

Actions and Alternatives Currently Included in the Comprehensive Annual Catch Limit (ACL) Amendment

2.1.1 Action 1: Remove Species from Snapper Grouper Fishery Management Unit (FMU)

Alternative 1 (No Action). Do not remove any species from the Snapper Grouper FMU.

Alternative 2. Remove species from the Snapper Grouper FMU with 95% (or greater) of landings in state waters.

French grunt	Spanish grunt	Yellow jack	Grass porgy	Porkfish	Puddingwife
Bluestriped grunt	Sheepshead	Crevalle jack	Black margate		

Alternative 3. Remove species from the Snapper Grouper FMU with 90% (or greater) of landings in state waters.

French grunt	Spanish grunt	Yellow jack	Grass porgy	Porkfish	Puddingwife
Bluestriped grunt	Sheepshead	Crevalle jack	Black margate	Sailors Choice	

Alternative 4 (Preferred). Remove species from the Snapper Grouper FMU with 80% (or greater) of landings in state waters, except hogfish and mutton snapper.

French grunt	Spanish grunt	Yellow jack	Grass porgy	Porkfish
Bluestriped grunt	Sheepshead	Crevalle jack	Black margate	Sailors Choice
Graysby	Schoolmaster	Saucereye porgy	Puddingwife	Margate

Alternative 5 (Preferred). Remove all the species under the Florida Marine Life Species Rule from the Snapper Grouper FMU.

Queen triggerfish	Porkfish	Puddingwife
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Alternative 6. Remove species with state and federal (combined) landings that are less than, or equal to 10,000 lbs (with the exception of speckled hind) from the Snapper Grouper FMU.

Tiger grouper	Black snapper	Misty grouper	Coney	Bank sea bass	Spanish grunt
Smallmouth grunt	Longspine porgy	Blackfin snapper	Yellowmouth grouper	Dog snapper	Puddingwife
Cottonwick	Mahogany snapper	Rock sea bass	Queen snapper	Scup	
French grunt	Saucereye porgy	Grass porgy	Queen triggerfish	Schoolmaster	

Alternative 7 (Preferred). Remove species with state and federal (combined) landings that are less than, or equal to 20,000 lbs (with the exception of cubera snapper, warsaw grouper, lesser amberjack and speckled hind) from the Snapper Grouper FMU.

Tiger grouper	Black snapper	Misty grouper	Coney	Bank sea bass	Puddingwife
Smallmouth grunt	Longspine porgy	Blackfin snapper	Yellowmouth grouper	Dog snapper	Bar jack
Cottonwick	Mahogany snapper	Rock sea bass	Queen snapper	Scup	Ocean triggerfish

French grunt	Saucereye porgy	Grass porgy	Queen triggerfish	Schoolmaster	
Sand tilefish	Yellowfin grouper	Graysby	Sailors choice	Spanish grunt	

Alternative 8 (Preferred). Remove tomtate, knobbed porgy, jolthead porgy, and whitebone porgy from the Snapper Grouper FMU.

Tomtate	Knobbed porgy	Jolthead porgy	Whitebone porgy
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Table 2-1. Snapper grouper species listed in **Alternative 2** with $\geq 95\%$ estimated landings (lbs, whole weight) from state waters during 2005-2009.

COMMON NAME	2005		2006		2007		2008		2009		TOTAL		% State	TOP STATE	
	EEZ	State	EEZ	State	EEZ	State	EEZ	State	EEZ	State	EEZ	State		MRFSS	HBS
French grunt	0	0	0	270	0	2,965	0	1,703	0	708	0	5,646	100%	FL	FL
Puddingwife	0	0	0	0	0	0	0	0	0	2,074	0	2,074	100%	FL	FL
Spanish grunt	0	0	0	688	0	0	0	0	0	0	0	688	100%	FL	N/A
Grass porgy	0	1,686	0	0	0	393	42	460	0	1,364	42	3,903	99%	FL	FL
Yellow jack	0	29,556	0	12,067	261	22,060	1,916	95,342	692	13,595	2,868	172,620	98%	FL	FL
Bluestriped grunt	811	24,500	0	70,320	1,346	62,742	1,237	37,764	0	6,535	3,394	201,862	98%	FL	FL
Black margate	1,834	63,481	4,304	39,041	25	66,304	1,559	51,386	0	201,325	7,723	421,537	98%	FL	FL
Porkfish	1,748	17,046	373	1,890	900	47,479	309	10,533	0	17,802	3,330	94,750	97%	FL	FL
Sheepshead	53,721	1,777,431	58,247	1,596,043	77,082	2,142,796	34,360	2,492,673	159,282	1,480,695	382,693	9,489,638	96%	FL	SC
Crevalle jack	31,850	841,147	34,586	528,530	33,483	642,703	32,070	703,856	30,164	682,501	162,153	3,398,737	95%	FL	FL

Source: SEFSC ACL and SE HBS CRNF datasets.*

Table 2-2. Snapper grouper species listed in **Alternative 3** with $\geq 90\%$ estimated landings (lbs, whole weight) from state waters during 2005-2009.

COMMON NAME	2005		2006		2007		2008		2009		TOTAL			TOP STATE	
	EEZ	State	EEZ	State	EEZ	State	EEZ	State	EEZ	State	EEZ	State	% State	MRFSS	HBS
French grunt	0	0	0	270	0	2,965	0	1,703	0	708	0	5,646	100%	FL	FL
Puddingwife	0	0	0	0	0	0	0	0	0	2,074	0	2,074	100%	FL	FL
Spanish grunt	0	0	0	688	0	0	0	0	0	0	0	688	100%	FL	N/A
Grass porgy	0	1,686	0	0	0	393	42	460	0	1,364	42	3,903	99%	FL	FL
Yellow jack	0	29,556	0	12,067	261	22,060	1,916	95,342	692	13,595	2,868	172,620	98%	FL	FL
Bluestriped grunt	811	24,500	0	70,320	1,346	62,742	1,237	37,764	0	6,535	3,394	201,862	98%	FL	FL
Black margate	1,834	63,481	4,304	39,041	25	66,304	1,559	51,386	0	201,325	7,723	421,537	98%	FL	FL
Porkfish	1,748	17,046	373	1,890	900	47,479	309	10,533	0	17,802	3,330	94,750	97%	FL	FL
Sheepshead	53,721	1,777,431	58,247	1,596,043	77,082	2,142,796	34,360	2,492,673	159,282	1,480,695	382,693	9,489,638	96%	FL	SC
Crevalle jack	31,850	841,147	34,586	528,530	33,483	642,703	32,070	703,856	30,164	682,501	162,153	3,398,737	95%	FL	FL
Sailors choice	1,868	35,153	863	2,951	1,752	19,491	894	15,299	4	17,768	5,381	90,663	94%	FL	FL

Source: SEFSC ACL and SE HBS CRNF datasets.*

Table 2-3. Snapper grouper species listed in **Alternative 4** with $\geq 80\%$ estimated landings (lbs, whole weight) from state waters during 2005-2009.

COMMON NAME	2005		2006		2007		2008		2009		TOTAL			TOP STATE	
	EEZ	State	EEZ	State	EEZ	State	EEZ	State	EEZ	State	EEZ	State	% State	MRFSS	HBS
French grunt	0	0	0	270	0	2,965	0	1,703	0	708	0	5,646	100%	FL	FL
Puddingwife	0	0	0	0	0	0	0	0	0	2,074	0	2,074	100%	FL	FL
Spanish grunt	0	0	0	688	0	0	0	0	0	0	0	688	100%	FL	N/A
Grass porgy	0	1,686	0	0	0	393	42	460	0	1,364	42	3,903	99%	FL	FL
Yellow jack	0	29,556	0	12,067	261	22,060	1,916	95,342	692	13,595	2,868	172,620	98%	FL	FL
Bluestriped grunt	811	24,500	0	70,320	1,346	62,742	1,237	37,764	0	6,535	3,394	201,862	98%	FL	FL
Black margate	1,834	63,481	4,304	39,041	25	66,304	1,559	51,386	0	201,325	7,723	421,537	98%	FL	FL
Porkfish	1,748	17,046	373	1,890	900	47,479	309	10,533	0	17,802	3,330	94,750	97%	FL	FL
Sheepshead	53,721	1,777,431	58,247	1,596,043	77,082	2,142,796	34,360	2,492,673	159,282	1,480,695	382,693	9,489,638	96%	FL	SC
Crevalle jack	31,850	841,147	34,586	528,530	33,483	642,703	32,070	703,856	30,164	682,501	162,153	3,398,737	95%	FL	FL
Sailors choice	1,868	35,153	863	2,951	1,752	19,491	894	15,299	4	17,768	5,381	90,663	94%	FL	FL
Schoolmaster	115	868	0	5,623	1,904	4,722	1,492	3,836	10	6,159	3,521	21,208	86%	FL	FL
Margate	1,727	28,788	2,676	18,025	3,071	18,104	1,815	4,650	3,721	5,283	13,010	74,850	85%	FL	FL
Saucereye porgy	139	4,453	591	769	325	0	0	0	0	223	1,055	5,445	84%	FL	FL
Graysby	1,624	8,722	2,620	7,266	530	4,428	1,099	8,132	1,219	1,953	7,091	30,500	81%	FL	SC

Source: SEFSC ACL and SE HBS CRNF datasets.*

*Note: **MRFSS**, **TPWD**, and **Commercial** data are from SEFSC ACL datasets and HBS data are from the SE HBS CRNF files. Therefore, all sectors are being considered for the state vs. federal landings analysis. Note that the CRNF files state vs. federal determination was based upon the headboat's "Distance from Shore" field. This field is sometimes not completed, and the weights of fish landed may not be very accurate. Additionally, the CRNF files may represent an incomplete landings dataset due to non-compliance with reporting requirements. As such, the landings values from the HBS component of the state vs. federal analysis will likely be underestimates of the total pounds landed and should not be substituted for the HBS landings data found within the SEFSC ACL dataset (which does not contain a state vs. federal breakout for headboat). Note ACL recreational dataset landings estimates may differ from MRFSS website queries because 'For Hire' includes headboat and charter, and SEFSC has used improved weight substitution and charter boat estimation procedures that differ from those on the MRFSS website. Note 'Atlantic' for recreational data includes MRFSS: SE Atl. states (NC-FLE) and Headboat: Atlantic (NC-FL Keys areas 1-17). Note gag and black grouper landings have been adjusted for misidentification prior to 1990.

Tiger grouper, black snapper, smallmouth grunt, misty grouper, and cottonwick did not have any reported landings. Goliath grouper and Nassau grouper are excluded since harvest is prohibited for these species. Speckled hind and warsaw grouper are also excluded since harvest and sale is prohibited as per Amendment 17B.

Table 2-4. Snapper grouper species with average state and federal (combined) landings from all sectors, from 2005-2009, that are less than or equal to 10,000 lbs.

COMMON NAME	TOTAL ≤ 10000 LBS
Tiger grouper	0
Smallmouth grunt	0
Cottonwick	6
Spanish grunt	138
Black snapper	141
Longspine pogy	372
Puddingwife	418
Mahogany snapper	467
Grass pogy	791
French grunt	1,142
Misty grouper	1,834
Saucereye pogy	1,975
Blackfin snapper	2,087
Rock sea bass	2,325
Coney	2,453
Queen triggerfish	3,503
Yellowmouth grouper	3,504
Queen snapper	5,086
Schoolmaster	5,423
Bank sea bass	5,567
Dog snapper	6,458
Scup	8,511

Source: SEFSC ACL Database, October 2010

Table 2-5. Snapper grouper species with average state and federal (combined) landings from all sectors, from 2005-2009, that are less than or equal to 20,000 lbs.

COMMON NAME	TOTAL ≤ 20000 LBS
Tiger grouper	0
Smallmouth grunt	0
Cottonwick	6
Spanish grunt	138
Black snapper	141
Longspine pogy	372
Puddingwife	418
Mahogany snapper	467
Grass pogy	791
French grunt	1,142
Misty grouper	1,834
Saucereye pogy	1,975

COMMON NAME	TOTAL ≤ 20000 LBS
Blackfin snapper	2,087
Rock sea bass	2,325
Coney	2,453
Queen triggerfish	3,503
Yellowmouth grouper	3,504
Queen snapper	5,086
Schoolmaster	5,423
Bank sea bass	5,567
Dog snapper	6,458
Scup	8,511
Bar jack	10,726
Ocean triggerfish	10,962
Sand tilefish	11,168
Yellowfin grouper	12,930
Graysby	14,648
Sailors choice	19,239

Source: SEFSC ACL Database, October 2010

***Note: In cases where no data were recorded for a species, charter boat and/or other recreational landings were assumed to be zero. Goliath grouper and Nassau grouper are excluded since harvest is prohibited for these species. Speckled hind and warsaw grouper are also excluded since harvest is restricted to one fish per vessel per trip and sale is prohibited. Lesser amberjack and cubera snapper are excluded as per Council guidance in December, 2010.

Table 2-6. Average state and federal (combined) landings from all sectors, for tomtate, knobbed porgy, jolthead porgy, and whitebone porgy, from 2005-2009.

COMMON NAME	TOTAL LBS
Tomtate	66,671
Knobbed porgy	37,618
Jolthead porgy	40,966
Whitebone porgy	21,064

Table 2-7. Summary of effects under **Action 1.**

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Alternative 1 (No Action)	(+) No species removed from FMU.	(+/-) Positive short-term socioeconomic impacts. Negative administrative impact.
Alternative 2. ≥ 95% landings in state waters	(-) 10 species removed from FMU, possible increase in landings and bycatch mortality.	(+/-) Would incur a lower level social and administrative impacts compared to preferred Alternatives 4, 5, 7, and 8.
Alternative 3. ≥ 90% landings	(-) 11 species removed from	(+/-) Would incur a lower level

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
in state waters	FMU, possible increase in landings and bycatch mortality.	social and administrative impacts compared to preferred Alternatives 4, 5, 7, and 8.
Alternative 4 (Preferred). ≥ 80% landings in state waters	(-) 15 species removed from FMU, possible increase in landings and bycatch mortality.	(+-) Highest net benefits over time.
Alternative 5 (Preferred). Florida Marine Life Species Rule	(+) 3 species removed from FMU. Non-lethal methods of harvest, small landings.	(+) Would incur the lowest level of socioeconomic impact because landings are small. Highest net benefits over time.
Alternative 6. Combined landings ≤ 10,000 lbs	(-) 22 species removed from FMU, possible increase in landings and bycatch mortality.	(+-) Lower benefits compared to Alternative 7 (Preferred).
Alternative 7 (Preferred) Combined landings ≤ 20,000 lbs	(-) Largest number of species (28) removed from FMU, possible increase in landings and bycatch mortality.	(+-) Highest net benefits over time.
Alternative 8 (Preferred)	(+-) Four species removed from FMU, small landings.	(+) Would incur a lower level of socioeconomic impact because landings are small. Highest net benefits over time.

2.1.2 Action 2: Establish Species Groupings for Snapper Grouper Species

Alternative 1 (No Action). Do not establish multi-species groupings for the Snapper Grouper FMU.

Alternative 2. Establish species groups (**Table 2-8**) for the Snapper Grouper FMU using associations based on life history, catch statistics from commercial logbook and observer data, recreational headboat logbook and private/charter survey, and fishery-independent MARMAP data. Establish sub-complexes within species complexes. Complex and/or sub-complex ACLs will be a sum of the individual ACLs included in that complex (all sectors combined) and/or sub-complex. When a complex ACL is exceeded, all species in that complex, as well as those in sub-complexes will be subject to AMs. When a sub-complex ACL is exceeded, but is below the combined ACL of the complex, only the species in that particular sub-complex will be subject to AMs.

Table 2-8. Complexes (dark gray), sub-complexes (light gray), and individual ACLs (white) for snapper grouper species under the Alternative 2 species grouping approach.

1 = Assessed species; 2 = Most vulnerable species in complex (PSA analysis); 3 = Prohibited (ACL = 0).

Deep-Water Grouper & Tilefish Complex	Subcomplexes	'Snappers' Complex	Subcomplexes
Yellowedge grouper ₂	Yellowedge grouper ₂	Gray snapper ₂	Gray snapper ₂
Blueline tilefish	Blueline tilefish	Lane snapper	Lane snapper
Silk Snapper ₂	Silk Snapper ₂	Cubera snapper	Cubera snapper
Snowy grouper ₁	Snowy grouper ₁	Yellowtail snapper ₁	Yellowtail snapper ₁
Golden tilefish ₁	Golden tilefish ₁	Mutton snapper ₁	Mutton snapper ₁
Shallow Water Grouper Complex	Subcomplexes	Hinds & Grunts Complex	
Scamp	Scamp	Red hind	
Gag _{1,2}	Gag _{1,2}	Rock hind	
Red grouper ₁	Red grouper ₁	White grunt	
Black grouper ₁	Black grouper ₁		
'Jacks' Complex	Subcomplexes		
Almaco jack ₂	Almaco jack ₂		
Banded rudderfish	Banded rudderfish		
Lesser amberjack	Lesser amberjack		
Greater amberjack ₁	Greater amberjack ₁		
Individual ACLs Not Affiliated With A Complex			
Red snapper ₁	Vermilion snapper ₁	Wreckfish	Warsaw grouper ₃
Red pogy ₁	Goliath grouper _{1,3}	Hogfish ₁	Speckled hind ₃
Blue runner	Atlantic spadefish	Nassau grouper ₃	Black sea bass ₁
Gray triggerfish			

Alternative 3. Establish species groups (**Table 2-9**) for the Snapper Grouper FMU based on similar life histories. (indicator species in bold).

Table 2-9. Complexes (units) for snapper grouper species under the Alternative 3 grouping approach.

<p>SHALLOW WATER GROUPER UNIT 1 Gag Red grouper Red hind Rock hind Black grouper Scamp</p> <p>UNIT 2 Goliath grouper</p> <p>UNIT 3 Nassau grouper</p>	<p>JACK UNIT Greater amberjack Almaco jack Banded rudderfish Lesser amberjack Blue runner GRUNT AND PORGY UNIT 1 Red porgy UNIT 2 White grunt SEA BASS UNIT Black sea bass</p>
<p>DEEP WATER GROUPER AND TILEFISH UNIT Snowy grouper Yellowedge grouper Warsaw grouper Speckled hind Tilefish (golden) Blueline tilefish</p>	<p>SHALLOW WATER SNAPPER, TILEFISH, AND WRASSE UNIT Yellowtail snapper Gray (mangrove) snapper Lane snapper Hogfish Cubera snapper</p>
<p>WRECKFISH Wreckfish</p>	<p>TRIGGERFISH AND SPADEFISH UNIT Gray triggerfish Atlantic spadefish</p>
<p>MID-SHELF SNAPPER UNIT Vermilion snapper Silk snapper Red snapper Mutton snapper</p>	

Alternative 4 (Preferred). Establish single species ACLs and grouped species complexes for the establishment of ACLs (**Table 2-10**). Single species ACLs would be established for assessed and targeted species, and species where ACL=0. Complexes for groups of species would be established for other species using associations based on life history, catch statistics from commercial logbook and observer data, recreational headboat logbook and private/charter survey, and fishery-independent MARMAP data. When a complex ACL is exceeded, all species in that complex will be subject to AMs. When an individual ACL is exceeded, the individual stock, and in some cases, other species that are closely associated with it, will be subject to AMs.

Table 2-10. Complexes (gray) and individual ACLs (white) for snapper grouper species under the Alternative 4 grouping approach.

1 = Assessed species; 2 = Most vulnerable species in complex (PSA analysis); 3 = Prohibited (ACL = 0).

Deep-Water Grouper & Tilefish Complex	Individual ACLs
Yellowedge grouper ₂	Atlantic spadefish
Blueline tilefish	Greater amberjack ₁
Silk Snapper ₂	Blue runner
Jacks Complex	Gray triggerfish
Almaco jack ₂	Snowy grouper ₁
Banded rudderfish	Golden tilefish ₁
Lesser amberjack	Warsaw grouper ₃
Snappers Complex	Wreckfish
Gray snapper ₂	Scamp
Lane snapper	Gag ₁
Cubera snapper	Red grouper ₁
Hinds & Grunts Complex	Goliath grouper _{1,3}
Red hind	Nassau grouper ₃
Rock hind	Black sea bass ₁
White grunt	Black grouper ₁
	Speckled hind ₃
	Red pogy ₁
	Hogfish ₁
	Yellowtail snapper ₁
	Red snapper ₁
	Vermilion snapper ₁
	Mutton snapper ₁

Table 2-11. Summary of effects under Action 2.

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Alternative 1 (No Action)	(-) No species groups. ACLs/AMs required for all 73 species. Stock assessments and SDC are not available for many of these species.	(+-) Smallest net economic benefits.
Alternative 2.	(+) Species grouped into complexes/sub-complexes, and individual ACLs. ACLs/AMs will apply to species included in groups.	(+-) Benefits between Alternative 1 (No Action) and Alternative 3.
Alternative 3.	(+) Species grouped into complexes/sub-complexes, and individual ACLs, less quantitative analysis compared with Alternative 2.	(+-) Benefits lower than Alternative 3, but greater than Alternatives 1 (No Action) and 2.
Alternative 4 (Preferred).	(+) Species grouped into complexes and individual ACLs. ACLs/AMs will apply to species included in groups.	(+-) Greatest net economic benefits.

2.1.3 Action 3: Establish an Acceptable Biological Catch (ABC) Control Rule for Snapper Grouper Species

Alternative 1 (No Action). Do not establish an ABC Control Rule for species in the Snapper Grouper FMU.

Alternative 2. Where applicable, establish an ABC Control Rule where ABC equals OFL.

Alternative 3. For unassessed species: establish an ABC Control Rule where ABC equals a percentage of OFL or a percentage of the median landings 1999-2008, as appropriate.

Subalternative 3a. ABC=65% (OFL or median landings 1999-2008)

Subalternative 3b. ABC=75% (OFL or median landings 1999-2008)

Subalternative 3c. ABC=85% (OFL or median landings 1999-2008)

Subalternative 3d. ABC=95% (OFL or median landings 1999-2008)

Alternative 4. For assessed species: establish an ABC Control Rule where ABC equals a percentage of the yield at MFMT.

Subalternative 4a. ABC=yield at 65%MFMT

Subalternative 4b. ABC=yield at 75%MFMT

Subalternative 4c. ABC=yield at 85%MFMT

Alternative 5. For assessed species: establish ABCs based on the South Atlantic SSC’s ABC control rule described in **Table 2-12**. For unassessed species: adopt the South Atlantic Council SSC’s Control Rule in **Table 2-12** but establish an interim ABC = median landings 1999-2008 and OFL = unknown until the SSC’s control rule can be fully applied.

Alternative 6. For assessed species: establish ABCs based on the South Atlantic’s SSC’s ABC control rule. For unassessed species: Adopt the Gulf of Mexico Council SSC’s ABC Control Rule for unassessed species as described in **Table 2-13**. The indicated default ABC buffer levels for Tier 3a and 3b are to be used unless specified otherwise by the Council on a stock by stock basis.

Table 2-12. The South Atlantic Fishery Management Council’s SSC’s Acceptable Biological Catch (ABC) Control Rule.

Note: The rule provides a hierarchy of dimensions and tiers within dimensions used to characterize uncertainty associated with stock assessments in the South Atlantic. Parenthetical values indicate (1) the maximum adjustment value for a dimension; and (2) the adjustment values for each tier within a dimension. See **Appendix R** for details on the methodology.

