

Amendment 32

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

DECISION DOCUMENT

**Actions to End Overfishing and Rebuild the
Blueline Tilefish (*Caulolatilus microps*) Stock
in the South Atlantic**

September 2014

Purpose and Need

Purpose for Action

Reduce the current level of fishing mortality of the blueline tilefish stock in the South Atlantic. Revise the annual catch limits and targets for the Deepwater Complex to respond to changes in the acceptable biological catch of silk snapper and yellowedge grouper.

Need for Action

End overfishing and rebuild the blueline tilefish stock, while minimizing, to the extent practicable, adverse social and economic effects. Specify annual catch limits and targets for blueline tilefish and species in the Deepwater Complex based upon the best available information.

COMMITTEE ACTION:

OPTION 1. ACCEPT THE IPT'S SUGGESTED CHANGES TO THE PURPOSE AND NEED STATEMENTS

OPTION 2. MODIFY THE IPT'S PROPOSED WORDING FOR THE PURPOSE AND NEED (COMMITTEE/COUNCIL TO SPECIFY CHANGES) AND APPROVE.

OPTION 3. OTHERS???

Proposed Actions and Alternatives

Action 1. Revise the Composition of the Deep-Water Complex and Adjust the Deep-Water Complex Annual Catch Limits, Optimum Yield, and Annual Catch Targets

Alternative 1. (No Action). The current Deepwater Complex temporarily includes ~~Retain the current species composition of the Deep-Water Complex (blueline tilefish, yellowedge grouper, silk snapper, misty grouper, queen snapper, sand tilefish, black snapper, and blackfin snapper).~~ Retain the values for the Deep-Water Complex annual catch limits, optimum yield, and recreational annual catch target. Blueline tilefish has been temporarily removed from the Deepwater Complex via an emergency rule issued under the Magnuson-Stevens Fishery Conservation and Management Act. Retain $ACL=OY=ABC$ and the recreational annual catch target equal to $ACL*(1-PSE)$ or $ACL*0.5$, whichever is greater, for the Deepwater Complex.

~~The National Marine Fisheries Service has temporarily removed blueline tilefish from the Deep-Water Complex and established temporary catch limits for blueline tilefish in the South Atlantic through emergency action. Effective on April 17, 2014, the Deepwater Complex catch limits are 60,371 and 19,313 pounds whole weight for the commercial and recreational sectors, respectively. The temporary measures will be in place for 180 days (through October 14, 2014) and may be extended for 186 additional days.~~

Alternative 2 (Preferred). Remove blueline tilefish from the Deepwater Complex. Revise the Deepwater Complex annual catch limits, optimum yield, and recreational annual catch targets to reflect the removal of blueline tilefish. ~~The Deep-Water Complex total annual catch limit equals 79,684 pounds. The Deep-Water Complex annual catch limits and optimum yield would be 60,371 and 19,313 pounds whole weight for the commercial and recreational sectors, respectively. The Deep-Water Complex annual catch target for the recreational sector would be 9,657 pounds whole weight.~~ **Retain $ACL=OY=ABC$ for the Deepwater Complex.** Retain the recreational annual catch target equal to $ACL*(1-PSE)$ or $ACL*0.5$, whichever is greater for the Deepwater Complex.

COMMITTEE ACTION:

OPTION 1. ACCEPT THE IPT'S SUGGESTED CHANGES TO ALTERNATIVES 1 & 2 UNDER ACTION 2

OPTION 2. MODIFY THE IPT'S PROPOSED WORDING FOR ALTERNATIVES 1 AND 2 UNDER ACTION 1 (COMMITTEE/COUNCIL TO SPECIFY CHANGES) AND APPROVE.

OPTION 3. OTHERS??

The following alternatives are recommended by the IPT and included for the Council's review at their September 2014 meeting.

Alternative 3. Remove blueline tilefish from the Deepwater Complex. Revise the Deepwater Complex annual catch limits, optimum yield, and recreational annual catch targets to reflect the removal of blueline tilefish. **Establish $ACL=OY=95\%ABC$ for the Deepwater Complex.** Retain the recreational annual catch target equal to $ACL*(1-PSE)$ or $ACL*0.5$, whichever is greater for the Deepwater Complex.

Alternative 4. Remove blueline tilefish from the Deepwater Complex. Revise the Deepwater Complex annual catch limits, optimum yield, and recreational annual catch targets to reflect the removal of blueline tilefish. **Establish $ACL=OY=90\%ABC$ for the Deepwater Complex.** Retain the recreational annual catch target equal to $ACL*(1-PSE)$ or $ACL*0.5$, whichever is greater for the Deepwater Complex.

Alternative 5. Remove blueline tilefish from the Deepwater Complex. Revise the Deepwater Complex annual catch limits, optimum yield, and recreational annual catch targets to reflect the removal of blueline tilefish. **Establish $ACL=OY=80\%ABC$ for the Deepwater Complex.** Retain the recreational annual catch target equal to $ACL*(1-PSE)$ or $ACL*0.5$, whichever is greater for the Deepwater Complex.

COMMITTEE ACTION:

OPTION 1. ACCEPT INCLUSION OF ALTERNATIVES 3-5 UNDER ACTION 1

OPTION 2. DO NOT ACCEPT INCLUSION OF ALTERNATIVES 3-5 UNDER ACTION 1

OPTION 3. OTHERS??

Summary of Effects

The values for the Deepwater Complex annual catch limits, optimum yield, and recreational annual catch target are listed below. **Alternatives 2** through **5** assume Amendment 29 is implemented. The actions in Amendment 29 would change the acceptable biological catch (ABC) for silk snapper and yellowedge grouper, which are contained within the Deepwater Complex.

Alternative	Deepwater Complex ACL, OY, and Recreational ACT (lbs whole weight)			
	Total ACL	Commercial ACL	Recreational ACL	Recreational ACT
Alternative 1 (no action)				
--Current: Temporary rule	79,684	60,371	19,313	197,100 ¹
--When temporary rule expires	711,025	376,469	334,556	197,100
--If Amendment 29 implemented	801,619	447,732	353,887	200,577
Alternative 2 (Preferred) (ACL=OY=ABC)	170,278	131,634	38,644	13,134
Alternative 3 (ACL=OY=95%ABC)	161,764	125,052	36,712	12,477
Alternative 4 (ACL=OY=90%ABC)	153,250	118,471	34,780	11,821
Alternative 5 (ACL=OY=80%ABC)	136,222	105,307	30,915	10,507

¹The Deepwater Complex recreational ACTs were not temporarily changed through the emergency rule.

Alternative 1 (No Action) would not change the current species composition of the Deepwater Complex, which includes blueline tilefish. The blueline tilefish portion of Deepwater Complex annual catch limit (ACL) is 89%. Therefore, landings of blueline tilefish have, by far, the greatest influence on triggering accountability measures (AMs) for the Deepwater Complex. **Alternatives 2 (Preferred)** through **5** would remove blueline tilefish from the Deepwater Complex when temporary measures expire or are replaced by measure proposed in Amendment 32. Relative to **Alternative 1 (No Action)**, **Alternatives 2 (Preferred)-5** would be expected to have positive biological effects on the stock because AMs would be triggered when the blueline tilefish ACL is met rather than when the Deepwater Complex ACL is met. Removal of blueline tilefish under **Alternative 2 (Preferred)** would make it less likely that AMs would be triggered because, other than blueline tilefish, species in the Deepwater Complex are not generally targeted and their landings are minor.

