

Several years ago we introduced some accountability measures and actually requested that the councils consider eliminating latent permits in the gillnet fishery. There were five of them. Much to our surprise and our relief, the council said, no, we're not going to do that just because these guys haven't exercised their right to fish. We shouldn't be arbitrarily putting people out of business. We salute that effort. The main reason and our main concern was to bring some credibility and accountability to that gillnet fishery, which is one of the most successful that there is prosecuted in the state of Florida; minimal bycatch, highly efficient. We just wanted to increase our level of accountability to the councils. We don't favor two-for-one provisions or any adjustments there or any retirement of latent permits in the hook-and-line fishery. The reason is here in Monroe County we have a number of latent permits and it is directly related to our trip limits, which I have suggested to both councils are inappropriate at 1,250 pounds with a step-down to 500 pounds at 75 percent of quota.

With fuel costs and the distances that we run, it is simply inappropriate. If we're going to assess whether or not there are latent permits in the fishery and they are going to remain that way, then maybe a modest boost in the trip limits would address that issue. I will tell you that there are a lot of very surprised fishermen; in excess of 100 hook-and-line permit holders in Monroe County that are particularly annoyed and upset about the South Atlantic Council and their Mackerel Committee endorsing those increases and the Gulf Council's Mackerel Committee endorsing those increases; and then suddenly for the Gulf Council to take a reversal on this, keep it at 1,250, remand it to the South Atlantic Council, who in turn also did 180's by both their Mackerel Committee and the Full Council; they then sent it back to the Gulf Council and it will be addressed at the meeting next week in Houston.

Like I said, we've got in excess of 100 permit holders in Monroe County that are being severely restricted by that limit. The case is being made by approximately 25 permit holders in Collier County that this would financially drop the price of mackerel, but that has happened for years, anyway. But the bottom line is whether the price remains the same or it does drop is that 18 years ago, when these council's proposed the rebuilding programs for king mackerel, the

industry was promised that they would get those quotas back when the stocks were rebuilt. They are; they have been. It is one of the most underutilized species in the Gulf of Mexico, and we're continuing to be penalized. That small handful of fishermen in Collier County now enjoys the migration of those fish down to the south at the beginning of the season. Our hook-and-line permitted fishermen can't afford to travel those 80 miles each way to harvest those fish. Then the Collier County fishermen enjoy and reap the rewards when those fish make their trip back northward. I will make one final plea at the Gulf Council meeting next week to see if we can't get a modest increase to 2,000 pounds.

That would be I think an appropriate way to gauge whether or not there is going to be an increased renewed action in the fishery and also help us to address latent permits. The next item coastal migratory pelagics for Mackerel Framework Amendment 1, Action 1, modify the annual catch limit; we support the South Atlantic's preferred Alternative 2. On Action 2, modify the annual catch limit for Gulf migratory group Spanish mackerel; we support the Alternative 2. Something I skipped over; we are not in favor of separate permits for Gulf and South Atlantic or separate permits for Spanish in Spanish or king mackerel fisheries. The final item here for Snapper Grouper Amendment 29, Action 1, amend the South Atlantic Council's ABC Control Rule; we support your Preferred Alternative 2. On Action 2, apply the revised ABC Control Rule to select the unassessed snapper grouper species; we support your preferred Subalternative 3B. Action 3, modify the measurement method for gray triggerfish and establish a size limit; we support the Preferred Alternative 3. On Action 4, establish a commercial split season for gray triggerfish; we support Alternative 1, no action. Action 5, establish a commercial trip limit for gray triggerfish; we support Alternative 1, no action. That completes my testimony. I want to thank both of you for taking time to come down here and give us the opportunity to voice our opinions.

MR. HARTIG: Thank you, Bill, I appreciate that. One of the interesting things I saw come out of the Spanish mackerel assessment was the realization that there are a lot of mackerel in the Gulf coming out of that stock assessment. I think you will see the same thing in king mackerel from the preliminary. Now, I can never tell you how an assessment will come out, but to me it looks like the recruitment is up; and it has been pretty steady on the high end for a pretty good period of time. I would hope that translates into a higher TAC for the Gulf. If that happens, I have no problem coming in and entertaining a different trip limit for your guys. That is not in the distant future. That is not far away.

MR. KELLY: Right; but the thing that concerns us is if we got a good stock assessment and they were to increase quota and we're harvesting more fish, isn't that going to have the same economic impact that fishermen seem to be concerned about now both in northeastern Florida and in Collier County?

MR. HARTIG: Well, mainly northeastern Florida should be done. Their fishery will be over by the time your fishery starts. The only interaction we'll have is between what used to be the mixing zone on our side and then the Keys fish. We'll have to see. We'll have to see what kind of a trip limit. Your guys were willing to go from 3,000 to 2,000; which I thought was a pretty good compromise. I think if we get enough fish, that wouldn't be a problem. Yes, there may be some impacts on our fishermen; but if you have the fish, that is just going to have to be part of it. To me; we had talked about it before, the fairness issue, the guys who had been in lobster and stone crab versus the guys who were in king mackerel and grouper and then how things evolved

over the 18 years, we had the 1,250 pounds. As fuel prices rose and as prices for lobster and stone crab rose, there wasn't that interest as much in king mackerel as there was previously. People evolve – people from Collier County, which you say, evolve more into king mackerel and grouper; and then your guys primarily lobster and stone crab fishermen. But you do have still a pretty good contingent of trollers in Key West that still participate in the fishery. Based on that petition that I saw, that internet petition, and the interviews with each one of them who put their points to why they wanted to see the 1,250 pounds stay at that level; it was pretty compelling to me that you still had a lot of participation from Key West in that fishery.

It is not all the same people probably. But I know the stalwarts; I know Bobby Pillar has talked to me for years, and a number of the Cuban fishermen as well have wanted that trip limit increase. Hopefully, we'll be able to do that in this next go round if we get a substantial increase in quota. I just can't see if you are going to increase it and make it high enough for more people to participate in it now, you've already got the quota stretched out about as far as you can get it based on the number of fish you have. We stretch it out into March, you get some of that Lent interaction, and you get some of the highest prices. If we put that significant increase, you are going to add more people. You are going to catch the quotas quicker. You are not going to get the economics of Lent and it is going to create a problem in people's business plans. Now, yes, it disadvantages the guys in the Keys who have fished that fishery forever, and I understand that. But, they have evolved into other fisheries.

MR. KELLY: Well, we've traditionally been multispecies fishermen down here. When we say the fishery is evolved, the fishery has evolved the way it has because these guys were regulated out of business essentially in that fishery. We've got well over 100 permit holders here in Monroe County that had to adapt to that. Yes, it evolved to other areas where it was convenient and they were closer to shore. We've actually seen a growth in the fishery in permit holders in Collier County, because that is a much lesser run. We're being penalized because of the regulatory measures. The stocks are fully rebuilt. This is a fishery that was traditionally in the Florida Keys. It was anchored here. The thing is with the promises that were made; we're not seeing any benefits of the rebuilding program. We have a substantial number of fishermen who have had to make do. But it is like anything else, a multispecies fishery; if I take ten grand out of your pocket here on mackerel and maybe to get another five grand out of your pocket on yellowtail or something like that; it all adds up. They've still got the same mortgage payments and kids to put through school and things of that nature. We're asking for fairness in the allocation of the fish.

MR. HARTIG: I know that wasn't a topic on the agenda, but I wanted to get your views on record.

MR. KELLY: Right; and I certainly appreciate that. I want to thank you very much. As I recall on that last stock assessment, the SSC recommended – well, they set the quota at 13.2 million pounds. I believe the SSC had said that you could go to 17 million pounds without having any negative impacts on the fishery. We really need to take a look at these numbers here and we need more and frequent stock assessments on all species, so that we can adapt on a timely basis.

MR. HARTIG: You are absolutely right. The assessments have been behind on the Gulf stock based on what I have observed over the years. Hopefully this one will catch up and get us to where we need to be.

MR. KELLY: Right; and there are some meetings taking place in Washington here soon on the reauthorization of Magnuson and so forth. We are pressing for fisheries management based on science and not on the best available science. Let's set some minimum standards. Let's get assessments made on economically important species by region, so that we're on top of these things.

MR. HARTIG: You're preaching to the choir with that one.

MR. WARD: I'm Gerald M. Ward; Riviera Beach, Palm Beach County, Florida. I am also an owner down here in Monroe County, Florida. It got too cold in Palm Beach. I gather, Mr. Chair, you are a Jupiter man.

MR. HARTIG: Actually I grew up in Riviera Beach, so I grew up around the Morays, Hardens, and Darville's.

MR. WARD: Since I'm supposedly on the record now, I'm not going to tell you what I told your member earlier about Riviera Beach. He, like me, has had optimism that we have the best piece of real estate in southeast Florida; but somehow we are walking backwards. I guess the first thing is I did try and drum up some people to come tonight, because I appreciate the two of you showing up all the way for five hours away. It is convenient to me, because I just go down Truman; and when it makes a 90 right the second time, it makes a 90 right here; and it makes a 90 right the second time, that is my house. I think you do need to overhaul the meeting process out the door. The ladies next door are as important as you guys are to making people understand; and when I first pulled down – and I did Snapper Grouper Amendment 29 first because that interested me both from the basic species as well as the triggerfish.

I would tell you the use of acronyms – and I do this to the Florida Legislature and to no end of bureaucrats at the state level, spell out what you're saying and quit using them. Now you do identify – like ACL shows up on Page 3, at the top of the page, explained. For those of us that don't deal in bureaucracy every day, acronyms get us confused. I have been very successful in some elements – Fish and Wildlife Conservation Commission, Office of Boating and Waterways – of changing their attitude. You spell out what you're saying, even if it is repetitive. It often makes the report shorter, because you really don't need as many pages as come forward.

(Remark made off the record)

MR. WARD: He has been very good for a half a century or so in Palm Beach County. He and I are getting old. The experience I've had was a week ago or two I went out on a small headboat and went bottom fishing in 70 feet on the reef, and then out to 120 feet on the reef. I got four hours or three hours worth of experience. And it was a rough day; probably six foot. The wind was 3/20 when we started. We went north of the inlet and had what I called great success, but more importantly the success was in diversity. We kept snapper, we kept triggerfish; we caught one small peanut dolphin with a flat line off the back. We sent back a number of other diverse species. I am not a fisherman as such. I can't tout being a West Palm Beach Fishing Club guy; but I would tell you that it impressed me to no end that we do have available for any Tom, Dick and Harry a large diversity of species in the Palm Beach County area. We were within three miles so we stayed within Riviera Beach shoreline. The state changed it in 1974, so the town goes three miles offshore.

That is just one more attribute that I tout about Riviera Beach. The proposed rule is to change a process which appears to be highly statistical, the ABC Control Rule. It is touted to be applied to unassessed species, meaning species that we don't seem to have a lot of data on harvesting or total quantities. That rule went into effect in 2012. I am not quite sure that you are ready to change it unless you have the staff prove to you that they didn't do good enough in something that is less than two years old. I am a great fan of the Florida Fish and Wildlife Conservation Commission Group out of St. Petersburg. Back in the sixties we used to go rifle their library; effectively their reports. I've done that in the seventies. It went downhill. A director ago was actually heading it up before he became the director of the commission. They do a lot of good work.

I'm not so sure that the feds should not start funding at a greater level Fish and Wildlife Florida as a means to stop what I see here as a – well, this may be better than what we've got, but is it really correct to proceed to it? I am very concerned about the risk factors. You have four being proposed; low, moderate, moderate low, and moderate high. The scale factors that come out of that get applied and then you have – I call it a safety factor – 10 percent for low. Moderate is 1.5 percent – I mean, 20 percent and moderate high is 30 percent. Almost everything in this whole new computation is nice round numbers of 10 percents or something of that nature. I know we have a lot of smart people that come out of the universities with PhDs.

I keep telling people the best thing they need to do is take statistics in their high school – physics, statistics, geometry – and forget all this higher math. That is a common sense way of doing business. I happen to be an engineer so higher math doesn't help me in most of our business. I would certainly like to see you query the staff as to whether they really are going to get something out of this. I am not a fan of splitting – although it has been touted that if you split north and south in evaluations, you can make changes quicker. If you can show that the bureaucratic process will feed you information back to make changes in allocations quicker, then, yes, maybe so. I think that when you get around to the reductions in landings, Page 13, which target the private, charter and headboat sectors, you need to start asking some economic questions.

If we target them, what is the difference when we have made things so complex that many people do not want to accommodate commercial fishermen in the state of Florida anymore? The businesses turn around and say it is simpler to buy fish out of a foreign country. That may be good to do what I just found in the last week or so, the diversity of what we landed off of Palm Beach; but I am not sure that is good for the health and welfare of the country. I am not sure I wanted to bring it up on this particular segment – but I think I had it under another one – that we have to look towards our younger folk. I guess I need to go to the public hearing for framework for Amendment 1, which is supposedly and truly three-tenths of a million pounds increase in catch. But if I were sitting in your shoes, I would start asking staff to give me not a ten year, which they did on the grouper snapper, but I would like to know for the mackerel 50 years worth of data.

The first thing they are going to tell you is, oh, we don't trust the data that is old. Yet I think that is illustrative to you, because I go back to 1964 when I was on a coast survey ship and every night at quitting hour we would anchor down over an old wreck. We either fished for bottom fish or fished for mackerel. The schools of mackerel would come down the coast. That was probably before we had aircraft to go put big nets around them and cause a significant problem.

I think you need presented the total picture of what we think landings were. Now, yes, they may be flawed, which is the reason that you've got the Amendment 29 to deal with the control rule, because you want something to deal with unassessed species. I really would like to think you need the full presentation, because I would take a silver spoon and flip it into a school of mackerel and the ship of 35 had dinner that night for three or four of us having fun, whether we put a whaler over or whether we just fished off the ship and the school came by. It was something that we fixed. We overfished the mackerel and it is no longer a problem. That sort of covers the Framework Amendment 1.

For Amendment 24, it is curious to me from the statistical standpoint when you look at the Tables S-1, S-2, which is roughly 10 years worth of tables, a decade; it is good information on landings yet we basically probably didn't have any stock data, because it is all the same. If you are dealing in 10 million pounds, it doesn't matter to me whether it is 10.2 or 10.8; we've got numbers that may not have had significance for years. That is why giving you a historical presence in terms of any species you're dealing in should be better. If you go to the Table S-4, and Table S-3, people said, well, let's just discount the times when tropicals occurred. We all know Francis and Jean. My wife just screams and hollers will it ever quit? She was moving 2 knots. The landings went down in the following fish year, because people had other things to do. They had to fix their house and they had to fix this up and the other.

It is needed to have that displayed; and our statistician is really the person who can tell you whether you should discard it. I sometimes wonder whether you should ever discard something, because it often finds that the following year or two years or whatever there is a bump that goes way up the other way. Using climatic events may not be the thing you need to do. I've taken your time. I really do think we need to go back at the NOAA elevation of our government to look at what the costs are when you develop dual permits, for instance. How many bureaucrats have to be hired? How many dollars have to come out of permittees' pockets? I'm very concerned that you don't get back what you hope. An academic or scientific type may think, oh, we're really trimming the data; but it is like me going through. Everything I did I rounded it to tenths of a million in terms of pounds.

There is no use dealing with these numbers that just go on forever. You can't get your mind wrapped around it. The system as structured by the Federal Fisheries Act is intended to function on data. The better thing would be to find a way to get our data better. I think Fish and Wildlife Conservation Commission, state of Florida – and your member here today raised a very good question; why there wasn't anybody there from FWC in the last couple days at the tournament we opened a brand new marina facility here, had a big tournament, and had to be supplied out of the north for bait fish, for instance. You turn around and nobody would do like we do at the KDW and have a Fish and Wildlife guy there censusing and checking on fish. I think more people would become better served by having less diversity of regulations and less options. It may be that you can have a Gulf and an Atlantic permit split, but I typically find that scofflaws are going to flaunt that; and all it will do is run a few younger people out of the business saying I want to go do something else. Thank you, gentlemen.

MR. HARTIG: Yes, Mr. Ward, it is interesting; you pointed to our tables and chose a very limited landings' years. That is correct; we only usually look back at that number to look at those allocations; but if you are really interested in where the science comes from in assessing our stocks, the SEDAR website; S-E-D-A-R –

MR. WARD: I saw that acronym.

MR. HARTIG: You can get on that website and you can go to all the assessments of the species you are interested in. If you go to that website like for king mackerel or Spanish mackerel, we usually go back into the fifties in historical and sometimes farther for most of our stocks. Like you say, there are uncertainties in your landings prior to a certain date; prior to when trip tickets were implemented, prior to when species were separated and things of that nature; so the model is weighted. That data is weighted differently going into the assessment than the other data. We do take those into account.

MR. WARD: By the scientific committee. What I'm always concerned about is the decision-makers get the bigger picture.

MR. HARTIG: That is a good point as well. When all of that is talked about at the data workshop for all those years, recreational and commercial fishermen are involved in that process or can be and usually are at least recently when they review that data. All the questions that the data providers have about the data try to get answered at that data workshop. It is week long when they look at the data. We do this periodically. We have different kinds of assessments; a benchmark, a standard and an update. The benchmark is the comprehensive where you look at everything. You have a week-long data workshop, you have a week-long assessment workshop and then you have an end review by independent scientists from other parts of the world that come in here to review our assessments. It is a very good process; and the data that goes into it is reviewed extensively by both people in the fishery that have the experience and the scientists to groundtruth that data to make sure it is up to our standards.

MR. WARD: But do you, as boots-in-the-water fishermen, believe that your associates can go to a meeting like that and tear apart a scientific, academic, statistician's desire to do something?

MR. HARTIG: The assessment process is supposed to be neutral, but human nature it is not.

MR. WARD: It is not.

MR. HARTIG: It is not and that is a very good observation. What we do is over the years we have developed a number of people who are credible witnesses or credible people on the water that will bring the truth to the table as they know it and not try and manipulate the system in a uninformed way or something different than how people have seen it. I think we get a pretty good analysis from the people who participate. We have what we call a SEDAR Pool. That is something you could get into.

MR. WARD: If I get into anymore things, I'll be worse off. You have a representative on our 12-county navigation authority for the east coast, Jerry Samson out of Brevard County. Jerry is absolutely the tempering force because he comes at things different. That board is a good board, because it has been fairly diverse over the past. You need to find a replacement for him, because he isn't going to find another appointment. He is term-limited. Regardless of his lobbying abilities in Tallahassee, I think the next governor won't reappoint him. You need people like him on a board. Our purpose is more or less to make you think about some things that maybe will –

MR. HARTIG: Your comments are very appropriate. We're just going into this visioning session that we're going to do. What you have told us today is really a lot of what we want to hear from the public in this visioning process that we're going to start here in April. We're trying to schedule one at the club, so I very much encourage you if you're available.

MR. WARD: You do a very good job of noticing meetings, at least the council does. I obviously got this and said, oh, I'm going to be in Key West and I can be there.

MR. HARTIG: We appreciate it. I don't know you personally and we have a parallel time in Palm Beach County. I moved there in '57. We have grown up seeing the same kinds of things and changes.

MR. WARD: From different perspectives; I'm an engineer you are boots in the water.

MR. HARTIG: Yes, but I mean you have a love of the water as well. You have seen the changes. I'm heartened to hear that your trip on the headboat was a good observation that we still have a diversity of fish to be able to be caught in that area, because there is a lot of pressure there. John knows the changes. For the largest animals; the largest animals have changed the most, there is no doubt about that. We don't see as many of the large animals, except for Goliath grouper and then gags when they come through in their migration. But other than that, you don't see many black grouper in that area anymore, which used to be pretty common back in the day, nice big fish, too.

MR. WARD: My last tour of duty was in Hawaii so I became a diver. In Hawaii you dive off the beach, just absolutely – it is great for your physique, because you get to swim out with your tank. You don't have a boat you have to deal with. You understand currents that go around the island, because you don't want to be walking back a quarter of a mile, a half a mile with your tank. You want to be able to come back in to the same spot. The same thing happened here diving in the seventies. We truly do need to watch what my real business is, water resources. As much as people scream, we've done very well in protecting you against a flood of your rear end since '76; but we have not understood that we keep discharging a bunch of crap, storm water, I mean. All you've got to do is drive over the Blue Heron Bridge and say; hey, I can't see the bottom because it rained a half an inch or two inches. That is because we're pushing it out the oven.

MR. HARTIG: As a fisherman over the years, I've noticed the changes and the algal blooms have increased tremendously and dramatically over the last 20 years in particular, so much to the degree that it actually settles on the reef in places on the back sides of current eddies in the reef and smothers portions of the reef. Those types of things, as we pumped some of this sewage into the ground; out of sight, out of mine; but that percolates through the aquifer and actually could come back up. I don't have to tell you; you are Mr. Water.

MR. WARD: C-1 Canal down in southern Dade County; that is where the other part of the Tiki Restaurant is at Black Point. I would go between here and Palm Beach. It is a short distance off of the turnpike. But the C-1 Canal; adjacent is the landfill; adjacent is the South Dade Waste Water Treatment Facility. The documentation is right there. Pump it down 3,000 feet, and by God it is showing up in the bay. You do have a lot of signature pollutants that you can track and yet nobody wants to talk about it. That is where we have a real problem. I did just give John a

copy of the Department of Interior Budget that was just passed. In it is a substantial increase, like four-tenths of a billion dollars over last year in terms of the grants' program for drinking water and waste water treatment. Somebody; they took three-tenths of a billion off of the Land and Water Fund, but they put four-tenths of a billion into these other issues. We have got to think about where we put stuff in the ground and otherwise treat it and reuse it.

MR. HARTIG: I've always been a proponent of reusing water. We haven't gone to the extent that I've always wanted to see it. One other thing, though – I'm going to change gears just a second. You had mentioned that only reliable catch or data-poor species; that you thought we probably should use a longer time series or maybe a more informed judgment on how we change it before – well, really review it. Well, that process actually had fishermen and scientists actually sat at the same table and arrived at these numbers. Now, were we happy with what we got as everything moderate? No.

MR. WARD: You better not be.

MR. HARTIG: We were not happy.

MR. WARD: Cut the baby.

MR. HARTIG: This is a first cut at that process. Hopefully, we want to improve that going into the future. The initial way we did it, that was pretty tough. We've got some closures in place for some of the species that I don't think are warranted, so we've got to work on that. This was a way to try in a stop gap. We're moving ahead with a new process of how to manage. It is going to take some time and some different ways of looking at things. In fact, they are having a big workshop at the Miami Lab about data-poor species with everybody from around the country, and even other places in the world are coming to talk about how do we manage these data-poor stocks better? We're making inroads into that and this is one way we're going to try it.

I don't think anybody from the fishing side of the equation was happy with everything coming out like it was. It needed to be more informed by more fishermen. We could only include a few people so we had a limited range of scope to develop all these different levels. I can't remember exactly the word to use for it. But all these different characteristics of each species were informed by not enough people in my opinion. I said we have to do this with our advisory panel through the entire range to get a better informed look. Frankly, I can come up with rock hind – rock hind was one, not the red hind, not the strawberry grouper, but rock hind is an animal that I've seen virtually disappear from the reefs that I fish. Where I am it is locally depleted, but up the coast it is not that way. How do you put all these in? A certain area is locally depleted and they are fairly abundant up here; so what does that come out to? We are going to tackled that.

MR. WARD: Well, I am very happy with the system we have in the state. The feds, no different than my lead income, it is about communication. Sometimes the further you get away, the less the communication is; that we didn't know these folks were next door until after we found out. It is important to be able to communicate. We need the data, because the data is where you solve the problems.

MR. HARTIG: I think a number of us on the council – and I know John is a proponent of this – is any increase in science funding I think we should funnel through the state system to do that.

We've talked about even at the congressional level that the states need to be more involved with the science, because I think they could do it more economically and, frankly, better.

MR. WARD: I am totally convinced. Well, do we have ten other people that want to speak? It is only 18:30.

MR. HARTIG: No, because based on the weather I saw coming down here, I knew what was going to transpire. And rightfully so; fishermen have to make a living, both recreational and commercial. Anybody with a boat is going to be on the water.