Level 1 – Assessed Stocks	
Tier	Tier Classification and Methodology to Compute ABC
1. Assessment Information (10%)	<ol style="list-style-type: none"> 1. Quantitative assessment provides estimates of exploitation and biomass; includes MSY-derived benchmarks. (0%) 2. Reliable measures of exploitation or biomass; no MSY benchmarks, proxy reference points. (2.5%) 3. Relative measures of exploitation or biomass, absolute measures of status unavailable. Proxy reference points. (5%) 4. Reliable catch history. (7.5%) 5. Scarce or unreliable catch records. (10%)
2. Uncertainty Characterization (10%)	<ol style="list-style-type: none"> 1. Complete. Key Determinant – uncertainty in both assessment inputs and environmental conditions are included. (0%) 2. High. Key Determinant – reflects more than just uncertainty in future recruitment. (2.5%) 3. Medium. Uncertainties are addressed via statistical techniques and sensitivities, but full uncertainty is not carried forward in projections. (5%) 4. Low. Distributions of F_{MSY} and MSY are lacking. (7.5%) 5. None. Only single point estimates; no sensitivities or uncertainty evaluations. (10%)
3. Stock Status (10%)	<ol style="list-style-type: none"> 1. Neither overfished nor overfishing. Stock is at high biomass and low exploitation relative to benchmark values. (0%) 2. Neither overfished nor overfishing. Stock may be in close proximity to benchmark values. (2.5%) 3. Stock is either overfished or overfishing. (5%) 4. Stock is both overfished and overfishing. (7.5%) 5. Either status criterion is unknown. (10%)
4. Productivity and Susceptibility – Risk Analysis	<ol style="list-style-type: none"> 1. Low risk. High productivity, low vulnerability, low susceptibility. (0%) 2. Medium risk. Moderate productivity, moderate vulnerability, moderate susceptibility. (5%)

(10%)	3. High risk. Low productivity, high vulnerability, high susceptibility. (10%)
Level 2 - Unassessed Stocks. Reliable landings and life history information available	
OFL derived from "Depletion-Based Stock Reduction Analysis" (DBSRA). ABC derived from applying the assessed stocks rule to determine adjustment factor if possible, or from expert judgment if not possible.	
Level 3 - Unassessed Stocks. Inadequate data to support DBSRA	
ABC derived directly, from "Depletion-Corrected Average Catch" (DCAC). Done when only a limited number of years of catch data for a fishery are available. Requires a higher level of "informed expert judgment" than Level 2.	
Level 4 - Unassessed Stocks. Inadequate data to support DCAC or DBSRA	
OFL and ABC derived on a case by case basis. ORCS ad hoc group is currently working on what to do when not enough data exist to perform DCAC.	

Table 2-13. The Gulf of Mexico Fishery Management Council’s SSC’s Acceptable Biological Catch Control Rule for unassessed species.

Note: The Council is only considering Tiers 3a and 3b in **Alternative 6**.

Tier 1 Acceptable Biological Catch Control Rule	
Condition for Use	A quantitative assessment provides both an estimate of overfishing limit based on MSY or its proxy and a probability density function of overfishing limit that reflects scientific uncertainty. Specific components of scientific uncertainty can be evaluated through a risk determination table.
OFL	OFL = yield resulting from applying F_{MSY} or its proxy to estimated biomass.
ABC	The Council with advice from the SSC will set an appropriate level of risk (P^*) using a risk determination table that calculates a P^* based on the level of information and uncertainty in the stock assessment. ABC = yield at P^* .
Tier 2 Acceptable Biological Catch Control Rule	
Condition for Use*	An assessment exists but does not provide an estimate of MSY or its proxy. Instead, the assessment provides a measure of overfishing limit based on alternative methodology. Additionally, a probability density function can be calculated to estimate scientific uncertainty in the model-derived overfishing limit measure. This density function can be used to approximate the probability of exceeding the overfishing limit, thus providing a buffer between the overfishing limit and acceptable biological catch.
OFL	An overfishing limit measure is available from alternative methodology.
ABC	Calculate a probability density function around the overfishing limit measure that accounts for scientific uncertainty. The buffer between the overfishing limit and acceptable biological catch will be based on that probability density function and the level of risk of exceeding the overfishing limit selected by the Council. <ul style="list-style-type: none"> a. Risk of exceeding OFL = 45% b. Risk of exceeding OFL = 35% c. Risk of exceeding OFL = 25% (default level for unassigned stocks) d. Risk of exceeding OFL = 15% Set ABC = OFL – buffer at risk of exceeding OFL
Tier 3a Acceptable Biological Catch Control Rule	
Condition for	No assessment is available, but landings data exist. The probability of exceeding the

Use*	overfishing limit in a given year can be approximated from the variance about the mean of recent landings to produce a buffer between the overfishing limit and acceptable biological catch. Based on expert evaluation of the best scientific information available, recent historical landings are without trend, landings are small relative to stock biomass, or the stock is unlikely to undergo overfishing if future landings are equal to or moderately higher than the mean of recent landings. For stock complexes, the determination of whether a stock complex is in Tier 3a or 3b will be made using all the information available, including stock specific catch trends.
OFL	Set the overfishing limit equal to the mean of recent landings plus two standard deviations. A time series of at least ten years is recommended to compute the mean of recent landings, but a different number of years may be used to attain a representative level of variance in the landings.
ABC	Set acceptable biological catch using a buffer from the overfishing limit that represents an acceptable level of risk due to scientific uncertainty. The buffer will be predetermined for each stock or stock complex by the Council with advice from the SSC as: <ul style="list-style-type: none"> a. ABC = mean of the landings plus 1.5 * standard deviation (risk of exceeding OFL = 31%) b. ABC = mean of the landings plus 1.0 * standard deviation (default) (risk of exceeding OFL = 16%) c. ABC = mean of the landings plus 0.5 * standard deviation (risk of exceeding OFL = 7%) d. ABC = mean of the landings (risk of exceeding OFL = 2.3%)

Tier 3b Acceptable Biological Catch Control Rule

Condition for Use*	No assessment is available, but landings data exist. Based on expert evaluation of the best scientific information available, recent landings may be unsustainable.
OFL	Set the overfishing limit equal to the mean of landings. A time series of at least ten years is recommended to compute the mean of recent landings, but a different number of years may be used to attain a representative level of variance in the landings.
ABC	Set acceptable biological catch using a buffer from the overfishing limit that represents an acceptable level of risk due to scientific uncertainty. The buffer will be predetermined for each stock or stock complex by the Council with advice from its SSC as: <ul style="list-style-type: none"> e. ABC = 100% of OFL f. ABC = 85% of OFL g. ABC = 75% of OFL (default level for unassigned stocks) h. ABC = 65% of OFL

*Changes in the trend of a stock’s landings or a stock complex’s landings in three consecutive years shall trigger a reevaluation of their acceptable biological catch control rule determination under Tiers 2, 3a, or 3b.

Alternative 7 (Preferred). For assessed species: establish ABCs based on the South Atlantic SSC’s ABC control rule described in **Table 2-12**. For unassessed species: When the ABC control rule portion for unassessed species is complete, establish ABCs based on the South Atlantic SSC’s ABC control rule described in **Table 2-12**. Until the ABC Control Rule is complete, establish ABCs based upon the interim approach in **Table 2-14** and OFL = unknown. Recommended ABC values are shown in **Table 2-15**.

Table 2-14. South Atlantic Council’s SSC interim approach to recommend ABCs for unassessed species in Level 4 of the Control Rule (**Table 2-12**)

1. Will catch affect stock?

NO: Ecosystem Species (Council largely done this already, ACL amend)

YES: GO to 2

2. Will increase (beyond current range of variability) in catch lead to decline or stock concerns?

NO: ABC = 3rd highest point in the 1999-2008 time series.

YES: Go to 3

3. Is stock part of directed fishery or is it primarily bycatch for other species?

Directed: ABC = Median 1999-2008

Bycatch/Incidental: If yes. Go to 4.

4. Bycatch. Must judge the circumstance:

If bycatch in other fishery: what are trends in that fishery? what are the regulations? what is the effort outlook?

If the directed fishery is increasing and bycatch of stock of concern is also increasing, the Council may need to find a means to reduce interactions or mortality. If that is not feasible, will need to impact the directed fishery. The SSC's intention is to evaluate the situation and provide guidance to the Council on possible catch levels, risk, and actions to consider for bycatch and directed components.

Table 2-15. Recommended ABC values for unassessed snapper grouper species using the S. Atlantic Council’s SSC interim approach under Alternative 7.

The table excludes species that would be removed from the FMU (**Action 1**). OFL is unknown.

Species Common Name	OFL	ABC (lbs ww) from SSC Control Rule (Alternative 7)
Yellowedge grouper	unknown	30,221
Blueline tilefish	unknown	592,602
Silk snapper	unknown	27,519
Scamp	unknown	492,572
Blue runner	unknown	1,289,941
Atlantic spadefish	unknown	282,841
Almaco jack	unknown	291,922
Banded rudderfish	unknown	152,999
Lesser amberjack	unknown	10,568
Hogfish	unknown	147,638
Gray snapper	unknown	894,019
Cubera snapper	unknown	31,772
Lane snapper	unknown	153,466
Red hind	unknown	25,885
Rock hind	unknown	37,569
White grunt*	unknown	635,899
Gray triggerfish*	unknown	672,565
Nassau grouper	unknown	0
Goliath grouper	unknown	0

*Includes unclassified grunts and triggerfishes because commercial landings of gray triggerfish are not identified to species and only one state identifies white grunt to species level.

Note: ABC = 0 (landings only) for Speckled hind and Warsaw grouper.

Table 2-16. ABCs (landed catch) for assessed snapper grouper species based on recommendation from the S. Atlantic Council’s SSC.

Species*	ABC
Black sea bass	847,000 lbs ww
Gag	949,000 lbs ww
Snowy grouper	102,960 lbs ww
Red porgy	395,281 lbs ww
Vermilion snapper	1,109,000 lbs ww
Red snapper	0 lbs
Greater amberjack	1,968,000 lbs ww
Yellowtail snapper**	2,898,500 lbs ww
Black grouper	245,810 lbs ww
Red grouper***	622,000 lbs ww

*ABC not specified for golden tilefish because a current stock assessment is being conducted, the SSC recommended not to specify ABC until the assessment was completed. ACL for golden tilefish = 331,000 lbs ww; **This value is not separated by S. Atlantic and Gulf of Mexico of Mexico; ***ABC recommended by SSC, but may change as per preferred jurisdictional allocation in Amendment 24.

Table 2-17. ABC values for unassessed species, which do not have ABCs specified by South Atlantic Council’s SSC. The table excludes species that would be removed from the FMU (**Action 1**). OFL is unknown.

Species Common Name	ABC (lbs ww) & Pref. Alt. 5; Median 99-08 landings	Alt. 2 ABC=OFL OFL is unknown	Alt. 3a ABC=65% Median 99-08 landings	Alt. 3b ABC=75% Median 99-08 landings	Alt. 3c ABC=85% Median 99-08 landings	Alt. 3d ABC=95% Median 99-08 landings
Yellowedge grouper	30,221	n/a	19,643	22,665	25,687	28,710
Blueline tilefish	146,134	n/a	94,987	109,600	124,214	138,827
Silk snapper	27,519	n/a	17,887	20,639	23,391	26,143
Scamp	492,572	n/a	320,172	369,429	418,686	467,944
Blue runner	1,007,120	n/a	654,628	755,340	856,052	956,764
Atlantic spadefish	231,056	n/a	150,187	173,292	196,398	219,503
Almaco jack	229,236	n/a	149,004	171,927	194,851	217,775
Banded rudderfish	119,916	n/a	77,945	89,937	101,928	113,920
Lesser amberjack	7,490	n/a	4,869	5,618	6,367	7,116
Hogfish	133,136	n/a	86,539	99,852	113,166	126,479
Gray snapper	769,475	n/a	500,159	577,107	654,054	731,002
Cubera snapper	22,362	n/a	14,535	16,771	19,007	21,244
Lane snapper	114,395	n/a	74,357	85,797	97,236	108,676
Red hind	24,406	n/a	15,864	18,304	20,745	23,185
Rock hind	32,792	n/a	21,315	24,594	27,873	31,152
White grunt*	635,899	n/a	413,335	476,925	540,514	604,104
Gray triggerfish*	529,309	n/a	344,051	396,981	449,912	502,843

*Includes unclassified grunts and triggerfishes because commercial landings of gray triggerfish are not identified to species and only one state identifies white grunt to species level.

Note: ABC = 0 (landings only) for Speckled hind and Warsaw grouper.

Table 2-18a. Gulf of Mexico ABC control rule alternatives applied to average landings and standard deviation (1999-2008) for unassessed South Atlantic snapper grouper species [all landings from SAFMC jurisdiction]. Tier 3a from **Table 2-13**.

Common Name	OFL (Mean + 2 SD)	Mean + 0.5 SD	Mean + 1 SD (Default)	Mean + 1.5 SD
Yellowedge grouper	52,025	35,458	40,980	46,503
Blueline tilefish	747,365	392,193	510,584	628,975
Silk snapper	69,988	42,887	51,921	60,954
Scamp	642,258	522,282	562,274	602,266
Blue runner	1,534,169	1,116,354	1,255,626	1,394,897
Atlantic spadefish	577,785	347,101	423,996	500,890
Almaco jack	366,092	261,828	296,583	331,338
Banded rudderfish	212,007	147,439	168,962	190,485
Lesser amberjack	17,566	11,114	13,264	15,415
Hogfish	208,964	152,939	171,614	190,289
Gray snapper	1,104,046	875,775	951,865	1,027,955
Cubera snapper	54,401	30,935	38,757	46,579
Lane snapper	184,619	140,153	154,975	169,797
Red hind	30,162	24,771	26,568	28,365
Rock hind	47,791	35,886	39,854	43,823
White grunt*	773,769	675,044	707,952	740,860
Gray triggerfish*	873,883	641,940	719,255	796,569

*Includes unclassified grunts and triggerfishes because commercial landings of gray triggerfish are not identified to species and only one state identifies white grunt to species level.

Table 2-18b. Gulf of Mexico ABC control rule alternatives applied to average landings and standard deviation (1999-2008) for unassessed South Atlantic snapper grouper species [all landings from SAFMC jurisdiction]. Tier 3b from **Table 2-13**.

Common Name	OFL (Mean)	85% OFL	75% OFL (Default)	65% OFL
Yellowedge grouper	29,936	25,445	22,452	19,458
Blueline tilefish	273,802	232,732	205,352	177,971
Silk snapper	33,854	28,776	25,390	22,005
Scamp	482,290	409,946	361,717	313,488
Blue runner	977,083	830,520	732,812	635,104
Atlantic spadefish	270,206	229,675	202,655	175,634
Almaco jack	227,074	193,013	170,305	147,598
Banded rudderfish	125,917	107,029	94,438	81,846
Lesser amberjack	8,963	7,618	6,722	5,826
Hogfish	134,264	114,125	100,698	87,272
Gray snapper	799,685	679,732	599,764	519,795
Cubera snapper	23,113	19,646	17,335	15,023
Lane snapper	125,331	106,531	93,998	81,465
Red hind	22,974	19,528	17,231	14,933

Common Name	OFL (Mean)	85% OFL	75% OFL (Default)	65% OFL
Rock hind	31,918	27,130	23,938	20,746
White grunt*	642,136	545,816	481,602	417,388
Gray triggerfish*	564,626	479,932	423,470	367,007

*Includes unclassified grunts and triggerfishes because commercial landings of gray triggerfish are not identified to species and only one state identifies white grunt to species level.

Table 2-19. Summary of effects under **Action 3.**

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Alternative 1 (No Action)	(-) Only 11 Snapper Grouper species would have ABCs, with no ABC specified for unassessed species. Would not meet MSA requirements.	(+-) Largest short-term positive benefits, smallest long-term benefits.
Alternative 2. ABC=ACL	(+-) Least conservative of the alternatives, since there is no buffer between ACL and ABC, does not account for scientific and management uncertainty like Alternatives 3-6.	(+-) Smaller long-term, bigger short-term positive benefits compared with subalternatives under Alternatives 3 and 4.
Alternative 3: Subalternative 3a. ABC=65% OFL OFL=Median landings (1999-2008)	(+-) Most conservative of the four subalternatives under Alternative 3. Offers a large buffer between ACL and ABC.	(+-) Smallest short-term benefits, largest long-term benefits.
Subalternative 3b. ABC=75% OFL OFL=Median landings (1999-2008)	(+-) Benefits could be less than Subalternative 3a , and more than Subalternatives 3c and 3d.	(+-) Short-term benefits could be less than Subalternative 3a , and more than Subalternatives 3c and 3d.
Subalternative 3c. ABC=85% OFL OFL=Median landings (1999-2008)	(+-) Benefits between Subalternatives 3b and 3d.	(+-) Benefits between Subalternatives 3b and 3d.
Subalternative 3d. ABC=95% OFL OFL=Median landings (1999-2008)	(+-) Least conservative of the four subalternatives under Alternative 3. Offers the smallest buffer between ACL and ABC.	(+-) Largest short-term positive benefits, smallest long-term benefits.
Alternative 4: Subalternative 4a. ABC=65% MFMT	(+-) Translates to 93.6% of OFL, benefits close to Subalternative 3d. Most conservative of the	(+-) Benefits close to Subalternative 3d.

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
	subalternatives under Alternative 4.	
Subalternative 4b. ABC=75% MFMT	(+-) Benefits between Subalternatives 4a and 4c.	(+-) Benefits between Subalternatives 4a and 4c.
Subalternative. ABC=85% MFMT	(+-) Translates to 98.9% of OFL, benefits close to Subalternative 3d. Least conservative of the subalternatives under Alternative 4.	(+-) Benefits close to Subalternative 3d.
Alternative 5. Assessed sp.= SAFMC SSC's ABC Control Rule Unassessed sp. = 75% OFL OFL = Median landings (1999-2008) (until ABC Control Rule established)	(+-) Benefits include a buffer between OFL and AC for assessed species. Benefits for unassessed species would be identical to Subalternative 3b until an ABC Control Rule is established for them, and then, unknown.	(+-) Larger long-term and smaller short-term benefits for assessed species. Benefits similar to Subalternative 3b for unassessed species until an ABC Control Rule is established for them, and then unknown.
Alternative 6. Assessed sp.=SAFMC SSC's ABC Control Rule Unassessed sp. = Gulf of Mexico SSC's ABC Control Rule (option with ABC = 1.5*S.D. (above Mean landings, 1999-2008).	(+-) Benefits for assessed species would be identical to Alternative 5. Benefits for unassessed species would be less than Alternative 5, since the Gulf of Mexico's ABC Control Rule results in more fish that can be landed.	(+-) Larger long-term and smaller short-term benefits for assessed species. Larger short-term, and smaller long-term benefits for unassessed species. Smaller long-term benefits compared to Alternative 5.
Alternative 7 (Preferred). Assessed sp.= SAFMC SSC's ABC Control Rule Unassessed sp. = interim approach and OFL = unknown (until ABC Control Rule established)	(+-) Benefits include a buffer between OFL and AC for assessed species. Benefits for unassessed species would be similar to Alternative 5, with a better analysis regarding scientific uncertainty.	(+-) Larger long-term and smaller short-term benefits for assessed species. Benefits better than Alternative 5, since the new ABC values allow for an increase in landings.

2.1.4 Action 4: Specify Allocations for Snapper Grouper Species That Do Not Currently Have Allocations

[Note: When considering two sectors (Commercial and Recreational), the Recreational sector includes private recreational (shore and rental boats) as well as for-hire (charter/headboat). When considering three sectors (Commercial, Recreational, and For-hire), the Recreational sector includes only private recreational (shore and rental boats).]

Alternative 1 (No Action). Retain the current allocations (**Table 2-20**). Do not specify allocations for those species where no allocations have been specified.

Table 2-20. Allocations for snapper grouper species established in other amendments. Allocations are specified in wreckfish and black grouper in **Actions 7** and **12**, respectively.

	Allocations	
	Commercial	Recreational
Black sea bass	43%	57%
Gag	51%	49%
Golden tilefish	97%	3%
Red porgy	50%	50%
Snowy grouper	95%	5%
Vermilion snapper	68%	32%
Red grouper (proposed in 24)	45%	55%

Alternative 2 (Preferred). Specify allocations for species that do not currently have allocations between two sectors, commercial and recreational, using the following equation:
 Allocation by sector = (0.5 * catch history) + (0.5 * current trend) whereby, catch history = average landings 1986-2008, current trend = average landings 2006-2008 for this amendment. The commercial and recreational ACLs specified for 2011 would remain in effect beyond 2011 until modified.

Alternative 3. Specify allocations for species that do not currently have allocations among three sectors, commercial, recreational, and for-hire, using the following equation:
 Allocation by sector = (0.5 * catch history) + (0.5 * current trend) whereby, catch history = average landings 1986-2008, current trend = average landings 2006-2008 for this amendment. The commercial and recreational ACLs specified for 2011 would remain in effect beyond 2011 until modified.

Alternative 4. Specify allocations for species that do not currently have allocations between two sectors, commercial and recreational using data from 1986-2008. The commercial and recreational ACLs specified for 2011 would remain in effect beyond 2011 until modified.

Alternative 5. Specify allocations for species that do not currently have allocations between two sectors, commercial and recreational using data from 1986-1998. The commercial and recreational ACLs specified for 2011 would remain in effect beyond 2011 until modified.

Alternative 6. Specify allocations for species that do not currently have allocations between two sectors, commercial and recreational using data from 1999-2008. The commercial and recreational ACLs specified for 2011 would remain in effect beyond 2011 until modified.

Alternative 7. Specify allocations for species that do not currently have allocations between two sectors, commercial and recreational using data from 2006-2008. The commercial and recreational ACLs specified for 2011 would remain in effect beyond 2011 until modified.

Table 2-21. Percentage of ACL that would be allocated to the commercial and recreational sectors under **Preferred Alternative 2**, and **Alternatives 4, 5, 6, and 7** as well as commercial, private, and for-hire sectors under **Alternative 3**. Allocations will be established for red grouper in Amendment 24. Allocations for wreckfish and black grouper are addressed in **Actions 7 and 12**, respectively.

Species or Species Complex	Preferred Alternative 2		Alternative 3			Alternative 4		Alternative 5		Alternative 6		Alternative 7	
	Comm	Rec	Comm	Private	For-Hire	Comm	Rec	Comm	Rec	Comm	Rec	Comm	Rec
Deep-Water Grouper & Tilefish													
Yellowedge Grouper	94%	6%	94%	5%	1%	94%	6%	98%	2%	88%	12%	100%	0%
Blueline Tilefish	64%	36%	64%	11%	25%	73%	27%	95%	5%	57%	43%	38%	62%
Silk Snapper	74%	26%	74%	3%	23%	74%	26%	67%	33%	85%	15%	71%	29%
Jacks													
Almaco Jack	46%	54%	46%	12%	42%	44%	56%	27%	73%	47%	53%	52%	48%
Banded Rudderfish	23%	77%	23%	11%	66%	22%	78%	15%	85%	26%	74%	23%	77%
Lesser Amberjack	57%	43%	57%	15%	29%	62%	38%	70%	30%	53%	47%	29%	71%
Snappers													
Gray Snapper	27%	73%	27%	42%	31%	30%	70%	40%	60%	19%	81%	12%	88%
Lane Snapper	16%	84%	16%	48%	36%	17%	83%	22%	78%	10%	90%	6%	94%
Cubera Snapper	17%	83%	17%	46%	37%	16%	84%	16%	84%	17%	83%	26%	74%
Hinds & Grunts													
Red Hind	75%	25%	75%	15%	10%	76%	24%	78%	22%	74%	26%	70%	30%
Rock Hind	57%	43%	57%	11%	31%	55%	45%	40%	60%	65%	35%	67%	33%
White Grunt	35%	65%	35%	25%	40%	36%	64%	37%	63%	34%	66%	37%	63%
Individuals ACLs													
Atlantic Spadefish	15%	85%	15%	41%	45%	15%	85%	14%	86%	16%	84%	11%	89%
Blue Runner	15%	85%	15%	26%	58%	16%	84%	15%	85%	16%	84%	14%	86%
Gray Triggerfish	47%	53%	47%	24%	29%	47%	53%	49%	51%	46%	54%	44%	56%
Scamp	71%	29%	71%	7%	21%	72%	28%	77%	23%	66%	34%	67%	33%
Speckled Hind	52%	48%	52%	5%	43%	52%	48%	50%	50%	55%	45%	59%	41%
Hogfish	37%	63%	37%	58%	6%	38%	62%	42%	58%	30%	70%	28%	72%
Yellowtail Snapper ₁	72%	28%	72%	12%	16%	73%	27%	70%	30%	77%	23%	65%	35%
Red Snapper	32%	68%	32%	36%	32%	33%	67%	40%	60%	47%	53%	24%	76%

Species or Species Complex	Preferred Alternative 2		Alternative 3			Alternative 4		Alternative 5		Alternative 6		Alternative 7	
	Comm	Rec	Comm	Private	For-Hire	Comm	Rec	Comm	Rec	Comm	Rec	Comm	Rec
Greater Amberjack	52%	48%	52%	19%	29%	53%	47%	54%	46%	49%	51%	43%	57%
Mutton Snapper ¹	24%	76%	24%	19%	57%	26%	74%	30%	70%	19%	81%	10%	90%

¹ Post-stratifies MRFSS data in Monroe County to the South Atlantic.