Alternatives 3 through **5** would specify lower ACLs for the Deepwater Complex than **Alternatives 1 (No Action)** and **2 (Preferred)** and would likely result in positive biological effects on the stocks in the complex since allowable harvest would be reduced from current levels. **Alternative 5** would impart the greatest biological benefits as the ACL for the Deepwater Complex would be set at 10% below the ABC to account for management uncertainty. Such a buffer would ensure that landings do not go above the ABC thus preventing overfishing. However, AMs would be in place (Actions 5 and 6) to retain landings below the ACL; hence, biological impacts would differ little among the proposed alternatives.

The highest short-term landings and ex-vessel revenues are expected to result from **Alternative 2 (Preferred)**. **Alternatives 3-5** provide for a buffer between the ABC and the ACL, which would result in long-term economic benefits due to a greater likelihood of landings staying below the ACL. However, since the species in the Deepwater Complex (once blueline tilefish is removed) are not typically targeted, annual landings that exceed the ACL are unlikely. By removing blueline tilefish from the Deepwater Complex, **Alternative 2 (Preferred)** reduces the likelihood of an in-season closure and results in long-term economic benefits through higher future landings due to improved stock health.

Changing the species included in the Deepwater Complex is primarily administrative and would be expected to have little direct effects on fishermen and communities. Retaining blueline tilefish in the Deepwater Complex (**Alternative 1, No Action**) could affect fishermen targeting blueline tilefish by removing some flexibility. However, **Preferred Alternative 2** would allow more precise management of blueline tilefish without affecting management of the other deepwater species, which would be expected to result in long-term social benefits due to rebuilding of the blueline tilefish stock.

Action 2. Re-define Maximum Sustainable Yield for Blueline Tilefish

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

MSY for blueline tilefish was established through Amendment 11 to the Snapper Grouper FMP (Amendment 11; SAFMC 1998). At that time, a stock assessment for blueline tilefish had not been conducted to estimate MSY. Therefore, the Council used a “proxy”, or substitute, value for MSY at 30% of the Spawning Potential Ratio (SPR). Now that a stock assessment has been conducted that provides an estimate of MSY, the Council needs to take action to adopt the new value and continue to adopt recommended MSY values as they are obtained from the Southeast Data, Review, and Assessment (SEDAR) process and the Scientific and Statistical Committee (SSC).

	Equation	F_{MSY}	MSY Values (lbs whole weight)
Alternative 1. No Action	Do not change the current definition of MSY for blueline tilefish. Currently, MSY equals the yield produced by F_{MSY} . $F_{30\%SPR}$ is used as the F_{MSY} proxy.	$F_{30\%SPR}=0.356$	not specified
Alternative 2. Preferred	MSY equals the yield produced by F_{MSY} or the F_{MSY} proxy. MSY and F_{MSY} are recommended by the most recent SEDAR/SSC.	0.302	226,500

Summary of Effects

MSY is a reference point used by managers to assess fishery performance over the long term. Defining MSY for blueline tilefish does not alter the current harvest or use of the resource. Specification of this metric merely establishes a benchmark for resource evaluation on which additional management actions would be based, if necessary. MSY in **Alternative 1 (No Action)** is defined as the yield produced by F_{MSY} where $F_{30\%SPR}$ is used as a substitute for F_{MSY} and represents the overfishing level defined in Amendment 11 (SAFMC 1998). In **Alternative 1 (No Action)**, a poundage for MSY is not specified since one was not specified in Amendment 11. **Alternative 2 (Preferred)** would redefine MSY for the blueline tilefish stock based on the recommendation of the SEDAR 32 (2013) Review Panel and the Council’s SSC to equal the

value associated with the yield at F_{MSY} (226,500 lbs ww). The specification of a MSY equation would have beneficial effects on blueline tilefish as it provides a reference point to monitor the long-term performance of the stock.

Since there would be no direct effects on resource harvest or use, there would be no direct effects on fishery participants, associated industries or communities. Direct effects only accrue to actions that alter harvest or other use of the resource. However, **Alternative 2 (Preferred)**, which is recommended in the most recent SEDAR and by the SSC, has a better scientific basis and thus provides a more solid ground for management actions that have economic and social implications.

Action 3. Establish Annual Catch Limits and Optimum Yield for Blueline Tilefish

Alternative 1 (No Action). Do not establish individual annual catch limits and optimum yield for blueline tilefish. Annual catch limits and optimum yield for blueline tilefish are temporarily in place. The National Marine Fisheries Service has temporarily removed blueline tilefish from the Deepwater Complex and established the following annual catch limits for blueline tilefish for the commercial and recreational sectors: total ACL = 224,100 pounds whole weight (lbs ww); commercial ACL = 112,207 lbs ww; and recreational ACL = 111,893 lbs ww. The temporary measures will be in place for 180 days (through October 14, 2014) and may be extended for 186 additional days.

Note: Blueline tilefish is in the Deepwater Complex and there is an annual catch limit for the complex. Action 1 proposes to separate blueline tilefish from the complex. The Deepwater Complex annual catch limit is 711,025 lbs ww and blueline tilefish accounts for 631,341 lbs ww of the annual catch limit. Action 1 proposes to remove blueline tilefish from the complex. If Action 1 is implemented and the temporary annual catch limit expires, there would not be an annual catch limit for blueline tilefish.

Alternative 2. Establish annual catch limits for blueline tilefish. The blueline tilefish ACL = OY = ABC. Specify commercial and recreational annual catch limits for blueline tilefish for 2015, 2016, 2017, and 2018 and beyond. The annual catch limit for 2018 will remain in effect until modified. Annual catch limits in 2016, 2017, and 2018 will not increase automatically in a subsequent year if present year projected catch has exceeded the total annual catch limit. Specify commercial and recreational annual catch limits based on existing sector allocations (50.07% commercial and 49.93% recreational).

Year	Blueline Tilefish ACL (lbs ww)		
	Total	Commercial	Recreational
2015	36,359	18,205	18,154
2016	54,548	27,312	27,236
2017	72,928	36,515	36,413
2018 and beyond until modified	89,769	44,947	44,822

Alternative 3 (Preferred). Establish annual catch limits for blueline tilefish. The blueline tilefish ACL = OY = 98%ABC. Specify commercial and recreational annual catch limits for blueline tilefish for 2015, 2016, 2017, and 2018 and beyond. The annual catch limit for 2018 will remain in effect until modified. Annual catch limits in 2016, 2017, and 2018 will not increase automatically in a subsequent year if present year projected catch has exceeded the total annual catch limit. Specify commercial and recreational annual catch limits based on existing sector allocations (50.07% commercial and 49.93% recreational).

Year	Blueline Tilefish ACL (lbs ww)		
	Total	Commercial	Recreational
2015	35,632	17,841	17,791
2016	53,457	26,766	26,691
2017	71,469	35,785	35,685
2018 and beyond until modified	87,974	44,048	43,925

Alternative 4. Establish annual catch limits for blueline tilefish. The blueline tilefish ACL = OY = 90%ABC. Specify commercial and recreational annual catch limits for blueline tilefish for 2015, 2016, 2017, and 2018 and beyond. The annual catch limit for 2018 will remain in effect until modified. Annual catch limits in 2016, 2017, and 2018 will not increase automatically in a subsequent year if present year projected catch has exceeded the total annual catch limit. Specify commercial and recreational annual catch limits based on existing sector allocations (50.07% commercial and 49.93% recreational).

Year	Blueline Tilefish ACL (lbs ww)		
	Total	Commercial	Recreational
2015	32,723	16,384	16,339
2016	49,093	24,581	24,512
2017	65,635	32,864	32,772
2018 and beyond until modified	80,792	40,453	40,339

COMMITTEE ACTION:

OPTION 1. ACCEPT THE IPT'S SUGGESTED CHANGES TO ALTERNATIVE 1 UNDER ACTION 3

OPTION 2. MODIFY THE IPT'S PROPOSED WORDING FOR ALTERNATIVE 1 UNDER ACTION 2 (COMMITTEE/COUNCIL TO SPECIFY CHANGES) AND APPROVE.

