Vision Blueprint Recreational Regulatory Amendment 26 for the Snapper Grouper Fishery of the South Atlantic Region

Decision Document

The Vision Blueprint Recreational Regulatory Amendment 26 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region would address specific action items in the 2016-2020 Vision Blueprint for the Snapper Grouper Fishery of the South Atlantic Region.

June 13-14, 2017

Snapper Grouper Committee
Sawgrass Mariott
Ponte Vedra, FL

Background

The 2016-2020 Vision Blueprint for the Snapper Grouper Fishery constitutes the long-term strategic plan for managing the fishery. The Council began developing the strategic plan in 2012 through the Visioning project, which included extensive outreach to stakeholders throughout the region and across both sectors in the fishery. The Vision Blueprint identifies the goals, objectives, strategies, and actions that support the vision for the snapper grouper fishery and centers around four goal areas - Science, Management, Communication, and Governance. During 2015, the Council prioritized action items that would be addressed through amendments to the Snapper Grouper Fishery Management Plan over the next 5 years. The Council is considering the following recreational items for inclusion in Vision Blueprint Regulatory Amendment 26:

- Modification of aggregate bag limits
- Re-evaluation of the shallow-water grouper closure (also being considered for the commercial sector in Vision Blueprint Amendment 27).
- Removal of minimum size limits for deep-water species (also being considered for the commercial sector in Vision Blueprint Amendment 27).
- Reduction in minimum size limit of black sea bass
- Reduction in minimum size limit for gray triggerfish off east Florida (also being considered for the commercial sector in Vision Blueprint Amendment 27).

Additional action items from the Vision Blueprint are being considered in Amendment 43 (red snapper management and recreational reporting) that could affect the commercial sector.

Purpose and need statement

Purpose for Actions

The purpose of this amendment is to modify recreational regulations such as aggregate bag limits, seasonal closures, and minimum size limits for species in the snapper grouper fishery.

Need for Actions

The need for this amendment is to simplify and promote compatible regulations; improve access to the snapper grouper resource; improve protection for spawning fish; and reduce discards of deep-water snapper grouper species, black sea bass, and gray triggerfish while minimizing, to the extent practicable, adverse socio-economic effects for recreational fishermen in the South Atlantic region.

Committee Action:

MODIFY AS NECESSARY

Proposed Actions and Alternatives

Action 1. Modify the recreational grouper and 10-snapper aggreagate bag limits and establish a recreational aggregate bag limit and recreational season for deep-water species

Alternative 1 (No Action). The following recreational aggregate bag limits and recreational seasons are in place in the South Atlantic Region:

Aggregate Snapper Bag Limit: Ten (10) snapper per person per day year-round ~~including~~ for the following species: lane, yellowtail, gray, mutton, queen, blackfin, cubera[1], and silk. The following species are excluded from the aggregate: vermilion snapper and red snapper. [1] <30 inches; max. 2 per person but no more than 2 per vessel > 30 inches total length (TL) off Florida

Aggregate Grouper Bag Limit: Three (3) groupers per person per day including: gag[1], black[1], snowy[2], misty, red, scamp, yellowedge, yellowfin, yellowmouth, blueline tilefish[3], sand tilefish, golden tilefish[4], coney, graysby, red hind, and rock hind. Shallow-water grouper (gag, black, red, scamp, yellowfin, yellowmouth, red hind, rock rind, graysby, coney) harvest only allowed May 1 through December 31.

[1]Maximum of ~~1~~ one gag or black grouper (but not both) per person per day with harvest allowed May 1 through December 31.

[2]Maximum of ~~1~~ one snowy grouper per *vessel* per day; recreational harvest allowed only May 1 through August 31 (closed September 1 through April 30)

[3]Blueline tilefish harvest allowed only May 1 through August 31 (closed September 1 through April 30)

[4]Maximum of ~~1~~ one golden tilefish per person per day year-round

Alternative 2. Modify the current species composition of the 3-fish aggregate grouper bag limit and the 10-snapper aggregate bag limit. Establish a 2-fish per person per day deep-water species aggregate bag limit including species in the Deep-water Complex (yellowedge grouper, silk snapper, misty grouper, queen snapper, sand tilefish, and blackfin snapper), golden tilefish, snowy grouper, and blueline tilefish.

Sub-alternative 2a. Establish a May 1 through August 31 recreational season for the deep-water species aggregate.

Sub-alternative 2b. Only ~~1~~ one fish per person per day within the deep-water species aggregate can be of any one species.

Alternative 3. Modify the current species composition of the 3-fish aggregate grouper bag limit and the 10-snapper aggregate bag limit. Establish a 3-fish per person per day deep-water species aggregate bag limit including species in the Deep-water Complex (yellowedge grouper, silk snapper, misty grouper, queen snapper, sand tilefish, and blackfin snapper), golden tilefish, snowy grouper, and blueline tilefish.

Sub-alternative 3a. Establish a May 1 through August 31 recreational season for the deep-water species aggregate.

Sub-alternative 3b. Only ~~1~~ one fish per person per day within the deep-water species aggregate can be of any one species.

Alternative 4. Modify the current species composition of the 3-fish aggregate grouper bag limit and the 10-snapper aggregate bag limit. Establish a 4-fish per person per day deep-water species aggregate bag limit including species in the Deep-water Complex (yellowedge grouper, silk snapper, misty grouper, queen snapper, sand tilefish, and blackfin snapper), golden tilefish, snowy grouper, and blueline tilefish.

Sub-alternative 4a. Establish a May 1 through August 31 recreational season for the deep-water species aggregate.

Sub-alternative 4b. Only ~~1~~ one fish per person per day within the deep-water species aggregate can be of any one species.

	Status Quo			**Aggregate Limit**			**Fishing seasons**	**Species Limit**
Species	**Aggregate**	**Limit**	**Fishing seasons**	**Alt 2**	**Alt 3**	**Alt 4**	**Sub-Alt 2a, 3a, 4a**	**Sub-Alt 2b, 3b, 4b**
Queen snapper	10-snapper	10/pp/day	Year-round	2/pp/day	3/pp/day	4/pp/day	May-August	Maximum 1 of each species
Blackfin snapper								
Silk snapper								
Yellowedge grouper	3-grouper	3/pp/day						
Misty grouper								
Sand tilefish								
Golden tilefish		1/pp/day						
Snowy grouper		1 pv/day	May-Aug					
Blueline tilefish		3/pp/day						

Preliminary Effects Analysis:

1.1 Biological Effects

This action considers establishing a recreational aggregate bag limit and season for deep-water species included in the current 10-snapper aggregate and deep-water species under the 3-grouper aggregate.

NOTE: ANALYSES DO NOT YET INCLUDE HEADBOAT DATA

Limited information is available to evaluate the potential impacts of implementing an aggregate bag limit for deep-water species (yellowedge grouper, silk snapper, misty grouper, queen snapper, sand tilefish, blackfin snapper, golden tilefish, snowy grouper, and blueline tilefish) and even less information to evaluate a possible recreational season on this group of species. There is only sufficient data in the Marine Recreational Information program (MRIP) to evaluate possible effects on blueline tilefish and sand tilefish. It is important to note that sand tilefish, a species currently included in the Deep-water Complex (yellowedge grouper, silk snapper, misty grouper, queen snapper, sand tilefish, blackfin snapper), is reported in the literature as a shallow-water species found over sand and rubble bottom (Dooley 1978).

Table 1.1 shows the number of interepted charter and private recreational trips intercepted from 2014 through 2016 that landed deep-water species, including sand tilefish, according to MRIP data. **Table 1.2** contains the same information excluding sand tilefish. Data used in this preliminary analysis are raw (unexpanded). From 2014 through 2016, 210 intercepted trips reported landing one deep-water species (including sand tilefish) and only 28 intercepted trips landed more than one deep-water species (including sand tilefish). When sand tilefish are removed, the number of intercepted charter and private recreational trips that landed one deep-water species from 2014 through 2016 dropped to only 7 intercepted trips landing more than 1 deep-water species (**Table 1.2** (A=observed harvest, B1=reported harvest, B2=discarded)).

Table 1.1. Number of intercepted charter and private recreational trips landing (A or B1) deep-water species, including sand tilefish, from 2014 to 2016 in South Atlantic waters (including Monroe County). If no deep-water species were landed (= 0), deep-water species were released.

Year	Number of DW Species Landed	Charter	Recreational
2014	0	28	32
	1	59	26
	2	5	2
2015	0	81	31
	1	20	26
	2	6	4
2016	0	46	22
	1	53	26
	2	3	6
	3	2	

Table 1.2. Number of sampled charter and private recreational trips landing (A + B1) deep-water species, excluding sand tilefish, from 2014 to 2016 in South Atlantic waters (including Monroe County). If no deep-water species were landed (Number of DW species landed = 0), deep-water species were released.

		2014		2015		2016	
Year	Number of Species Landed	Charter	Private Rec	Charter	Private Rec	Charter	Private Rec
2014	0	2	4	3	1	1	2
	1	44	8	10	4	27	6
	2	2		1		2	1
	3	1				1	

Table 1.3 examines the unexpanded distribution of the catch per angler on charter trips that caught (A=observed harvest, B1=reported harvest, B2=discarded) deep-water species from 2014 through 2016. There were no reported trips that caught queen snapper or misty grouper over this time period. **Table 1.4** shows the same information but only for landed catch (A + B1). **Tables 1.5** and **1.6** present similar information for the private recreational sector.

Sand tilefish is the most frequently encountered species on charter trips followed by blueline tilefish, golden tilefish, and snowy grouper. In terms of landings, blueline tilefish is the most frequently landed species on charter trips. In addition, from 2014 through 2016, anglers on charter trips frequently caught more than one blueline tilefish and many anglers (57) landed more than 3 fish. Only one blueline tilefish was reported to have been discarded during the same time period (**Table 1.3**). From 2014 through 2016 there were no reported catches of queen snapper or misty grouper among charter anglers. Given the low number of trips intercepted for misty grouper, snowy grouper, yellowedge grouper, blackfin snapper, queen snapper, silk snapper, and golden tilefish, the catch estimates will not likely provide informative catch statistics for the different management alternatives.

Table 1.3. Unexpanded catch per angler on charter trips that caught (A+B1+B2) deep-water species in the South Atlantic (including Monroe County) from 2014 through 2016. Numbers in top row denote number of fish caught. Numbers within cells are numbers of anglers.

Year	Species	Number of Sampled Trips	Number of Anglers Catching (A, B1, and B2)					
			0	1	2	3	4	5
2014	blackfin snapper	2	5	2	.	.	.	.
2014	blueline tilefish	40	33	50	29	58	42	2
2015		1	4	2	.	.	.	.
2016		27	22	33	15	55	13	.
2014	sand tilefish	28	162	36	.	.	.	.
2015		74	528	111	1	.	.	.
2016		49	334	82	1	.	.	.
2014	silk snapper	1	2	1	.	.	.	.
2015		2	4	6	.	.	.	.

2014	snowy grouper	5	18	5	.	.	.	.
2015		11	39	11	.	.	.	.
2016		7	29	9	.	.	.	.
2014	yellowedge grouper	2	9	3	.	.	.	.
2015		1	5	1	.	.	.	.
2016		1	4	2	.	.	.	.
2014	golden tilefish	2	12	3	.	.	.	.
2015		11	30	22	2	.	.	.
2016		8	16	18	1	.	.	.

Information in **Tables 1.5** and **1.6** suggests that private recreational anglers also encountered sand tilefish most frequently than any other deep-water species from 2014 through 2016 and up to four sand tilefish were reportedly kept. Considerably fewer private recreational anglers caught and landed blueline tilefish than anglers on charter trips. Private recreational anglers also kept almost all the blueline tilefish they encountered and only three reported keeping more than three blueline tilefish. From 2014 through 2016 there were no reported catches of yellowedge grouper, queen snapper, or misty grouper among private recreational anglers. Given the low number of trips intercepted for misty grouper, snowy grouper, yellowedge grouper, blackfin snapper, queen snapper, silk snapper, and golden tilefish, the catch estimates will not likely provide informative catch statistics for the different management alternatives.

Table 1.4. Unexpanded catch per angler on charter trips that landed (A+B1) deep-water species in the South Atlantic (including Monroe County) from 2014 through 2016. Numbers in top row denote number of fish landed. Numbers within cells are numbers of anglers.

Year	Species	Number of Sampled Trips	Number of Anglers Landing (A and B1)					
			0	1	2	3	4	5
2014	blackfin snapper	2	5	2	.	.	.	.
2014	blueline tilefish	40	34	49	29	58	42	2
2015		1	4	2	.	.	.	.
2016		27	22	33	15	55	13	.
2014	sand tilefish	28	191	7	.	.	.	.
2015		74	640	0	.	.	.	.
2016		49	412	5	.	.	.	.
2014	silk snapper	1	2	1	.	.	.	.
2015		2	5	5	.	.	.	.
2014	snowy grouper	5	19	4	.	.	.	.
2015		11	41	9	.	.	.	.
2016		7	30	8	.	.	.	.
2014	yellowedge grouper	2	9	3	.	.	.	.
2015		1	5	1	.	.	.	.
2016		1	4	2	.	.	.	.
2014	golden tilefish	2	12	3	.	.	.	.
2015		11	30	22	2	.	.	.
2016		8	16	18	1	.	.	.

Table 1.5. Unexpanded catch per angler on private recreational trips that caught (A+B1+B2) deep-water species in the South Atlantic (including Monroe County) from 2014 through 2016.

Year	Species	Number of Sampled Trips	Number of Anglers Catching (A, B1, and B2)					
			0	1	2	3	4	5
2014	blackfin snapper	1	2	1	.	.	.	.
2016		1	1	2	.	.	.	.
2014	blueline tilefish	7	8	9	2	0	1	.
2015		3	1	4	2	1	.	.
2016		7	7	4	5	3	1	1
2014	sand tilefish	30	27	40	6	3	.	.
2015		31	31	35	11	3	1	.
2016		17	36	19	.	.	.	.
2014	snowy grouper	4	9	7	.	.	.	.
2015		2	5	2	.	.	.	.
2016		2	2	2	.	.	.	.
2014	golden tilefish	2	2	2	.	.	.	.
2015		1	1	1	.	.	.	.
2016		5	12	7	.	.	.	.

Table 1.6. Unexpanded catch per angler on private recreational trips that landed (A+B1) deep-water species in the South Atlantic (including Monroe County) from 2014 through 2016.

Year	Species	Number of sampled trips	Number of anglers landing (A and B1)					
			0	1	2	3	4	5
2014	blackfin snapper	1	2	1	.	.	.	.
2016		1	1	2	.	.	.	.
2014	blueline tilefish	7	8	9	2	0	1	.
2015		3	1	4	2	1	.	.
2016		7	9	3	4	3	1	1
2014	sand tilefish	30	69	3	2	2	.	.
2015		31	73	6	2	.	.	.
2016		17	54	1	.	.	.	.
2014	snowy grouper	4	16	0	.	.	.	.
2015		2	6	1	.	.	.	.
2016		2	3	1	.	.	.	.
2014	golden tilefish	2	2	0	.	.	.	.
2015		1	1	1	.	.	.	.
2016		5	12	1	.	.	.	.

Tables 1.7 and **1.8** show expanded numbers of deep-water species landed in the charter and private components of the recreational fishery in the South Atlantic region (including Monroe County) from 2014 to 2016 during January-April and September-December and May-August. **Table 1.7** contains information on the status quo whereas **Table 1.8** shows the effect on landings of restricting catch to a bag limit of one fish.

Prior to implementation of the May-August recreational season for blueline tilefish (Amendment 32, effective March 30, 2015), recreational landings were higher during those four months than over the remaining eight months of the year. During 2015, very small landings were confined to the recreational season and during 2016, some landings occurred outside the 4-month season (**Table 1.7**). Snowy grouper landings have occurred outside the May-August season during 2014-2016. The amendment that implemented the recreational season for snowy grouper (Regulatory Amendment 20, SAFMC 2014) was effective in August 2015, so the first year the closure was in place was 2016. According to **Table 1.7**, the same level of snowy grouper landings were observed within the established May-August season as during the remainder of the year when recreational harvest of the species is not allowed. Recreational harvest of golden tilefish is currently allowed under a one fish per person limit year-round, yet harvest seems concentrated during months other than May-August.

Table 1.7. Expanded numbers of deep-water species landed in the South Atlantic (including Monroe County) during January-April and September-December and May-June during 2014-2016 for charter and private recreational components. Cells highlighted in red indicate low sample size (N<20) and not likely reliable estimates to determine effect of proposed management alternatives.

Year	Species	Charter		Recreational	
		Jan-Apr & Sept-Dec	May-Aug	Jan-Apr & Sept-Dec	May-Aug
2014	Blackfin snapper	25	99	528	
	Blueline tilefish*	2,062	6,217	2,056	3,570
	Sand tilefish	35	0	2,421	1,993
	Silk snapper	25			
	Snowy grouper*	48	31	0	0
	Golden tilefish	285		447	
	Yellowedge grouper	13	32		
2015	Blueline tilefish*		105		1,542
	Sand tilefish	0	0	0	2,636
	Silk snapper	0	414		
	Snowy grouper*	233	156		451
	Golden tilefish	3,417	74	174	
	Yellowedge grouper		56		
2016	Blackfin snapper				293
	Blueline tilefish*	870	13,703		13,422
	Sand tilefish	322	180	1,159	0
	Snowy grouper*	261	266		424
	Golden tilefish	5,068		390	3,367
	Yellowedge grouper		62		

* Species for which a May through August recreational season is currently in place.

Because very few recreational trips during 2014-2016 caught more than one deep-water species (**Tables 1.1** and **1.2**), **Alternatives 3** and **4** (3-fish and 4-fish aggregate bag limits, respectively), would have no effect on landings. **Table 1.8** shows that a 1-fish bag limit within a 2-fish aggregate (**Alternative 2**, **Sub-alternative 2b**) would reduce landings of blueline tilefish by 53%. Landings of golden tilefish from charter trips also show a reduction under the 1-fish bag limit scenario even though the current retention limit is one fish. This is because there were intercepted trips in 2014-2016 that exceeded the current golden tilefish bag limit (**Table 1.4**). Landings of other deep-water species would not be affected as anglers are not catching more than 1 fish.

Table 1.8. Expanded numbers of deep-water species landed in the South Atlantic (including Monroe County) during January-April and September-December and May-June during 2014-2016 for charter and private recreational components with an imposed 1-fish bag limit. Cells highlighted in red indicate low number of intercepted trips (N<20) and not likely reliable estimates to determine effect of proposed management alternatives.

