

Revised 10/20/11

PUBLIC HEARING SUMMARY

of AMENDMENT 24 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (RED GROUPE)

The SEDAR stock assessment of the red grouper stock in the South Atlantic was completed in 2010 with data through 2008. The assessment showed red grouper are **overfished** (population biomass or pounds in the water is too low) and **undergoing overfishing** (rate of removal or numbers of fish removed from the water is too high).

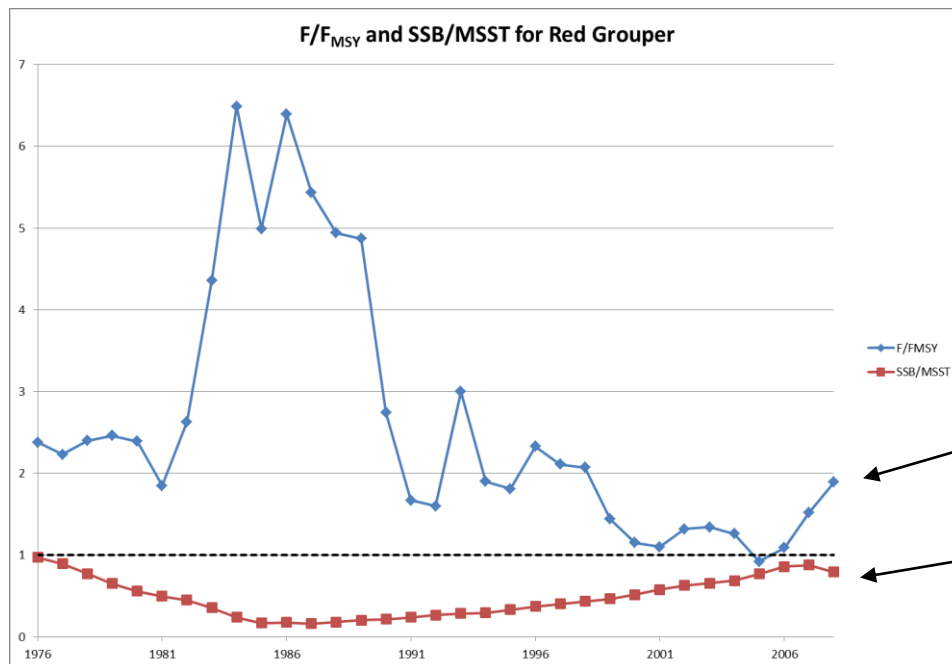
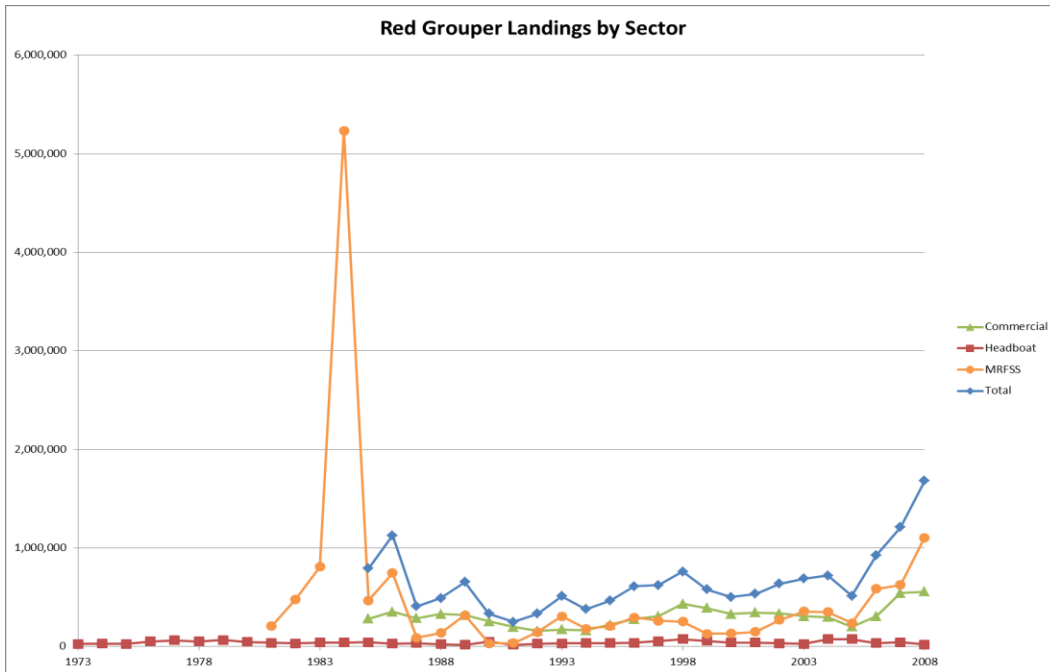
The South Atlantic Fishery Management Council (South Atlantic Council) and National Marine Fisheries Service (NOAA Fisheries Service) are required by law to implement a rebuilding plan. The primary purpose of Amendment 24 to the Fishery Management Plan for the Snapper Grouper Fishery (Amendment 24) is to implement the rebuilding plan to end overfishing and rebuild the spawning stock of red grouper. However, the South Atlantic Council is also required to specify management benchmarks (called maximum sustainable yield and minimum stock size threshold).

On July 29, 2009, the South Atlantic Council's Amendment 16 to the Snapper Grouper Fishery Management Plan that included a four-month spawning season closure for gag grouper and shallow water groupers (including red grouper) was implemented by NOAA Fisheries Service. Based on 2010 red grouper catch data, current management measures may be sufficient to limit recreational landings below the recreational ACL proposed in this amendment; however, the commercial ACL is expected to be exceeded before the end of the year once implemented in 2012.

This document is intended to serve as a SUMMARY for all the actions and alternatives in Amendment 24. It also provides background information and includes a summary of the expected biological, social, and economic effects from the management measures.

Why is the South Atlantic Council taking Action?

The stock assessment of red grouper in the South Atlantic Council's area was completed in 2010 using data through 2008. The assessment showed red grouper to be **overfished** (population too low) and **undergoing overfishing** (rate of removal too high) (see figures below). The South Atlantic Fishery Management Council (South Atlantic Council) and National Marine Fisheries Service (NOAA Fisheries Service) are required by law to implement a rebuilding plan to end overfishing and rebuild the spawning stock of red grouper.

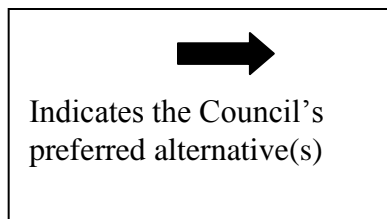
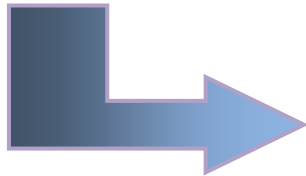


Overfishing if
 $F/F_{MSY} > 1$
 $F_{2008}/F_{MSY} = 1.35$

Overfished if
 $SSB/MSST < 1$
 $B_{2008}/B_{MSY} = 0.92$

What Are the Proposed Actions?