(Whereupon, the public hearing was adjourned)

Transcribed By:
Graham Transcriptions, Inc.
January 2014



SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL
 4055 FABER PLACE DRIVE, SUITE 201
 NORTH CHARLESTON, SOUTH CAROLINA 29405

PUBLIC COMMENT ATTENDANCE RECORD

Public Hearing and Scoping

LOCATION OF MEETING (CITY & STATE) Key West, FL	DATE OF MEETING January 27, 2014
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YOUR NAME (PLEASE PRINT) Bill Kelly	TELEPHONE NUMBER (& AREA CODE)
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BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE)
 FL Keys Commercial Fishermen's Assn.

CHECK IF YOU WISH TO MAKE A STATEMENT	For Public Hearing:		For Scoping:	
	<input checked="" type="checkbox"/>	Snapper Grouper Amendment 29 (ORCS & Triggerfish)	<input type="checkbox"/>	Snapper Grouper Reg Amendment 16 (hsb pots)
	<input checked="" type="checkbox"/>	Mackerel Framework Amendment 1 (Spanish Mackerel)	<input type="checkbox"/>	Mackerel Amendment 24 (allocations)
			<input type="checkbox"/>	Mackerel Amendment 26 (permits)



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LOCATION OF MEETING (CITY & STATE) Key West, FL	DATE OF MEETING January 27, 2014
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YOUR NAME (PLEASE PRINT) Kasly Fly	TELEPHONE NUMBER (& AREA CODE)
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	<input type="checkbox"/>	Snapper Grouper Amendment 29 (ORCS & Triggerfish)	<input checked="" type="checkbox"/>	Snapper Grouper Reg Amendment 16 (hsb pots)
	<input type="checkbox"/>	Mackerel Framework Amendment 1 (Spanish Mackerel)	<input checked="" type="checkbox"/>	Mackerel Amendment 24 (allocations)
			<input type="checkbox"/>	Mackerel Amendment 26 (permits)



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LOCATION OF MEETING (CITY & STATE)

Key West, FL

DATE OF MEETING

January 27, 2014

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 Mackerel Amendment 24 (allocations)
 Mackerel Amendment 26 (permits)



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LOCATION OF MEETING (CITY & STATE)

Key West, FL

DATE OF MEETING

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- Snapper Grouper Amendment 29 (ORCS & Triggerfish)
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Public Hearing and Scoping

LOCATION OF MEETING (CITY & STATE) **Key West, FL** DATE OF MEETING **January 27, 2014**

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For Public Hearing:

Snapper Grouper Amendment 29 (ORCS & Triggerfish)

Mackerel Framework Amendment 1 (Spanish Mackerel)

For Scoping:

Snapper Grouper Reg Amendment 16 (bsb pots)

Mackerel Amendment 24 (allocations)

Mackerel Amendment 26 (permits)



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LOCATION OF MEETING (CITY & STATE) **Key West, FL** DATE OF MEETING **January 27, 2014**

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CHECK IF YOU WISH TO MAKE A STATEMENT

For Public Hearing:

Snapper Grouper Amendment 29 (ORCS & Triggerfish)

Mackerel Framework Amendment 1 (Spanish Mackerel)

For Scoping:

Snapper Grouper Reg Amendment 16 (bsb pots)

Mackerel Amendment 24 (allocations)



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LOCATION OF MEETING (CITY & STATE) Key West, FL	DATE OF MEETING January 27, 2014
YOUR NAME (PLEASE PRINT) Kathleen Sparrow	TELEPHONE NUMBER (& AREA CODE) 252-305-6094
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BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE) North Carolina Watermen United	
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LOCATION OF MEETING (CITY & STATE) Key West, FL	DATE OF MEETING January 27, 2014
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BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE) NOAA Nat'l Marine Sanctuary Program	
CHECK IF YOU WISH TO MAKE A STATEMENT	<p>For Public Hearing: _____</p> <p>For Scoping: _____</p> <p><input type="checkbox"/> Snapper Grouper Amendment 29 (ORCS & Triggerfish)</p> <p><input type="checkbox"/> Mackerel Framework Amendment 1 (Spanish Mackerel)</p> <p><input type="checkbox"/> Snapper Grouper Reg Amendment 16 (bsb pots)</p> <p><input type="checkbox"/> Mackerel Amendment 24 (allocations)</p> <p><input type="checkbox"/> Mackerel Amendment 26 (permits)</p>



SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL
4055 FABER PLACE DRIVE, SUITE 201
NORTH CHARLESTON, SOUTH CAROLINA 29405

PUBLIC COMMENT ATTENDANCE RECORD

Public Hearing and Scoping

LOCATION OF MEETING (CITY & STATE)

Key West, FL

DATE OF MEETING

January 27, 2014

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For Public Hearing:

Snapper Grouper Amendment 29 (ORCS & Triggerfish)

Mackerel Framework Amendment 1 (Spanish Mackerel)

For Scoping:

Snapper Grouper Reg Amendment 16
(bsb pots)

Mackerel Amendment 24 (allocations)

Mackerel Amendment 26 (permits)

**PUBLIC HEARING
BAYWATCH RESORT & CONFERENCE CENTER
NORTH MYRTLE BEACH, SOUTH CAROLINA
JANUARY 21, 2013**

MR. McCaffity: My name is Chris McCaffity. I am a commercial fisherman out of Morehead City, North Carolina. I wanted to comment on two of the issues, one of them being Snapper Grouper Amendment 29 with the gray triggerfish and what you are calling the ORCS. I think the way that you are doing those is very good. You're using the landings data, the high end, and then reducing it by 10 percent and make sure there is not going to be any overfishing. I support that measure. I think you're also doing a good thing about the split seasons to align with the vermilion snapper. They have lived together in many of the same areas and it is really important that both species are going to be legal at the same time. I think that is important that the council is listening to us, and I really appreciate that. Then with the triggerfish quota, it is not as high as the vermilion snapper quota. It is not going to be even with these ORCS.

What we need to do is consider that when we allocate or set the possession limit. That possession limit needs to be set at a level; and you can do it several different ways. You either start out with one possession limit that is going to be low enough to extend that season for six months, or for the large majority of it, or you can start with the high poundage limit that then reduces down to a level that fills that quota without a long closure. See if you could start out with 500 pounds or something like that and drop down to 100 pounds; and that would pretty well extend the season. That gives the consumer a dependable supply of that product through most of the year. It also reduces regulatory discards. Nobody really wants to see wasted fish. The size limits kind of touches on the wasted fish thing, too. All the fish houses I've ever dealt with, they told me we don't want your midget triggerfish; and if you brought them in, they wouldn't buy them.

The free market has pretty well taken care of that. Recreational anglers, if they want to clean the 12-inch triggerfish, more power to them; let them do it. Don't force them to throw back a fish. If they are only allowed 20 or whatever the limit is now on the recreational side, it would be better off from the scientific standpoint and from their benefit to just allow them to keep the first 20 that they catch regardless of size. There is a sad joke on the recreational side that you need a lawyer to go with you to follow all of the laws. Another size limit, you have to consider how it is going to be enforced, too. All laws, even the ones you guys write, they are enforced by the threat of force and seizure of your private property, all of that kind of stuff. You need to take that into consideration. I would like to see that the free market is what dictates the size limit on the triggerfish.

As long as you don't have a quota, it really doesn't matter what size that fish is or when it is harvested as long as you don't exceed the quota and overfish. I think that pretty well touches on the gray triggerfish. The black sea bass pots; I think some of the proposals Rusty Hudson talked about it on the webinar about just having the right whale critical habitat being the closed area and the rest of the areas open. I didn't really like the way the endorsement thing went down. I lost my bass pot tags; many other fishermen did, too. But those bass pot fishermen shouldn't be made to suffer, and I want to support their freedom to fish and do it when the market is right, when the fish are right. In the middle of the summer; that is not the best black sea bass time. The wintertime is when you're going to have the bigger fish and the better price. By doing that, you would also open up the opportunity for a pot fishery for lionfish.

I was at the Marine Resource Education Program down in St. Petersburg; and you were there for the first part of it. The fishermen during the second leg of it that were from the Caribbean, they talked about how they would take female gonads from a fish and use them as bait. They took nothing more than milk crates, zip tied them together, cut a hole, took a flower pot with the bottom cut out of that for the funnel and stuck in there with a couple of bricks and the female gonads. They said they would be stuck full of male lionfish, nothing else, no bycatch of any kind; no females either, just male lionfish. I would like to see that we try to create an exploratory fishery, anyway, and see if we can do that off of our coast and try to control the population of that invasive species. Create another market and profit from it. I guess for what you are scoping today that is pretty much what I had to say, but I am always happy to answer questions and have a discussion.

I'll be part of the visioning project. I will try to work on that. I do urge the council to really look at we need to manage each individual species, as I mentioned with the triggerfish, to avoid these closures. We have over a million pounds of our quotas now allocated to dead discards, and we really need to try to get that under control and reduce that. The biggest way we can do it is by avoiding these extended commercial closures that we have now; and to a lesser degree the recreational closures. I just wanted to add one more thing about the triggerfish and all fish with small mouths. We really need to look at the circle hook mandate and consider removing that. Fish like a grouper and snapper; the circle hooks work very well with them. They have decreased the mortality rate, and that was the reason for putting them on there.

I would also encourage the council to ask John Carmichael in the stock assessment going on with gag grouper – that is off of this subject – to look at reducing the mortality rate in the stock assessment for gag grouper based on the circle hook use. But then think about it is not very effective on triggerfish and it is making a lot of people basically just break the law to fish for triggerfish with a J-hook instead of a circle hook. I wish I had a triggerfish here so that you could see how it is to dehook a triggerfish with a circle hook in its mouth. It tears his mouth up. It is going to break a lot of their jaws to where if you have the discard they are going to die, and they are going to starve to death slowly because of that. That is just a wanton waste of the resource of something that you need to look at; that we can't just do that kind of thing, it is unethical. That was my comment on that. Thank you.

MR. MERSHON: I'm Wayne Mershon, President of the Council for Sustainable Fishing, also owner of Kenyon Seafood, a federal dealer for our fishery. I would like to thank you for the opportunity to provide input on a number of proposed fishery management plan amendments that are either up for scoping or public hearing. These are our comments for council consideration. Snapper Grouper Regulatory Amendment 16; the black sea bass pot fishery closure, November 1st through the 30th; we believe the action the Fishery Council took in Snapper Grouper Amendment 18A in 2012, such as capping the number of vessels utilizing pot gear at 32, limiting vessels to 35 pots, requiring the pots be back to shore after each trip and establishing a commercial trip limit of 1,000 pounds reduce the potential for any interactions with right whales, even though there has never been any reported document of a whale and pot gear interactions. The Council for Sustainable Fishing also supports allowing a black sea bass pot fishery November 1st through April 30th, even if it is restricted to the areas outside the defined right whale critical habitat, such as considered in new Alternative 6 of the proposed amendment.

Moving on to Snapper Grouper Amendment 29, the only reliable catch stocks approach; we support amending the Fishery Council's ABC Control Rule proposed in Action 1, Alternative 2; to adopt the SSC's recommended approach to determine ABC values for only reliable catch

stocks. Action 2; we support the application of revised ABC Control Rule through the selected unassessed snapper grouper species in the low-, moderate- and high-risk category using the risk tolerance scalars in Subalternatives 2B, 3B, and 4B. Fishermen would benefit from the higher ACLs that would result from the amended ABC Control Rule and the application of the higher risk tolerance scalars. Gray triggerfish, Action 3; we support Alternative 4, which would specify a minimum size limit for gray triggerfish of 14-inch fork length in federal waters off North and South Carolina, Georgia and Eastern Florida.

From the standpoint of yield of a 12-inch or smaller triggerfish, it is not large enough to benefit commercial markets and it is pretty small even for a recreational fisherman to eat. We think the fishery could benefit from a minimum size limit of 14 inches. Action 4; we support Alternative 2, which would change the allocation of the commercial ACL to 50 percent from January 1 through June 30th and the other 50 percent from July 1st through December 31st each year. The gray triggerfish season would then mirror the seasons for vermilion snapper. Since these are co-occurring species that are caught together, this alternative would reduce bycatch of both species. Action 5; we support the use of trip limits to manage commercial fisheries; however, this action needs more alternatives for an analysis. Consideration should be given to establishing a trip limit for gray triggerfish that is combined with a step-down trip limit when 75 percent of the commercial ACL is met or is projected to be met.

A range of step-down trip limits such as 50 pounds, 75 pounds, 100, 150 pounds should be considered. Coastal Migratory Pelagics Amendment 24, modifying sector allocations for Atlantic migratory group Spanish mackerel and Gulf migratory group king mackerel; the Council for Sustainable Fishing supports optimization of fishery ACLs. It is clear that in both fisheries the total ACL has never been landed in the 10-year time series within Tables S-1 and S-2 in the scoping document and that the commercial sector has exceeded this ACL while the recreational sector has landed decreasingly lower proportions of its ACL. The Fishery Council should consider reallocation alternatives in both fisheries. Coastal Migratory Pelagics Mackerel Framework Amendment 1; modify an annual catch limit ACL for Atlantic and Gulf Spanish mackerel migratory groups; the Council for Sustainable Fishing supports the alternatives that would increase the ACLs for these fishery groups. Consideration of our comments is appreciated, and I thank you all very much for hearing me.

MR. SOLANA: My name is Alberto Solana. I have a snapper grouper unlimited permit. My boat is out of Wrightsville Beach, North Carolina. Our main method of harvesting fish is spearfishing. A lot of these amendments don't have too much effect on us, but I would like to say something about Amendment 29 and the changes in triggerfish. Although I agree with increasing the size limit on triggerfish to 14 inches, I just feel like there is not enough data on triggerfish to make any changes in ACLs or any size limits on them. As far as I'm concerned, I spearfished all the way from Rhode Island down to Key West; and gray triggerfish in my eyes is a highly migratory species where massive amounts of them are all the way in the North Atlantic and massive amounts are taken in the Mid-Atlantic area and even New England area and back to here. I would like to see more tagging programs and more information taken on them before you make any more changes in it, although the 14-inch size limit I would agree with. I would like to say that the changes in trip limits are another thing I really agree with and I like it. I think it should be used with more of the species, especially triggerfish. Definitely in my eyes we have very little bycatch, if any, but I like being able to having all the fishery seasons opened at the same time even if we're only allowed 50 or 100 pounds trip limit. I would agree with the motion to do that and just have a step-down trip limit on there. I think it has worked really good. This year we saw a start of it with the gag grouper. They just didn't jump in fast enough or lower the

trip limit enough to keep it open throughout the season, which would have helped us a lot. Even 100 or 50 pounds of gag a trip, it makes a big difference. I would like to see the step-down work, even jumping in when it hits 50 percent of the ACL to a certain level and then continually dropping it. That is about all I have to say about any of the amendments up here. Thank you.

MR. CONKLIN: Alberto, there is a stock assessment going on with gray triggerfish right now.

MR. SOLANA: I saw some of the data.

MR. CONKLIN: There are discrepancies in some of the aging on the fish. There has been more information gathered on those. Hopefully, when that comes out, we'll be able to make a more educated decision on what to do about gray trigger.

MR. SOLANA: I was just curious if that was ever considered in any of the stock assessments or data collection. They are on the migratory species category in my eyes. Most people here think they go inshore and offshore, and that is that. I have seen just through my commercial fishing career from all the way up in Rhode Island and Massachusetts; in the summer they are there and then they start migrating back in the fall. We would follow them going right down along the coast. It is not just a couple fish. It is I would say a good portion of the whole stock; half of it is migratory and half of it is staying here and moving inshore or offshore, staying in the same area. I was just wondering if that was ever mentioned in any of the stock assessments or any of the data just doing a tagging program just to find out more about them.

MR. CONKLIN: I can't give you a clear answer on that. Maybe David or Tom might know something a little bit more about what has been done previously.

MR. SOLANA: The main thing that I am just saying is I think you should definitely get some more data on gray triggerfish before we start making any new ACLs or any size limits on them, just to understand the stock and the species a little bit more.

MR. MOORE: My name is Captain Matthew Moore. I run a charterboat out of Little River, and I also commercial fish out of Wilmington, South Carolina, where my primary tool for harvesting fish is speargun during the wintertime. During the stock assessment for Amendment 29 with the triggerfish, have they taken into consideration that probably a couple years ago when they started making everybody go from J-hooks to circle hooks that the number of triggerfish that I was bringing in by charter significantly dropped because of the use of circle hooks, because of the dynamics of their mouth and how they feed and how they are pickers and everything. I saw a lot less fish coming back to the docks triggerfish-wise because of the circle hook. I want to know if that was taken into consideration while doing the stock assessment by looking at all of our trip reports and everything.

Another thing, I will state that I do agree with split season that co-exists harvesting of triggerfish with vermilion snapper, because a lot of guys going after vermilion snapper during the daytime, they have trouble getting on a bite during the day when the triggerfish are awake, and the triggerfish chew them up. They wait until the triggerfish go to bed, lay down in the rocks or on the sand at night until they can get the majority of their vermilion snapper. I will agree with the split season. That's all I've got to say.

MR. CUPKA: Matthew, I don't know if it is being considered specifically, the impact of the different hooks on a triggerfish, but it is I guess considered indirectly in that the type of hook is

going to impact the catch. Catch is one of the data elements that go into the assessment. It is kind of considered indirectly, but I don't know that they have looked at it directly.

MR. MOORE: Yes, I hope like NOAA and the scientists weren't like, oh, my God, the population is plummeting, and like look there is this less fish coming back to the dock; you know, it is because you made us use different hooks. Like I said, I do a lot of diving. I watch them chew up the hooks. They are a bait-stealing little fish. They have a small mouth, fused teeth. They are just hard to hook on the small circle hooks, and you've got to go to a wider gap, smaller shank or a smaller diameter circle hook if you want to get them. Then you are obviously breaking lines and breaking hooks with weaker hooks if you do get attacked by a jack or something like that on the same one. Then you are leaving hardware into a fish, and that is not good.

MR. CONKLIN: Well I've got your e-mail and I am going to try and find that out for you and get back with you as far as the circle hook question.

MR. MOORE: Like I said, a lot of my target fish is not triggerfish; it was just a thought and a concern of mine.

MR. FORD: I didn't see anything other than what was caught over the last – I don't know eight or nine years, as far as the king mackerel and Spanish. I was really surprised by the figures. The king fishing has been atrocious here for the last I would say four to five years. I tournament fish and I recreational fish and I commercial fish. I noticed about five years ago that the decline in the kings was absolutely related to these Virginia boats that were coming here wiping out all of our menhaden, our pogies. That went on year after year; and now when we're out and we're looking at our screens, you don't see the bait balls on your screen that you saw five or six years ago. To me it makes complete sense that the kingfish are smart enough to leave an area when they have nothing to eat. They have nothing to eat. You are looking for a restaurant out in the ocean and Long Bay is like a desert. It doesn't have a whole lot of artificial reefs.

It doesn't have a lot of structure. It is almost like the Saudi Desert, except for an occasional manmade reef. Now that these Virginia vessels cleaned out big, large pods of the pogies, I think basically the kingfish were smart enough to move elsewhere. Now this year was better than it has been for the last four years. This year I saw them coming back; and someone told me that those Virginia boats were banned from harvesting the pogies so close to the beach. Now I don't know whether they were banned or not. But, I believe that the king fishing has been bad basically because the bait fish aren't here. If the bait fish aren't here, the predators aren't going to be here. I don't know the status of these Virginia – it is a big company in Virginia. You are aware of them? You're not one of the shareholders, right? They sell the oil, the pogy oil. They make fertilizer. I don't understand how boats from Virginia can just come down here and wipe out our bait fish. I think that that is a big problem. That is all I wanted to say basically.

I hope they've been banned. I know that Captain Brant out of Ocean Isle and his family have been fighting to get them out of North Carolina because of the pogy situation. We just don't see the bait balls on the screen anymore that we used to see. Your whole screen would be covered. Now occasionally you will see a little blip on the screen. I think it definitely ties into the lack of fish. You are going to go look for a restaurant; and if there is no restaurants, well, then you will head somewhere else. That is all I wanted to comment on.

MR. CUPKA: Thank you for your comments; and you are right, pogie is an important food fish.

MR. FORD: Pogies, menhaden; up in New York we called them bunker. When I first came here – I moved here about 13 years ago – I always called them bunker and nobody knew what I was talking about down here. Bunker; what are bunker? Then they said pogies, and we call them menhaden up in New York as well. The best fishing I ever had in New York under the Verrazano Bridge, when I was 16, was one year the pogies made it up the Hudson River. I was with my dad under the Verrazano Bridge, and all of a sudden we saw miles of pogies. Boy, did we catch the fish. We caught striped bass and bluefish all summer. Then they disappeared and the pogies never came back under the Verrazano, at least while I was fishing there. The fishing went back to catching hackleheads and eels, because they follow the bait.

MR. CUPKA: Like I was saying, they are an important food fish and are managed primarily by the Atlantic States Marine Fisheries Commission, which are states from Maine to Florida, because it is mostly an inshore fish. Many years ago they were banned here in South Carolina, and I'll tell you why; because there was a state senator, Senator Drummond, who was fishing off Georgetown and one of those pogie boats set their runaround net around Senator Drummond. Well, he went back and had a law passed saying that they couldn't fish for menhaden with runaround nets in state waters. That was many years ago. At one time there were a lot of factories, even in this state that processed menhaden. We used to have one down in Johns Island, and another one further down toward Beaufort, Lady's Island and all. But over the years they've all gone out of business and have been consolidated. Now the big one is out of Reedville, Virginia.

MR. FORD: That is the one I'm talking about.

MR. CUPKA: Yes, and then there is one in the Gulf that also works out of Pascagoula down there. But they are important fish, and the Atlantic States Marine Fisheries Commission within the last couple years have started paying more attention to them. What they are trying to do is limit the harvest of them, because they are so important as food fish for striped bass, bluefish and various fish.

MR. FORD: Absolutely. If you don't have something for the fish to eat, they are going to go to Alaska. They're going to go to Florida. They are going to go wherever they can find food. If they wipe out the bait, what is going to keep them here? The water in Long Bay is surprisingly devoid of fish life in Long Bay. I mean, for such a big expanse it is devoid. You watch your screen, you don't see anything. You are watching your screen; you don't see the bait balls anymore. There is nothing for the fish to eat.

I was just fishing in Biloxi in the kingfish tournament. The bait fish are everywhere, and the kings are there; big kings. One of the records came out of there two years ago out of Ocean Isle guys that I know, in Biloxi. But when you go out and you throw a cast net in Biloxi, you fill it up in a minute and there is just an abundance of bait. That is why they have the tournament; they have the national tournaments there. You are going to go where the fish are. Long Bay, there are not a lot of pogies in Long Bay, they are just not here anymore. You see little and it is a shame. I think if they bring the bait fish back, they wouldn't have to worry so much about quotas and what is happening with the kingfish. They are so worried; well, they didn't catch that many this year, so they must be in trouble. They are not necessarily in trouble; they are somewhere else. They are not going to stick around.

MR. CUPKA: Like I say, Atlantic States is paying more attention to the importance of bait fish and trying to reduce the directed harvest on them so they will be available to provide food for

these game fish. I know what it used to be like. I worked for South Carolina DNR for 35 years, and I saw what happened with pogies in this state; but they were outlawed, the fishing for them. Senator Drummond did outlaw them years ago.

MR. SEBASTIAN: The only one I'm concerned with is the black sea bass trap, and it is currently closed down for, what, like a five-month period or something along those lines? I come from the recreational headboat/charterboat fishing. I don't mind letting those guys trap, that is fine, but I think that if not now, at some point in time there should be some type of delineation, a distance where they would have to stay maybe offshore to protect the headboat charter fisherman; because if they've got a 12-inch limit and we've got a 13-inch limit, we can catch almost the same poundage of fish roughly. They are trapping those areas right around the inlet where the charter/headboat guys have got to make their money. By the time we hit our open season, man, there are no 13-inch fish to be found. If you can kill two birds with one stone, hey, save the whales, save the headboat/charter fishing guys and let us make some money.