Year	Species	Charter		Recreational	
		Jan-Apr & Sept-Dec	May-Aug	Jan-Apr & Sept-Dec	May-Aug
2014	Blackfin snapper	25	99	528	
	Blueline tilefish	851	2,905	1,778	2,525
	Sand tilefish	35	0	2,421	797
	Silk snapper	25			
	Snowy grouper	48	31	0	0
	Golden tilefish	285		447	
	Yellowedge grouper	13	32		
2015	Blueline tilefish		105		1,079
	Sand tilefish	0	0	0	2,003
	Silk snapper	0	414		
	Snowy grouper	233	156		451
	Golden Tilefish	3,389	74	174	
	Yellowedge grouper		56		
2016	Blackfin snapper				293
	Blueline tilefish	435	5,436		5,733
	Sand tilefish	322	180	1,159	0
	Snowy grouper	261	266		424
	Golden Tilefish	4,451		390	3,367
	Yellowedge grouper		62		

1.2 Economic Effects

Generally, angler satisfaction, which can be measured monetarily in consumer surplus (CS), increases with the number of fish that are harvested and the size of the fish. The smaller the bag limit the greater the probability that the satisfaction from an angler trip could be negatively affected. The effects of **Action 1** would vary depending on the species being examined. **Alternative 2**, **3**, and **4** would potentially increase harvest and CS on trips landing snowy grouper, as this alternative is less restrictive than the current 1 fish per vessel per day limit and maintains or removes the current harvest season of May 1-August 31. **Sub-alternative 2a** would restrict CS derived on trips landing yellowedge grouper, silk snapper, misty grouper, queen snapper, sand tilefish, blackfin snapper, sand tilefish, or golden tilefish that occur outside May 1-August 31 harvest season, as this season does not currently apply to these species. **Sub-alternative 2b** would restrict the CS that could be derived on trips harvesting yellowedge grouper, silk snapper, misty grouper, queen snapper, sand tilefish, blackfin snapper, and blueline tilefish by limiting the harvest of each species below their current respective bag limits if there is a 1 fish/person/day limit for any one species.

Sub-alternative 3a and **4a** would restrict CS derived on trips landing yellowedge grouper, silk snapper, misty grouper, queen snapper, sand tilefish, blackfin snapper, sand tilefish, and golden tilefish that occur outside May 1-August 31, since this season does not currently apply to these species. **Sub-alternative 3b and 4b** would restrict the CS that could be derived on trips harvesting yellowedge grouper, silk snapper, misty grouper, queen snapper, sand tilefish, blackfin snapper, and blueline tilefish by limiting the harvest of each species below their current respective bag limits if there is a 1 fish/person/day limit for any one species. Based on the analysis provided in **Section 1.1**, the greatest negative economic effects would occur on trips landing blueline tilefish. There would be no economic effects in regards to CS derived from golden tilefish, as this species has a limit of 1 fish per person and falls within the current 3 fish per person aggregate grouper bag limit.

In relation to the other alternatives, **Alternative 1 (No Action)** is equally or less restrictive for all species except snowy grouper. **Alternative 4** is the second least restrictive, and thus is expected to have the least negative economic effects based on the highest aggregate bag limit followed by **Alternative 3** and **Alternative 2**. The exact effects of each alternative will be dependent on the sub-alternative chosen.

1.3 Social Effects

Section 3.4 of the draft amendment document describes communities with the highest engagement and reliance on recreational fishing. These communities may have residents and businesses that would be expected to be affected by the proposed action. This action would specifically affect individuals and for-hire businesses that specialize in deep-dropping, a technique used to target deepwater species. Deep-dropping requires some specialized gear and knowledge, and likely contributes to a higher rate for for-hire trips targeting deepwater species.

In general, the social effects of modifying the recreational harvest limit and specifying a season for deepwater species would be associated with the biological costs of each alternative and sub-alternative (see **Section 1.1**), as well as the effects on current recreational fishing opportunities. While **Alternatives 2-4** could restrict recreational fishing opportunities for deepwater species but would also be expected to contribute to long-term benefits to the stocks and for future recreational opportunities. The effects on recreational fishermen due to an establishment of a designated season for recreational deepwater harvest during the year with would be associated with the biological benefits of how the opening/closing dates, and the negative social and economic effects of restricted access when the season is not open.

Alternative 1 (No Action) would not modify the current harvest limits for deepwater species and would not modify the current specified seasons, and this would not be expected to have any effects on recreational fishermen and for-hire businesses that target deepwater species because there would be no additional restrictions. The exception would be for trips targeting snowy grouper, because **Alternative 1 (No Action)** would maintain the current limit of 1 per vessel per day, and **Alternatives 2-4** would allow for more than one snowy grouper per vessel through the personal bag limits.

Lower bag limits are usually associated with increased restrictions on recreational fishing opportunities. In some cases, if a bag limit is too low, it may not be worth the time and effort to take the recreational trip. For fishermen on charter trips, it is likely that the lower aggregate limit could have negative social effects because charter trips were more likely to have higher catch per person (see **Section 1.1**) and would therefore be more limited in how many fish to keep. The greatest restrictions on fishing opportunities and trip satisfaction on charter businesses and clients would be under **Alternative 2,** followed by **Alternative 3** and then **Alternative 4.** For private recreational trips, it is likely that the aggregate limits would affect some recreational opportunities and trip satisfaction, but not at the same level as for charter. The specifications that only one fish per species may be kept under **Sub-alternatives 2b, 3b** and **4b** may have minimal effects on most fishermen, except for those targeting blueline tilefish because it is not uncommon to keep more than one blueline tilefish (**Section 1.1**).

The proposed seasons in **Sub-alternatives 2a, 3a** and **4a** may negatively affect recreational fishermen and for-hire businesses targeting deepwater species because all deepwater species would be limited to May 1 through August 31. This may particularly affect recreational fishermen targeting golden tilefish because those are the most commonly caught September through April (**Table 1.7**).

However, assuming that there are associated management measures to reduce harvest during the designated periods, the long-term benefits to the deepwater species will be greater with more restrictive bag limits and aligning the open recreational season for all deepwater species under **Sub-alternatives 2a, 3a** and **4a.**

Setting the recreational harvest limits and aligning the deepwater open season (**Alternatives 2-4**) would reduce complexity of management measures, which would likely improve compliance.

1.4 Administrative Effects

To be completed

Committee Action:

Action 1. Modify the recreational grouper and 10-snapper aggregate bag limits and establish a recreational aggregate bag limit and recreational season for deep-water species

Alternative 1 (No Action). The following recreational aggregate bag limits and recreational seasons are in place in the South Atlantic Region:

Aggregate Snapper Bag Limit: Ten (10) snapper per person per day year-round ~~including~~ for the following species: lane, yellowtail, gray, mutton, queen, blackfin, cubera[1], and silk. The following species are excluded from the aggregate: vermilion snapper and red snapper. [1] <30 inches; max. 2 per person but no more than 2 per vessel > 30 inches total length (TL) off Florida

Aggregate Grouper Bag Limit: Three (3) groupers per person per day including: gag[1], black[1], snowy[2], misty, red, scamp, yellowedge, yellowfin, yellowmouth, blueline tilefish[3], sand tilefish, golden tilefish[4], coney, graysby, red hind, and rock hind. Shallow-water grouper (gag, black, red, scamp, yellowfin, yellowmouth, red hind, rock rind, graysby, coney) harvest only allowed May 1 through December 31.

[1]Maximum of ~~1~~ one gag or black grouper (but not both) per person per day with harvest allowed May 1 through December 31.

[2]Maximum of ~~1~~ one snowy grouper per *vessel* per day; recreational harvest allowed only May 1 through August 31 (closed September 1 through April 30)

[3]Blueline tilefish harvest allowed only May 1 through August 31 (closed September 1 through April 30)

[4]Maximum of ~~1~~ one golden tilefish per person per day year-round

Alternative 2. Modify the current species composition of the 3-fish aggregate grouper bag limit and the 10-snapper aggregate bag limit. Establish a 2-fish per person per day deep-water species aggregate bag limit including species in the Deep-water Complex (yellowedge grouper, silk snapper, misty grouper, queen snapper, sand tilefish, and blackfin snapper), golden tilefish, snowy grouper, and blueline tilefish.

Sub-alternative 2a. Establish a May 1 through August 31 recreational season for the deep-water species aggregate.

Sub-alternative 2b. Only ~~1~~ one fish per person per day within the deep-water species aggregate can be of any one species.

Alternative 3. Modify the current species composition of the 3-fish aggregate grouper bag limit and the 10-snapper aggregate bag limit. Establish a 3-fish per person per day deep-water species aggregate bag limit including species in the Deep-water Complex (yellowedge grouper, silk snapper, misty grouper, queen snapper, sand tilefish, and blackfin snapper), golden tilefish, snowy grouper, and blueline tilefish.

Sub-alternative 3a. Establish a May 1 through August 31 recreational season for the deep-water species aggregate.

Sub-alternative 3b. Only ~~1~~ one fish per person per day within the deep-water species aggregate can be of any one species.

Alternative 4. Modify the current species composition of the 3-fish aggregate grouper bag limit and the 10-snapper aggregate bag limit. Establish a 4-fish per person per day deep-water species aggregate bag limit including species in the Deep-water Complex (yellowedge grouper, silk snapper, misty grouper, queen snapper, sand tilefish, and blackfin snapper), golden tilefish, snowy grouper, and blueline tilefish.

Sub-alternative 4a. Establish a May 1 through August 31 recreational season for the deep-water species aggregate.

Sub-alternative 4b. Only ~~1~~ one fish per person per day within the deep-water species aggregate can be of any one species.

IPT input:

- The current golden tilefish assessment indicates the stock is undergoing overfishing. The Council needs to take action in 2017 to end overfishing of golden tilefish. Modifications to the assessment will be completed in 2017 (different fitting approach to composition data).
- Snowy grouper is under a rebuilding plan. Some of the alternatives under this action would increase the retention limit substantially for this species.
- Add alternative for single-hook rig requirement when in possession of and/or fishing for deep-water species? Separate action?? NOTE: This is also being considered in Am 43.
- Consider that this action is going to establish a new DW aggregate, modify the bag limit for those species, and possibly put in a season. It may be best to separate into 3 actions (act 1: modify aggregate bag limits, act 2: modify bag limits; act 3: modify seasons).
- Need to explain/account for what happens to species that are not being considered in the DW complex.

Snapper Grouper AP input:

- Concern that alternatives for 1-fish of any one species would significantly increase discards.
- Concern that available recreational data are minimal.
- Season for deep-water species is a good idea.
- Include information on PSEs for deep-water species.
- Concern that ACLs are being exceeded and will continue to be.
- Need for better region-wide survey to get information on deep-water species.
- Recreational effort for deep-water species in south Florida has increased.
- Recommend excluding sand tilefish from deep-water species aggregate.
- MOTION: AP RECOMMENDS THAT THE COUNCIL CONSIDER A SUB-ALTERNATIVE FROM MAY 1- JUNE 30 AS A SEASON FOR DEEP-WATER SPECIES.
  APPROVED (2 OPPOSED/1 ABSTENTION)

CONSIDER IPT'S AND AP'S RECOMMENDATIONS AND PRELIMINARY ANALYSES AND MODIFY ALTERNATIVES AS NECESSARY

SELECT PREFERRED ALTERNATIVE?

Action 2. ~~Establish a~~ Modify the recreational grouper aggregate bag limit and establish a recreational aggregate bag limit for shallow-water grouper species

Alternative 1 (No Action). The following recreational aggregate bag limit is in place in the South Atlantic Region:
Aggregate Grouper Bag Limit: Three (3) groupers per person per day including: gag[1], black[1], snowy[2], misty, red, scamp, yellowedge, yellowfin, yellowmouth, blueline tilefish[3], sand tilefish, golden tilefish[4], coney, graysby, red hind, and rock hind. Shallow-water grouper (gag, black, red, scamp, yellowfin, yellowmouth, red hind, rock rind, graysby, coney) harvest only allowed May 1 through December 31.

[1]Maximum of ~~1~~ one gag or black grouper (but not both) per person/day with harvest allowed May 1 through December 31.

[2]Maximum of ~~1~~ one snowy grouper per *vessel* per day; recreational harvest allowed only May 1 through August 31 (closed September 1 through April 30)

[3]Blueline tilefish harvest allowed only May 1 through August 31 (closed September 1 through April 30)

[4]Maximum of ~~1~~ one golden tilefish per person per day year-round

Alternative 2. Modify the current species composition of the 3-fish aggregate grouper bag limit. Establish a shallow-water grouper aggregate bag limit including species in the Shallow-Water Grouper complex (red hind, rock hind, coney, graysby, yellowfin grouper, yellowmouth grouper), scamp, gag, black grouper, and red grouper.

Sub-alternative 2a. ~~1~~ one fish per person per day.

Sub-alternative 2b. ~~2~~ two fish per person per day with no more than 1 fish of any one species.

Sub-alternative 2c. ~~3~~ three fish per person per day with no more than 1 fish of any one species.

	Status Quo		Aggregate Limit			
Species	**Limit**	**Seasons**	**Alt 2**	**Sub-Alt 2a**	**Sub-Alt 2b**	**Sub-Alt 2c**
Gag	1 gag or 1 black grouper/pp/day	May-December	Establish SWG aggregate	1/pp/day	2/pp/day and maximum one of each species	3/pp/day and maximum one of each species
Black grouper						
Red grouper	3/pp/day					
Scamp						
Red hind						
Rock hind						
Yellowmouth grouper						
Yellowfin grouper						
Grasby						
Coney						

Preliminary Effects Analysis:

2.1 Biological Effects

This action considers establishing a recreational aggregate bag limit and season for shallow-water grouper species included in the current 3-grouper aggregate.

Shallow-water grouper (red hind, rock hind, coney, graysby, yellowfin grouper, yellowmouth grouper, gag, scamp, black grouper, and red grouper) are currently included in the 3-grouper aggregate along with some deep-water species. From 2014 through 2016, 100 intercepted charter trips reported landing one shallow-water grouper, whereas 11 intercepted trips landed more than 1 species. In the private recreational component, 92 intercepted trips reported landing 1 fish and only 7 intercepted trips had more than 1 species (**Table 2.1**).

Table 2.2 examines the distribution of the catch per angler on charter trips that caught (A=observed harvest, B1=reported harvest, B2=discarded) shallow-water species from 2014 through 2016.

Table 2.1. Number of intercepted trips landing (A or B1) shallow-water species from 2014 to 2016 in South Atlantic waters on charter and private recreational vessels (including Monroe County). If no shallow-water species were landed (Number of species landed = 0), shallow-water species were only released.

		2014		2015		2016	
Year	Number of Species Landed	Charter	Private Rec	Charter	Private Rec	Charter	Private Rec
2014	0	27	110	38	101	43	68
	1	46	32	25	23	29	37
	2	6	1	1	3	3	3
	3	1					

Table 2.2. Unexpanded catch per angler on charter trips that caught (A+B1+B2) shallow-water species in the South Atlantic (including Monroe County) from 2014 through 2016. Numbers in top row denote number of fish caught. Numbers within cells are numbers of anglers.

			Number of Anglers Catching (A, B1, and B2)					
Year	Species	Number of Trips Sampled	0	1	2	3	4	5
2014	Black grouper	9	20	13	1	.	.	.
2015		8	15	10	2	.	.	.
2016		2	11	2	.	.	.	.
2014	Coney	1	5	3	.	.	.	.
2015		4	19	5	.	.	.	.
2016		5	21	5	.	.	.	.
2014	Gag	52	139	70	3	.	.	.
2015		28	73	37	0	2	.	.
2016		38	127	51	.	.	.	.
2014	Graysby	6	39	7	.	.	.	.
2015		12	63	15	.	.	.	.
2016		11	45	18	.	.	.	.

2014	Red grouper	18	66	24	1	.	.	.
2015		12	43	12	.	.	.	.
2016		27	136	31	2	.	.	.
2014	Red hind	4	15	4	.	.	.	.
2015		3	26	4	.	.	.	.
2014		2	11	2	.	.	.	.
2016		2	6	4	.	.	.	.

Gag is the most frequently encountered shallow-water species on charter trips followed by red grouper. Gag is also the species that is most frequently discarded. In terms of landings (**Table 2.3**), gag is the most frequently landed species on charter trips and most anglers land one fish. Current regulations limit possession of gag to one fish within the 3-fish grouper aggregate. No scamp, yellowfin grouper or yellowmouth grouper were reported during charter trips from 2014 through 2016 in the South Atlantic.

Table 2.3. Unexpanded catch per angler on charter trips that landed (A+B1) shallow-water species in the South Atlantic (including Monroe County) from 2014 through 2016. Numbers in top row denote number of fish landed. Numbers within cells are numbers of anglers.

Year	Species	Number of Trips Sampled	Number of Anglers Landing (A and B1)					
			0	1	2	3	4	5
2014	Black grouper	9	27	6	1	.	.	.
2015		8	24	3	.	.	.	.
2016		2	12	1	.	.	.	.
2014	Coney	1	5	3	.	.	.	.
2015		4	24	0	.	.	.	.
2016		5	23	3	.	.	.	.
2014	Gag	52	165	45	2	.	.	.
2015		28	93	19	.	.	.	.
2016		38	149	29	.	.	.	.
2014	Graysby	6	39	7	.	.	.	.
2015		12	70	8	.	.	.	.
2016		11	48	15	.	.	.	.
2014	Red grouper	18	73	17	1	.	.	.
2015		12	51	4	.	.	.	.
2016		27	166	3	.	.	.	.
2014	Red hind	4	15	4	.	.	.	.
2015		3	28	2	.	.	.	.
2014	Rock hind	2	11	2	.	.	.	.
2016		2	6	4	.	.	.	.

Catch per angler for private recreational trips in the South Atlantic from 2014 through 2016 is shown in **Table 2.4**. Landings per angler are shown in **Table 2.5**. Similar to the charter component, private recreational anglers caught and landed primarily gag and red grouper. For both species, the number of discarded fish is greater than those landed. Scamp, yellowfin grouper, and yellowmouth grouper are absent from private recreational trips that took place in the South Atlantic from 2014 through 2016.