There are 10 actions in Amendment 24. Each *action* has a range of *alternatives*, including a “no action alternative” and a “preferred alternative”.



Proposed Actions in Amendment 24

1. Maximum Sustainable Yield
2. Minimum Stock Size Threshold
3. Rebuilding Schedule
4. Rebuilding Strategy and Acceptable Biological Catch Levels
5. Allocations
6. Annual Catch Limits and Optimum Yield
7. Annual Catch Target for the Commercial Sector
8. Annual Catch Target for the Recreational Sector
9. Accountability Measures for the Commercial Sector
10. Accountability Measures for the Recreational Sector

What Are the Alternatives?

1. Maximum Sustainable Yield

Proposed Actions in Amendment 24

1. **Maximum Sustainable Yield**
2. Minimum Stock Size Threshold
3. Rebuilding Schedule
4. Rebuilding Strategy and Acceptable Biological Catch Levels
5. Allocations
6. Annual Catch Limits and Optimum Yield
7. Commercial ACT
8. Recreational ACT
9. Commercial AMs
10. Recreational AMs

Alternatives	Equation	F_{MSY}	MSY Values (lbs whole weight)
Alternative 1 (No Action)	MSY equals the yield produced by F_{MSY} . $F_{30\%SPR}$ is used as the F_{MSY} proxy.	$F_{30\%SPR}=0.178^1$	not specified
Alternative 2 (Preferred)	MSY equals the yield produced by F_{MSY} or the F_{MSY} proxy. MSY and F_{MSY} are recommended by the most recent SEDAR/SSC.	0.221 ²	1,110,000 ³

¹Estimate from the Beaufort Age Model (BAM)
^{2,3}SEDAR 19 (2010)

Impacts

Biological: Preferred Alternative 2 would have beneficial effects on the red grouper stock as it provides a reference point to monitor its long-term performance.

Economic: Preferred Alternative 2, which is recommended in the most recent SEDAR and by the SSC, has a better scientific basis. Hence, it provides a more solid ground for management actions that have economic implications.

Social: Preferred Alternative 2 will likely have few negative social effects if the threshold is above the mean landings and not substantially reduced by other management actions.

Snapper Grouper Advisory Panel Recommendation: Select **Alternative 2** as Preferred.

2. Minimum Stock Size Threshold (MSST)

Proposed Actions in Amendment 24

1. Maximum Sustainable Yield
2. **Minimum Stock Size Threshold**
3. Rebuilding Schedule
4. Rebuilding Strategy and Acceptable Biological Catch Levels
5. Allocations
6. Annual Catch Limits and Optimum Yield
7. Commercial ACT
8. Recreational ACT
9. Commercial AMs
10. Recreational AMs

Alternatives	MSST Equation	M equals	MSST Values (lbs whole weight)
Alternative 1 (No Action)	MSST equals $SSB_{MSY} ((1-M) \text{ or } 0.5, \text{ whichever is greater})$.	0.14 ¹	4,914,053
Alternative 2	MSST equals 50% of SSB_{MSY}	n/a	2,857,162
Alternative 3 (Preferred)	MSST equals 75% of SSB_{MSY}	n/a	4,285,742
Alternative 4	MSST equals 85% of SSB_{MSY}	n/a	4,857,175
Alternative 5	MSST at which rebuilding to the MSY level would be expected to occur within 10 years at the MFMT level.		

Impacts

Biological: Taking no action could result in the red grouper stock's biomass fluctuating frequently between an overfished and rebuilt status because the current MSST is set too close to SSB_{msy} (the stock biomass expected to exist under equilibrium conditions when fishing at F_{MSY}). **Alternatives 2-4** would establish a larger buffer between what is considered to be an overfished and rebuilt condition. The benefits of **Preferred Alternative 3** are intermediate between **Alternatives 2 and 4**.

Economic: Like MSY, MSST does not alter the current harvest or use of the resource, and thus would have no direct economic effects on fishery participants and associated industries or communities. However, a low MSST level would be associated with lower probability of enacting rebuilding actions that would alter the economic environment. The economic effects of the **Preferred Alternative 3** fall in between those of taking no action (**Alternative 1**) and setting the MSST at 50% of the SSB_{msy} (**Alternative 2**).

Social: **Preferred Alternative 3** is expected to result in greater short-term social impacts than **Alternative 2** from closures and other regulations that limit harvest due to MSST being reached, but less long-term social impacts than **Alternative 4**.

Snapper Grouper Advisory Panel Recommendation: Select **Alternative 1 (No Action)** as Preferred.

3. Rebuilding Schedule

Proposed Actions in Amendment 24

1. Maximum Sustainable Yield
2. Minimum Stock Size Threshold
3. **Rebuilding Schedule**
4. Rebuilding Strategy and Acceptable Biological Catch Levels
5. Allocations
6. Annual Catch Limits and Optimum Yield
7. Commercial ACT
8. Recreational ACT
9. Commercial AMs
10. Recreational AMs

Alternatives

Definition

Alternative 1 (No Action)

Do not implement a rebuilding plan for red grouper. There currently is not a rebuilding plan for red grouper. Snapper Grouper Amendment 4 (regulations effective January 1992) implemented a 15-year rebuilding plan beginning in 1991, which expired in 2006.

Alternative 2

Define a rebuilding schedule as the shortest possible period to rebuild in the absence of fishing mortality (T_{MIN}). This would equal 3 years with the rebuilding time period ending in 2013. 2011 is Year 1.

Alternative 3

Define a rebuilding schedule intermediate between the shortest possible and maximum recommended period to rebuild. This would equal 7 years with the rebuilding time period ending in 2017. 2011 is Year 1.

Alternative 4

Define a rebuilding schedule of 8 years with the rebuilding time period ending in 2018. 2011 is Year 1.

Alternative 5 (Preferred)

Define a rebuilding schedule as the maximum period allowed to rebuild (T_{MAX}). This would equal 10 years with the rebuilding time period ending in 2020. 2011 is Year 1.

Impacts

Biological: Preferred Alternative 5 would take the longest time period to rebuild the red grouper stock. A longer rebuilding schedule would, in general: 1) offer lower beneficial impacts to the biological environment, 2) allow the stock to be harvested at higher rates as it rebuilds, and 3) increase the risk that environmental or other factors could prevent the stock from recovering.

Economic: Preferred Alternative 5 would provide the least restrictive management measures over the rebuilding timeframe. The degree of short-term adverse economic consequences would vary according to the restrictiveness of management measures. It can be expected that more future benefits would accrue soonest under **Alternative 1 (No Action)** and latest under the preferred alternative.

Social: Generally, the shorter the rebuilding schedule, the more severe the necessary harvest restrictions and the greater the short-term adverse effects associated with business failure, job or living dislocations, and overall adjustments for the social environment. **Preferred Alternative 5** would be expected to allow the greatest flexibility to recover red grouper and minimize the adverse social and economic effects on associated fisheries.