OPTION 3: OTHERS??

Summary of Effects

Prior to April 17, 2014, blueline tilefish was included in the Deepwater Complex. The blueline tilefish portion of the Deepwater Complex ACL was 631,341 pounds whole weight (lbs ww). However, effective April 17, 2014, the National Marine Fisheries Service (NMFS) temporarily removed blueline tilefish from the Deepwater Complex and specified an individual ACL for blueline tilefish. Although NMFS implemented a temporary ACL to reduce overfishing as specified in **Alternative 1 (No Action)**, this alternative would not reduce fishing mortality levels to those necessary to end overfishing on a long-term basis. **Alternatives 2 through 4** would be expected to have positive biological effects on the stock since allowable harvest levels would be reduced to levels that reflect the current status of the stock. **Alternative 4** would have greater positive effects on the blueline tilefish stock compared to **Alternatives 2 and 3**, as **Alternative 4** would establish the lowest catch levels.

Alternative 2, Alternative 3 (Preferred), and Alternative 4 propose more conservative ACLs than **Alternative 1 (No Action)** and could result in short-term economic losses. However, these alternatives would potentially result in long-term economic benefits once the stock is rebuilt through higher landings and ex-vessel revenues for the commercial sector and higher total consumer surplus and net operating revenues over time for the recreational sector. The differences in the range of proposed ACLs among **Alternatives 2, 3 (Preferred), and 4** differ by about 3,600 lbs ww and 9,000 lbs ww for 2015 and for 2018 and beyond, respectively. Therefore, differences in resulting economic impacts among these alternatives are relatively small. However, differences between the proposed alternatives and **Alternative 1 (No Action)** are large. For 2015, the expected annual ex-vessel loss to the commercial sector from **Alternatives 2, 3 (Preferred), and 4**, would be between \$195,000 to \$200,000 (in 2012 U.S. dollars). For the recreational sector, landings in 2015 are expected to decrease by about 95,000 pounds. However, commercial landings of blueline tilefish in 2012 were approximately 294,000 lbs ww (see **Table 1**) while recreational landings were estimated at 89,000 lbs ww with estimates for 2013 projected to be much higher (over 300,000 lbs ww). Therefore, the actual commercial annual ex-vessel revenue losses and recreational consumer surplus, and net operating revenue losses could be three times the amount calculated here if landings are not maintained at or below the ACL. The differences in expected long-term economic benefits are minor among **Alternatives 2, 3 (Preferred), and 4**. **Alternative 1 (No Action)**, however, is expected to result in the smallest long-term economic benefits.

Table 1. Observed blueline tilefish landings (lbs ww) by sector in the South Atlantic, 1974-2012 from SEDAR 32.

Year	Recreational	Commercial	Total
1974	18,519	33,000	51,519
1975	11,112	56,456	67,568
1976	19,560	55,774	75,334
1977	7,216	30,995	38,211
1978	9,547	82,713	92,260
1979	2,004	59,799	61,803
1980	19,049	118,264	137,313
1981	7,256	403,605	410,861

1982	15,934	1,180,617	1,196,551
1983	17,455	656,690	674,145
1984	13,602	506,472	520,074
1985	2,596	392,055	394,651
1986	2,179	228,678	230,857
1987	13,982	145,070	159,052
1988	1,200	107,083	108,283
1989	1,200	112,612	113,812
1990	757	175,125	175,882
1991	802	194,854	195,656
1992	2,782	279,529	282,311
1993	13,509	200,204	213,713
1994	146	188,238	188,384
1995	26,466	170,881	197,347
1996	15,306	148,246	163,552
1997	78,196	219,988	298,184
1998	259	107,654	107,913
1999	3,718	116,243	119,961
2000	419	112,433	112,852
2001	23,836	127,824	151,660
2002	3,352	265,558	268,910
2003	36,122	119,079	155,201
2004	12,813	76,709	89,522
2005	32,349	83,936	116,285
2006	246,511	173,002	419,513
2007	422,938	85,103	508,041
2008	332,915	412,178	745,093
2009	137,860	474,844	612,704
2010	76,059	438,049	514,108
2011	51,779	141,502	193,281
2012	88,803	370,729	459,532

Blueline tilefish is an important component to the commercial species landed in Wanchese, North Carolina, in addition to potentially being an important recreational species in communities such as Key West, Florida (see **Section 3.3.3** in amendment). Changes to the ACL and access to the resource could affect individuals and businesses in these communities. However, in Wanchese, the overall importance to the community is not as great as that of other species. The importance to specific vessels is unknown but the primary effect would likely be vessels substituting blueline tilefish for other species, if available, when access to the blueline tilefish resource is limited or prohibited. In general, the higher the ACL, the greater the short-term social and economic benefits that would be expected to accrue, assuming long-term recovery is met. Adhering to stock recovery is assumed to result in net long-term positive social and economic benefits. Additionally, adjustments in an ACL based on updated information from a stock assessment would be the most beneficial in the long term to fishermen and communities

because ACLs would be based on the current conditions, even if the updated information indicates that a lower ACL is appropriate to sustain the stock.

Action 4. Establish a Recreational Annual Catch Target for Blueline Tilefish

Alternative 1 (No Action). Do not establish an individual annual catch target for blueline tilefish for the recreational sector.

Note: Blueline tilefish is in the Deepwater Complex and there is an annual catch target for the complex. Action 1 proposes to remove blueline tilefish from the complex. If Action 1 is implemented and the temporary annual catch target expires, there would not be an annual catch target for blueline tilefish.

Alternative 2 (Preferred). Establish an annual catch target for blueline tilefish for the recreational sector that equals the recreational $ACL \cdot (1 - PSE)$ or $ACL \cdot 0.5$, whichever is greater.

	Blueline Tilefish ACT (lbs ww)		
Year	Action 3; Preferred Alternative 2 (ACL=ABC)	Action 3; Alternative 3 (ACL=98%ABC)	Action 3; Alternative 4 (ACL=90%ABC)
2015	11,368	11,141	10,231
2016	17,055	16,714	15,350
2017	22,802	22,346	20,522
2018 and beyond until modified	28,067	27,506	25,261

Note: Calculations use the most recent 5 years of recreational landings to obtain the PSE.

	Blueline Tilefish PSE
Year	
2009	35.6
2010	27.8
2011	43.6
2012	27.8
2013	52.1
Average	37.38

Alternative 3. Establish an annual catch target for blueline tilefish for the recreational sector that equals 85% of the recreational annual catch limit.

Year	Blueline Tilefish ACT (lbs ww)		
	Action 3; Alternative 2 (ACL=ABC)	Action 3; Alternative 3 (ACL=98%ABC)	Action 3; Alternative 4 (ACL=90%ABC)
2015	15,431	15,122	13,888
2016	23,150	22,687	20,835
2017	30,951	30,332	27,856
2018 and beyond until modified	38,098	37,336	34,289

Note: Blueline tilefish is in the Deepwater Complex and there is an annual catch limit for the complex. Action 1 proposes to separate blueline tilefish from the complex.

COMMITTEE ACTION:

OPTION 1. ACCEPT THE IPT'S SUGGESTED CHANGES TO ALTERNATIVES 1-3 UNDER ACTION 4

OPTION 2. MODIFY THE IPT'S PROPOSED WORDING FOR ALTERNATIVES 1-3 UNDER ACTION 4 (COMMITTEE/COUNCIL TO SPECIFY CHANGES) AND APPROVE.

