Appendix A. Alternatives the Council considered but eliminated from detailed study, and a brief discussion of the reasons for their elimination.

This section describes alternatives to the proposed actions that the Council considered in developing this document, but decided not to pursue. The description of each alternative is followed by a summary statement of why it was eliminated from more detailed summary. Note that some actions were removed when red snapper was included in Amendment 17, which addressed 10 species experiencing overfishing. The Council subsequently placed only red snapper in Amendment 17A.

Rejected Alternatives 1. Modify the Council's current definition of Optimum Yield (OY) for red snapper undergoing overfishing by using the sum of the sector ACTs (Table 1).

Table 1. OY alternatives for ten species undergoing overfishing.

Alternatives	**OY equation**	**F_{OY} equals**
Alternative 1.	OY equals the sum of the sector ACTs.	_____ pounds (will be added after the Committee & Council specify ACTs.)

Rationale for elimination: The Council had considered this action because of concern that the ACL and ACT could be at or below the ABC. Amendment 17A includes an action to specify OY for red snapper. The Council is not considering establishing ACTs for red snapper at this time.

Rejected Alternatives 2 and 3. Modify the Council's current definition of minimum stock size threshold (MSST) for red snapper (Table 2).

Table 2. MSST alternatives for red snapper.

Alternatives	**MSST equation**
Alternative 3.	MSST equals $SSB_{MSY}(0.5)$.
Alternative 4.	MSST equals $SSB_{MSY}(0.75)$.

Rationale for elimination: The Council has modified the definition of MSST for snowy grouper and golden tilefish over concern that recruitment fluctuations could cause a reoccurring overfished status determination for these species. The low value for natural mortality creates a numerical similar value for MSST and SSB_{MSY}. Despite a low natural mortality rate for red snapper, the Council is not considering modifying MSST at this time.

This was an action in the original Amendment 17 when 10 species were being considered and not just red snapper in Amendment 17. The natural mortality rate (M) for most of the species is not on the scale of snowy grouper (M = 0.12) and golden tilefish (M = 0.08). However, the M for red snapper is also very low (M = 0.08). The Council did not feel it was necessary to

address MSST at this time since biomass is currently at very low levels. Based on the SEDAR 15 (2008) stock assessment and the Council's preferred rebuilding schedule, it will be more than 30 years before stock biomass is close is close to MSST of B_{MSY}. The Council felt it was more appropriate to delay discussion and analysis of MSST to a future amendment and deal with more pressing issues of ending overfishing and rebuilding the red snapper stock in Amendment 17A.

Rejected Alternatives 4-7. Define allocations for red snapper (Table 3).

Alternative 4. Define allocations based upon landings from the ALS, MRFSS, and headboat databases. The allocation would be based on landings from the years 1986-2007.

Alternative 5. Define allocations based upon landings from the ALS, MRFSS, and headboat databases. The allocation would be based on landings from the years 2005-2007.

Alternative 6. Define allocations 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) 1986-2007) + (50% * average of recent catch trend (lbs) 2005-2007)

Alternative 7. Split the allocation equally among the three sectors.

<u>Rationale for elimination</u>: Council is considering allocations based on historic catch between the commercial, for-hire, and recreational sectors as part of one of the management alternatives, which would allow some harvest of red snapper. This alternative has been moved to considered but rejected appendix. For other alternatives, which would allow no harvest or an allowable level of red snapper discards, the Council has decided that implementing a single ACL is a preferable way to manage as red snapper. The Council's preferred management measure prohibits all commercial and recreational harvest until modified in the future. As the stock rebuilds, management measures will likely be adjusted by the Council to allow harvest of red snapper. At that point, the Council may want to reconsider allocations for red snapper.

Table 3. Percent allocations from allocation alternatives for red snapper. CM = Commercial, RC = Recreational, FH = For Hire, PR = Private Recreational, NS=Not Specified.

Species	**Alt. 1. No Action**		**Alt. 2. 1986-2007**			**Alt. 3. 2005-2007**			**Alt. 4. Equation**			**Alt. 5. Split Evenly**		
	CM	**RC**	**CM**	**FH**	**PR**	**CM**	**FH**	**PR**	**CM**	**FH**	**PR**	**CM**	**FH**	**PR**
Red snapper	NS	NS	30%	30%	40%	26%	33%	41%	28%	31%	41%	33%	33%	33%

Rejected Alternative 8. Prohibit commercial and recreational harvest, possession, and retention of species in the Snapper Grouper FMU in an area that includes commercial logbook grids 2880, 2980, 2981, 3179, 3080, 3081, 3180, 3181, 3278, 3279, 3280, 3378, and 3379.

Rejected Alternative 9. Prohibit commercial and recreational harvest, possession, and retention of species in the Snapper Grouper FMU in an area that includes commercial logbook grids 2880, 2980, 2981, 3179, 3080, 3081, 3180, 3181, 3278, 3279, 3280, 3378, and 3379. Allow commercial black sea bass pots, commercial harvest of golden tilefish by vessels with a hook-and-line or longline endorsement, and spearfishing.

<u>Rationale for elimination</u>: The Council believes that spatial management will be a component of the management measures to end overfishing and rebuild the red snapper stock in the South Atlantic. However, one of the Council's stated objectives is to minimize the economic and social effects of a snapper and grouper prohibition in an area by proposing an area that is no larger than necessary to achieve reductions in fishing mortality. In order to accomplish this, the Council proposes to prohibit snapper grouper harvest in locations where the majority of the red snapper abundance and fishing mortality occurs (Figure 1). Some of the grids listed in Rejected Alternatives 8 and 9 include locations where only a small amount of red snapper are caught.

