PUBLIC HEARING SUMMARY

for

Snapper Grouper Amendment 29

Amendment to the ABC Control Rule, ABC Adjustments to Unassessed Species, and Management Measures for Gray Triggerfish

(January 13, 2014)

This document is intended to serve as a SUMMARY for the actions and alternatives in Amendment 29. It also provides background information and includes a summary of the expected biological, social, and economic effects from the proposed management measures.

Send written comments to:
Bob Mahood, Executive Director
South Atlantic Fishery Management Council
4055 Faber Place Drive, Suite 201
North Charleston, SC 29405

Email comments to: SGAmend29Comments@safmc.net

Fax comments to:
(843) 769-4520

Comments are being accepted until 5 p.m., February 3, 2014

Background

What Actions Are Being Proposed?

Amendment 29 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (Snapper Grouper FMP) proposes actions to: (1) update the South Atlantic Council's Acceptable Biological Catch (ABC) Control Rule to incorporate methodology for determining the ABC of "Only Reliable Catch Species" (ORCS); (2) adjust ABCs for the affected species; and (3) establish management measures for gray triggerfish in federal waters of the South Atlantic region.

Purpose for Action

The *purpose* for the proposed actions is to: update the South Atlantic Council's Acceptable Biological Catch (ABC) Control Rule to incorporate methodology for determining the ABC of "Only Reliable Catch Species" (ORCS); adjust ABCs for the affected species; and establish management measures for gray triggerfish in federal waters of the South Atlantic region.

Need for Action

The *need* for the proposed actions is to: adopt the recommendations of the South Atlantic Council's Scientific and Statistical Committee (SSC) to update the ABC Control Rule and adjust ABCs for "ORCS" based on the revised ABC Control Rule, lengthen the commercial season for gray triggerfish to diminish and/or prevent derby conditions, and ensure that overfishing does not occur pending a new assessment of the gray triggerfish stock in the South Atlantic region.

Who is Proposing the Actions?

The South Atlantic Fishery Management Council (South Atlantic Council) is proposing the actions. The South Atlantic Council recommends management measures to the National Marine Fisheries Service (NMFS) who ultimately approves, disapproves, or partially approves, and implements the actions through the development of regulations on behalf of the Secretary of Commerce. NMFS is an agency in the National Oceanic and Atmospheric Administration within the Department of Commerce.

Why are the South Atlantic Council and NMFS Considering Action?

Changes to the Acceptable Biological Catch (ABC) Control Rule

The Scientific and Statistical Committee (SSC) has recommended revising the South Atlantic Council's Acceptable Biological Catch (ABC) Control Rule to incorporate methodology for stocks without assessments for which there are reliable catch data. These stocks, termed Only Reliable Catch Stocks (ORCS), comprise 14 species within the Snapper Grouper Fishery Management Unit. The methodology for estimating the ABC for such stocks was being developed at the time the South Atlantic Council

approved its ABC Control Rule through the Comprehensive Annual Catch Limit (ACL) Amendment (SAFMC 2011c). Hence the South Atlantic Council needs to take action to incorporate the revisions that the SSC has recommended.

Application of the updated ABC Control Rule to select unassessed snapper grouper stocks

To apply the ORCS methodology to the target stocks, the South Atlantic Council must first decide on a numerical factor that determines the Risk Tolerance level. That is, the South Atlantic Council must decide the level of risk they are willing to allow in establishing the ABC for unassessed stocks that only have reliable catch information. Various levels of Risk Tolerance are considered in Action 2 that allow the South Atlantic Council to be more or less risk averse depending on whether a stock is deemed to be at a low, moderate, or moderately high risk of overexploitation. The latter classification was determined by the SSC based on an extensive set of criteria (see **Appendix X** in Amendment 29).

Management Measures for Gray Triggerfish

A stock assessment for the South Atlantic stock of gray triggerfish was attempted in 2013 (SEDAR 32 2013). Unfortunately, significant discrepancies in ageing led the analysts to postpone completion of the assessment. Meanwhile, fishermen have approached the South Atlantic Council with concerns about the stock status of gray triggerfish and requests for management measures. While the South Atlantic Council had intended to wait until after the results of the stock assessment were available to make changes to management measures for this stock, the unforeseen delays in the assessment prompted the South Atlantic Council to be proactive and consider the management measures that fishermen are suggesting at this time.

Summary of Effects

Action 1. Amend the South Atlantic Council's ABC Control Rule

Alternative 1 (No Action). Continue to utilize the South Atlantic Council's ABC control rule as adopted in the Comprehensive Annual Catch Limit (ACL) Amendment to specify ABCs for snapper grouper species.

Preferred Alternative 2. Adopt the SSC's recommended approach to determine ABC values for Only Reliable Catch Stocks (ORCS). This approach will become Level 4 of the ABC Control Rule and the existing Level 4 will be renumbered as Level 5.

Biological Effects

Amending the ABC Control Rule as proposed in **Preferred Alternative 2** would not have any direct biological effects. This change would, however, indirectly benefit the biological environment since an approved scientific methodology would be adopted to establish ABCs for snapper grouper species that have not been assessed but for which there are reliable catch statistics.

Economic Effects

Alternative 1 (No Action) would continue use of the current control rule to specify ABCs for snapper grouper species, while **Preferred Alternative 2** would change the ABC control rule used to determine ABCs for Only Reliable Catch Stocks. Both alternatives would have no added beneficial or adverse economic impacts because Action 1 is an administrative action; however, **Preferred Alternative 2** allows for subsequent action (Action 2) that could have beneficial and/or adverse economic impacts beyond the status quo.