OPTION 3. OTHERS??

Summary of Effects

If the recreational sector were managed by comparing landings to the annual catch target (ACT), then **Alternative 2 (Preferred)** would have the greatest biological benefit of the three alternatives considered since the ACT is lower than that under **Alternative 3**. By using the proportional standard error (PSE) in **Preferred Alternative 2**, more precaution is taken with increasing variability and uncertainty in the landings data since the lower the PSE value, the more reliable the landings data. If AMs were triggered when landings reached or were projected to reach the ACT, the need to close or implement post-season AMs that are meant to correct for an ACL overage would be diminished. However, at present, ACTs are used as a management reference point to track performance of the management measures imposed on the recreational sector. No AMs are triggered if recreational landings reach the recreational ACT. Hence, biological effects are neutral for all alternatives considered, including **Alternative 1 (No Action)**.

If ACTs were used to trigger control measures, they would serve as “cushions” to effectively limit harvests and thus contribute to rebuilding of the stock. Long-term economic benefits would then ensue from a healthy stock. As long as long-term economic benefits outweigh short-term

costs, the fishing industry, and society in general, would be better off. If the ACT were used to trigger AMs for the recreational sector, economic effects would be similar in nature to those under **Action 3**, though not necessarily in magnitude. Under that scenario, **Alternative 1 (No Action)** would have the same economic effects as any of the ACL alternatives under **Action 3**.

Because the ACT is used for monitoring only, it is expected that the social effects of **Alternative 1 (No Action)**, **Preferred Alternative 2**, and **Alternative 3** would be the same.

Action 5. Specify Accountability Measures for Blueline Tilefish for the Commercial Sector

Alternative 1 (No Action). Accountability measures are temporarily in place for blueline tilefish for the commercial sector. ~~Do not specify accountability measures for blueline tilefish for the commercial sector.~~ The National Marine Fisheries Service has temporarily removed blueline tilefish from the Deepwater Complex and established an in-season accountability measure for blueline tilefish for the commercial sector. The accountability measure is as follows: If commercial landings for blueline tilefish reach or are projected to reach the commercial annual catch limit, National Marine Fisheries Service will file a notification with the Office of the Federal Register to close the commercial sector for blueline tilefish for the remainder of the fishing year. The temporary measures will be in place for 180 days (through October 14, 2014) and may be extended for 186 additional days.

Accountability measures are in place for the Deepwater Complex for the commercial sector. The accountability measures are as follows: **In-season:** If commercial landings for the Deepwater Complex, as estimated by the Science and Research Director, reach or are projected to reach the commercial annual catch limit, the Assistant Administrator for Fisheries will file a notification with the Office of the Federal Register to close the commercial sector for this complex for the remainder of the fishing year. **Post-season:** If commercial landings exceed the ACL and at least one species overfished, reduce the ACL in following year by overage amount.

Note: Blueline tilefish is in the Deepwater Complex and there is an accountability measure for the commercial sector for the complex. Action 1 proposes to remove blueline tilefish from the complex. If Action 1 is implemented and the temporary accountability measure for the commercial sector expires, there would not be an accountability measure for blueline tilefish.

Preferred Alternative 2. Specify the following in-season and post-season accountability measures for blueline tilefish for the commercial sector: If blueline tilefish commercial landings as estimated by the Science and Research Director reach or are projected to reach the commercial ACL annual catch limit, the Regional Administrator shall publish a notice to close the commercial sector for the remainder of the fishing year. On and after the effective date of such a notification, all sale or purchase is prohibited and harvest or possession of this species in or from the South Atlantic EEZ exclusive economic zone is limited to the bag and possession limit. This bag and possession limit applies in the South Atlantic on board a vessel for which a valid Federal commercial or charter vessel/headboat permit for South Atlantic snapper grouper has been issued as appropriate, without regard to where such species were harvested, i.e., in state or Federal waters. Additionally,

Sub-alternative 2a. If the commercial ACL annual catch limit is exceeded, the Regional Administrator shall publish a notice to reduce the commercial ACL annual catch limit in the following fishing year by the amount of the commercial overage, only if the species* is overfished.

Sub-alternative 2b. If the commercial ACL annual catch limit is exceeded, the Regional Administrator shall publish a notice to reduce the commercial ACL annual catch limit in the following fishing year by the amount of the commercial overage, only if the total

ACL annual catch limit (commercial ACL annual catch limit and recreational ACL annual catch limit) is exceeded.

Preferred Sub-alternative 2c. If the commercial ACL annual catch limit is exceeded, the Regional Administrator shall publish a notice to reduce the commercial ACL annual catch limit in the following fishing year by the amount of the commercial overage, only if the species* is overfished and the total ACL annual catch limit (commercial ACL annual catch limit and recreational ACL annual catch limit) is exceeded.

*For the Deepwater Complex, at least one of the species would need to be overfished.

COMMITTEE ACTION:

OPTION 1. ACCEPT THE IPT'S SUGGESTED CHANGES TO ALTERNATIVES 1 & 2 UNDER ACTION 5

OPTION 2. MODIFY THE IPT'S PROPOSED WORDING FOR ALTERNATIVES 1 & 2 UNDER ACTION 5 (COMMITTEE/COUNCIL TO SPECIFY CHANGES) AND APPROVE.

OPTION 3: OTHERS??

Summary of Effects

Alternative 1 (No Action) allows the Regional Administrator to close the commercial sector in-season if the blueline tilefish ACL is met or projected to be met. However, this measure is only temporarily in place. An in-season closure AM is currently in place for the Deepwater Complex. After the temporary rule expires, **Alternative 2 (Preferred)** would prohibit commercial harvest of blueline tilefish when the ACL is projected to be met. **Alternative 2 (Preferred)** would also continue the in-season closure for the Deepwater Complex when the commercial ACL is met or is projected to be met. Thus, **Alternative 2 (Preferred)** would be expected to have positive beneficial effects when compared to **Alternative 1 (No Action)**. The sub-alternatives for **Alternative 2 (Preferred)** would specify commercial payback provisions for blueline tilefish and the Deepwater Complex, and enhance the biological benefits provided by an in-season closure. Currently, there is no mechanism to correct an ACL overage if one were to occur. Therefore, biological benefits would be realized under any of the three sub-alternatives considered when compared to **Alternative 1 (No Action)**. **Sub-alternative 2a** is associated with only one criterion for triggering implementation of a payback of the ACL, and it would ensure that paybacks are triggered when they are most needed, i.e., when the species is overfished. However, if a species is not overfished and the commercial ACL is exceeded, no payback would be required. Thus, **Sub-alternative 2a** would only result in biological benefits if the species is overfished. **Sub-alternative 2b** is likely to have similar or greater beneficial biological impacts than **Sub-alternative 2a**, as the AM would be triggered when both the recreational and commercial ACLs have been exceeded regardless of overfished status. **Sub-alternative 2c**

(Preferred) would be triggered the least frequently of the sub-alternatives under consideration, because the payback would only be required if two criteria are met: (1) blueline tilefish is overfished, and (2) the total ACL has been exceeded. Since **Sub-alternative 2c (Preferred)** would implement a commercial payback under infrequently encountered simultaneous events it would have fewer biological benefits than **Sub-alternatives 2a** and **2b**.

All options under **Alternative 2** would result in short-term ex-vessel revenue losses to the commercial sector compared to recent landings. Over the long-term, however, these alternatives would provide a beneficial economic scenario for the commercial sector by addressing issues related to overfishing of the stock. With a relatively stable stock over time, future harvest would increase or at least would be stable. This stability could benefit the commercial sector financially by paving the way for more confident business planning with more predictable landings that could result in improvements in reliability of landings to dealers and their markets.