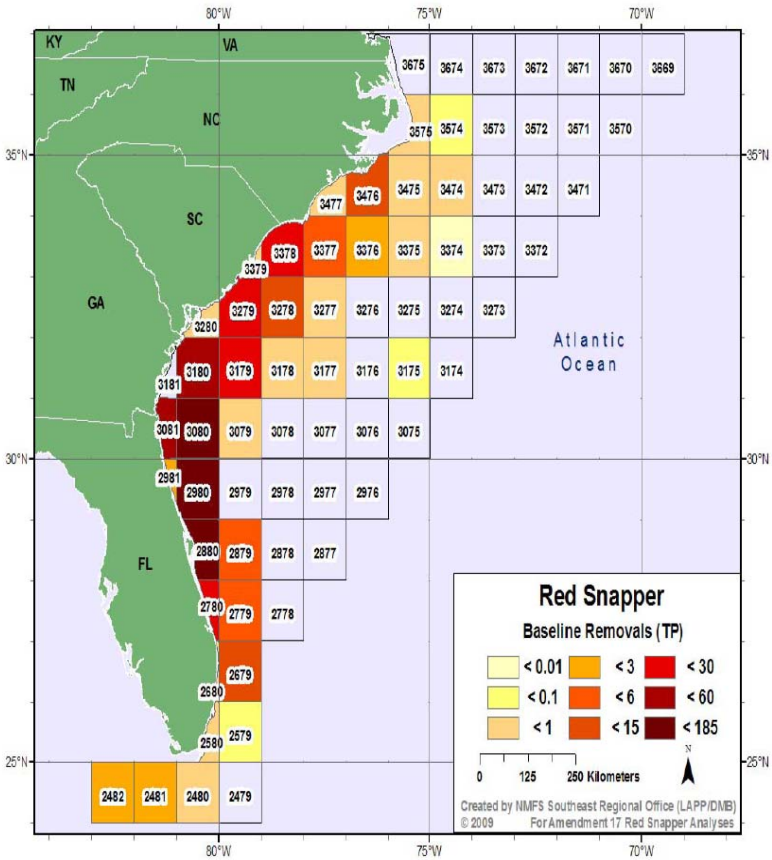


Figure 1. Baseline removals of South Atlantic red snapper by logbook grid, 2005-2007. Removals include landings and dead discards in throusands of pounds (TP) from the commercial, headboat and private/charterboat sectors.

Rejected Alternative 10. Modify the bag and/or size limit.

> **Sub-alternative 10a.** Remove the existing commercial and recreational 20 inch size limit.
> **Sub-alternative 10b.** Reduce the bag limit to 1.

Rationale for elimination: The Council's preferred rebuilding strategy would require an 83% reduction in total removals. Neither a reduction in bag limit to 1 fish per person or a removal of the size limit will achieve this reduction (Table 4).

Table 4. Reduction in harvest associated with reducing the bag limit for red snapper to 1 fish per person per day. Includes non-compliance with bag limit, and 40% release mortality. Based on data from 2003-2007.

Sector	Bag limit 1 % reduction
Private	1.96
Charter	5.00
Private/Charter Combined	3.26
Headboat	3.12
All rec	3.22

Annual Catch Limits

Rejected Alternative 11. ACL equals ABC.
Rejected Alternative 12. ACL equals 90% of the ABC.
Rejected Alternative 13. ACL equals 80% of the ABC.

Annual Catch Targets for the Commercial Sector

Rejected Alternative 14. The commercial sector ACT equals the commercial sector ACL.
Rejected Alternative 15. The commercial sector ACT equals 90% of the commercial sector ACL.
Rejected Alternative 16. The commercial sector ACT equals 80% of the commercial sector ACL.

Annual Catch Targets for the Recreational Sector

Rejected Alternative 17. The recreational sector ACT equals 85% of the private recreational sector ACL.
Rejected Alternative 18. The recreational sector ACT equals 75% of the private recreational sector ACL.

Rejected Alternative 19. The recreational sector ACT equals sector ACL[(1-PSE) or 0.5, whichever is greater].

Accountability Measures for the Commercial Sector

Rejected Alternative 20. Implement Accountability Measures for the commercial sector for **species undergoing overfishing**. If the sector ACT is projected to be met, prohibit the harvest and retention of species or species group. If the sector ACL is exceeded, the Assistant Administrator shall publish a notice to **reduce the sector ACT** in the following year by the amount of the overage.

Rejected Alternative 21. Implement Accountability Measures for the commercial sector for **species undergoing overfishing**. If the sector ACT is projected to be met, prohibit the harvest and retention of species or species group. If the sector ACL is exceeded, the Assistant Administrator shall publish a notice to **reduce the length of the following fishing year** by the amount necessary to recover the overage from the prior fishing year.

Rejected Alternative 22. Implement Accountability Measures for the commercial sector **for species undergoing overfishing**. **If the species is overfished or not overfished and the sector ACT** is projected to be met, prohibit the harvest and retention of species or species group. **If the species is overfished and the sector ACL is exceeded**, the Assistant Administrator shall publish a notice to reduce the sector ACT in the following year by the amount of the overage. **If the species is not overfished and the sector ACL** is exceeded, the Assistant Administrator shall publish a notice to reduce the length of the following fishing year by the amount necessary to recover the overage from the prior fishing year.

Accountability Measures for the Recreational Sector

Rejected Alternative 23. Implement Accountability Measures (AMs) for the recreational sector for species undergoing overfishing. **The AM would not vary depending on stock status.**

> **Sub-alternative 23A**. Do **not implement *in season* AMs if the sector ACT is projected to be met**. If the sector ACL is exceeded, the Assistant 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 sector ACT for the following fishing year.
>
> **Sub-alternative 23B. Do not implement *in season* AMs if the sector ACT is projected to be met**. If the sector ACL is exceeded, the Assistant Administrator shall publish a notice to **reduce the sector ACT** in the following year by the amount of the overage.

Sub-alternative 23C. If the sector ACT is projected to be met, prohibit the harvest and retention of species or species group. If the sector ACL is exceeded, the Assistant Administrator shall publish a notice to **reduce the length of the following fishing year** by the amount necessary to recover the overage from the prior fishing year.

Sub-alternative 23D. If the sector ACT is projected to be met, prohibit the harvest and retention of species or species group. If the sector ACL is exceeded, the Assistant Administrator shall publish a notice to **reduce the sector ACT** in the following year by the amount of the overage.

Alternative 24. Implement Accountability Measures for the recreational sector for species undergoing overfishing. **The AM would vary depending on stock status.**

Sub-alternative 24A. Do not implement ***in season*** AMs if the sector ACT is projected to be met. **If the species is overfished and the ACL is exceeded**, the Assistant Administrator shall publish a notice to reduce the sector ACT in the following year by the amount of the overage. **If not overfished and the ACL is exceeded**, the Assistant 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 sector ACT for the following fishing year.