Table 2-22. Summary of effects under Action 4.

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Alternative 1 (No Action)	(-) Only six out of 73 Snapper Grouper species would have allocations. A single ACL would be established for both sectors, no ACLs in the recreational sector, and limited options for AMs.	(+-) Maintains current caps on landings between commercial and recreational sectors.
Alternative 2 (Preferred).	(+) Would divide allocations among two sectors based on historical landings from 1986-2008, and 2006-2008. Combines beneficial effects of older data (favoring commercial sector) and newer data (favoring recreational sector). Sector specific ACLs would be based on allocations.	(+-) Groups with a higher allocation would have a higher economic benefit. This alternative considers both sectors, with two time frames that may represent them in a fair manner.
Alternative 3.	(+-) Benefits could be identical to Alternative 2 (Preferred) , except that a third sector (for-hire) would be added. This could have a lower benefit compared to Alternative 2 (Preferred) due to a greater chance of the ACLs to be exceeded for the recreational sector(s).	(+-) Benefits could be identical to Alternative 2 (Preferred) , with greater financial stability to the for-hire sector.
Alternative 4.	(+-) Benefits could be almost identical to Alternative 2 (Preferred) , except that all landings data would be from 1986-2008.	(+-) Benefits could be higher for the recreational sector than the commercial sector.
Alternative 5.	(+-) Benefits could favor the commercial sector more than the recreational sector since they would consider landings data from 1986-1998.	(+-) Benefits could favor the commercial sector more than the recreational sector.
Alternative 6.	(+-) Benefits could favor the recreational sector more than the commercial sector since they would consider more recent landings data, from	(+-) Benefits could favor the recreational sector more than the commercial sector.

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
	1999-2008.	
Alternative 7.	(+-) Benefits could favor the recreational sector more than the commercial sector since they would consider more recent landings data, from 2006-2008.	(+-) Benefits could favor the recreational sector more than the commercial sector.

2.1.5 Action 5: Establish Annual Catch Limits (ACLs) and Optimum Yield (OY) for the Snapper Grouper Fishery

Alternative 1 (No Action). Retain existing ACLs and OYs (**Table 2-23**) for snapper grouper species or species groups. Do not specify ACLs and OYs for species that already have them.

Table 2-23. Annual Catch Limits and Optimum Yield information in place.

Species	ACLs In Place	OY Information in Place
Black grouper	Comm Aggregate ACL (black, red, gag) = 662,403 lbs gw (781,635 lbs ww) Rec Aggregate ACL = 648,663 lbs gw (765,422 lbs ww)	To be established in Action 14 of Comprehensive ACL Amendment.
Black sea bass	309,000 lbs gw comm. (556,200 lbs ww) 409,000 lbs gw (rec.)	Yield @ 75% MFMT (Amendment 15A) 2,324,196 lbs gw (2,742,551 lbs ww) when stock is at B_{MSY}
Gag	352,940 lbs gw comm. (416,469 lbs ww) 340,060 lbs gw rec. (401,271 lbs ww)	Yield @ 75% MFMT (Amendment 16) 1,238,000 lbs gw (1,460,840 lbs ww) when stock is at B_{MSY}
	<u>IN ADDITION</u> Comm Aggregate ACL (black, red, gag) = 662,403 lbs gw (781,635 lbs ww) Rec Aggregate ACL = 648,663 lbs gw (765,422 lbs ww)	
Golden tilefish	282,819 lbs comm. (316,757 lbs ww) 1,578 fish rec.	Yield @ 75% MFMT (Amendment 15B) 291,566 lbs gw (326,554 lbs ww)
Red grouper	Comm Aggregate ACL (black, red, gag) = 662,403 lbs gw (781,635 lbs ww) Rec Aggregate ACL = 648,663 lbs gw (765,422 lbs ww)	Will be specified in Amendment 24
Snowy grouper	82,900 lbs gw comm. (97,822 lbs ww) 523 fish rec.	Yield @ 75% MFMT (Amendment 15A) 255,747 lbs gw (301,781 lbs ww) when stock is at B_{MSY}
Speckled hind	0 (landings only) comm. and rec.	Yield @ F40% SPR (Amendment 11) No value specified

Species	ACLs In Place	OY Information in Place
Vermilion snapper	315,523 lb gw (350,231 lbs ww) Jan-June; comm. 302,523 lbs gw (335,801, lbs ww) July-Dec; comm. 307,315 lbs gw (341,120 lbs ww) recreational	Yield @ 75% MFMT (Amendment 16) 2,306,731 lbs gw (2,560,471 lbs ww) When stock at B_{MSY} , biomass and MSY values determined unreliable from assessment. (Value from Vermilion Snapper Update Assessment 2007)
Warsaw grouper	0 (landings only) comm. and rec.	Yield @ F40% SPR (Amendment 11) No value specified
Red snapper	0 (landings only) comm. and rec.	Yield @ 98% MFMT (Amendment 17A) 2,184,685 lbs gw (2,425,000 lbs ww) when stock is at B_{MSY}
Red porgy	190,050 lbs gw comm. (197,652 lbs ww) 190,050 lbs gw rec. (197,657 lbs ww)	Yield @ 75% MFMT (Amendment 15A) 584,711 lbs gw (608,099 ww) when stock is at B_{MSY}
Greater amberjack	1,169,931 lbs gw comm. (1,216,782 lbs ww) Recreational ACL specified in Action 5 Table 4-27 of Comprehensive ACL Amendment	Specified in Action 5, Table 4-27 of Comprehensive ACL Amendment

Alternative 2 (Preferred). Establish ACLs for species as needed where $ACL = OY = ABC$.

Alternative 3. Establish ACLs for species as needed where $ACL = OY = 90\%$ of the ABC.

Alternative 4. Establish ACLs for species as needed where $ACL = OY = 80\%$ of the ABC.

Table 2-24. ACLs and OYs for species based on preferred **Alternative 2** and **Alternatives 3** and **4**. The numbers below reflect the new ABC values as per **Table 2-14**.

Species	ACL=OY=ABC Preferred Alternative 2	ACL=OY=90% of ABC Alternative 3	ACL=OY=80% of ABC Alternative 4
Yellowedge grouper	30,221	27,199	24,177
Blueline tilefish	592,602	533,342	474,082
Silk snapper	27,519	24,767	22,015
Goliath grouper	0	0	0
Nassau grouper	0	0	0
Scamp	492,572	443,315	394,058
Blue runner	1,289,941	1,160,947	1,031,953
Atlantic spadefish	282,841	254,557	226,273
Almaco jack	291,922	262,730	233,538
Banded rudderfish	152,999	137,699	122,399
Lesser amberjack	10,568	9,511	8,454
Yellowtail snapper**	2,898,500	2,898,500	2,898,500

Hogfish	147,638	132,874	118,110
Gray snapper	894,019	804,617	715,215
Cubera snapper	31,772	28,595	25,418
Lane snapper	153,466	138,119	122,773
Red hind	25,885	23,297	20,708
Rock hind	37,569	33,812	30,055
White grunt*	635,899	572,309	508,719
Gray triggerfish*	672,565	605,309	538,052
Mutton snapper	926,600	833,940	741,280

*Includes unclassified grunts and triggerfishes because commercial landings of gray triggerfish are not identified to species and only one state identifies white grunt to species level. ** Per SSC recommendation from assessment. Note: This is the ACL for the Gulf of Mexico and South Atlantic combined, and numbers do not change for alternatives 3 and 4, since this is not an unassessed species. Alternatives to divide the ABC into Gulf of Mexico and South Atlantic are found in Action 15.

Table 2-25. Annual catch limits and optimal yield (lbs whole weight) to be set in this amendment. ACLs based on **Alternative 4 (preferred) in Action 2** (species groupings), **Alternative 7 (preferred) in Action 3** (ABC control rule), **Alternative 2 (preferred) in Action 4** (allocations), and **Alternative 2 (preferred) in Action 5** (ACLs and OY). ACLs for wreckfish and black grouper can be found in **Actions 8 and 13**, respectively. ACL for red grouper will be re-examined in Amendment 24.

Deep-Water Grouper & Tilefish	comm	rec	Individual ACLs	Comm	Rec
Yellowedge Grouper	428,037	222,305	Atlantic Spadefish	42,426	240,415
Blueline Tilefish			Blue Runner	193,491	1,096,450
Silk Snapper			Gray Triggerfish*	316,106	356,459
Jacks	comm	rec	Wreckfish	237,500	12,500
Almaco Jack	175,498	279,991	Scamp	349,726	142,846
Banded Rudderfish			Goliath Grouper	0	0
Lesser Amberjack			Nassau Grouper	0	0
Snappers	comm	rec	Hogfish	54,626	93,012
Gray Snapper	271,341	807,916	Yellowtail Snapper**	2,086,920	811,580
			Greater Amberjack***	1,023,360	944,640
			Mutton Snapper	222,384	704,216
Lane Snapper					
Cubera Snapper					
Hinds and Grunts	comm	rec			
Red Hind	263,393	435,960			
Rock Hind					

White Grunt		
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*Includes unclassified grunts and triggerfishes because commercial landings of gray triggerfish are not identified to species and only one state identifies white grunt to species level. ** Allocations are for the SA and Gulf of Mexico combined ABC. ***Assessed species, but with no current recreational ACL, commercial ACL shown here represents the preferred allocation percentage in Action 4.

Table 2-26. Summary of effects under Action 5.

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Alternative 1 (No Action)	(-) Would not meet the requirements of MSA to specify ACLs for all species in an FMU, and could lead to overfishing.	(+-) Smallest long-term, and greatest short-term benefits.
Alternative 2 (Preferred). ACL=OY=ABC	(+-) Would establish sector-specific ACLs, benefits are higher since AMs would be required for both sectors. Least conservative of the alternatives, since there is no buffer between ACL and ABC.	(+-) Smaller long-term short-term benefits when compared with Alternatives 3 and 4.
Alternative 3. ACL=OY=90% ABC	(+-) Would establish sector-specific ACLs, benefits are higher since AMs would be required for both sectors. Provides a buffer between ABC and ACL. Benefits could fall in-between Alternatives 2 and 4.	(+-) Greater long-term benefits than Alternative 2.
Alternative 4. ACL=OY=80% ABC	(+) Would establish sector-specific ACLs, benefits are higher since AMs would be required for both sectors. Most conservative of the alternatives. Provides a greater buffer between ABC and ACL, and therefore, greater benefits.	(+-) Smallest short-term, and largest long-term benefits.

2.1.6 Action 6: Specify Accountability Measures (AMs)/Annual Catch Targets (ACTs) for the Commercial Sector for species in the Snapper Grouper FMU

Alternative 1 (No Action). Do not specify new commercial AMs for the following species:

Yellowedge grouper	Blueline tilefish	Silk snapper	Almaco jack	Banded rudderfish	Lesser amberjack
Gray snapper	Lane snapper	Cubera snapper	White grunt	Atlantic spadefish	Greater amberjack
Red hind	Rock hind	Scamp	Hogfish	Yellowtail snapper	Blue runner
Gray triggerfish	Mutton snapper				

Alternative 2. Specify individual Annual Catch Targets (ACT) for the species in the table above.

Subalternative 2a (Preferred). Do not establish a commercial sector ACT.

Subalternative 2b. The individual ACT equals 90% of the individual ACL. The complex ACT equals 90% of the complex ACL.

Subalternative 2c. The individual ACT equals 80% of the individual ACL. The complex ACT equals 80% of the complex ACL.

Alternative 3 (Preferred). For the species in the table above, if an ACL (i.e., individual or complex) is met or is projected to be met, all subsequent purchase and sale is prohibited and harvest and/or possession is limited to the bag limit for the species covered by that ACL. For example, if a complex ACL is met or projected to be met, all purchase and sale of all the species in the complex is prohibited and harvest and/or possession is limited to the bag limit.

Alternative 4 (Preferred). For the species in the table above, if an ACL (i.e., individual or complex) is exceeded, the Regional Administrator shall publish a notice to reduce the ACL in the following season by the amount of the overage only if the species is overfished.

Table 2-27. Summary of effects under **Action 6.**

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Alternative 1 (No Action)	(-) Would not meet NS 1 guidelines and comply with the requirements under MSA. No positive benefits.	(+-) Greatest short-term and possible smallest long-term benefits.
Alternative 2: Commercial sector ACT Subalternative 2a (Preferred). No commercial sector ACT	(+-) AMs would apply when the commercial ACL is exceeded, no buffer between ACT and ACL. Benefits may be lower than subalternatives 2b and 2c.	(+-) Greater short-term and possible smaller long-term benefits.
Subalternative 2b. ACT = 90% commercial sector ACL	(+-) Provides a buffer between ACT and ACL. Benefits may be higher than Subalternative 2a and lower than	(+-) Benefits in-between subalternatives 2a and 2c.

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
	Subalternative 2c.	
Subalternative 2c. ACT = 80% commercial sector ACL	(+-) Provides a bigger buffer between ACT and ACL. Benefits may be highest of all subalternatives under Alternative 2.	(+-) Possible smaller short-term and long-term benefits.
Alternative 3 (Preferred). Commercial sector AM: Harvest/possession limited to bag limit	(+-) A form of post-season AM, possible positive benefits, especially when combined with Alternative 4 (Preferred).	(+-) Greater short-term benefits compared to Alternative 4 (Preferred) , but less than Alternative 1 (No Action).
Alternative 4 (Preferred). Commercial sector AM: ACL reduced in the following season by amount of overage.	(+-) A form of post-season AM, possible positive benefits, especially when combined with Alternative 3 (Preferred).	(+-) Greatest long-term benefits to the commercial fishery compared with Alternatives 3 (Preferred) and 1 (No Action).

2.1.7 Action 7: Specify Accountability Measures (AMs)/Annual Catch Targets (ACTs) for the Recreational Sector for species in the Snapper Grouper FMU

I. Types of Recreational AMs Under Consideration

- 1) ACTs
- 2) In-season AMs to prevent the ACL from being exceeded (i.e., closing fishery)
- 3) Post-season AMs
 - o Payback provisions applied in a year following an ACL overage
 - o Actions to prevent the ACL from being exceeded in the year following an ACL overage (i.e., shortening the following season, changing a bag limit).

II. Council Decision Process for Choosing Recreational AMs

The South Atlantic Council is employing a four-pronged approach to assessing the AM alternatives for the recreational sector (**Figure 2-1**). First, the South Atlantic Council determines whether or not to specify an ACT. The ACT alone would not trigger any corrective action. Second, the South Atlantic Council determines what years of landings would be used to determine whether or not an ACL overage has occurred. Next, the South Atlantic Council determines whether in-season action would be taken if the ACL is projected to be met. Lastly, the South Atlantic Council decides whether or not post-season AMs should be used to correct for ACL overages and/or prevent an ACL overage in the following year. The combination of the preferred alternatives designated under each of step of the decision process creates the recreational AM. The resultant AM would be applied separately to species that have been assigned ACLs as part of a species complex, and to snapper-grouper species that have been assigned individual ACLs (See **Tables 2-28** and **2-29**).

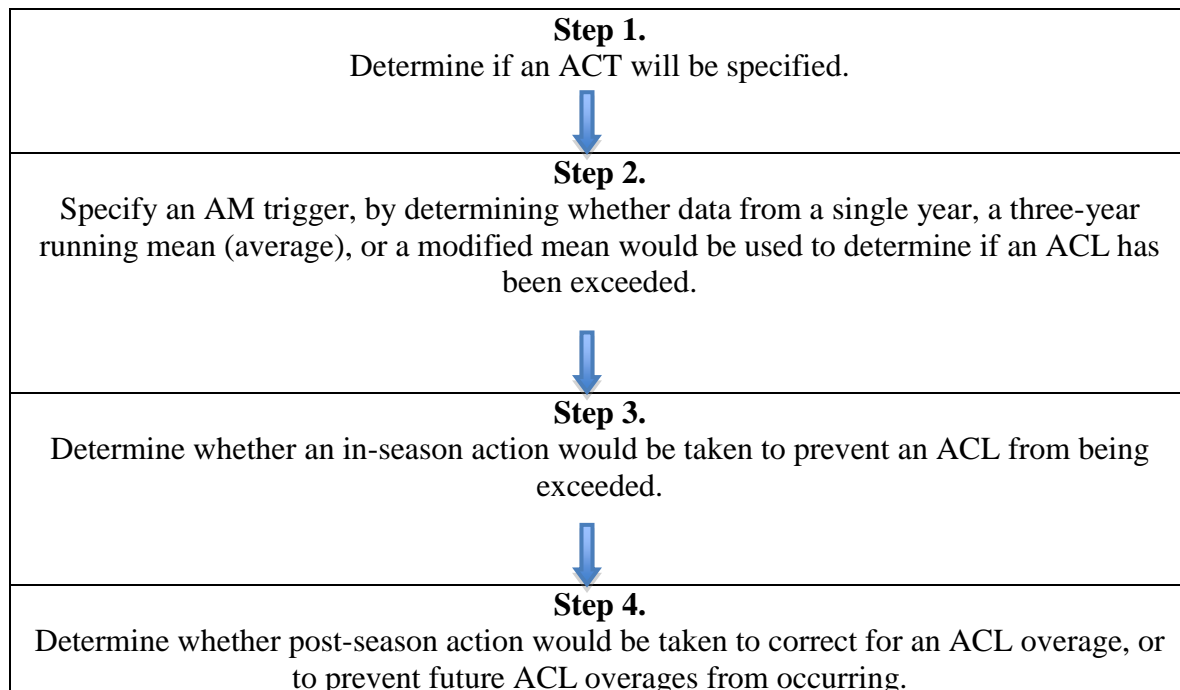




Figure 2-1. Decision process for choosing preferred AM alternatives for the recreational sector of the snapper grouper fishery.

Table 2-28. Species that are part of Species-Complex ACLs that require recreational AMs

Hinds & Grunts Complex	Snappers Complex	Jacks Complex	Deepwater Grouper & Tilefish Complex
Red Hind	Gray Snapper	Almaco Jack	Yellowedge Grouper
Rock Hind	Lane Snapper	Banded Rudderfish	Blueline Tilefish
White Grunt	Cubera Snapper	Lesser Amberjack	Silk Snapper

*AMs for species in this table would be applied on a species complex basis.

Table 2-29. Species that have been assigned individual ACLs and require recreational AMs

Snapper Grouper Species With Individual ACLs
Atlantic Spadefish
Greater Amberjack
Scamp
Red Pogy
Hogfish
Yellowtail Snapper
Blue Runner
Gray Triggerfish
Mutton Snapper

*AMs for species in this table would be applied on an individual basis.

III. Recreational AM Alternatives

Alternative 1 (No Action). Do not specify new recreational AMs for the following species:

Yellowedge grouper	Blueline tilefish	Silk snapper	Almaco jack	Banded rudderfish	Lesser amberjack
Gray snapper	Lane snapper	Cubera snapper	White grunt	Atlantic spadefish	Greater amberjack
Red hind	Rock hind	Scamp	Red pogy	Hogfish	Yellowtail snapper
Blue runner	Gray triggerfish	Mutton snapper			

Decision 1. Specify an ACT?

Alternative 2. Specify an ACT.

Subalternative 2a. Do not specify an ACT.

Subalternative 2b. The ACT equals 85% of the ACL.

Subalternative 2c. The ACT equals 75% of the ACL.

Subalternative 2d (Preferred). The ACT equals $ACL \cdot (1 - PSE)$ or $ACL \cdot 0.5$, whichever is greater.

Decision 2. What is the AM trigger?

Alternative 3. Specify the AM trigger.

Subalternative 3a. Do not specify an AM trigger.

Subalternative 3b (Preferred). If the *annual landings* exceed the ACL in a given year.

Subalternative 3c. If the *mean landings* for the past three years exceed the ACL.^{1,2}

Subalternative 3d. If the *modified mean landings* exceed the ACL. The modified mean is the average of the most recent 5 years of available landings data with highest and lowest landings estimates removed.^{1,2}

Subalternative 3e. If the lower bound of the 90% *confidence interval* estimate of the MRFSS landings' population mean plus headboat landings is greater than the ACL.

Notes:

¹ *Start the clock over.* In any year the ACL is reduced or increased, the sequence of future ACLs will begin again starting with a single year of landings compared to the ACL for that year, followed by a 2-year average of landings compared to the 2-year average annual catch limits in the next year, followed by a 3-year average of landings compared to the 3-year average of ACLs for the third year, and so on.

² For 2011, use only 2011 landings. For 2012, use the mean landings of 2011 and 2012. For 2013 and beyond, use the most recent three-year running mean.

Decision 3. Is there an in-season AM?

Alternative 4. Specify the in-season AM.

Subalternative 4a (Preferred). Do not specify an in-season AM.

Subalternative 4b. The Regional Administrator shall publish a notice to close the recreational sector when the ACL is projected to be met.

Decision 4. Is there a post-season AM?

Alternative 5. Specify the post-season AM.

Subalternative 5a. Do not specify a post-season AM.

Subalternative 5b. For post-season accountability measures, compare ACL with landings over a range of years. For 2011, use only 2011 landings. For 2012, use the mean landings of 2011 and 2012. For 2013 and beyond, use the most recent three-year running mean.¹

Subalternative 5c. *Monitor following year.* If the ACL is exceeded, the following year's landings would be monitored for persistence in increased landings. The Regional Administrator would take action as necessary.

Subalternative 5d (Preferred). *Monitor following year and shorten season as necessary.* If the ACL is exceeded, the following year's landings would be monitored in-season for persistence in increased landings. The Regional Administrator will publish a notice to reduce the length of the fishing season as necessary.

Subalternative 5e. *Monitor following year and reduce bag limit as necessary.* If the ACL is exceeded, the following year's landings would be monitored for persistence in increased landings. The Regional Administrator will publish a notice to reduce the bag limit as necessary.

Subalternative 5f. *Shorten following season.* If the ACL is exceeded, the Regional Administrator shall publish a notice to reduce the length of the following fishing year by the amount necessary to ensure landings do not exceed the ACL for the following fishing season.