In general, the most beneficial in the long term for the stock and for sustainable fishing opportunities is a combination of an in-season closure and a payback provision. However, some flexibility in how these AMs are triggered, such as conditions of the stock being overfished or the total ACL being exceeded, can help to mitigate the negative short-term impacts on fishermen and associated businesses and communities. **Sub-alternatives 2a, 2b, and 2c (Preferred)** would provide some flexibility and specifics for triggering the AMs. **Preferred Sub-alternative 2c** would provide the most flexibility for triggering the payback AM, in that the most critical conditions must be met before the payback is triggered, and would be expected to be most beneficial to commercial fishermen in that it would be less likely that a payback is required for an overage. Additionally, **Preferred Sub-alternative 2c** would be more consistent with AMs implemented for other species such as king mackerel and Spanish mackerel.

Action 6. Specify Accountability Measures for Blueline Tilefish and the Deepwater Complex for the Recreational Sector

Alternative 1 (No Action). Accountability measures are temporarily in place for blueline tilefish for the recreational sector. ~~Do not specify accountability measures for blueline tilefish for the recreational sector.~~ The National Marine Fisheries Service has temporarily removed blueline tilefish from the Deepwater Complex and established an in-season accountability measure for blueline tilefish for the recreational sector. The accountability measure is as follows: If recreational landings for blueline tilefish reach or are projected to reach the recreational annual catch limit, National Marine Fisheries Service will file a notification with the Office of the Federal Register to close the recreational sector for blueline tilefish for the remainder of the fishing year. The temporary measures will be in place for 180 days (through October 14, 2014) and may be extended for 186 additional days.

Accountability measures are in place for the Deepwater Complex for the recreational sector. The accountability measures are as follows: **In-season:** none. **Post-season:** If recreational landings for the Deepwater Complex exceed the recreational annual catch limit then during the following fishing year, recreational landings will be monitored for a persistence in increased landings and, if necessary, National Marine Fisheries Service will reduce the length of the following recreational fishing season by the amount necessary to ensure recreational landings do not exceed the recreational annual catch limit in the following fishing year.

Note: Blueline tilefish is in the Deepwater Complex and there is an accountability measure for the recreational sector for the complex. Action 1 proposes to ~~separate remove~~ blueline tilefish from the complex. If Action 1 is implemented and the temporary accountability measures for the recreational sector expire, there would not be accountability measures for blueline tilefish.

Preferred Alternative 2. Specify the following post-season accountability measures for blueline tilefish and the Deepwater Complex for the recreational sector: If recreational landings, as estimated by the Science and Research Director, exceed the recreational ~~ACL annual catch limit~~, then during the following fishing year, recreational landings will be monitored for a persistence in increased landings.

Sub-alternative 2a. If necessary, the Regional Administrator shall publish a notice to reduce the length of fishing season and the recreational ~~ACL annual catch limit~~ in the following fishing year by the amount of the recreational overage, only if the species* is overfished. The length of the recreational season and recreational ~~ACL annual catch limit~~ will not be reduced if the Regional Administrator determines, using the best scientific information available, that a reduction is unnecessary.

Sub-alternative 2b. If necessary, the Regional Administrator shall publish a notice to reduce the length of fishing season and the recreational ~~ACL annual catch limit~~ in the following fishing year by the amount of the recreational overage, only if the total ~~ACL annual catch limit~~ (commercial ~~ACL annual catch limit~~ and recreational ~~ACL annual catch limit~~) is exceeded. The length of the recreational season and recreational ACL will not be reduced if the Regional Administrator determines, using the best scientific information available, that a reduction is unnecessary.

Preferred Sub-alternative 2c. If necessary, the Regional Administrator shall publish a notice to reduce the length of fishing season and the recreational ACL annual catch limit in the following fishing year by the amount of the recreational overage, only if the species* is overfished and the total ACL annual catch limit (commercial ACL annual catch limit and recreational ACL annual catch limit) is exceeded. The length of the recreational season and recreational ACL will not be reduced if the Regional Administrator determines, using the best scientific information available, that a reduction is unnecessary.

Alternative 3. Specify the following in-season accountability measures for blueline tilefish and the Deepwater Complex for the recreational sector: If recreational landings for blueline tilefish and the Deepwater Complex reach or are projected to reach the recreational annual catch limit, National Marine Fisheries Service will file a notification with the Office of the Federal Register to close the recreational sector for blueline tilefish for the remainder of the fishing year.

Alternative 4 (Preferred). If recreational landings reach or are projected to reach the recreational annual catch limit for blueline tilefish and the Deepwater Complex, National Marine Fisheries Service will file a notification with the Office of the Federal Register to close the recreational sector for the remainder of the fishing year, unless, using the best scientific information available, the Regional Administrator determines that a closure is unnecessary.

Sub-alternative 4a. If the species* is overfished.

Sub-alternative 4b (Preferred). Regardless of stock status.

*For the Deepwater Complex, at least one of the species would need to be overfished.

COMMITTEE ACTION:

OPTION 1. ACCEPT THE IPT'S SUGGESTED CHANGES TO ALTERNATIVES UNDER ACTION 6

OPTION 2. MODIFY THE IPT'S PROPOSED WORDING FOR ALTERNATIVES UNDER ACTION 6 (COMMITTEE/COUNCIL TO SPECIFY CHANGES) AND APPROVE.

OPTION 3: OTHERS??

Summary of Effects

Alternative 4 (Preferred) and **Sub-alternative 4b (Preferred)** would allow for an in-season recreational closure of blueline tilefish and the Deepwater Complex, regardless of stock status. Thus, **Alternative 4 (Preferred)** and **Sub-alternative 4b (Preferred)** would provide positive biological benefits for blueline tilefish and the Deepwater Complex relative to **Alternative 1 (No Action)**. **Sub-alternatives 2a, 2b, and 2c (Preferred)** would enhance the biological benefits provided by **Alternative 4 (Preferred)** and **Sub-alternative 4b (Preferred)** by providing a payback provision if the recreational ACL is exceeded. **Sub-alternatives 2a, 2b, and 2c**

(Preferred) would maintain the ability of the Regional Administrator to interpret landings data to determine whether a payback is needed. These sub-alternatives would all allow the payback to take the form of a recreational ACL reduction and a season length reduction, compared to **Alternative 1 (No Action)**, which is a temporary in-season closure if landings are projected to reach the ACL for blueline tilefish and the Deepwater Complex.

Sub-alternative 2a would require a payback of a recreational overage and a reduction in the length of the season but only if the species is overfished. This scenario could lead to negative biological impacts, especially if the recreational ACL is exceeded repeatedly without an overfished determination. **Sub-alternative 2b** require a reduction in the length of the fishing season and the recreational ACL if the total ACL (commercial and recreational ACL combined) is exceeded. It is expected that the AM under **Sub-alternative 2b** would be triggered more frequently and have a greater biological benefit than **Sub-alternative 2a**. **Sub-alternative 2c (Preferred)** differs from **Sub-alternative 2b** in that the ACL payback and reduction in the length of the season would only take place if the species is overfished. In the case of the Deepwater Complex, at least one species within the Complex would need to be overfished. This AM is the least likely to be triggered considering the infrequently encountered scenario of a total ACL being exceeded and a species being overfished in the same fishing year. Under **Sub-alternative 2c (Preferred)**, no action would be taken to correct for a recreational ACL overage unless both of those criteria are met. Therefore, **Sub-alternative 2c (Preferred)** may be the least biologically beneficial compared to the other **Alternative 2** sub-alternatives.