Sub-alternative 24B. If the sector ACT is projected to be met, prohibit the harvest and retention of species or species group. **If the species is overfished and the ACL is exceeded**, the Assistant Administrator shall publish a notice to reduce the sector ACT in the following year by the amount of the overage. **If not overfished and the ACL is exceeded**, the Assistant 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 sector ACT for the following fishing year.

Alternative 25. Compare ACL in Alternatives 2 and 3 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 three year running average.

<u>Rationale for elimination</u>: During the development process of Amendment 17, which subsequently became Amendments 17A and 17B, the Council considered a system that would establish allocations, annual catch limits (ACLs), annual catch targets (ACTs), and accountability measures (AMs) for the ten species undergoing overfishing (including red snapper) with the SSC's ABC recommendation as an upper limit. Under this system, the Council would then evaluate whether current regulations would be expected to keep the mortality below the ACT for each of these species. If not, the Council would propose regulatory changes.

Due to the variability in recreational landings data, the Council is using a running average of landings over a series of years to compare with the recreational ACL to

invoke AMs. However, since the intent of the Council is to prohibited harvest of recreational and commercial harvest of red snapper, the Council did not feel that this alternative was necessary at this time. It is anticipated that red snapper harvest will be allowed in the near future as the stock rebuilds and the Council may want to consider the use of a three year running average in the future for comparison with a recreational ACL.

Rejected Alternative 26. Allow red snapper harvest, based on a quota for the commercial fishery, a quota for the for-hire fishery (utilizing electronic logbooks), and a quota for the private recreational fishery (based on a quota tag system administered by the states).

Once the catch limits are reached in Georgia, South Carolina, and Florida, bottom fishing is prohibited beyond 98 feet. Dead discards inshore of 98 feet must be taken off the top before quotas are established. Possibly eliminate the 20-inch size limit.

Rationale for elimination:

This analysis will use two sets of allocations for comparison (Table 5) and evaluates two ACLs

Table 5. Allowable total removals or red snapper for commercial, private, and for-hire sectors based on landings data from 2003-2008.

	ALT 2 - 60% rec./40% Comm. Where 36% Private; 24% for-hire.		**ALT 3 - EQUATION (.50)(86-08)+(.50)(06-08). Comm = 28%; Private 43%; For-Hire 29%.**	
ACL	**ACL=61,000**	**ACL=82,000**	**ACL=61,000**	**ACL=82,000**
Commercial				
FL & GA	18,034	24,242	12,624	16,970
SC	4,544	6,109	3,181	4,276
NC	1,822	2,449	1,275	1,714
Totals	24,400	32,800	17,080	22,960
Private Recreational				
FL	20,218	27,178	24,149	32,463
GA	1,089	1,464	1,301	1,749
SC	390	524	466	626
NC	263	354	314	422
Totals	21,960	29,520	26,230	35,260
For Hire (Headboat & Charter)				
FL	10,632	14,292	12,847	17,270
GA	1,325	1,781	1,601	2,152
SC	1,656	2,226	2,001	2,689
NC	1,027	1,381	1,241	1,668
Totals	14,640	19,680	17,690	23,780

According to the proposed alternative, estimates of total removals inside of 98 feet would have to be subtracted from Table 5 above before quotas would be established. A small percentage of red snapper harvest/interactions occur outside the proposed closed areas. NMFS developed a program where various parameters could be adjusted (e.g., areas closed, release mortality, depth) to evaluate the change in percent reduction in projected red snapper mortality. It may be possible to roughly estimate the amount of total removals inside of 98 feet using the program. Regardless, as values in Table 5 are very small, this would leave an even smaller amount of allowable total removals for the commercial, private, and for-hire sectors.

Based on catch rates of landed and discarded red snapper in 2007 and 2008, the allowable catch for each sector would be estimated to be met in less than one month (Tables 6-10). The approach would require extensive observer coverage, implementation of electronic logbooks, and establishment of some sort of tagging system. Additionally, not all states possess the administrative resources to implement such a tagging program. Discarded red snapper would have to be closely tracked in addition to harvests and release mortality rates would need to be applied to the discards to ensure total removals allocated to state and sector is not exceeded. The SSC has strongly opposed tracking discards as a means of monitoring fishery catch levels, and depending on self reported discards may create a disincentive for reporting if the fishery were close a result of them doing so.

Table 6. Monthly commercial landings (pounds whole weight) of red snapper.

Month	2007	2007 cumulative	2008	2008 cumulative
1	7,646	7,646	12,072	12,072
2	6,666	14,312	17,064	29,136
3	4,688	19,000	20,247	49,383
4	6,751	25,751	17,804	67,187
5	8,038	33,789	20,322	87,509
6	18,234	52,023	23,557	111,066
7	7,408	59,431	26,829	137,895
8	9,608	69,039	9,065	146,960
9	8,443	77,482	12,394	159,354
10	8,663	86,145	14,054	173,408
11	12,225	98,370	16,884	190,292
12	18,564	116,934	42,975	233,267

Table 7. Monthly headboat and MRFSS for-hire landings (pounds whole weight) of red snapper.

Year	2007	2007 cumulative	2008	2008 cumulative
1	7,342	7,342	14,446	14,446
2	6,733	14,075	24,720	39,166

Year	2007	2007 cumulative	2008	2008 cumulative
3	4,928	19,003	18,459	57,625
4	5,904	24,908	17,332	74,957
5	13,964	38,872	39,791	114,748
6	14,661	53,533	36,198	150,946
7	5,800	59,333	49,851	200,797
8	5,748	65,081	43,596	244,394
9	2,178	67,259	3,979	248,373
10	1,863	69,122	6,658	255,031
11	13,042	82,164	10,986	266,017
12	14,689	96,853	9,319	275,336

Table 8. MRFSS non for-hire landings (pounds whole weight) of red snapper by wave.

Wave	2007	2007 cumulative	2008	2008 cumulative
1	12,390	12,390	42,227	42,227
2	5,946	18,336	53,693	95,920
3	131,202	149,538	201,827	297,747
4	44,528	194,066	72,690	370,437
5	43,618	237,684	76,744	447,181
6	6,067	243,751	94,661	541,842

Table 9. Red snapper landings and discards (numbers) from for-hire fishery (headboat and MRFSS) for 2008.