Subalternative 5g. *Payback.* If the ACL is exceeded, the Regional Administrator shall publish a notice to reduce the ACL in the following season by the amount of the overage.

**Why would an ACL change?*

An ACL could change for the following reasons:

- (1) From a rebuilding plan that specifies increasing ACLs.
- (2) Based on new ABC recommendations from the SSC, including those from an updated stock assessment.
- (3) From payback provisions if implemented.
- (4) From a re-estimate of data.

Table 2-30. Recreational ACTs (lbs whole weight) to be established in this amendment as per **subalternative 2d (preferred)** in **Action 7**. ACTs are based on **Alternative 4 (preferred)** in **Action 2** (species groupings), **Alternative 7 (preferred)** in **Action 3** (ABC control rule), **Alternative 2 (preferred)** in **Action 4** (allocations), and **Alternative 2 (preferred)** in **Action 5** (ACLs and OY). ACTs for wreckfish and black grouper can be found in **Actions 9** and **14**, respectively. ACT for red grouper based on ACL being proposed in Amendment 24.

Deepwater Grouper & Tilefish	Rec ACT	Individual ACTs	Rec ACT
Yellowedge Grouper	137,074	Atlantic Spadefish	173,051
Blueline Tilefish		Blue Runner	890,975
Silk Snapper		Gray Triggerfish*	302,705
Jacks	Rec ACT	Wreckfish	12,500
Almaco Jack	199,967	Scamp	91,164
Banded Rudderfish		Goliath Grouper	0
Lesser Amberjack		Nassau Grouper	0
Snappers	Rec ACT	Hogfish	66,783
Gray Snapper	707,918	Yellowtail Snapper**	708,672
		Greater Amberjack***	805,400
Lane Snapper		Mutton snapper	743,191
Cubera Snapper			
Hinds and Grunts	Rec ACT		
Red Hind	367,253		
Rock Hind			
White Grunt			

Source: Average PSE's from MRFSS (2005-2009).

*Includes unclassified grunts and triggerfishes because commercial landings of gray triggerfish are not identified to species and only one state identifies white grunt to species level.

** Per SSC recommendation from assessment. Note: This is based on the ACL for the Gulf of Mexico and South Atlantic combined. Alternatives to divide the ABC into Gulf of Mexico and South Atlantic are found in Action 15. Note: Nassau grouper and Goliath grouper are not included in the table above since these are prohibited species, and ACL = 0. ***Assessed species, but with no current recreational ACL, commercial ACL shown here represents the preferred allocation percentage in Action 4.

Table 2-31. Summary of effects under **Action 7**.

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
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Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Alternative 1 (No Action)	(-) Would not meet NS 1 guidelines and comply with the requirements under MSA. No positive benefits.	(+-) Greatest long-term negative effects.
Alternative 2: Specify a recreational sector ACT Subalternative 2a. No ACT	(+-) Would not provide a buffer between ACT and ACL.	(+-) Smaller long-term and greater short-term benefits.
Subalternative 2b. ACT = 85% recreational sector ACL	(+-) Provides a buffer between ACT and ACL.	(+-) Greater long-term and smaller short-term benefits.
Subalternative 2c. ACT = 75% recreational sector ACL	(+-) Provides a bigger buffer between ACT and ACL when compared with Subalternative 2b.	(-) Smaller short-term and long-term benefits.
Subalternative 2d (Preferred). ACT = recreational sector ACL [(1-PSE) or 0.5, whichever is greater]	(+-) Provides the greatest benefit of the subalternatives under Alternative 2 , by adjusting the ACL by 50% or the percent standard error.	(+-) Smallest short-term and greatest long-term benefits when compared with subalternatives 2b and 2c .
Alternative 3: Specify the AM trigger. Subalternative 3a. No AM trigger.	(+-) Same as Alternative 1 (No Action) .	(+-) No indirect economic effects.
Subalternative 3b (Preferred). Annual landings > ACL.	(+-) Does not address anomalous spikes in landings, only one year's data used to determine trigger.	(+-) Greatest short-term negative, and positive long-term effects of all subalternatives under Alternative 3 .
Subalternative 3c. Mean landings for past 3 years > ACL.	(+-) Addresses anomalous spikes in landings, but spikes would affect the average for three years and could trigger AMs when not necessary.	(+-) Positive long-term benefits higher than subalternatives 3d and 3e , but lower than Subalternative 3b (Preferred) .
Subalternative 3d. Modified mean (most recent 5 years landings data with the highest and lowest removed) > ACL.	(+-) Similar to Subalternative 3c , may have more benefits due to two additional years of data used to determine overage.	(+-) Positive long-term benefits higher than subalternatives 3e , but lower than subalternatives 3b (Preferred) and 3c .
Subalternative 3e. Lower bound of 90% confidence interval estimate of the landings' mean > ACL.	(+-) More precautionary than Subalternatives 3c and 3d .	(+-) Smallest short-term negative, and positive long-term effects of all subalternatives under

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
		Alternative 3.
Alternative 4: Specify the in-season AM. Subalternative 4a (Preferred). No in-season AM.	(+-) May have negligible effects due to the selection of current ACT (Subalternative 2d, Preferred).	(+-) No indirect economic effects.
Subalternative 4b. Recreational fishery closed.	(+-) Requires in-season monitoring of the recreational fishery, which has time lags in reporting and uncertainty in landings data. Possible unnecessary negative benefits.	(+-) Greater short-term negative effects compared with Subalternative 4a .
Alternative 5: Specify the post-season AM. Subalternative 5a. No post-season AM.	(+-) May have negative effects since there would be no penalty for going over the ACL.	(+-) No indirect economic effects.
Subalternative 5b. Compare ACL with 3-year running mean.	(+-) Addresses anomalous spikes in landings, but spikes would affect the average for three years and could prescribe AMs when not necessary.	(+-) No indirect economic effects.
Subalternative 5c. Monitor following year.	(+) Ensures that AMs are employed when absolutely necessary.	(+-) Same indirect economic effects as Subalternatives 5d (Preferred) and 5e .
Subalternative 5d (Preferred). Monitor following year and shorten season as necessary.	(+-) Ensures that AMs are triggered when absolutely necessary, biologically beneficial since the following fishing season and associated mortality is addressed.	(+-) Negative short-term indirect economic effects smaller than Subalternative 5e .
Subalternative 5e. Monitor following year and reduce bag limit as necessary.	(+-) Ensures that AMs are triggered when absolutely necessary, biologically beneficial since fewer fish can be taken.	(+-) Negative short-term indirect economic effects greater than Subalternative 5d (Preferred) .
Subalternative 5f. Shorten fishing season by amount necessary.	(+-) There is no monitoring component, not as beneficial as Subalternatives 5c-5e .	(+-) Negative short-term indirect economic effects greater than Subalternatives 5c-5e .
Subalternative 5g. Payback, reduce ACL by amount of overage in following season.	(+-) Biologically beneficial due to reduced ACL.	(+-) Negative short-term indirect economic effects greater than Subalternative 5f .

2.1 Snapper Grouper Fishery Management Plan (wreckfish)

Acceptable Biological Catch (ABC) Control Rule for Wreckfish

The South Atlantic Council's SSC met in April 2010 to discuss ABC Control Rules for unassessed species. After extensive discussion of wreckfish issues, the SSC established that ABC was unknown and that the South Atlantic Council should consider an annual catch limit that did not exceed 200,000 pounds. One of the issues discussed was whether the management system of individual quotas tied to portions of the allowable harvest level potentially alters the relation between the recommended harvest and the realized harvest. Effort is reduced in the fishery, to the extent that recent landings are confidential because fewer than 3 harvesters are in operation in recent years. Landings are reduced and recent trends in landings, even if such landings could be publicly disseminated, are possibly not representative of fishery productivity.

The SSC discussed setting an ABC for wreckfish during their August 2010 meeting. The SSC stated that the 2001 assessment (Vaughan et al. 2001) indicated depletion at higher historical levels of effort and that the catch reductions appeared to have come mainly from gear restrictions, spawning season closure, and individual transferable quota implementation. Since stock size cannot be projected, an estimate of overfishing limit from the 2001 assessment could not be produced. A DBSRA or DCAC estimate (see section 1.4.2) could be calculated, but recent landings are confidential, therefore the SSC was not be able to perform the calculations to produce these estimates. The SSC agreed the 2001 assessment was dated and did not apply to current landings and conditions. The SSC concluded that a control rule based on catch-only data should be used even though a stock assessment exists for wreckfish.

In the absence of a current assessment, using a catch-only scenario at "moderate" historical catch (**Table 1-3 in Section 1.4.2**), it is possible that increasing catch will result in overfishing. The SSC reached consensus that catch-only analysis was appropriate because it was inappropriate to use an old assessment applied to new catch data for catches coming from potentially different fishing conditions than at the time of the assessment. Although an estimate of F_{MSY} exists, it cannot be applied to current stock biomass. A recent estimate of F is close to F_{MSY} , so increasing F could lead to overfishing if there were increases in catch. Even though B_{MSY} is unknown, fishing at F_{MSY} on a stock that is below B_{MSY} is acceptable for a stock that is not overfished and this will allow rebuilding. Therefore, the SSC recommended setting the ABC at the average historical catch (1997-recent) of 250,000 lbs in September 2010. Due to confidentiality of data, a more precise level could not be set. This level of harvest would cap fishery where it is, consistent with the "moderate" level of historical catch in Methot's table for catch-only scenarios (**Table 1-3 in Section 1.4.2**). The SSC also recommended conducting DCAC or DBSRA analysis in the next year to compare with the current catch-only recommendation.

2.2.1 Action 8: Specify Allocations for the Wreckfish Fishery

[Note: When considering two sectors (Commercial and Recreational), the Recreational sector includes private recreational (shore and rental boats) as well as for-hire (charter/headboat).]

Alternative 1 (No Action). Do not specify allocation.

In this scenario, the TAC is essentially allocated 100% to the commercial sector.

Alternative 2. Divide allocations as 90% Commercial and 10% Recreational.

Alternative 3 (Preferred). Divide allocations as 95% Commercial and 5% Recreational.

Alternative 4. Allocate 100% of the allowable catch to the commercial sector.

Table 2-32. Allocation of wreckfish (lbs whole weight) by sector.

Alternative	Commercial		Recreational	
	Allocation(%)	Pounds (ww)	Allocation(%)	Pounds (ww)
1 (No Action)	100	250,000	0	0
2	90	225,000	10	25,000
3 (Preferred)	95	237,500	5	12,500
4	100	250,000	0	0

Table 2-33. Summary of effects under **Action 8.**

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Alternative 1 (No Action)	(-) ACL would not be specified for the recreational sector.	(+/-) No recreational allocation, less level of stability and predictability. Greatest long-term benefit to commercial fishery.
Alternative 2. 90% Comm./10% Rec.	(+/-) ACLs would be specified for both sectors. Lesser benefit than Alternative 3 (Preferred) due to higher uncertainty in estimates of recreational landings. Could help mitigate bycatch mortality.	(+/-) Greater benefits to recreational fishery compared with Alternative 3 (Preferred) .
Alternative 3 (Preferred). 95% Comm./5% Rec.	(+/-) ACLs would be specified for both sectors. Higher benefit than Alternative 2 , especially if all landings are tracked closely, with mandatory reporting in both sectors. Could help mitigate bycatch mortality.	(+/-) Smaller benefits to recreational fishery compared with Alternative 2 (Preferred) .
Alternative 4.	(-) Identical to Alternative 1	(+/-) Identical to Alternative 1

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
100% Comm.	(No Action).	(No Action).

2.2.2 Action 9: Establish an Annual Catch Limit (ACL) and Optimum Yield (OY) for Wreckfish

Alternative 1 (No Action). Do not establish an Annual Catch Limit (ACL) for wreckfish.

Alternative 2 (Preferred). ACL = OY = ABC.

Alternative 3. ACL = OY = 90% of the ABC.

Alternative 4. ACL = OY = 80% of the ABC.

Table 2-34. ACLs (lbs whole weight) for wreckfish.

Alternative	ACL (lbs ww)
1 (No Action)	N/A (TAC=2 Million lbs)
2 (Preferred) (ACL=OY=ABC)	250,000
3 (ACL=OY=90% ABC)	225,000
4 (ACL=OY=80% ABC)	200,000

Table 2-35. Summary of effects under **Action 9**.

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Alternative 1 (No Action)	(-) Would allow for an ACL = 2 million pounds, higher than the current ABC recommendation of 250,000 pounds. Would not meet NS 1 guidelines.	(+-) Smallest long-term positive benefits of all alternatives.
Alternative 2 (Preferred). ACL=OY=ABC	(+-) Would not allow for a buffer between ACL and ABC. Possible risk of exceeding ABC.	(+-) Higher positive short-term benefits, smallest positive long-term benefits when compared with Alternatives 3 and 4 .
Alternative 3. ACL=OY=90% ABC	(+-) Would allow for a buffer between ACL and ABC.	(+-) Benefits in-between Alternative 2 (Preferred) and Alternative 4 .
Alternative 4. ACL=OY=80% ABC	(+-) Would allow for a larger buffer between ACL and ABC, greatest biological benefit.	(+-) Higher positive long-term benefits compared with Alternative 3 .

2.2.3 Action 10: Specify Accountability Measures (AM) for the Wreckfish Fishery

Alternative 1 (No Action). Do not specify AMs for a recreational sector of the wreckfish fishery. Do not add new AMs for the commercial sector of the wreckfish fishery. Currently, the commercial sector for wreckfish is managed under an ITQ system, whereby permitted fishery participants are only allowed to harvest the poundage of wreckfish associated with the shares issued to them each year.

Decision 1. Specify an ACT?

The specification of a recreational ACT for wreckfish was moved to the rejected alternatives appendix.

Decision 2. What is the AM trigger?

Alternative 2. Specify the AM trigger.

Subalternative 2a. Do not specify an AM trigger.

Subalternative 2b (Preferred). If the *annual landings* exceed the ACL in a given year.

Subalternative 2c. If the *mean landings* for the past three years exceed the ACL.^{1,2}

Subalternative 2d. If the *modified mean landings* exceed the ACL. The modified mean is the average of the most recent 5 years of available landings data with highest and lowest landings estimates removed.^{1,2}

Subalternative 2e. If the lower bound of the 90% *confidence interval* estimate of the MRFSS landings' population mean plus headboat landings is greater than the ACL.

Notes:

¹ *Start the clock over.* In any year the ACL is reduced or increased, the sequence of future ACLs will begin again starting with a single year of landings compared to the ACL for that year, followed by a 2-year average of landings compared to the 2-year average annual catch limits in the next year, followed by a 3-year average of landings compared to the 3-year average of ACLs for the third year, and so on.

² For 2011, use only 2011 landings. For 2012, use the mean landings of 2011 and 2012. For 2013 and beyond, use the most recent three-year running mean.

Decision 3. Is there an in-season AM?

The specification of a commercial and recreational in-season AM for wreckfish (closing recreational fishery when ACL met) was moved to the rejected alternatives appendix.

Decision 4. Is there a post-season AM?

Alternative 3. Specify the recreational post-season AM.

Subalternative 3a. Do not specify a recreational post-season AM.

Subalternative 3b. For post-season accountability measures, compare recreational ACL with recreational landings over a range of years. For 2011, use only 2011 landings. For 2012, use the mean landings of 2011 and 2012. For 2013 and beyond, use the most recent three-year running mean.¹

Subalternative 3c. *Monitor following year.* If the ACL is exceeded, the following year’s landings would be monitored for persistence in increased landings. The Regional Administrator would take action as necessary.

Subalternative 3d (Preferred). *Monitor following year and shorten season as necessary.* If the ACL is exceeded, the following year’s landings would be monitored in-season for persistence in increased landings. The Regional Administrator will publish a notice to reduce the length of the fishing season as necessary.

Subalternative 3e. *Monitor following year and reduce bag limit as necessary.* If the ACL is exceeded, the following year’s landings would be monitored for persistence in increased landings. The Regional Administrator will publish a notice to reduce the bag limit as necessary.

Subalternative 3f. *Shorten following season.* If the ACL is exceeded, the Regional Administrator shall publish a notice to reduce the length of the following fishing season by the amount necessary to ensure landings do not exceed the ACL for the following fishing year.

Subalternative 3g. *Payback.* If the ACL is exceeded, the Regional Administrator shall publish a notice to reduce the ACL in the following season by the amount of the overage.

Table 2-36. Summary of effects under **Action 10.**

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Commercial sector: Alternative 1 (No Action)	(+-) ITQ acts as a form of AM. Current TAC of 2 million lbs has not been exceeded. New ABC of 250,000 lbs would add more benefits.	(+-) No indirect economic effects.
Recreational sector: Alternative 2: Specify the AM trigger. Subalternative 2a. No AM trigger.	(+-) Same as Alternative 1 (No Action).	(+-) No indirect economic effects.
Subalternative 2b (Preferred). Annual landings > ACL.	(+-) Does not address anomalous spikes in landings, only one year’s data used to	(+-) Greatest positive indirect long-term economic effects of all subalternatives under

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
	determine trigger.	Alternative 2.
Subalternative 2c. Mean landings for past 3 years > ACL.	(+-) Addresses anomalous spikes in landings, but spikes would affect the average for three years and could trigger AMs when not necessary.	(+-) Positive indirect long-term economic effects in-between Subalternative 2b (Preferred) and Subalternative 2d.
Subalternative 2d. Modified mean (most recent 5 years landings data with the highest and lowest removed) > ACL.	(+-) Similar to Subalternative 3c , would have more benefits due to two additional years of data used to determine overage.	(+-) Positive indirect long-term economic effects lower than Subalternative 2c , but higher than Subalternative 2e.
Subalternative 2e. Lower bound of 90% confidence interval estimate of the landings' mean > ACL.	(+-) More precautionary than Subalternatives 3c and 3d.	(+-) Smallest positive indirect long-term economic effects of all subalternatives under Alternative 2.
Alternative 3: Specify the post-season AM. Subalternative 3a. No post-season AM.	(+-) May have negative effects since there would be no penalty for going over the ACL.	(+-) Smallest negative indirect short-term economic effects of all subalternatives under Alternative 3.
Subalternative 3b. Compare ACL with 3-year running mean.	(+-) Addresses anomalous spikes in landings, but spikes would affect the average for three years and could prescribe AMs when not necessary.	(+-) Smaller negative indirect short-term economic effects compared to Subalternatives 3c-3g.
Subalternative 3c. Monitor following year.	(+) Ensures that AMs are employed when absolutely necessary.	(+-) Smaller negative indirect short-term economic effects compared to Subalternatives 3d-3g.
Subalternative 3d (Preferred). Monitor following year and shorten season as necessary.	(+-) Ensures that AMs are triggered when absolutely necessary, biologically beneficial since the following fishing season and associated mortality is addressed.	(+-) Negative indirect short-term economic effects in-between Subalternatives 3c-3e.
Subalternative 3e. Monitor following year and reduce bag limit as necessary.	(+-) Ensures that AMs are triggered when absolutely necessary, biologically beneficial since fewer fish can be taken.	(+-) Negative indirect short-term economic effects higher than Subalternatives 3a-3d , but, lower than Subalternatives 3f and 3g.
Subalternative 3f. Shorten fishing season by amount necessary.	(+-) There is no monitoring component, not as beneficial as Subalternatives 3c-3e.	(+-) Negative indirect short-term economic effects greater than Subalternatives 3a-3e , but lower than Subalternative

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
		3g.
Subalternative 3g. Payback, reduce ACL by amount of overage in following season.	(+-) Biologically beneficial due to reduced ACL.	(+-) Greatest negative indirect short-term economic effects of all subalternatives under Alternative 3.

2.2.4 Action 11: Establish Management Measures for Wreckfish

Alternative 1 (No Action). Retain the January 15-April 15 spawning season closure. Wreckfish is included in the 20-fish snapper grouper aggregate bag limit. The TAC for wreckfish is 2 million pounds.

Recreational Sector

Alternative 2. Remove wreckfish from the 20 fish aggregate snapper grouper bag limit.

Alternative 3 (Preferred). Implement a one-wreckfish per vessel per day bag limit for the recreational fishery.

Alternative 4. Implement a one-wreckfish per angler per day bag limit for the recreational fishery.

Alternative 5. Implement a 5-wreckfish per vessel per day bag limit for the recreational fishery.

Alternative 6 (Preferred). Establish a July-August recreational season.

Alternative 7. Establish a May-June recreational season.

Alternative 8. Exempt the recreational sector from having to have commercial permits (snapper-grouper and wreckfish), wreckfish shares, and coupons to land wreckfish.

Table 2-37. Summary of effects under **Action 11.**

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Commercial sector: Alternative 1 (No Action)	(+-) Retains the spawning season closure of January 15-April 15, reduced ABC of 250,000 lbs could lead to positive effects	(+-) No net benefits.
Recreational sector: Alternative 2. Removed from 20 fish aggregate snapper grouper bag limit	(+-) Same as Alternative 1 (No Action).	(+-) Same as Alternative 1 (No Action).

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Alternative 3 (Preferred). 1-fish/vessel/day bag limit	(+-) More conservative than Alternatives 4 and 5 , hence more positive effects.	(+-) Minimal direct and indirect economic benefits.
Alternative 4. 1-fish/angler/day bag limit	(+-) Benefits in between Alternatives 3 and 5 .	(+-) Minimal direct and indirect economic benefits.
Alternative 5. 5-fish/vessel/day bag limit	(+-) Least conservative of Alternatives 3, 4, and 5 , hence smaller benefits.	(+-) Minimal direct and indirect economic benefits.
Alternative 6 (Preferred). July-August recreational season	(+-) More beneficial than Alternative 7 , provides additional time after spawning season closure ends.	(+-) Indirect economic benefits greater than Alternative 7 .
Alternative 7. May-June recreational season	(+-) Less beneficial than Alternative 6 (Preferred) .	(+-) Indirect economic benefits smaller than Alternative 7 .
Alternative 8. Exempt recreational fishermen from commercial regulations.	(+-) Administrative in nature, unknown biological effects.	(+-) Reduced administrative burden, possible positive social effects.

2.3.1 Action 12: Specify Jurisdictional Allocations for Black Grouper

Alternative 1 (No action). Do not establish jurisdictional allocation of the black grouper acceptable biological catch (ABC) between the Gulf of Mexico and South Atlantic Councils.

Alternative 2. Establish a jurisdictional allocation based on the Florida Keys (Monroe County) jurisdictional boundary between the Gulf of Mexico and South Atlantic Councils for black grouper acceptable biological catch (ABC) based on one of the following methods:

Subalternative 2a. South Atlantic = 46% of ABC and Gulf of Mexico = 54% of ABC (Established by using catch history from 1991-2008).

Subalternative 2b (Preferred). South Atlantic = 47% of ABC and Gulf of Mexico = 53% of ABC (Established by using 50% of catch history from 1986-2008 + 50% of catch history from 2006-2008).

Subalternative 2c. South Atlantic = 48% of ABC and Gulf of Mexico = 52% of ABC (Established by using 50% of catch history from 1991-2008 + 50% of catch history from 2006-2008).

Subalternative 2d. South Atlantic = 50% of ABC and Gulf of Mexico = 50% of ABC (Divide the ABC evenly between the two Councils).

Table 2-38. ABCs (lbs whole weight) for South Atlantic and Gulf of Mexico using jurisdiction allocations specified in Sub-alternatives 2a-2d and preferred alternative for ACL of 523,000 lbs whole weight for Gulf of Mexico of Mexico and South Atlantic specified for 2011 in Table 4-27.