Social Effects

Preferred Alternative 2 would be expected to be beneficial to the commercial fleet, for-hire fleet, private anglers, and other resource users because the ORCS method is expected to improve assessment of how much of each stock can be harvested, even if there are not accurate, up-to-date, or available fishery-independent data for the stock. Because the ACLs for the species that have been designated as ORCS would not be adjusted to reflect the new SSC method to specify the ABC for these stocks, including information from fishermen and scientific experts, **Alternative 1 (No Action)** would not result in any social benefits. On the other hand, the proposed ABC control rule under **Preferred Alternative 2** could help to increase some ABCs and associated ACLs, which would be more beneficial to the commercial and for-hire fleets, recreational fishermen,

fishing businesses and communities than maintaining the current ABC control rule under **Alternative 1 (No Action)**.

What is the ORCS Approach?

Based on methodology in *Calculating Acceptable Biological Catch for Stocks That Have Reliable Catch Data Only (Only Reliable Catch Stocks – ORCS)* (Berkson et al. 2011), the South Atlantic Council's Scientific and Statistical Committee (SSC) recommended an approach to compute the ABC for unassessed stocks with only reliable catch data. The approach involved selection of a "catch statistic", a scalar (number) to denote the risk of overexploitation for the stock, and a scalar to denote the management risk level. The SSC provided the first two criteria for each stock, but the South Atlantic Council must specify their risk tolerance level for each stock.

Catch Statistic: The median was considered inadequate to represent the high fluctuation in landings (i.e., the median failed to appropriately capture the range of occasional high landings) and the maximum catch over the period 1999-2007 was chosen instead. The time period was chosen to (1) be consistent with the period of landings used in the Council's Comprehensive ACL Amendment, and (2) to minimize the impact of recent regulations and the economic down turn on the landings time series.

Risk of Overexploitation: Based on SSC consensus and expert judgment, each stock is assigned to a final risk of exploitation category. See **Appendix X** (in Amendment 29) for a detailed description of the attributes used to assess the level of risk.

A scalar scheme consistent with the Risk of Overexploitation categories is assigned to stocks as follows:

Risk of Overexploitation	Scalar Value
Low	2
Moderate Low	1.75
Moderate	1.5
Moderate High	1.25

Risk Tolerance Level: The next step in the process involves multiplying the "catch statistic × scalar" metric by a range of scalar values that reflects the South Atlantic Council's risk tolerance level. For instance, the South Atlantic Council may choose to be more risk-averse in computing the ABC for a stock that exhibits a moderately high risk of overexploitation. As such, the South Atlantic Council may use a scalar of 0.50 for such stocks to arrive at more conservative ABC. On the other hand, stocks with low risk of overexploitation and thus able to tolerate a higher level of management risk, may be assigned a less conservative scalar, such as 0.90.

Proposed changes to the South Atlantic ABC Control Rule are noted below in yellow

Level 1 – Assessed Stocks	
Tier	**Tier Classification and Methodology to Compute ABC**
1. Assessment Information (10%)	1. Quantitative assessment provides estimates of exploitation and biomass; includes MSY-derived benchmarks. (0%) 2. Reliable measures of exploitation or biomass, no MSY benchmarks, proxy reference points. (2.5%) 3. Relative measures of exploitation or biomass, absolute measures of status unavailable. Proxy reference points. (5%) 4. Reliable catch history. (7.5%) 5. Scarce or unreliable catch records. (10%)
2. Uncertainty Characterization (10%)	1. Complete. Key determinant – uncertainty in both assessment inputs and environmental conditions are included. (0%) 2. High. Key determinant – reflects more than just uncertainty in future recruitment. (2.5%) 3. Medium. Uncertainties are addressed via statistical techniques and sensitivities, but full uncertainty is not carried forward in projections. (5%) 4. Low. Distributions of F_{MSY} and MSY are lacking. (7.5%) 5. None. Only single point estimates; no sensitivities or uncertainty evaluations. (10%)
3. Stock Status (10%)	1. Neither overfished nor overfishing. Stock is at high biomass and low exploitation relative to benchmark values. (0%) 2. Neither overfished nor overfishing. Stock may be in close proximity to benchmark values. (2.5%) 3. Stock is either overfished or overfishing. (5%) 4. Stock is both overfished and overfishing. (7.5%) 5. Either status criterion is unknown. (10%)
4. Productivity and Susceptibility Analysis (10%)	1. Low risk. High productivity, low vulnerability, low susceptibility. (0%) 2. Medium risk. Moderate productivity, moderate vulnerability, moderate susceptibility. (5%) 3. High risk. Low productivity, high vulnerability, high susceptibility. (10%)
Level 2 – Unassessed Stocks. Reliable landings and life history information available	
OFL derived from "Depletion-Based Stock Reduction Analysis" (DBSRA). ABC derived from applying the assessed stocks rule to determine the adjustment factor if possible, or from expert judgment if not possible.	
Level 3 – Unassessed Stocks. Inadequate data to support DBSRA	
ABC derived directly from "Depletion-Corrected Average Catch" (DCAC). Done when only a limited number of years of catch data for a fishery are available. Requires a higher level of "informed expert judgment" than Level 2.	
Level 4 – Unassessed Stocks. Only Reliable Catch Stocks.	
OFL and ABC derived on a case-by-case basis. Apply ORCS approach using a catch statistic, a scalar derived from the risk of overexploitation, and the Council's risk tolerance level.	