Snapper Grouper Advisory Panel Recommendation: Select **Alternative 5** as Preferred.

4. Rebuilding Strategy and ABC

The South Atlantic Council is proposing the implementation of a rebuilding plan for red grouper as the stock is overfished. The Council is considering a range of rebuilding strategy alternatives that define the maximum fishing mortality rate throughout the rebuilding timeframe. The table below summarizes the alternatives.

Proposed Actions in Amendment 24

1. Maximum Sustainable Yield
2. Minimum Stock Size Threshold
3. Rebuilding Schedule
4. **Rebuilding Strategy and Acceptable Biological Catch Levels**
5. Allocations
6. Annual Catch Limits and Optimum Yield
7. Commercial ACT
8. Recreational ACT
9. Commercial AMs
10. Recreational AMs

Alternatives	Rebuilding strategy (F _{OY} Equal To)		ABC (lbs whole weight) <i>Landings & Discards</i>	ABC (lbs whole weight) <i>Landings (Preferred)</i>
	Scenario	F rate		
Alternative 1 (No Action)	F _{45%SPR}	0.1055	399,000 (2011) 468,000 (2012) 537,000 (2013) 602,000 (2014)	374,000 (2011) 442,000 (2012) 511,000 (2013) 575,000 (2014)
Alternative 2	F _{REBUILD} (10 years)	0.181	665,000 (2011) 737,000 (2012) 806,000 (2013) 866,000 (2014)	622,000 (2011) 693,000 (2012) 762,000 (2013) 822,000 (2014)
Alternative 3 (Preferred)	75%F _{MSY}	0.166	613,000 (2011) 687,000 (2012) 759,000 (2013) 821,000 (2014)	573,000 (2011) 647,000 (2012) 718,000 (2013) 780,000 (2014)
Alternative 4	65%F _{MSY}	0.144	535,000 (2011) 610,000 (2012) 683,000 (2013) 749,000 (2014)	501,000 (2011) 575,000 (2012) 648,000 (2013) 713,000 (2014)
Alternative 5	F _{REBUILD} (7 years)	0.157	583,000 (2011) 657,000 (2012) 730,000 (2013) 794,000 (2014)	545,000 (2011) 619,000 (2012) 691,000 (2013) 755,000 (2014)
Alternative 6	F _{REBUILD} (8 years)	0.168	620,000 (2011) 695,000 (2012) 765,000 (2013) 828,000 (2014)	580,000 (2011) 654,000 (2012) 724,000 (2013) 787,000 (2014)



Alternative 1 (No Action). Do not specify a rebuilding strategy for red grouper.

Alternative 2. Define a rebuilding strategy for red grouper that sets ABC equal to the yield at $F_{REBUILD}$. $F_{REBUILD}$ is a fishing mortality rate that would have a 70% probability of rebuilding success to SSB_{MSY} in TMAX (ten years for red grouper). Under this strategy, the fishery would have at least a 50% chance of rebuilding to SSB_{MSY} by 2017 and 70% chance of rebuilding to SSB_{MSY} by 2020.



Alternative 3 (Preferred). Define a rebuilding strategy for red grouper that sets ABC equal to the yield at $75\%F_{MSY}$. Under this strategy, the fishery would have at least a 50% chance of rebuilding to SSB_{MSY} by 2016 and 81% chance of rebuilding to SSB_{MSY} by 2020.

Alternative 4. Define a rebuilding strategy for red grouper that sets ABC equal to the yield at $65\%F_{MSY}$. Under this strategy, the fishery would have at least a 50% chance of rebuilding to SSB_{MSY} by 2016 and 92% chance of rebuilding to SSB_{MSY} by 2020.

Alternative 5. Define a rebuilding strategy for red grouper that sets ABC equal to the yield at $F_{REBUILD}$. $F_{REBUILD}$ is a fishing mortality rate that would have a 70% probability of rebuilding success to SSB_{MSY} in 7 years. Under this strategy, the fishery would have at least a 48% chance of rebuilding to SSB_{MSY} by 2015 and 70% chance of rebuilding to SSB_{MSY} by 2017.

Alternative 6. Define a rebuilding strategy for red grouper that sets ABC equal to the yield at $F_{REBUILD}$. $F_{REBUILD}$ is a fishing mortality rate that would have a 70% probability of rebuilding success to SSB_{MSY} in 8 years. Under this strategy, the fishery would have at least a 54% chance of rebuilding to SSB_{MSY} by 2016 and 70% chance of rebuilding to SSB_{MSY} by 2018.

A comparison of rebuilding strategy alternatives in terms of probability of stock recovery.

	Alternatives					
	1 (No Acti on)	2 F_{REB} UILD (10 years)	3 $75\%F_M$ SY (Prefer red)	4 $65\%F$ MSY	5 F_{REB} UILD (7 years)	6 F_{REB} UILD (8 years)
Probability of rebuilding to SSB_{MSY} in <u>10 years</u> (2020)	n/a	70%	81%	92%	n/a	n/a
Probability of rebuilding to SSB_{MSY} in <u>7 years</u> (2017)	n/a	54%	64%	78%	70%	n/a
Probability of rebuilding to SSB_{MSY} in <u>8 years</u> (2018)	n/a	61%	72%	85%	n/a	70%
Year in which 50% probability of rebuilding to SSB_{MSY} would be reached	2014 ¹	2017	2016	2016	2015 ²	2016 ³
¹ Based upon a $F_{30\%SPR}$ proxy for F_{MSY} ² A 48% probability of rebuilding ³ A 54% probability of rebuilding NOTE: Alternatives 2-4 are based on a 70% probability of rebuilding success in 10 years. Alternative 5 is based on a 70% probability of rebuilding success in 7 years. Alternative 6 is based on a 70% probability of rebuilding success in 8 years.						

Impacts

Biological: This action determines the target level of fishing mortality during the rebuilding time frame. The second greatest biological benefit would be provided by **Preferred Alternative 3**, which would specify an ABC equal to the yield $75\%F_{MSY}$. A large sustainable biomass associated with the preferred fishing mortality rate would be beneficial for the stock.

Economic: **Preferred Alternative 3** would provide the third highest economic benefits (after **Alternatives 2 and 6**). From a regional perspective, **Alternative 2** is economically superior in that it makes all constituents better off without making anybody worse off.

Social: Although a more conservative fishing mortality rate (F) would likely result in a higher probability of rebuilding over a shorter period of time, the strategy proposed under **Preferred Alternative 3** provides more long-term social benefits than **Alternatives 2 or 6**.

Snapper Grouper Advisory Panel Recommendation: Select **Alternative 3** as Preferred.

5. Allocations

Alternative 1 (No Action). Do not establish sector allocations for red grouper.

Alternative 2. Specify allocations for the commercial and recreational sectors based on criteria as outlined in one of the following options below. (using SEDAR 24 data; Table S-1)

Subalternative 2a. Commercial = 52% and recreational = 48% (Established by using average landings from 1986-2008).