Alternative	South Atlantic	Gulf of Mexico
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Alternative	South Atlantic	Gulf of Mexico
Alternative 2a	240,580	282,420
Alternative 2b	245,810	277,190
Alternative 2a	251,040	271,960
Alternative 2b	261,500	261,500

Table 2-39. ABCs (lbs whole weight) for South Atlantic and Gulf of Mexico by year using jurisdiction allocations specified in preferred Subalternative 2b.

Year	ABC	South Atlantic	Gulf of Mexico
2011	523,000	245,810	277,190
2012	522,543	245,595	276,948
2013	545,595	256,430	289,165
2014	558,711	262,594	296,117
2015	564,737	265,426	299,311

Table 2-40. Summary of effects under **Action 12.**

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Alternative 1 (No Action)	(+-) Current recreational landings in S. Florida may not accurately correspond to existing ABC levels between S. Atl. and Gulf of Mexico, and hence benefits may not be optimal.	(+-) No net economic benefits due to distributional nature of allocation.
Alternative 2: Percentage of ABC between S. Atl. and Gulf of Mexico; different time series for landings. Subalternative 2a. S. Atl.=46%; Gulf of Mexico=54%;1991-2008.	(+-) Slightly higher proportion of the ABC to the Gulf of Mexico, time series for landings takes into account better recreational effort from 1991 onwards. Benefits unclear.	(+-) Smallest net economic benefits of all subalternatives under Alternative 2.
Subalternative 2b (Preferred). S. Atl.=47%; Gulf of Mexico=53%;50% from 1986-2008 + 50% from 2006-2008.	(+-) Slightly higher proportion of the ABC to the Gulf of Mexico compared with Subalternative 2a. Time series for landings takes into account better fishing effort for all sectors. Benefits may be higher.	(+-) Net economic benefits between subalternatives 2a and 2c.
Subalternative 2c. S. Atl.=48%; Gulf of Mexico=52%;50% from 1991-	(+-) Similar to Subalternative 2b (Preferred). Benefits may be higher due to time series	(+-) Net economic benefits higher than Subalternatives 2a and 2b, but lower than

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
2008 + 50% from 2006-2008.	for landings taking into account better recreational effort from 1991 onwards.	Subalternative 2d.
Subalternative 2d. S. Atl.=50%; Gulf of Mexico=50%.	(+-) Even distribution of ABC, benefits unclear between the two jurisdictional areas.	(+-) Greatest net economic benefits of all subalternatives under Alternative 2.

2.3.2 Action 13: Specify Sector Allocations for Black Grouper

[Note: When considering two sectors (Commercial and Recreational), the Recreational sector includes private recreational (shore and rental boats) as well as for-hire (charter/headboat). When considering three sectors (Commercial, Recreational, and For-hire), the Recreational sector includes only private recreational (shore and rental boats).]

Alternative 1 (No action). Do not establish sector allocations for black grouper

Alternative 2 (Preferred). Establish commercial and recreational sector allocations based on criteria outlined in subalternatives below.

Subalternative 2a. Commercial = 68% and recreational = 32% using catch history from 1986-2008.

Subalternative 2b. Commercial = 71% and recreational = 29% using catch history from 1986-1998.

Subalternative 2c. Commercial = 63% and recreational = 37% using catch history from 1999-2008.

Subalternative 2d. Commercial = 60% and recreational = 40% using catch history from 2006-2008.

Subalternative 2e (Preferred). Commercial = 65% and recreational = 35% using 50% of catch history from 1991-2008 + 50% of catch history from 2006-2008.

Alternative 3. Establish commercial, recreational, and for-hire sector allocations based on criteria outlined in subalternatives below.

Subalternative 3a. Commercial = 68% , for-hire = 25%, and recreational = 7% using catch history from 1986-2008.

Subalternative 3b. Commercial = 71% , for-hire = 24%, and recreational = 5% using catch history from 1986-1998.

Subalternative 3c. Commercial = 63% , for-hire = 26%, and recreational = 11% using catch history from 1999-2008.

Subalternative 3d. Commercial = 60% , for-hire = 29%, and recreational = 11% using catch history from 2006-2008.

Subalternative 3e. Commercial = 65% , for-hire = 26%, and recreational = 9% using 50% of catch history from 1991-2008 + 50% of catch history from 2006-2008.

Table 2-41. Commercial and recreational ACLs for the South Atlantic in **Alternatives 2 and 3** based on the ACL of 245,595 for 2012 specified in the preferred alternative in Action 14.

Alternative 2	Comm	Rec	
Sub Alt 2a	167,005	78,590	
Sub Alt 2b	174,372	71,223	
Sub Alt 2c	154,725	90,870	
Sub Alt 2d	147,357	98,238	
Sub Alt 2e	159,637	85,958	
Alternative 3	Comm	For-Hire	Rec
Sub Alt 3a	167,005	61,399	17,192
Sub Alt 3b	174,372	58,943	12,280
Sub Alt 3c	154,725	63,855	27,015
Sub Alt 3d	147,357	71,223	27,015
Sub Alt 3e	159,637	63,855	22,104

Table 2-42. Commercial and recreational ACLs by year based on commercial (65%) and recreational (35%) allocations specified in preferred **Subalternative 2e**.

Year	South Atlantic	Comm	Rec
2012	245,595	159,637	85,958
2013	256,430	166,679	89,750
2014 (and onwards until modified)	262,594	170,686	91,908

Table 2-43. Summary of effects under **Action 13**.

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Alternative 1 (No Action)	(+-) A single ABC, and therefore single ACL would be established for both sectors, no ABC for the recreational sector, could lead to overfishing.	(+-) Maintains an overall ABC, and consequent ACL, few socio-economic benefits.
Alternative 2: ABC divided into two sectors; different time series for landings. Subalternative 2a. Commercial=68%; Recreational=32%; landings 1986-2008.	(+-) Would establish sector-specific ABCs, benefits are higher since ACLs and AMs would be required for both sectors. Landings data represent commercial sector better than more recent recreational effort.	(+-) No net benefits due to allocation.
Subalternative 2b. Commercial=71%; Recreational=29%; landings 1986-1998.	(+-) Similar to Subalternative 2a , benefits may be lower since landings data represent commercial sector much better	(+-) No net economic benefits due to allocation.

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
	than more recent recreational effort.	
Subalternative 2c. Commercial=63%; Recreational=37%; landings 1999-2008.	(+-) Benefits in-between Subalternatives 2a and 2b.	(+-) No net economic benefits due to allocation. Less short-term economic disruption.
Subalternative 2d. Commercial=60%; Recreational=40%; landings 2006-2008.	(+-) Benefits similar to Subalternative 2c , except recreational effort is captured better in this time series.	(+-) No net economic benefits due to allocation. Less short-term economic disruption.
Subalternative 2e (Preferred). Commercial=65%; Recreational=35%; landings 50% 1991-2008 + 50% 2006-2008.	(+-) Highest benefit of all subalternatives under alternatives 2 and 3. Landings data for both sectors are from time periods with the best reporting.	(+-) No net economic benefits due to allocation. Less short-term economic disruption.
Alternative 3: ABC divided into three sectors; different time series for landings. Subalternative 3a. Commercial=68%; Recreational=25%; For-hire=7%; landings 1986-2008.	(+-) Lower benefit than Subalternative 2a. Uncertainty in recreational landings increased by adding another recreational sector.	(+-) No net economic benefits due to allocation.
Subalternative 3b. Commercial=71%; Recreational=24%; For-hire=5%; landings 1986-1998.	(+-) Lower benefit than Subalternatives 2b and 3a. Earlier time series has better commercial reporting, recreational landings and associated uncertainty may lead to overfishing.	(+-) No net economic benefits due to allocation.
Subalternative 3c. Commercial=63%; Recreational=26%; For-hire=11%; landings 1999-2008.	(+-) Benefits in-between Subalternatives 3a and 3b.	(+-) No net economic benefits due to allocation. Less short-term economic disruption.
Subalternative 3d. Commercial=60%; Recreational=29%; For-hire=11%; landings 2006-2008.	(+-) Benefits lower than Subalternative 2d , and similar to Subalternative 3c , except recreational effort is captured better in this time series.	(+-) No net economic benefits due to allocation. Less short-term economic disruption.
Subalternative 3e. Commercial=65%;	(+-) Highest benefit of all subalternatives under	(+-) No net economic benefits due to allocation. Less short-

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Recreational=26%; For-hire=9%; landings 1986-1998. 50% 1991-2008 + 50% 2006-2008.	Alternative 3 , but, lower than Subalternative 2e (Preferred) .	term economic disruption.

2.3.3 Action 14: Establish Annual Catch Limits (ACL) and Optimum Yield (OY) for Black Grouper

Alternative 1 (No Action). Retain aggregate recreational and commercial ACLs and OY for black grouper, red grouper, and gag.

Alternative 2 (Preferred). ACL = OY = ABC. Specify commercial and recreational ACLs for black grouper as indicated in the table below. ACLs will not increase in a subsequent year if present year projected catch has exceeded the ACL.

Alternative 3. ACL = OY = 90% of the ABC. Specify commercial and recreational ACLs for black grouper as indicated in the table below. ACLs will not increase in a subsequent year if present year projected catch has exceeded the ACL.

Alternative 4. ACL = OY = 80% of the ABC. Specify commercial and recreational ACLs for black grouper as indicated in the table below. ACLs will not increase in a subsequent year if present year projected catch has exceeded the ACL.

Table 2-44. ACL formula , ACL, and OY value (lbs whole weight) for black grouper (without discard projections). Commercial and recreational ACL values are based on preferred allocation alternative (65% commercial/35% recreational) in **Action 13**.

Alternative	ACL Formula	Total ACL	Comm ACL	Rec ACL
1 (No Action)	The group ACL for gag, black grouper, and red grouper is 662,403 gw (781,636 ww) for the commercial sector and 648,663 gw (765,422 ww) for the recreational sector. The total group ACL is 1,311,066 gw (1,547,058 ww). *			
2 (Preferred)	ABC	245,595 (2012) 256,430 (2013) 262,594 (2014 and onwards until modified)	159,637 (2012) 166,679 (2013) 170,686 (2014 and onwards until modified)	85,958 (2012) 89,750 (2013) 91,908 (2014 and onwards until modified)
3	90% ABC	221,036 (2012) 230,787 (2013) 236,335 (2014 and onwards until modified)	143,673 (2012) 150,011 (2013) 153,618 (2014 and onwards until modified)	77,362 (2012) 80,775 (2013) 82,717 (2014 and onwards until modified)

4	80% ABC	196,476 (2012) 205,144 (2013) 210,075 (2014 and onwards until modified)	127,710 (2012) 133,343 (2013) 136,549 (2014 and onwards until modified)	68,767 (2012) 71,800 (2013) 73,526 (2014 and onwards until modified)
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*Note: An individual ACL is currently not in place for black grouper. These values are equivalent to the expected catch resulting from the implementation of management measures for black grouper in Amendment 16 and specified in Amendment 17B. The black grouper portion of the combined gag, black, and red grouper ACL would translate to a total ACL of 140, 124 lbs ww (118,749 lbs gw); 102,526 lbs ww (86,866 lbs gw) for the commercial ACL; and 37,598 lbs ww (31,868 lbs gw).

Table 2-45. Summary of effects under Action 14.

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Alternative 1 (No Action)	(-) Would not meet the requirements of MSA to specify ACLs for all species in an FMU, and could lead to overfishing.	(+-) Smallest long-term, and greatest short-term benefits.
Alternative 2 (Preferred). ACL=OY=ABC	(+-) Would establish sector-specific ACLs, benefits are higher since AMs would be required for both sectors. Least conservative of the alternatives, since there is no buffer between ACL and ABC.	(+-) Smaller long-term benefits when compared with Alternatives 3 and 4.
Alternative 3. ACL=OY=90% ABC	(+-) Would establish sector-specific ACLs, benefits are higher since AMs would be required for both sectors. Provides a buffer between ABC and ACL. Benefits could fall in-between Alternatives 2 and 4.	(+-) Benefits in-between Alternatives 2 and 4.
Alternative 4. ACL=OY=80% ABC	(+) Would establish sector-specific ACLs, benefits are higher since AMs would be required for both sectors. Most conservative of the alternatives. Provides a greater buffer between ABC and ACL, and therefore, greater benefits.	(+-) Smallest short-term, and largest long-term benefits.

2.3.4 Action 15: Establish Accountability Measures/Management Measures for the Commercial Sector for Black Grouper

Alternative 1 (No Action). Retain the existing commercial AMs for black grouper (**Table 2-46**).

Table 2-46. Existing commercial regulations.

Current Regulations	
In-season closures	Gag commercial ACL of 352,940 lbs gutted weight. After the commercial ACL is met, all purchase and sale of the following species is prohibited and harvest and/or possession is limited to the bag limit: gag; black grouper; red grouper; scamp; red hind; rock hind; yellowmouth grouper; tiger grouper; yellowfin grouper; graysby; and coney.
Minimum size limit	20 inch total length
Seasonal closure	No fishing for and/or possession of the following species is allowed January through April: black grouper; red grouper; scamp; red hind; rock hind; yellowmouth grouper; tiger grouper; yellowfin grouper; graysby, and coney.
Aggregate ACL	In addition to the gag sector-ACLs, establish an ACL for gag, black grouper, and red grouper of 662,403 lbs gutted weight (commercial) and 648,663 lbs gutted weight (recreational). Prohibit the commercial possession of shallow water groupers when the gag or the gag, black grouper, and red grouper when the ACL is projected to be met.

Alternative 2. Specify Annual Catch Targets (ACT) for the commercial sector, apply the ACT to commercial AM Alternatives 3 and 4.

Subalternative 2a (Preferred). Do not establish a commercial sector ACT.

Subalternative 2b. The commercial sector ACT equals 90% of the commercial sector ACL.

Subalternative 2c. The commercial sector ACT equals 80% of the commercial sector ACL.

Alternative 3 (Preferred). After the commercial ACL is met or projected to be met, all purchase and sale of black grouper is prohibited and harvest and/or possession is limited to the bag limit.

Alternative 4 (Preferred). If the commercial sector ACL is exceeded, the Regional Administrator shall publish a notice to reduce the commercial sector ACL in the following season by the amount of the overage only if overfished.

Table 2-47. The commercial sector ACT for each of the alternatives. Values are in lbs gutted weight.

Species	Preferred Commercial ACL	Commercial Sector ACT		
		ACT Subalt. 2a (Preferred); No ACT	ACT Subalt. 2b; ACT=90%(ACL)	ACT Subalt. 2c; ACT=80%(ACL)
Black grouper	159,777	N/A	143,799	127,821

Table 2-48. Summary of effects under **Action 15.**

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Alternative 1 (No Action)	(-) Would not meet NS 1 guidelines and comply with the requirements under MSA. No positive benefits.	(+-) Greatest short-term and smallest long-term benefits.
Alternative 2: Commercial sector ACT Subalternative 2a (Preferred). No commercial sector ACT	(+-) AMs would apply when the commercial ACL is exceeded, no buffer between ACT and ACL. Benefits may be lower than Subalternatives 2b and 2c.	(+-) Greater short-term and smaller long-term benefits.
Subalternative 2b. ACT = 90% commercial sector ACL	(+-) Provides a buffer between ACT and ACL. Benefits may be higher than Subalternative 2a and lower than Subalternative 2c.	(+-) Benefits in-between Subalternatives 2a and 2c.
Subalternative 2c. ACT = 80% commercial sector ACL	(+-) Provides a bigger buffer between ACT and ACL. Benefits may be highest of all subalternatives under Alternative 2.	(-) Smaller short-term and long-term benefits.
Alternative 3 (Preferred). Commercial sector AM: Harvest/possession limited to bag limit	(+-) A form of post-season AM, possible positive benefits, especially when combined with Alternative 4 (Preferred).	(+-) Greater short-term benefits compared to Alternative 4 (Preferred) , but less than Alternative 1 (No Action).
Alternative 4 (Preferred). Commercial sector AM: ACL reduced in the following season by amount of overage.	(+-) A form of post-season AM, possible positive benefits, especially when combined with Alternative 3 (Preferred).	(+-) Greatest long-term benefits to the commercial fishery compared with Alternatives 3 (Preferred) and 1 (No Action).

2.3.5 Action 16: Establish Accountability Measures/Management Measures for the Recreational Sector for Black Grouper

Alternative 1 (No Action). Do not specify new recreational AMs for black grouper (**Table 2-49**).

Table 2-49. Existing recreational regulations for black grouper.

Current Recreational Regulations	
Bag limit	Three grouper aggregate bag limit per person per day. Exclude the captain and crew on for-hire vessels from possessing a bag limit for groupers
Minimum size limit	20 inch total length
Seasonal closure	No fishing for and/or possession of the following species is allowed January through April: black grouper; red grouper; scamp; red hind; rock hind; yellowmouth grouper; tiger grouper; yellowfin grouper; graysby, and coney.
ACL/AM	Establish a recreational ACL for gag, black grouper, and red grouper of 648,663 lbs gutted weight. If at least one of the species (gag, red grouper, or black grouper) is <i>overfished</i> and the sector ACL is projected to be met, prohibit the harvest and retention of the species or species group. If the ACL is exceeded, independent of stock status, the Regional Administrator shall publish a notice to reduce the sector ACL in the following year by the amount of the overage. For black grouper, black sea bass, gag, red grouper, and vermilion snapper, compare the recreational ACL with recreational landings over a range of years. For 2010, use only 2010 landings. For 2011, use the average landings of 2010 and 2011. For 2012 and beyond, use the most recent three-year running average.

Alternative 1 (No Action). Do not specify new recreational AMs for black grouper.

Decision 1. Specify an ACT?

Alternative 2. Specify an ACT.

Subalternative 2a. Do not specify an ACT.

Subalternative 2b. The ACT equals 85% of the ACL.

Subalternative 2c. The ACT equals 75% of the ACL.

Subalternative 2d (Preferred). The ACT equals $ACL \cdot (1 - PSE)$ or $ACL \cdot 0.5$, whichever is greater.

Decision 2. What is the AM trigger?

Alternative 3. Specify the AM trigger.

Subalternative 3a. Do not specify an AM trigger.

Subalternative 3b (Preferred). If the annual landings exceed the ACL in a given year.

Subalternative 3c(NEW). If the mean landings for the past three years exceed the ACL.^{1, 2}

Subalternative 3d. If the modified mean landings exceed the ACL. The modified mean is the average of the most recent 5 years of available landings data with highest and lowest landings estimates removed.^{1,2}

Subalternative 3e. If the lower bound of the 90% confidence interval estimate of the MRFSS landings' population mean plus headboat landings is greater than the ACL.

Notes:

¹ Start the clock over. In any year the ACL is reduced or increased, the sequence of future ACLs will begin again starting with a single year of landings compared to the ACL for that year, followed by a 2-year average of landings compared to the 2-year average annual catch limits in the next year, followed by a 3-year average of landings compared to the 3-year average of ACLs for the third year, and so on.

² For 2011, use only 2011 landings. For 2012, use the mean landings of 2011 and 2012. For 2013 and beyond, use the most recent three-year running mean.

Decision 3. Is there an in-season AM?

Alternative 4. Specify the in-season AM.

Subalternative 4a (Preferred). Do not specify an in-season AM.

Subalternative 4b. The Regional Administrator shall publish a notice to close the recreational sector when the ACL is projected to be met.

Decision 4. Is there a post-season AM?

Alternative 5. Specify the post-season AM.

Subalternative 5a. Do not specify a post-season AM.

Subalternative 5b. For post-season accountability measures, compare ACL with landings over a range of years. For 2011, use only 2011 landings. For 2012, use the mean landings of 2011 and 2012. For 2013 and beyond, use the most recent three-year running mean.¹

Subalternative 5c. Monitor following year. If the ACL is exceeded, the following year's landings would be monitored for persistence in increased landings. The Regional Administrator would take action as necessary.

Subalternative 5d (Preferred). Monitor following year and shorten season as necessary. If the ACL is exceeded, the following year's landings would be monitored in-season for persistence in increased landings. The Regional Administrator will publish a notice to reduce the length of the fishing season as necessary.

Subalternative 5e. Monitor following year and reduce bag limit as necessary. If the ACL is exceeded, the following year's landings would be monitored for

persistence in increased landings. The Regional Administrator will publish a notice to reduce the bag limit as necessary.

Subalternative 5f. *Shorten following season.* If the ACL is exceeded, the Regional Administrator shall publish a notice to reduce the length of the following fishing year by the amount necessary to ensure landings do not exceed the ACL for the following fishing season.

Subalternative 5g. *Payback.* If the ACL is exceeded, the Regional Administrator shall publish a notice to reduce the ACL in the following season by the amount of the overage.

Table 2-50. The recreational ACT for each of the alternatives. Average PSE during 2005-09 equals 42. Values are in lbs whole weight.

Species	Preferred Recreational Sector ACL	Recreational Sector ACT		
		ACT Subalt. 5a; ACT=85%(ACL)	ACT Subalt. 5b; ACT=75%(ACL)	ACT Subalt. 5c (Preferred); ACT equals sector ACL[(1-PSE) or 0.5, whichever is greater]
Black grouper	86,034	73,128	64,525	61,084

Table 2-51. Projected landings for black and red grouper in 2010. ACL currently in place for gag, and proposed aggregate ACL for gag, black, and red grouper.

	Commercial (lbs gw)	Recreational (lbs gw)	Total (lbs gw)
Gag ACL (<i>Amend 16</i>)	352,940	340,060	693,000
Projected black grouper landings (2010) ¹	86,886	31,863	118,749
Projected red grouper landings (2010) ²	221,557	276,740	498,297
Gag, black, red aggregate ACL	662,403	648,663	1,311,006

¹The commercial projected landings for 2010 was computed by using the annual average from 2004-2006. The landings from Jan through April were zero to account for the 4 month closure implemented on July 29, 2009. The landings from December were zero to account for the projected shallow water grouper closure when the gag commercial ACL would be met.

²The recreational projected landings for 2010 was computed by using the annual average from 2004-2006. The landings from Jan through April were zero to account for the 4 month closure implemented on July 29, 2009. In addition, harvest was reduced by 2.5% to account for the change in aggregate bag limit from 5 to 3.