Since the vast majority of recreational trips in the South Atlantic are catching only one shallow-water grouper species, proposed **Sub-alternatives 2b** and **2c** (two and three fish per person per day with only one of any one species, respectively) would not have any effect on landings. Hence, **Table 2.6** compares the status quo (**Alternative 1 (No Action)**) and **Sub-alternative 2a**, a 1-fish per person per day bag limit for all shallow-water grouper species. As expected, **Sub-alternative 2a** would not result in any difference from the status quo.

Table 2.4. Unexpanded catch per angler on private recreational trips that caught (A+B1+B2) shallow-water species in the South Atlantic (including Monroe County) from 2014 through 2016.

Year	Species	Number of Trips Sampled	Number of Anglers Catching (A, B1, and B2)					
			0	1	2	3	4	5
2014	Black grouper	10	12	13	.	.	.	.
2015		17	28	20	.	.	.	.
2016		13	21	18	.	.	.	.
2014	Coney	1	2	2	.	.	.	.
2015		2	3	2	.	.	.	.
2014	Gag	75	102	85	5	0	1	.
2015		68	103	76	0	4	1	1
2016		53	71	58	3	.	.	.
2014	Graysby	21	28	26	3	0	1	.
2015		16	19	18	2	1	.	.
2016		9	18	9	.	.	.	.
2014	Red grouper	46	76	50	5	.	.	.
2015		23	29	31	6	.	.	.
2016		35	58	41	1	.	.	.
2014	Red hind	3	4	3	.	.	.	.
2015		1	1	1	.	.	.	.
2016		2	9	2	.	.	.	.
2014	Rock hind	2	2	2	.	.	.	.
2015		4	7	5	.	.	.	.
2016		3	5	4	.	.	.	.

Table 2.5. Unexpanded catch per angler on private recreational trips that landed (A+B1) shallow-water species in the South Atlantic (including Monroe County) from 2014 through 2016.

Year	Species	Number of Trips of Sampled	Number of Anglers Landing (A and B1)					
			0	1	2	3	4	5
2014	Black grouper	10	24	1	.	.	.	.
2015		17	44	4	.	.	.	.
2016		13	28	11	.	.	.	.
2014	Coney	1	4	0	.	.	.	.
2015		2	5	0	.	.	.	.
2014	Gag	75	174	19	.	.	.	.
2015		68	175	9	0	1	.	.
2016		53	113	20	.	.	.	.
2014	Graysby	21	48	10	.	.	.	.

2015		16	28	11	1	.	.	.
2016		9	21	7	.	.	.	.
2014	Red grouper	46	121	10	.	.	.	.
2015		23	56	10	.	.	.	.
2016		35	89	12	.	.	.	.
2014	Red hind	3	6	1	.	.	.	.
2015		1	1	1	.	.	.	.
2016		2	10	1	.	.	.	.
2014	Rock hind	2	4	0	.	.	.	.
2015		4	11	1	.	.	.	.
2016		3	7	2	.	.	.	

Table 2.6. Expanded catch (in numbers of fish) for status quo (Alternative 1) and Sub-alternative 2a for shallow-water groupers on charter and private recreational trips from 2014 through 2016 in the South Atlantic. Cells highlighted in red indicate low number of intercepted trips (N<20) and not likely reliable estimates to determine effect of proposed management alternatives.

Year	Species	Status Quo		Bag Limit =1	
		Charter	Recreational	Charter	Recreational
2014	Black grouper	154	349	138	349
	Coney	63	0	63	0
	Gag	3,278	10,596	3,111	10,596
	Graysby	345	4,670	345	4,670
	Red grouper	822	3,505	801	3,505
	Red hind	201	245	201	245
	Rock hind	152	0	152	0
2015	Black grouper	108	486	108	486
	Coney	0	0	0	0
	Gag	2,848	2,110	2,848	1,756
	Graysby	587	6,578	587	6,128
	Red grouper	180	14,789	180	14,789
	Red hind	202	274	202	274
	Rock hind		3,475		3,475
2016	Black grouper	12	4,336	12	4,336
	Coney	169		169	
	Gag	1,451	8,539	1,451	8,539
	Graysby	990	12,580	990	12,580
	Red grouper	661	8,856	661	8,856
	Red hind		529		529
	Rock hind	175	436	175	436

2.2 Economic Effects

Angler satisfaction, which can be monetarily measured in consumer surplus (CS), typically increases with the number of fish that are harvested and the size of the fish. The smaller the bag limit the greater the probability that the satisfaction from an angler trip could be negatively affected. The economic effects of **Action 2** will vary by species. Assuming no deepwater species (yellowedge grouper, blueline tilefish, golden tilefish, sand tilefish, snowy grouper, misty grouper) are harvested on a trip, **Sub-alternatives 2a** and **2b** are more restrictive for all of the shallow-water grouper species than **Alternative 1 (No Action)**, as these sub-alternatives restrict the aggregate grouper bag limit below the 3 fish per person per day that is currently allowed. **Sub-alternative 2c** would not have any economic effects in regards to CS that could be derived from harvesting black or gag grouper, as there is already a limit of one fish per person per day. Trips landing red hind, rock hind, coney, graysby, yellowfin grouper, yellowmouth grouper, scamp, or red grouper may incur negative economic effects if more than one specimen of legal harvest size from multiple species is landed. However, based on the analysis provided in **Section 2.1**, the anticipated change in landings is expected to be minimal and thus so are the anticipated economic effects of **Action 2**.

2.3 Social Effects

Descriptions of communities that may be affected by changes to recreational management are described in **Section 3.4** (in draft amendment). As discussed in **Section 1.3**, the potential effects on fishermen and communities from changes to harvest limits are associated with changes in access and effects on trip satisfaction, along with long-term biological benefits to the stocks that will contribute to more fish being available in the future.

Alternative 1 (No Action) would not modify the current harvest limits for shallow-water grouper species, and this would not be expected to have any effects on recreational fishermen and for-hire businesses that target shallow-water grouper species because there would be no additional restrictions.

In general, lower harvest limits would be expected to result in the greatest negative effects on fishermen and communities due to restrictions on fishing opportunities and reduced trip satisfaction. However, as discussed in **Section 2.1,** most recreational trips in the South Atlantic are catching only one shallow-water grouper species. The bag limits under **Sub-alternatives 2a-2c** would be expected to have minimal or no effects on recreational fishermen because it would likely not be different from the number of fish being landed under current conditions.

2.4 Administrative Effects

To be completed

Committee Action:

~~Action 2. Establish a~~ Modify the recreational grouper aggregate bag limit and establish a recreational aggregate bag limit for shallow-water grouper species

Alternative 1 (No Action). The following recreational aggregate bag limit is in place in the South Atlantic Region:
Aggregate Grouper Bag Limit: Three (3) groupers per person per day including: gag[1], black[1], snowy[2], misty, red, scamp, yellowedge, yellowfin, yellowmouth, blueline tilefish[3], sand tilefish, golden tilefish[4], coney, graysby, red hind, and rock hind. Shallow-water grouper (gag, black, red, scamp, yellowfin, yellowmouth, red hind, rock rind, graysby, coney) harvest only allowed May 1 through December 31.

[1]Maximum of ~~1~~ one gag or black grouper (but not both) per person/day with harvest allowed May 1 through December 31.
[2]Maximum of ~~1~~ one snowy grouper per *vessel* per day; recreational harvest allowed only May 1 through August 31 (closed September 1 through April 30)
[3]Blueline tilefish harvest allowed only May 1 through August 31 (closed September 1 through April 30)
[4]Maximum of ~~1~~ one golden tilefish per person per day year-round

Alternative 2. Modify the current species composition of the 3-fish aggregate grouper bag limit. Establish a shallow-water grouper aggregate bag limit including species in the Shallow-Water Grouper complex (red hind, rock hind, coney, graysby, yellowfin grouper, yellowmouth grouper), scamp, gag, black grouper, and red grouper.

Sub-alternative 2a. ~~1~~ one fish per person per day.
Sub-alternative 2b. ~~2~~ two fish per person per day with no more than 1 fish of any one species.
Sub-alternative 2c. ~~3~~ three fish per person per day with no more than 1 fish of any one species.

IPT Input:

- Golden tilefish stock assessment to be completed in 2018(?)
- Red grouper assessment in June (OF and undergoing OF). May require rebuilding plan.
- Black grouper stock assessment on hold
- Similarly to Action 1 & 3, is this action retaining or modifying the aggregates?
- Need to explain/account for what happens to species that are not being considered in the DW complex.

Snapper Grouper AP Input:

- Need information on whether limits are being met, how many fishermen are meeting the aggregate bag limits.
- Council staff conducted some preliminary analyses indicating very few fishermen were meeting aggregate bag limit.
- In the Florida Keys, fishermen are seeing abundance of black grouper.

- Concern about red grouper becoming a "choke species."

CONSIDER IPT'S AND AP'S RECOMMENDATIONS AND PRELIMINARY ANALYSES AND MODIFY ALTERNATIVES AS NECESSARY

SELECT PREFERRED ALTERNATIVE?

Action 3. Modify the 10-snapper and 20-fish recreational aggregate bag limits

Alternative 1 (No Action). The following recreational aggregate bag limits are in place in the South Atlantic Region:
Aggregate Snapper Bag Limit: Ten (10) snapper per person per day year-round including the following species: lane, yellowtail, gray, mutton, queen, blackfin, cubera[1], and silk. The following species are excluded from the aggregate: vermilion snapper and red snapper.
[1] Less than 30 inches; maximum two fish per person but no more than two fish per vessel less than 30 inches total length off Florida
Aggregate for Species Without Bag Limit: Twenty (20) fish per person/day year-round including: whitebone porgy, jolthead porgy, knobbed porgy, saucereye porgy, scup, gray triggerfish, bar jack, almaco jack, banded rudderfish, lesser amberjack, white grunt, margate, sailor's choice, and Atlantic spadefish.

Alternative 2. Modify the current species composition of the 10-snapper aggregate grouper bag limit and the 20-fish aggregate bag limit. Establish a 20-fish aggregate limit including species in the current 20-fish aggregate in addition to those in the current 10-snapper aggregate: whitebone porgy, jolthead porgy, knobbed porgy, saucereye porgy, scup, gray triggerfish, bar jack, almaco jack, banded rudderfish, lesser amberjack, white grunt, margate, sailor's choice, Atlantic spadefish, lane snapper, yellowtail snapper, gray snapper, mutton snapper (daily limit is 5 per person)*, and cubera snapper (<30 inches; max. 2 per person but no more than 2 per vessel > 30 inches TL off Florida). **Pending approval of Amendment 41*

Sub-alternative 2a. Within the 20-fish aggregate, no more than 10 fish can be gray triggerfish.

Sub-alternative 2b. Within the 20-fish aggregate, no more than 10 fish can be Atlantic spadefish.

Sub-alternative 2c. Within the 20-fish aggregate, no more than 10 fish can be of any one species.

Sub-alternative 2d. Within the 20-fish aggregate, no more than 5 fish can be of any one species.

	Status Quo		Aggregate Limit	Species Limit			
Species	**Aggregate**	**Limit within the aggregate**	**Alt 2**	**Sub-Alt 2a**	**Sub-Alt 2b**	**Sub-Alt 2c**	**Sub-Alt 2d**
Lane snapper	10-Snapper Aggregate	10/pp/day	20 pp/day	Maximum 10 gray triggerfish	Maximum 10 Atlantic spadefish	Maximum 10 of any one species	Maximum 5 of any one species
Yellowtail snapper							
Gray snapper							
Mutton snapper							
Cubera snapper		<30 in, 2/pp; >30 in, 2/pv					
Whitebone porgy	20-fish Aggregate without a bag limit	20 pp/day					
Jolthead porgy							
Knobbed porgy							
Saucereye porgy							
Scup							
Gray triggerfish							
Bar jack							
Almaco jack							
Banded rudderfish							
Lesser amberjack							
White grunt							
Margate							
Sailor's choice							
Atlantic spadefish							

Preliminary Effects Analysis:

3.1 Biological Effects

This action considers a 20-fish aggregate bag limit including species in the current 10-snapper aggregate and species under the 20-fish aggregate and different bag limits for certain species within the aggregate.

Anglers on intercepted recreational trips (charter and private) that took place from 2014 through 2016 in the South Altlantic region retained up to eight species within the aggregate but the majority retained only one (**Table 3.1**).

Tables 3.2 and **3.3** show landings per angler based on raw (unexpanded) Marine Recreational Information Progam (MRIP) data for charter trips in the South Atlantic from 2014 through 2016. **Table 3.2** shows landings of species in the current 20-fish aggregate only, whereas **Table 3.3** examines landings of species in the 20-fish aggregate and the 10-snapper aggregate combined. Eighty percent of intercepted charter trips from 2014 through 2016 and 83% of anglers on charter trips during the same time period landed one fish or less of species within the current 20-fish aggregate. The percent of anglers landing one fish of less was slightly higher in 2015 compared to 2014 and 2016 (**Table 3.2**). About 76% of intercepted trips and 79% of anglers on charter trips in the South Atlantic landed less than one fish of the species included in the current 20-fish and 10-snapper aggregates combined (**Table 3.3**). Both tables show very little change in the distribution of landings per angler after 7 fish per angler.

Table 3.1. Unexpanded number of species retained on sampled charter and private recreational trips from 2014 through 2016 in the South Atlantic (including Monroe County). This includes species in the 10-snapper aggregate and the 20-fish aggregate.; PR=private recreational.

# Species Retained	2014		2015		2016	
	Charter	Private	Charter	Private	Charter	Private
0	180	744	273	871	247	537
1	157	355	175	320	141	282
2	49	86	48	71	54	55
3	23	35	34	28	22	20
4	18	5	13	9	9	5
5	12		12	3	9	3
6	3		3		9	
7			3		2	
8					2	

Table 3.2. Percent of intercepted charter trips and percent of anglers landing (A+B1) different bags (0-20 fish) of species in the 20-fish aggregate from 2014 through 2016 in the South Atlantic region (including Monroe County). Data are unexpanded. If the catch is 0, it indicates all species in the 20-fish aggregate were discarded.

Landings Per Angler	2014		2015		2016	
	Percent Trips	Percent Anglers	Percent Trips	Percent Anglers	Percent Trips	Percent Anglers
0	30.1	33.1	42.0	47.3	44.6	48.5
0.1-0.99	46.6	45.8	40.3	40.7	35.1	34.3
1-1.99	8.8	7.9	8.5	5.8	10.3	8.7
2-2.99	3.0	2.8	2.3	1.2	1.7	1.9
3-3.99	3.4	3.3	1.0	0.7	2.3	1.9
4-4.99	0.7	0.5	1.0	0.8	1.4	0.9
5-5.99	1.7	1.5	1.3	0.9	0.6	0.5
6-6.99	1.0	0.8	1.0	0.6	0.9	0.7
7-7.99	0.3	0.3	1.0	0.9	0.0	0.0
8-8.99	0.7	0.8	0.7	0.5	0.3	0.3
9-9.99	0.7	0.8	0.3	0.1	0.3	0.2
10-10.99	1.0	0.9	0.0	0.0	0.3	0.3
11-11.99	0.0	0.0	0.3	0.2	0.9	0.7
12-12.99	0.0	0.0	0.0	0.0	0.0	0.0
13-13.99	0.3	0.4	0.3	0.3	0.0	0.0
14-14.99	0.7	0.4	0.0	0.0	0.3	0.2
15-19.99	0.3	0.4	0.0	0.0	0.9	0.7
20-24.99	0.3	0.3	0.0	0.0	0.3	0.2
>=25	0.3	0.1	0.0	0.0	0.0	0.0

Table 3.3. Percent of intercepted charter trips and percent of anglers landing (A+B1) different bags (0-20 fish) of species in the 20-fish and 10-snapper aggregates from 2014 through 2016 in the South Atlantic region (including Monroe County). Data are unexpanded. If the catch is 0, it indicates all fish were discarded.

Landings Per Angler	2014		2015		2016	
	Percent Trips	Percent Anglers	Percent Trips	Percent Anglers	Percent Trips	Percent Anglers
0	40.6	45.1	48.7	52.7	50.1	51.9
0.1-0.99	30.5	28.5	29.9	29.5	27.0	27.2
1-1.99	11.3	9.7	10.2	9.1	10.8	9.1
2-2.99	5.6	6.1	5.0	4.0	4.1	4.9
3-3.99	3.6	3.2	2.0	1.6	2.8	2.4
4-4.99	2.3	2.0	1.1	0.8	1.2	1.0
5-5.99	1.4	1.3	1.1	0.8	1.0	0.9
6-6.99	1.1	0.9	0.4	0.2	0.6	0.5
7-7.99	0.7	0.5	0.9	0.8	0.4	0.1
8-8.99	0.5	0.5	0.4	0.3	0.2	0.2
9-9.99	0.5	0.5	0.2	0.1	0.2	0.2
10-10.99	0.7	0.6	0.0	0.0	0.2	0.2

11-11.99	0.0	0.0	0.2	0.1	0.6	0.5
12-12.99	0.0	0.0	0.0	0.0	0.0	0.0
13-13.99	0.2	0.3	0.2	0.2	0.0	0.0
14-14.99	0.5	0.3	0.0	0.0	0.2	0.1
15-19.99	0.2	0.3	0.0	0.0	0.4	0.5
20-24.99	0.2	0.2	0.0	0.0	0.2	0.2
>=25	0.2	0.1	0.0	0.0	0.0	0.0

Landings per angler based on unexpanded MRIP data for private recreational trips in the South Atlantic from 2014 through 2016 are shown in **Tables 3.4** and **3.5**. Similar to the charter component, about 80% of intercepted private trips and anglers on private recreational trips landed one fish or less of species in both the 20-fish aggregate and the combined 20-fish and 10-snapper aggregates (**Tables 3.4** and **3.5**). The same trend of slightly higher percentages of trips and anglers landing one fish or less in 2015 is also evident for the private recreational component.

Table 3.4. Percent of intercepted private recreational trips and percent of anglers landing (A+B1) different bags (0-20 fish) of species in the 20-fish aggregate from 2014 through 2016 in the South Atlantic region (including Monroe County). Data are unexpanded. If the catch is 0, it indicates all species in the 20-fish aggregate were discarded.