Subalternative 2b. Commercial = 54% and recreational = 46% (Established by using average landings from 1986-1998).

Subalternative 2c. Commercial = 49% and recreational = 51% (Established by using average landings from 1999-2008).

Subalternative 2d. Commercial = 41% and recreational = 59% (Established by using average landings from 2006-2008).

Subalternative 2e (Preferred). Commercial = 44% and recreational = 56% (Established by using 50% of average landings from 1986-2008 + 50% of average landings from 2006-2008).

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Impacts

Biological: The biological effects of the different allocation alternatives would be similar if landings in both sectors could be closely monitored. Further, the biological effects of options that allocate more of the ABC to the commercial sector could have a more beneficial biological effect because there is less chance a commercial ACL would be exceeded than a recreational ACL. Commercial data can often be more closely monitored as they are based on dealer reports, whereas much of the recreational data (except headboat data) are based on survey information.

Economic: In terms of the commercial sector, **Subalternative 2b** would result in the largest positive effects for all states combined. **Subalternatives 2a-2c** would have negative impacts on Georgia/Northeast Florida and positive for all other states. **Subalternative 2d** would result in negative effects for all states. **Preferred Subalternative 2e** would not result in any changes to business activity. In terms of the recreational fishery, the alternatives may be ranked in descending order as follows: **2d, 2e (Preferred), 2c, 2a, and 2b**. This ranking is mainly driven by the size of the recreational allocation.

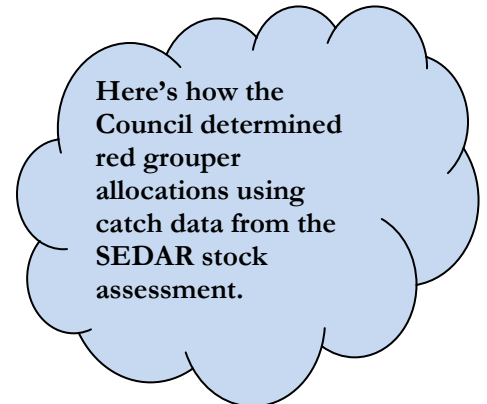
Social: **Preferred Subalternative 2e** would result in more social benefits for the commercial sector than **Subalternative 2d**, and more social benefits for the recreational sector than **Subalternatives 2a, 2b and 2c**.

Snapper Grouper Advisory Panel Recommendation: Select **Subalternative 2e** as Preferred.

Table S-1. Red grouper catches by recreational & commercial sectors and percentages from data in the SEDAR Assessment (pounds whole weight)

Year	Recreational	% Rec	Commercial	%Com	Total
1986	775,164	69%	353,202	31%	1,128,366
1987	122,558	30%	285,679	70%	408,237
1988	160,621	33%	329,624	67%	490,245
1989	335,050	51%	319,067	49%	654,117
1990	78,198	23%	255,077	77%	333,275
1991	50,803	20%	198,562	80%	249,365
1992	176,044	53%	156,617	47%	332,661
1993	337,910	66%	171,300	34%	509,210
1994	216,995	57%	162,735	43%	379,730
1995	241,106	52%	222,171	48%	463,277
1996	333,076	55%	276,945	45%	610,021
1997	316,706	51%	305,940	49%	622,646
1998	327,083	43%	433,301	57%	760,384
1999	187,357	32%	391,232	68%	578,589
2000	172,432	34%	329,150	66%	501,582
2001	188,190	35%	344,748	65%	532,938
2002	300,258	47%	336,392	53%	636,650
2003	383,175	56%	305,646	44%	688,821
2004	423,043	59%	297,475	41%	720,518
2005	314,667	61%	199,761	39%	514,428
2006	619,598	67%	307,212	33%	926,810
2007	667,750	55%	541,960	45%	1,209,710
2008	1,125,328	67%	556,286	33%	1,681,614

Landings data from the Red Grouper SEDAR Stock Assessment was used to determine allocations (www.sefsc.noaa.gov/sedar/).



South Atlantic Council's Preferred Allocation Formula for each sector:

Sector apportionment = (50% * (average of long catch range (lbs) 1986-2008 + (50% * average of recent catch trend (lbs) 2006-2008). The commercial and recreational allocations specified would remain in effect until modified.

Com Sector % = $\frac{(50\% \times \text{Average Com 1986-2008}) + (50\% \times \text{Average Com 2006-2008})}{(50\% \times \text{Avg Com 1986-2008} + 50\% \times \text{Avg Com 2006-2008}) + (50\% \times \text{Avg Rec 1986-2008} + 50\% \times \text{Avg Rec 2006-2008})}$


Rec Sector % = $\frac{(50\% \times \text{Average Rec 1986-2008}) + (50\% \times \text{Average Rec 2006-2008})}{(50\% \times \text{Avg Rec 1986-2008} + 50\% \times \text{Avg Rec 2006-2008}) + (50\% \times \text{Avg Com 1986-2008} + 50\% \times \text{Avg Com 2006-2008})}$

6. Annual Catch Limits and Optimum Yield

Alternative 1 (No Action). Do not specify an individual ACL for red grouper. An individual ACL is currently not in place for red grouper. Retain aggregate recreational and commercial ACLs for black grouper, red grouper, and gag. The commercial sector ACL for gag, black grouper, and red grouper is 662,403 lbs gw (781,636 lbs ww) and 648,663 lbs gw (765,422 lbs ww) for the recreational sector. The total group ACL is 1,311,066 lbs gw (1,547,058 lbs ww). These values are equivalent to the expected catch resulting from the implementation of management measures for red grouper in Amendment 16 and specified in Amendment 17B.


Proposed Actions in Amendment 24

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2. Minimum Stock Size Threshold
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7. Commercial ACT
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 **Alternative 2 (Preferred).** ACL = OY = ABC. Specify commercial and recreational ACLs for red grouper for 2012, 2013, and 2014 and beyond. The ACL for 2014 would remain in effect until modified. ACLs in 2013 and 2014 will not increase automatically in a subsequent year if present year projected catch has exceeded the total ACL.

Alternative 3. ACL = OY = 90% of the ABC. Specify commercial and recreational ACLs for red grouper for 2012, 2013, and 2014 and beyond. The ACL for 2014 would remain in effect until modified. ACLs in 2013 and 2014 will not increase automatically in a subsequent year if present year projected catch has exceeded the total ACL.

Alternative 4. ACL = OY = 80% of the ABC. Specify commercial and recreational ACLs for red grouper for 2012, 2013, and 2014 and beyond. The ACL for 2014 would remain in effect until modified. ACLs in 2013 and 2014 will not increase automatically in a subsequent year if present year projected catch has exceeded the total ACL.

 **Alternative 5 (Preferred).** Eliminate the commercial sector aggregate ACL of 662,403 lbs gw for black grouper, gag, and red grouper. Eliminate the in-season AM that specifies a prohibition on possession of all shallow water groupers once the commercial aggregate ACL is projected to be met.