Table 2-52. Summary of effects under **Action 16.**

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
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Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Alternative 1 (No Action)	(-) Would not meet NS 1 guidelines and comply with the requirements under MSA. No positive benefits.	(+-) Greatest long-term negative effects.
Alternative 2: Specify a recreational sector ACT Subalternative 2a. No ACT	(+-) Would not provide a buffer between ACT and ACL.	(+-) Smaller long-term and greater short-term benefits.
Subalternative 2b. ACT = 85% recreational sector ACL	(+-) Provides a buffer between ACT and ACL.	(+-) Greater long-term and smaller short-term benefits.
Subalternative 2c. ACT = 75% recreational sector ACL	(+-) Provides a bigger buffer between ACT and ACL when compared with Subalternative 2b.	(-) Smaller short-term and long-term benefits.
Subalternative 2d (Preferred). ACT = recreational sector ACL [(1-PSE) or 0.5, whichever is greater]	(+-) Provides the greatest benefit of the subalternatives under Alternative 2 , by adjusting the ACL by 50% or the percent standard error.	(+-) Smallest short-term and greatest long-term benefits when compared with Subalternatives 2b and 2c .
Alternative 3: Specify the AM trigger. Subalternative 3a. No AM trigger.	(+-) Same as Alternative 1 (No action) .	(+-) No indirect economic effects.
Subalternative 3b (Preferred). Annual landings > ACL.	(+-) Does not address anomalous spikes in landings, only one year's data used to determine trigger.	(+-) Greatest short-term negative, and positive long-term effects of all subalternatives under Alternative 3 .
Subalternative 3c. Mean landings for past 3 years > ACL.	(+-) Addresses anomalous spikes in landings, but spikes would affect the average for three years and could trigger AMs when not necessary.	(+-) Positive long-term benefits higher than than Subalternatives 3d and 3e , but lower than Subalternative 3b (Preferred) .
Subalternative 3d. Modified mean (most recent 5 years landings data with the highest and lowest removed) > ACL.	(+-) Similar to Subalternative 3c , may have more benefits due to two additional years of data used to determine overage.	(+-) Positive long-term benefits higher than than Subalternatives 3e , but lower than Subalternatives 3b (Preferred) and 3c .
Subalternative 3e. Lower bound of 90% confidence interval estimate of the landings' mean > ACL.	(+-) More precautionary than Subalternatives 3c and 3d .	(+-) Smallest short-term negative, and positive long-term effects of all subalternatives under

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
		Alternative 3.
Alternative 4: Specify the in-season AM. Subalternative 4a (Preferred). No in-season AM.	(+-) May have negligible effects due to the selection of current ACT (Subalternative 2d, Preferred).	(+-) No indirect economic effects.
Alternative 4b. Recreational fishery closed.	(+-) Requires in-season monitoring of the recreational fishery, which has time lags in reporting and uncertainty in landings data. Possible unnecessary negative benefits.	(+-) Greater short-term negative effects compared with Subalternative 4a .
Alternative 5: Specify the post-season AM. Subalternative 5a. No post-season AM.	(+-) May have negative effects since there would be no penalty for going over the ACL.	(+-) No indirect economic effects.
Subalternative 5b. Compare ACL with 3-year running mean.	(+-) Addresses anomalous spikes in landings, but spikes would affect the average for three years and could prescribe AMs when not necessary.	(+-) No indirect economic effects.
Subalternative 5c. Monitor following year.	(+) Ensures that AMs are employed when absolutely necessary.	(+-) Same indirect economic effects as Subalternatives 5d (Preferred) and 5e .
Subalternative 5d (Preferred). Monitor following year and shorten season as necessary.	(+-) Ensures that AMs are triggered when absolutely necessary, biologically beneficial since the following fishing season and associated mortality is addressed.	(+-) Negative short-term indirect economic effects smaller than Subalternative 5e .
Subalternative 5e. Monitor following year and reduce bag limit as necessary.	(+-) Ensures that AMs are triggered when absolutely necessary, biologically beneficial since fewer fish can be taken.	(+-) Negative short-term indirect economic effects greater than Subalternative 5d (Preferred) .
Subalternative 5f. Shorten fishing season by amount necessary.	(+-) There is no monitoring component, not as beneficial as Subalternatives 5c-5e .	(+-) Negative short-term indirect economic effects greater than Subalternatives 5c-5e .
Subalternative 5g. Payback, reduce ACL by amount of overage in following season.	(+-) Biologically beneficial due to reduced ACL.	(+-) Negative short-term indirect economic effects greater than Subalternatives 5f .

2.3.6 Action 17: Establish Jurisdictional Allocations for Yellowtail Snapper

Notes: Analysis for Alternative 2 is based on the 2003 SEDAR stock assessment. These may not be viable alternatives because Florida Keys (Monroe County) is not post-stratified between the Gulf of Mexico and South Atlantic Councils.

Regions 1 through 3 were combined to represent South Atlantic jurisdiction, while Region 4 was used to represent the Gulf of Mexico jurisdiction.

Regions: 1 - North of Palm Beach county; 2 - Palm Beach through Miami-Dade counties; 3 - Monroe county (Florida Keys); and 4 - Gulf of Mexico north or west of the Keys.

Analysis for Alternatives 3-6 catch histories begin in 1993 due to issues associated with post-stratifying Florida Keys (Monroe County) landings prior to that date (1993-2009).

Alternative 1 (No Action). Do not establish jurisdictional allocation of the yellowtail snapper acceptable biological catch (ABC) between the Gulf of Mexico and South Atlantic Councils.

Alternative 2. Establish a jurisdictional allocation for yellowtail snapper based on the most recent stock assessment for the South Atlantic and Gulf of Mexico (SEDAR 3, 2003).

Subalternative 2a. South Atlantic = 98% of ABC and Gulf of Mexico = 2% of ABC (Established by using catch history from 1987-2001).

Subalternative 2b. South Atlantic = 98% of ABC and Gulf of Mexico = 2% of ABC (Established by using 50% of catch history from 1987-2001 + 50% of catch history from 1999-2001).

Subalternative 2c. South Atlantic = 100% of ABC and Gulf of Mexico = 0% of ABC (Established by using highest catch history from 1987-2001).

Subalternative 2d. South Atlantic = 95% of ABC and Gulf of Mexico = 5% of ABC (Established by using lowest catch history from 1987-2001).

Alternative 3. Establish a jurisdictional allocation based on the Florida Keys (Monroe County) jurisdictional boundary between the Gulf of Mexico and South Atlantic Councils for yellowtail snapper acceptable biological catch (ABC) based on the following method: South Atlantic = 73% of ABC and Gulf of Mexico = 27% of ABC (Established by using 50% of catch history from 1993-2009 + 50% of catch history from 2007-2009).

Alternative 4 (Preferred). Establish a jurisdictional allocation based on the Florida Keys (Monroe County) jurisdictional boundary between the Gulf of Mexico and South Atlantic Councils for yellowtail snapper acceptable biological catch (ABC) based on the following method: South Atlantic = 75% of ABC and Gulf of Mexico = 25% of ABC (Established by using 50% of catch history from 1993-2008 + 50% of catch history from 2006-2008).

Alternative 5. Establish a jurisdictional allocation based on the Florida Keys (Monroe County) jurisdictional boundary between the Gulf of Mexico and South Atlantic Councils for yellowtail snapper acceptable biological catch (ABC) based on the following method: South Atlantic =

77% of ABC and Gulf of Mexico = 23% of ABC (Established by using catch history from 1999-2008).

Alternative 6. Establish a jurisdictional allocation based on the Florida Keys (Monroe County) jurisdictional boundary between the Gulf of Mexico and South Atlantic Councils for yellowtail snapper acceptable biological catch (ABC) based on the following method: South Atlantic = 71% of ABC and Gulf of Mexico = 29% of ABC (Established by using catch history from 2005-2009).

Table 2-53. ACLs (lbs whole weight) for South Atlantic and Gulf of Mexico using jurisdiction allocations specified in Alternatives 2-6 and preferred alternative for ACL of 2,898,500 lbs whole weight for Gulf of Mexico and South Atlantic specified in Action 5.

Alternative	South Atlantic	Gulf of Mexico
Alternative 2a	2,840,530	579,700
Alternative 2b	2,840,530	579,700
Alternative 2c	2,898,500	0
Alternative 2d	2,753,575	144,925
Alternative 3	2,115,905	782,595
Alternative 4 (preferred)	2,173,875	724,625
Alternative 5	2,231,845	666,655
Alternative 6	2,057,935	840,565

Table 2-54. Summary of effects under **Action 17.**

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Alternative 1 (No Action)	(+-) Both councils would need to agree on ACLs and a common set of regulations. Benefits may not be optimal.	(+-) No net benefits due to distributional nature of allocation.
Alternative 2. Percentage of ABC between South Atlantic and Gulf of Mexico based on SEDAR 3 (2003) stock assessment. Subalternative 2a. South Atlantic =98%; Gulf of Mexico=2%; 1987-2001.	(+-) Benefits unclear, all landings data for Monroe County, Florida was assigned to the South Atlantic, in SEDAR 3 (2003) stock assessment.	(+-) Higher total economic benefits to the South Atlantic region.
Subalternative 2b. South Atlantic=98%; Gulf of Mexico=2%; 50% from 1987-2001 + 50% from 1999-2001.	(+-) Identical to Subalternative 2a.	(+-) Benefits same as Subalternative 2a.
Subalternative 2c.	(+-) Similar to Subalternative	(+-) Highest total economic

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
South Atlantic =100%; Gulf of Mexico=0%; Highest landings from 1987-2001.	2a.	benefits to the South Atlantic region.
Subalternative 2d. South Atlantic =95%; Gulf of Mexico=5%; Lowest landings from 1987-2001.	(+-) Similar to Subalternative 2a.	(+-) Lowest total economic benefit to the South Atlantic region of all the subalternatives under Alternative 2.
Alternative 3. South Atlantic =73%; Gulf of Mexico=27%; 50% from 1993-2009 + 50% from 2007-2009.	(+-) Benefits unclear, but data incorporates more recent years, and all catch history data since 1993 is post-stratified between the two Councils for Monroe County, Florida	(+-) Higher net economic benefits than Alternative 6 , but lower than alternatives 4 and 5 , to the South Atlantic region.
Alternative 4 (Preferred). South Atlantic =75%; Gulf of Mexico=25%; 50% from 1993-2008 + 50% from 2006-2008.	(+-) Similar to Alternative 3.	(+-) Benefits between Alternatives 3 and 5.
Alternative 5. South Atlantic =77%; Gulf of Mexico=23%; 1999-2008.	(+-) Similar to Alternatives 3 and 4.	(+-) Net economic benefits higher than Alternatives 3, 4, and 6 , to the South Atlantic region.
Alternative 6. South Atlantic =71%; Gulf of Mexico=29%; 2005-2009.	(+-) Similar to Alternative 3 , gives the largest jurisdictional allocation to the Gulf of Mexico of all the alternatives.	(+-) Least net economic benefits of all alternatives under this action to the South Atlantic region.

2.3.7. Action 18: Establish Jurisdictional Allocations for Mutton Snapper

Alternative 1. (No Action). Do not establish jurisdictional allocation of the mutton snapper Acceptable Biological Catch (ABC) between the Gulf and South Atlantic Councils.

Alternative 2 (Preferred). (modified with landings through 2008). Establish a jurisdictional allocation based on the Florida Keys (Monroe County) jurisdictional boundary between the Gulf and South Atlantic Councils for mutton snapper acceptable biological catch (ABC) based on the following method: South Atlantic = 82% of ABC and Gulf = 18% of ABC (Established by using 50% of catch history from 1990-2008 + 50% of catch history from 2006-2008).

Alternative 3. Establish a jurisdictional allocation based on the Florida Keys (Monroe County) jurisdictional boundary between the Gulf and South Atlantic Councils for mutton snapper Acceptable Biological Catch (ABC) based on the following method: South Atlantic = 79% of ABC and Gulf = 21% of ABC (Established by using catch history from 2002-2006).

Alternative 4. Do not establish a jurisdictional allocation based on the Florida Keys (Monroe County) jurisdictional boundary between the Gulf and South Atlantic Councils for mutton snapper. The South Atlantic Council would manage mutton snapper in the South Atlantic and Gulf of Mexico.

Table 2-54. Summary of effects under **Action 18.**

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Alternative 1 (No Action)	(+-) Both councils would need to agree on ACLs and a common set of regulations. Benefits may not be optimal.	(+-) No net benefits due to distributional nature of allocation.
Alternative 2 (Preferred). Percentage of ABC between South Atlantic and Gulf of Mexico. South Atlantic =82%; Gulf of Mexico=18%; 50% from 1990-2008 + 50% from 2006-2008.	(+-) Benefits unclear, all landings data for Monroe County, Florida was assigned to the South Atlantic. Identical to the preferred alternative chosen by the Gulf of Mexico.	(+-) Higher total economic benefits to the South Atlantic region.
Subalternative 3. South Atlantic=79%; Gulf of Mexico=21%; 2002-2006.	(+-) Benefits unclear.	(+-) Slightly lower economic benefit to the South Atlantic region.
Subalternative 4. No jurisdictional allocation, the South Atlantic Council would manage mutton snapper in both jurisdictional waters.	(+-) Translates to 100% allocation to the South Atlantic. Benefits unclear.	(+-) Highest total economic benefits to the South Atlantic region.

2.2 Dolphin Wahoo Fishery Management Plan

2.4.1 Dolphin

2.4.1.1. Action 19: Establish an Acceptable Biological Catch (ABC) Control Rule and ABC for Dolphin

Alternative 1 (No Action). Do not establish an ABC Control Rule for Dolphin.

Alternative 2. Establish an ABC Control Rule where ABC equals OFL.

Alternative 3. Establish ABC based on the Gulf of Mexico Council’s ABC control rule. Note: The Gulf of Mexico Council’s Control Rule, if applied to dolphin, would likely be Tier 3a and would set the OFL = mean 10 years most recent landings + 2 SD and set the ABC = mean or mean + 0.5-1.5 SD.

Alternative 4 (Preferred). When the ABC control rule portion for unassessed species is complete, establish ABC for dolphin based on the South Atlantic Council’s SSC’s ABC control rule described in Table 2-12. Until the ABC control rule is complete, establish ABC based upon the interim approach in Table 2-14 and OFL = unknown.

Table 2-55. Summary of effects under **Action 19.**

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Alternative 1 (No Action)	(-) Would not meet MSA requirements.	(+-) Largest short-term positive benefits, smallest long-term benefits.
Alternative 2. ABC=OFL; OFL=13,709,523 lbs.	(+-) Least conservative of the alternatives, since there is no buffer between OFL and ABC, does not account for scientific and management uncertainty like Alternatives 3 and 4.	(+-) Negative economic effects less than all alternatives, except and Alternative 4 (Preferred).
Alternative 3. Gulf of Mexico Council SSC’s ABC Control Rule; ABC=1.5 S.D. above mean landings 1999 to 2008.	(+-) Benefits similar to Alternative 4 (Preferred).	(+-) Negative economic effects least of all alternatives, except Alternative 4 (Preferred).
Alternative 4 (Preferred). South Atlantic Council SSC’s ABC Control Rule; ABC=third highest landings during 1999 to 2008.	(+-) Benefits similar to Alternative 3.	(+-) Negative economic effects least of all alternatives.

2.4.1.2 Action 20: Specify Allocations for Dolphin

[Note: When considering two sectors (Commercial and Recreational), the Recreational sector includes private recreational (shore/rental boats and charter boats), as well as headboats. When considering three sectors (Commercial, Recreational, and For-hire), the Recreational sector includes only private recreational (shore/rental boats) and for-hire includes headboats and charter boats.]

Alternative 1 (No Action). Continue to use the allocations for dolphin specified in the Dolphin Wahoo FMP (13% commercial/87% recreational).

Alternative 2. Define allocations for dolphin based upon landings from the accumulative landings system (ALS), MRFSS, and headboat databases. The allocation would be based on landings from the years 1999-2008. The allocation would be 7% commercial and 93% recreational. The commercial and recreational allocation specified for 2011 would remain in effect beyond 2011 until modified.

Alternative 3 (Preferred). Define allocations for dolphin based upon landings from the ALS, MRFSS, and headboat databases. The allocation would be based on the following formula for each sector:

Sector apportionment = (50% * average of long catch range (lbs) 1999-2008) + (50% * average of recent catch trend (lbs) 2006-2008). The allocation would be 7.3% commercial and 92.7% recreational. The commercial and recreational allocation specified for 2011 would remain in effect beyond 2011 until modified.

Alternative 4. Define allocations for dolphin based upon landings from the ALS, MRFSS, and headboat databases. The allocation would be based on the following formula for each sector:

Sector apportionment = (50% * average of long catch range (lbs) 1999-2008) + (50% * average of recent catch trend (lbs) 2006-2008). The allocation would be 7.3% commercial, 38.4% for-hire, and 54.4% private recreational. The commercial, for-hire, and private recreational allocations specified for 2011 would remain in effect beyond 2011 until modified.

Table 2-56. Summary of effects under **Action 20.**

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Alternative 1 (No Action)	(+-) Highest benefits compared to alternatives 1-3 (Preferred) .	(+-) Maintains current caps on landings between commercial and recreational sectors.
Alternative 2. Commercial=7%; Recreational=93% Landings (1999-2008).	(+-) Benefits lower than alternatives 1 (No Action) and 3 (Preferred) , higher than Alternative 4.	(+-) No net benefits to the due to allocation, losses slightly higher than alternatives 3 and 4.
Alternative 3 (Preferred). Commercial=7.3%;	(+-) Benefits higher than alternatives 2 and 4 , less than	(+-) No net benefits to the due to allocation, losses similar to

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Recreational=92.7% Landings 50% * average catch 1999-2008 + 50% * average catch 2006-2008.	Alternative 1 (No Action). Combines beneficial effects of older data (favoring commercial sector) and newer data (favoring recreational sector).	Alternative 4.
Alternative 4. Commercial=7.3%; Recreational=54.4%; For-hire=38.4%. Landings 50% * average catch 1999-2008 + 50% * average catch 2006-2008.	(+-) Benefits would be less than alternatives 1-3 (Preferred) , uncertainty in recreational landings higher due to addition of another recreational sector.	(+-) No net benefits to the due to allocation, losses similar to Alternative 3 (Preferred) .

2.4.1.3 Action 21: Establish Annual Catch Limits (ACL) and Optimum Yield (OY) for Dolphin

Alternative 1 (No Action). There is no ACL specified for dolphin. OY for dolphin is the amount of harvest that can be taken by fishermen while not exceeding 75% of the maximum sustainable yield (MSY) (between 14.1 and 34.9 million pounds).

Alternative 2 (Preferred). ACL = OY = ABC

Alternative 3. ACL = OY = 85% of the ABC

Alternative 4. ACL = OY = 75% of the ABC

Alternative 5. ACL = OY = 65% of the ABC

Discussion

The Dolphin Wahoo FMP (SAFMC 2003) established what is called a “soft cap” on the commercial sector. This soft cap does not trigger a closure of the commercial sector; however, it does trigger a review of the data and a determination whether action is necessary. The wording is as follows:

ACTION 12. Establish a cap of 1.5 million pounds or 13% of total landings, whichever is greater, for the commercial fishery for dolphin. Should the catch exceed this level, the Council will review the data and evaluate the need for additional regulations which may be established through the framework.

The Dolphin Wahoo Advisory Panel (AP) discussed adding an alternative that would set ACL equal to 65%, 75%, or 85% of 46.5 million pounds (the top end of the current MSY range). The AP could not provide an ACL recommendation at this time given the problems with the landings

data. The AP did recommend the South Atlantic Council examine a regional approach to allocating the quotas.

Table 2-57. ACL formula, ACL, and OY values (lbs whole weight) for dolphin under **Alternatives 2-5**. Commercial and recreational ACL values are based on preferred allocation alternative (7.3% commercial/92.7% recreational) in Action 19. NEW TABLE

Alternative	ACL Formula	ACL value	Comm ACL	Rec ACL
Alternative 2 (Preferred)	ABC	14,596,216	1,065,524	13,530,692
Alternative 3	85% ABC	12,406,784	905,695	11,501,089
Alternative 4	75% ABC	10,947,162	799,143	10,148,019
Alternative 5	65% ABC	9,487,540	692,590	8,794,950

Table 2-58. Summary of effects under **Action 21**.

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Alternative 1 (No Action)	(-) Would not meet the requirements of MSA to specify ACLs for all species in an FMU, and could lead to overfishing.	(+-) Smallest long-term, and greatest short-term benefits.
Alternative 2 (Preferred). ACL=OY=ABC	(+-) Least conservative of the alternatives, since there is no buffer between ACL and ABC. Benefits may be lower than Alternatives 3, 4, and 5 .	(+-) Smallest short-term economic losses of all alternatives.
Alternative 3. ACL=OY=85% ABC	(+-) Provides a buffer between ABC and ACL. Benefits could be higher than Alternative 2 (Preferred) and smaller than Alternatives 4 and 5 .	(+-) Short-term economic losses greater than Alternative 2 (Preferred) , but smaller than Alternatives 4 and 5 .
Alternative 4. ACL=OY=75% ABC	(+-) Benefits in-between Alternatives 3 and 5 .	(+-) Short-term economic losses in-between Alternatives 3 and 5 .
Alternative 5. ACL=OY=65% ABC	(+-) Most conservative of the alternatives. Provides a greater buffer between ABC and ACL, and therefore, greater benefits.	(+-) Greatest short-term economic losses of all alternatives.

2.4.1.4 Action 22: Establish Accountability Measures for the Commercial Sector for Dolphin

Alternative 1 (No Action). Do not specify commercial sector ACTs or AMs for dolphin. There is no hard quota for dolphin and there are no AMs in place for dolphin.

Alternative 2. Specify commercial sector ACTs for dolphin, apply to commercial AM Alternatives 3 and 4.

Subalternative 2a (Preferred). Do not specify a commercial sector ACT.

Subalternative 2b. The commercial sector ACT equals 90% of the commercial sector ACL.

Subalternative 2c. The commercial sector ACT equals 80% of the commercial sector ACL.

Table 2-59. The commercial sector ACT for each of the alternatives. Values are in lbs gutted weight.

Species	Preferred Commercial ACL	Commercial Sector ACT		
		ACT Subalt. 2a (Preferred); No ACT	ACT Subalt. 2b; ACT=90%(ACL)	ACT Subalt. 2c; ACT=80%(ACL)
Dolphin	905,695	N/A	815,126	724,556

Alternative 3 (Preferred). After the commercial ACL is met or projected to be met, all purchase and sale of dolphin is prohibited and harvest and/or possession is limited to the bag limit.

Alternative 4. If the commercial sector ACL is exceeded, the RA shall publish a notice to reduce the commercial sector ACL in the following season by the amount of the overage.

Table 2-60. Summary of effects under **Action 22.**

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Alternative 1 (No Action)	(-) Would not meet NS 1 guidelines and comply with the requirements under MSA. No positive benefits.	(+-) Greatest short-term and smallest long-term benefits.
Alternative 2: Commercial sector ACT Subalternative 2a (Preferred). No commercial sector ACT	(+-) AMs would apply when the commercial ACL is exceeded, no buffer between ACT and ACL. Benefits may be lower than subalternatives 2b and 2c.	(+-) Same as Alternative 1 (No Action).
Subalternative 2b. ACT = 90% commercial	(+-) Provides a buffer between ACT and ACL. Benefits may	(+-) Benefits in-between subalternatives 2a and 2c.

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
sector ACL	be higher than Subalternative 2a and lower than Subalternative 2c .	
Subalternative 2c. ACT = 80% commercial sector ACL	(+-) Provides a bigger buffer between ACT and ACL. Benefits may be highest of all subalternatives under Alternative 2 .	(-) Smaller short-term benefits compared with Subalternative 2b .
Alternative 3 (Preferred). Commercial sector AM: Harvest/possession limited to bag limit	(+-) A form of post-season AM, possible positive benefits, especially when combined with Alternative 4 (Preferred) .	(+-) Greater short-term benefits compared to Alternative 4 , but less than Alternative 1 (No Action) .
Alternative 4. Commercial sector AM: ACL reduced in the following season by amount of overage.	(+-) A form of post-season AM, possible positive benefits, especially when combined with Alternative 3 (Preferred) .	(+-) Greater long-term benefits to the commercial fishery compared with alternatives 3 (Preferred) and 1 (No Action) .

2.4.1.5 Action 23: Establish Accountability Measures for the Recreational Sector for Dolphin

Alternative 1 (No Action). Do not specify new recreational AMs for dolphin.

Decision 1. Specify an ACT?

Alternative 2. Specify an ACT.

Subalternative 2a. Do not specify an ACT.

Subalternative 2b. The ACT equals 85% of the ACL.

Subalternative 2c. The ACT equals 75% of the ACL.

Subalternative 2d (Preferred). The ACT equals $ACL \cdot (1 - PSE)$ or $ACL \cdot 0.5$, whichever is greater. Council guidance to use the PSE 3-year average (7.0).

Table 2-61. Proportional Standard Errors (PSEs) for dolphin from weight estimates (A+B1) for all modes.

Obtained from <http://www.st.nmfs.noaa.gov> on June 10, 2011.