Month	number caught	number discarded
1	2,338	13,600
2	3,310	16,865
3	3,338	10,020
4	2,817	13,696
5	5,612	15,075
6	5,428	13,814
7	7,511	11,626
8	6,614	8,987
9	747	3,045
10	1,076	4,767
11	1,959	5,624
12	1,547	5,132

*Discards are only available in numbers of fish.

Table 10. Red snapper landings and discards (numbers) from non for-hire fishery (MRFSS) for 2008.

Wave	number caught	number discarded
1	9,764	72,086
2	9,772	54,883
3	28,986	85,734
4	11,612	43,470
5	11,112	35,181
6	16,700	60,860

*Discards are only available in numbers of fish.

Rejected Alternative 27. Implement the following:

(1) Buy-out Georgia commercial fishermen. No red snapper sale allowed.
(2) For the recreational sector. Bag limit = 1/person/day (not including captain/crew).
(3) Remove size limit.
(4) Off a portion of the coast, prohibit bottom-fishing for six months (Oct.1 to March 31).
(5) During April 1 to September 30, when 12,000 lbs is harvested, enact the same prohibition mentioned above.
(6) Monitor discards through self-reporting.
(7) Begin construction of artificial habitat.
(8) Between 98-240 feet, only single hook rigs are permitted and prohibit electric reels.

Rationale for elimination:

An 83% reduction in total removals is needed for the preferred rebuilding strategy (97%$F_{Rebuild}$) (Table 11). The alternative proposed would not end overfishing of red snapper without larger areas closed off of Florida and South Carolina. Therefore, the Georgia proposal represents a partial alternative since the other affected states would have to develop their alternatives and combine them with the Georgia proposal in order to achieve the necessary reductions in red snapper mortality.

Table 11. Reduction in total removals (landings plus dead discards) needed end overfishing. Determined by comparing expected landings in 2010 to average landings during 2006-2007. Non-shaded areas determined by comparing estimated landings in 2009 with allowable removals in 2010. Shaded areas are estimated by interpolation. Alternatives 2-5 use $F_{40\%}$ as F_{MSY} proxy; Alternatives 6-9 use $F_{30\%}$ as F_{MSY} proxy. Council's preferred choice is to use very high recruitment with $F_{40\%SPR}$ proxy for F_{MSY}.

Fmsy proxy	F40% proxy				F30% proxy			
	Base Estimated Recruitment	High Recruitment	Very High Recruitment	Extremely High Recruitment	Base Estimated Recruitment	High Recruitment	Very High Recruitment	Extremely High Recruitment
Alternative 2 and 6 (85% F_{MSY})	89%	88%	85%	81%	84%	83%	79%	79%
Alternative 3 and 7 (75% F_{MSY})	90%	89%	87%	85%	86%	85%	82%	81%
Alternative 4 and 8 (65% F_{MSY})	91%	90%	89%	87%	88%	87%	84%	83%
Alternative 5 and 9 (97% F_{MSY})	87%	86%	83%	81%	82%	81%	76%	73%

Development of a buy-out program for the commercial fishermen would require time, a currently unidentified source of funds, and would need to be agreed to by those affected. There would be concerns about using self-reporting catches when this information would be used to trigger a fishery closure. While elimination of the size limit would be expected to reduce the number of discarded red snapper, the total removals (harvested plus discarded fish) would be expected to increase (Tables 12 and 13). This assumes fishermen who caught at least two red snapper would now be expected to retain those fish and the current level of non-compliance would continue. It also assumes that red snapper that were regulatory discards would now be retained by fishermen who did fill their two fish bag limit. The tables do not reflect the effect of area closures but do show that elimination of the size limit would not reduce the magnitude of total removals.

Construction of artificial reefs, reducing the bag limit to one fish, and prohibiting captain and crew from retaining red snapper would provide a small reduction in harvest. It is expensive to create artificial habitat on the scale needed to mimic natural habitat. In addition, artificial reefs can attract both fish and fishermen so there might not be much benefit to the species. Since the bag limit of red snapper is currently two fish per person per day and few fishermen obtained the two fish bag during 2005-2008, a reduction in the bag limit to one fish per day would provide little reduction in harvest (~5% when 40% release mortality is included). Exclusion of captain and crew is included in the estimate.

Therefore, the reduction needed for ending overfishing of red snapper can primarily be obtained from a combination of a harvest prohibition for red snapper and area closures for all snapper-grouper species that reduces red snapper discards. It is not clear if the proposed 12,000 lbs is landed catch or total kill. Either way, it would require monitoring of discards, which the SSC opposes due to the possibility of under reporting discards. In addition, it is likely that 12,000 lbs would reached not long after the start of the fishing year.

Commercial logbook grids 3080 and 3180 represent the 3rd and 5th highest concentrations of red snapper, respectively. Partial closures of grids 3080 and 3081 may require full or partial closures of eight additional grids in order to end overfishing of red snapper.

The proposed alternative could have National Standard 4 concerns since they would allow some harvest for Georgia recreational fishermen, but Georgia commercial fishermen would not be allowed to harvest any fish. Furthermore, harvest would have to be prohibited in all other states for red snapper along with larger closed areas from other states.

It is not clear whether the proposal intends to close the open area after a quota/allocation is met. It is also unclear who is responsible for reporting harvest from the for-hire sector.

Table 12. Number harvested, released, and total removals of red snapper taken by recreational fishermen during 2003-2006 (SEDAR 15 2008). Dead discards determined by applying 40% release mortality to discarded fish. Total removals = harvest (landed fish) + dead discards. Total removals in closed fishery, where red snapper harvest is prohibited is determined by applying a 40% release mortality rate to the total of landed plus discarded fish.

Year	landed	discarded	dead discards	total removals	Total removals in closed fishery
2003	41,367	184,646	73,858	115,225	90,405
2004	49,728	242,306	96,922	146,650	116,814
2005	42,615	155,576	62,230	104,845	79,276
2006	32,962	168,126	67,250	100,212	80,435
average	41,668	187,664	75,065	116,733	91,733

Table 13. Expected number harvested, released, and total removals of red snapper taken by recreational fishermen during 2003-2006 if there was no size limit and a 2 fish bag limit. Dead discards determined by applying 40% release mortality to discarded fish. Total removals = harvest (landed fish) + dead discards.