Level 5 – Unassessed Stocks. No reliable catch.
OFL and ABC derived on a case-by-case basis. Stocks with very low landings that show very high variability in catch estimates (mostly caused by the high degree of uncertainty in recreational landings estimates), or stocks that have species identification issues that may cause unreliable landings estimates. Use "decision tree": 1. Will catch affect stock? NO: Ecosystem Species (Council done this already, ACL Amend) YES: Go to 2 2. Will increase (beyond current range of variability) in catch lead to decline or stock concerns? NO: ABC = 3rd highest point in the 1999-2008 time series YES: Go to 3 3. Is stock part of directed fishery or is it primarily bycatch for other species? Directed: ABC = Median 1999-2008 Bycatch/Incidental: If yes, go to 4. 4. Bycatch. Must judge the circumstance: If bycatch in other fishery: what are trends in that fishery? What are the regulations? What is the effort outlook? If the directed fishery is increasing and bycatch of stock of concern is also increasing, the Council may need to find a means to reduce interactions or mortality. If that is not feasible, will need to impact the directed fishery. The SSC's intention is to evaluate the situation and provide guidance to the Council on possible catch levels, risk, and actions to consider for bycatch and directed components.

Action 2. Apply the Revised ABC Control Rule to select unassessed snapper grouper species

Alternative 1 (No Action). Do not adjust ABCs for select unassessed snapper grouper species based on the revised ABC Control Rule.

Alternative 2. Assign a Risk Tolerance scalar to stocks deemed by the SSC to be under Low Risk of Overexploitation:

Sub-alternative 2a. Apply a Risk Tolerance scalar of 0.75

Stock	Catch Statistic (Highest landings 1999-2007)	Risk of Overexploitation Scalar	Risk Tolerance Scalar	New ABC (lbs ww)	Current ABC (lbs ww)	Difference in ABC
Bar Jack	34,583	2	0.75	51,875	24,780	+27,095

Preferred Sub-alternative 2b. Apply a Risk Tolerance scalar of 0.90

Stock	Catch Statistic (Highest landings 1999-2007)	Risk of Overexploitation Scalar	Risk Tolerance Scalar	New ABC (lbs ww)	Current ABC (lbs ww)	Difference in ABC
Bar Jack	34,583	2	0.90	62,249	24,780	+37,469

Alternative 3. Assign a Risk Tolerance scalar to stocks deemed by the SSC to be under Moderate Risk of Overexploitation:

Sub-alternative 3a. Apply a Risk Tolerance scalar of 0.75

Stock	Catch Statistic (Highest landings 1999-2007)	Risk of Overexploitation Scalar	Risk Tolerance Scalar	New ABC (lbs ww)	Current ABC (lbs ww)	Difference in ABC
Margate	63,993	1.5	0.75	71,992	29,889	+42,103
Red Hind	27,570	1.5	0.75	31,016	24,867	+6,149
Cubera Snapper	52,721	1.5	0.75	59,311	24,680	+34,631
Blue Runner*	1,328,272	1.5	0.75	1,494,306	1,125,729	+368,577
Yellowedge Grouper	46,330	1.5	0.75	52,121	30,221	+21,900
Silk Snapper	75,269	1.5	0.75	84,678	25,104	+59,574
White Grunt (South)	735,873	1.5	0.75	827,858	674,033	+153,825
Atlantic Spadefish	677,065	1.5	0.75	761,698	189,460	+572,238
Gray Snapper	1,039,277	1.5	0.75	1,169,187	795,743	+373,444
Lane Snapper	169,572	1.5	0.75	190,769	119,984	+70,785

* Blue runner will no longer be managed under the federal Snapper Grouper Fishery Management Plan as of January 27, 2014.

Preferred Sub-alternative 3b. Apply a Risk Tolerance scalar of 0.80

Stock	Catch Statistic (Highest landings 1999-2007)	Risk of Overexploitation Scalar	Risk Tolerance Scalar	New ABC (lbs ww)	Current ABC (lbs ww)	Difference in ABC
Margate	63,993	1.5	0.80	76,792	29,889	+46,903
Red Hind	27,570	1.5	0.80	33,084	24,867	+8,217
Cubera Snapper	52,721	1.5	0.80	63,265	24,680	+38,585
Blue Runner*	1,328,272	1.5	0.80	1,593,926	1,125,729	+468,197
Yellowedge Grouper	46,330	1.5	0.80	55,596	30,221	+25,375
Silk Snapper	75,269	1.5	0.80	90,323	25,104	+65,219
White Grunt (South)	735,873	1.5	0.80	883,048	674,033	+209,015
Atlantic Spadefish	677,065	1.5	0.80	812,478	189,460	+623,018
Gray Snapper	1,039,277	1.5	0.80	1,247,132	795,743	+451,389
Lane Snapper	169,572	1.5	0.80	203,486	119,984	+83,502

* Blue runner will no longer be managed under the federal Snapper Grouper Fishery Management Plan as of January 27, 2014.

Alternative 4. Assign a Risk Tolerance scalar to stocks deemed by the SSC to be under Moderately High Risk of Overexploitation:

Preferred Sub-alternative 4a. Apply a Risk Tolerance scalar of 0.70

Stock	Catch Statistic (Highest landings 1999-2007)	Risk of Overexploitation Scalar	Risk Tolerance Scalar	New ABC (lbs ww)	Current ABC (lbs ww)	Difference in ABC
Rock Hind	42,849	1.25	0.70	37,493	37,953	-460
Tomtate	105,909	1.25	0.70	92,670	80,056	+12,614
White Grunt (North)	735,873	1.25	0.70	643,889	674,033	-30,144
Scamp	596,879	1.25	0.70	522,269	509,788	+12,481
Gray Triggerfish	819,428	1.25	0.70	717,000	626,518	+90,482