Alternatives 3 and 4 (Preferred) would implement in-season measures to prevent the ACL from being exceeded thus preventing the need for implementation of a post season AM specified under **Alternative 2**. Biologically, it is preferable to prevent overexploitation of a resource rather than correcting for it after overharvest has occurred. **Alternatives 3 and 4 (Preferred)** may not be practicable by themselves; however, for species with extremely small recreational ACLs, such as blueline tilefish. For this reason, the most biologically beneficial option would be to implement a system of recreational AMs that combines **Alternatives 2 (Preferred)** and **3 or 4 (Preferred)**. The difference between **Sub-alternatives 4a and 4b (Preferred)** is that the former would only require an in-season closure if a species is overfished whereas the latter would require an in-season closure regardless of stock status. As mentioned previously, for the Deepwater Complex, at least one species within the Complex would need to be overfished. **Sub-alternative 4b (Preferred)** is the biologically preferable sub-alternative under **Alternative 4 (Preferred)**. However, under **Alternative 4 (Preferred)**, the Regional Administrator would have the option to not implement an in-season closure for a species that is not overfished, if the best scientific information indicates a closure is not necessary. In that scenario, the biological benefits of **Sub-alternative 4b (Preferred)** may be equal to those under **Sub-alternative 4a**.

Under **Alternative 1 (No Action)**, an in-season closure is temporarily in place for the blueline tilefish recreational sector. When the temporary rule expires, there will be no AM for blueline tilefish. The recreational AM for the Deepwater Complex is to reduce the length of the following fishing season if the ACL is exceeded. **Alternative 1 (No Action)** would not economically benefit the blueline tilefish recreational sector in the long-term because it would not help to prevent overfishing. Overfishing leads to long-term economic losses in terms of consumer surplus and revenues for headboat and charter operations due to decreases in available

harvest as a result of decreased stock health. **Alternative 3** and **Alternative 4 (Preferred)** would prohibit harvest of blueline tilefish or the Deepwater Complex when the recreational ACL is projected to be met. **Sub-alternatives 2a, 2b, and 2c (Preferred)** would enhance the biological benefits provided by **Alternative 4 (Preferred)** and **Sub-alternative 4b (Preferred)** by providing a payback provision if the recreational ACL is exceeded. Thus, the combined effects of an in-season closure and payback provision under **Alternatives 2 (Preferred)-4 (Preferred)** are more restrictive than **Alternative 1 (No Action)** and provide a beneficial economic outcome for the recreational sector by addressing issues related to overfishing of the stock but allowing for greater access to the resource than under **Alternative 1 (No Action)**.

For the recreational sector, **Alternative 1 (No Action)** would have minimal social effects but also would not establish necessary AMs for blueline tilefish and the Deepwater Complex, which could have negative social effects if the long-term health of the stock or complex is affected. Establishment of a payback provision for the recreational sector for stocks without an in-season AM under **Preferred Alternative 2** could increase the likelihood that an overage of the recreational ACL would reduce fishing opportunities in the following year. However **Sub-alternatives 2a, 2b, and Preferred 2c** provide some flexibility in how a post-season payback would be triggered, with **Preferred Sub-alternative 2c** being the least likely to trigger a payback and affecting recreational fishing opportunities in the subsequent year for both the Deepwater Complex and for blueline tilefish. The in-season AMs proposed under **Alternative 3** and **Alternative 4 (Preferred)** could have negative effects on recreational fishing opportunities and for-hire businesses because there has not been an in-season recreational AM in place for blueline tilefish or the Deepwater Complex. However, the in-season closure would likely help prevent the frequency of paybacks, along with offering additional protection for the resource. **Preferred Alternative 4** would provide flexibility for when the in-season AM is triggered if information is available that indicates that the closure is not necessary, which could help reduce the risks an in-season closure. **Preferred Sub-alternative 4b** would provide additional flexibility and is expected to further reduce the risk of an in-season closure, more so than **Sub-alternative 4a**.

Action 7. Establish Trip Limit for Blueline Tilefish for the Commercial Sector

Alternative 1 (No Action). Do not establish a trip limit for blueline tilefish for the commercial sector.

Alternative 2. Establish a commercial trip limit for blueline tilefish of 100 lbs whole gutted weight (lbs gw).

Alternative 3. Establish a commercial trip limit for blueline tilefish of 200 lbs whole gutted weight (lbs gw).

Alternative 4. Establish a commercial trip limit for blueline tilefish of 300 lbs whole gutted weight (lbs gw).

At the June 2014 meeting, the Council approved a motion to add an alternative that would consider trip limits of 100, 200 and 300 pounds. However, the Council did not specify whether the trip limit would be in whole weight or gutted weight. Council members have since requested that the trip limits be specified in gutted weight.

COMMITTEE ACTIONS:

OPTION 1. ACCEPT THE IPT'S SUGGESTED ALTERNATIVES 2-4 UNDER ACTION 7 AND SPECIFY GUTTED WEIGHT

OPTION 2. MODIFY THE IPT'S SUGGESTED ALTERNATIVES 2-4 UNDER ACTION 7 (COMMITTEE/COUNCIL TO SPECIFY CHANGES) AND APPROVE.

OPTION 3. SELECT ALTERNATIVE X AS PREFERRED

OPTION 4. OTHERS??

Summary of Effects

The biological effects of proposed **Alternatives 2** through **4** would be expected to be neutral compared to **Alternative 1 (No Action)**, because ACLs and AMs are in place to cap harvest, and trigger corrective action if ACLs are exceeded. Alternatives with larger trip limits could present a greater biological risk to blueline tilefish in terms of exceeding the ACL since the rate of harvest would be greater. However, improvements have been made to the quota monitoring system, and the Council has approved a Dealer Reporting Amendment (effective August 7, 2014), which should enhance data reporting. Larger trip limits could also result in earlier closures of blueline tilefish. Early closures can lead to regulatory discards and release mortality for blueline tilefish is 100% thus resulting in negative biological impacts to the stock. Similarly

smaller trip limits could increase bycatch if a trip is not ended and fishermen continue to target co-occurring species when the blueline tilefish trip limit is met. Therefore, little difference in the biological effects of the trip limit alternatives is expected.

In general, commercial trip limits may help slow the rate of harvest, lengthen a season, and prevent the ACL from being exceeded. However, trip limits that are too low may make fishing trips inefficient and too costly if fishing grounds are too far away, which could affect business decisions and fishing behavior for commercial fishermen. The costs and benefits to fishermen when considering commercial trip limits depend on if a longer season with a consistent supply of blueline tilefish is more important than maximizing efficiency on fishing trips, even if the season is shorter. The use of longlines has steadily increased since 2007, peaking in 2011 at approximately 81%. Users of longline gear would likely suffer the greatest negative economic effects, as a group, from lower trip limits since this type of gear is more capable of larger landings per trip than handline gear.

These results indicate that the lower trip limits imply a longer season while the higher trip limits imply a shorter season. As mentioned above, the lower trip limit could indicate lower profits and, for some, the inability to make a trip at all. A higher trip limit would indicate the opposite. **Table 2** shows the usage of handline versus longline gear. The data indicate a steady increase in the use of longline over handline since 2007, peaking in 2011 at approximately 81%.

Table 2. Blueline Tilefish Landings by Gear Type, 2002-2011.