Landings Per Angler	2014		2015		2016	
	Percent Trips	Percent Anglers	Percent Trips	Percent Anglers	Percent Trips	Percent Anglers
0	43.5	42.4	55.3	54.7	45.1	43.2
0.1-0.99	28.7	33.6	24.9	28.6	31.3	35.6
1-1.99	13.2	11.1	9.5	8.4	11.2	9.2
2-2.99	6.1	6.0	5.1	4.2	7.6	7.1
3-3.99	3.3	2.6	2.1	1.8	3.0	3.1
4-4.99	1.1	0.9	0.5	0.3	1.0	1.0
5-5.99	1.1	0.8	1.3	1.1	0.3	0.3
6-6.99	0.6	0.5	0.0	0.0	0.3	0.5
7-7.99	0.3	0.3	0.0	0.0	0.3	0.1
8-8.99	1.1	0.9	0.0	0.0	0.0	0.0
9-9.99	0.3	0.2	0.3	0.2	0.0	0.0
10-10.99	0.3	0.3	0.3	0.2	0.0	0.0
11-11.99	0.0	0.0	0.3	0.1	0.0	0.0
12-12.99	0.0	0.0	0.0	0.0	0.0	0.0
13-13.99	0.3	0.4	0.0	0.0	0.0	0.0
14-14.99	0.0	0.0	0.0	0.0	0.0	0.0
15-19.99	0.3	0.1	0.3	0.3	0.0	0.0
20-24.99	0.0	0.0	0.0	0.0	0.0	0.0
>=25	0.0	0.0	0.3	0.2	0.0	0.0

Table 3.5. Percent of intercepted private recreational trips and percent of anglers landing (A+B1) different bags (0-20 fish) of species in the 20-fish and 10-snapper aggregates from 2014 through 2016 in the South Atlantic region (including Monroe County). Data are unexpanded. If the catch is 0, it indicates all fish were discarded.

Landings Per Angler	2014		2015		2016	
	Percent Trips	Percent Anglers	Percent Trips	Percent Anglers	Percent Trips	Percent Anglers
0	60.2	59.1	66.6	65.6	59.5	56.9
0.1-0.99	16.5	19.9	15.8	18.3	19.6	23.5
1-1.99	11.3	10.1	8.2	8.0	10.9	9.7
2-2.99	4.4	4.3	3.7	3.4	5.0	5.1
3-3.99	3.1	2.9	2.4	2.2	2.0	1.9
4-4.99	1.6	1.3	0.7	0.6	1.2	1.1
5-5.99	0.9	0.6	0.8	0.8	0.7	0.7
6-6.99	0.5	0.4	0.1	0.1	0.1	0.2
7-7.99	0.5	0.3	0.4	0.3	0.6	0.4
8-8.99	0.3	0.3	0.3	0.1	0.3	0.3
9-9.99	0.3	0.3	0.2	0.1	0.2	0.1
10-10.99	0.2	0.2	0.3	0.2	0.0	0.0
11-11.99	0.1	0.1	0.1	0.0	0.0	0.0
12-12.99	0.0	0.0	0.1	0.1	0.0	0.0
13-13.99	0.0	0.0	0.0	0.0	0.0	0.0
14-14.99	0.0	0.0	0.0	0.0	0.0	0.0
15-19.99	0.2	0.1	0.2	0.2	0.0	0.0
20-24.99	0.0	0.0	0.0	0.0	0.0	0.0
>=25	0.0	0.0	0.1	0.1	0.0	0.0

To examine the possible effects of proposed bag limit modifications on charter and recreational landings (charter and private), the expanded catch (in numbers of fish) for 2014 through 2016 under the current limits (status quo, SQ) and under a 10-fish (**Sub-alternatives 2a** (affects only gray triggerfish), **2b** (affects only Atlantic spadefish), and **2c** or a 5-fish (**Sub-alternative 2d**) aggregate bag limit is presented in **Table 3.6**. Cells highlighted in yellow indicate a change in the level of expected landings relative to the status quo.

Table 3.6. Expanded number of fish caught based on MRIP data for South Atlantic region (including Monroe County) from 2014 to 2016. SQ=Status Quo (current regs with no change assumed for mutton snapper), Alt2a-c establishes a 10-fish bag limit (note Alt2a impacts only gray triggerfish and Alt2b impacts only Atlantic spadefish), Alt2d establishes a 5- fish bag limit. Cells highligthed in yellow are a change from current catch with potential bag limit change. Cells highlighted in red indicate low number of intercepted trips (N<20) and not likely reliable estimates to determine effect of management alternative.

		Charter			Recreational		
Year	Species	SQ	Alt2a-c	Alt2d	SQ	Alt2a-c	Alt2d
2014	Almaco jack	5,994	5,994	5,994	2,957	2,957	2,957
	Atlantic spadefish	1,537	1,537	1,537	44,940	44,940	43,982
	Banded rudderfish	14,034	14,034	14,034	1,751	1,751	1,479
	Bar jack	261	261	261	223	223	223
	Blackfin snapper	124	124	124	528	528	528
	Cubera snapper				2,837	2,837	2,837
	Gray snapper	14,640	14,640	14,640	491,981	491,981	486,154
	Gray triggerfish	34,549	33,128	29,683	95,809	95,809	95,460
	Jolthead porgy	1,960	1,960	1,960	27,006	27,006	27,006
	Lane snapper	2,773	2,773	2,773	113,013	113,013	110,339
	Lesser amberjack	16	16	16	289	289	289
	Margate				2,682	2,682	2,682
	Mutton snapper	9,364	9,364	9,364	80,736	80,736	80,736
	Sailors choice	201	201	201	49,080	49,080	45,092
	Scup	859	859	859	1,779	1,779	1,779
	Silk snapper	25	25	25			
	White grunt	42,402	40,740	37,710	154,730	151,236	125,846
	Whitebone porgy	507	507	507	36,564	36,564	35,148
	Yellowtail snapper	21,288	21,288	20,499	309,860	309,860	257,049
2015	Almaco jack	7,948	7,948	7,948	16,453	16,453	16,453
	Atlantic spadefish				11,705	11,705	11,705
	Banded rudderfish	2,282	2,282	2,282	1,334	1,334	1,334
	Bar jack	329	329	329	1,747	1,747	1,747
	Cubera snapper	437	437	437	0	0	0
	Gray snapper	19,718	19,718	19,718	342,750	342,750	335,360
	Gray triggerfish	71,068	70,829	60,977	34,145	34,145	34,145
	Jolthead porgy	5,280	5,280	5,280	30,114	30,114	30,114
	Lane snapper	10,076	10,076	10,076	68,483	68,483	65,490
	Lesser amberjack				201	201	201
	Margate	0	0	0	1,148	1,148	1,148
	Mutton snapper	20,074	20,074	20,074	55,176	55,176	55,176
	Sailors choice	672	672	672	18,670	18,670	18,670
	Scup	26	26	26			
	Silk snapper	414	414	414			
	White grunt	16,038	16,038	13,178	122,155	97,715	86,636
	Whitebone porgy	4,360	4,360	4,360	9,475	9,475	8,697

	Yellowtail snapper	42,825	42,825	42,825	173,927	173,927	159,944
2016	Almaco jack	6,486	6,486	6,486	22,264	22,264	22,264
	Atlantic spadefish				1,200	1,200	1,200
	Banded rudderfish	2,422	2,422	2,422	722	722	722
	Bar jack	0	0	0	925	925	925
	Blackfin snapper				293	293	293
	Gray snapper	24,926	24,926	22,745	335,638	335,638	332,618
	Gray triggerfish	16,917	14,919	12,779	137,900	137,900	136,093
	Jolthead porgy	5,469	5,469	5,469	35,144	35,144	35,144
	Lane snapper	3,377	3,377	3,377	62,732	62,732	62,732
	Lesser amberjack	50	50	50			
	Margate	0	0	0	1,113	1,113	1,113
	Mutton snapper	11,997	11,997	11,997	55,117	55,117	55,117
	Sailors choice	221	221	221	12,836	12,836	12,836
	White grunt	18,781	18,462	16,286	181,300	181,300	181,300
	Whitebone porgy	1,560	1,560	1,560	15,105	15,105	15,105
	Yellowtail snapper	17,699	17,699	17,699	227,819	227,819	208,597

While most of the expected changes in landings as a result of possible modification to the aggregate bag limits, a few are worth noting. A slight decrease in the level of landings for the charter component might be expected under **Sub-alternatives 2a-2d** for gray triggerfish, white grunt, yellowtail snapper (only **Sub-alternative 2d**), and gray snapper (only **Sub-alternative 2d**). **Sub-alternative 2d** (no more than five fish of any one species within the aggregate) may result in more noticeable changes in landings for the private recreational component, albeit generally small. The exceptions are white grunt and yellowtail snapper, whose landings would decrease by about 18,000 pounds and 30,000 pounds, respectively (**Table 3.6**).

The biological effects of proposed **Alternative 2** and it sub-alternatives relative to **Alternative 1 (No Action)** are expected to be neutral since they would not impact overall recreational catch.

3.2 Economic Effects

The cumulative effects of **Action 3**, **Alternative 2** will be dependent on the sub-alternative(s) that are chosen and will vary by species. Based on the analyses provided in **Section 3.1**, **Sub-alternatives 2a** and **2c** may decrease the harvest of triggerfish as well as the CS derived from triggerfish on trips where these harvest limits could have been exceeded under **Alternative 1 (No Action)**. **Sub-alternative 2b** would reduce the upper limits of spadefish harvest and resulting CS on a trip, however it is unknown how many trips are harvesting more than 10 spadefish per person and the extent to which this sub-alternative would affect current fishing behavior. **Sub-alternative 2d** is the most restrictive and thus would be expected to have the greatest negative short-term economic effects, particularly for CS derived from yellowtail snapper and white grunt (**Table 3.6**). Presumably, in the long-term, reduced bag limits may create economic benefits if the biomass of a species covered under **Action 3** increases and more fish are available to harvest. The extent of these benefits will vary by species and will be dependent on how harvest levels and

fishing effort change in relation to the new bag limits. Overall, **Alternative 2** is more restrictive than **Alternative 1 (No Action)**, therefore short-term negative economic effects of **Alternative 2** are expected to be greater.

3.3 Social Effects

Descriptions of communities that may be affected by changes to recreational management are described in **Section 3.4** of the draft amendment document. As discussed in **Section 1.3**, the potential effects on fishermen and communities from changes to harvest limits are associated with changes in access and effects on trip satisfaction, along with long-term biological benefits to the stocks that will contribute to more fish being available in the future.

Alternative 1 (No Action) would not modify the current limits for the aggregate snapper and aggregate for no-limit fish. This would not be expected to have any effects on recreational fishermen and for-hire businesses that target these species because there would be no additional restrictions.

In general, lower harvest limits would be expected to result in the greatest negative effects on fishermen and communities due to restrictions on fishing opportunities and reduced trip satisfaction. However, as discussed in **Section 3.1,** most recreational trips in the South Atlantic are catching only one fish of the species in the aggregate. The bag limits under **Sub-alternatives 2a- 2d** would be expected to have minimal or no effects on most recreational fishermen because it would likely not be different from the number of fish being landed under current conditions. The exceptions, as noted in **Section 3.1**, would be gray triggerfish and yellowtail snapper. Gray triggerfish is a popular species for recreational fishermen in all South Atlantic states and a more restrictive limit (**Sub-alternative 2d**) could negatively affect recreational fishing opportunities and trip satisfaction. Additionally, yellowtail snapper is very popular in south Florida and the Florida Keys. A lower limit under **Sub-alternative 2d** could negatively affect recreational anglers targeting yellowtail by restricting fishing opportunities.

The potential complexity of the combinations of management measures that would result from **Sub-alternatives 2a-2d** may have some negative effects on recreational anglers and enforcement.

3.4 Administrative Effects

To be completed

Committee Action:

Action 3. Modify the 10-snapper and 20-fish recreational aggregate bag limits

Alternative 1 (No Action). The following recreational aggregate bag limits are in place in the South Atlantic Region:
Aggregate Snapper Bag Limit: Ten (10) snapper per person per day year-round including the following species: lane, yellowtail, gray, mutton, queen, blackfin, cubera[1], and silk. The following species are excluded from the aggregate: vermilion snapper and red snapper.

[1] Less than 30 inches; maximum two fish per person but no more than two fish per vessel less than 30 inches total length off Florida

Aggregate for Species Without Bag Limit: Twenty (20) fish per person/day year-round including: whitebone porgy, jolthead porgy, knobbed porgy, saucereye porgy, scup, gray triggerfish, bar jack, almaco jack, banded rudderfish, lesser amberjack, white grunt, margate, sailor's choice, and Atlantic spadefish.

Alternative 2. Modify the current species composition of the 10-snapper aggregate grouper bag limit and the 20-fish aggregate bag limit. Establish a 20-fish aggregate limit including species in the current 20-fish aggregate in addition to those in the current 10-snapper aggregate: whitebone porgy, jolthead porgy, knobbed porgy, saucereye porgy, scup, gray triggerfish, bar jack, almaco jack, banded rudderfish, lesser amberjack, white grunt, margate, sailor's choice, Atlantic spadefish, lane snapper, yellowtail snapper, gray snapper, mutton snapper, and cubera snapper (<30 inches; max. 2 per person but no more than 2 per vessel > 30 inches TL off Florida).

Sub-alternative 2a. Within the 20-fish aggregate, no more than 10 fish can be gray triggerfish.

Sub-alternative 2b. Within the 20-fish aggregate, no more than 10 fish can be Atlantic spadefish.

Sub-alternative 2c. Within the 20-fish aggregate, no more than 10 fish can be of any one species.

Sub-alternative 2d. Within the 20-fish aggregate, no more than 5 fish can be of any one species.

IPT Input:

- Mutton snapper will be 5 fish within the aggregate pending approval of Am 41

Snapper Grouper AP Input:

- Concern about making regulations too complicated. Sub-alternatives 2c and 2d (2c: Within the 20-fish aggregate, no more than 10 fish can be of any one species; 2d: Within the 20-fish aggregate, no more than 5 fish can be of any one species) may be enough to capture the need to reduce take for some species.
- Five yellowtail within the aggregate may be too low for fishermen in the Keys.
- Consider adding flexibility in aggregate bag limits since fishery is so diverse and certain species are not available in some areas.
- MOTION: AP RECOMMENDS ALTERNATIVE 1, NO ACTION, FOR ACTION 3.

APPROVED P (11 IN FAVOR/6 OPPOSED/ 1 ABSTENTION)

- MOTION: RECOMMEND THAT THE COUNCIL EXPLORE BAG LIMIT OF PORGIES (3 FISH, 5 FISH) WITHIN THE 20-FISH AGGREGATE
  APPROVED (1 OPPOSED)

- MOTION: RECOMMEND THE COUNCIL EXPLORE A 20 FISH AGGREGATE OF SPECIES CURRENTLY IN THE 10-SNAPPER AGGREGATE AND THE 20-FISH AGGREGATE
  APPROVED (1 OPPOSED/1 ABSTENTION)
  INTENT TO MAINTAIN THE CURRENT BAG LIMITS WITHIN THE AGGREGATE (I.E., GRAY SNAPPER IS 10)*

CONSIDER IPT'S AND AP'S RECOMMENDATIONS AND PRELIMINARY ANALYSES AND MODIFY ALTERNATIVES AS NECESSARY

SELECT PREFERRED ALTERNATIVE?

Action 4. Modify the seasonal prohibition on recreational harvest and possession of shallow-water groupers

Alternative 1 (No Action). Recreational harvest and possession of shallow-water groupers (gag, black grouper, scamp, red grouper, yellowfin grouper, yellowmouth grouper, red hind, rock hind, graysby, and coney) is prohibited annually in the South Atlantic EEZ from January 1 through April 30.

Alternative 2. Prohibit recreational harvest and possession of shallow-water grouper species (gag, black grouper, scamp, red grouper, yellowfin grouper, yellowmouth grouper, red hind, rock hind, graysby, and coney) ~~annually~~ seasonally by area:

Sub-alternative 2a. In federal waters off East Florida from the Georgia/Florida state boundary south to the end of the ~~SAFMC's~~ South Atlantic Fishery Management Council's jurisdiction, the closure applies (month) to (month).

Sub-alternative 2b. In federal waters off Georgia and the Carolinas from the Georgia/South Carolina border north to the North Carolina/Virginia border, the closure applies (month) to (month)

Alternative 3. Prohibit recreational harvest and possession of shallow-water grouper species (gag, scamp, red grouper, yellowfin grouper, yellowmouth grouper, red hind, rock hind, graysby, and coney) (excluding black grouper) south of 28° North latitude (approximately off Palm Bay, Florida):

Sub-alternative 3a. January – March (three months)
Sub-alternative 3b. February – March (two months)
Sub-alternative 3c. February – April (three months)
Sub-alternative 3d. February – May (four months)

Alternative 4. Prohibit recreational harvest and possession of black grouper in federal waters off (specify area based on Alternative 2a above)

Sub-alternative 4a. January – March (three months)
Sub-alternative 4b. January
Sub-alternative 4c. February
Sub-alternative 4d. March

Alternative 5. Prohibit recreational harvest and possession of red grouper in federal waters off (specify area based on Alternative 2b above)

Sub-alternative 5a. January – May (five months)
Sub-alternative 5b. February – May (four months)
Sub-alternative 5c. March – June (four months)

Preliminary Effects Analysis:

4.1 Biological Effects

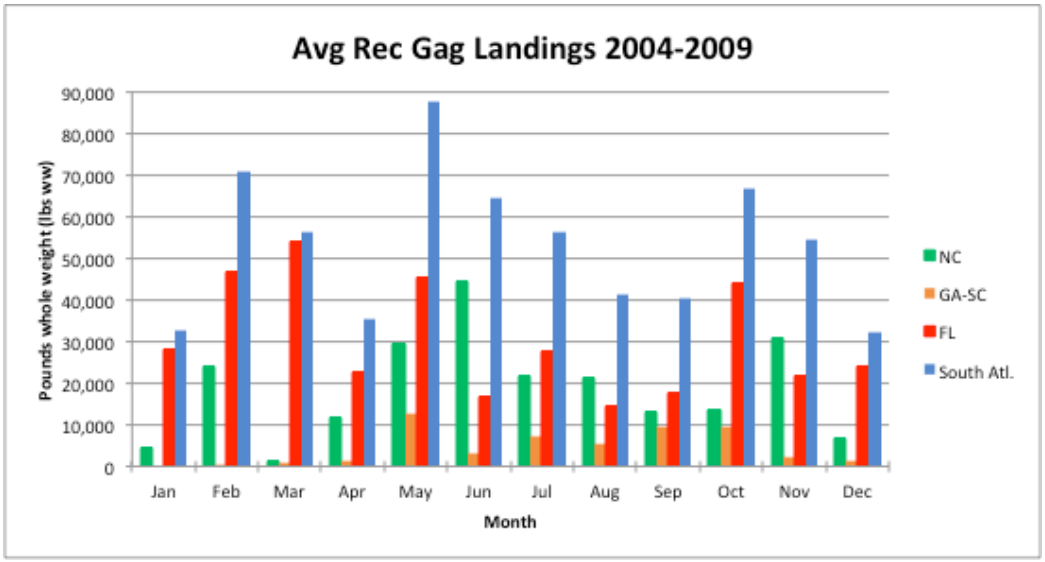
Alternatives under this action seek to provide managers with the flexibility to enhance the effectiveness of the January-April closure intended to protect shallow-water grouper species (gag, black grouper, scamp, red grouper, yellowfin grouper, yellowmouth grouper, red hind, rock hind, graysby, and coney) from fishing mortality during their spawning season. The existing closure was implemented in 2009 through implementation of Amendment 16 (SAFMC 2009a). In recent years, fishermen and other stakeholders have expressed concern that the current closure is not matching the timing of spawning for certain species (i.e., red grouper off North Carolina, black grouper in the Florida Keys).