Sub-alternative 4b. Apply a Risk Tolerance scalar of 0.75

Stock	Catch Statistic (Highest landings 1999-2007)	Risk of Overexploitation Scalar	Risk Tolerance Scalar	New ABC (lbs ww)	Current ABC (lbs ww)	Difference of ABC
Rock Hind	42,849	1.25	0.75	40,171	37,953	+2,218
Tomtate	105,909	1.25	0.75	99,290	80,056	+19,234
White Grunt (North)	735,873	1.25	0.75	689,881	674,033	+15,848
Scamp	596,879	1.25	0.75	559,574	509,788	+49,786
Gray Triggerfish	819,428	1.25	0.75	768,214	626,518	+141,696

Sub-alternative 4c. Apply a Risk Tolerance scalar of 0.50

Stock	Catch Statistic (Highest landings 1999-2007)	Risk of Overexploitation Scalar	Risk Tolerance Scalar	New ABC (lbs ww)	Current ABC (lbs ww)	Difference in ABC
Rock Hind	42,849	1.25	0.50	26,781	37,953	-11,172
Tomtate	105,909	1.25	0.50	66,193	80,056	-13,863
White Grunt (North)	735,873	1.25	0.50	459,921	674,033	-214,112
Scamp	596,879	1.25	0.50	373,049	509,788	-136,739
Gray Triggerfish	819,428	1.25	0.50	512,143	626,518	-114,375

Biological Effects

Under the South Atlantic Council's preferred sub-alternatives for this action, ABCs would increase for all but two of the species: rock hind and white grunt (northern population). However, all of the sub-alternatives under this action were developed by the Council's SSC's ORCS approach and should not result in negative biological impacts. There is uncertainty involved through the selection of the risk of overexploitation scalar (given to the Council by the SSC) and the selection of the risk tolerance scalar. If the Council were to select the risk tolerance scalar to achieve the most conservative values of ABC, any potential biological impacts would be minimized.

Economic Effects

A comparison of recent landings with current and proposed ACLs for each of the target species revealed that the proposed changes would not result in any economic impacts to either the commercial or recreational sectors for the majority of the target species. Economic benefits could potentially be realized for the recreational sector due to the proposed increase in the ACL of Atlantic spadefish and the Deepwater Complex (due to increases in the ACLs for yellowedge grouper and silk snapper). The commercial sector could potentially see economic benefits from increases in the ACLs for blue runner and the Deepwater Complex. However, as of January 27, 2014, blue runner will no longer be managed under the federal Snapper Grouper Fishery Management Plan and will therefore not be subject to an ACL.

Social Effects

In general a higher ACL would be more beneficial to commercial and recreational fishermen as long as it is set to prevent overfishing. Except for **Alternative 1 (No Action)**, **Preferred Sub-alternative 4a** (two species), and **Sub-alternative 4c**, the ACLs will increase for the designated species under the alternatives and sub-alternatives. Because the ACLs (commercial or recreational) for most of the species other than blue runner, scamp, and gray triggerfish have not recently been met or exceeded, the increases under **Sub-alternatives 2a, Preferred 2b, 3a, Preferred 3b, Preferred 4a,** and **4b** are not expected to affect commercial and recreational fishermen harvesting these species. The lower ACLs expected under **Sub-alternative 4c** could impact some of the stocks if harvest increases in the future.

Action 3. Modify the measurement method for gray triggerfish and establish a size limit

Alternative 1 (No Action). Currently, the minimum size limit for gray triggerfish is specified in inches total length (TL) in federal waters off east Florida only. In Florida state waters, the minimum size for gray triggerfish is specified in inches fork length (FL). The minimum size limit is 12 inches TL in federal waters off east Florida and 12 inches FL in east Florida state waters.

Alternative 2. Specify a minimum size limit for gray triggerfish of 12 inches fork length (FL) in federal waters off east Florida.

Preferred Alternative 3. Specify a minimum size limit for gray triggerfish of 12 inches fork length (FL) in federal waters off North Carolina, South Carolina, Georgia, and east Florida.

Alternative 4. Specify a minimum size limit for gray triggerfish of 14 inches fork length (FL) in federal waters off North Carolina, South Carolina, Georgia, and east Florida.

Biological Effects

For the commercial sector, there would be little difference in the biological benefits of **Alternatives 1 (No Action) - 4**, since the establishment of a minimum size limit would not be very restrictive on the harvest of gray triggerfish. A minimum size limit of 12 inch FL under **Preferred Alternative 3** would provide slightly greater spawning opportunities for gray triggerfish. A minimum size limit of 14 inches FL under **Alternative 4** would provide the greatest spawning opportunities of the alternatives considered. Therefore, biological benefits would be greatest for **Alternative 4**, followed by **Preferred Alternative 3,** then **Alternative 2** and **Alternative 1** (**No Action**) for the commercial sector.

For the recreational sector, **Alternative 2** would be expected to result in a very small reduction in total landings (**Table S-1**).

Table S-1. Percent reductions in annual South Atlantic recreational sector gray triggerfish landings from increasing the minimum size in Florida federal waters from 12 inches TL (10.46 inches FL) to 12 inches FL.

Year	% Reduction in Total Landings
2010	0.82
2011	1.07
2012	1.06

Note: MRIP and headboat landings included.

Under **Preferred Alternative 3**, the expected reductions in total landings for the private, charter, and headboat sectors in the south Atlantic are slightly greater (**Table S-2**). The expected reductions in landings are greatest under **Alternative 4** (**Table S-3**).

Table S-2. Percent reductions in annual South Atlantic recreational sector gray triggerfish landings from implementing a 12 inch FL size limit in North Carolina, South Carolina, and Georgia federal waters and increasing the minimum size in Florida federal waters from 12 inches TL (10.46 inches FL) to 12 inches FL.

Year	% Reduction in Total Landings
2010	3.5
2011	3.7
2012	4.8

Note: MRIP and headboat landings included.