 **Alternative 6 (Preferred).** Eliminate the recreational sector aggregate ACL of 648,663 lbs gw for black grouper, gag, and red grouper. Eliminate the in-season AM that specifies a prohibition on possession of black grouper, gag, and red grouper once the ACL is projected to be met if any one of the three species is listed as overfished. Eliminate the post-season AM that specifies a reduction in a subsequent year's ACL by the amount of an overage if landings exceed the aggregate ACL. Eliminate the regulation that states that the recreational landings are evaluated relative to the ACL as follows: For 2010, only 2010 recreational landings will be compared to the ACL; in 2011, the average of 2010 and 2011 recreational landings will be compared to the ACL; and in 2012 and subsequent fishing years, the most recent 3-year running average recreational landings will be compared to the ACL.

Table S-2. The ACL values (lbs whole weight) for red grouper in **Preferred Alternative 2** (ACL=ABC). ACL values are based on preferred allocation alternative (44% commercial/56% recreational).

Alt. 2 ACL=ABC (Preferred)						
Total						
	Year	F_{REBUILD} (10years)	75%F_{MSY}	65%F_{MSY}	F_{REBUILD} (7 years)	F_{REBUILD} (8 years)
landings	2012	693,000	647,000	575,000	619,000	654,000
	2013	762,000	718,000	648,000	691,000	724,000
	2014	822,000	780,000	713,000	755,000	787,000
landings & discards	2012	737,000	687,000	610,000	657,000	695,000
	2013	806,000	759,000	683,000	730,000	765,000
	2014	866,000	821,000	749,000	794,000	828,000
Commercial (44%)						
	Year	F_{REBUILD} (10years)	75%F_{MSY}	65%F_{MSY}	F_{REBUILD} (7 years)	F_{REBUILD} (8 years)
landings	2012	304,920	284,680	253,000	272,360	287,760
	2013	335,280	315,920	285,120	304,040	318,560
	2014	361,680	343,200	313,720	332,200	346,280
landings & discards	2012	324,280	302,280	268,400	289,080	305,800
	2013	354,640	333,960	300,520	321,200	336,600
	2014	381,040	361,240	329,560	349,360	364,320
Recreational (56%)						
	Year	F_{REBUILD} (10years)	75%F_{MSY}	65%F_{MSY}	F_{REBUILD} (7 years)	F_{REBUILD} (8 years)
landings	2012	388,080	362,320	322,000	346,640	366,240
	2013	426,720	402,080	362,880	386,960	405,440
	2014	460,320	436,800	399,280	422,800	440,720
landings & discards	2012	412,720	384,720	341,600	367,920	389,200
	2013	451,360	425,040	382,480	408,800	428,400
	2014	484,960	459,760	419,440	444,640	463,680

Table S-3. The ACL values (lbs whole weight) for red grouper in **Alternative 3** (ACL=90%ABC). ACL values are based on preferred allocation alternative (44% commercial/56% recreational).

Alt. 3 ACL=90%ABC						
Total						
	Year	F_{REBUILD} (10years)	75%F_{MSY}	65%F_{MSY}	F_{REBUILD} (7 years)	F_{REBUILD} (8 years)
landings	2012	623,700	582,300	517,500	557,100	588,600
	2013	685,800	646,200	583,200	621,900	651,600
	2014	739,800	702,000	641,700	679,500	708,300
landings & discards	2012	663,300	618,300	549,000	591,300	625,500
	2013	725,400	683,100	614,700	657,000	688,500
	2014	779,400	738,900	674,100	714,600	745,200
Commercial (44%)						
	Year	F_{REBUILD} (10years)	75%F_{MSY}	65%F_{MSY}	F_{REBUILD} (7 years)	F_{REBUILD} (8 years)
landings	2012	274,428	256,212	227,700	245,124	258,984
	2013	301,752	284,328	256,608	273,636	286,704
	2014	325,512	308,880	282,348	298,980	311,652
landings & discards	2012	291,852	272,052	241,560	260,172	275,220
	2013	319,176	300,564	270,468	289,080	302,940
	2014	342,936	325,116	296,604	314,424	327,888
Recreational (56%)						
	Year	F_{REBUILD} (10years)	75%F_{MSY}	65%F_{MSY}	F_{REBUILD} (7 years)	F_{REBUILD} (8 years)
landings	2012	349,272	326,088	289,800	311,976	329,616
	2013	384,048	361,872	326,592	348,264	364,896
	2014	414,288	393,120	359,352	380,520	396,648
landings & discards	2012	371,448	346,248	307,440	331,128	350,280
	2013	406,224	382,536	344,232	367,920	385,560
	2014	436,464	413,784	377,496	400,176	417,312

Table S-4. The ACL values (lbs whole weight) for red grouper in **Alternative 4** (ACL=80%ABC). ACL values are based on preferred allocation alternative (44% commercial/56% recreational).

Alt. 4 ACL=80%ABC						
Total						
	Year	F_{REBUILD} (10years)	75%F_{MSY}	65%F_{MSY}	F_{REBUILD} (7 years)	F_{REBUILD} (8 years)
landings	2012	554,400	517,600	460,000	495,200	523,200
	2013	609,600	574,400	518,400	552,800	579,200
	2014	657,600	624,000	570,400	604,000	629,600
landings & discards	2012	589,600	549,600	488,000	525,600	556,000
	2013	644,800	607,200	546,400	584,000	612,000
	2014	692,800	656,800	599,200	635,200	662,400
Commercial (44%)						
	Year	F_{REBUILD} (10years)	75%F_{MSY}	65%F_{MSY}	F_{REBUILD} (7 years)	F_{REBUILD} (8 years)
landings	2012	243,936	227,744	202,400	217,888	230,208
	2013	268,224	252,736	228,096	243,232	254,848
	2014	289,344	274,560	250,976	265,760	277,024
landings & discards	2012	259,424	241,824	214,720	231,264	244,640
	2013	283,712	267,168	240,416	256,960	269,280
	2014	304,832	288,992	263,648	279,488	291,456
Recreational (56%)						
	Year	F_{REBUILD} (10years)	75%F_{MSY}	65%F_{MSY}	F_{REBUILD} (7 years)	F_{REBUILD} (8 years)
landings	2012	310,464	289,856	257,600	277,312	292,992
	2013	341,376	321,664	290,304	309,568	324,352
	2014	368,256	349,440	319,424	338,240	352,576
landings & discards	2012	330,176	307,776	273,280	294,336	311,360
	2013	361,088	340,032	305,984	327,040	342,720
	2014	387,968	367,808	335,552	355,712	370,944

PROPOSED 2012 ACL VALUES

Red Grouper ACL = 647,000 pounds whole weight

Commercial Sector ACL (44%) = 284,680 pounds whole weight

Recreational Sector ACL (56%) = 362,320 pounds whole weight

Impacts

Biological: **Alternatives 3 and 4** would have a greater positive biological effect than **Preferred Alternative 2** because they would create a buffer between the ACL and ABC thus providing greater assurance overfishing would not occur. **Preferred Alternatives 5 and 6** would eliminate the aggregate commercial and recreational ACLs and accountability measures (AMs) currently in place for red grouper, black grouper, and gag. An ACL for black grouper is being established through the Comprehensive ACL Amendment (under review) and a gag ACL is already in place.