The following series of figures pertain to individual shallow-water grouper species. Average monthly and annual recreational landings are shown by state (data for Georgia and South Carolina were aggregated to maintain confidentiality).

Gag

Average recreational landings (pounds whole weight; lbs ww) of **gag** are shown in **Figure 4.1** by month and state for pre-closure (2004-2009) and post-closure (2010-2015) years. Data are from the Marine Resources Information Program (MRIP) and exclude headboat.

Annual recreational landings (lbs ww) of **gag** from 2004 through 2015 are shown in **Figure 4.2**. The shallow-water grouper closure was implemented in 2009, depicted in the figure by a break in the series.



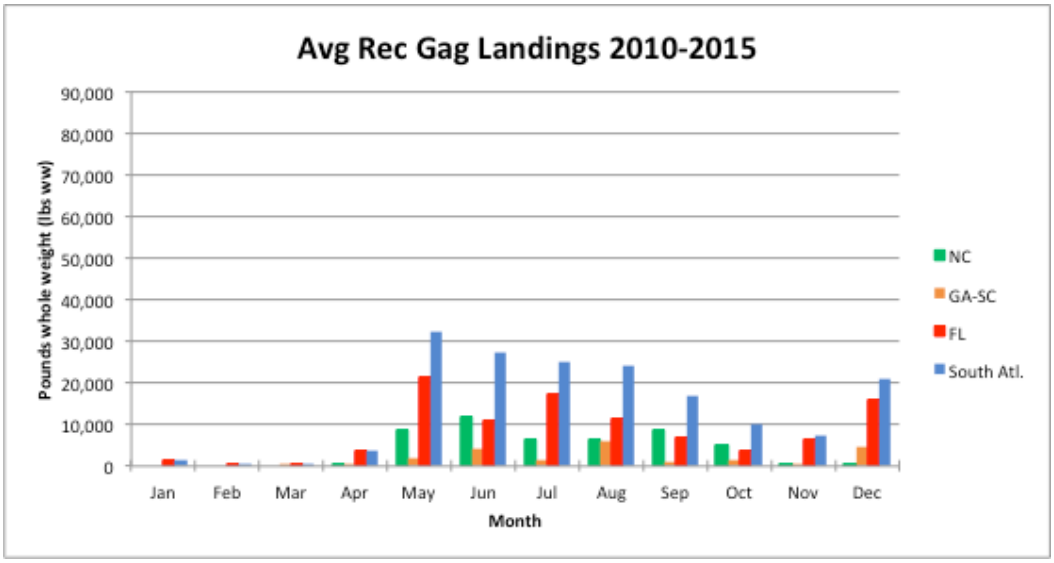


Figure 4.1. Average monthly recreational landings of **gag** (pounds whole weight) from 2004 through 2015 by state. Top panel is for years before the existing closure (2004-2009); bottom panel shows landings in years after the closure (2009-2015). Source: SAFMC

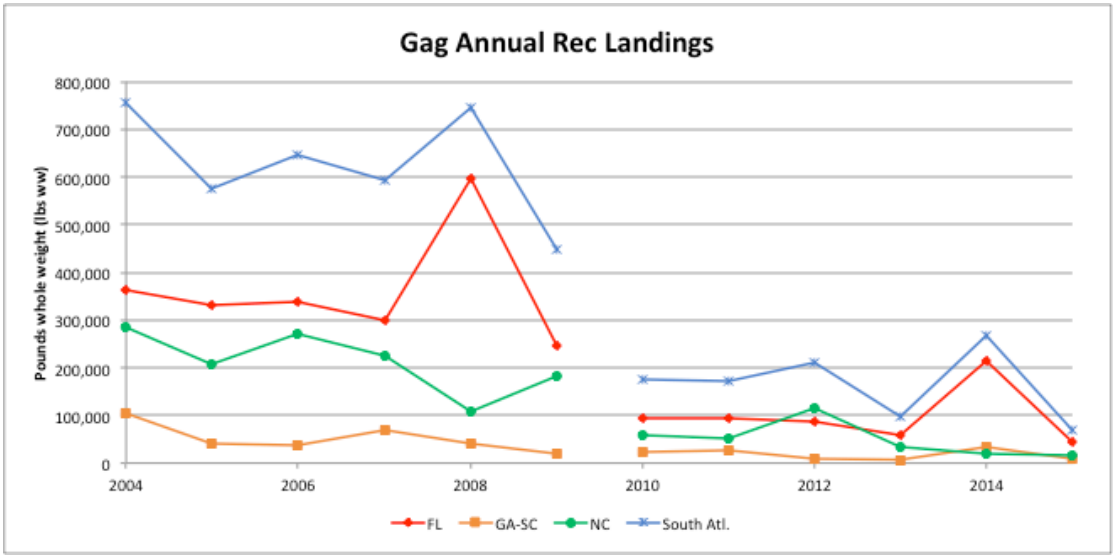


Figure 4.2. Annual recreational landings of **gag** from 2004 through 2015 by state. The shallow water grouper closure was implemented in 2009, depicted in the figure by a break in the series. Source: SAFMC

Average monthly recreational landings of **gag** in the South Atlantic prior to the spawning season closure (2004-2009) peaked in May, with high landings also observed in February and October. The bulk of the landings were in Florida, followed by North Carolina (**Figure 4.1**). While landings of gag in May were still highest for the years after the closure, the overall magnitude of the landings decreased substantially from just under 90,000 pounds whole weight (lbs ww) to just over 30,000 lbs ww. Annual recreational landings reflect this trend (**Figure 4.2**).

However, it is not clear whether management measures or other factors (or both) have contributed to the apparent decline. Based on the SEDAR 10 Update (2014), biomass was similar between the two periods.

To explore the level of discards of gag, landings (A +B1) and discards (B2) from MRIP data fro 2014 through 2016 were examined. On average 83% of the total recreational catch of gag on charter and private recreational vessels were discarded (**Table 4.1**). Over 99% of the discards of gag came from trips that did not hit either the aggregate limit or the gag/black limit with or without the January-April closure (**Tables 4.2** and **4.3**, respectively). This suggests that most gag encountered are below the minimum size. This is supported by the distribution of discards by month for the same time period (**Table 4.4**), where January-April collectively make up about 22% of the gag discards on average for the year. However, December makes up almost 23% of the discards by itself. September is next in line with around 15%. On average, almost every month (except for June and July) has a higher proportion of the discards than any of the closed months. This may be due to the high amount of directed fishing effort in those months. If the current shallow-water grouper closure in January-April were to be removed, gag discards would increase but landings might not change much. Especially since on average landings constitute only about 17% of the total catch of gag (**Table 4.1**).

Table 4.1. Percent of total catch of gag by mode from 2014 through 2016 for charter and private vessels. AB1= (A observed catch), B1 (unobserved reported catch), B2=discarded.

Year	Charter		Private		Total	
	Exp A+B1	Exp B2	Exp A+B1	Exp B2	Exp A+B1	Exp B2
2014	60.9	39.1	11.7	88.3	16.1	83.9
2015	27.9	72.1	5.4	94.6	9.5	90.5
2016	46.8	53.2	30.0	70.0	31.6	68.4
Total	43.9	56.1	13.4	86.6	17.0	83.0

Table 4.2. Discards of Gag on trips that did not hit the Aggregate or Gag/Black Bag (No Bag) vs. Total Gag Discards from 2014-2016, including January-April. B2=discarded, Exp B2=expanded discards.

Year	No Bag		Total		% No Bag of Total	
	B2	Exp B2	B2	Exp B2	B2	Exp B2
2014	175	96,359	176	96,375	99.43	99.98
2015	184	63,243	189	63,657	97.35	99.35
2016	78	24,208	78	24,208	100.00	100.00
Total	437	183,810	443	184,240	98.65	99.77

Table 4.3. Discards of Gag on trips that did not hit the Aggregate or Gag/Black Bag (No Bag) vs. Total Gag Discards from 2014-2016 with January-April removed. B2=discarded, Exp B2=expanded discards.

Year	No Bag		Total		% No Bag of Total	
	B2	Exp B2	B2	Exp B2	B2	Exp B2
2014	113	75,296	114	75,311	99.12	99.98
2015	159	49,581	164	49,995	96.95	99.17
2016	64	18,230	64	18,230	100.00	100.00
Total	336	143,107	342	143,536	98.25	99.70

Table 4.4.4.4. Percent of monthly AB1 and expanded discards from 2014-2016. Each column sums to 100%. 1=January, 12=December. AB1= (A observed catch), B1 (unobserved reported catch), Exp B2=expanded discards.

Month	2014		2015		2016		Total	
	Exp A+B1	Exp B2	Exp A+B1	Exp B2	Exp A+B1	Exp B2	Exp A+B1	Exp B2
1	0.0%	5.7%	6.7%	7.5%	0.0%	6.4%	1.1%	6.4%
2	0.0%	9.0%	0.0%	0.6%	0.0%	10.2%	0.0%	6.2%
3	0.0%	5.1%	0.0%	0.5%	0.0%	6.3%	0.0%	3.7%
4	0.0%	2.1%	0.0%	12.8%	0.0%	1.9%	0.0%	5.8%
5	12.8%	5.4%	10.6%	8.0%	56.3%	8.8%	27.2%	6.7%
6	11.2%	2.6%	25.4%	6.2%	13.4%	8.3%	14.3%	4.6%
7	25.0%	0.5%	5.7%	5.9%	16.3%	10.7%	18.9%	3.7%
8	23.7%	3.3%	17.4%	16.1%	3.1%	7.4%	15.7%	8.3%
9	9.3%	16.8%	9.9%	14.3%	2.8%	10.6%	7.2%	15.1%
10	1.4%	4.2%	0.0%	11.2%	0.4%	4.3%	0.8%	6.7%
11	3.5%	10.3%	22.7%	3.5%	6.0%	25.3%	7.5%	9.9%
12	13.1%	35.0%	1.4%	13.3%	1.7%	0.0%	7.3%	22.9%

Red Grouper

Average recreational landings (lbs ww) of **red grouper** are shown in **Figure 4.3** by month and state for pre-closure (2004-2009) and post-closure (2010-2015) years.

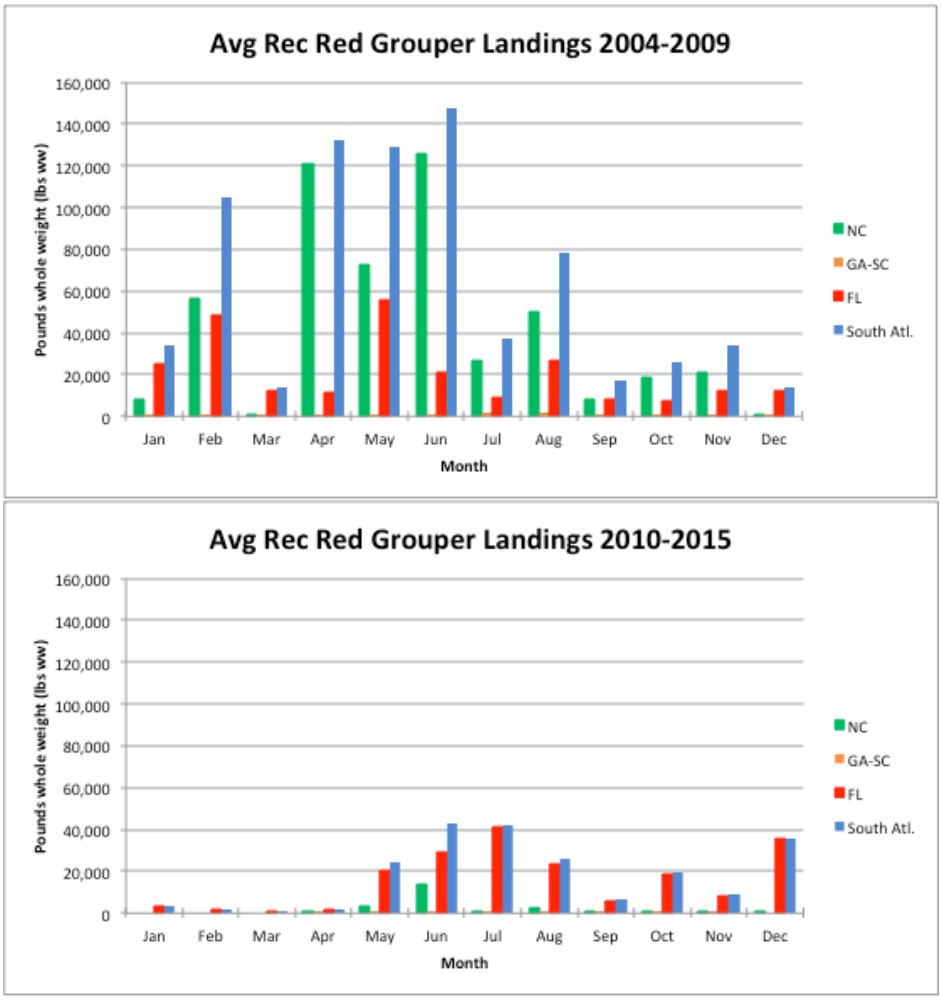


Figure 4.3. Average monthly recreational landings of **red grouper** (pounds whole weight) from 2004 through 2015 by state. Top panel is for years before the existing closure (2004-2009); bottom panel shows landings in years after the closure (2009-2015). Source: SAFMC

Annual recreational landings (lbs ww) of **red grouper** from 2004 through 2015 are shown in **Figure 4.4**. The shallow-water grouper closure was implemented in 2009, depicted in the figure by a break in the series.

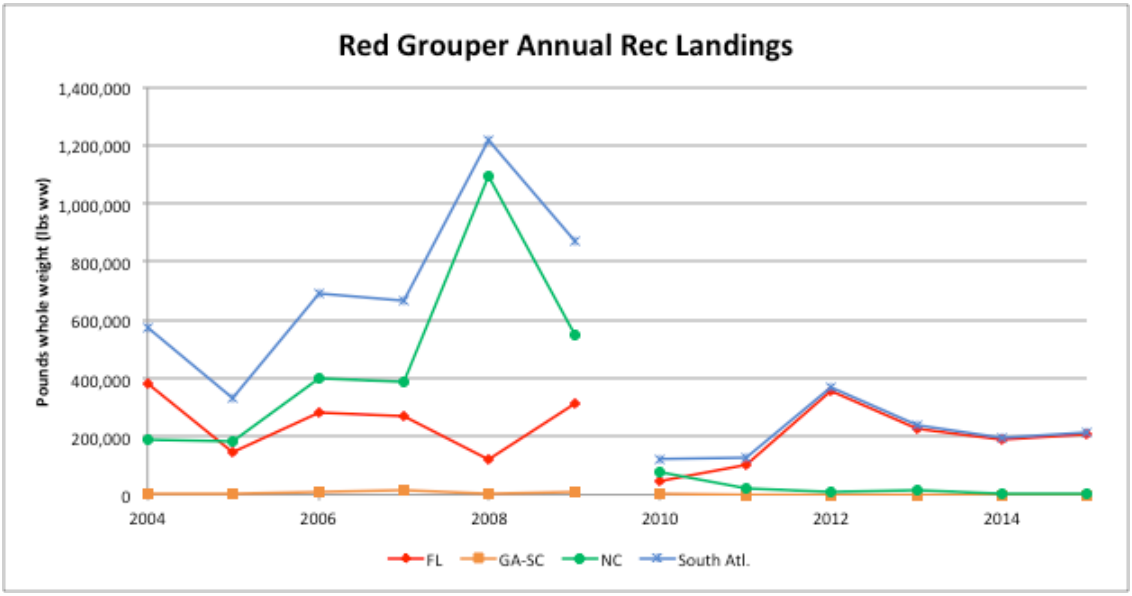


Figure 4.4. Annual recreational landings of **red grouper** from 2004 through 2015 by state. The shallow water grouper closure was implemented in 2009, depicted in the figure by a break in the series. Source: SAFMC

Red grouper recreational landings have declined sharply in the South Atlantic since implementation of the shallow-water grouper closure, from about 150,000 lbs ww to just over 40,000 lbs ww (**Figures 4.3** and **4.4**). Prior to the closure, recreational landings of red grouper were dominated by North Carolina and were highest in April-June. Since the closure, Florida has dominated the recreational harvest of the species. Similar to gag, it is not clear whether management measures or other factors (or both) have contributed to the observed decline. According to SEDAR 53 (2017), red grouper spawning stock biomass decreased in the 2010 to 2015 period compared to the earlier period.

Scamp

Average recreational landings (lbs ww) of **scamp** are by month and state for pre-closure (2004-2009) and post-closure (2010-2015) years are shown in **Figure 4.5**. Annual landings are in **Figure 4.6**. The shallow-water grouper closure was implemented in 2009, depicted in the figure by a break in the series.