Push them to 20 miles offshore or something along that depth, 15 miles off. Just give us that 10-mile, 15-mile bump; where when our season comes in, we'll be able to make some money and our customers, which number in the thousands to tens of thousands versus 32 trappers, will be able to go out and have a really good time and enjoy themselves and come down and spend millions and millions and millions and millions and millions and millions of dollars in South Carolina, because that is where the real money is and not 32 guys making money off traps. That is pretty much about it.

MR. SHUMAN: I'm a recreational charter captain. On that amendment with the bass pots, the only thing I would suggest was to have a depth or a mileage; you know, 15 to 20 miles before – in other words, they can't set them inside of that. I take a lot of families in Myrtle Beach here, and the kids love catching those things. But when you have somebody out there setting pots and scooping up all the things, it is just not good. Like Cam had said, all of mine are vacation people. They come down here and they have a blast. They have a blast out in the water. I teach them about fishing and the different fish that are out there, and it is a good thing. I want to keep it going. Thanks.

Transcribed By:
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January 2014



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 4055 FABER PLACE DRIVE, SUITE 201
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PUBLIC COMMENT ATTENDANCE RECORD

Public Hearing and Scoping

LOCATION OF MEETING (CITY & STATE) North Myrtle Beach, SC	DATE OF MEETING January 21, 2014
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EMAIL ADDRESS schousegop@aol.com	
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YOUR NAME (PLEASE PRINT) Kenny Moore	TELEPHONE NUMBER (& AREA CODE) 843-446-5777
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YOUR NAME (PLEASE PRINT) Dean Foster	TELEPHONE NUMBER (& AREA CODE) 843-735-5070
MAILING ADDRESS (PLEASE INCLUDE STREET OR BOX NO., CITY, STATE, & ZIP CODE) P.O. Box 31046 Charleston, SC 29417	
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BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE) Foster Associates / PEW Charitable Trusts	

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YOUR NAME (PLEASE PRINT) Chris STEVENS	TELEPHONE NUMBER (& AREA CODE) (843) 281-9159
MAILING ADDRESS (PLEASE INCLUDE STREET OR BOX NO., CITY, STATE, & ZIP CODE) 4219 ELLIS DR. LITTLE RIVER, S.C 29566	
EMAIL ADDRESS	
BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE) HURRICANE FLEET	
CHECK IF YOU WISH TO MAKE A STATEMENT	<p>For Public Hearing: _____</p> <p>For Scoping: _____</p> <p><input type="checkbox"/> Snapper Grouper Amendment 29 (ORCS & Triggerfish)</p> <p><input type="checkbox"/> Mackerel Framework Amendment 1 (Spanish Mackerel)</p> <p><input type="checkbox"/> Snapper Grouper Reg Amendment 16 (bsb pots)</p> <p><input type="checkbox"/> Mackerel Amendment 24 (allocations)</p> <p><input type="checkbox"/> Mackerel Amendment 26 (permits)</p>



SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL
 4055 FABER PLACE DRIVE, SUITE 201
 NORTH CHARLESTON, SOUTH CAROLINA 29405

PUBLIC COMMENT ATTENDANCE RECORD

Public Hearing and Scoping

LOCATION OF MEETING (CITY & STATE) North Myrtle Beach, SC	DATE OF MEETING January 21, 2014
YOUR NAME (PLEASE PRINT) Tom Swetzel	TELEPHONE NUMBER (& AREA CODE) 843-222-7456
MAILING ADDRESS (PLEASE INCLUDE STREET OR BOX NO., CITY, STATE, & ZIP CODE) PO Box 1311, Murrells Inlet, SC 29576	
EMAIL ADDRESS tom@swetzel.com	
BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE) Council for Sustainable Fishing	
CHECK IF YOU WISH TO MAKE A STATEMENT	<p>For Public Hearing: _____</p> <p>For Scoping: _____</p> <p><input type="checkbox"/> Snapper Grouper Amendment 29 (ORCS & Triggerfish)</p> <p><input type="checkbox"/> Mackerel Framework Amendment 1 (Spanish Mackerel)</p> <p><input type="checkbox"/> Snapper Grouper Reg Amendment 16 (bsb pots)</p> <p><input type="checkbox"/> Mackerel Amendment 24 (allocations)</p> <p><input type="checkbox"/> Mackerel Amendment 26 (permits)</p>



SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL
 4055 FABER PLACE DRIVE, SUITE 201
 NORTH CHARLESTON, SOUTH CAROLINA 29405

PUBLIC COMMENT ATTENDANCE RECORD

Public Hearing and Scoping

LOCATION OF MEETING (CITY & STATE)

North Myrtle Beach, SC

DATE OF MEETING

January 21, 2014

YOUR NAME (PLEASE PRINT)

John Tinker

TELEPHONE NUMBER (& AREA CODE)

843 424-9320

MAILING ADDRESS (PLEASE INCLUDE STREET OR BOX NO., CITY, STATE, & ZIP CODE)

550 HAMMOCK AVE, Murrells Inlet, SC, 29526

EMAIL ADDRESS

john.tinkermi@gmail.com

BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE)

CHECK IF YOU WISH TO MAKE A STATEMENT For Public Hearing:

- Snapper Grouper Amendment 29 (ORCS & Triggerfish)
 Mackerel Framework Amendment 1 (Spanish Mackerel)

For Scoping:

- Snapper Grouper Reg Amendment 16 (bsb pots)
 Mackerel Amendment 24 (allocations)
 Mackerel Amendment 26 (permits)



SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL
 4055 FABER PLACE DRIVE, SUITE 201
 NORTH CHARLESTON, SOUTH CAROLINA 29405

PUBLIC COMMENT ATTENDANCE RECORD

Public Hearing and Scoping

LOCATION OF MEETING (CITY & STATE)

North Myrtle Beach, SC

DATE OF MEETING

January 21, 2014

YOUR NAME (PLEASE PRINT)

TOM KEEGAN

TELEPHONE NUMBER (& AREA CODE)

MAILING ADDRESS (PLEASE INCLUDE STREET OR BOX NO., CITY, STATE, & ZIP CODE)

c/o CONGRESSMAN TOM RICE

EMAIL ADDRESS

2411 NORTH OAK ST, MYRTLE BEACH

BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE)

29577

CHECK IF YOU WISH TO MAKE A STATEMENT For Public Hearing:

- Snapper Grouper Amendment 29 (ORCS & Triggerfish)
 Mackerel Framework Amendment 1 (Spanish Mackerel)

For Scoping:

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 Mackerel Amendment 26 (permits)



SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL
 4055 FABER PLACE DRIVE, SUITE 201
 NORTH CHARLESTON, SOUTH CAROLINA 29405

PUBLIC COMMENT ATTENDANCE RECORD

Public Hearing and Scoping

LOCATION OF MEETING (CITY & STATE) **North Myrtle Beach, SC** DATE OF MEETING **January 21, 2014**

YOUR NAME (PLEASE PRINT) **BARBARA MACKINNON** TELEPHONE NUMBER (& AREA CODE)

MAILING ADDRESS (PLEASE INCLUDE STREET OR BOX NO., CITY, STATE, & ZIP CODE)
323 59TH AVE N

EMAIL ADDRESS **NORTH MYRTLE BEACH, SC 29582**

BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE)

CHECK IF YOU WISH TO MAKE A STATEMENT

For Public Hearing:

Snapper Grouper Amendment 29 (ORCS & Triggerfish)

Mackerel Framework Amendment 1 (Spanish Mackerel)

For Scoping:

Snapper Grouper Reg Amendment 16 (bsb pots)

Mackerel Amendment 24 (allocations)

Mackerel Amendment 26 (permits)



SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL
 4055 FABER PLACE DRIVE, SUITE 201
 NORTH CHARLESTON, SOUTH CAROLINA 29405

PUBLIC COMMENT ATTENDANCE RECORD

Public Hearing and Scoping

LOCATION OF MEETING (CITY & STATE) **North Myrtle Beach, SC** DATE OF MEETING **January 21, 2014**

YOUR NAME (PLEASE PRINT) **D. GRANT MACKINNON** TELEPHONE NUMBER (& AREA CODE) **843-249-3454**

MAILING ADDRESS (PLEASE INCLUDE STREET OR BOX NO., CITY, STATE, & ZIP CODE)
323 59TH AVE N., NMB, SC. 29582

EMAIL ADDRESS **MACKINNON@FRONTIER.COM**

BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE)

CHECK IF YOU WISH TO MAKE A STATEMENT

For Public Hearing:

Snapper Grouper Amendment 29 (ORCS & Triggerfish)

Mackerel Framework Amendment 1 (Spanish Mackerel)

For Scoping:

Snapper Grouper Reg Amendment 16 (bsb pots)

Mackerel Amendment 24 (allocations)

Mackerel Amendment 26 (permits)



SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL
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 NORTH CHARLESTON, SOUTH CAROLINA 29405

PUBLIC COMMENT ATTENDANCE RECORD

Public Hearing and Scoping

LOCATION OF MEETING (CITY & STATE) North Myrtle Beach, SC		DATE OF MEETING January 21, 2014
YOUR NAME (PLEASE PRINT) Dan Aves		TELEPHONE NUMBER (& AREA CODE)
MAILING ADDRESS (PLEASE INCLUDE STREET OR BOX NO., CITY, STATE, & ZIP CODE) 14 Bayberry Cir		
EMAIL ADDRESS Carolina shores, NC 28467		
BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE) NA Seacoast anglers		
CHECK IF YOU WISH TO MAKE A STATEMENT		
For Public Hearing: <input type="checkbox"/> Snapper Grouper Amendment 29 (ORCS & Triggerfish) <input type="checkbox"/> Mackerel Framework Amendment 1 (Spanish Mackerel)		For Scoping: <input type="checkbox"/> Snapper Grouper Reg Amendment 16 (bsb pots) <input type="checkbox"/> Mackerel Amendment 24 (allocations) <input type="checkbox"/> Mackerel Amendment 26 (permits)



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PUBLIC COMMENT ATTENDANCE RECORD

Public Hearing and Scoping

LOCATION OF MEETING (CITY & STATE) North Myrtle Beach, SC		DATE OF MEETING January 21, 2014
YOUR NAME (PLEASE PRINT) Melissa Morgan		TELEPHONE NUMBER (& AREA CODE)
MAILING ADDRESS (PLEASE INCLUDE STREET OR BOX NO., CITY, STATE, & ZIP CODE) 894 Sandridge Rd Little River SC 29566		
EMAIL ADDRESS Morganmelissa35@yahoo.com		
BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE) Little River Fish House		
CHECK IF YOU WISH TO MAKE A STATEMENT		
For Public Hearing: <input checked="" type="checkbox"/> Snapper Grouper Amendment 29 (ORCS & Triggerfish) <input checked="" type="checkbox"/> Mackerel Framework Amendment 1 (Spanish Mackerel)		For Scoping: <input checked="" type="checkbox"/> Snapper Grouper Reg Amendment 16 (bsb pots) <input checked="" type="checkbox"/> Mackerel Amendment 24 (allocations) <input checked="" type="checkbox"/> Mackerel Amendment 26 (permits)



SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL
4055 FABER PLACE DRIVE, SUITE 201
NORTH CHARLESTON, SOUTH CAROLINA 29405

PUBLIC COMMENT ATTENDANCE RECORD

Public Hearing and Scoping

LOCATION OF MEETING (CITY & STATE)

North Myrtle Beach, SC

DATE OF MEETING

January 21, 2014

YOUR NAME (PLEASE PRINT)

Addis McGinnis

TELEPHONE NUMBER (& AREA CODE)

843-742-7056

MAILING ADDRESS (PLEASE INCLUDE STREET OR BOX NO., CITY, STATE, & ZIP CODE)

894 Sandridge Rd Little River SC 29566

EMAIL ADDRESS

addismcginnis@yahoo.com

BUSINESS OR ORGANIZATION YOU REPRESENT (IF APPLICABLE)

Little River Fish House

CHECK IF YOU WISH
TO MAKE A
STATEMENT

For Public Hearing:

Snapper Grouper Amendment 29 (ORCS & Triggerfish)

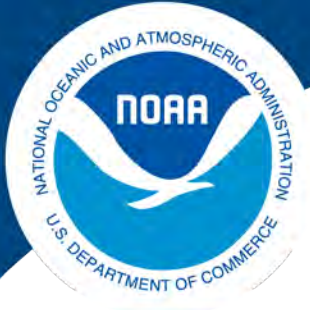
Mackerel Framework Amendment 1 (Spanish Mackerel)

For Scoping:

Snapper Grouper Reg Amendment 16
(bsb pots)

Mackerel Amendment 24 (allocations)

Mackerel Amendment 26 (permits)



NOAA
FISHERIES

LAPP/DM
Southeast
Regional
Office

Potential New Alternatives for Regulatory Amendment 16

SAFMC Meeting
June 2015
Key West, FL

ALTERNATIVE 11: Hybrid of Alternatives 4 and 8a

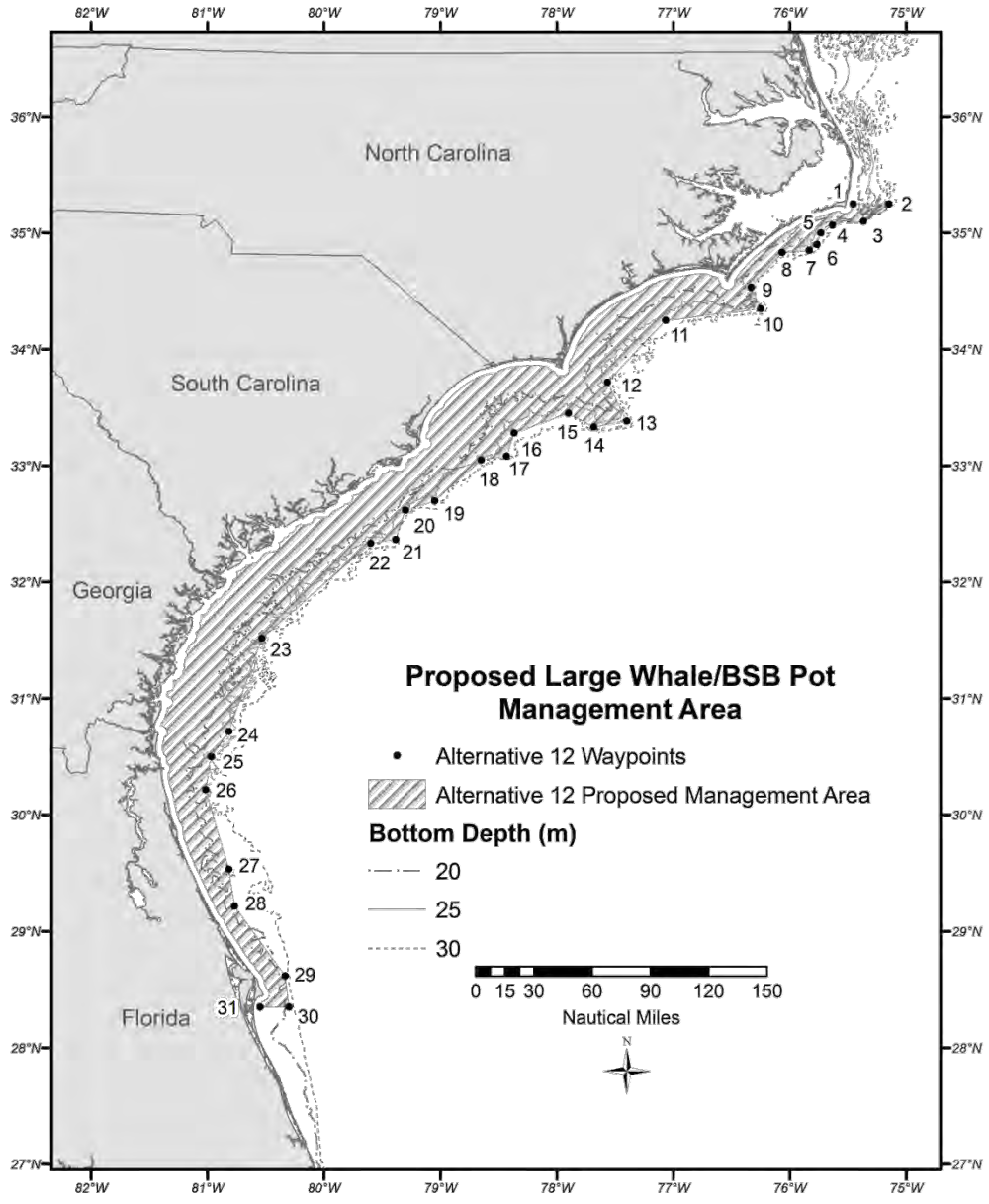
- NOVEMBER 1-30 and APRIL 1-30: Alternative 8a
- DECEMBER 1 – MARCH 31: Alternative 4
- *Rationale*: To provide more protection than Alternative 8a during time period calves are most prevalent in the SEUS while still affording fishing opportunities for pot gear during the winter.
- Pro: High level of protection Dec-Mar for calving whales
- Con: Dynamic closure with changing spatial boundaries

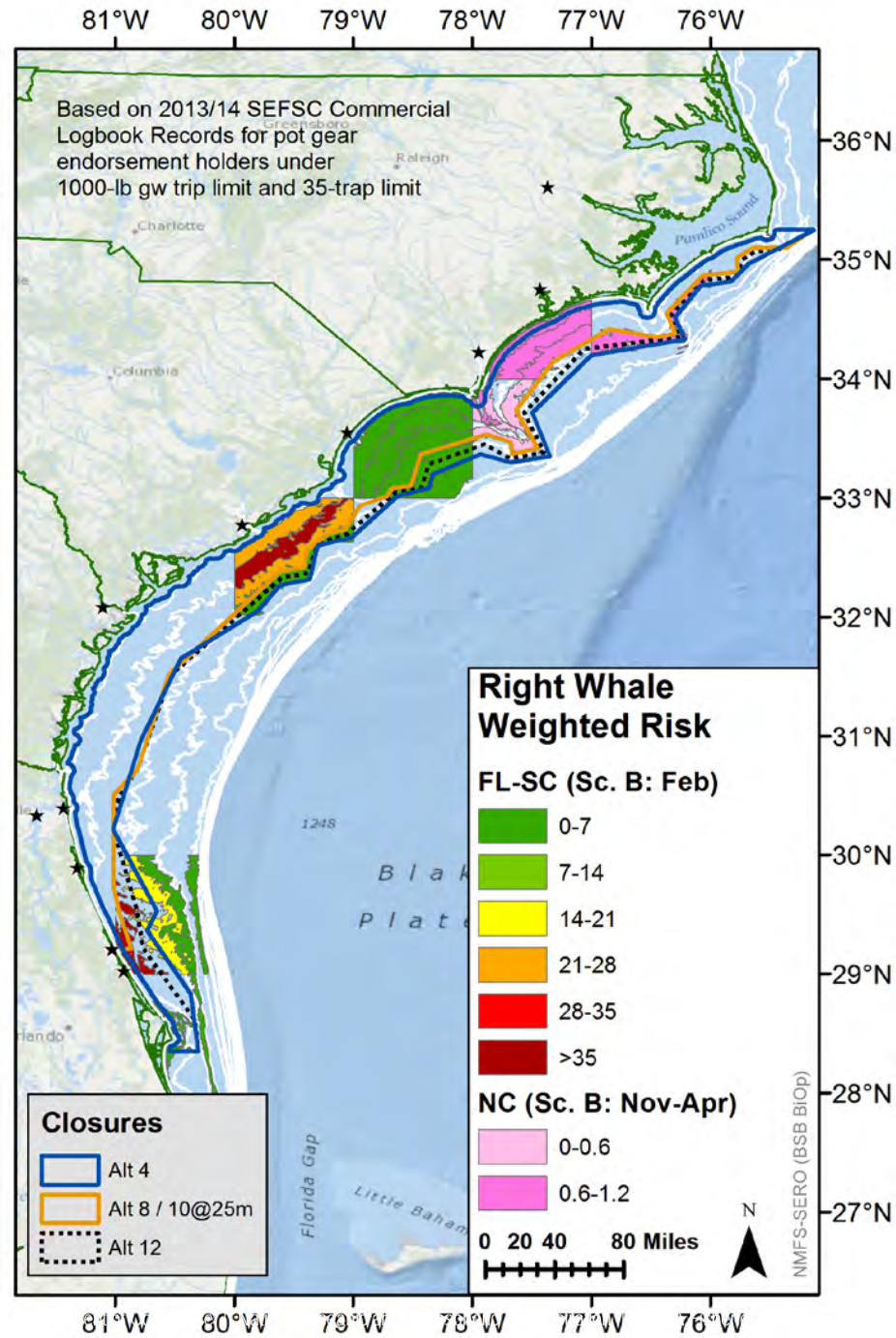
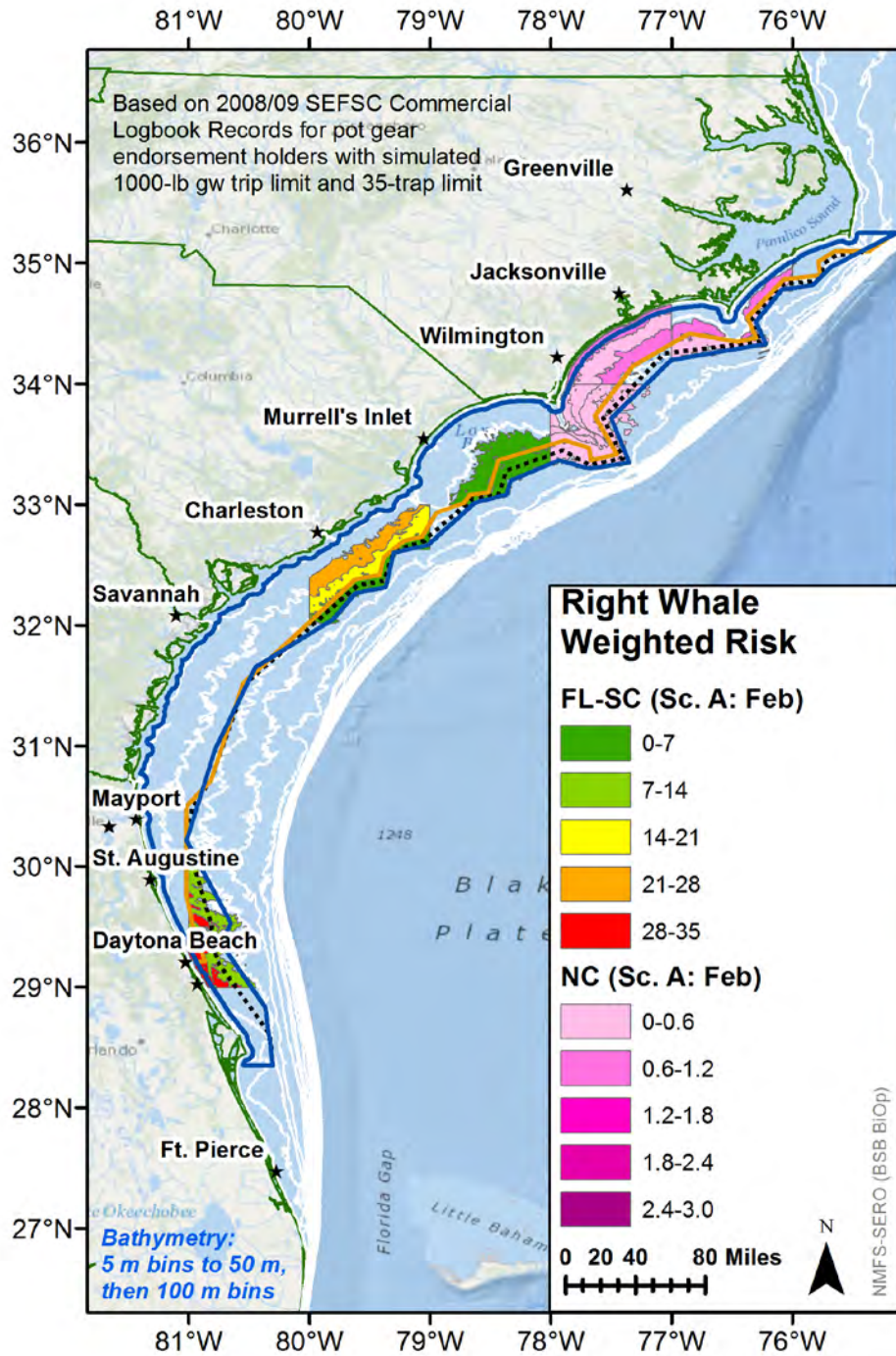
ALTERNATIVE 12: Midway between Alts 4 and 8a