Economic: **Preferred Alternative 2** would provide the largest ACL, and would also result in the largest positive economic impacts. It should be noted, however, that South Carolina would experience reductions in business activity under any of the alternatives. Under **Preferred Alternative 2**, all states except South Carolina would experience positive impacts on business activity. Removal of the aggregate quota for red, gag, and black (**Preferred Alternatives 5 & 6**) is not expected to have any economic effects based on the analysis.

Social: **Preferred Alternative 2** would result in fewer short-term social impacts than alternatives that set the ACL at a percentage of the ABC. Any social effects from **Alternatives 5 and 6 (Preferreds)** would be expected to result from a species-specific limit that could impact fishermen by limiting harvest of red grouper.

Snapper Grouper Advisory Panel Recommendation: Select **Alternatives 2, 5 and 6** as Preferred.

7. Specify a Commercial Sector Annual Catch Target



Alternative 1 (No Action) (Preferred). Do not specify a commercial ACT for red grouper. Currently, there is no commercial ACT for red grouper (The proposed commercial ACL would equal 284,680 pounds whole weight in 2012 but would increase in 2013 and 2014 as long as the total ACL is not exceeded).

Proposed Actions in Amendment 24

1. Maximum Sustainable Yield
2. Minimum Stock Size Threshold
3. Rebuilding Schedule
4. Rebuilding Strategy and Acceptable Biological Catch Levels
5. Allocations
6. Annual Catch Limits and Optimum Yield
7. **Commercial ACT**
8. Recreational ACT
9. Commercial AMs
10. Recreational AMs

Alternative 2. The commercial ACT equals 90% of the commercial ACL (The proposed commercial ACT would equal 256,212 pounds whole weight in 2012 but would increase in 2013 and 2014 as long as the total ACL is not exceeded).

Alternative 3. The commercial ACT equals 80% of the commercial ACL (The proposed commercial ACT would equal 227,744 pounds whole weight in 2012 but would increase in 2013 and 2014 as long as the total ACL is not exceeded).

Snapper Grouper Advisory Panel Recommendation: Select **Alternative 1 (No Action)** as Preferred.

Impacts

Biological: Alternatives 2 and 3 are designed to hedge against an ACL overage by providing a buffer between the ACT and ACL, and therefore account for management uncertainty. Establishing an ACT that is 90% or 80% of the commercial ACL would also reduce the probability that post-season AMs, meant to correct for an ACL overage, would be needed.

Economic: Preferred Alternative 1 (No Action) would not set a commercial ACT and therefore no economic impacts are expected relative to the status quo.

Social: Preferred Alternative 1 (No Action) would not set a commercial ACT and therefore no social impacts are expected relative to the status quo.

8. Specify a Recreational Sector Annual Catch Target

Alternative 1 (No Action). Do not specify a recreational ACT for red grouper. Currently, there is no recreational ACT for red grouper.

Alternative 2. The recreational ACT equals 85% of the recreational ACL.

Alternative 3. The recreational ACT equals 75% of the recreational ACL.



Alternative 4 (Preferred). The recreational ACT equals the recreational $ACL \times (1 - PSE)$ or $ACL \times 0.5$, whichever is greater

Proposed Actions in Amendment 24

1. Maximum Sustainable Yield
2. Minimum Stock Size Threshold
3. Rebuilding Schedule
4. Rebuilding Strategy and Acceptable Biological Catch Levels
5. Allocations
6. Annual Catch Limits and Optimum Yield
7. Commercial ACT
- 8. Recreational ACT**
9. Commercial AMs
10. Recreational AMs

Table S-5. Proportional Standard Error (PSE) values for red grouper 2004-2008 including 3-year and 5-year averages.
Source: MRFSS

PSE Values (weight)	
2004	24.7
2005	22.7
2006	26.0
2007	27.1
2008	25.6
3 Yr Avg	26.2
5 Yr Avg	25.2
Council using PSE=25%	

What is PSE?

PSE stands for Proportional Standard Error and is a measure of precision. The smaller the PSE, the better the estimate of recreational landings.

Table S-6. Red grouper recreational ACTs. Values are in lbs whole weight.

Year	Preferred Recreational Sector ACL	Recreational Sector ACT		
		Alt 2; ACT=85%(ACL)	Alt 3; ACT=75%(ACL)	Alt 4 (Preferred); ACT equals sector ACL*(1- PSE) or ACL*0.5, whichever is greater
2012	362,320	307,972	271,740	271,740
2013	402,080	341,768	301,560	301,560
2014+	436,800	371,280	327,600	327,600

Impacts

Biological: Preferred Alternative 4 would have the greatest biological benefit of the alternatives. The lower the value of the PSE, the more reliable the landings data. If the Council chose to limit harvest to the ACT, establishing this level below the recreational ACL would also reduce or eliminate the need to close or implement post-season AMs that are meant to correct for an ACL overage.

Economic: Alternative 2 would result in larger positive economic effects than Alternative 3. Preferred Alternative 4 would have exactly the same economic effects as Alternative 3.

Social: Alternatives 2-4 impose various buffers as percentages of the ACL. It would be expected that short-term negative social effects would accrue as the buffer increases from Alternative 2 to Preferred Alternative 4.

Snapper Grouper Advisory Panel Recommendation: Select **Alternative 4** as Preferred.

Why an ACT for the recreational sector?

An ACT can be considered a “soft target” because the Council’s goal is to have recreational landings fluctuate around the ACT level. The Council uses the ACT to determine whether a change in management is needed. If the current or expected recreational catch is above the ACT, the Council uses bag/size limits and seasons to reduce the recreational catch. If catches are below the ACT, no change in management measures is necessary.

The goal is to have the estimate of landings from MRFSS/MRIP fluctuate around the ACT without exceeding the ACL. Using PSE, which is a measure of the variability of the estimate of the recreational catch, provides the best approach to keep catches below the ACL as long as the necessary management measures are specified to limit the recreational catch. To ensure catches do not exceed the ACL, the Council is specifying Accountability Measures to close the recreational fishery when NMFS projects the recreational catch will be met. This requires in-season availability of the headboat and MRFSS/MRIP data and a method to project the expected catches. Delays in either of these data sources could result in the ACL being exceeded.