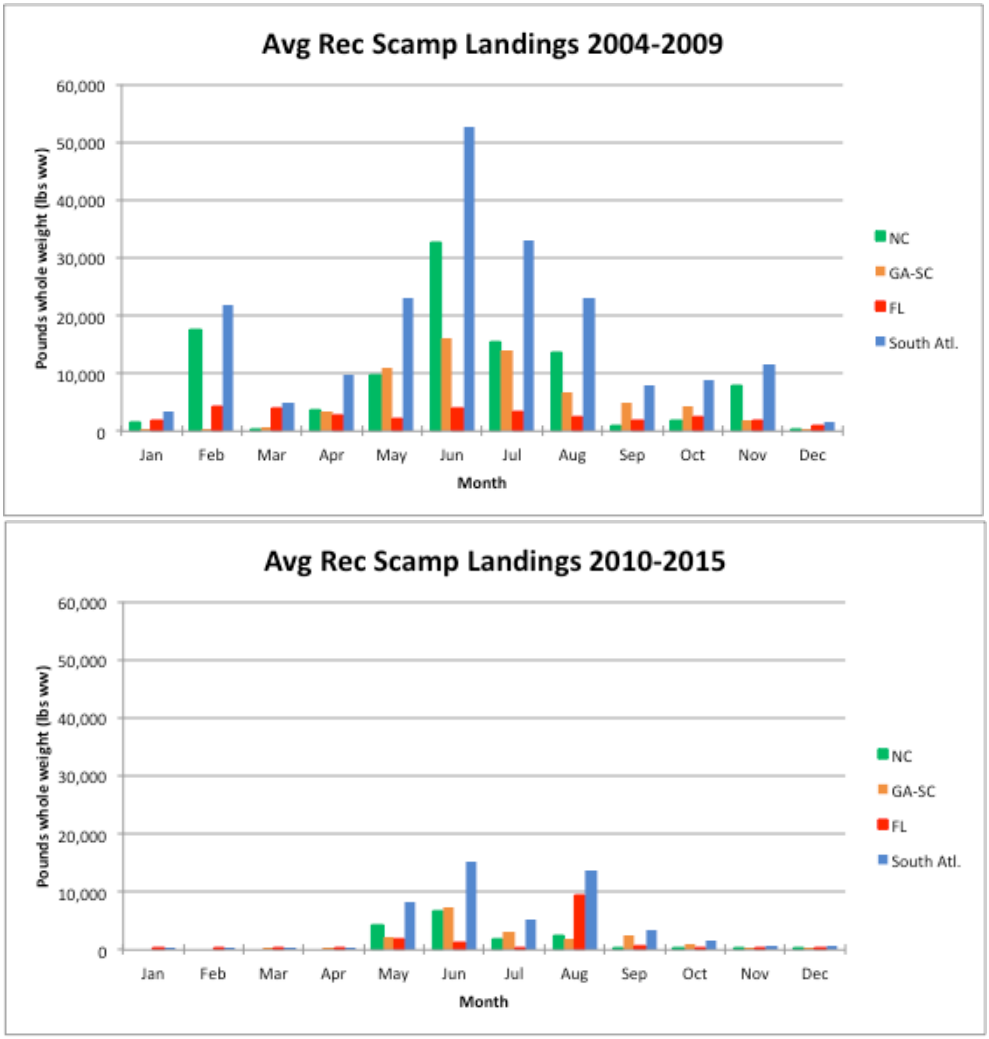


Figure 4.5. Average monthly recreational landings of **scamp** (pounds whole weight) from 2004 through 2015 by state. Top panel is for years before the existing closure (2004-2009); bottom panel shows landings in years after the closure (2009-2015). Source: SAFMC

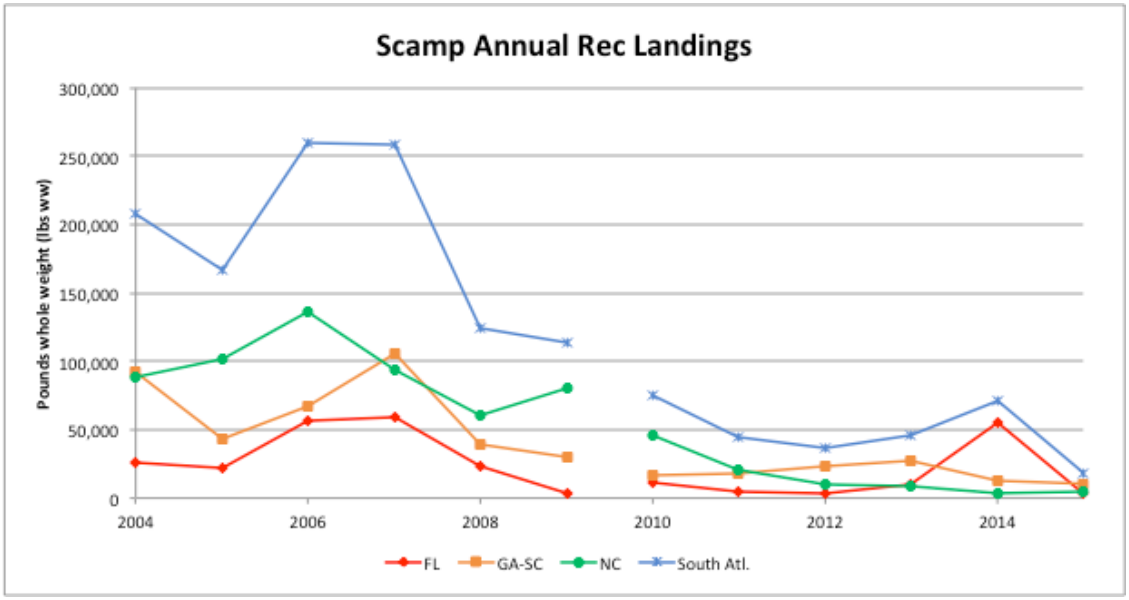


Figure 4.6. Annual recreational landings of **scamp** from 2004 through 2015 by state. The shallow water grouper closure was implemented in 2009, depicted in the figure by a break in the series. Source: SAFMC

A similar trend to that of gag and red grouper is seen on recreational landings of **scamp** prior to and after the shallow-water grouper closure (**Figures 4.5** and **4.6**). Monthly landings of **scamp** in the South Atlantic in years prior to the closure peaked in June and high catches were reported from North Carolina (**Figure 4.5**). Average landings in June declined from just over 50,000 lbs ww during the pre-closure years to about 15,000 pounds in the post-closure time period examined. Since the closure, highest recreational landings of scamp have been in Florida (**Figure 4.5**).

Black Grouper

To explore potential issues with species misidentification, percentages of "A" versus "B1" landings from the MRIP were examined. **Table 4.5** shows the distribution of recreational black grouper landings from 2004 to 2015. Type "A" landings are based on intercepts where the species was caught and brought back to the dock in a form that could be identified by trained interviewers. "B1" landings are those based on angler information, where the species was caught and killed but was not available for interviewer identification. On average, the majority of back grouper recreational harvest is type "A". Also shown in **Table 4.5** is the distribution of black grouper recreational harvest in Florida, with the majority attributed to the Florida Keys.

Annual recreational landings (lbs ww) of **black grouper** from 2004 through 2015 are shown in Figure **4.7**. The shallow-water grouper closure was implemented in 2009, depicted in the figure by a break in the series.

Table 4.5. Distribution of black grouper recreational landings (A and B1) from the Marine Recreational Information Program in Florida, 2004-2015.

Year	FLE (26.4%)		Keys (73.6%)		All FL	
	% A	% B1	% A	% B1	% A	% B1
2004	94.8	5.2	99.6	0.4	99.0	1.0
2005	61.7	38.3	99.7	0.3	83.3	16.7
2006	100.0	0.0	91.1	8.9	94.4	5.6
2007	100.0	0.0	99.9	0.1	99.9	0.1
2008	100.0	0.0	70.6	29.4	75.8	24.2
2009	8.2	91.8	100.0	0.0	68.1	31.9
2010	100.0	0.0	97.8	2.2	99.3	0.7
2011	16.9	83.1	100.0	0.0	55.3	44.7
2012	86.6	13.4	100.0	0.0	87.7	12.3
2013	27.7	72.3	100.0	0.0	63.9	36.1
2014	93.7	6.3	74.3	25.7	83.4	16.6
2015	100.0	0.0	73.9	26.1	75.3	24.7
Avg	**78.2**	**21.8**	**91.7**	**8.3**	**88.1**	**11.9**

Source: SAFMC based on MRIP data (excludes headboats).

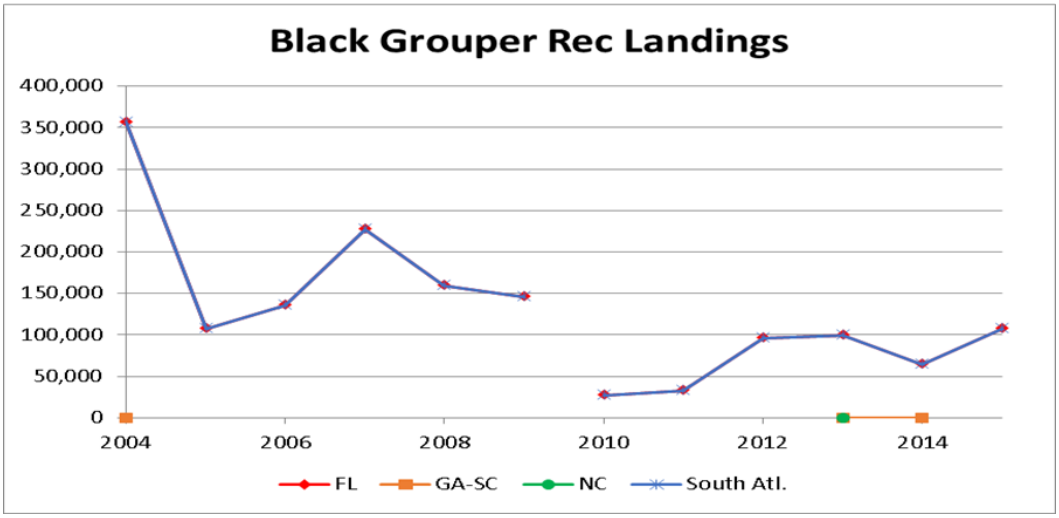


Figure 4.7. Annual recreational landings of **black grouper** (pounds whole weight) from 2004 through 2015 by state. The shallow-water grouper closure was implemented in 2009, depicted in the figure by a break in the series. Source: SAFMC

Black grouper are caught recreationally mainly in Florida and the Florida Keys. Annual recreational landings pre- and post-closure have shown a similar decline to that of other shallow-water groupers. It is not clear whether management measures or other factors (or both) have contributed to the observed decline.

Spawning seasons and months of peak spawning activity for select snapper grouper species in the South Atlantic are presented in **Table 4.6**.

Table 4.6. Timing of spawning (gray shading) and peak spawning (black shading) for exploited Atlantic Ocean reef fish stocks off the southeastern United States (Farmer, et al, 2017).

Stock	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Citation
Gray triggerfish													[10]
Greater amberjack													[7]
White grunt													[14, 17]
Cubera Snapper													WDH, pers. comm.
Red snapper													[17, 18]
Vermilion snapper													[2, 17]
Blueline tilefish													[6]
Tilefish													[4, 17]
Black sea bass													[15, 17]
Gag													[13, 17]
Red grouper													[1]
Scamp (NC)													[12]
Scamp (FL)													[5]
Scamp (29.95–32.95 °N)													[8, 17]
Snowy grouper													[16, 19]
Speckled hind													[20]
Warsaw Grouper													[11, 17]
Red porgy													[3, 17]

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In the South Atlantic, gag spawn from January through June with a peak in February and April (**Table 4.6**). Hence, it is expected that **Alternative 1 (No Action)** would have beneficial biological effects on the species as it encompasses the period of peak spawning activity. More information on the changes proposed in **Alternatives 2** and **3** is needed to assess their potential biological effects on the stock of gag in the South Atlantic.

Red grouper spawn from February through June in the South Atlantic with a peak in April (**Table 4.6**). Fishermen have indicated, however, that red grouper harvested in May off North Carolina are frequently in spawning condition and there is concern that the current spawning season closure is not capturing the bulk of spawning activity for that species in North Carolina. Detailed information on the spatial distribution of red grouper spawning activity is needed to corroborate this information. However, there have been observed shifts in the timing of spawning activity for other species in response to warming ocean temperature (insert citations). The current limited amount of information on the reproductive biology of red grouper would indicate that **Alternative 1 (No Action)** encompasses the bulk of red grouper spawning activity in the region and would continue to impart beneficial biological effects on the red grouper stock. However, as mentioned above, landings data indicate that red grouper were historically commonly caught off North Carolina (**Figure 4.3**); therefore, **Alternative 5** and its sub-alternatives, if applicable to federal waters off North Carolina (**Alternative 2**, **Sub-alternative 2b**), would be expected to result in positive biological effects. **Sub-alternative 5a** would lengthen the existing seasonal closure by one month, **Sub-alternative 5b** would shift the closure by a month, and **Sub-alternative 5c** would shift the closure by two months. It is expected that **Sub-alternatives 5a** and **5b** would have similar biological effects as they both include the month of May and commercial fishing for red grouper is low or non-existent in January off North Carolina. **Sub-alternative 5c** would allow fishing for red grouper in February, when the species is reportedly commencing spawning activity in the South Atlantic (**Table 4.6**). However, extending the seasonal closure for two months past the reported peak in spawning may have the most positive biological effects on red grouper off North Carolina.

Off North Carolina, scamp have been documented to spawn from April through August with peak activity in May and June; whereas in Florida, the species reportedly spawns in April and September (**Table 4.6**). Based on this information, the current seasonal closure on recreational harvest under **Alternative 1 (No Action)** is not encompassing the entirety of peak spawning activity for the species in the South Atlantic. As currently structured, it is unclear whether the sub-alternatives under **Alternative 2** would impart biological benefits to scamp. Of the **Alternative 3** sub-alternatives, **Sub-alternatives 3c** and **3d** encompass the month of April, when scamp are reportedly spawning off Florida (**Table 4.6**). Of these, **Sub-alternative 3d** would be most likely to encompass the bulk of spawning activity and, therefore, be more biologically beneficial to scamp than **Sub-alternative 3c**.

According to SEDAR 19 (2010), the peak spawning season of black grouper, based on back-calculated hatching dates of postlarval fish, is from February through April. Spawning aggregations of the species have been observed in the Florida Keys but spawning activity was not confirmed (Ecklund et al. 2000).

With the limited amount of information for this species' timing, duration, and location of spawning activity, it is difficult to evaluate the effects of proposed alternatives under this action. **Alternative 4** considers seasonal closures on the recreational harvest of black grouper. If the sub-alternatives under **Alternative 4** were to be applicable to South Florida and the Florida Keys (**Alternative 2**, **Sub-alternative 2a**), then **Sub-alternative 4a** would encompass the longest time during which the species is reportedly spawning and would result in the greatest biological benefit of the alternatives considered. **Sub-alternatives 4c** and **4d** would each only encompass one of the three peak spawning months, whereas **Sub-alternative 4b** would implement a closure outside of the peak spawning months for black grouper.

4.2 Economic Effects

Under **Alternative 1 (No Action)**, the annual spawning season closure for harvest would remain from January 1 through April 30 for shallow-water groupers (gag grouper, black grouper, scamp, red grouper, yellowfin grouper, yellowmouth grouper, red hind, rock hind, graysby, and coney). **Alternative 2** would potentially change the spawning season closure months depending on the geographic location. The economic effects of would be dependent on which months are chosen and how they may relate to altering the number of fishing trips for shallow-water grouper as well as the change in harvest and thus CS derived from the shallow-water grouper species.

Alternative 3 would change the months that the shallow-water grouper (excluding black grouper) spawning season closure would take place south of 28° North latitude. **Sub-alternatives 3a** through **3c** decrease the harvest closure. These sub-alternatives may result in positive, short-term economic benefits through increased CS derived from additional harvest of shallow-water groupers, however there may be negative long-term effects if the biomass of shallow-water groupers decreases, thereby decreasing the number of fish available to harvest and the CS that results from such harvest. **Sub-alternative 3d** would maintain the length of the spawning season closure, but shift the annual closure to start and end a month later than under **Alternative 1 (No Action)**. The economic effects will be dependent on how this shift effects harvest and fishing behavior both in the short and long term, as well as if there is a change in the biomass of shallow-water grouper.

Alternative 4 would reduce the annual spawning season closure for black grouper. The economic effects of would be dependent on which months are chosen and how they may relate to altering the number of fishing trips for black grouper as well as changing harvest and thus CS derived from the species. **Sub-alternatives 4a** through **4d** may result in positive, short-term economic benefits through increased CS derived from additional harvest of black grouper, however there may be negative long-term economic effects if the biomass of black grouper decreases, thereby decreasing the number of fish available to harvest and the CS that results from that harvest.

Conversely, **Alternative 5** would shift or increase the annual spawning season closure for red grouper, with the intention of providing better protection of red grouper when the fish are in spawning aggregations and more susceptible to overharvest. The economic effects of would be dependent on which months are chosen and how they may relate to altering effort and harvest for

red grouper and thus CS derived from the species. **Sub-alternative 5a** increases the closure period by one month (May), which may incur some negative economic effects on trips that land or would have landed red grouper during May of each year. **Sub-alternative 5b** and **5c** shifts the harvest closure to occur later in the year, which may offer better protection of the red grouper spawning stock biomass. All sub-alternatives of **Alternative 5** may create positive long-term effects if the biomass of red grouper increases, thereby increasing the number of fish available to harvest and the CS that results from that harvest.

4.3 Social Effects

The potential effects on recreational fishermen, for-hire businesses and coastal communities of modifying the shallow-water grouper closure will be a trade-off between the biological benefits of the seasonal closure and the increased recreational fishing opportunities if the closure is shortened. In general, a longer seasonal closure may be biologically beneficial to the stock and contribute to sustainable fishing opportunities in the future if the closure appropriately lines up with spawning, but longer closure would be more likely to restrict recreational fishing opportunities if the closure if during popular times of the year for fishing.

There may be some benefits to maintaining the current seasonal closure in **Alternative 1 (No Action)**, including minimized complexity in management that will result from **Alternatives 2-5**. However, public input from recreational fishermen indicate that the biological benefits of the closure could be maximized if the closures were better tailored by area and with specific times for some species. The benefits to recreational fishermen of more appropriate closures for the areas will be more likely under **Alternative 2/Sub-alternatives 2a and 2b** than under **Alternative 1 (No Action).** Designating an additional sub-zone in **Alternative 3** for south Florida and the Florida Keys will add complexity to management, but may also contribute to better aligned closure with the spawning activity.