Year	landed	discarded	dead discards	total removals
2003	100,508	125,506	50,202	150,711
2004	124,129	167,906	67,162	191,292
2005	106,053	92,141	36,856	142,909
2006	81,252	119,833	47,933	129,185
average	102,986	126,346	50,539	153,524

Table 14. Monthly headboat and MRFSS for-hire landings (pounds whole weight) of red snapper.

Year	2007	2007 cumulative	2008	2008 cumulative
1	7,342	7,342	14,446	14,446
2	6,733	14,075	24,720	39,166
3	4,928	19,003	18,459	57,625
4	5,904	24,908	17,332	74,957
5	13,964	38,872	39,791	114,748
6	14,661	53,533	36,198	150,946
7	5,800	59,333	49,851	200,797
8	5,748	65,081	43,596	244,394
9	2,178	67,259	3,979	248,373
10	1,863	69,122	6,658	255,031
11	13,042	82,164	10,986	266,017
12	14,689	96,853	9,319	275,336

Table 15. MRFSS non for-hire landings (pounds whole weight) of red snapper by wave.

Wave	2007	2007 cumulative	2008	2008 cumulative
1	12,390	12,390	42,227	42,227
2	5,946	18,336	53,693	95,920
3	131,202	149,538	201,827	297,747
4	44,528	194,066	72,690	370,437
5	43,618	237,684	76,744	447,181
6	6,067	243,751	94,661	541,842

Table 16. Red snapper landings and discards (numbers) from for-hire fishery (headboat and MRFSS) for 2008.

Month	number caught	number discarded
1	2,338	13,600
2	3,310	16,865
3	3,338	10,020
4	2,817	13,696
5	5,612	15,075
6	5,428	13,814
7	7,511	11,626
8	6,614	8,987
9	747	3,045
10	1,076	4,767
11	1,959	5,624
12	1,547	5,132

*Discards are only available in numbers of fish.

Table 17. Red snapper landings and discards (numbers) from non for-hire fishery (MRFSS) for 2008.

Wave	number caught	number discarded
1	9,764	72,086
2	9,772	54,883
3	28,986	85,734
4	11,612	43,470
5	11,112	35,181
6	16,700	60,860

*Discards are only available in numbers of fish.

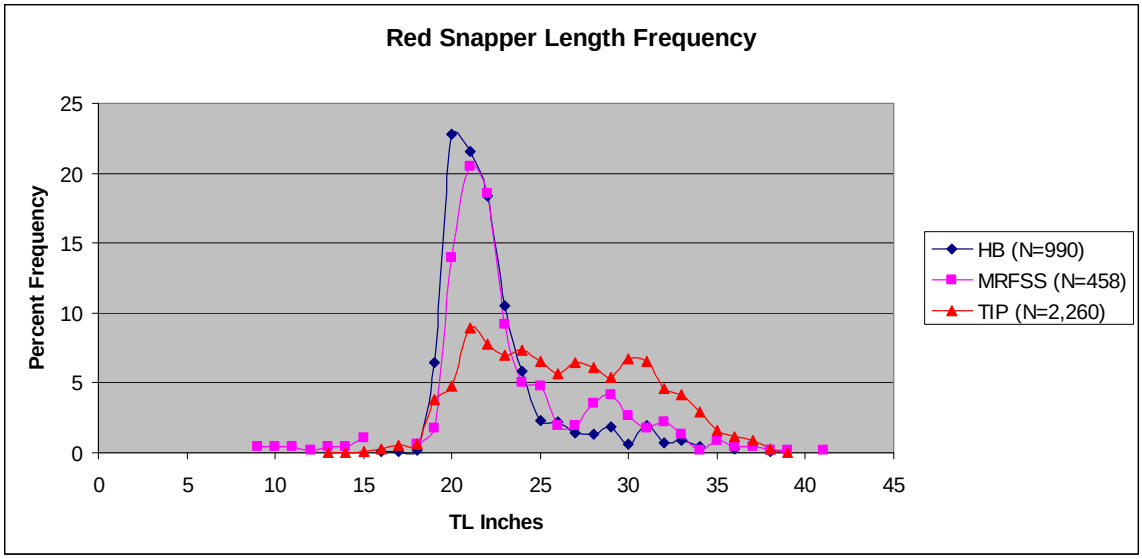
Rejected Alternative 28. Implement the following as recommended by the Snapper Grouper Advisory Panel at their August 2009 meeting:

Motion 1: In Amendment 17A, recommend that the council analyze the following recreational management measures off the coast of Georgia:
--6 month closure starting Oct 1
--bag limit to 1, excluding captain and crew (keep 1st fish caught)
--no min size limit
--max size limit 28”
--close 50% of live bottom to all snapper grouper harvest where red snapper are year-round (reconsider closure following next stock assessment)
--one hook per rod and reels, manual rod and reel only

Motion 2: 31 20 latitude line to be the northern end of the GA closure (northern section open to fishing).

Rationale for elimination:

This is very similar to Rejected Alternative 27. The major differences are Rejected Alternative 31 specifies the portion of the area to be closed and specifies maximum size limit of 28 inches. Most (92% headboat; 82% MRFSS; 66% commercial) of the red snapper taken by recreational and commercial fishermen during 2005-2008 were less than 28 inches TL. Therefore, the combination of eliminating the 20 inch TL size limit and establishing a maximum 28 inch size limit would likely increase total removals.


Red Snapper Length Frequency
Percent Frequency
25
20
15
10
5
0
0
5
10
15
20
25
30
35
40
45
TL Inches
HB (N=990)
MRFSS (N=458)
TIP (N=2,260)

Rejected Alternative 29. Implement the following as recommended by the Snapper Grouper Advisory Panel at their August 2009 meeting:

Motion 5: Recommend the Council investigate methods to reduce recreational limits through vessel limits (1/person or 4/vessels whichever is more restrictive) with adjustments to vessel limits following the next assessment. Also investigate a reduction in red snapper minimum size to 16"

Rationale for elimination:

Reductions in the bag limits to 1 fish per person and vessels limits of 4 red snapper would not be sufficient to end overfishing (Tables 19 and 20). Reduction in the bag limit from two fish per person per day to one fish per person per day would be expected to provide a five percent reduction in harvest when non-compliance and a 40% release mortality is considered (Table 19). Reductions in harvest with a 4 person vessel limit would be expected to provide reduction in harvest ranging from 3% for private recreational to 34% for headboats.