9. Specify Commercial Accountability Measures for Red Grouper

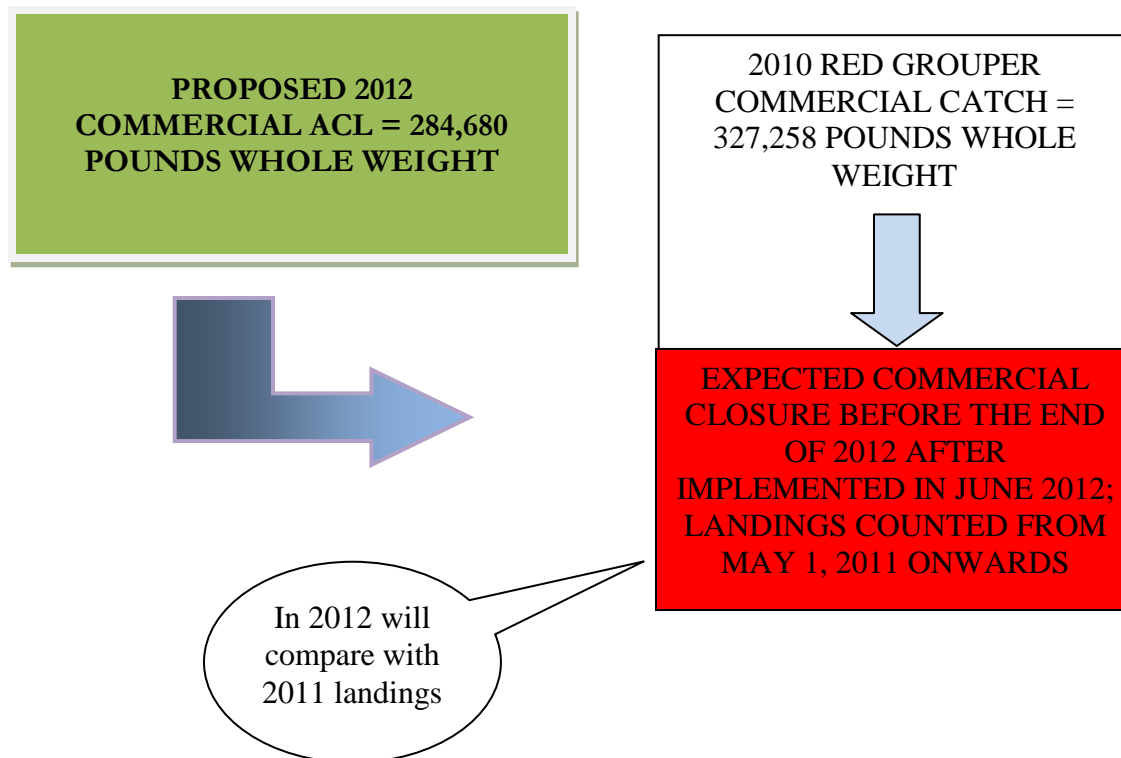
Alternative 1 (No Action). Do not specify new commercial AMs for red grouper. There currently are commercial AMs for a black grouper, gag, and red grouper complex.

➔ **Alternative 2 (Preferred).** If the commercial ACL is met or is projected to be met, all subsequent purchase and sale of red grouper is prohibited and harvest and/or possession is limited to the bag limit.

➔ **Alternative 3 (Preferred).** If the commercial ACL is exceeded, the Regional Administrator shall publish a notice to reduce the commercial ACL in the following season by the amount of the overage.

Proposed Actions in Amendment 24

1. Maximum Sustainable Yield
2. Minimum Stock Size Threshold
3. Rebuilding Schedule
4. Rebuilding Strategy and Acceptable Biological Catch Levels
5. Allocations
6. Annual Catch Limits and Optimum Yield
7. Commercial ACT
8. Recreational ACT
9. **Commercial AMs**
10. Recreational AMs



CURRENT COMMERCIAL REGULATIONS

- 20 inch total length minimum size limit (effective 1/1/92)
- Vessels with longline gear can only possess deepwater species (no red grouper) (effective 2/24/99)
- Aggregate ACL of 662,403 lbs gutted weight for black grouper, gag, and red grouper (effective 1/31/11)
- Once the aggregate ACL is projected to be met, all possession of shallow water groupers is prohibited (effective 1/31/11)
- January through April annual closure of all shallow water groupers (effective 7/29/09)

Snapper Grouper Advisory Panel Recommendation: Select **Alternative 2** as Preferred.

Impacts

Biological: Preferred Alternative 3 would complement Preferred Alternative 2 because it would correct for an ACL overage post-season, if such an event were to occur, by reducing the commercial ACL in the following season by the amount of the overage. This may result in a shortened season, however, if the reduced ACL is met earlier in the year. A shortened season could in turn result in increased regulatory discards if no level of harvest is permitted after the ACL is reached. However, Preferred Alternative 2 would still allow fishermen to retain bag limit quantities of red grouper, which may reduce the number of regulatory discards that would otherwise result from a shortened season.

Economic: Preferred Alternative 2 would provide greater short-term economic benefits to the commercial sector compared to Preferred Alternative 3 but less than Alternative 1 (No Action). Preferred Alternative 3 would also provide the greatest long-term economic benefits to the commercial sector compared to Alternatives 1 (No Action) and Alternative 2 (Preferred).

Social: The combination of Preferred Alternatives 2 and 3 should provide sufficient protection with some beneficial social effects. While payback does incur short-term negative social impacts, the long-term benefits of stock protection should contribute to the overall benefits as the red grouper stock would remain at sustainable levels.

Table S-7. Red grouper commercial landings (whole weight) by month during the open season for 2010.

Commercial ACL = 284,680 lbs whole weight

2010		Cumulative
Jan		
Feb		
Mar		
Apr		
May	85,057	85,057
Jun	55,486	140,543
Jul	35,893	176,436
Aug	32,205	208,641
Sep	24,857	233,498
Oct	41,625	275,123
Nov	31,272	306,395
Dec	23,620	330,015
Total	330,015	

Source: NMFS SEFSC

Note: Jan-Apr sale prohibited

10. Specify Recreational Accountability Measures (AMs) for Red Grouper

Alternative 1 (No Action). Do not specify new, or modify existing, recreational AMs for red grouper. There currently are recreational AMs for a black grouper, gag, and red grouper complex.

Alternative 2. Specify the recreational AM trigger.

Subalternative 2a. Do not specify a recreational AM trigger.

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

Subalternative 2c. If the mean recreational landings for the past three years exceed the recreational ACL.

Subalternative 2d. If the modified mean recreational landings exceeds the recreational ACL. The modified mean is the most recent 5 years of available recreational landings data with highest and lowest landings estimates from consideration removed.

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 recreational ACL.

Alternative 3. Specify the recreational in-season AM.

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

➡ **Subalternative 3b (Preferred).** The Regional Administrator shall publish a notice to close the recreational sector when the recreational ACL is projected to be met.

Alternative 4. Specify the recreational post-season AM.

Subalternative 4a. Do not specify a recreational post-season AM.

Subalternative 4b. For recreational post-season accountability measures, compare the 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.

Subalternative 4c. Monitor following year. If the recreational 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 4d. Monitor following year and shorten season as necessary. If the recreational 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 recreational fishing season as necessary.