The potential effects on fishermen from a specified closure for black grouper in the area north of the Georgia/Florida line (**Alternative 4**) will depend on where and when black grouper are spawning, and there is limited information about this (see **Section 4.1**). However, there will be expected short-term benefits to recreational fishermen targeting black grouper in Georgia, South Carolina and North Carolina from potentially shorter closures in **Sub-alternatives 4a-4d**, particularly the one-month closures in **Sub-alternatives 4b-4d**. It is likely that the potential effects on Florida fishermen from adjusting the red grouper closure for Florida (**Alternative 5**) would be similar as the effects on Georgia, South Carolina and North Carolina under **Alternative 4.**

4.4 Administrative Effects

To be completed

Committee Action:

Action 4. Modify the seasonal prohibition on recreational harvest and possession of shallow-water groupers

Alternative 1 (No Action). Recreational harvest and possession of shallow-water groupers (gag, black grouper, scamp, red grouper, yellowfin grouper, yellowmouth grouper, red hind, rock hind, graysby, and coney) is prohibited annually in the South Atlantic EEZ from January 1 through April 30.

Alternative 2. Prohibit recreational harvest and possession of shallow-water grouper species (gag, black grouper, scamp, red grouper, yellowfin grouper, yellowmouth grouper, red hind, rock hind, graysby, and coney) ~~annually~~ seasonally by area:

Sub-alternative 2a. In federal waters off East Florida from the Georgia/Florida state boundary south to the end of the ~~SAFMC's~~ South Atlantic Fishery Management Council's jurisdiction, the closure applies (month) to (month).

Sub-alternative 2b. In federal waters off Georgia and the Carolinas from the Georgia/South Carolina border north to the North Carolina/Virginia border, the closure applies (month) to (month)

Alternative 3. Prohibit recreational harvest and possession of shallow-water grouper species (gag, scamp, red grouper, yellowfin grouper, yellowmouth grouper, red hind, rock hind, graysby, and coney) (excluding black grouper) south of 28° North latitude (approximately off Palm Bay, Florida):

Sub-alternative 3a. January – March (three months)
Sub-alternative 3b. February – March (two months)
Sub-alternative 3c. February – April (three months)
Sub-alternative 3d. February – May (four months)

Alternative 4. Prohibit recreational harvest and possession of black grouper in federal waters off (specify area based on Alternative 2a above)

Sub-alternative 4a. January – March (three months)
Sub-alternative 4b. January
Sub-alternative 4c. February
Sub-alternative 4d. March

Alternative 5. Prohibit recreational harvest and possession of red grouper in federal waters off (specify area based on Alternative 2b above)

Sub-alternative 5a. January – May (five months)
Sub-alternative 5b. February – May (four months)
Sub-alternative 5c. March – June (four months)

IPT Input:

- Red grouper assessment will be presented to Council in June 2017
- The most recent black grouper stock assessment data workshop noted issues with species

ID between gag and black grouper off South Florida. This could have implications for analyses.

Snapper Grouper IPT Input:

- Concern about not having results of stock assessment on red grouper. May be premature until it is known whether a reduction in harvest, and if so how much, is needed.
- Concern that after closure having been in place for many years there is no apparent increase in population.
- Existing closure already covers the bulk of spawn for these species.
- MOTION: AP RECOMMENDS NO ACTION ON MODIFYING THE SHALLOW-WATER GROUPER CLOSURE
  APPROVED (UNANIMOUSLY)

CONSIDER IPT'S AND AP'S RECOMMENDATIONS AND PRELIMINARY ANALYSES AND MODIFY ALTERNATIVES AS NECESSARY

SELECT PREFERRED ALTERNATIVE?

Action 5. Remove the recreational minimum size limit for deep-water snapper species

Alternative 1 (No Action). The recreational minimum size limit for queen snapper, silk snapper, and blackfin snapper in South Atlantic federal waters is 12 inches total length (TL).

Alternative 2. Remove the 12-inch TL recreational minimum size limit for queen snapper, silk snapper, and blackfin snapper in South Atlantic federal waters.

Preliminary Effects Analysis:

5.1 Biological Effects

Potential impacts of removing the existing recreational minimum size limit on queen, snapper, silk snapper, and blackfin snapper may not be fully evaluated due to limited data.

Table 5.1 shows the number of fish measured, raw (unexpanded) number of A (observed harvest), B1 (reported harvest), and B2 (released alive) fish from the Marine Recreational Information Program (MRIP) intercepts and expanded number of fish estimates for A and B1 (landings) and A, B1, and B2 (catch) for blackfin, queen, and silk snappers from 2014 to 2106 (excluding Monroe County).

Table 5.1. Number of fish measured, raw (unexpanded) number of A, B1, and B2 reported through Marine Recreational Information Program (MRIP) intercepts and expanded number of fish estimates for A and B1 (landigs) and A, B1, and B2 (catch) for Blackfin, Queen, and Silk Snappers from 2014 to 2106. Note: Does not include Monroe County.

Combined Charter and Private Recreational							
Year	**Species**	**Number Measured**	**A_Raw**	**B1_Raw**	**B2_Raw**	**Expanded A+B1**	**Expanded A+B1+B2**
2014	blackfin snapper	3	3	0	0	652	652
	queen snapper						
	silk snapper	1	1	0	0	25	25
2015	blackfin snapper						
	queen snapper						
	silk snapper	5	5	0	1	414	427
2016	blackfin snapper	2	2	0	0	293	293
	queen snapper						
	silk snapper						

Table 5.2. Expanded number of fish for A and B1 (landings) and A, B1, and B2 (catch) estimates from the MRIP for Blackfin, Queen, and Silk Snapper caught on charter and private recreational trips from 2014 to 2016. Note: Does not include Monroe County.

Year	Species	Charter		Private Recreational	
		Expanded A+B1	Expanded A+B1+B2	Expanded A+B1	Expanded A+B1+B2
2014	blackfin snapper	124	124	528	528
	queen snapper				
	silk snapper	25	25		
2015	blackfin snapper				
	queen snapper				
	silk snapper	414	427		
2016	blackfin snapper			293	293
	queen snapper				
	silk snapper				

Table 5.3 shows numbers of deep-water species for each component of the MRIP estimate for charter and private recreational trips from 2010 through 2016 including proportional standard error (PSE) estimates for each component. The PSE for each component was greater than 68 for all years and samples. In 2012, the number of discards of silk snapper exceeded the sillk snapper catch.

Table 5.3. Numbers of deep-water species for each component of the MRIP estimate (A=observed harvest; B1=reported harvest; B2=discards) for charter and private recreational trips from 2010 through 2016 including proportional standard error (PSE) estimates for each component.

Year	Species	Observed Harvest (A)	PSE	Reported Harvest (B1)	PSE	Released Alive (B2)	PSE
2010	silk snapper	191	84.8	0	.	35	102.3
2011		766	89.5	0	.	136	78.3
2012		0	.	0	.	3,100	98.6
2013		11	100.6	0	.	0	.
2014		25	105.4	0	.	0	.
2015		414	98.8	0	.	14	110.7
2010	queen snapper	5	108.1	0	.	0	.
2010	blackfin snapper	248	72.8	0	.	0	.
2011		708	101.4	7,787	101.4	0	.
2012		793	83.2	0	.	0	.
2013		18	103.7	0	.	0	.
2014		652	68.6	0	.	0	.
2016		293	100	0	.	0	.

Length distribution of blackfin, queen, and silk snappers sampled through the MRIP program from 2004 through 2016 are shown in **Figure 5.1**. There were less than 10 lengths by species from 2014 to 2016. Lengths from the MRIP database were converted to total length based on conversions in published literature and rounded to the nearest inch (Queen: Gobert et l 2005, Blackfin: Burton et al. 2016, Silk: Thompson and Munro 1983). Data on blackfin snapper and

queen snapper were insufficient to evaluate the length distribution of landings relative to the recreational minimum size limit. For silk snapper, the majority of the landings appear to be above the current 12 inch minimum size limit.

For comparison, length distributions for these species from the Gulf of Mexico and the Caribbean are presented in **Figure 5.2**. Silk snapper may be a more important recreationally in the Gulf of Mexico and Caribbean than in the South Atlantic.

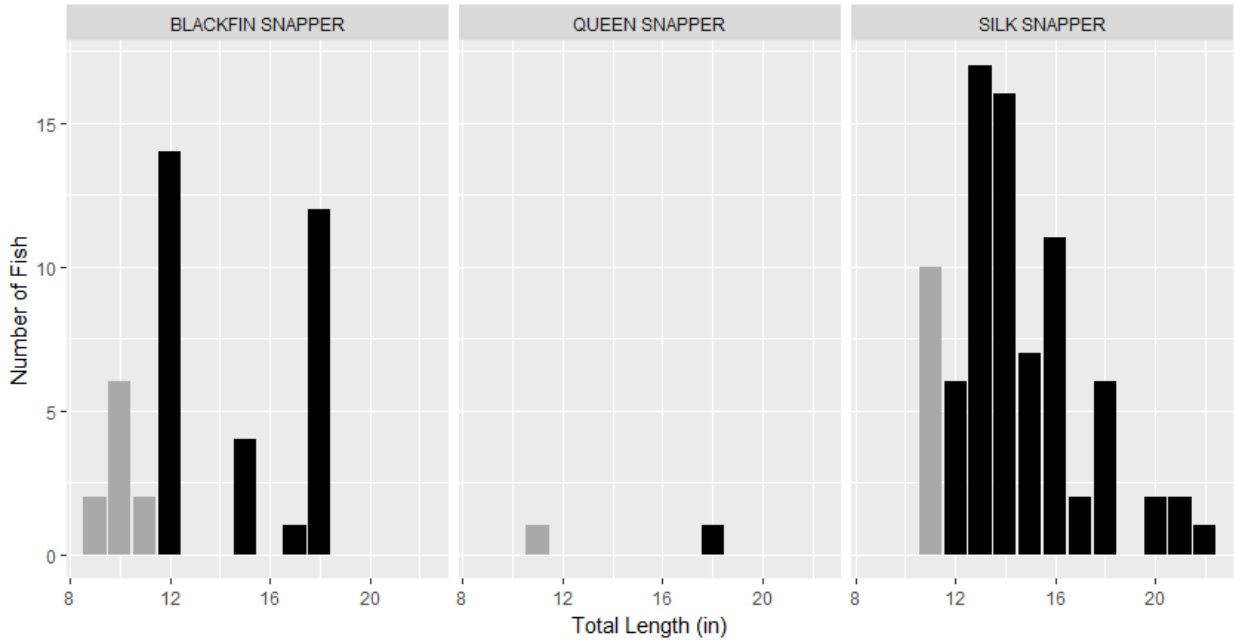

Figure 5.1. Unexpanded lengths of blackfin, queen, and silk snappers sampled through the MRIP survey from 2004 to 2016. Colors represent less than 12 inches (gray) and 12 inches and greater (black).

Available data suggest minimal changes in discard or harvest rates would be expected under **Alternative 2** as queen snapper, silk snapper, and blackfin snapper are not caught in high numbers recreationally. Thus, biological effects of **Alternative 2** would be neutral compared to **Alternative 1 (No Action)** as removing the size limit would have no effect on overall harvest, which is limited by the ACL, and AMs are in place to prevent overages.

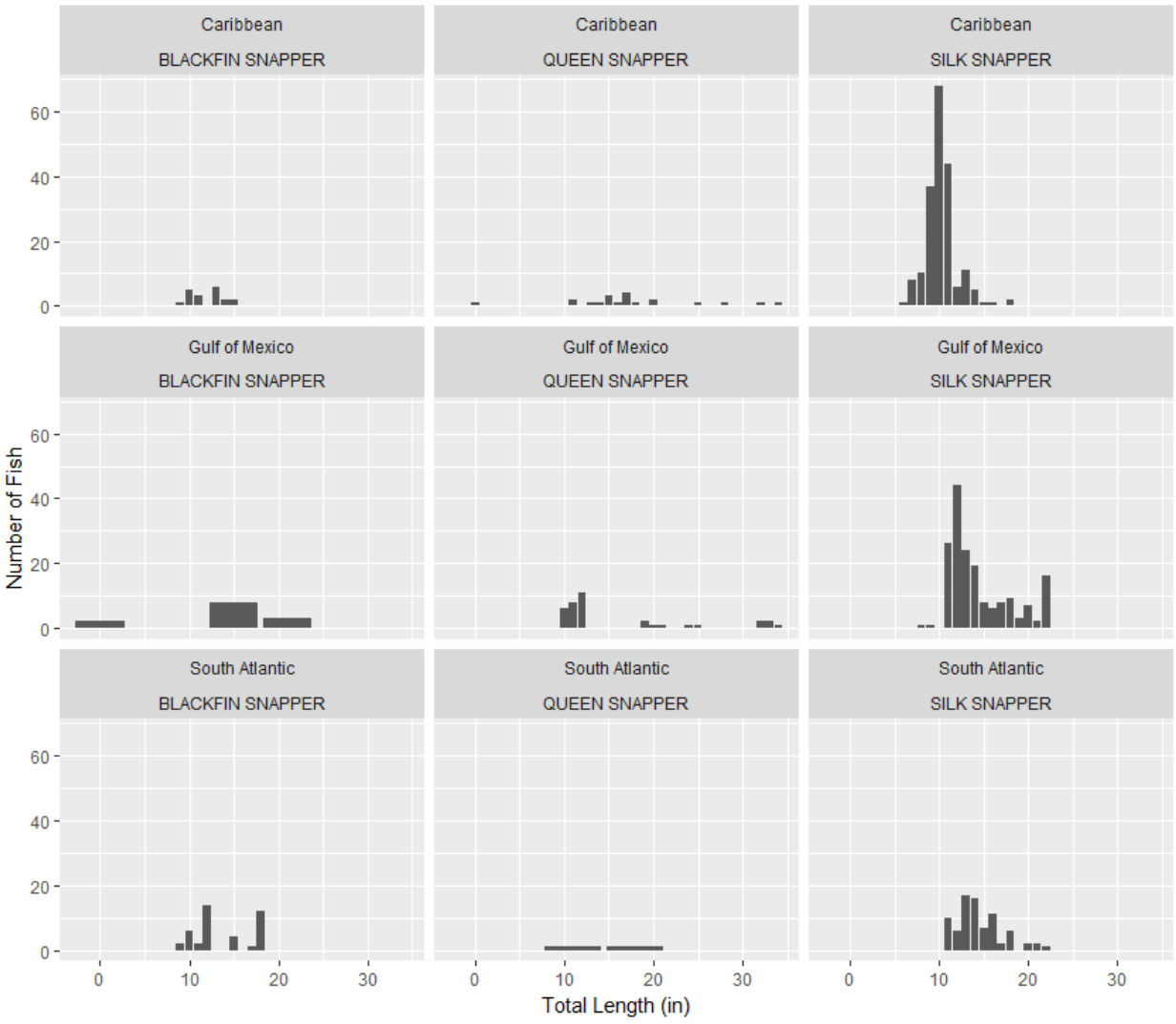

Figure 5.2. Unexpanded lengths of blackfin, queen, and silk snappers sampled through the MRIP survey from 2004 to 2016 in the Gulf of Mexico, Caribbean, and South Atlantic. Colors represent less than 12 inches (gray) and 12 inches and greater (black).

5.2 Economic Effects

Due to the relatively rare occurrence of recreational queen snapper, silk snapper, and blackfin snapper on recreational fishing trips, the overall anticipated economic effects of removing the size limit on these species is expected to likely be minimal. There will likely be some direct, positive economic effects as more fish would be available to harvest and fewer regulatory discards required in the fishery. In the recreational sector, the initial increase in fish available for harvest would positively affect consumer surplus for the fishery.

5.3 Social Effects

Some social effects of removing the minimum size limits from the deepwater species would be associated with the positive and negative biological effects on the species (see **Section 5.1**).

Positive effects of removing the minimum size limit would result from reduced discards. This would be expected to contribute to the sustainability of harvest and the health of the deepwater

However, as discussed in **Section 5.1**, recreational catch for queen, silk and blackfin snapper is generally at low levels. Removing the minimum size limit (**Alternative 2**) would likely have minimal or no effect on current recreational fishing opportunities or trip satisfaction, similar to expected effects of **Alternative 1 (No Action)**, because these species are not commonly caught on recreational trips.

5.4 Administrative Effects

To be completed

Committee Action:

Action 5. Remove the recreational minimum size limit for deep-water snapper species

Alternative 1 (No Action). The recreational minimum size limit for queen snapper, silk snapper, and blackfin snapper in South Atlantic federal waters is 12 inches total length (TL).

Alternative 2. Remove the 12-inch TL recreational minimum size limit for queen snapper, silk snapper, and blackfin snapper in South Atlantic federal waters.

Snapper Grouper AP Input:

- MOTION: RECOMMEND REMOVAL OF MINIMUM SIZE LIMIT FOR DEEP-WATER SPECIES
  APPROVED (UNANIMOUSLY)

CONSIDER IPT'S AND AP'S RECOMMENDATIONS AND PRELIMINARY ANALYSES AND MODIFY ALTERNATIVES AS NECESSARY

SELECT PREFERRED ALTERNATIVE?

Action 6. Reduce the recreational minimum size limit for black sea bass

Alternative 1 (No Action). The recreational minimum size limit for black sea bass in South Atlantic federal waters is 13 inches total length (TL).

Alternative 2. Reduce the recreational minimum size limit for black sea bass in South Atlantic federal waters to 12 inches TL.

Alternative 3. Reduce the recreational minimum size limit for black sea bass in South Atlantic federal waters to 11 inches TL.

Preliminary Effects Analysis:

6.1 Biological Effects

Table 6.1 shows the numbers and percent (of total catch) of black sea bass that were discarded in from 2014 through 2016 as estimated by the Marine Recreational Information Program (MRIP) in state (<= 3 miles) and federal (> 3 miles) waters. For comparison, **Table 6.2** shows the distribution of black sea bass landings and percent of landings compared to the total catch for the same time period. Numbers of discards do not appear to vary significantly between state and federal waters. For both state and federal waters, the number of black sea bass being discarded appears to be substantially above that which is landed. Indeed, on average, when compared to the total catch, the percent of black sea bass discarded between 2014 and 2016 was 94%.

Table 6.1. Numbers of black sea bass discarded (B2) and percent of total catch in the South Atlantic between 2014 and 2016 as estimated by the Marine Recreational Information Program (MRIP) for state waters (<= 3 miles) and federal waters (> 3 miles).