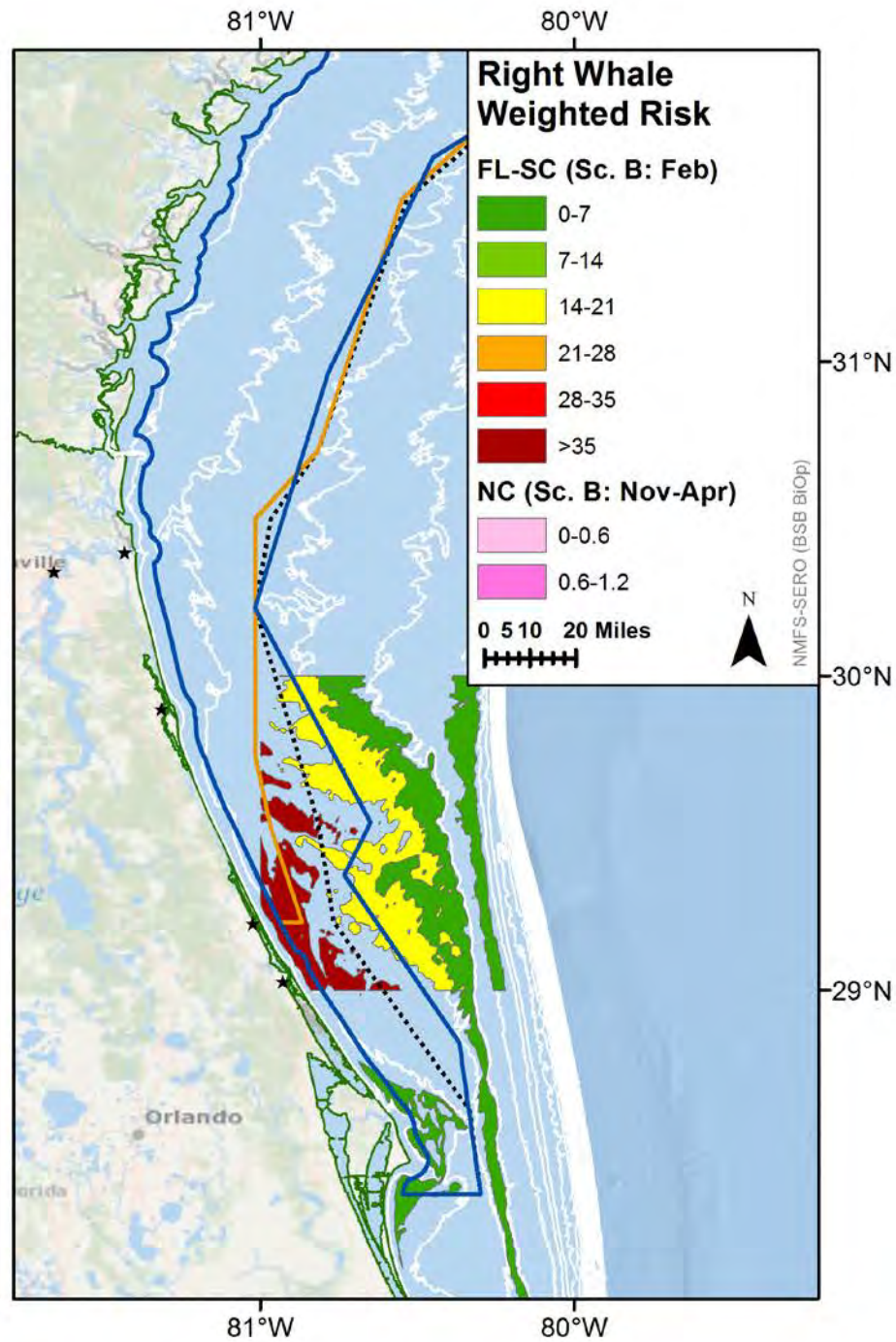
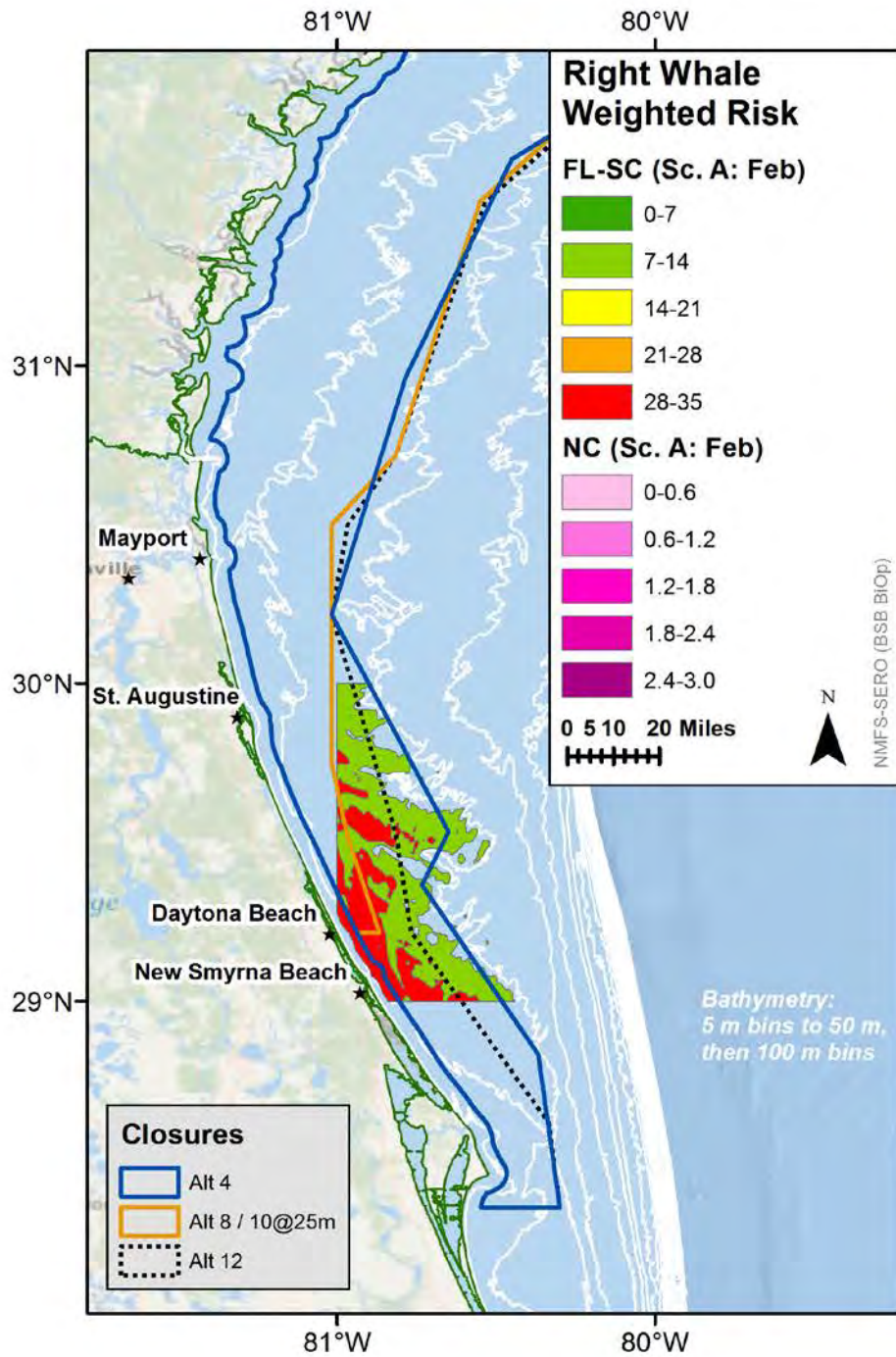
- NOVEMBER 1 – APRIL 30
- *Rationale:* To provide more protection than Alternative 8a during time period calves are most prevalent in the SEUS while still affording fishing opportunities for pot gear during the winter.
- Pro: Stable throughout winter, no shifting boundaries
- Con: Slightly less protective during Dec-Mar period

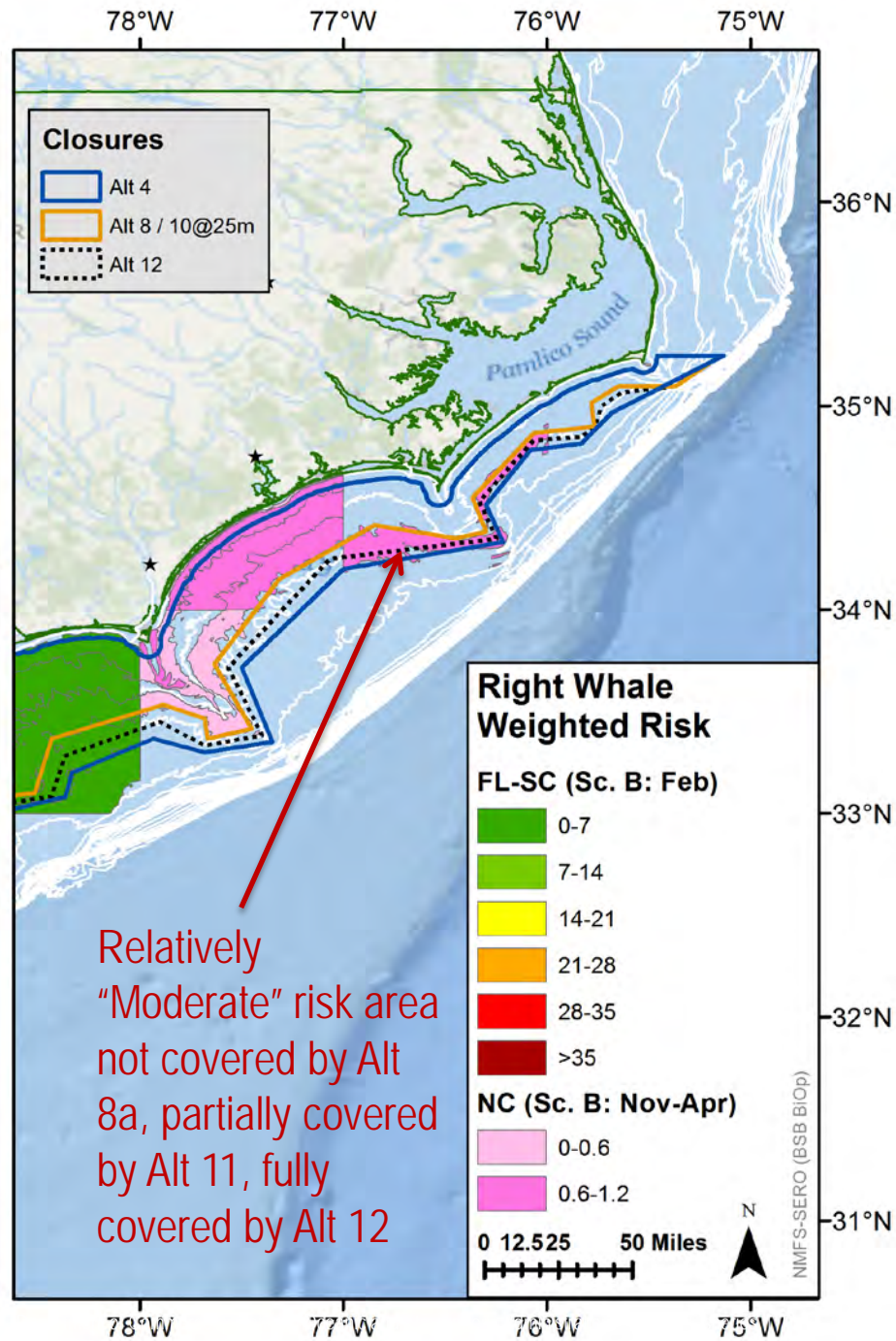
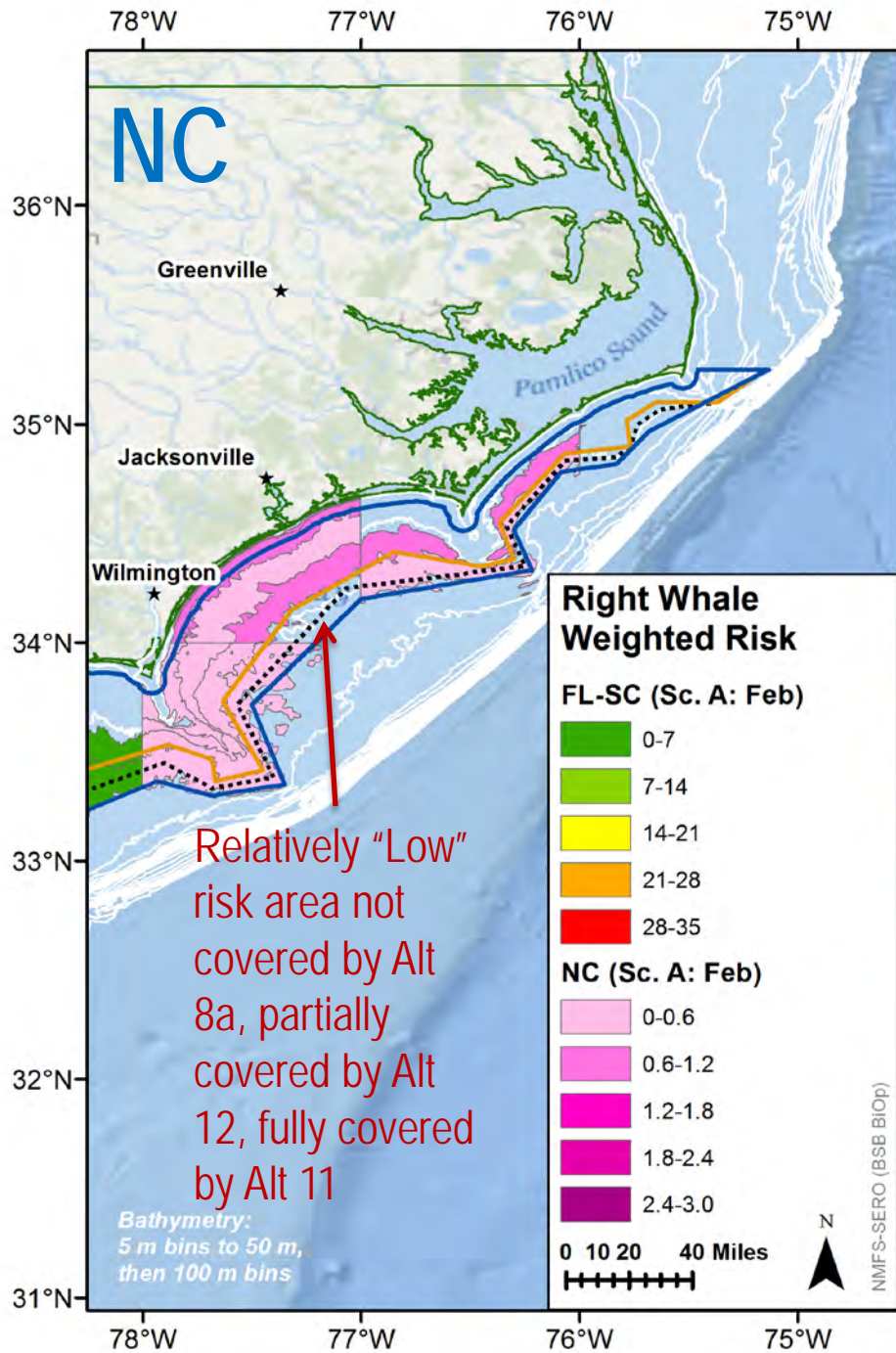
Alternative 12

- Midway between Alternative 4 and Alternative 8
- Roughly follows 27 m contour









Projected Closure Dates

- Alternative 4: Dec 7-30
- Alternative 8a: Oct 20 – Dec 12
- Alternative 11: Dec 3-28
- Alternative 12: Nov 21 – Dec 23

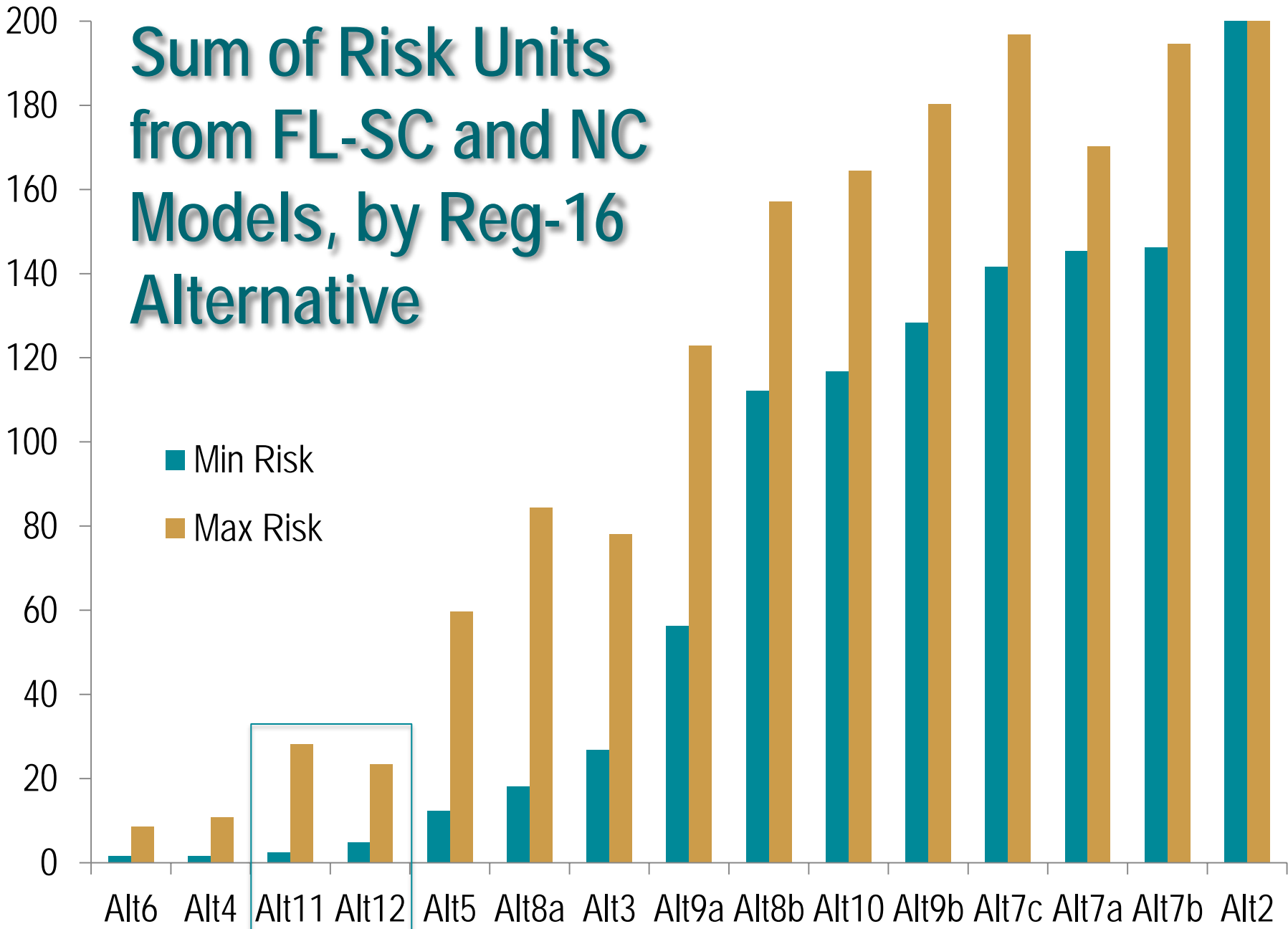
Relative Risk of Reg-16 Alternatives

NORTH CAROLINA			SOUTH CAROLINA-FLORIDA		
NC RISK	MIN	MAX	FL-SC RISK	MIN	MAX
Alt 2	100	100	Alt 2	100	100
Alt 3	10	26	Alt 3	16	52
Alt 4	2	8	Alt 4	0	3
Alt 5	1	2	Alt 5	11	58
Alt 6	2	8	Alt 6	0	0
Alt 7a	69	74	Alt 7a	77	96
Alt 7b	77	89	Alt 7b	70	106
Alt 7c	75	97	Alt 7c	67	100
Alt 8a	6	26	Alt 8a	12	58
Alt 8b	51	68	Alt 8b	61	89
Alt 9a	26	51	Alt 9a	30	72
Alt 9b	61	87	Alt 9b	67	94
Alt 10	55	75	Alt 10	62	89
Alt 11	2	15	Alt 11	0	13
Alt 12	3	15	Alt 12	2	9