Reduction or elimination of a minimum size limit would increase the total removals because previously 60% of the fish less than 20 inches TL were believed to have survived the trauma of capture. With the establishment of a 16 inch TL size limit, a greater proportion (up to the two fish bag limit) of the red snapper between 16 and 20 inches would die.

Table 19. Bag limit analysis for red snapper with 40% release mortality and elimination of captain and crew based on data from 2005 to 2008.

Sector	Bag limit 1
Private	5.21
Charter	4.05
MRFSS	4.72
Headboat	7.05
All rec	5.30

Table 20. Reduction in red snapper harvest associated vessel limits for red snapper. Assumes 40% release mortality based on data from 2005-2008.

Vessel Limit Number	Charter	Private	Headboat
50	0	0	2.73
45	0	0	3.06
40	0	0	3.55
35	0	0	4.36
30	0	0	5.57
25	0.22	0	7.41
20	0.49	0	9.88
15	0.81	0	13.47
10	1.68	0.3	19.24
9	2.12	0.37	20.99
8	2.82	0.45	22.91
7	3.58	0.75	25.14
6	4.51	1.27	27.63
5	5.70	2.09	30.66
4	7.38	3.06	34.26
3	9.99	4.55	38.59
2	13.36	6.56	43.89
1	18.19	10.21	50.72

Rejected Alternative 30. Implement the following as recommended by the Snapper Grouper Advisory Panel at their August 2009 meeting:

Motion 8: Move SAFMC investigate alternative effort controls to achieve multi-species management objectives. The days-at-sea concept involves controlling multispecies harvest pressure (hooks in the water) by time rather than closure of areas.

Rationale for elimination:

The Council previously considered and rejected an alternative for Amendment 13C that would retain all commercial regulations currently in place for South Atlantic snapper grouper species. The alternative would allow each permit holder to designate two months when no commercial fishing for snapper grouper species would occur. These months would be printed on the permit or on a sticker to aid enforcement.

The Council rejected this alternative because it is not possible to determine if this strategy would end overfishing of snowy grouper, black sea bass, vermilion snapper, and black sea bass without knowing which months each fisherman would choose to refrain from fishing. Little reduction in harvest would be achieved if all fishermen selected months of historically lowest catches. The Council examined average aggregate snapper grouper landings by month for all permit holders to determine if the two months of lowest catch would provide an adequate reduction in harvest. If December and January (anecdotally the months when fishing is least desirable) were closed

for all permit holders, approximately a 14% reduction in snapper grouper landings would result, which is not adequate to end overfishing for any of the species (black sea bass, vermilion snapper, snowy grouper, and golden tilefish).

To effectively end overfishing of red snapper, fishing for all species would need to be closed for a period of time to prevent incidental catch. Examination of Table 21 indicates that 10 month closure of red snapper (for all sectors combined) could be needed to reduce harvest of red snapper or red snapper by 85%.

Other forms of effort control could be considered by the Council such as restrictions on the number of trips or days at sea. Tables 22 shows current effort levels for red snapper (with the exception of angler days for red snapper) and the number of trips/angler days if effort was reduced by 85%. The Council indicated that it could consider some other form of effort control such as a days at sea program in a future amendment.

Table 21. Average monthly catch (pounds whole weight) of red snapper during 2007 and 2008.

Month	comm	Headboat	MRFSS	Total	Percent	Cum Perc
1	9,859	2,115	22,433	34,407	4.58%	4.58%
2	11,865	6,948	22,433	41,246	5.49%	10.07%
3	12,468	9,409	17,194	39,071	5.20%	15.27%
4	12,278	9,334	17,194	38,806	5.16%	20.43%
5	14,180	9,206	98,371	121,757	16.20%	36.63%
6	20,896	10,316	98,371	129,582	17.24%	53.88%
7	17,119	6,270	50,860	74,248	9.88%	63.76%
8	9,337	3,117	50,860	63,313	8.43%	72.19%
9	10,419	2,980	30,189	43,588	5.80%	77.99%
10	11,359	4,161	30,189	45,709	6.08%	84.07%
11	14,555	6,515	30,681	51,751	6.89%	90.96%
12	30,770	6,505	30,681	67,955	9.04%	100.00%

Table 4-36. Average number of commercial trips that caught red snapper during 2005-2008, average number recreational trips (MRFSS all modes) that targeted red snapper during 2003-2007, and average number of angler days during 2003-2007 from Amendment 17A. Number of trips and angler days if reduced by 85%.

	Comm trips	Red snapper rec targeted trips	Headboat angler days
current avg	1,357	43,469	240,980
85% reduction	204	6,520	36,147

Rejected Alternative 31. Implement the following as recommended by the Snapper Grouper Advisory Panel at their August 2009 meeting:

(a) VMS (all vessels that harvest snapper grouper species in the EEZ)
(b) Consider recommendations from LAPP Workgroup
(c) Smaller closures closed to all fishing and target closures to spawning locations
(d) Closures that change throughout the year and location changes
(e)

Close 50% of live bottom off GA coast
6 month closure (Nov 1 through March 31) for for-hire and pr. rec
Bag limit to 1/person excluding captain and crew
Eliminate 20" size limit
Maximum of 28" size limit for red snapper
Restrict to 1 hook per angler for hook and line fishing
Prohibit use of electric reel for recreational fishermen
Create mid-shelf spawning area with no fishing allowed
Artificial reef placement

Rationale for elimination:

The Council feels that actions to require VMS for snapper-grouper vessels should be delayed. New regulations and LAPP programs are being proposed that could affect the number of participants in the snapper grouper fishery. The Council feels that the effects of these measures should be realized before considering the requirement of VMS. The Council and the LAPP workgroup has discussed a LAPPs for the snapper grouper fishery and is considering LAPPs for golden tilefish and golden crab in other snapper grouper amendments. The Council is also revaluating the wreckfish individual transferable quota system in compliance with the Reauthorized Magnuson-Stevens Act. The Council discussed smaller area closures and closures that change during the year but rejected them because they would not be sufficient to end overfishing of red snapper.