Number of BSB Discards				Percent of BSB Discards		
Year	<= 3 mi	> 3 mi	Total	<= 3 mi	> 3 mi	Total
2014	2,060,023	2,863,174	4,923,197	97.9	90.7	93.6
2015	1,725,703	1,575,180	3,300,883	98.8	89.3	94.0
2016	2,022,670	1,141,448	3,164,119	99.2	87.1	94.5
Avg.	1,936,132	1,859,934	3,796,066	98.6	89.6	94.0

Table 6.2. Numbers of black sea bass landed (A+B1) and percent of total catch in the South Atlantic between 2014 and 2016 as estimated by the Marine Recreational Information Program (MRIP) for state waters (<= 3 miles) and federal waters (> 3 miles).

BSB Landings (number)				Percent BSB Landings		
Year	<= 3 mi	> 3 mi	Total	<= 3 mi	> 3 mi	Total
2014	44,202	293,339	337,542	2.1	9.3	6.4
2015	21,768	188,431	210,199	1.2	10.7	6.0
2016	16,106	169,355	185,461	0.8	12.9	5.5
Avg.	27,359	217,042	244,400	1.4	10.4	6.0

A decrease in the recreational minimum size limit of black sea bass, as proposed under **Alternatives 2** and **3**, would likely lead to an increase in landings. However, a recreational ACL is in place to prevent overall harvest from exceeding the sustainable level. Unless the proposed alternatives lead to an in-season closure (and subsequent increase in discards), **Alternatives 2** and **3** are expected to have neutral biological effects. However, an assessment of the status of black sea bass in the South Atlantic is currently underway (SEDAR 56) and results are not anticipated prior to this amendment being finalized under the current development timeline.

The new bag/size limit analysis developed by Council staff and being considered by the Scientific and Statistical Committee relies on information from the most recent stock assessment. In particular, it requires estimates of abundance at age, size at age, and selectivity at age in order to estimate the proportion of discarded fish in the catch that are above or below a given size limit. For black sea bass, the most recent assessment is the SEDAR 25 Update (2013), which has a terminal year of 2012. We are currently five years past that terminal year and the estimates of abundance at age are no longer valid. It may be possible to obtain projected abundance at age from the projections, but there are several issues with doing that. First, projections were only run through 2015. Second, and more importantly, using projected information assumes the population is actually following the trend assumed in the projections. Recent chevron trap data have shown that black sea bass may not be following the trajectory assumed in the projections despite landings remaining below the ACL. Therefore, analyzing the size limit alternatives for black sea bass is not possible at this time given the available data.

6.2 Economic Effects

Size limits that result in a smaller spawning stock or lower fecundity would result in more long-term negative economic effects presumably through the availability of decreased numbers of fish in the future. The recreational annual catch limit and accountability measures that are in place are designed to mitigate and reduce these potential negative economic effects. There could also be some direct, likely short-term, positive economic effects as more fish would be available to harvest and fewer regulatory discards required in the fishery. In the recreational sector, the initial increase in fish available for harvest would positively affect consumer surplus for the black seabass fishery. Net operating revenue for charter and head boat trips may be positively affected as well if overall fishing effort increases or trips become less costly due to lower search costs resulting from increased availability of fish of legal length to harvest. The greater the decrease in the minimum size limit (**Alternatives 2** and **3**) from **Alternative 1 (No Action)**, the greater the probability for short-term negative economic effects. However, a decrease in the minimum size limit below **Alternative 1 (No Action)** could also result in greater long-term negative economic effects if the decreased size limit translates into a smaller spawning stock biomass and overall biomass. Presumably, since the biological effects of **Alternatives 2** and **3** are likely neutral, these potential long-term negative economic effects are expected to be minimal.

6.3 Social Effects

Black sea bass is a very popular recreational species for fishermen in all South Atlantic states. Some social effects of minimum size limits would be associated with the positive and negative biological effects on black sea bass (**Section 6.1**). Reducing the minimum size limit may benefit recreational fishermen by increasing the number of fish that can be kept, which may improve trip satisfaction. However, allowing more fish to be landed may result in a higher harvest rate, which could result in a shorter subsequent fishing season. The benefits and costs to recreational fishermen would depend on the balance of increasing the number of fish that can be kept while ensuring that an increased harvest rate would not result in a shortened recreational season for the next year. **Alternative 3** would result in the greatest increase in the number of black sea bass that could be kept on recreational trips, followed by **Alternative 2** and then **Alternative 1 (No Action).** However, the larger minimum size limit in **Alternative 1 (No Action)** would be least likely to contribute to a faster harvest rate and potentially shorter subsequent fishing season, followed by **Alternative 2** and then **Alternative 3.**

6.4 Administrative Effects

To be completed

Committee Action:

Action 6. Reduce the recreational minimum size limit for black sea bass

Alternative 1 (No Action). The recreational minimum size limit for black sea bass in South Atlantic federal waters is 13 inches total length (TL).

Alternative 2. Reduce the recreational minimum size limit for black sea bass in South Atlantic federal waters to 12 inches TL.

Alternative 3. Reduce the recreational minimum size limit for black sea bass in South Atlantic federal waters to 11 inches TL.

IPT Input:

- ABC for black sea bass based on selectivity patterns. If MSL changes that would affect the ABC. Also consider that the black sea bass assessment (SEDAR 56) has been delayed and results may not be available until 2018

Snapper Grouper AP Input:

- Concern about how change in size limit would affect bag limit and length of season
- MOTION: AP RECOMMENDS REDUCING RECREATIONAL MINIMUM SIZE LIMIT FOR BLACK SEA BASS TO 12 INCHES (ALTERNATIVE 2) APPROVED BY AP (6 OPPOSED)

CONSIDER IPT'S AND AP'S RECOMMENDATIONS AND PRELIMINARY ANALYSES AND MODIFY ALTERNATIVES AS NECESSARY

SELECT PREFERRED ALTERNATIVE?

Action 7. Reduce the recreational minimum size limit for gray triggerfish in federal waters off East Florida

Alternative 1 (No Action). The recreational minimum size limit for gray triggerfish in South Atlantic federal waters off the east coast of Florida is 14 inches fork length (FL). The recreational minimum size limit for gray triggerfish in federal waters off Georgia, South Carolina, and North Carolina is 12 inches FL.

Alternative 2. Reduce the recreational minimum size limit for gray triggerfish in federal waters off the east coast of Florida to 12 inches FL.

Preliminary Effects Analysis:

7.1 Biological Effects

Prior to July 2015 the recreational minimums size limit for gray triggerfish was 12 inches fork length (FL) in Florida. Upon implementation of Amendment 29 (SAFMC 2014) in July 2015, the size limit off the east coast of Florida was increased to 14 inches FL. As the Marine Recreational Information Program (MRIP) obtains lengths of sampled fish as fork lengths, no length-weight conversion was needed for the analysis.

Analysis examined data from 2014 to 2016 to determine the potential impact of the proposed reduction in the recreational minimum size limit of gray triggerfish off east Florida. To fill in for unmeasured fish, MRIP imputes lengths other strata, which could have an impact on the analysis. **Figure 7.1** is length plot of imputed and observed lengths provided as a reference. Overall the size distribution of the catch did not change from the period before the increase in the size limit to after. Also, note that the modal length in 2016 for both charter vessels and private recreational was 12-inches FL.

The percentage of fish landed off east Florida that were less than 14 inches was calculated for the time period prior to July 2015 and thereafter. In addition, the number of triggerfish that were discarded was also examined (**Table 7.1**).

The increase in the minimum size limit from 12 inches FL to 14 inches FL in July 2015 appears to have affected the number of recreational discards of gray triggerfish. Overall, during the period prior to the minimum size limit change, the recreational sector (private and charter) discarded about 60% of gray triggerfish caught off east Florida (**Table 7.1**). After the minimum size limit increased to 14 inches FL, the average percentage of discarded fish increased to 78.5%. It appears the majority of the discards are in the private sector.

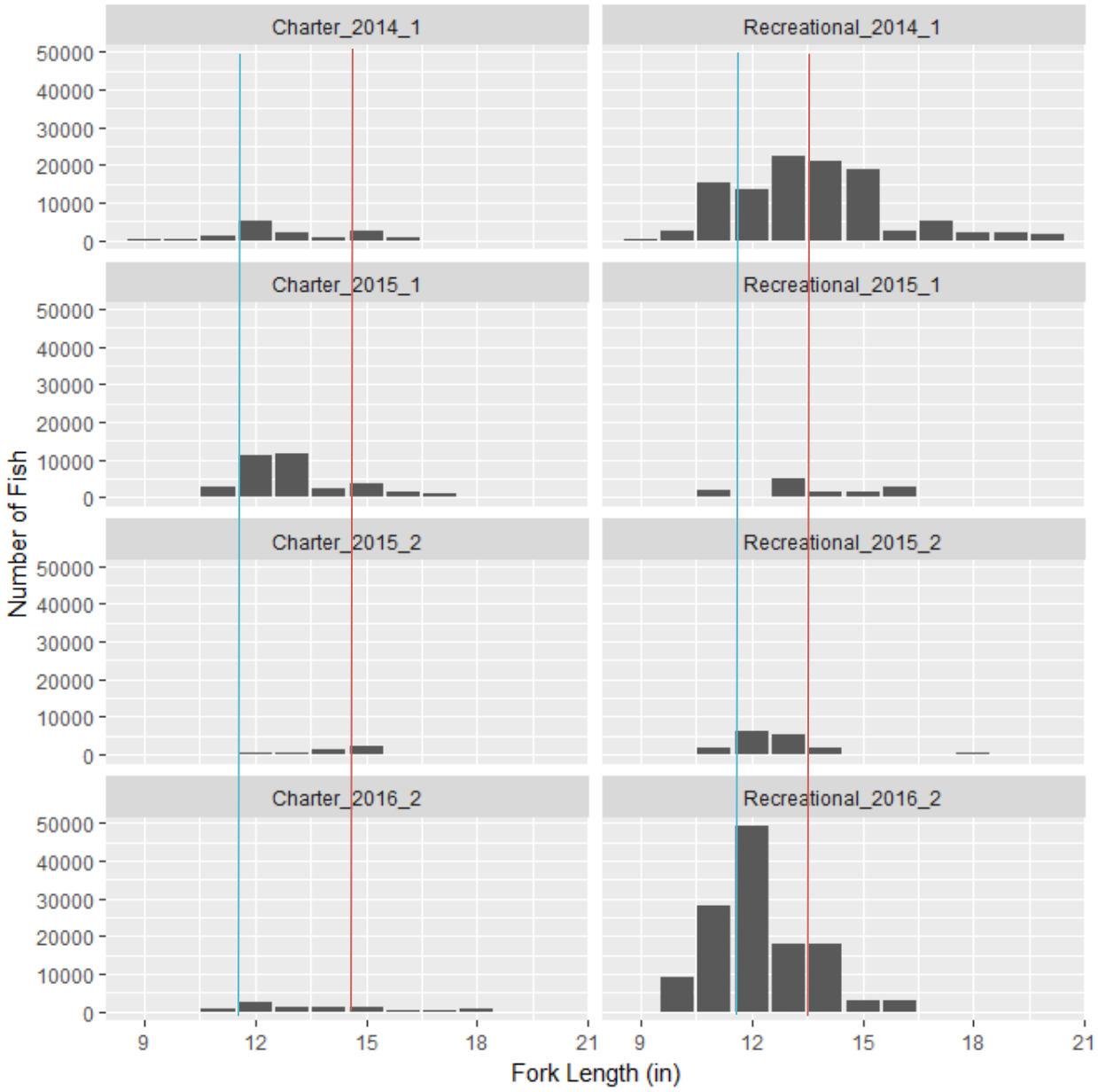

Figure 7.1. Length distribution (inches fork length) of gray triggerfish landings off east Florida (including Monroe County) prior to (#1: 12-inch minimum size limit) and after (#2: 14-inch minimum size limit) the change in minimum size limit that took effect in July 2015 for charter (left panels) and private recreational components. Blue lines denote the 12-inch size limit and red lines indicate the 14-inch size limit

Table 7.1. Estimates of gray triggerfish caught from Combined, Charter Boat, and Private Recreational landings in Florida. Estimates include: A (observed catch), B1 (unobserved reported catch), B2 (released fish), weight of catch in (kg), and percent of total catch released. Reg=1 denotes period prior to size limit increase (July 2015); Reg=2 denotes period after size limit increase.

Charter and Private Recreational Combined						
Reg	**Year**	**A + B1**	**B2**	**A, B1, B2**	**wgt_ab1 (kg)**	**% Released Num**
1	2014	119,041	122,112	241,154	132,183	51%
1	2015	46,533	103,576	150,108	46,485	69%
2	2015	19,825	74,853	94,678	18,635	79%
2	2016	135,829	495,810	631,639	107,232	78%
Charter						
Reg	**Year**	**A + B1**	**B2**	**A, B1, B2**	**wgt_ab1 (kg)**	**% Released Num**
1	2014	12,167	12,278	24,445	11,799	50%
1	2015	33,760	8,855	42,615	32,370	21%
2	2015	4,340	9,236	13,576	5,198	68%
2	2016	7,915	12,589	20,504	8,632	61%
Private						
Reg	**Year**	**A + B1**	**B2**	**A, B1, B2**	**wgt_ab1 (kg)**	**% Released Num**
1	2014	106,874	109,834	216,709	120,384	51%
1	2015	12,773	94,721	107,493	14,115	88%
2	2015	15,485	65,617	81,102	13,437	81%
2	2016	127,914	483,221	611,135	98,600	79%

Decreasing the minimum size limit to 12 inches FL as proposed under **Alternative 2** could lead to higher recreational landings overall. Recreational landings of gray triggerfish in 2013 and 2014 in the South Atlantic exceeded the recreational ACL by 6% and 22%, respectively. Landings in 2015 did not reach the recreational ACL (88%). However, it is difficult to establish a baseline to compare potential effects since the change in the size limit occurred very recently and established different size limits for the species in Florida and the rest of the South Atlantic states. Unless recreational landings were projected to reach the recreational ACL as a result of a decrease in the size limit, the biological effects of **Alternative 2** would be neutral.

7.2 Economic Effects

Size limits that result in a smaller spawning stock or lower fecundity would result in more long-term negative economic effects presumably through the availability of decreased numbers of fish in the future. The recreational annual catch limit and accountability measures that are in place are designed to mitigate and reduce these potential negative economic effects. There could also be some direct, likely short-term, positive economic effects as more fish would be available to harvest and fewer regulatory discards required in the fishery. In the recreational sector, the initial increase in fish available for harvest would positively affect consumer surplus for the gray triggerfish fishery off of Florida. Net operating revenue for charter and head boat trips may be positively affected as well if overall fishing effort increases or trips become less costly due to lower search costs due to increased availability of fish of legal length to harvest. The greater the decrease in the minimum size limit from **Alternative 1 (No Action)**, the greater the probability for short-term negative economic effects. However, a decrease in the minimum size limit below **Alternative 1 (No Action)** could also result in greater long-term negative economic effects if the

decreased size limit translates into a smaller spawning stock biomass and overall biomass of fish available to harvest. Overall, the size limit in **Alternative 2** brings the size limit for grey triggerfish caught off of Florida in-line with the rest of the South Atlantic states, with the biological effects likely to be neutral. As such, these potential long-term negative economic effects are expected to be minimal.

7.3 Social Effects

As discussed in **Section 6.3**, some social effects of minimum size limits would be associated with the biological effects on gray triggerfish (**Section 7.1**). Additionally, there is a trade-off with reducing the minimum size limit in that an increase in the number of fish that can be kept may improve recreational trip satisfaction, but may also contribute to the harvest rate and associated accountability measure if landings reach the ACL sooner in the fishing year.

Reducing the minimum size limit (**Alternative 2**) may benefit recreational fishermen by increasing the number of fish that can be kept, which may improve trip satisfaction for Florida fishermen, and would also make the minimum size limit consistent for all South Atlantic states. **Alternative 2** would also be expected to reduce the number of discards.

There is a greater likelihood that landings and rate of harvest would increase under the minimum size limit in **Alternative 2** than the minimum size limit in **Alternative 1 (No Action)**. The accountability measure for gray triggerfish is an in-season closure for the whole South Atlantic, which extends the potential negative effects of **Alternative 2** to all recreational fishermen targeting gray triggerfish. The benefits and costs to recreational fishermen would depend on the balance of increasing the number of fish that can be kept while ensuring that an increased harvest rate would not result in a shortened recreational season.

7.4 Administrative Effects

Selection of **Alternative 2** would result in consistent regulations with state waters off the east coast of Florida and the other South Atlantic states, but create inconsistent regulations between the west coast of Florida in state and federal (pending a size limit increase) waters. However, neither **Alternatives 1 (No Action),** nor **Alternative 2** would allow for consistent minimum size limit regulations for gray triggerfish in the Gulf of Mexico and South Atlantic, which is particularly troublesome for fishermen and law enforcement in the Florida Keys. Additionally, **Alternative 1 (No Action)** and **Alternative 2** could have some negative effects on recreational and fishermen harvesting gray triggerfish in the EEZ off states that currently do not have size limits by limiting the number of fish that can be kept.

Committee Action:

Action 7. Reduce the recreational minimum size limit for gray triggerfish in federal waters off East Florida

Alternative 1 (No Action). The recreational minimum size limit for gray triggerfish in South Atlantic federal waters off the east coast of Florida is 14 inches fork length (FL). The recreational minimum size limit for gray triggerfish in federal waters off Georgia, South Carolina, and North Carolina is 12 inches FL.

Alternative 2. Reduce the recreational minimum size limit for gray triggerfish in federal waters off the east coast of Florida to 12 inches FL.

IPT Input:

- Consider an alternative that would increase the MSL from 12 to 14 inches off GA, SC and NC. The Gulf Council is considering increasing the MSL to 15 inches as Gulf gray triggerfish is undergoing overfishing.

Snapper Grouper AP Input:

- MOTION: AP RECOMMENDS ALTERNATIVE 2, REDUCING THE MSL FOR GRAY TRIGGERFISH OFF EAST FLORIDA TO 12 INCHES APPROVED (1 ABSTENTION)

CONSIDER IPT'S AND AP'S RECOMMENDATIONS AND PRELIMINARY ANALYSES AND MODIFY ALTERNATIVES AS NECESSARY

SELECT PREFERRED ALTERNATIVE?

APPROVE VISION BLUEPRINT RECREATIONAL REGULATORY AMENDMENT 26 FOR PUBLIC HEARINGS IN AUGUST 2017?