Table S-3. Percent reductions in annual South Atlantic recreational sector gray triggerfish landings from implementing a 14 inch FL size limit in North Carolina, South Carolina, and Georgia federal waters and increasing the minimum size in Florida federal waters from 12 inches TL (10.46 inches FL) to 12 inches FL.

Year	% Reduction in Total Landings
2010	22.3
2011	21.9
2012	28.0

Note: MRIP and headboat landings included.

Hence, from a biological perspective, **Alternative 4** would result in the greatest benefits, followed in turn by **Preferred Alternative 3**, and **Alternative 2**.

Economic Effects

Alternatives 2, 3 (Preferred), and **4** would be expected to reduce annual commercial and recreational landings of gray triggerfish beyond the status quo of **Alternative 1 (No Action)**. It is initially estimated that **Preferred Alternative 3** could reduce landings from 3.5 – 4.8% and **Alternative 2** from 0.82 – 1.07%. **Table S-4** presents percent reductions in commercial and recreational landings as the same percentage reductions of the current commercial and recreational ACLs. **Preferred Alternative 3** would result in a loss of annual commercial landings from 2,729 to 13,644 lbs ww, and loss of annual recreational landings from 13,644 to 17,682 lbs ww. **Alternative 2** would result in a loss of annual commercial landings from 1,365 to 5,458 lbs ww and recreational landings from 1,768 to 7,702 lbs ww. It is possible that fishermen may mitigate to reduce the impacts of either **Preferred Alternative 3** or **Alternative 2** by increasing the length of a trip to harvest the same number of pounds before the minimum size limit requirements change; however, an increase in the length of a trip would increase trip-related costs, such as fuel, bait, and risk. Increases or decreases of the ACL would similarly increase or

decrease the adverse economic impact of **Preferred Alternative 3** or **Alternative 2**. **Alternative 4** could increase commercial and recreational landings of gray triggerfish; however, the extent of those increases cannot be presently quantified.

Table S-4. Sector ACLs and potential reductions from proposed ABC for gray triggerfish based on a new minimum size limit.

	Current	**0.50%**	**1%**	**2%**	**3%**	**4%**	**5%**
Sector	**ABC=ACL**						
Commercial (43.56%)	272,880	1,364	2,729	5,458	8,186	10,915	13,644
Recreational (56.44%)	353,638	1,768	3,536	7,073	10,609	14,146	17,682
Total	**626,518**						
	Proposed	**0.50%**	**1%**	**2%**	**3%**	**4%**	**5%**
Sector	**ABC=ACL**						
Commercial (43.56%)	312,325	1,562	3,123	6,247	9,370	12,493	15,616
Recreational (56.44%)	404,675	2,023	4,047	8,094	12,140	16,187	20,234
Total	**717,000**						

Social Effects

Changing the size limit measurement method under **Alternative 2** and **Preferred Alternative 3** to be consistent with the Florida size limit requirements would be beneficial to commercial and recreational fishermen by removing inconsistency between the state and federal requirements that would continue under **Alternative 1 (No Action)**. Establishing a size limit for federal waters of North Carolina, South Carolina, and Georgia (**Preferred Alternative 3** and **Alternative 4**) would make the federal regulations consistent for the EEZs of all the South Atlantic states, but could have some negative effects on recreational and commercial fishermen harvesting gray triggerfish in the EEZ of states that currently do not have size limits by limiting the number of fish that can be kept. Because **Alternative 1 (No Action)** and **Alternative 2** would not implement size limits for the states without a size limit, there would be no expected effects on commercial or recreational fishermen targeting gray triggerfish in North Carolina, South Carolina, and Georgia for these two alternatives.

Some social effects from size limits would be associated with the positive and negative biological effects of size limits on the gray triggerfish stock. Positive effects of allowing only fish of a certain size that are caught in the South Atlantic EEZ to be landed (**Preferred Alternative 3** and **Alternative 4**) could help maintain sustainability of harvest and the health of the stock, which would be beneficial to recreational and commercial fishermen in the long term. Negative effects of potential increase in discard mortality due to a newly established size limit in North Carolina, South Carolina, and Georgia under **Preferred Alternative 3** and **Alternative 4**, compared to allowing all fish

to be landed in those states under **Alternative 1 (No Action)** and **Alternative 2**, could affect the stock and in turn, commercial and recreational fishing opportunities.

Implementation of a minimum size limit for the EEZs of North Carolina, South Carolina, and Georgia would likely have more impact on recreational fishermen and for-hire businesses targeting gray triggerfish. Under **Preferred Alternative 3**, a small reduction in recreational landings is expected if a minimum size is required for all states (**Table S-2**). However, under **Alternative 4**, recreational landings would have been reduced by 22-28% if a 14-inch FL minimum size requirement was implemented (**Table S-3**). Particularly for recreational fishermen targeting gray triggerfish in Florida, the increase in the size limit under **Alternative 4** could change fishing behavior and opportunities to keep gray triggerfish. With the growing popularity and economic importance of gray triggerfish, changes in management measures could have considerable impacts on the stock that would in turn impact fishing opportunities in the future.

Action 4. Establish a commercial split season for gray triggerfish

Note: The Council does not have a preferred alternative for this action. The Council is requesting public input on these alternatives.

Alternative 1 (No Action). Presently, the commercial fishing season is from January 1st through December 31st of each year. The Commercial ACL is allocated for the entire year.

Alternative 2. Change the allocation of the Commercial ACL to 50% from January 1 through June 30 and the other 50% from July 1 through December 31 each year. If landings for the year are less than the ACL, any difference would be transferred to the following season; however, if landings for the second season are less than the ACL, the difference would not carry into a third season.