Rejected Alternative 32. Implement the following in waters off the state of Florida as recommended by the Snapper Grouper Advisory Panel at their August 2009 meeting:

For Florida red snapper regulations:
1/person
4/vessel
excluding capt/crew
keep size limit
closure areas to protect spawning areas
one hook per rod and reels, manual rod and reel only

Rationale for elimination:

As discussed under Rejected Alternative 29, reductions in the bag limits to 1 fish per person and vessels limits of 4 red snapper would not be sufficient to end overfishing (Tables 10 and 11). Reduction in the bag limit from two fish per person per day to one fish per person per day would be expected to provide a five percent reduction in harvest when non-compliance and a 40% release mortality is considered (Table 10). Reductions in harvest with a 4 person vessel limit would be expected to provide reduction in harvest ranging from 3% for private recreational to 34% for headboats. Excluding captain and crew as well as requiring one hook rod and reels would provide small reductions in total removals but would not be sufficient to end overfishing when combined with other components of the action.

Rejected Alternative 33. Implement the following:

Red Snapper Allocation Alternatives

Alternative 1 (Status Quo). Do not define allocations for red snapper.

Alternative 2. Allocate the red snapper ACL by state and sector as described in the table below. The sector allocation would be based upon 40% commercial, 24% for-hire (headboat & charter), and 36% private recreational (This is based upon a 40% commercial and 60% recreational allocation). The allocation between the for-hire and private recreational sectors would be based upon landings from the commercial, MRFSS, and headboat databases based on the following 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 state allocation would be based upon landings from the commercial, MRFSS, and headboat databases based on the following formula for each sector:
State apportionment = (50% * average of long catch range (lbs) 1986-2007) + (50% * average of recent catch trend (lbs) 2006-2008).

The allocations specified for 2010 would remain in effect beyond 2010 until modified. Could remove X lbs (X%) off top to account for expected red snapper mortality off the coasts of North Carolina and South Florida.

Table 23. Estimated catch limit by sector state with a 61,000 lb whole weight ACL. Percent represents proportion of 61,000 lbs whole weight taken by each sector and state.

	North Carolina		South Carolina		Georgia		Florida	
Sector	%	lbs	%	lbs	%	lbs	%	lbs
Commercial	3.0	1,822	7.4	4,544	30%; 18,034 lbs			
For-Hire	1.7	1,027	2.7	1,656	2.2	1,325	17	10,632
Private Recreational	.43	263	.64	390	1.8	1,089	33	20,218

The sector allocation would be based upon 40% commercial, 24% for-hire (headboat & charter), and 36% private recreational (This is based upon a 40% commercial and 60% recreational allocation).

Alternative 3. Allocate the red snapper ACL by state and sector as described in the table below. The sector allocation would be based upon landings from the commercial, MRFSS, and headboat databases based on the following 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 state allocation would be based upon landings from the commercial, MRFSS, and headboat databases based on the following formula for each sector:
State apportionment = (50% * average of long catch range (lbs) 1986-2008) + (50% * average of recent catch trend (lbs) 2006-2008).

The allocations specified for 2010 would remain in effect beyond 2010 until modified. Could remove X lbs (X%) off top to account for expected red snapper mortality off the coasts of North Carolina and South Florida.

Table 24. Estimated catch limit by sector state with a 61,000 lb whole weight ACL. Percent represents proportion of 61,000 lbs whole weight taken by each sector and state.

	North Carolina		South Carolina		Georgia		Florida	
Sector	%	lbs	%	lbs	%	lbs	%	lbs
Commercial	2.1	1,275	5.2	3,181	21%; 12,624 lbs			
For-Hire	2.0	1,241	3.3	2,001	2.6	1,601	21	12,847
Private Recreational	.51	314	.76	466	2.1	1,301	40	24,149

The sector allocation would be based upon landings from the commercial, MRFSS, and headboat databases based on the following formula for each sector: Sector apportionment = (50% * average of long catch range (lbs) 1986-2008) + (50% * average of recent catch trend (lbs) 2006-2008).

Rationale for elimination:
Since the intent of the Council is to prohibited harvest of recreational and commercial harvest of red snapper, the Council did not feel that this alternative was necessary at this time. It is anticipated that red snapper harvest will be allowed in the near future as the stock rebuilds and the Council may want to consider an action that will allocate the allowable catch among sectors.

Red Snapper Management Measure Alternative

Alternative 1 (Status Quo). Do not modify management regulations red snapper.

Alternative 2. Implement the following management regulations for red snapper.

Commercial Sector

Implement the following monitoring devices: VMS, real-time electronic bycatch reporting, and observers. If mortality is greater than x lbs (landings and dead discards), prohibit fishing for, possession, and retention of species in the snapper grouper fishery management unit for the commercial sector off the coast of that state.

For-Hire Sector

Implement the following monitoring devices: VMS, real-time electronic bycatch reporting, and observers. If mortality is greater than x lbs (landings and dead discards), prohibit fishing for, possession, and retention of species in the snapper grouper fishery management unit for the for-hire sector off the coast of that state.

Private Recreational

Implement a card and tag system for the private recreational sector. X number of cards and tags will be distributed each year based upon a lottery system. The tags would be referenced to the cards which are issued. The proposed tags are numbered strips at the bottom of the cards which would be separated and attached to the fish by the fishermen.

Prohibit fishing for, possession, and retention of all snapper grouper species in an area off the coast of Georgia and North Florida (need to specify area). Specify an allowable red snapper fishing area off the coast of Georgia (need to specify area). Only those individuals with a tag may fish in that area. Each red snapper caught would need to be retained and have a tag applied. Once all the tags are used, prohibit fishing for, possession, and retention of species in the snapper grouper fishery management unit for the private recreational sector off the entire coast of Georgia.

Alternative 3. Allow harvest and retention of snapper grouper species in depths of 98 feet or less for 6 months (need to specify time of year).

Alternative 4. Remove red snapper bag and size limit restrictions for all sectors.