Species	2003	2004	2005	2006	2007	2008	2009	3 year average (2007-09)	5 year average (2005-09)
Dolphin	8.5	7.6	26.6	16.4	17.5	15.6	9.9	14.3	17.2

Note: The South Atlantic Council decided to use the 3-year average PSE because this better represented recent catches than the 5-year average.

Table 2-62. The recreational ACT for each of the alternatives. Values are in lbs whole weight.

Species	Preferred Recreational Sector ACL	Recreational Sector ACT		
		ACT Subalt. 5a; ACT=85%(ACL)	ACT Subalt. 5b; ACT=75%(ACL)	ACT Subalt. 5c; ACT equals sector ACL[(1-PSE) or 0.5, whichever is greater]
Dolphin	11,501,089	9,775,926	8,625,817	9,856,433

Average recreational landings for 2005-2009 from Table 4-65 = 9,056,933 lbs ww.

Decision 2. What is the AM trigger?

Alternative 3. Specify the AM trigger.

Subalternative 3a. Do not specify an AM trigger.

Subalternative 3b (Preferred). If the *annual landings* exceed the ACL in a given year.

Subalternative 3c. If the *mean landings* for the past three years exceed the ACL.^{1, 2}

Subalternative 3d. If the *modified mean landings* exceed the ACL. The modified mean is the average of the most recent 5 years of available landings data with highest and lowest landings estimates removed.^{1, 2}

Subalternative 3e. If the lower bound of the 90% *confidence interval* estimate of the MRFSS landings' population mean plus headboat landings is greater than the ACL.

Notes:

¹ *Start the clock over.* In any year the ACL is reduced or increased, the sequence of future ACLs will begin again starting with a single year of landings compared to the ACL for that year, followed by a 2-year average of landings compared to the 2-year average annual catch limits in the next year, followed by a 3-year average of landings compared to the 3-year average of ACLs for the third year, and so on.

² For 2011, use only 2011 landings. For 2012, use the mean landings of 2011 and 2012. For 2013 and beyond, use the most recent three-year running mean.

Decision 3. Is there an in-season AM?

Alternative 4. Specify the in-season AM.

Subalternative 4a (Preferred). Do not specify an in-season AM.

Subalternative 4b. The Regional Administrator shall publish a notice to close the recreational sector when the ACL is projected to be met.

Decision 4. Is there a post-season AM?

Alternative 5. Specify the post-season AM.

Subalternative 5a. Do not specify a post-season AM.

Subalternative 5b. For post-season accountability measures, compare recreational ACL with recreational landings over a range of years. For 2011, use only 2011 landings. For 2012, use the mean landings of 2011 and 2012. For 2013 and beyond, use the most recent three-year running mean.¹

Subalternative 5c. *Monitor following year.* If the ACL is exceeded, the following year’s landings would be monitored for persistence in increased landings. The Regional Administrator would take action as necessary.

Subalternative 5d (Preferred). *Monitor following year and shorten season as necessary.* If the ACL is exceeded, the following year’s landings would be monitored in-season for persistence in increased landings. The Regional Administrator will publish a notice to reduce the length of the fishing season as necessary.

Subalternative 5e. *Monitor following year and reduce bag limit as necessary.* If the ACL is exceeded, the following year’s landings would be monitored for persistence in increased landings. The Regional Administrator will publish a notice to reduce the bag limit as necessary.

Subalternative 5f. *Shorten following season.* If the ACL is exceeded, the Regional Administrator shall publish a notice to reduce the length of the following fishing season by the amount necessary to ensure landings do not exceed the ACL for the following fishing year.

Subalternative 5g. *Reduce bag limit.* If the ACL is exceeded, the Regional Administrator shall publish a notice to reduce the bag limit by the amount necessary to ensure landings do not exceed the ACL for the following fishing year.

Subalternative 5h. *Payback.* If the ACL is exceeded, the Regional Administrator shall publish a notice to reduce the ACL in the following season by the amount of the overage.

Table 2-63. Summary of effects under **Action 23.**

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Alternative 1 (No Action)	(-) Would not meet NS 1 guidelines and comply with the requirements under MSA. No positive benefits.	(+-) Greatest short-term and smallest long-term benefits.
Alternative 2: Specify a recreational sector ACT Subalternative 2a. No ACT	(+-) Would not provide a buffer between ACT and ACL.	(+-) Smaller long-term and greater short-term benefits.
Subalternative 2b. ACT = 85% recreational sector ACL	(+-) Provides a buffer between ACT and ACL.	(+-) Greater long-term and smaller short-term benefits.
Subalternative 2c. ACT = 75% recreational sector ACL	(+-) Provides a bigger buffer between ACT and ACL when compared with Subalternative 2b.	(-) Smaller short-term and long-term benefits.

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Subalternative 2d (Preferred). ACT = recreational sector ACL [(1-PSE) or 0.5, whichever is greater]	(+-) Provides the greatest benefit of the subalternatives under Alternative 2 , by adjusting the ACL by 50% or the percent standard error.	(+-) Smallest short-term and greatest long-term benefits when compared with Subalternatives 2b and 2c .
Alternative 3: Specify the AM trigger. Subalternative 3a. No AM trigger.	(+-) Same as Alternative 1 (No Action) .	(+-) No indirect economic effects.
Subalternative 3b (Preferred). Annual landings > ACL.	(+-) Does not address anomalous spikes in landings, only one year's data used to determine trigger.	(+-) Greatest short-term negative, and positive long-term effects of all subalternatives under Alternative 3 .
Subalternative 3c. Mean landings for past 3 years > ACL.	(+-) Addresses anomalous spikes in landings, but spikes would affect the average for three years and could trigger AMs when not necessary.	(+-) Positive long-term benefits higher than than Subalternatives 3d and 3e , but lower than Subalternative 3b (Preferred) .
Subalternative 3d. Modified mean (most recent 5 years landings data with the highest and lowest removed) > ACL.	(+-) Similar to Subalternative 3c , may have more benefits due to two additional years of data used to determine overage.	(+-) Positive long-term benefits higher than than Subalternatives 3e , but lower than Subalternatives 3b (Preferred) and 3c .
Subalternative 3e. Lower bound of 90% confidence interval estimate of the landings' mean > ACL.	(+-) More precautionary than Subalternatives 3c and 3d .	(+-) Smallest short-term negative, and positive long-term effects of all subalternatives under Alternative 3 .
Alternative 4: Specify the in-season AM. Subalternative 4a (Preferred). No in-season AM.	(+-) May have negligible effects due to the selection of current ACT (Subalternative 2d, Preferred).	(+-) No indirect economic effects.
Alternative 4b. Recreational fishery closed.	(+-) Requires in-season monitoring of the recreational fishery, which has time lags in reporting and uncertainty in landings data. Possible unnecessary negative benefits.	(+-) Greater short-term negative effects compared with Subalternative 4a .
Alternative 5: Specify the post-season AM. Subalternative 5a. No post-season AM.	(+-) May have negative effects since there would be no penalty for going over the ACL.	(+-) No indirect economic effects.

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Subalternative 5b. Compare ACL with 3-year running mean.	(+-) Addresses anomalous spikes in landings, but spikes would affect the average for three years and could prescribe AMs when not necessary.	(+-) No indirect economic effects.
Subalternative 5c. Monitor following year.	(+) Ensures that AMs are employed when absolutely necessary.	(+-) Same indirect economic effects as Subalternatives 5d (Preferred) and 5e .
Subalternative 5d (Preferred). Monitor following year and shorten season as necessary.	(+-) Ensures that AMs are triggered when absolutely necessary, biologically beneficial since the following fishing season and associated mortality is addressed.	(+-) Negative short-term indirect economic effects smaller than Subalternative 5e .
Subalternative 5e. Monitor following year and reduce bag limit as necessary.	(+-) Ensures that AMs are triggered when absolutely necessary, biologically beneficial since fewer fish can be taken.	(+-) Negative short-term indirect economic effects greater than Subalternative 5d (Preferred) .
Subalternative 5f . Shorten fishing season by amount necessary.	(+-) There is no monitoring component, not as beneficial as Subalternatives 5c-5e .	(+-) Negative short-term indirect economic effects greater than Subalternatives 5c-5e .
Subalternative 5g. Reduce the bag limit following season.	(+-) Biologically beneficial due to reduced number of fish that can be taken the following season.	(+-) Negative short-term indirect economic effects greater than Subalternatives 5c-5f .
Subalternative 5h. Payback, reduce ACL by amount of overage in following season.	(+-) Biologically beneficial due to reduced ACL.	(+-) Negative short-term indirect economic effects greater than Subalternatives 5f and 5g .

2.4.1.5 Action 24: Establish Management Measures for Dolphin

Note: The South Atlantic Council's preferred recreational ACT does not require a reduction in harvest based on 2005-2009 average recreational catch; in fact, the average catch (9,056,933 lbs whole weight; 2005-09) is 15% below the recreational ACT (10,696,013 lbs whole weight; **Table 2-53**). The commercial sector will be closed when the commercial ACL is met or projected to be met. The South Atlantic Council's preferred alternative for a commercial ACL is greater than the average landings during 2005-2009.

Alternative 1 (No Action). Retain current management regulations.

- Sale of recreationally caught dolphin in or from the Atlantic EEZ prohibited. For-hire vessels possessing the necessary state and federal commercial permits can sell dolphin harvested under the bag limit in or from the Atlantic EEZ.
- Commercial soft cap of 1.5 million pounds or 13% of total landings, whichever is greater.
- Recreational daily bag limit of 10 dolphin per person per day in or from the EEZ not to exceed 60 dolphin per boat per day whichever is less. Bag limit of 10 dolphin per paying passenger on headboats.
- Minimum size limit for dolphin of 20 inches fork length off Florida and Georgia, and no minimum size limit north of Georgia. Note: Florida regulations require a minimum size limit of 20 inches fork length; a 10 fish per person bag limit with a 60 fish boat limit; and a saltwater products license, a restricted species endorsement, and a federal commercial vessel permit to sell dolphin, exceed the 10-fish bag limit, or exceed 60 per vessel per day statewide.
- Vessel permits and operator permits are required for commercial and for-hire sectors.

Alternative 2 (Preferred). Prohibit bag limit sales of dolphin from for-hire vessels.

Note: It is the Council's intent that if a for-hire vessel has a commercial permit, they would be allowed to sell their catch only when they are not operating under a for-hire mode.

Alternative 3 (Preferred). Establish a minimum size limit of 20 inches fork length from Florida through South Carolina.

Alternative 4. Establish a minimum size limit of 20 inches fork length from Florida through New England.

Alternative 5. Increase the minimum size limit in Florida and Georgia to 22 inches or 24 inches fork length.

Alternative 6. Reduce the boat limit (e.g. reduce by 1/3). Note: this applies only to charterboats and recreational vessels, not headboats.

Subalternative 6a. Reduce the boat limit by 25%.

Subalternative 6b. Reduce the boat limit by 33%.

Subalternative 6c. Reduce the boat limit by 50%.

Table 2-64. Dolphin OFL, ABC, ACL, ACT alternatives with the required recreational reductions.

Dolphin	OFL	ABC	ACL=OY=85%ABC	Com ACL(7.3%)	Rec ACL(92.7%)	Rec ACT	%Recreational Reduction from various time periods		
							2005-09	2006-09	2004-09
SSC ABC Control Rule	Unknown	14,596,216	12,406,784	905,695	11,501,089	10,696,013	-15%	-17%	-17%
GMFMC Tier 3a*	16,743,471	15,415,524	13,103,195	956,533	12,146,662	11,296,396	-20%	-21%	-21%
Mean + 1.0 Std.Dev.		14,087,576	11,974,440	874,134	11,100,306	10,323,284	-12%	-14%	-14%
Mean + 0.5 Std.Dev.		12,759,629	10,845,685	791,735	10,053,950	9,350,173	-3%	-5%	-5%
Mean		11,431,682	9,716,929	709,336	9,007,593	8,377,062	8%	7%	6%
Average landings for time period from Table 4-44.							9,056,933	8,927,993	8,919,457

*GMFMC Tier 3a OFL = mean + 2.0 Std.Dev.; ABC = mean + 1.5 Std.Dev.

Alternative 7. Consider a series of trip limits for the commercial fishery (e.g., 4,000 pounds with alternatives higher and lower).

Subalternative 7a. Establish a 3,000 pound trip limit for dolphin north of 31° N. Latitude and a 1,000 pound trip limit for dolphin south of 31° N. Latitude (between Jekyll Island and Little Cumberland Island, Georgia) in the EEZ southward through the SAFMC’s area of jurisdiction for dolphin (landed head and tail intact) with no transfer at sea allowed.

Subalternative 7b. Establish a 5,000 pound trip limit.

Subalternative 7c. Establish a 4,000 pound trip limit.

Subalternative 7d. Establish a 3,000 pound trip limit.

Subalternative 7e. Establish a 2,000 pound trip limit.

Subalternative 7f. Establish a 1,000 pound trip limit.

Alternative 8. Reduce the recreational bag limit to 9 dolphin per person.

Table 2-65. Summary of effects under **Action 24.**

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Alternative 1 (No Action)	(+-) Not a beneficial alternative since Council’s preferred recreational ACT requires a reduction of 11% based on 1999-2009 average recreational catch to ensure the recreational ACT is not exceeded. The commercial sector would be closed when the commercial ACL is projected to be met.	(+-) Negative long-term effects.
Alternative 2 (Preferred). Prohibit bag limit sales from for-hire vessels.	(+-) Beneficial to the fishery as effort may be reduced. Ensures regulations are fair and equitable, fish harvested by the recreational sector are not counted toward commercial quotas, and total landings data are accurate.	(+-) Negative short-term effects.
Alternative 3 (Preferred). Establish a 20” FL minimum size limit off South Carolina.	(+-) Smallest benefit (would reduce the total harvest by 1.4%) all alternatives. Would not meet the 11% reduction in harvest needed to ensure the recreational ACT would not	(+-) Negative short-term economic effects for South Carolina.

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
	be exceeded.	
Alternative 4. Establish a 20” FL minimum size limit from Florida through New England.	(+-) Smaller benefit (would reduce the harvest in South Carolina and North Carolina by about 5%). A minimum size limit of 21” FL would provide about a 14% reduction in harvest and would provide slightly more than the 11% reduction in harvest needed to ensure the recreational ACT is not exceeded.	(+-) Negative effects for North Carolina and South Carolina. Loss of \$70,000.00 in gross revenue to the commercial sector.
Alternative 5. Increase the minimum size limit to 22” or 24” FL.	(+-) Higher benefit with the 24” FL size limit increase (35% reduction in harvest) compared with the 22” FL size limit increase (17% reduction in harvest), among all sectors off Florida and Georgia. Both size limit increases would provide more than the 11% reduction in harvest needed to ensure the recreational ACT would not be exceeded.	(+-) Most conservative and would therefore likely yield the largest positive long-term economic benefits in excess of the benefits expected under alternatives 3 and 4. Largest short-term negative economic effects for Florida.
Alternative 6: Reduce the boat limit; only applies to charterboats and recreational vessels, not headboats. Subalternative 6a. Reduce the boat limit by 25%.	(+-) Lowest benefits of all subalternatives under Alternative 6 (would result in a maximum of 45 fish/vessel). 6% reduction in harvest. Would not meet the 11% reduction in harvest needed to ensure the recreational ACT would not be exceeded.	(+-) Smallest negative economic effects of all subalternatives under Alternative 6.
Subalternative 6b. Reduce the boat limit by 33%.	(+-) Slightly higher benefits than Subalternative 6a (would result in a maximum of 40 fish/vessel), lower benefits than Subalternative 6c.	(+-) Negative economic effects in-between subalternative 6a and 6c.
Subalternative 6c. Reduce the boat limit by 50%.	(+-) Highest benefit (would result in a maximum of 30 fish/vessel) of the subalternatives under	(+-) Greatest negative economic effects of all subalternatives under Alternative 6.

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
	Alternative 6. 18% reduction in harvest. Would provide more than the 11% reduction in harvest needed to ensure the recreational ACT would not be exceeded.	
Alternative 7: Trip limits for commercial fishery Subalternative 7a. 3,000 lb trip limit N. of 31 ⁰ Latitude; 1,000 lb trip limit S. of 31 ⁰ Latitude.	(+-) Higher benefits than subalternatives 7b and 7c , similar to subalternatives 7d, 7e, and 7f.	(+-) Could result in ex-vessel revenue losses of \$468,000.00.
Subalternative 7b. 5,000 lb trip limit.	(+-) Lowest benefits of all subalternatives under Alternative 7.	(+-) Could result in ex-vessel revenue losses of \$205,000.00.
Subalternative 7c. 4,000 lb trip limit.	(+-) Lower benefits than subalternatives 7d, 7e, and 7f.	(+-) Negative economic effects less than Subalternative 7b , but more than subalternatives 7d-7f.
Subalternative 7d. 3,000 lb trip limit.	(+-) Benefits higher than subalternatives 7b and 7c , lower than subalternatives 7e and 7f.	(+-) Negative economic effects in-between subalternatives 7c and 7e.
Subalternative 7e. 2,000 lb trip limit.	(+-) Benefits higher than subalternatives 7b, 7c, and 7d , lower than subalternative 7f.	(+-) Ex-vessel revenue losses less than Subalternative 7f , but likely higher than subalternatives 7b-7d.
Subalternative 7f. 1,000 lb trip limit.	(+-) Benefits highest (26% reduction in harvest) among subalternatives under Alternative 7. This reduction in harvest would be for all fishing areas, and would provide more than the 11% reduction in harvest needed to ensure the recreational ACT would not be exceeded..	(+-) Could result in ex-vessel revenue losses of \$686,000.00.
Alternative 8. Reduce recreational bag limit of 9 fish/person.	(+-) Similar benefit to Alternative 3 (would reduce harvest by 2%). The bag limit would have to be reduced to 5 fish per person to achieve the necessary reduction of 11%.	(+-) Negative short-term effects.

2.4.2 Wahoo

2.4.2.1 Action 25: Establish an Acceptable Biological Catch (ABC) Control Rule and ABC for Wahoo

The South Atlantic Council requested the SSC consider the Gulf of Mexico Control Rule which would use mean, mean + 0.5 to 2.0 times the SD. During their March 2011 meeting, the South Atlantic Council approved the following motion: For dolphin and wahoo, provide guidance to the SSC that is based on biology and productivity and not overfishing/overfished status, the Council is comfortable using mean landings over the last 10 years + 1.0 standard deviation to set ABC.

The South Atlantic Council's SSC met April 5-7, 2011 in Charleston, South Carolina and recommended that the Gulf of Mexico Council's ABC Control Rule not be used for South Atlantic stocks. Instead they recommended use of their own ABC control rule for unassessed stock. Their action changed the previous OFL/ABC recommendation for wahoo (and dolphin).

At their April 2011 meeting, the South Atlantic Council's SSC stated that OFL for wahoo is unknown since there is no stock assessment, current conditions are impacted by management, and there is no measure of stock biomass relative to landings. An ABC = 1,491,785 pounds whole weight was recommended based on the SSC's ABC control rule for unassessed species.

Alternative 1 (No Action). Do not establish an ABC Control Rule for wahoo.

Alternative 2. Establish an ABC Control Rule where ABC equals OFL.

Alternative 3. Establish ABC based on the Gulf of Mexico Council's ABC control rule.

Note: The Gulf of Mexico Control Rule as applied to wahoo would likely be Tier 3a and would set the OFL = mean 10 years landings + 2 SD (OFL=1,994,417 lbs) and set the ABC = mean or mean + 0.5-1.5 SD (1,171,513 or 1,377,239 or 1,582,965 or 1,788,691 lbs).

Alternative 4 (Preferred). When the ABC control rule portion for unassessed species is complete, establish ABC for wahoo based on the South Atlantic Council's SSC's ABC control rule described in Table 2-12. Until the ABC control rule is complete, establish ABC based upon the interim approach in Table 2-14 and OFL = unknown.

Table 2-66. Summary of effects under **Action 25.**

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Alternative 1 (No Action)	(-) Would not meet MSA requirements.	(+/-) No negative short-term effects on commercial fleet.
Alternative 2. ABC=OFL; OFL=1,202,939 lbs.	(+/-) Least conservative of the alternatives, since there is no buffer between OFL and	(+/-) Negative short-term loss of \$5,000.00 to commercial fleet.

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
	ABC, does not account for scientific and management uncertainty like Alternative 4 .	
Alternative 3. Gulf of Mexico Council SSC's ABC Control Rule; ABC=1.5 S.D. above mean landings 1999 to 2008.	(+-) Benefits similar to Alternative 4 (Preferred) .	(+-) No negative short-term effects on commercial fleet.
Alternative 4 (Preferred). South Atlantic Council SSC's ABC Control Rule; ABC=third highest landings during 1999 to 2008.	(+-) Benefits similar to Alternative 3 .	(+-) No negative short-term effects on commercial fleet.

2.4.2.2 Action 26: Specify Allocations for Wahoo

[Note: When considering two sectors (Commercial and Recreational), the Recreational sector includes private recreational (shore/rental boats and charter boats), as well as headboats. When considering three sectors (Commercial, Recreational, and For-hire), the Recreational sector includes only private recreational (shore/rental boats) and for-hire includes headboats and charter boats.]

Alternative 1 (No Action). Do not define allocations for wahoo.

Alternative 2. Define allocations for wahoo based upon landings from the ALS, MRFSS, and headboat databases. The allocation would be based on landings from the years 2006-2008. The allocation would be 4% commercial and 96% recreational. The commercial and recreational allocation specified for 2011 would remain in effect beyond 2011 until modified.

Alternative 3 (Preferred). Define allocations for wahoo based upon landings from the ALS, MRFSS, and headboat databases. The allocation would be based on the following formula for each sector:

Sector apportionment = (50% * average of long catch range (lbs) 1999-2008) + (50% * average of recent catch trend (lbs) 2006-2008). The allocation would be 4.3% commercial and 95.7% recreational.

Alternative 4. Define allocations for wahoo based upon landings from the ALS, MRFSS, and headboat databases. The allocation would be based on the following formula for each sector: Sector apportionment = (50% * average of long catch range (lbs) 1999-2008) + (50% * average of recent catch trend (lbs) 2006-2008). The allocation would be 4.3% commercial, 29.1% for-hire, and 66.6% private recreational. The commercial, for-hire, and private recreational allocations specified for 2011 would remain in effect beyond 2011 until modified.

Table 2-67. Summary of effects under Action 26.

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Alternative 1 (No Action)	(+-) Would not establish allocations for wahoo, would not be possible to identify the ACL in the recreational sector. Only a single ACL could be established for both sectors and options for an accountability measure (AM) would be limited. Smallest benefits compared to Alternatives 2-4.	(+-) Maintains current caps on landings between commercial and recreational sectors.
Alternative 2. Commercial=4%; Recreational=96% Landings 2006-2008.	(+-) Benefits lower than Alternative 3 (Preferred) , possibly higher than Alternative 4.	(+-) Positive overall economic benefits.
Alternative 3 (Preferred). Commercial=4.3%; Recreational=95.7% Landings (50% 1999-2008 +50% 2006-2008).	(+-) Benefits higher than Alternatives 1 (No Action) , 2, and 4. Combines beneficial effects of older data (favoring commercial sector) and newer data (favoring recreational sector).	(+-) Positive overall economic benefits.
Alternative 4. Commercial=4.3%; For-hire=29.1%; Private recreational=66.6% Landings (50% 1999-2008 + 50% 2006-2008).	(+-) Benefits would be less than Alternatives 2 and 3 (Preferred) , uncertainty in recreational landings higher due to addition of another recreational sector.	(+-) Positive overall economic benefits.