Year	Handline	Longline	Other	Total	% Handline	% Longline
2002	140,673	124,815	70	265,558	52.97%	47.00%
2003	78,996	34,954	5,129	119,079	66.34%	29.35%
2004	42,415	27,003	7,291	76,709	55.29%	35.20%
2005	59,083	18,364	6,489	83,936	70.39%	21.88%
2006	110,545	47,358	15,099	173,002	63.90%	27.37%
2007	68,717	6,904	9,482	85,103	80.75%	8.11%
2008	210,865	186,846	14,467	412,178	51.16%	45.33%
2009	260,283	199,873	14,688	474,844	54.81%	42.09%
2010	137,744	291,514	88,791	518,049	26.59%	56.27%
2011	19,904	114,343	7,255	141,502	14.07%	80.81%

Source: SEDAR 32 (SAFMC, 2013).

Overall, it would be expected that fishermen and crew working on vessels in Wanchese, North Carolina, would be the most affected by the proposed trip limits in **Alternative 2**. **Alternative 1 (No Action)** would be most beneficial for vessels that wish to maximize trip efficiency and have other species to target when blueline tilefish is not available. However, with the proposed commercial ACL in **Action 3**, it is likely that the commercial season will be much shorter than in recent years with no trip limit in place (**Table 3**). For fishing businesses that would benefit more from a higher trip limit than a longer season, **Alternative 4** would be the most beneficial, followed by **Alternative 3** and **Alternative 2**. Any changes to fishing trips

could affect captains, crew, fish houses and dealers, and businesses associated with blueline tilefish harvest.

Table 3. The expected closure dates for the commercial sector under various trip limits for the ACL alternatives.

ACL Alternative	Commercial ACL	Trip Limit	Days Fishing	Predicted End Date
2 ACL = ABC	16,254 lbs gw	No Limit	22	22-Jan
		100 lb gw	161	10-Jun
		200 lb gw	118	28-Apr
		300 lb gw	102	12-Apr
3 (Preferred) ACL = 98% ABC	15,929 lbs gw	No Limit	20	20-Jan
		100 lb gw	156	5-Jun
		200 lb gw	116	26-Apr
		300 lb gw	101	11-Apr
4 ACL = 90% ABC	14,629 lbs gw	No Limit	13	13-Jan
		100 lb gw	149	29-May
		200 lb gw	108	18-Apr
		300 lb gw	86	27-Mar

The trip limits proposed in **Alternatives 2-4** would likely prohibit a vessel from making a trip only to target blueline tilefish, and would require multi-species trips. This could change fishing behavior for fishermen harvesting blueline tilefish, and could affect associated businesses and communities such as Wanchese, North Carolina, and possibly Murrells Inlet and Little River in South Carolina. However, **Alternatives 2-4** could also be considered a bycatch allowance and allow fishermen to keep some blueline tilefish caught on trips targeting other species, which could improve profitability and efficiency of the trip. The negative effects of trip limits on fishermen using longline gear is expected to be more severe than on fishermen using hook and line, due to time and effort required for the longline sector.

Action 8. Adjust the Bag Limit for Blueline Tilefish for the Recreational Sector

Alternative 1 (No Action). ~~Retain the current blueline tilefish aggregate grouper bag limit of 3/person/day.~~ Retain blueline tilefish in the aggregate grouper bag limit of 3/person/day. The aggregate group contains the following species: gag, black grouper, snowy grouper, misty grouper, red grouper, scamp, yellowedge grouper, yellowfin grouper, yellowmouth grouper, blueline tilefish, golden tilefish, sand tilefish, coney, graysby, red hind, and rock hind.

Alternative 2. Remove blueline tilefish from the aggregate grouper bag limit.

Alternative 3. Establish a bag limit of blueline tilefish of 1/person/day.

Alternative 4. Establish a vessel limit of blueline tilefish of 1/vessel/day.

Alternative 5. Establish a vessel limit of blueline tilefish of 1/vessel/day May through August and no retention during the ~~rest-remainder~~ of the year.

Alternative 6. Establish a vessel limit of blueline tilefish of 1/vessel/day year during May and June with no retention during the remainder of the year.

Alternative 7. Establish a vessel limit of blueline tilefish of 1/vessel/day during May with no retention during the remainder of the year.

Alternative 8. Establish a vessel limit of blueline tilefish of 1/vessel/day during June with no retention during the remainder of the year.

COMMITTEE ACTIONS:

OPTION 1. ACCEPT THE IPT'S SUGGESTED EDITS TO ALTERNATIVES 1 & 5 UNDER ACTION 8.

OPTION 2. MODIFY THE IPT'S SUGGESTED CHANGES TO ALTERNATIVES 1 & 5 UNDER ACTION 8 (COMMITTEE/COUNCIL TO SPECIFY CHANGES) AND APPROVE.

OPTION 3. SELECT ALTERNATIVE X AS A PREFERRED ALTERNATIVE

OPTION 4. OTHERS??

Summary of Effects

The biological effects of the **Alternatives 3 through 8** are expected to be neutral compared with **Alternative 1 (No Action)**, because ACLs and AMs are in place to cap harvest, and take action if ACLs are exceeded. However, alternatives with larger bag limits could present a greater biological risk to blueline tilefish in terms of exceeding the ACL since the rate of harvest would be greater. For example, **Alternative 3** would implement a bag limit of one per person per day and the expected closure date could be as early as January. If this alternative is implemented, fishery managers would not be aware that the ACL was reached until later in the fishing season. In this scenario, it is possible that the recreational ACL would be exceeded, unless meeting the ACL was anticipated through landings projections, and NMFS implemented an in-season closure. If less conservative bag limits increase the probability of an overage of the ACL, then more conservative bag limit alternatives (**Alternatives 6 through 8**) would have greater beneficial effects to the resource than less conservative alternatives (**Alternatives 3 through 5**).

The bag limit analysis results in **Table 4** show that **Alternative 1 (No Action)** could result in a January 5th closure date with a recreational fishing season of four days. The remaining alternatives (other than **Alternative 2**) have projected season lengths of 25 days (**Alternative 3**), approximately 30 days (**Alternatives 7 and 8**), 61 days (**Alternative 6**), 123 days (**Alternative 5**), and 197 days (**Alternative 4**).

Table 4. The expected closure dates for the recreational sector under various bag limits for the preferred ACL alternative based on 2013 data.

	Projected Closure date	Projected Days Open	Projected Landings (ww)	Percentage of ACL
Status quo (Alt 1)	Jan – 5	4	17,791	100%
1/person/day (Alt 3)	Jan – 26	25	17,791	100%
1/vessel/day (Alt 4)	Jul – 15	195	17,791	100%
1/vessel/day from May – Aug (Alt 5)	Sep – 1	123	14,397	80.9%
1/vessel/day from May –Jun (Alt 6)	Jul – 1	61	579	3.3%
1/vessel/day in May only (Alt 7)	Jun – 1	31	293	1.6%
1/vessel/day in June only (Alt 8)	Jul – 1	30	287	1.6%

In 2013, very high landings were reported in Wave 1 (January-February), which may not be representative of future landings (**Table 5**). A sensitivity analysis was conducted using the 12 most recent months of data available (**Table 6**). This included MRIP landings from the ACL datasets for Waves 1 and 2 from 2014, and all remaining data were from 2013. The sensitivity analysis lengthened the season length for **Alternatives 1, 3, and 4**, but had no effect on the other alternatives because they would be closed during Wave 1. In comparison to the status quo **Alternative 1**, using data in the sensitivity analysis would extend the season length by 100 days

under **Alternative 3** (1 fish per person per day) and 210 days under **Alternative 4** (1 fish per vessel per day).

Table 5. MRIP landings from the ACL database over time.