Sum of Risk Units from FL-SC and NC Models, by Reg-16 Alternative

SUM OF RISK UNITS

■ Min Risk
■ Max Risk

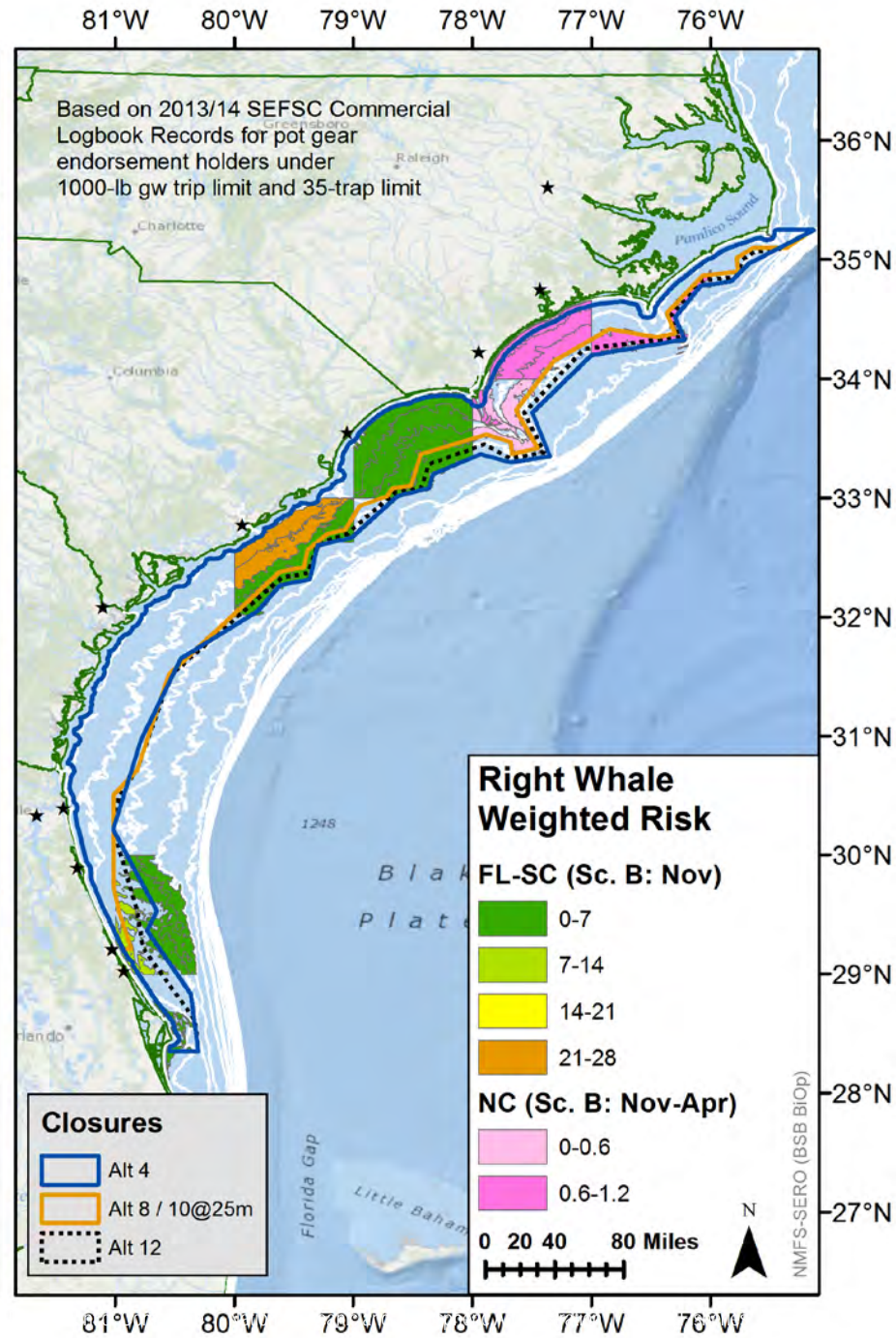
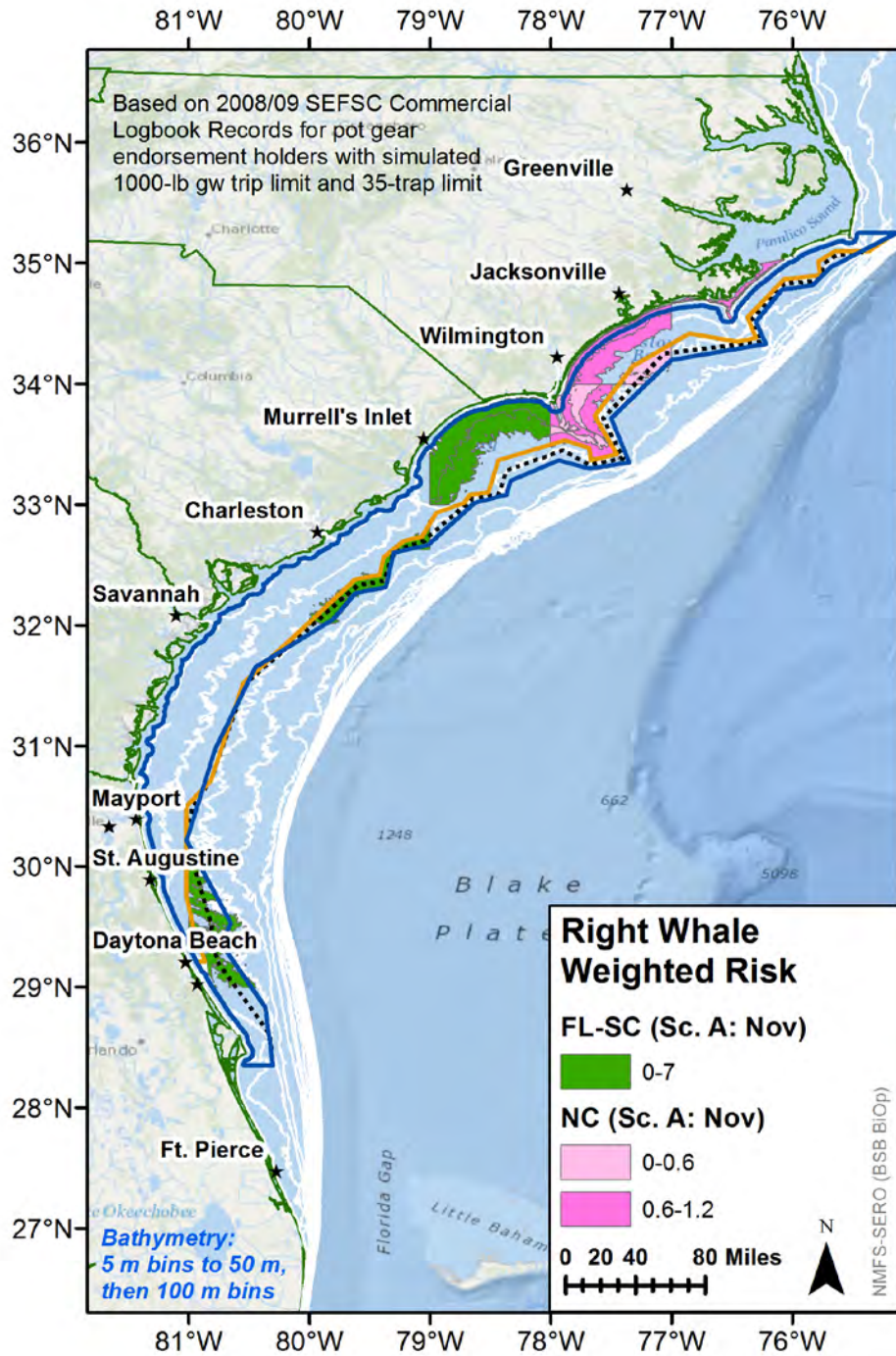


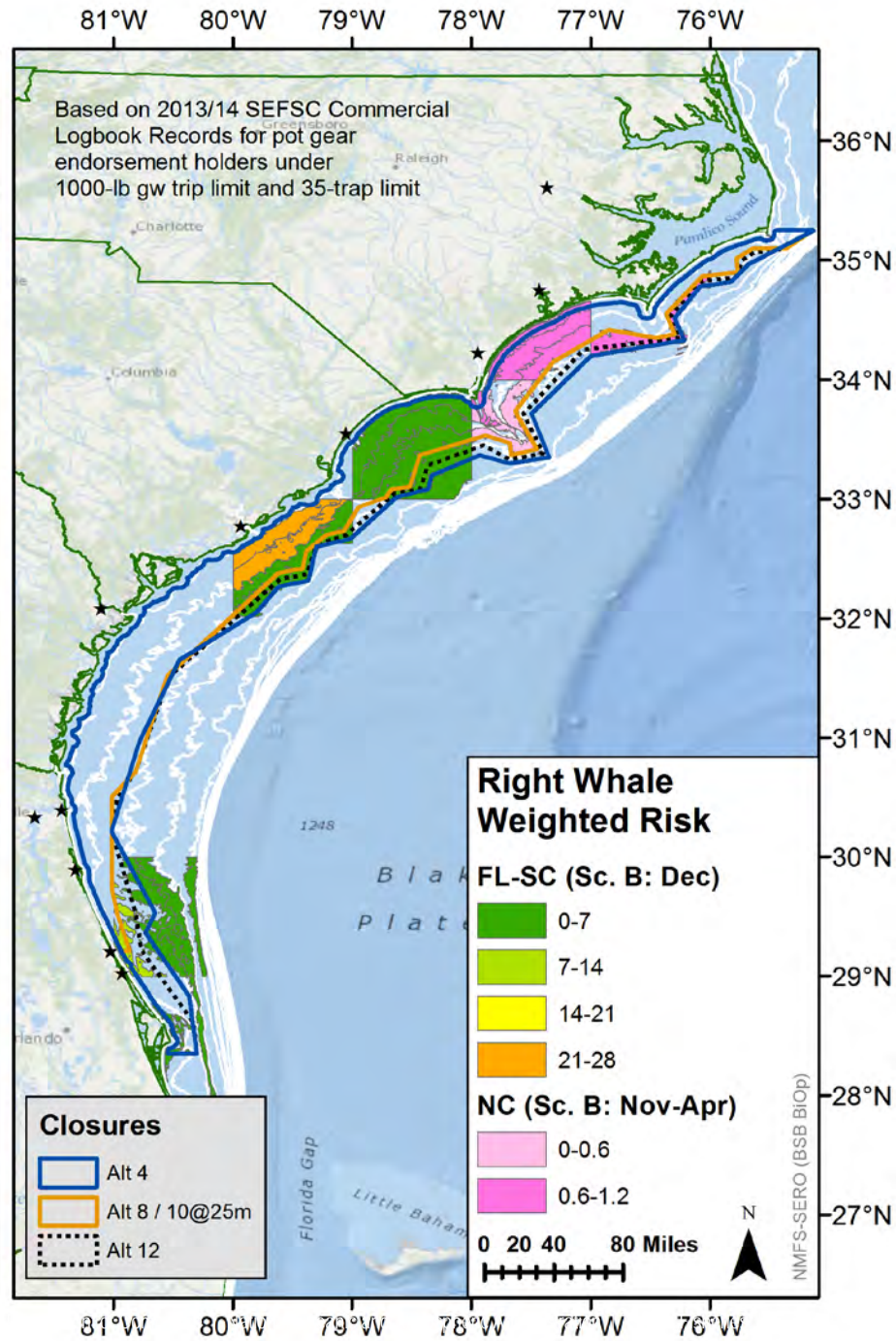
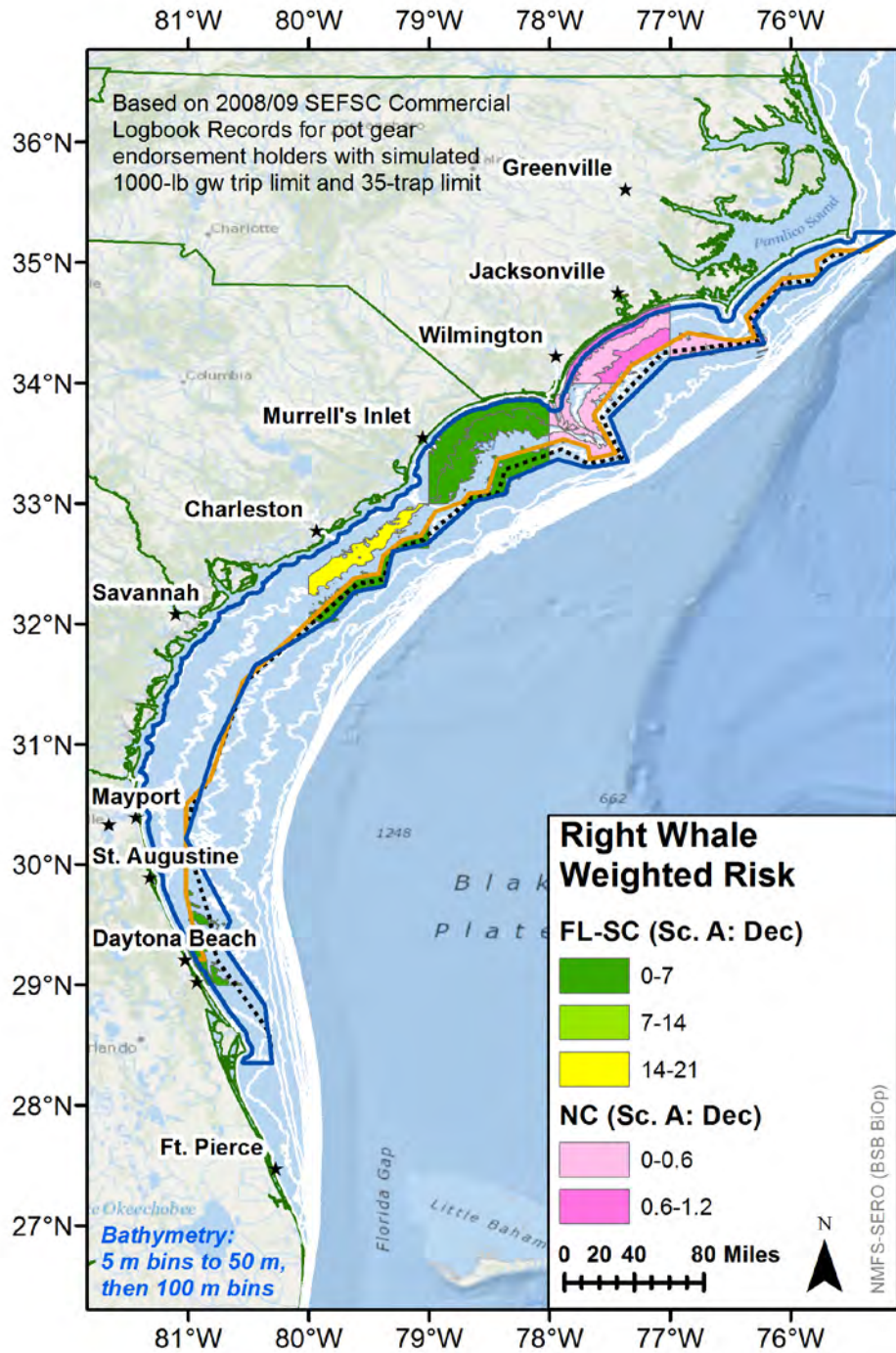
NARW Protection	Alternative
Most Protective	1: no relative risk of entanglement (0 RRU)
	6: low increase in relative risk off NC (+2-8 RRU); no additional risk off FL-SC (0 RRU).
	4: low increase in relative risk off NC (+2-8 RRU); low increase in relative risk off FL-SC (+0-3 RRU).
	11: low increase in relative risk off NC (+2-15 RRU); low increase in relative risk off FL-SC (+0-13 RRU).
	12: low increase in relative risk off NC (+3-15 RRU); low increase in relative risk off FL-SC (+2-9 RRU).
	5: low increase in relative risk off NC (+1-2 RRU); low to high increase in relative risk off FL-SC (+11-58 RRU).
	3: low to moderate increase in relative risk off NC (+10-26 RRU); low to high increase in relative risk off FL-SC (+16-52 RRU).
	8a: low to moderate increase in relative risk off NC (+13-36 RRU); low to high increase in relative risk off FL-SC (+13-64 RRU).
	9a: moderate to high increase in relative risk off NC (+26-51 RRU); moderate to high increase in relative risk off FL-SC (+30-72 RRU).
	7a: high increase in relative risk off NC (+69-74 RRU); very high increase in relative risk off FL-SC (+77-96 RRU).
	8b: high increase in relative risk off NC (+51-68 RRU); high to very high increase in relative risk off FL-SC (+61-89 RRU).
	10: high to very high increase in relative risk off NC (+55-75 RRU); high to very high increase in relative risk off FL-SC (+62-89 RRU).
	9b: high to very high increase in relative risk off NC (+61-87 RRU); high to very high increase in relative risk off FL-SC (+67-94 RRU).
	7c: high to very high increase in relative risk off NC (+75-97 RRU) and off FL-SC (+67-100 RRU).
	7b: very high increase in relative risk off NC (+77-89 RRU); high to very high increase in relative risk off FL-SC (+70-106 RRU).
Least Protective	2: very high increase in relative risk off NC (+100 RRU over status quo) and off FL-SC (+100 RRU).
Risk Classification	1-25 RRU = low, 26-50 RRU = moderate, 51-75 RRU= high, 76-100+ RRU = very high

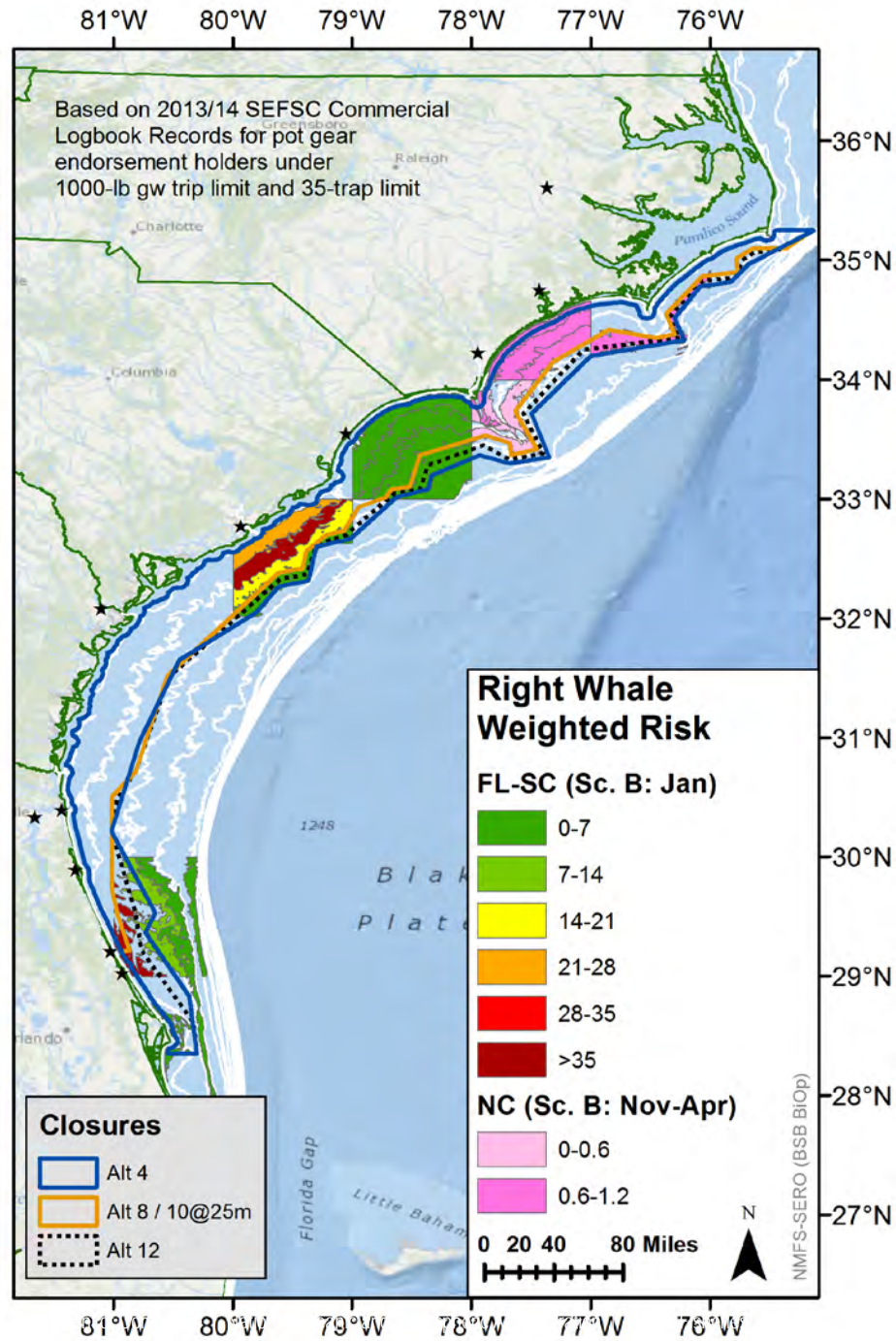
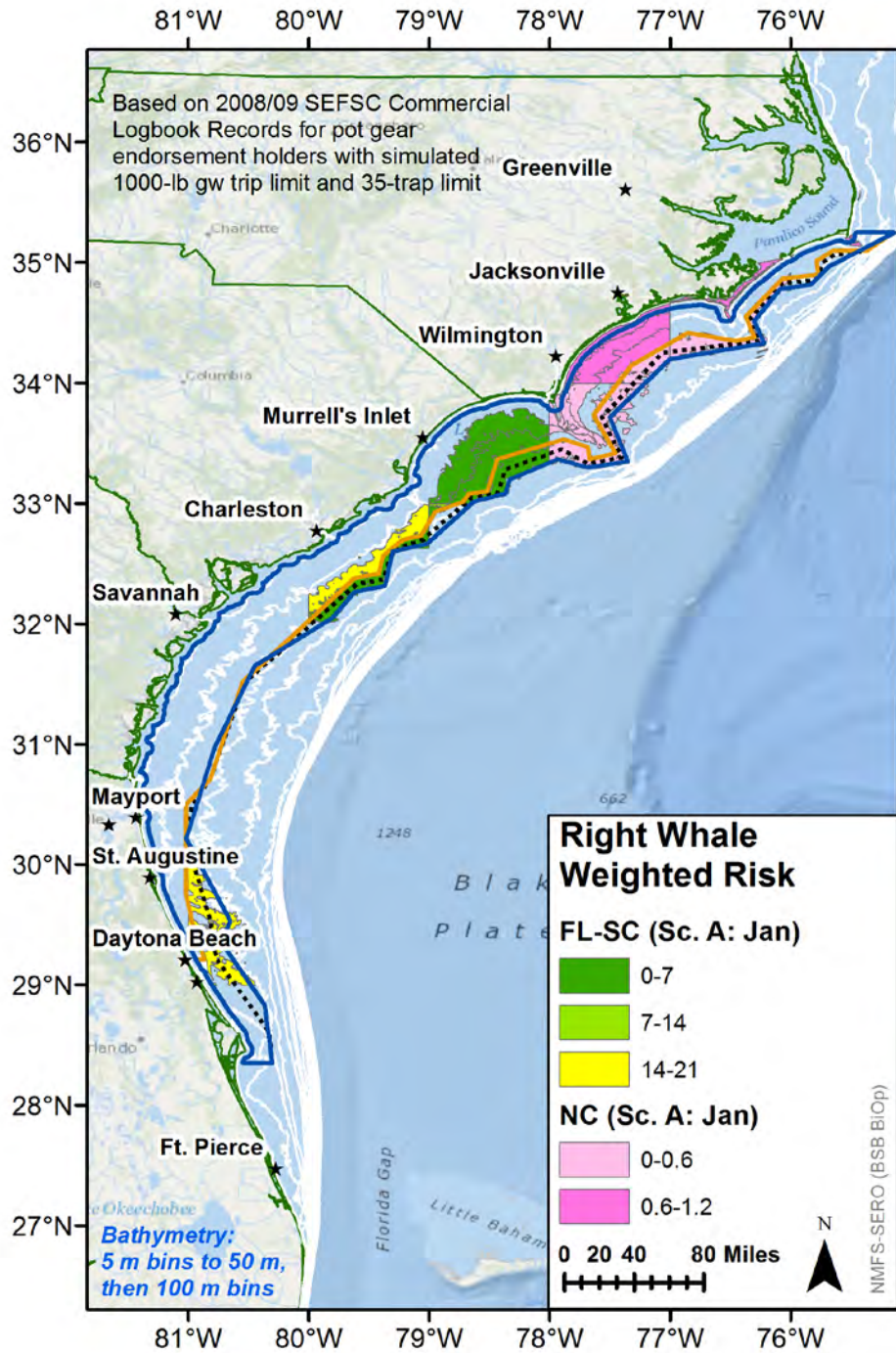
QUESTIONS?