2.4.2.3 Action 27: Establish Annual Catch Limits (ACL) and Optimum Yield (OY) for Wahoo

Alternative 1 (No Action). There is no ACL specified for wahoo. Currently OY for wahoo is the amount of harvest that can be taken by fishermen while not exceeding 100% of MSY (between 1.41 and 1.63 million pounds).

Alternative 2 (Preferred). ACL = OY = ABC.

Alternative 3. ACL = OY = 85% of the ABC.

Alternative 4. ACL = OY = 75% of the ABC.

Alternative 5. ACL = OY = 65% of the ABC.

ACL values are shown in **Table 2-62**.

Table 2-68. ACL formula, ACL, and OY values (lbs whole weight) for wahoo under **Alternatives 2-5**. Commercial and recreational ACL values are based on preferred allocation alternative (4.3% commercial/95.7% recreational) in **Action 25**.

Alternative	ACL Formula	ACL value	Comm ACL	Rec ACL
Alternative 2 (Preferred)	ABC	1,491,785	64,147	1,427,638
Alternative 3	85% ABC	1,268,017	54,525	1,213,492
Alternative 4	75% ABC	1,118,839	48,110	1,070,729
Alternative 5	65% ABC	969,660	41,695	927,965

Table 2-69. Summary of effects under **Action 27**.

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Alternative 1 (No Action)	(-) Would not meet the requirements of MSA to specify ACLs for all species in an FMU, and could lead to overfishing.	(+-) Smallest long-term, and greatest short-term benefits.
Alternative 2. ACL=OY=ABC	(+-) Least conservative of the alternatives, since there is no buffer between ACL and ABC. Benefits may be lower than Alternatives 3, 4, and 5 .	(+-) No short-term economic losses to commercial sector.
Alternative 3 (Preferred). ACL=OY=85% ABC	(+-) Provides a buffer between ABC and ACL. Benefits could be higher than Alternative 2 (Preferred) and smaller than Alternatives 4 and 5 .	(+-) Short-term economic losses greater than Alternative 2 , but smaller than Alternatives 4 and 5 . Gains in recreational sector.
Alternative 4. ACL=OY=75% ABC	(+-) Benefits in-between Alternatives 3 and 5 .	(+-) Short-term economic losses in-between Alternatives 3 and 5 . Gains in recreational sector.
Alternative 5. ACL=OY=65% ABC	(+-) Most conservative of the alternatives. Provides a greater buffer between ABC and ACL, and therefore, greater benefits.	(+-) Greatest short-term economic losses of all alternatives. Gains in recreational sector.

2.4.2.4 Action 28: Establish Accountability Measures for the Commercial Sector for Wahoo

Alternative 1 (No Action). There is no hard quota for wahoo and there are no AMs in place for wahoo.

Alternative 2. Establish commercial sector ACT for wahoo, apply to commercial AM Alternatives 3 or 4.

Subalternative 2a (Preferred). Do not specify a commercial sector ACT.

Subalternative 2b. The commercial sector ACT equals 90% of the commercial sector ACL.

Subalternative 2c. The commercial sector ACT equals 80% of the commercial sector ACL.

Table 2-70. Commercial sector ACTs for each of the alternatives. Values are in lbs whole weight.

Species	Preferred Commercial ACL	Commercial Sector ACT Subalternatives		
		2a - No ACL	2b - 90%(ACL)	2c - 80%(ACL)
Wahoo	64,147	N/A	57,732	51,318

Alternative 3 (Preferred). After the commercial ACL is met or projected to be met, all purchase and sale of wahoo is prohibited and harvest and/or possession is limited to the bag limit.

Alternative 4. If the commercial sector ACL is exceeded, the Regional Administrator shall publish a notice to reduce the commercial sector ACL in the following season by the amount of the overage.

Table 2-71. Summary of effects under **Action 28.**

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Alternative 1 (No Action)	(-) Would not meet NS 1 guidelines and comply with the requirements under MSA. No positive benefits.	(+-) Greatest short-term and smallest long-term benefits.
Alternative 2: Commercial sector ACT Subalternative 2a (Preferred). No commercial sector ACT	(+-) AMs would apply when the commercial ACL is exceeded, no buffer between ACT and ACL. Benefits may be lower than Subalternatives 2b and 2c.	(+-) Same as Alternative 1 (No Action).
Subalternative 2b. ACT = 90% commercial sector ACL	(+-) Provides a buffer between ACT and ACL. Benefits may be higher than Subalternative 2a and lower than Subalternative 2c.	(+-) Benefits in-between Subalternatives 2a and 2c.

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Subalternative 2c. ACT = 80% commercial sector ACL	(+-) Provides a bigger buffer between ACT and ACL. Benefits may be highest of all subalternatives under Alternative 2.	(-) Smaller short-term benefits compared with Subalternative 2b.
Alternative 3 (Preferred). Commercial sector AM: Harvest/possession limited to bag limit	(+-) A form of post-season AM, possible positive benefits, especially when combined with Alternative 4 (Preferred).	(+-) Greater short-term benefits compared to Alternative 4 , but less than Alternative 1 (No Action).
Alternative 4. Commercial sector AM: ACL reduced in the following season by amount of overage.	(+-) A form of post-season AM, possible positive benefits, especially when combined with Alternative 3 (Preferred).	(+-) Greater long-term benefits to the commercial fishery compared with Alternatives 3 (Preferred) and 1 (No Action).

2.4.2.5 Action 29: Establish Accountability Measures for the Recreational Sector for Wahoo

Alternative 1 (No Action). Do not specify new recreational AMs for wahoo.

Decision 1. Specify an ACT?

Alternative 2. Specify an ACT.

Subalternative 2a. Do not specify an ACT.

Subalternative 2b. The ACT equals 85% of the ACL.

Subalternative 2c. The ACT equals 75% of the ACL.

Subalternative 2d (Preferred). The ACT equals $ACL \cdot (1 - PSE)$ or $ACL \cdot 0.5$, whichever is greater]. Council guidance to use the PSE 5-year (2005-2009) average (13.9).

Table 2-72. Proportional Standard Errors (PSEs) for wahoo from weight estimates (A+B1) for all modes.

Obtained from <http://www.st.nmfs.noaa.gov> on June 10, 2011.

Species	2003	2004	2005	2006	2007	2008	2009	3 year average (2007-09)	5 year average (2005-09)
Wahoo	21.1	23.1	19.8	13.7	20.8	18.1	19.8	19.5	30.7

Note: The Council decided to use the 5-year average PSE because this better represented recent catches than the 3 year average.

Table 2-73. The recreational ACT for each of the alternatives. Values are in lbs whole weight.

Species	Preferred	Recreational Sector ACT Subalternatives
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	Recreational Sector ACL	5a - 85%(ACL)	5b - 75%(ACL)	5c – ACL [(1-PSE) or 0.5, whichever is greater]
Wahoo	1,427,638	1,213,492	1,070,729	1,149,249

Average recreational landings from 2005, 2006, 2008, and 2009 from Table 4-94 = 768,686 lbs ww.

Decision 2. What is the AM trigger?

Alternative 3. Specify the AM trigger.

Subalternative 3a. Do not specify an AM trigger.

Subalternative 3b (Preferred). If the *annual landings* exceed the ACL in a given year.

Subalternative 3c. If the *mean landings* for the past three years exceed the ACL.^{1,2}

Subalternative 3d. If the *modified mean landings* exceed the ACL. The modified mean is the average of the most recent 5 years of available landings data with highest and lowest landings estimates removed.^{1,2}

Subalternative 3e. If the lower bound of the 90% *confidence interval* estimate of the MRFSS landings' population mean plus headboat landings is greater than the ACL.

Notes:

¹ *Start the clock over.* In any year the ACL is reduced or increased, the sequence of future ACLs will begin again starting with a single year of landings compared to the ACL for that year, followed by a 2-year average of landings compared to the 2-year average annual catch limits in the next year, followed by a 3-year average of landings compared to the 3-year average of ACLs for the third year, and so on.

² For 2011, use only 2011 landings. For 2012, use the mean landings of 2011 and 2012. For 2013 and beyond, use the most recent three-year running mean.

Decision 3. Is there an in-season AM?

Alternative 4. Specify the in-season AM.

Subalternative 4a (Preferred). Do not specify an in-season AM.

Subalternative 4b. The Regional Administrator shall publish a notice to close the recreational sector when the ACL is projected to be met.

Decision 4. Is there a post-season AM?

Alternative 5. Specify the post-season AM.

Subalternative 5a. Do not specify a post-season AM.

Subalternative 5b. For post-season accountability measures, compare recreational ACL with recreational landings over a range of years. For 2011, use only 2011 landings. For 2012, use the mean landings of 2011 and 2012. For 2013 and beyond, use the most recent three-year running mean.¹

Subalternative 5c. *Monitor following year.* If the ACL is exceeded, the following year’s landings would be monitored for persistence in increased landings. The Regional Administrator would take action as necessary.

Subalternative 5d (Preferred). *Monitor following year and shorten season as necessary.* If the ACL is exceeded, the following year’s landings would be monitored in-season for persistence in increased landings. The Regional Administrator will publish a notice to reduce the length of the fishing season as necessary.

Subalternative 5e. *Monitor following year and reduce bag limit as necessary.* If the ACL is exceeded, the following year’s landings would be monitored for persistence in increased landings. The Regional Administrator will publish a notice to reduce the bag limit as necessary.

Subalternative 5f. *Shorten following season.* If the ACL is exceeded, the Regional Administrator shall publish a notice to reduce the length of the following fishing year by the amount necessary to ensure landings do not exceed the ACL for the following fishing year.

Subalternative 5g. *Reduce bag limit and shorten season.* If the ACL is exceeded, the Regional Administrator shall publish a notice to reduce the bag limit to 1 fish and reduce the season as necessary to ensure landings do not exceed the recreational sector ACL for the following fishing year.

Subalternative 5h. *Payback.* If the ACL is exceeded, the Regional Administrator shall publish a notice to reduce the ACL in the following season by the amount of the overage.

Table 2-74. Summary of effects under Action 29.

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Alternative 1 (No Action)	(-) Would not meet NS 1 guidelines and comply with the requirements under MSA. No positive benefits.	(+/-) Greatest short-term and smallest long-term benefits.
Alternative 2: Specify a recreational sector ACT Subalternative 2a. No ACT	(+/-) Would not provide a buffer between ACT and ACL.	(+/-) Smaller long-term and greater short-term benefits.
Subalternative 2b. ACT = 85% recreational sector ACL	(+/-) Provides a buffer between ACT and ACL.	(+/-) Greater long-term and smaller short-term benefits.
Subalternative 2c. ACT = 75% recreational sector ACL	(+/-) Provides a bigger buffer between ACT and ACL when compared with Subalternative 2b.	(-) Smaller short-term and long-term benefits.
Subalternative 2d	(+/-) Provides the greatest	(+/-) Smallest short-term and

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
(Preferred). ACT = recreational sector ACL [(1-PSE) or 0.5, whichever is greater]	benefit of the subalternatives under Alternative 2 , by adjusting the ACL by 50% or the percent standard error.	greatest long-term benefits when compared with subalternatives 2b and 2c .
Alternative 3: Specify the AM trigger. Subalternative 3a. No AM trigger.	(+-) Same as Alternative 1 (No Action) .	(+-) No indirect economic effects.
Subalternative 3b (Preferred). Annual landings > ACL.	(+-) Does not address anomalous spikes in landings, only one year's data used to determine trigger.	(+-) Greatest short-term negative, and positive long- term effects of all subalternatives under Alternative 3 .
Subalternative 3c. Mean landings for past 3 years > ACL.	(+-) Addresses anomalous spikes in landings, but spikes would affect the average for three years and could trigger AMs when not necessary.	(+-) Positive long-term benefits higher than than Subalternatives 3d and 3e , but lower than Subalternative 3b (Preferred) .
Subalternative 3d. Modified mean (most recent 5 years landings data with the highest and lowest removed) > ACL.	(+-) Similar to Subalternative 3c , may have more benefits due to two additional years of data used to determine average.	(+-) Positive long-term benefits higher than than Subalternatives 3e , but lower than Subalternatives 3b (Preferred) and 3c .
Subalternative 3e. Lower bound of 90% confidence interval estimate of the landings' mean > ACL.	(+-) More precautionary than Subalternatives 3c and 3d .	(+-) Smallest short-term negative, and positive long- term effects of all subalternatives under Alternative 3 .
Alternative 4: Specify the in- season AM. Subalternative 4a (Preferred). No in-season AM.	(+-) May have negligible effects due to the selection of current ACT (Subalternative 2d, Preferred).	(+-) No indirect economic effects.
Alternative 4b. Recreational fishery closed.	(+-) Requires in-season monitoring of the recreational fishery, which has time lags in reporting and uncertainty in landings data. Possible unnecessary negative benefits.	(+-) Greater short-term negative effects compared with Subalternative 4a .
Alternative 5. Specify the post-season AM. Subalternative 5a. No post-season AM.	(+-) May have negative effects since there would be no penalty for going over the ACL.	(+-) No indirect economic effects.
Subalternative 5b	(+-) Addresses anomalous	(+-) No indirect economic

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
(Preferred). Compare ACL with 3-year running mean.	spikes in landings, but spikes would affect the average for three years and could prescribe AMs when not necessary.	effects.
Subalternative 5c. Monitor following year.	(+) Ensures that AMs are employed when absolutely necessary.	(+-) Same indirect economic effects as Subalternatives 5d (Preferred) and 5e.
Subalternative 5d (Preferred). Monitor following year and shorten season as necessary.	(+-) Ensures that AMs are triggered when absolutely necessary, biologically beneficial since the following fishing season and associated mortality is addressed.	(+-) Negative short-term indirect economic effects smaller than subalternative 5e.
Subalternative 5e. Monitor following year and reduce bag limit as necessary.	(+-) Ensures that AMs are triggered when absolutely necessary, biologically beneficial since fewer fish can be taken.	(+-) Negative short-term indirect economic effects greater than Subalternative 5d (Preferred).
Subalternative 5f . Shorten fishing season by amount necessary.	(+-) There is no monitoring component, not as beneficial as Subalternatives 5c-5e.	(+-) Negative short-term indirect economic effects greater than Subalternatives 5c-5e.
Subalternative 5g. Reduce the bag limit following season.	(+-) Biologically beneficial due to reduced number of fish that can be taken the following season.	(+-) Negative short-term indirect economic effects greater than Subalternatives 5c-5f.
Subalternative 5h. Payback, reduce ACL by amount of overage in following season.	(+-) Biologically beneficial due to reduced ACL.	(+-) Negative short-term indirect economic effects greater than Subalternatives 5f and 5g.

2.4.2.5 Action 30: Establish Management Measures for Wahoo

The South Atlantic Council’s preferred recreational ACT (1,229,196 lb whole weight) does not require a reduction based on average recreational landings (2005-2009, excluding 2007); in fact, the average catch (768,868 lbs whole weight) is 37% below the ACT (Table 2-75). The commercial sector will be closed when the commercial ACL is met or projected to be met. Average commercial landings (42,004) during 2005-2009 (excluding 2007) are well below the South Atlantic Council’s preferred alternative for a commercial ACL (64,147 lbs whole weight).

Alternative 1 (Preferred) (No Action). Retain current management measures for wahoo.

- Sale of recreationally caught wahoo in or from the Atlantic EEZ is prohibited.

- 500 pound commercial trip limit for wahoo (landed head and tail intact) with no transfer at sea allowed.
- Recreational bag limit of 2 wahoo per person per day in the Atlantic EEZ.

Alternative 2. Establish a boat limit of 2-12 wahoo per boat/vessel per day in the recreational fishery.

Subalternative 2a. Establish a boat limit of 12 wahoo per boat/vessel per day.

Subalternative 2b. Establish a boat limit of 11 wahoo per boat/vessel per day.

Subalternative 2c. Establish a boat limit of 10 wahoo per boat/vessel per day.

Subalternative 2d. Establish a boat limit of 9 wahoo per boat/vessel per day.

Subalternative 2e. Establish a boat limit of 8 wahoo per boat/vessel per day.

Subalternative 2f. Establish a boat limit of 7 wahoo per boat/vessel per day.

Subalternative 2g. Establish a boat limit of 6 wahoo per boat/vessel per day.

Subalternative 2h. Establish a boat limit of 5 wahoo per boat/vessel per day.

Subalternative 2i. Establish a boat limit of 4 wahoo per boat/vessel per day.

Subalternative 2j. Establish a boat limit of 3 wahoo per boat/vessel per day.

Subalternative 2k. Establish a boat limit of 2 wahoo per boat/vessel per day.

Table 2-75. Wahoo OFL, ABC, ACL, ACT alternatives with the required recreational reductions.

Wahoo	OFL	ABC	ACL=OY=ABC	Com ACL (4.3%)	Rec ACL (95.7%)	Rec ACT	%Recreational Reduction from various time periods			
							2005-09	2006-09	2004-09	05, 06, 08, 09
SSC ABC Control Rule	Unknown	1,491,785	1,491,785	64,147	1,427,638	1,229,196	-17%	-13%	-16%	-37%
GMFMC Tier 3a*	1,994,417	1,788,691	1,788,691	76,914	1,711,777	1,473,840	-31%	-28%	-30%	-48%
Mean + 1.0 Std.Dev.		1,582,965	1,582,965	68,067	1,514,898	1,304,327	-22%	-18%	-21%	-41%
Mean + 0.5 Std.Dev.		1,377,239	1,377,239	59,221	1,318,018	1,134,814	-10%	-6%	-9%	-32%
Mean		1,171,513	1,171,513	50,375	1,121,138	965,300	6%	10%	7%	-20%
							1,023,180	1,065,807	1,036,106	768,686

Note: The South Atlantic Council decided to calculate reductions in harvest for wahoo using average landings for years 2005-2009 excluding 2007. The bag limit specified for wahoo was first implemented in 2004 and the reduction is reflected in the 2005 landings after full implementation. Landings from 2007 are excluded because they are much higher than years since the bag limit was implemented, and the South Atlantic Council concluded this was more of a sampling factor than actual catches.

Table 2-76. Summary of effects under Action 30.

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Alternative 1 (Preferred) (No Action)	(+-) No additional management measures are needed to prevent ACT from being exceeded. The commercial sector would be closed when the commercial ACL is projected to be met. Most conservative of the recreational bag limits considered, would reduce harvest of wahoo in the private and recreational sectors by 26%.	(+-) No economic impacts in the short-term, negative impacts in the long-term.
Alternative 2. Recreational boat limit of 2-12 wahoo/vessel/day	(+-) Would reduce harvest of wahoo in the private and recreational sectors from 26% (2 fish per vessel) to 0.75% (12 fish per vessel).	(+-) Negative short-term and positive long-term impacts.
Subalternative 2a. Recreational boat limit of 12 wahoo/vessel/day	(+-) Would reduce harvest of wahoo in the private and recreational sectors by 0.75%.	(+-) Greatest short-term positive economic effects of all subalternatives under Alternative 2.
Subalternative 2b. Recreational boat limit of 11 wahoo/vessel/day	(+-) Benefits between Subalternatives 2a and 2c.	(+-) Positive short-term economic effects.
Subalternative 2c. Recreational boat limit of 10 wahoo/vessel/day	(+-) Would reduce harvest of wahoo in the private and recreational sectors by 1.09%.	(+-) Positive short-term economic effects.
Subalternative 2d. Recreational boat limit of 9 wahoo/vessel/day	(+-) Would reduce harvest of wahoo in the private and recreational sectors by 1.42%.	(+-) Positive short-term economic effects.
Subalternative 2e. Recreational boat limit of 8 wahoo/vessel/day	(+-) Would reduce harvest of wahoo in the private and recreational sectors by 2.10%.	(+-) Positive short-term economic effects.
Subalternative 2f. Recreational boat limit of 7 wahoo/vessel/day	(+-) Would reduce harvest of wahoo in the private and recreational sectors by 3.27%.	(+-) Positive short-term economic effects.
Subalternative 2g. Recreational boat limit of 6 wahoo/vessel/day	(+-) Would reduce harvest of wahoo in the private and recreational sectors by 5.20%.	(+-) Positive short-term economic effects.
Subalternative 2h. Recreational boat limit of 5	(+-) Would reduce harvest of wahoo in the private and	(+-) Positive short-term economic effects.

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
wahoo/vessel/day	recreational sectors by 7.71%.	
Subalternative 2i. Recreational boat limit of 4 wahoo/vessel/day	(+-) Would reduce harvest of wahoo in the private and recreational sectors by 10.98%.	(+-) Positive short-term economic effects.
Subalternative 2j. Recreational boat limit of 3 wahoo/vessel/day	(+-) Would reduce harvest of wahoo in the private and recreational sectors by 15.84%.	(+-) Positive short-term economic effects.
Subalternative 2k. Recreational boat limit of 2 wahoo/vessel/day	(+-) Would reduce recreational harvest by 26%.	(+-) Smallest short-term positive economic effects of all subalternatives under Alternative 2.

2.6.2 Action 31: Establish an Annual Catch Limit (ACL) and Optimum Yield (OY) for Golden Crab

Alternative 1 (No Action). Do not specify an ACL for Golden Crab.

Alternative 2 (Preferred). ACL= OY=ABC.

Alternative 3. ACL = OY = 85% of the ABC.

Alternative 4. ACL = OY =75% of the ABC.

Alternative 5. ACL = OY =65% of the ABC.

Table 2-77. Summary of effects under **Action 31.**

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Alternative 1 (No Action)	(+-) Would not meet NS 1 guidelines and comply with the requirements under MSA. No positive benefits.	(+-) No net economic benefits.
Alternative 2 (Preferred). AC=OY=ABC.	(+-) Least conservative of the alternatives, since there is no buffer between ACL and ABC. Benefits may be lower than Alternatives 3, 4, and 5.	(+) Greatest long-term benefits when compared with alternatives 3, 4, and 5.
Alternative 3. ACL=OY=85% ABC.	(+-) Provides a buffer between ABC and ACL. Benefits could be higher than Alternative 2 (Preferred) and smaller than Alternatives 4 and 5.	(+-) Long-term benefits in-between Alternatives 2 (Preferred), 4, and 5.
Alternative 4. ACL=OY=75% ABC.	(+-) Benefits in-between Alternatives 3 and 5.	(+-) Benefits in-between Alternatives 3 and 5.
Alternative 5. ACL=OY=65% ABC.	(+-) Most conservative of the alternatives. Provides a greater buffer between ABC and ACL, and therefore, greater benefits.	(-) Smallest long-term benefits.

2.6.3 Action 32: Establish Accountability Measures for Golden Crab

Alternative 1 (No Action). Do not establish accountability measures for Golden Crab.

Alternative 2 (Preferred). After the ACL is met or projected to be met, all harvest, purchase, and sale of golden crab is prohibited.

Alternative 3 (Preferred). If the ACL is exceeded, the Regional Administrator shall publish a notice to reduce the ACL or ACT in the following season by the amount of the overage only if overfished.

Table 2-78. Summary of effects under **Action 32.**

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Alternative 1 (No Action)	(-) Would not meet NS 1 guidelines and comply with the requirements under MSA. No positive benefits.	(+-) Greatest short-term and smallest long-term benefits (indirect).
Alternative 2 (Preferred). Fishery closed after ACL is projected to be met.	(+-) Requires in-season monitoring of the fishery, benefits higher when combined with Alternative 3 (Preferred).	(+-) Smaller short-term indirect benefits when compared with Alternative 3 (Preferred).
Alternative 3 (Preferred). ACL reduced in the following season by amount of overage.	(+-) A form of post-season AM, possible positive benefits, especially when combined with Alternative 3 (Preferred).	(+-) Greater long-term indirect benefits when compared with Alternative 2 (Preferred).