Subalternative 4e. Monitor following year and reduce bag limit as necessary. If the recreational 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 recreational bag limit as necessary.

Subalternative 4f. Shorten following season. If the recreational ACL is exceeded, the Regional Administrator shall publish a notice to reduce the length of the following recreational fishing year by the amount necessary to ensure landings do not exceed the recreational ACL for the following fishing season.

Proposed Actions in Amendment 24

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9. Commercial AMs
10. **Recreational AMs**



Subalternative 4g (Preferred). Payback. If the recreational ACL is exceeded, the Regional Administrator shall publish a notice to reduce the recreational ACL in the following season by the amount of the overage.

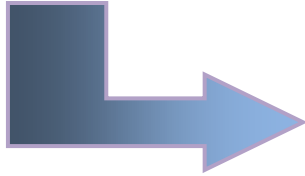
CURRENT RECREATIONAL REGULATIONS

- 20 inch total length minimum size limit (effective 1/1/92)
- Aggregate grouper bag limit of 3 per person per day (effective 7/29/09)
- Aggregate ACL of 648,663 lbs gw for black grouper, gag, and red grouper (effective 1/31/11)
- Once the ACL is projected to be met, possession of black grouper, gag, and red grouper is prohibited if any one of the three species is listed as overfished (effective 1/31/11)
- If the aggregate ACL exceeded, the subsequent year's ACL is reduced by the amount of the overage (effective 1/31/11)
- Recreational landings are evaluated relative to the ACL as follows: For 2010, only 2010 recreational landings will be compared to the ACL; in 2011, the average of 2010 and 2011 recreational landings will be compared to the ACL; and in 2012 and subsequent fishing years, the most recent 3-year running average recreational landings will be compared to the ACL (effective 1/31/11)
- January through April annual closure of all shallow water groupers (effective 7/29/09)

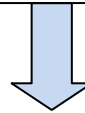
**PROPOSED 2012 RECREATIONAL ACL =
362,320 POUNDS WHOLE WEIGHT**

RECREATIONAL ACT

$\text{Rec ACT} = \text{Rec ACL} * (1 - \text{PSE})$
 $= 362,320 * (1 - 0.25)$
 $= 271,740 \text{ pounds whole weight}$



**2010 RED GROUPER
RECREATIONAL CATCH =
98,419 POUNDS WHOLE
WEIGHT**



In 2012 will
compare with
2011 landings

**NO RECREATIONAL CLOSURE IS
EXPECTED BEFORE THE END OF 2012
AFTER IMPLEMENTED IN JUNE 2012;
LANDINGS COUNTED FROM MAY 1,
2011 ONWARDS BUT EXPECTED TO BE
BELOW PROPOSED ACL & ACT. NO
CHANGE TO RECREATIONAL
MANAGEMENT MEASURES REQUIRED
BASED ON 2010 RECREATIONAL
CATCHES.**

Impacts

Biological: Together **Preferred Subalternatives 2b, 3b, and 4g** define the Council's approach to ensure that landings do not surpass the recreational ACL and any overages, should they occur, are accounted for. The approach would benefit the red grouper stock in that it would ensure that overfishing does not occur and the stock is rebuilt.

Economic: **Subalternatives 2c and 2d** would likely provide less adverse short-term economic effects than the other subalternatives under **Alternative 2** since they are less likely to trigger the AM. Between the two subalternatives under **Alternative 3**, **Subalternative 3a** would benefit the recreational sector more in the short-term since no further restrictions would be imposed. However, it would result in a worse long-term economic situation since lack of an AM could result in further overfishing of the stock that, in turn, would require more restrictive regulations. **Subalternative 4d** may yield larger adverse economic impacts than **Subalternative 4e** because it would totally eliminate fishing opportunities during part of the fishing year rather than mainly reduce the fishing experience for part of the year. It is likely that **Subalternatives 4f and 4g (Preferred)** would result in the same fishing season length, although some other measures, like bag limit reduction, may be employed to lengthen the season thus benefiting the economic environment.

Social: The long-term social effects of this action would be positive as long as the restrictions on recreational harvest through the preferred subalternatives help to meet the rebuilding goals.

Snapper Grouper Advisory Panel Recommendation: Select **Subalternatives 2b, 3b and 4e** as Preferred.

PUBLIC HEARING DATES & LOCATIONS

All hearings are from 4 pm – 7 pm (except Charleston and Raleigh)

<p><u>Monday, November 14, 2011</u> Avista Resort 300 N. Ocean Blvd. North Myrtle Beach, SC 29582 (843) 249-2521</p> <p>Hampton Inn & Suites Savannah/Midtown 20 Johnston Street Savannah, GA 31405 (912) 721-3700</p>	<p><u>Wednesday, November 16, 2011</u> Radisson Resort at the Port 8701 Astronaut Boulevard Cape Canaveral, FL 32920 (321) 784-0000</p>
<p><u>Tuesday, November 15, 2011</u> – Charleston Marriott Hotel 170 Lockwood Blvd. Charleston, SC 29403 (843) 723-3000 <i>Hearing from 5:30 to 7:30 p.m.</i></p> <p>Jacksonville Marriott 4670 Salisbury Rd. Jacksonville, FL 32256 (904) 296-2222</p>	<p><u>Thursday, November 17, 2011</u> Key Largo Bay Marriott 103800 Overseas Highway Key Largo, FL 33037 (305) 453-0000</p>
	<p><u>Tuesday, December 6, 2011</u> Holiday Inn Brownstone 1707 Hillsborough Street Raleigh, NC 27605 (919) 828-0811 <i>Hearing begins at 5:30 p.m.</i></p>

Written Comments:

Bob Mahood, Executive Director
 South Atlantic Fishery Management Council
 4055 Faber Place Drive; Suite 201
 North Charleston, SC 29405

E-mail:

SGAmend24PHcomment@safmc.net

DEADLINE

All written comments must
 be received by 5 p.m. on
 November 21, 2011

What's Next?

- Snapper Grouper Advisory Panel (10/5/11-10/6/11) in Charleston, SC; final review of Amendment 24
- NMFS Files DEIS on 10/14/11 with comment period ending by 12/5/11
- Scientific & Statistical Committee (11/8/11 - 11/10/11) in Charleston, SC; final review of Amendment 24
- Public Hearings from SC thru FL (11/14/11-11/17/11)
- Written comments due by 5 p.m. on Monday, November 21, 2011
- Public Hearing in NC on 12/6 during December 5-9 Council meeting - Raleigh
- Snapper Grouper Committee & Council review hearing comments and approve all actions (12/7/11-12/11) in Raleigh, NC; Final Approval
- Send to Secretary of Commerce by December 15, 2011
- Public Comment on proposed rule
- Public Comment on amendment to Secretary of Commerce
- Regulations effective by June 9, 2012 to meet Congressionally-mandated deadline
- Monitor commercial & recreational catches and close as necessary