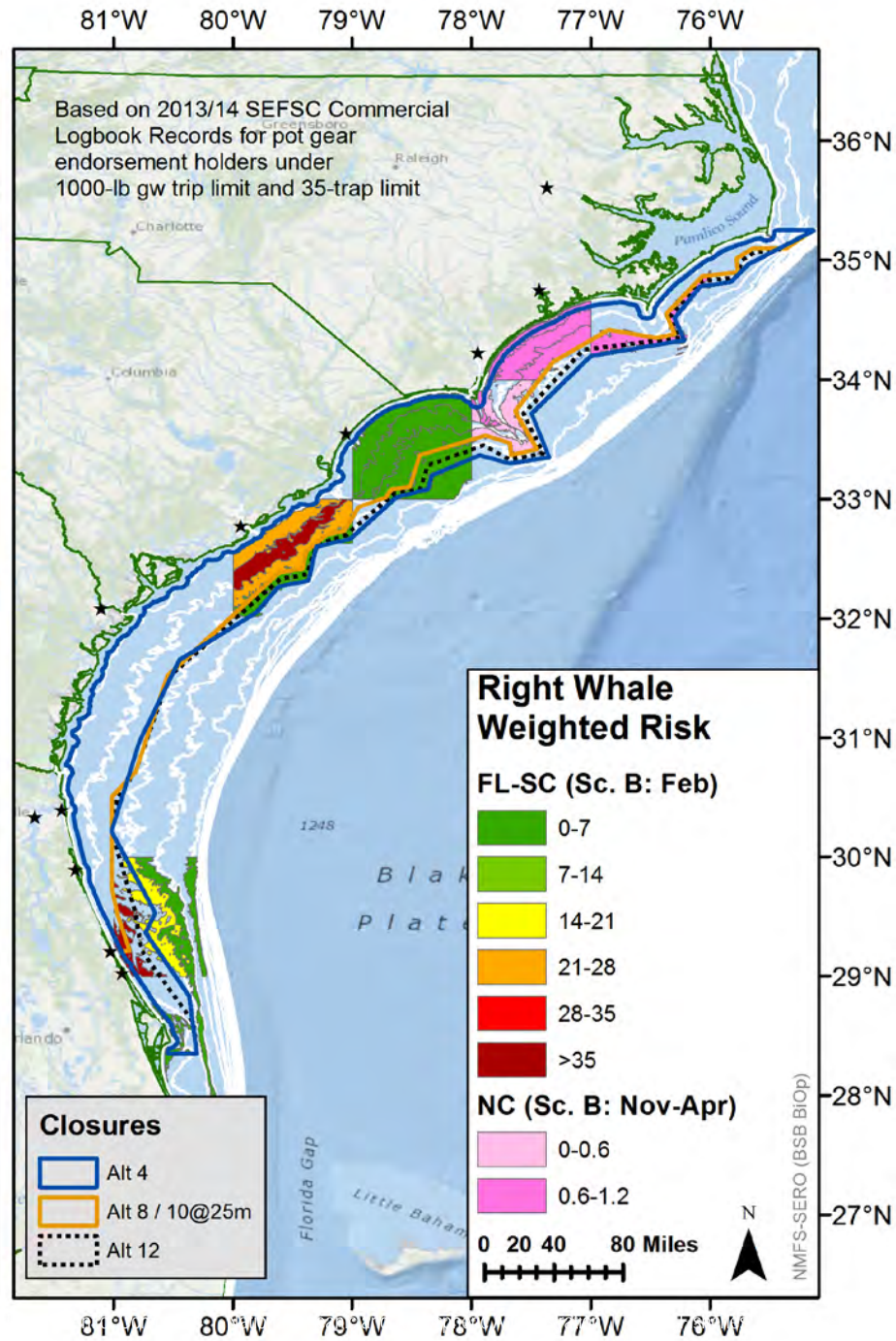
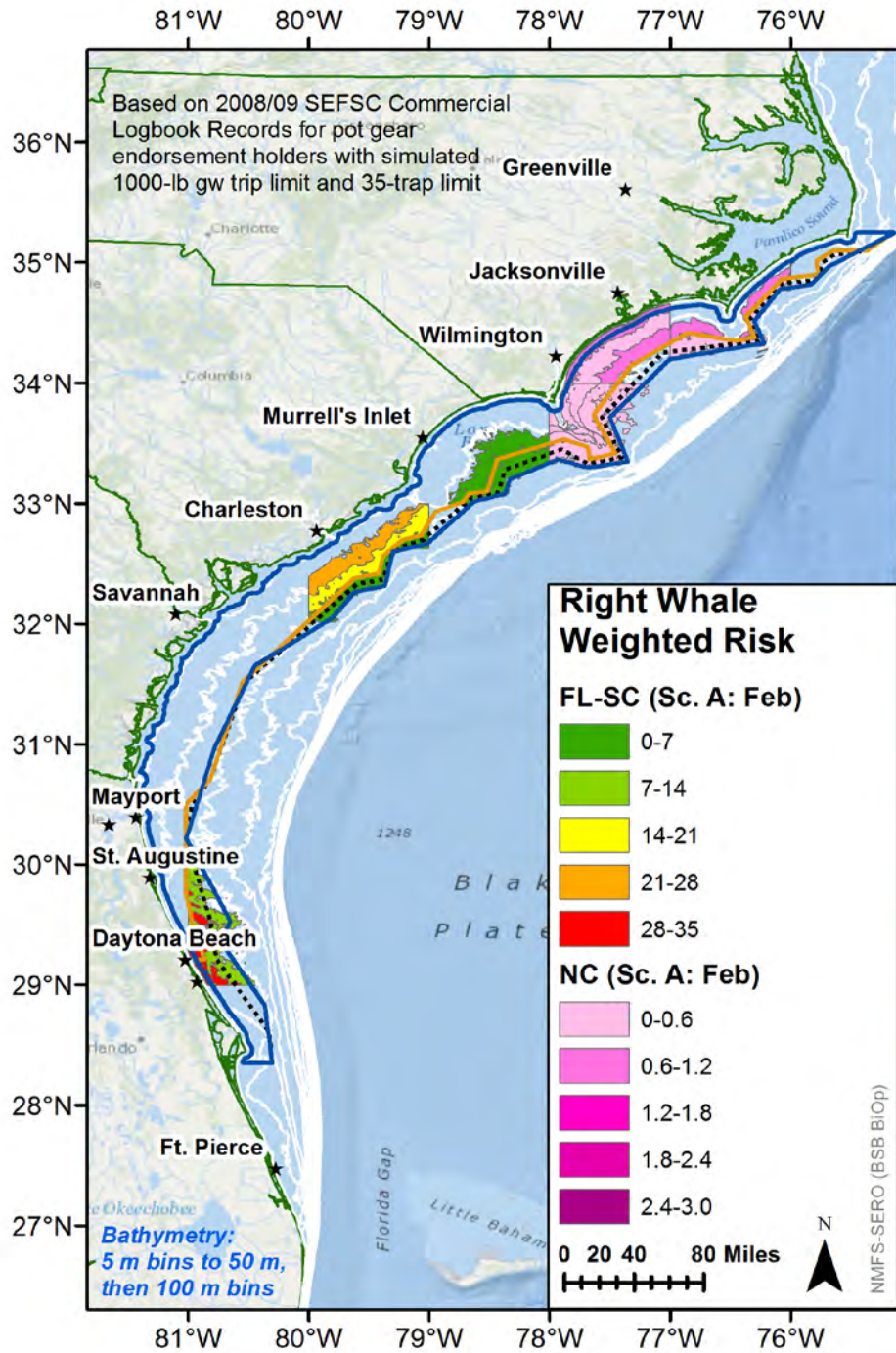


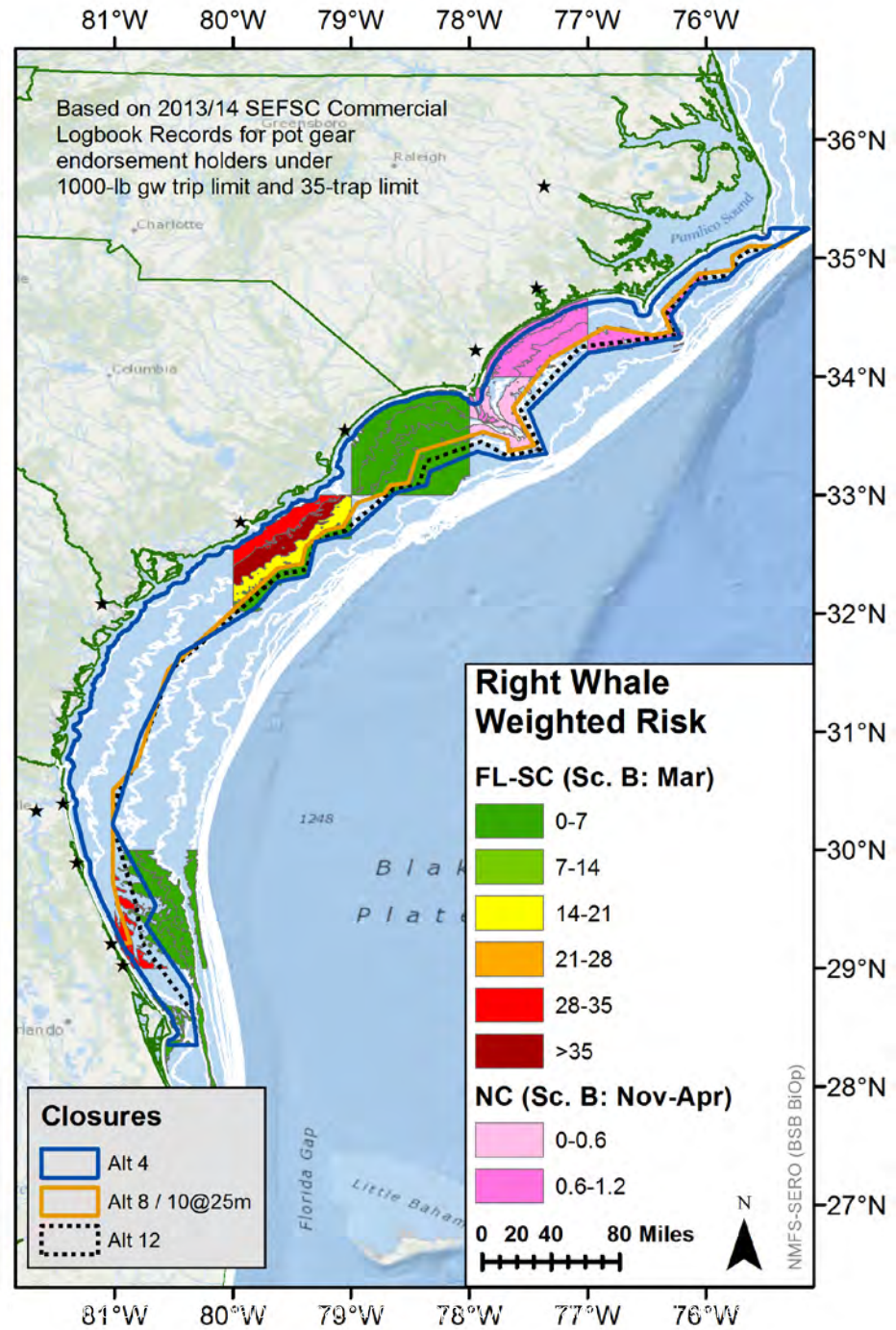
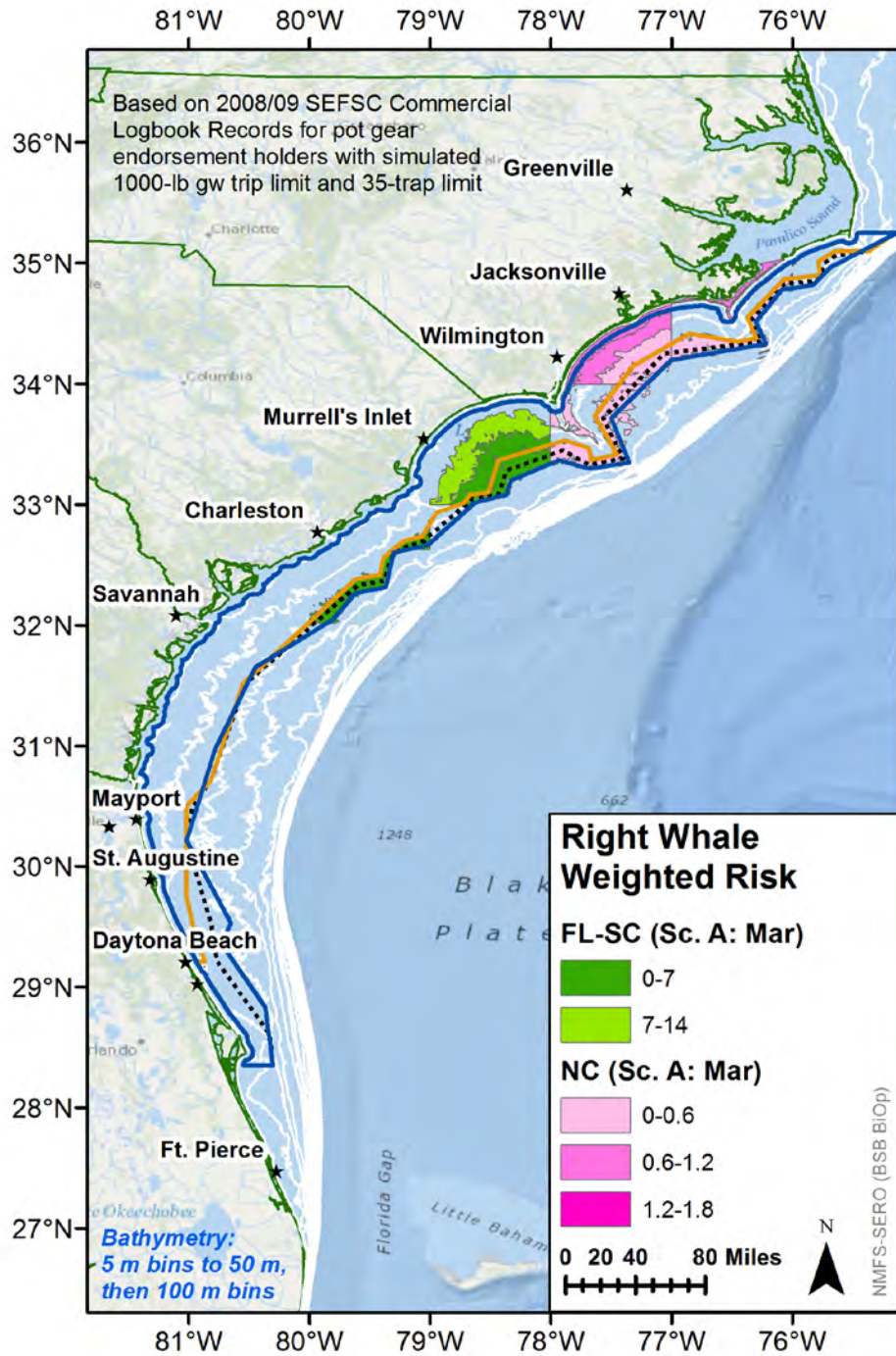
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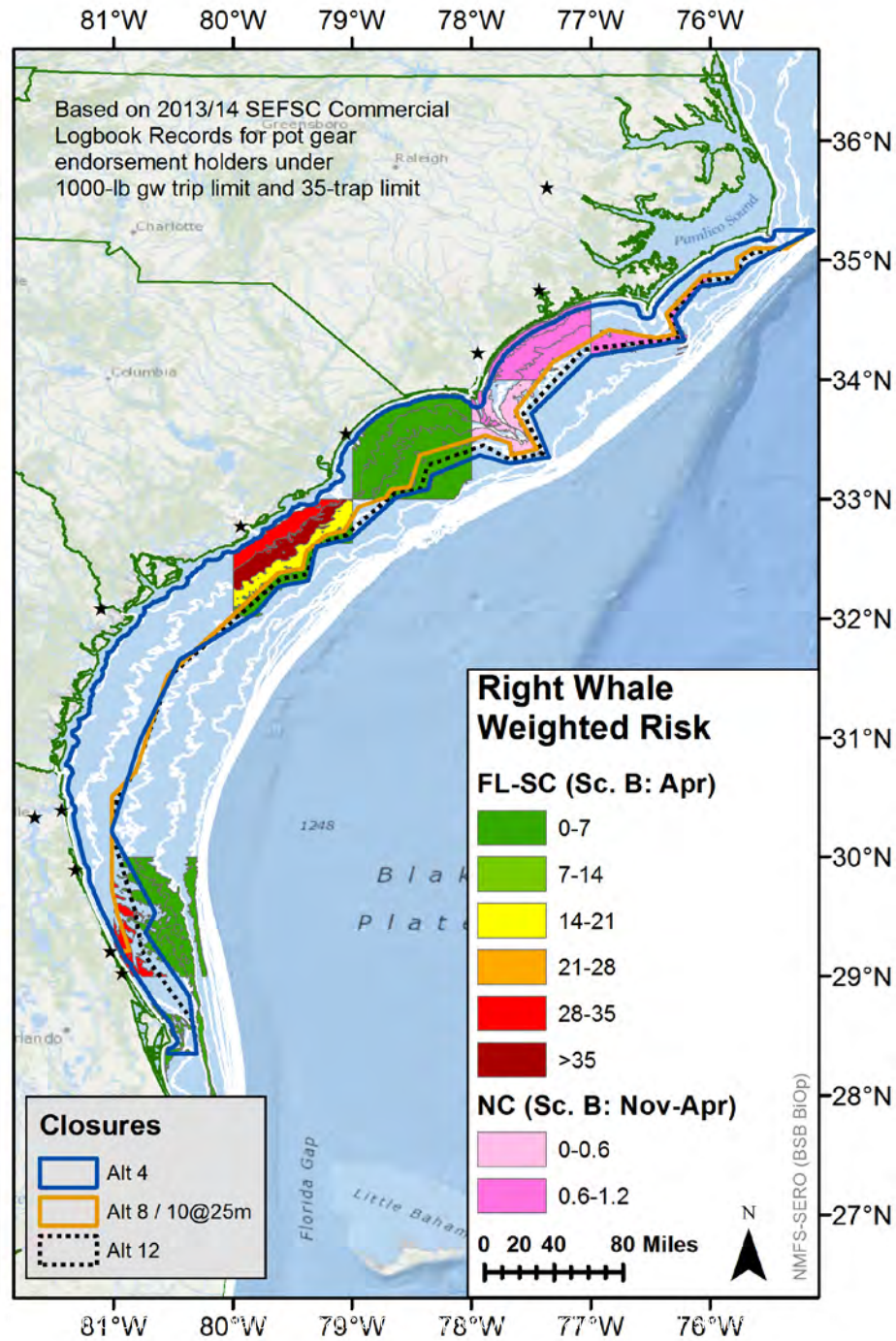
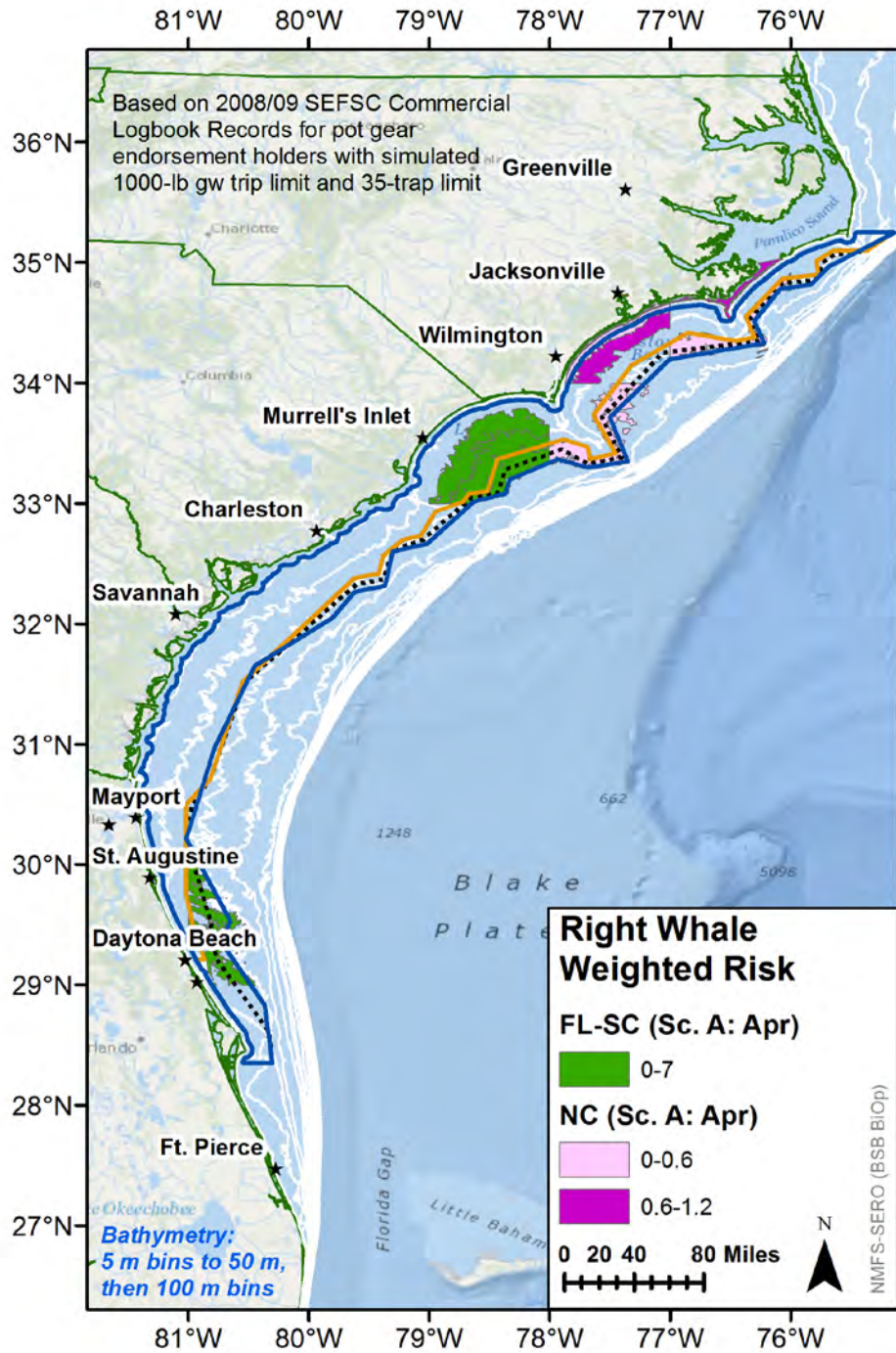


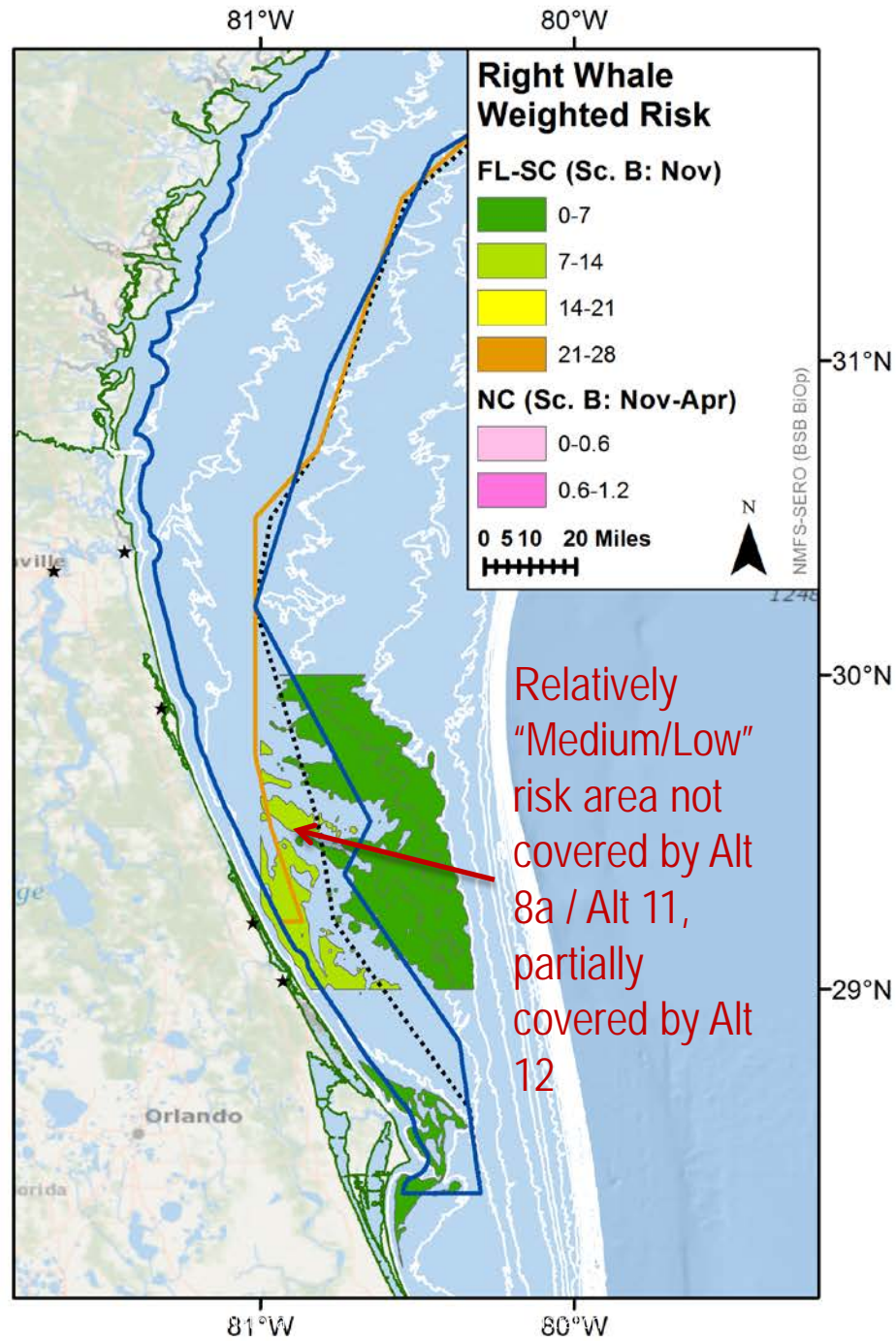
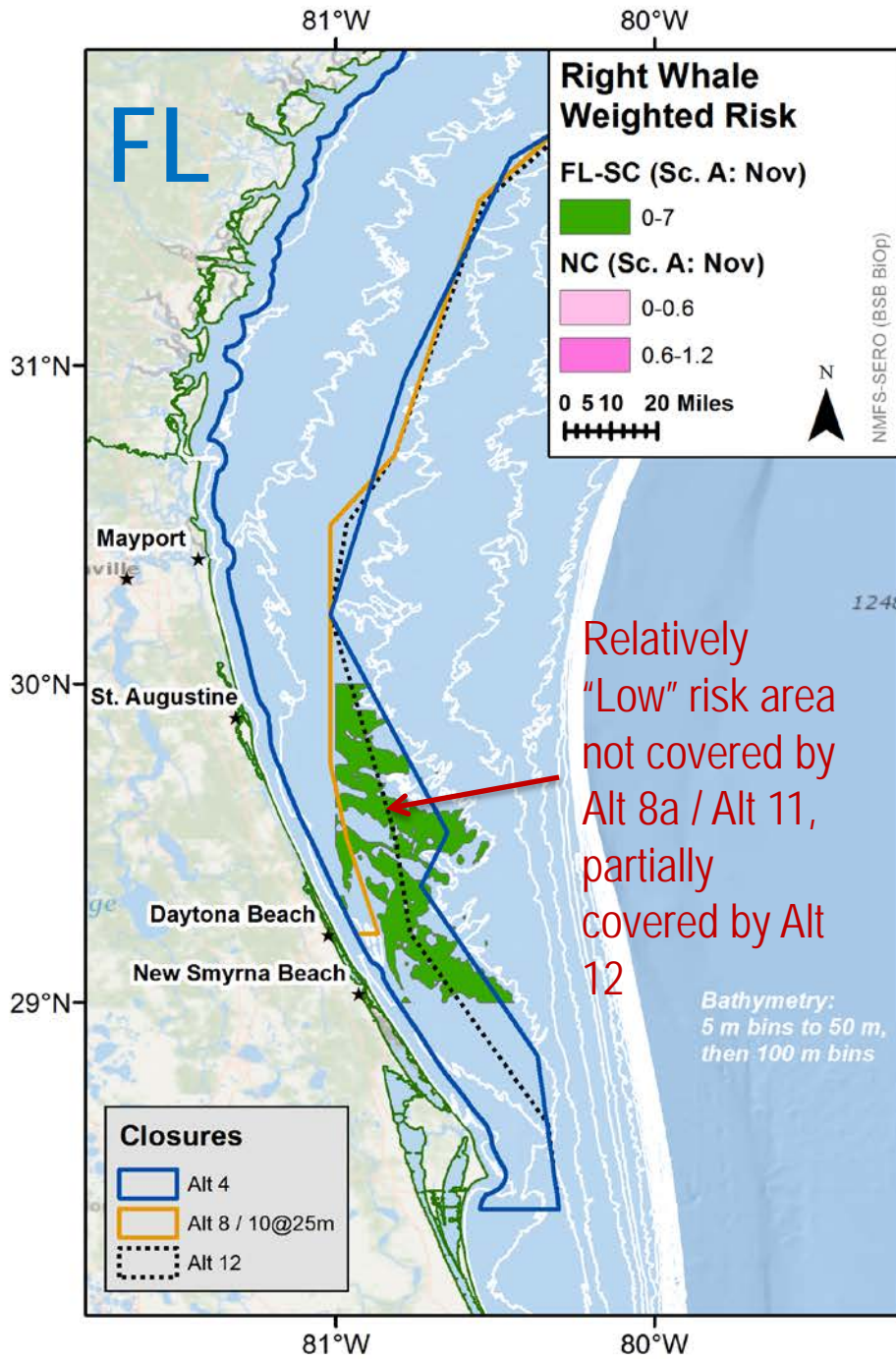