Alternative 3. Allocate the directed commercial gray triggerfish ACL XX% to the period January 1 through June 30 and XX% to the period July 1 through December 31. Any remaining ACL from season 1 would transfer to season 2. Any remaining ACL from season 2 would not be carried forward.

Biological Effects

The biological consequences for gray triggerfish of a split season under **Alternatives 2** or **3** are likely to be neutral since overall harvest would be limited to the commercial ACL and split-season ACLs and AMs would be triggered if the commercial ACLs were exceeded. Dividing the commercial ACL into two time periods could result in gray triggerfish being open for a short period of time, and possibly encourage derby conditions to a greater extent than **Alternative 1 (No Action)**. However, **Alternative 2** would establish fishing seasons that have opening and closing dates similar to vermilion snapper. Since gray triggerfish and vermilion snapper are co-occurring species that are caught together, **Alternative 2** could reduce bycatch of both species. Fishermen in southern areas with better weather during winter could have an advantage in catching gray triggerfish early in the fishing year. Thus, a split season ACL would allow fishermen in different regions to target gray triggerfish when weather is good in their area. Therefore, alternatives that divide the ACL into two time periods would allow for a greater opportunity among all areas to catch gray triggerfish. Furthermore, dividing the quota into two seasons would allow fishermen to target gray triggerfish in summer when historical catches have been the best. An examination of landings during 2009-2011 reveals that 40% of the commercial landings were during January-June, and 60% were during July-December (**Table S-5**).

Table S-5. Percentage of commercial gray triggerfish landings by month during 2008-2011.

Month	Percent
January	9%
February	7%
March	6%
April	5%
May	7%
June	6%
July	6%
August	10%
September	13%
October	14%
November	11%
December	6%

Economic Effects

At the beginning of the year, Florida's fishermen benefit from milder winters. They are less likely to cancel a trip due to adverse weather conditions than their northern counterparts. Consequently, Florida's gray triggerfish commercial fisherman may have a head start in the annual landings count. If that head start is significant, **Alternative 1 (No Action)** would keep that advantage, while **Alternative 2** make more of the ACL available to a larger area of the South Atlantic. The economic effects of **Alternative 3** may vary depending on how the South Atlantic Council decides to split the percentage of allowable harvest between the two split seasons.

Social Effects

A split season under **Alternative 2** or **Alternative 3** would likely be beneficial to commercial fishermen harvesting gray triggerfish in North Carolina and South Carolina. Because the current fishing year starts in January 1 (**Alternative 1 (No Action)**), fishermen in North Carolina and South Carolina sometimes have limited or no access to gray triggerfish in the early months due to weather, or could risk unsafe conditions to fish. A split season under **Alternative 2** or **Alternative 3** would likely increase access to the commercial ACL for North Carolina and South Carolina.

Depending on the percentages used for each season's quota under **Alternative 3**, the split seasons could be more beneficial for a specific area during different times of the year. For example, an area that focuses on gray triggerfish in the winter months would benefit more from a higher percentage in the first season. Likewise, an area that has higher landings and trips targeting gray triggerfish in the summer months would benefit more from a higher percentage in the second season.

Action 5. Establish a commercial trip limit for gray triggerfish

Note: The Council does not have a preferred alternative for this action. The Council is requesting public input on these alternatives.

Alternative 1 (No Action). There is no commercial trip limit for gray triggerfish in the South Atlantic region.

Alternative 2. Establish a commercial trip limit for gray triggerfish in the South Atlantic region.

Sub-alternative 2a. 500 lbs
Sub-alternative 2b. 1,000 lbs
Sub-alternative 2c. 1,500 lbs

Alternative 3. When 75% of the gray triggerfish commercial ACL is met or is projected to be met, the trip limit is reduced to

Sub-alternative 3a. 200 pounds
Sub-alternative 3b. 500 pounds
Sub-alternative 3c. 750 pounds

Biological Effects

The effects of trip limits proposed in **Alternatives 2** and **3** are based on 2012 logbook data. This preliminary analysis serves as a tool to help the South Atlantic Council select a reasonable range of alternatives.

Alternative 2 would establish commercial trip limits ranging from 500 lbs ww to 1,500 lbs ww. Landings information from 2012 show that about 8% of the trips had landings greater than 500 lbs ww (**Table S-7**) (**Sub-alternative 2a**), 2% of the trips had landings greater than 1,000 lbs ww (**Sub-alternative 2b**), and less than 1% of the trips had landings greater than 1,500 lbs ww (**Sub-alternative 2c**). Thus, commercial closures would still be expected under **Sub-alternatives 2a-2c**. Assuming landings during September-December 2012 would have been similar to those of 2008-2011, a 57% reduction in harvest would be needed to keep gray triggerfish open all year. If effort were to remain at the same levels as in 2012, a very low trip limit (i.e., 150 lbs ww) would be needed to obtain the harvest reduction needed to keep the commercial sector open all year. However, if the trip limit was set at that level, it is expected some fishermen would no longer target gray triggerfish. **Table S-8** shows the expected dates that the commercial ACL would be expected to be met under **Sub-alternatives 2a-2c**. A 500 lb trip limit (**Sub-alternative 2a**) would be expected to extend the fishing season by over a month as compared to **Alternative 1 (No Action)**, and a 1,500 lb ww trip limit (**Sub-alternative 2b**) would be expected to extend the fishing season by about a week. The trip limits may have a greater effect based on 2013 data if there has been an increase in the catch per trip.

Alternative 3 would specify a trip limit when 75% of the commercial ACL is caught. For 2011 and 2012, it is expected that 75% of the current 272,880 lbs ww ACL would be met in June. Reducing the trip limit to 200 lbs ww after 75% of the ACL is met would be expected to result in a closure during September based on data from 2011 and 2012. The proposed commercial ACL (312,325 lbs ww) would likely delay these expected closures dates assuming fishing patterns were similar.