Year	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6
2014	4,548	18,089	NA	NA	NA	NA
2013	178,302	5,905	4,366	108,849	4,027	43,024
2012	388	3,300	33,190	27,886	19,609	7,711
2011	2,797	326	6,195	26,492	9,084	166
2010	11,453	12,596	30,297	6,293	6,570	3,675

Season lengths would be extended based on a sensitivity analysis that substitutes 2014 data for data from Waves 1 and 2 in 2013 (**Table 6**). **Alternative 4**, which proposes 1 fish per vessel per day is expected to result in the greatest number of days available for recreational fishermen to access the resource. **Alternative 4** is also expected to result in the greatest capture of the recreational ACL. Therefore, **Alternative 4** is expected to result in the largest short-term economic benefits to the recreational sector. **Alternatives 6, 7, and 8** offer the least amount the ACL to be taken (3.3%, 1.6%, and 1.6%, respectively). These last three alternatives are among the least economically beneficial for the recreational fishery after **Alternative 2**.

Table 6. Estimated projected closures and landings using 2014 data for MRIP waves 1 and 2, and 2013 data for all other months/waves.

	Projected Closure date	Projected Days Open	Projected Landings (ww)	Percentage of ACL
Status quo (Alt 1)	Apr – 4	93	17,791	100%
1/person/day (Alt 3)	Jul – 13	193	17,791	100%
1/vessel/day (Alt 4)	Oct – 31	303	17,791	100%
1/vessel/day from May – Aug (Alt 5)	Sep – 1	123	14,397	79.3%
1/vessel/day from May –Jun (Alt 6)	Jul – 1	61	579	3.3%
1/vessel/day in May only (Alt 7)	Jun – 1	31	293	1.6%
1/vessel/day in June only (Alt 8)	Jul – 1	30	287	1.6%

In general, the social effects of modifying the recreational bag or vessel limit would be associated with the biological costs of each alternative, as well as the effects on current recreational fishing opportunities. The aggregate bag limit (**Alternative 1 (No Action)**) would not contribute to directed management of blueline tilefish. Additionally, **Alternative 1 (No Action)** could result in the shortest projected season (4 days). **Alternatives 3-8** would limit recreational fishing opportunities for blueline tilefish but would also be expected to contribute to successful rebuilding of the stock. Establishing a recreational season for blueline tilefish under **Alternatives 5-8** could contribute to rebuilding the stock and reducing discards of blueline tilefish by confining recreational landings in a small time period each year.

The following analysis was conducted by Council staff to complement the analyses above and to aid the Council in discussions and selection of a preferred alternative.

The analysis included data from 2010, 2012, 2013, and waves 1-3 of 2014. Catch was examined on a trip by trip basis and bag limits of 1/person or 1/vessel were imposed by year and wave/month. Once the landings were adjusted for the proposed bag limits, the MRIP provided weights and effort expansion factors were applied to estimate landings of blueline tilefish (in pounds whole weight) by wave or month for the entire South Atlantic region. Headboat data from the SAFE report by wave and month were also included in the analysis. Since trip level information was unavailable for the headboat dataset, the landings of the headboat fleet under the proposed bag limits had to be estimated. This was done by calculating the proportion of headboat landings to MRIP landings per wave or month (HB/MRIP) and it was assumed that the relative proportion of HB/MRIP remained constant through the bag limit changes. The estimated landings by wave/month from each year were then averaged to get an overall average for the time period looked at. This was done to help smooth some of the inherent data spikes in the MRIP intercept data, typically caused by one or two random intercepts in a high effort stratum, which are very common for rarely encountered species such as blueline tilefish. In addition, pooling over several years was done to help increase sample size and decrease variability. Although pooling over these years did substantially increase sample size, it should be noted that sample sizes were still fairly low and standard deviations for each month were very high (Tables 10-11). Results of this analysis are different from the conclusions of the analysis submitted by SERO (possibly due to the averaging of several years of data rather than using a single 12 month period). Results suggest that, at 1 fish per person, the recreational ACL would be expected to be met sometime in April or May 2015 rather than January (Table 4 analysis with 2013 data) or July (Table 6 sensitivity analysis). Results of the analysis are shown in Tables 7-11 below.

Table 7. Landings and cumulative landings (lbs ww) of blueline tilefish by wave, 2010-2014, and under a 1/person and 1/trip limits.

Overall Average of 2010 and 2012-Wave 3 of 2014						
Wave	Landings (lbs ww)			Cumulative (lbs ww)		
	Current	1BLT/Ang	1BLT/Trip	Current	1BLT/Ang	1BLT/Trip
1	29,008	8,766	3,863	29,008	8,766	3,863
2	9,011	7,129	2,638	38,019	15,895	6,501
3	24,683	19,814	11,559	62,701	35,709	18,059
4	30,377	17,670	6,648	93,078	53,379	24,707
5	11,090	6,449	2,259	104,168	59,828	26,966
6	38,846	13,475	12,865	143,015	73,303	39,830
Total	143,015	73,303	39,830	% Reduction	-48.7%	-72.1%

Table 8. Landings and cumulative landings (lbs ww) of blueline tilefish by month, 2010-2014, and under a 1/person and 1/trip limits.

Overall Average of 2010 & 2012-June 2014						
Month	Landings (lbs ww)			Cumulative (lbs ww)		
	Current	1BLT/Ang	1BLT/Trip	Current	1BLT/Ang	1BLT/Trip
1	2,747	1,429	1,375	2,747	1,429	1,375
2	26,260	7,322	2,463	29,008	8,751	3,838
3	6,559	5,254	2,041	35,567	14,005	5,879
4	2,452	1,872	591	38,019	15,877	6,471
5	11,428	10,320	4,676	49,447	26,197	11,147
6	13,255	9,487	6,887	62,701	35,685	18,033
7	21,948	12,491	5,008	84,650	48,175	23,042
8	8,429	5,235	1,598	93,078	53,410	24,640
9	6,373	2,924	854	99,451	56,335	25,493
10	4,717	3,390	1,329	104,168	59,725	26,822
11	2,019	1,319	741	106,187	61,043	27,563
12	36,835	12,227	12,134	143,022	73,270	39,697
Total	143,022	73,270	39,697	% Reduction	-48.8%	-72.2%

Table 9. Projected length of season under the preferred recreational ACL for 1/person and 1/trip limits for blueline tilefish.

Year	Preferred Rec ACL	Month of Closure		
		Current	1/Ang	1/Trip
2015	17,791	Feb	Apr/May	June
2016	26,691	Feb	May	Oct
2017	35,685	March	June	Dec
2018	43,925	May	July	No Closure

Table 10. Number of intercepted trips in the MRIP database that landed blueline tilefish by year and month.

Month	2010	2012	2013	2014	Total
1	1	1	2	0	4
2	0	0	9	2	11
3	1	2	3	4	10
4	11	2	0	5	18
5	12	1	4	10	27
6	4	9	1	4	18
7	2	7	2	0	11
8	3	6	2	0	11
9	2	5	4	0	11
10	6	5	0	0	11
11	2	3	1	0	6
12	0	7	1	0	8
Total	44	48	29	25	146

Table 11. Standard deviations in MRIP landings per month over time period analyzed in pounds whole weight and associated sample sizes.

St Dev in MRIP Landings per Month (lbs ww)				
Month	Current	1/Ang	1/Trip	Sample Size
1	1,868	920	934	4
2	6,515	1,221	433	11
3	1,368	1,311	425	10
4	163	163	41	18
5	1,868	1,880	949	27
6	1,942	1,933	1,882	18
7	3,488	2,379	1,209	11
8	776	427	131	11
9	621	208	47	11
10	422	377	198	11
11	352	242	189	6
12	17,325	5,768	5,775	8
Year	4,665	1,884	1,592	146