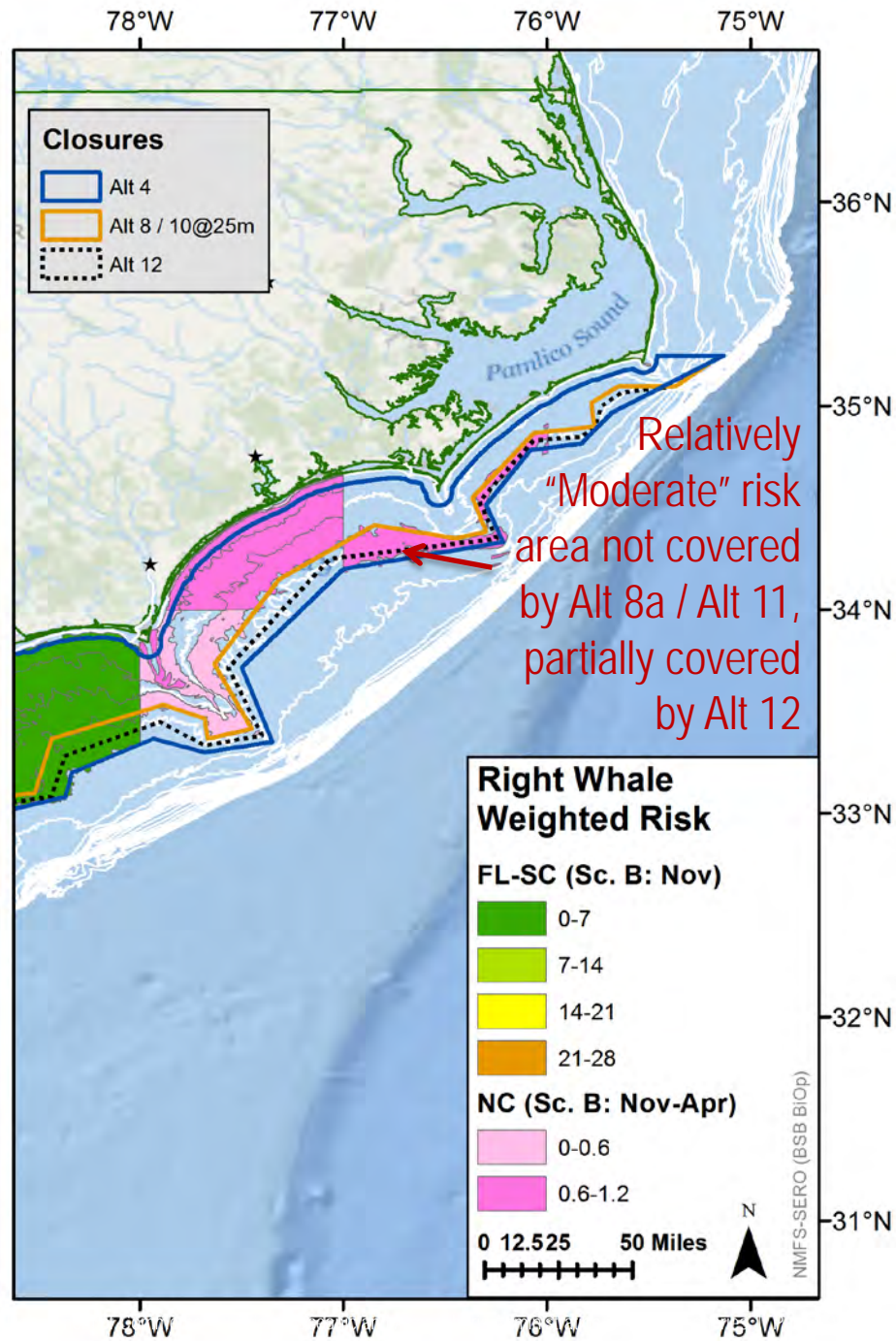
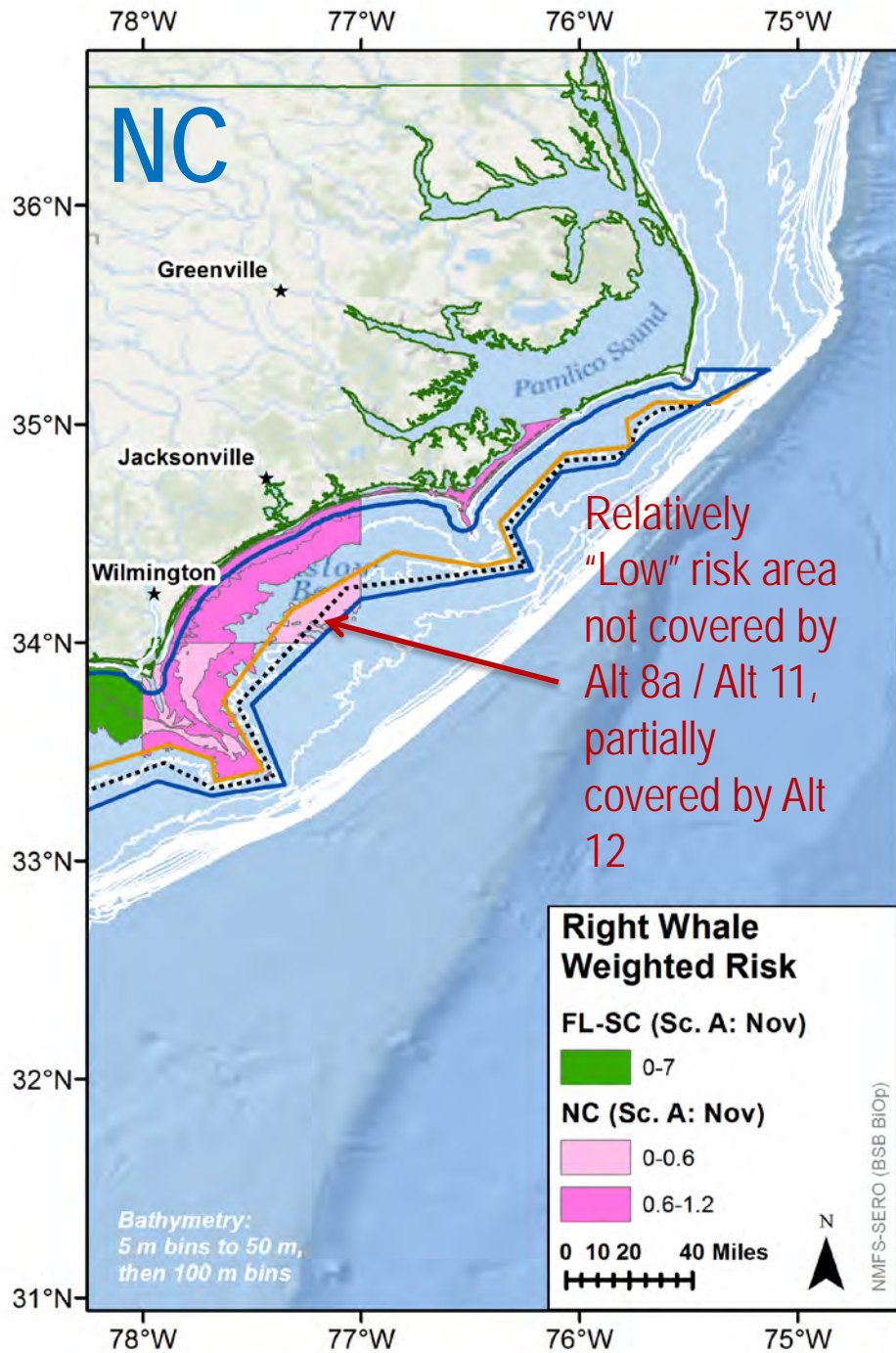


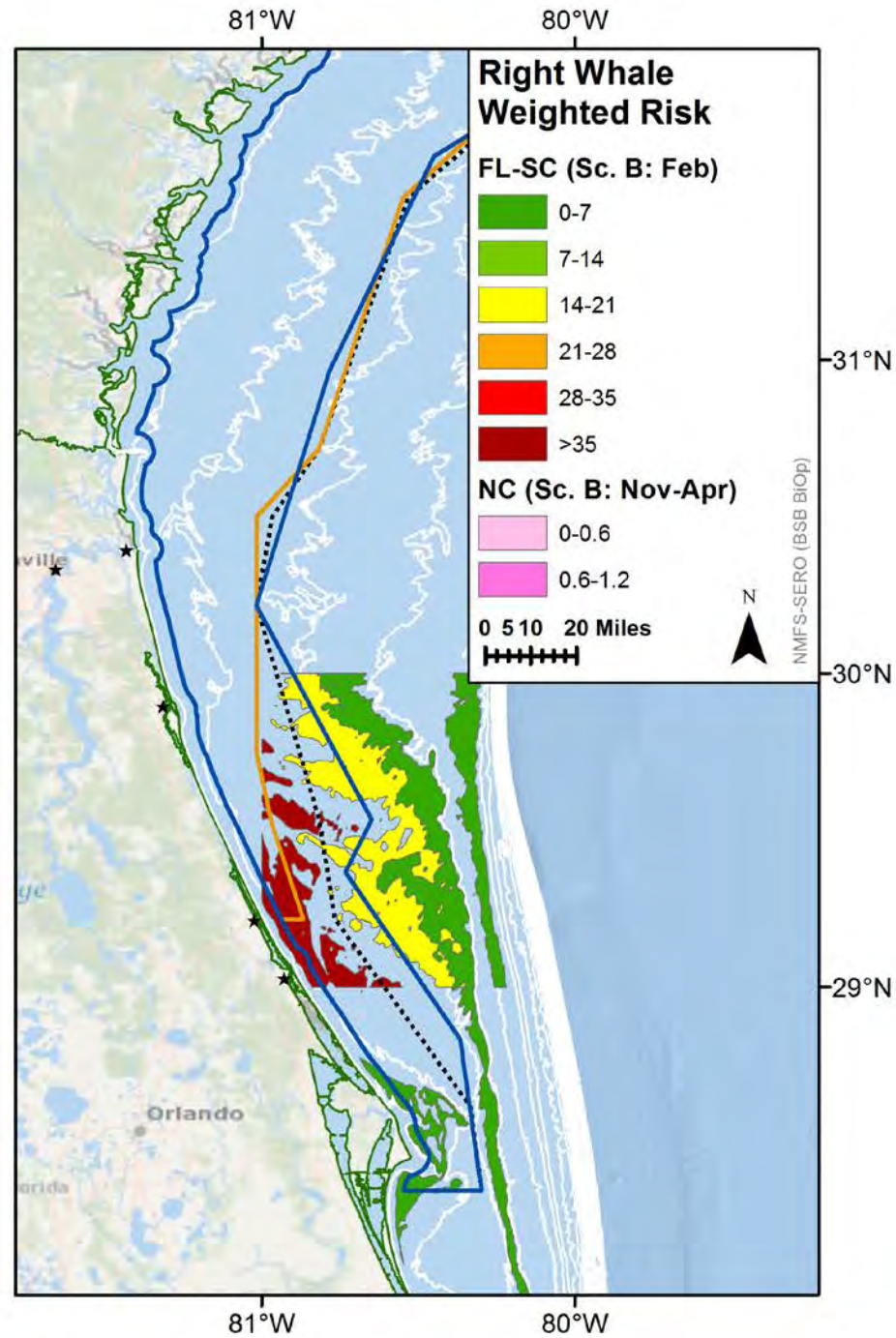
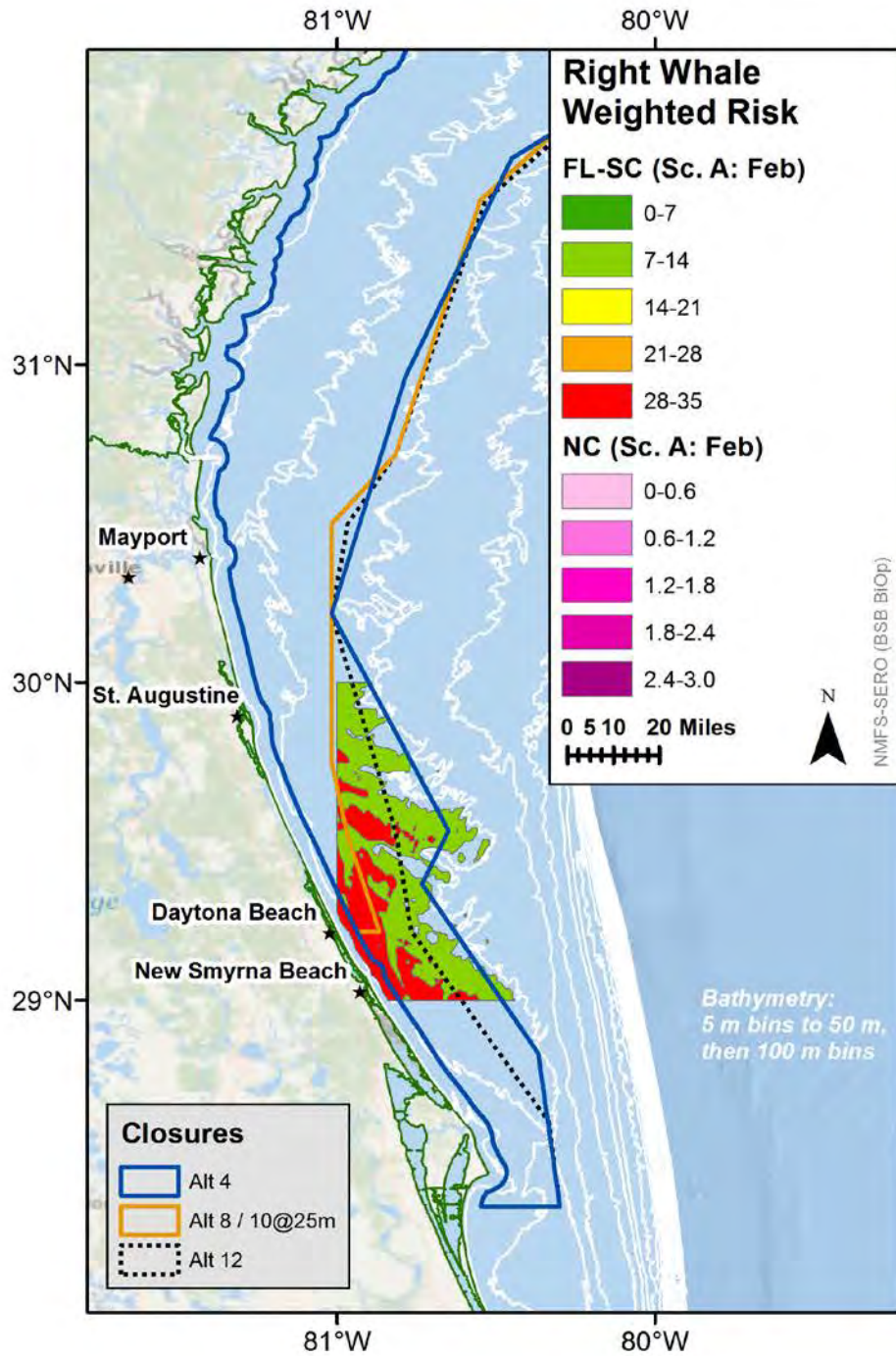


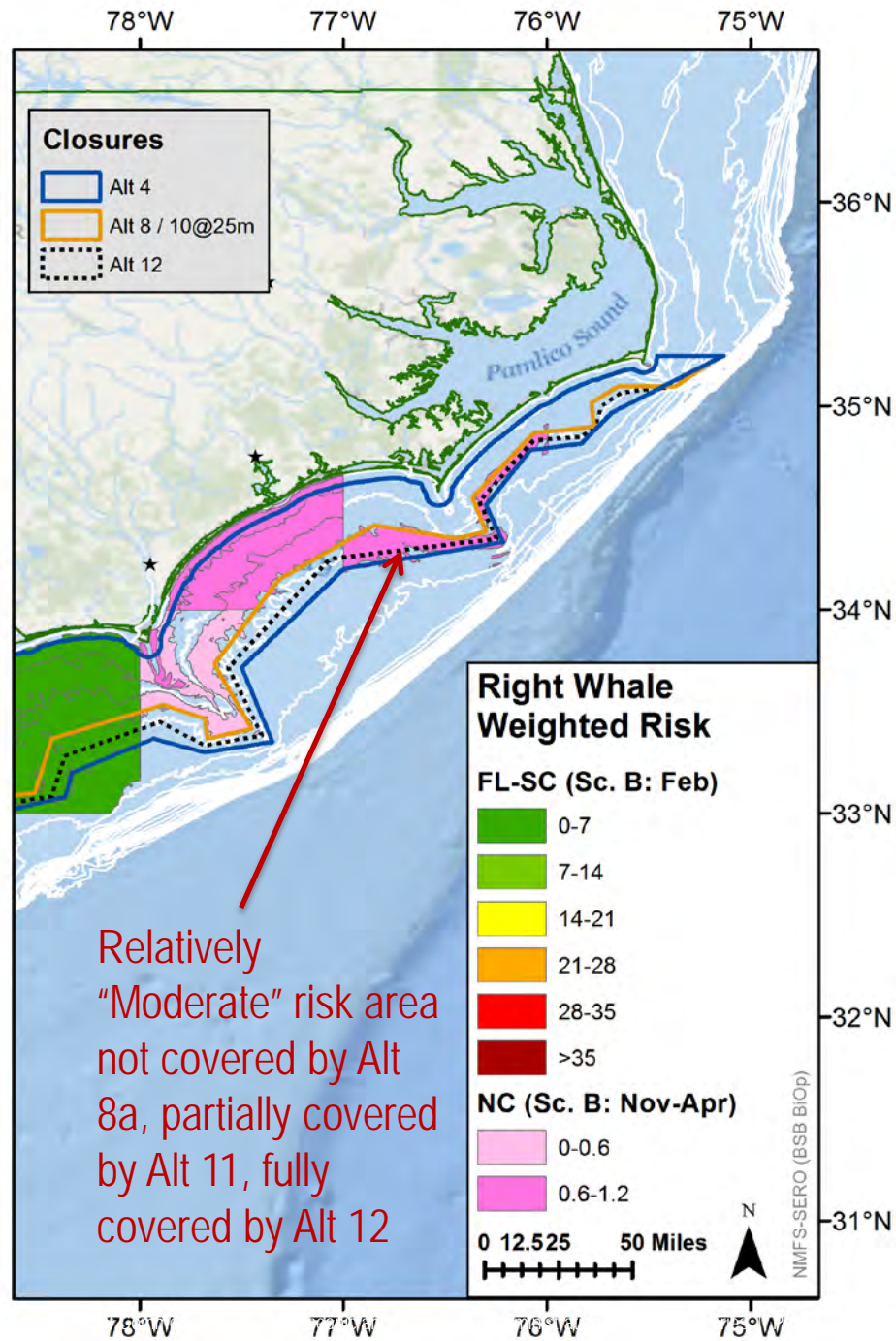
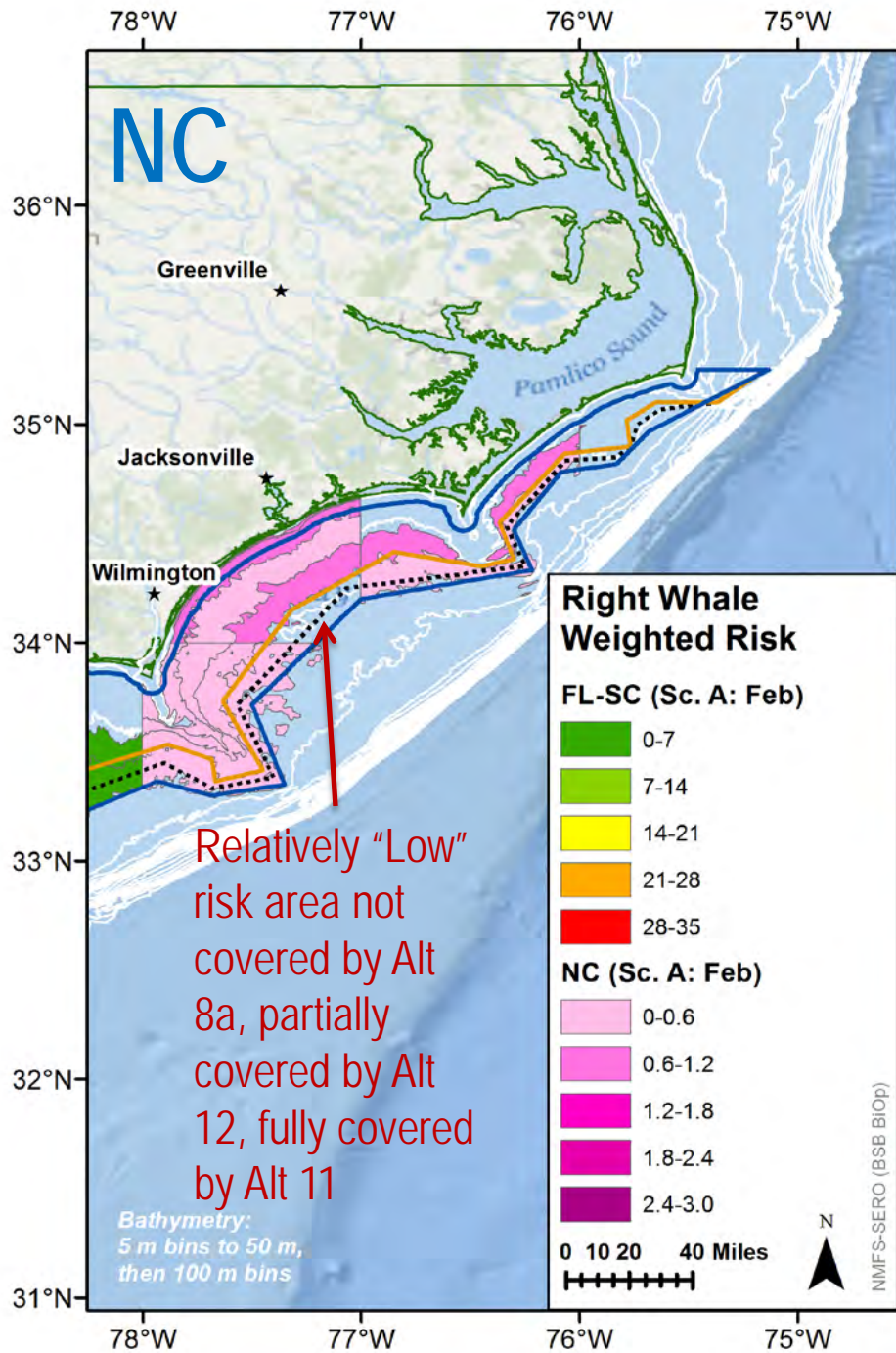