Table S-7. Trip limit, number of trips, percentage of trips greater than trip limit, and harvest reduction provided by trip limit for 2012.

Trip Limit (lbs ww)	2012		
	# Trips	% Trips	Harvest Reduction
0	1,702	100.00%	100.00%
100	652	38.31%	65.24%
112	616	36.19%	62.53%
150	505	29.67%	55.02%
175	441	25.91%	50.81%
200	394	23.15%	47.09%
224	364	21.39%	43.84%
250	323	18.98%	40.66%
300	268	15.75%	35.40%
337	239	14.04%	32.10%
500	143	8.40%	21.31%
600	111	6.52%	16.74%
700	80	4.70%	13.24%
800	66	3.88%	10.67%
900	48	2.82%	8.69%
1,000	39	2.29%	7.16%
1,100	28	1.65%	5.98%
1,200	22	1.29%	5.08%
1,300	18	1.06%	4.36%
1,400	15	0.88%	3.76%
1,500	14	0.82%	3.24%

Trip Limit (lbs ww)	2012		
	# Trips	% Trips	Harvest Reduction
1,600	9	0.53%	2.89%
1,700	8	0.47%	2.58%
1,800	6	0.35%	2.32%
1,900	4	0.24%	2.13%
2,000	3	0.18%	2.00%
2,250	2	0.12%	1.79%
2,500	2	0.12%	1.61%
2,750	2	0.12%	1.44%
3,000	2	0.12%	1.26%
3,250	2	0.12%	1.08%
3,500	2	0.12%	0.90%
3,750	2	0.12%	0.73%
4,000	1	0.06%	0.59%
4,250	1	0.06%	0.50%
4,500	1	0.06%	0.41%
4,750	1	0.06%	0.32%
5,000	1	0.06%	0.23%
5,250	1	0.06%	0.14%
5,500	1	0.06%	0.05%
5,750	0	0.00%	0.00%

Source: Coastal logbook data from June 2013.

Table S-8. Expected dates that the current ACL for gray triggerfish would be expected to be met under Alternatives 2 and 3.

Year	Sub-Alt 2a	Sub-Alt 2b	Sub-Alt 2c	Alt 1	75%	Sub-Alt 3a
	500 lb	1,000 lb	1,500 lb	No Trip Limit		200 lb after 75%
2008	Not met	11/17	11/7	10/30	9/12	12/14
2009	11/20	10/14	10/7	10/1	9/5	10/30
2010	10/19	9/28	9/21	9/15	7/20	10/14
2011	9/18	8/25	8/18	8/13	6/17	9/12
2012	10/5	9/6	9/1	8/23	6/15	9/27

The biological effects of **Alternatives 1 (No Action), Alternative 2** (including its sub-alternatives)**,** and **Alternative 3** (including its sub-alternatives) would be expected to be neutral because ACLs and AMs are in place to cap harvest, and take action if ACLs are exceeded. **Alternative 1 (No Action)** could present a greater biological risk to gray triggerfish in terms of exceeding the commercial ACL than **Alternatives 2** and **3** since no trip limit would be in place to slow down the rate of harvest and help ensure the commercial ACL is not exceeded. However, improvements have been made to the quota monitoring system, and the South Atlantic Council has approved a Dealer Reporting Amendment, which should enhance data reporting. Therefore, any biological benefits associated with trip limits would be expected to be small. Larger trip limits would not constrain catch and would result in the commercial ACL being met earlier in the year. Early closures of gray triggerfish could result in increased bycatch of gray triggerfish when fishermen target co-occur species such as vermilion snapper and black sea bass. However, release mortality of gray triggerfish is considered to be low. An ongoing stock assessment for gray triggerfish in the South Atlantic estimates that 87.5% of released fish survive. Thus, commercial closures associated with meeting the commercial ACL are not expected to negatively affect the gray triggerfish stock due to bycatch.

Evaluation of trip limit impacts on season length accounted for the recent trends in landings by fitting a seasonal autoregressive integrated moving average model (SARIMA) to commercial catch-per-day and forward projecting one year. The analysis also accounted for the change in the size limit (Action 3, Preferred Alternative 3: 12" FL for all SAFMC states). Analyses were conducted using the current commercial ACL of 272,880 lbs ww. (Note: Updated analyses using the proposed commercial ACL of 312,325 lbs ww will be provided to the Council prior to the March 2014 meeting.) Lower trip limits lead to longer seasons (**Table S-9**). A 100-lb trip limit for the entire season is the only alternative projected to keep the fishery open year-round.

Table S-9. Commercial gray triggerfish projected mean closure dates, with 95% confidence limits, under a variety of trip limit scenarios.

Alternative	Trip Limit	Mean	L95%	U95%
1	No trip limit	31-Jul	No Closure	23-Apr
2c	1500-lb trip limit	4-Aug	No Closure	27-Apr
2b	1000-lb trip limit	10-Aug	No Closure	7-May
2a	750-lb trip limit	19-Aug	No Closure	20-May
	500-lb trip limit	4-Sep	No Closure	15-Jun
	300-lb trip limit	28-Sep	No Closure	23-Jul
	200-lb trip limit	9-Nov	No Closure	19-Aug
	100-lb trip limit	No Closure	No Closure	10-Oct
3a	200-lb trip limit @ 75% ACL	16-Aug	No Closure	7-Jun
3b	500-lb trip limit @ 75% ACL	4-Aug	No Closure	13-May
3c	750-lb trip limit @ 75% ACL	2-Aug	No Closure	5-May

Economic Effects

From 2009 through 2013, very few commercial trips that landed gray triggerfish landed more than 500 lbs per trip. Consequently, **Alternative 1 (No Action)** and **Sub-Alternatives 2a**, **2b** and **2c** are expected to have minimal impact on landings of gray triggerfish. Allowing a 500 lb ww trip limit (**Sub-alternative 2a**) would only extend the season by one month compared to **Sub-alternative 2c**'s 1,500 lbs trip limit (**Table S-9**). And having no trip limit as in **Alternative 1 (No Action)** only shortens the season by 4 additional days compared to **Sub-alternative 2c**.

It is reasonable to expect that larger vessels that make longer trips could have landings greater than 500, 1,000, or 1,500 lbs. If so, **Sub-Alternative 2a** would have the largest adverse economic impact on commercial fishermen with historically larger landings per trip, followed in turn by **Sub-Alternatives 2b** and **2c**. **Alternative 1 (No Action)** would have no adverse economic impact beyond that baseline.

Implementing the trip limits of **Alternative 3** after 75% of the commercial ACL has been taken are projected to offer only short extensions the fishing season (**Table S-9**). A 200 lbs ww trip limit after 75% of the ACL has been taken is projected to extend the season by 16 days (**Sub-alternative 3a**) compared to no trip limits. A 500 lbs ww trip limit after 75% of the ACL has been taken is projected to extend the season by 4 days (**Sub-alternative 3b**), and a 750 lbs ww trip limit after 75% of the ACL has been taken is projected to extend the season only by 2 days (**Sub-alternative 3c**).

Because none of the sub-alternatives of **Alternative 3** are expected to have significant impacts on extending the length of the fishing season, the sub-alternatives are expected to have minimal economic effects when compared to **Alternative 1 (No Action)**. Qualitative comparisons of the sub-alternatives after 75% of the commercial ACL has been caught can be made. Higher trip limits mean the total commercial ACL would be reached sooner, however, the higher the trip limit increases the possibility of any given trip to be more profitable. A trip limit of 750 lbs ww after 75% of the commercial ACL

has been taken as in **Sub-Alternative 3c** would provide the greatest direct positive economic effect, followed by **Sub-Alternatives 3b** (500 lbs ww) and **3a** (200 lbs ww), respectively.

Social Effects

In general, a commercial trip limit may help slow the rate of harvest, lengthen a season, and prevent the commercial ACL from being exceeded, but trip limits that are too low may make fishing trips inefficient and too costly if fishing grounds are too far away. Relative to **Alternative 1 (No Action)**, **Alternatives 2** and **3** could reduce the risk of derby conditions and associated negative impacts that can occur due to an in-season closure or payback provision if the ACL is exceeded. A more restrictive trip limit is more likely to slow the rate of harvest and lengthen the season than a less restrictive trip limit, unless vessels do not currently harvest over a proposed limit. The 500-lb limit proposed under **Sub-alternative 2a** is the most restrictive under **Alternative 2**, but a low percentage of trips exceed 500 lbs of gray triggerfish at this time (**Table S-7**). Very few trips exceed the 1,000 lbs (**Sub-alternative 2b**) and less than 1% exceed 1,500 lbs (**Sub-alternative 2c**) (**Table S-7**). The typical low catch of gray triggerfish is likely attributed to the multi-species catch of many snapper grouper commercial trips. In addition to gray triggerfish, a commercial vessel is likely to also target several other snapper grouper species along with coastal migratory pelagic species on one trip. Therefore, a trip with low poundage of one particular species is not necessarily an inefficient trip.

The step-down trip limit when 75% of the commercial ACL is met under **Alternative 3** would allow commercial trips to continue fishing for other species, but with a sort of bycatch allowance for any gray triggerfish caught on the trips. **Sub-alternatives 3a-3c** would help to reduce discards of gray triggerfish and could help extend the season. Overall, the social benefits to the commercial fleet, associated businesses, and communities would likely be maximized as a result of some trade-off between season length and economic changes.

References

Berkson, J., L. Barbieri, S. Cadrin, S. L. Cass-Calay, P. Crone, M. Dorn, C. Friess, D. Kobayashi, T. J. Miller, W. S. Patrick, S. Pautzke, S. Ralston, M. Trianni. 2011. Calculating Acceptable Biological Catch for Stocks That Have Reliable Catch Data Only (Only Reliable Catch Stocks – ORCS). NOAA Technical Memorandum NMFS-SEFSC-616, 56 p.

SAFMC (South Atlantic Fishery Management Council). 2011c. Comprehensive Annual Catch Limit Amendment for the South Atlantic Region with Final Environmental Impact Statement, 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. 755 pp. plus appendices.

SEDAR (Southeast Data, Assessment, and Review) 32. 2013. South Atlantic Gray Triggerfish and Blueline Tilefish. Southeast Data, Assessment and Review, 4055 Faber Place, Ste 201, North Charleston, S.C. 29405. Available at: http://www.sefsc.noaa.gov/sedar/

Timing of Amendment 29

Public hearings held from 4 P.M. to 7 P.M. on the following dates and 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: 252-240-1155
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

The Council will review public comments, request additional comment, and approve all actions during the March 3-7, 2014 meeting in Savannah, GA. The Council will review the final amendment and approve the amendment for formal review by the Secretary of Commerce during the June 9-13, 2014 meeting in Ponte Vedra Beach, FL.

NMFS will issue a proposed rule and final rule, each with its respective comment period. NMFS will then consider comments submitted and approve, disapprove, or partially approve the amendment for implementation.

Regulations would be effective by early 2015.

Comments must be received by 5:00 P.M. on February 3, 2014
(see cover for addresses)