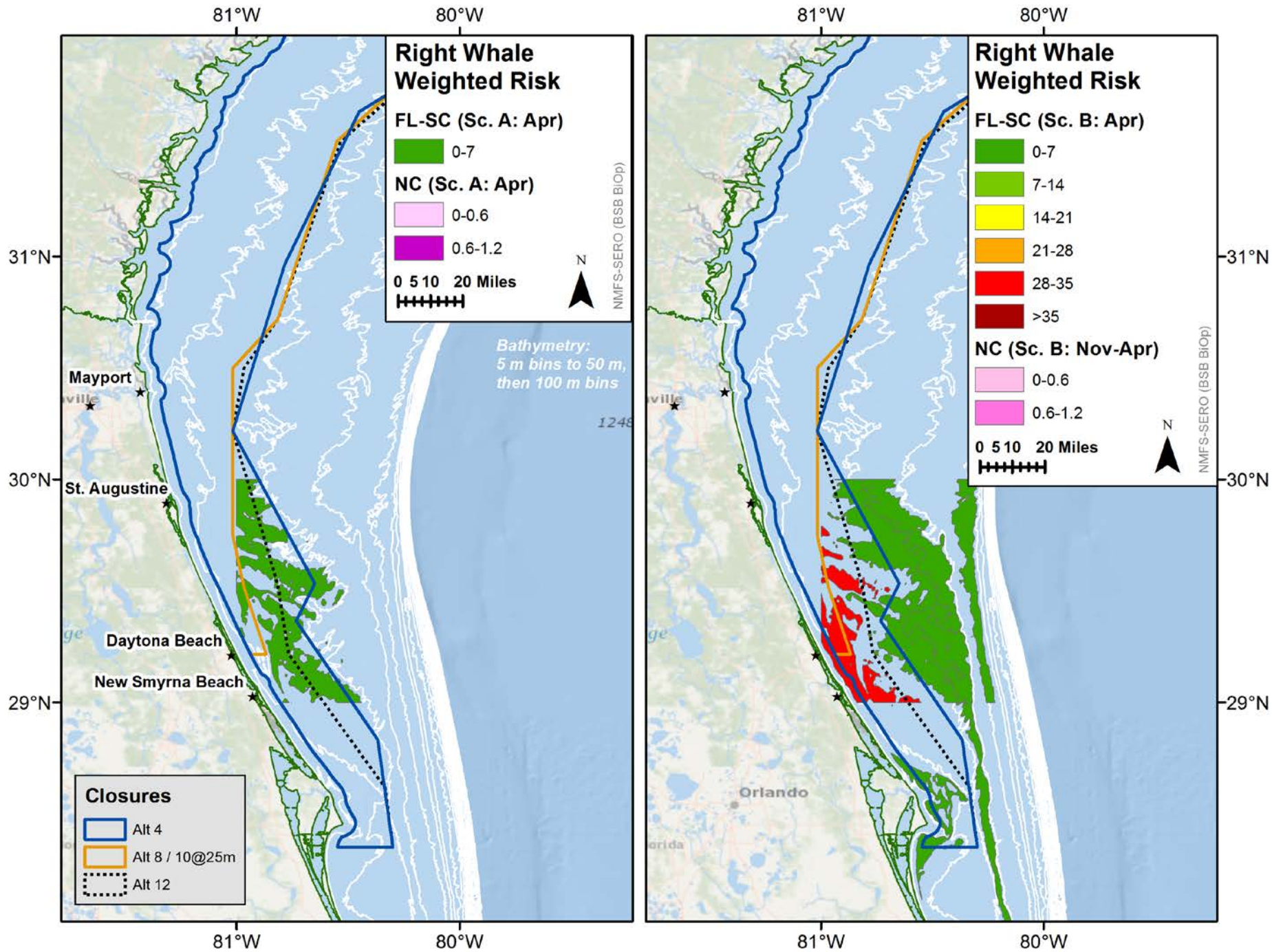


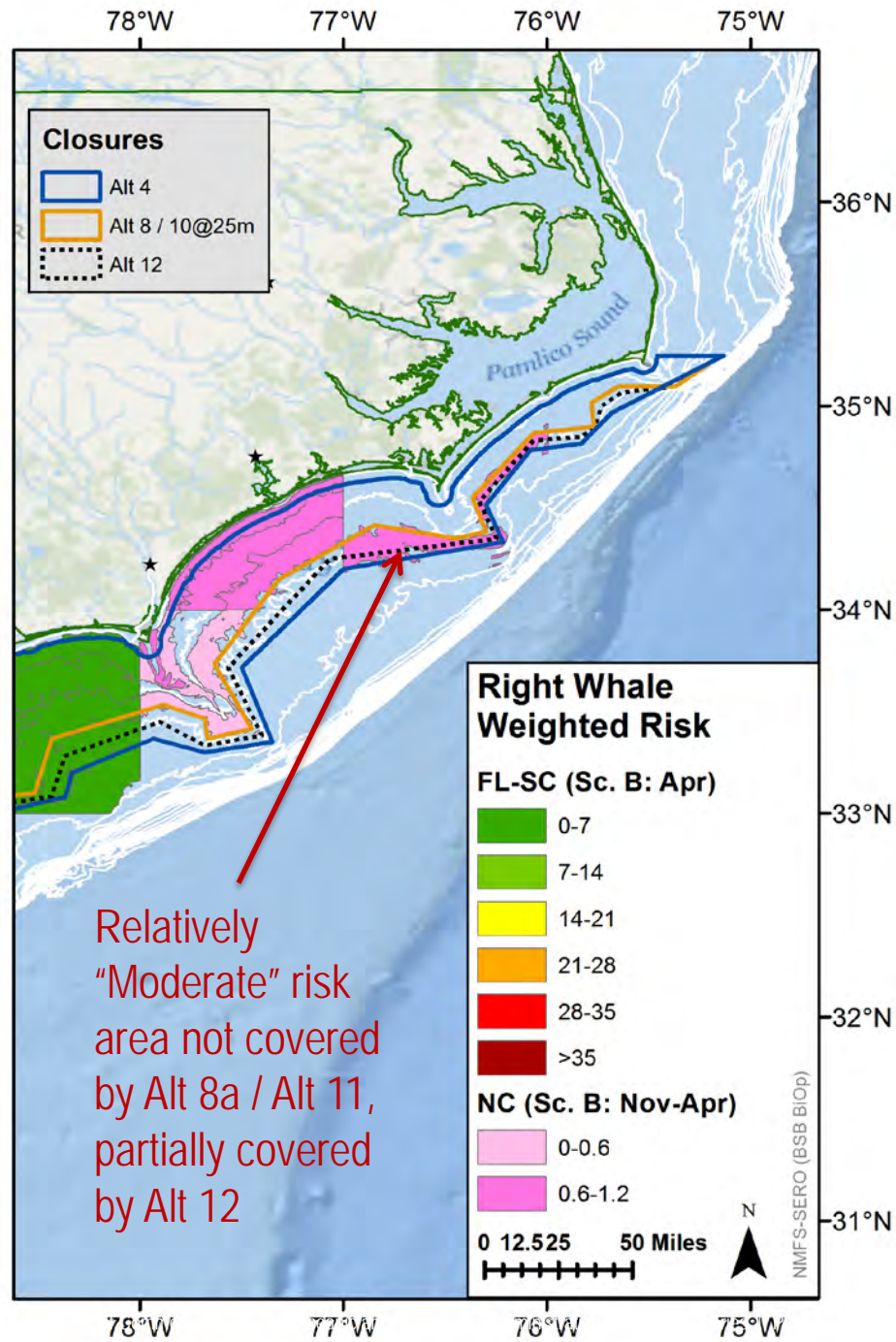
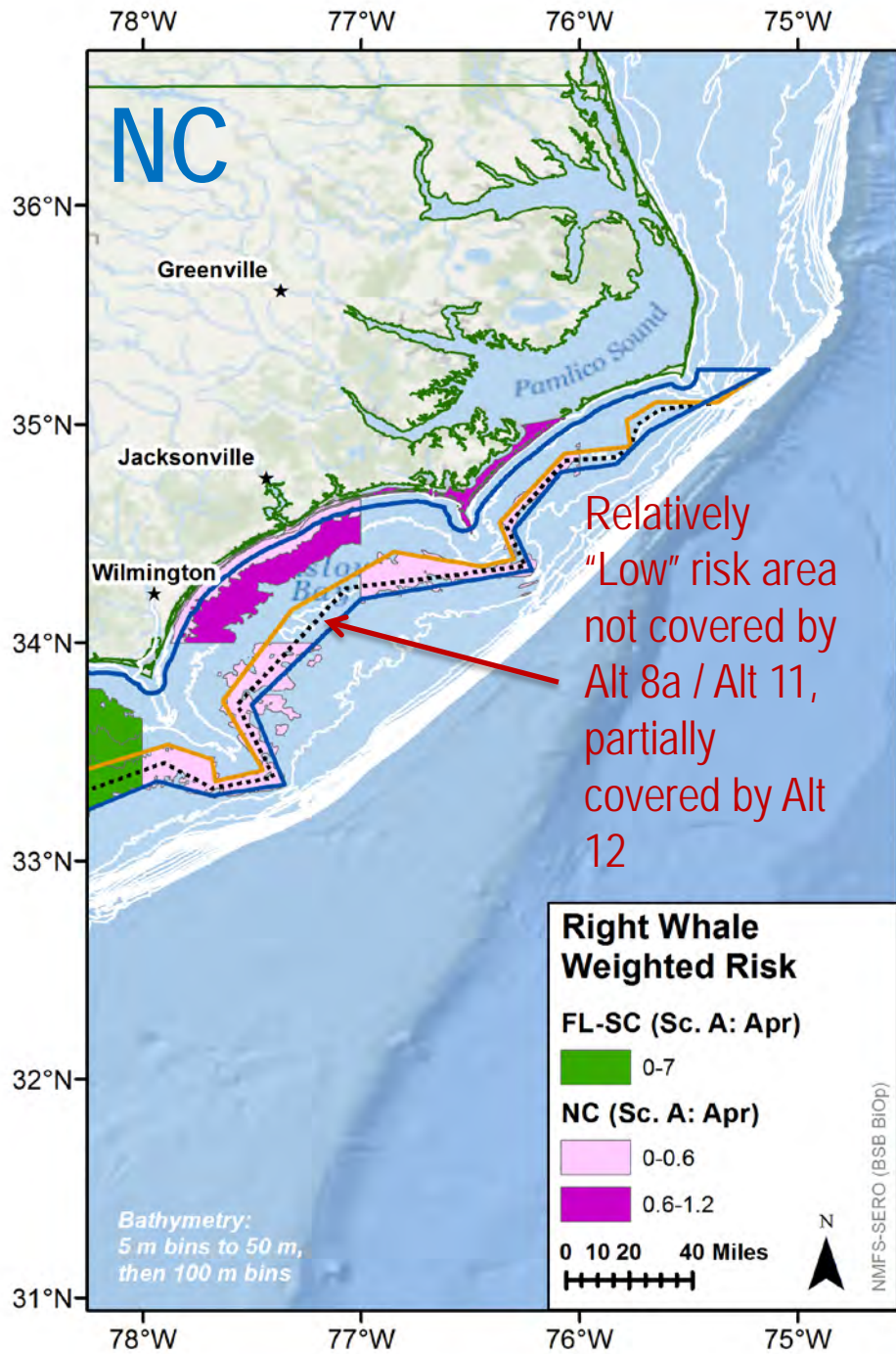












Appendix Q. Response to Comments on the Draft Environmental Impact Statement for Regulatory Amendment 16 to the Fishery Management Plan for the Snapper-Grouper Fishery of the South Atlantic Region

The National Marine Fisheries Service (NMFS) received a total of eight comments from individuals, organizations, and state and federal agencies during the 45-day comment period for the draft environmental impact statement (DEIS) for Regulatory Amendment 16 to the Fishery Management Plan for the Snapper-Grouper Fishery of the South Atlantic Region (Regulatory Amendment 16). The Environmental Protection Agency supported the proposed actions and gave the DEIS an “LO” (lack of objection). The Department of Interior indicated they did not have any comments at this time. Some comments were in favor of the preferred alternative in **Action 1** (modifications to the current annual prohibition on the use of black sea bass pots from November 1 through April 30). The Massachusetts Division of Marine Fisheries did not support any of the alternatives in **Action 1** because there was not an alternative to fully remove the closure. One comment supported no action, but did not offer strenuous objection to the preferred alternative. Another comment concerning the use of minimum size limits for black sea bass was outside the range of actions considered by the South Atlantic Fishery Management Council (South Atlantic Council) in Regulatory Amendment 16.

In **Action 2** (gear modification), the final environmental impact statement (FEIS) contains a preferred alternative to require unique line gear marking for black sea bass pots, but does not contain preferred alternatives that would change the buoy line and weak link breaking strength requirements. Some comments did support the preferred alternative in **Action 2**. However, two comments supported the selection of an alternative in **Action 2** to change the breaking strength requirement for the black sea bass pot buoy line. One comment supported the selection of a preferred alternative to change the weak link strength requirement.

Response to comments:

EPA Comment

Comment 1: The South Atlantic Council might wish to consider collecting and including a more thorough analysis and how climate change may or may not affect a particular species of fish.

Response: Discussion of the possible effect of climate change on North Atlantic Right whales and black sea bass has been added to the analysis of cumulative effects in **Chapter 6** of the FEIS.

Other Comments

Comment 2: There was little time for the staff of NMFS and the South Atlantic Council to undertake a meaningful review of substantive public comments and/or make any revisions flowing therefrom before approval of Regulatory Amendment 16. We believe it violates the purpose and spirit of the National Environmental Policy Act to allow the South Atlantic Council to make a decision so quickly after the end of the comment period.

Response: NMFS believes that there was sufficient time for the South Atlantic Council to make a reasoned decision after receiving and reviewing the comments on the DEIS. The South Atlantic Council first discussed Regulatory Amendment 16 in 2013, and NMFS published a notice of intent to prepare a DEIS on December 4, 2013. The South Atlantic Council continued to develop the amendment and invited public comments throughout that process. The notice of availability of the DEIS published on October 16, 2015. The DEIS comment period began on October 23, 2015, and ended December 7, 2015. Comments were made available for public access (which includes access by South Atlantic Council members) on <http://www.regulations.gov> as the comments were received. On December 8, 2015, South Atlantic Council staff provided a verbal and written report of the comments received to the South Atlantic Council's Snapper-Grouper Committee, which is comprised of all of the South Atlantic Council members. The South Atlantic Council then discussed the recommendations of the Snapper-Grouper Committee on December 11, 2015, and voted to submit Regulatory Amendment 16 to NMFS for formal review. In addition, the South Atlantic Council received public comment at the meeting before voting.

Comment 3: The DEIS specifies protective measures for right whales only within the jurisdiction of the South Atlantic Council (and not in state waters or north of the South Atlantic Council's boundaries). NMFS must address this potential risk inside of state waters and provide a detailed explanation and analysis of its chosen boundaries. NMFS should consider with the relevant Council(s), whether similar protective measures should be imposed north of the northern extent of the proposed boundary in Preferred Alternative 11.

Response: The FEIS contains a detailed explanation and analysis of the chosen boundaries. The South Atlantic Council cannot specify regulations for species and areas where it does not have management authority, and they do not have authority in state waters and other waters outside of their jurisdiction. The South Atlantic Council manages black sea bass south of 35°15.19' N. lat. (due east of Cape Hatteras Light, North Carolina). If a final rule to implement Regulatory Amendment 16 is issued, NMFS will request the states to adopt compatible regulations in their waters; however, less than one percent of fishing with black sea bass pots occurs in state waters.

Comment 4: The South Atlantic Council is not clear on what needs to be remedied in lifting the seasonal prohibition of black sea bass pot fishing as there are two entirely different purposes stated in the DEIS. The DEIS states that the purpose is both "to improve socio-economic benefits to black sea bass pot endorsement holders..." and to "reduce the adverse socioeconomic impacts resulting from the annual November 1 through April 30 prohibition."

Response: During their discussion of Regulatory Amendment 16, the South Atlantic Council discussed the purpose and need for taking action and the differences between improving socio-economic benefits and reducing adverse socio-economic impacts. The South Atlantic Council determined that the need for taking action is to reduce the adverse socioeconomic impacts resulting from the annual November 1 through April 30 prohibition on the use of black sea bass pot gear, and increase the flexibility of black sea bass pot endorsement holders to fish with this gear while continuing to protect whales listed under the Endangered Species Act in the South Atlantic region, as stated in the purpose and need statement in **Chapter 1**. The FEIS does not

contain a discussion of improving socio-economic benefits when discussing the purpose of taking action.

Comment 5: Should the South Atlantic Council and NMFS decide to allow the black sea bass pot sector to reopen between November 1 and April 30, the South Atlantic Council should prohibit black sea bass pot fishing in the full area that is proposed for expanded critical habitat.

Response: If **Preferred Alternative 11** in **Action 1** is implemented, the area where fishing with black sea bass pots would be prohibited, *during the months of November and April each year*, covers 99.9% of the critical habitat for North Atlantic right whales that was effective on February 26, 2016. From *December 1 through March 31 each year*, 99% of the critical habitat for North Atlantic right whales is covered by the area specified in **Preferred Alternative 11**.

Comment 6: If NMFS selects **Alternative 11** in **Action 1** rather than the no action alternative, the South Atlantic Council and NMFS must adopt, as part of Regulatory Amendment 16, reduced breaking strengths for the line (1,200 pounds [lbs]) as proposed in **Sub-Alternative 2B**. The failure to reduce breaking strength of rope or to consider lowering weak link breaking strength can have tragic consequences for the mothers, calves, and juveniles found in the action area. The current requirement in the Atlantic Large Whale Take Reduction Plan (ALWTRP) for a rope breaking strength of 2,500 lbs, as is the status quo in South Carolina, Georgia, and Florida, is entirely unacceptable when there is ample and more recent scientific evidence that this breaking strength is highly risk prone. The actions in the DEIS relies on the ALWTRP to achieve risk reduction, despite the fact that it has already failed in its approach to reducing excessive mortality and did not even consider the existence of the black sea bass pot sector when rulemaking was finalized.

Response: The South Atlantic Council is not proposing to reduce the breaking strength of buoy line or weak links. The South Atlantic Council determined that reducing the breaking strength of buoy lines and weak links would not be good management strategies because black sea bass pots would be required, if the preferred alternative in Action 1 is implemented, to fish further offshore from November 1 through April 30 when the weather is likely to be rougher than at other times of the year requiring stronger buoy lines and weak links.

It is important to note that although a breaking strength of up to 2,500 lbs is allowed under the ALWTRP, most black sea bass fishermen typically use rope with lower breaking strengths. As stated in the FEIS, NMFS tested the breaking strength of number 8 and number 10 Osprey lines. Florida black sea bass pot fishermen primarily use number 8 (1/4 in) and number 10 (5/16 in) Osprey buoy line. The testing concluded the maximum breaking strengths were 1,475 lbs and 2,218 lbs, respectively. Furthermore, the majority of black sea bass pot fishermen in North Carolina report using number 10 5/16 in diameter line.

Additionally, because fishing for black sea bass with traps also occurs north of the South Atlantic Council's jurisdiction, it is appropriate for the ALWTRT to consider whether any changes are necessary to their current requirements for the breaking strength of the trap lines or weak links.

Comment 7: NMFS will need to re-initiate consultation on the Biological Opinion that was issued in conjunction with the recent revisions to the ALWTRP that did not consider the existence of the black sea bass pot sector when risk from vertical lines was evaluated.

Response: NMFS will evaluate whether consultation under the Endangered Species Act is appropriate.

Comment 8: One commenter stated that many of the substantive issues they raised in scoping comments remain unaddressed in the DEIS. They include the following:

Comment 8A: The DEIS states “If we did have a strong year class in 2010, there may not be another one for several years or more.” This example clearly indicates that, not only is key information lacking, but the information in this document is often outdated. That is, we are now 5 years past the 2010 year class that is referenced as a forthcoming age class. More recent information on the status and cyclic trends in the productivity of black sea bass should have been available and used in this discussion.

Response: Typically, year class strength is evaluated through SEDAR stock assessments. The SEDAR 25 benchmark assessment for black sea bass was completed in 2011 and contained data through 2010. An update to SEDAR 25 was completed in 2013 with data through 2012. NMFS added a statement to the FEIS to clarify that, although a 2010 strong year class was identified, more recent data than 2010 were used in the analysis.

Comment 8B: We pointed out in our prior comments that a reference to “NMFS 2014” discussing modeling and extinction risk is an incorrect reference—yet this same incorrect reference remains on page 124 and several others in this draft.

Response: NMFS has updated the reference in the section of the FEIS discussing modeling and extinction risk.

Comment 8C: The DEIS includes an inappropriate analysis and weighing of the economics of saving right whales against the profits of the industry. We also pointed out in prior comments that the economic costs of disentanglement were cited to “NMFS SERO PRD 2015”, an apparently key factor used by the South Atlantic Council in an economic analysis in this document. The citation was missing in the initial draft of the EIS; and it is still not available to reviewers in bibliography in the current draft.

Response: The statement comparing the expected economic gains and the estimated costs of disentangling a North Atlantic right whale from unspecified fishing gear (cited as “NMFS SERO PRD 2015”) has been removed from the FEIS, **Section 4.1.2**. The analysis now only contains a comparison of the estimated change in value of commercial black sea bass sector versus right whale co-occurrence off Florida through South Carolina for proposed spatial closure alternatives.

Comment 8D: The DEIS contains poor economic justification of the need for re-opening the black sea bass pot sector during November through April. In addition, the DEIS fails to justify

the need to enrich the black sea bass pot sector at the potential economic expense of other gear types targeting black sea bass.

Response: The FEIS contains robust analyses of the economic effects to the commercial sector predicted from the proposed modification to the current prohibition; the commercial sector includes hook-and-line fishers and pot fishers. The analyses may be found in **Sections 3.3.1, 4.1.2, and 6.2**, in addition to **Appendices G, H, L, and I**. Justification for the action may be found in **Chapter 1** and **Section 5.1.5**. Finally, **Section 1.6** details the benefits to black sea bass pot endorsement holders by allowing fishing in the winter.