Rationale for elimination:

Based on catch rates of landed and discarded red snapper in 2007 and 2008, the allowable catch for each sector, with some as low as 390 lbs for some sectors/states, would be met would be met in less than one month (Tables 25-30). The approach would require extensive observer coverage, implementation of electronic logbooks, and establishment of some sort of tagging system. Development of an electronic reporting program for the commercial and for-hire fishermen would take time and require a currently unidentified source of funds. There would be concerns about using self reporting catches when this information would be used to close a fishery.

*For the commercial and for-hire sectors under **Management Alternative 2**, catch of red snapper would be monitored by means of VMS, real-time electronic bycatch reporting, and observers. If total removals (landings and discards) are greater than specified in Tables 15 and 16 for **Allocation Alternatives 2 and 3**, respectively, fishing for, possession, and retention of species in the snapper grouper fishery management unit for the commercial sector off the coast of that state would be prohibited. Based on monthly commercial landings provided in Tables 3 and 4, the commercial and for-hire catch limits for red snapper could be met in a month.*

For the private recreational sector, a closed area would be established off Georgia and Florida where no snapper grouper fishing would be allowed. Tags would be issued to allow some fishermen to target red snapper within a closed area off of Georgia. Once all the tags are used, fishing for, possession, and retention of species in the snapper grouper fishery management unit would be prohibited for the private recreational sector off the entire coast of Georgia. Development of a tag program for the private recreational sector would take time. There would be concerns about using self-reporting catches when this information would be used to close a fishery.

This alternative could prevent overfishing if all fishing for snapper grouper species was prohibited once the limits were met. However, ***Management Alternative 2*** *would allow fishing for snapper grouper species by private recreational fishermen outside of Georgia after tags are depleted. If red snapper were incidentally taken and killed after limits for all three sectors had been met, overfishing would be occurring.*

Management Alternative 3 *would allow harvest and retention of snapper grouper species in depths of 98 feet or less for 6 months. It is assumed that all fishing for snapper grouper species would be prohibited at depths greater than 98 feet. Red snapper are known to occur in depths shallower than 98 feet but there are not good estimates of what proportion of the population occurs in those depths (Moe 1962). Therefore, data are not adequate, at this time, to determine if this alternative would end overfishing of red snapper. If Proposed* ***Management Alternative 3*** *is adopted (allow harvest in depths of 98 feet or less), the state/sector ACLs would need to be lowered to incorporate the estimated red snapper mortality.*

Table 25. Number harvested, released, and total removals of red snapper taken by recreational fishermen during 2003-2006 (SEDAR 15 2008). Dead discards determined by applying 40% release mortality to discarded fish. Total removals = harvest (landed fish) + dead discards. Total removals in closed fishery, where red snapper harvest is prohibited is determined by applying a 40% release mortality rate to the total of landed plus discarded fish.

Year	landed	discarded	dead discards	total removals	Total removals in closed fishery
2003	41,367	184,646	73,858	115,225	90,405
2004	49,728	242,306	96,922	146,650	116,814
2005	42,615	155,576	62,230	104,845	79,276
2006	32,962	168,126	67,250	100,212	80,435
average	41,668	187,664	75,065	116,733	91,733

Table 26. Expected number harvested, released, and total removals of red snapper taken by recreational fishermen during 2003-2006 if there was no size limit and a 2 fish bag limit. Dead discards determined by applying 40% release mortality to discarded fish. Total removals = harvest (landed fish) + dead discards.

Year	landed	discarded	dead discards	total removals
2003	100,508	125,506	50,202	150,711
2004	124,129	167,906	67,162	191,292
2005	106,053	92,141	36,856	142,909
2006	81,252	119,833	47,933	129,185
average	102,986	126,346	50,539	153,524

Table 27. Monthly headboat and MRFSS for-hire landings (pounds whole weight) of red snapper.

Year	2007	2007 cumulative	2008	2008 cumulative
1	7,342	7,342	14,446	14,446
2	6,733	14,075	24,720	39,166
3	4,928	19,003	18,459	57,625
4	5,904	24,908	17,332	74,957
5	13,964	38,872	39,791	114,748
6	14,661	53,533	36,198	150,946
7	5,800	59,333	49,851	200,797
8	5,748	65,081	43,596	244,394
9	2,178	67,259	3,979	248,373
10	1,863	69,122	6,658	255,031
11	13,042	82,164	10,986	266,017
12	14,689	96,853	9,319	275,336

Table 28. MRFSS non for-hire landings (pounds whole weight) of red snapper by wave.

Wave	2007	2007 cumulative	2008	2008 cumulative
1	12,390	12,390	42,227	42,227
2	5,946	18,336	53,693	95,920
3	131,202	149,538	201,827	297,747
4	44,528	194,066	72,690	370,437
5	43,618	237,684	76,744	447,181
6	6,067	243,751	94,661	541,842

Table 29. Red snapper landings and discards (numbers) from for-hire fishery (headboat and MRFSS) for 2008.

Month	number caught	number discarded
1	2,338	13,600
2	3,310	16,865
3	3,338	10,020
4	2,817	13,696
5	5,612	15,075
6	5,428	13,814
7	7,511	11,626
8	6,614	8,987
9	747	3,045
10	1,076	4,767
11	1,959	5,624
12	1,547	5,132

*Discards are only available in numbers of fish.

Table 30. Red snapper landings and discards (numbers) from non for-hire fishery (MRFSS) for 2008.

Wave	number caught	number discarded
1	9,764	72,086
2	9,772	54,883
3	28,986	85,734
4	11,612	43,470
5	11,112	35,181
6	16,700	60,860

*Discards are only available in numbers of fish.

Rejected Alternative 34. Define a rebuilding strategy for red snapper that sets fishing mortality at F_{MSY} ($F_{40\%SPR}$) in year 1. The ACL (total removals) for 2010 would be 105,000 lbs whole weight. The ACL specified for 2010 would remain in effect beyond 2010 until modified. Under this strategy, the fishery would have a 44% chance of rebuilding to SSB_{MSY} within the allowable 35 year timeframe. Since this alternative specifies the fishing mortality rate that produces MSY, OY at equilibrium would not be specified. The Council will review ACL and management measures following the next scheduled assessment for red snapper.

Rationale for elimination: The National Standard 1 Guidelines at 50 CFR § 600.310(j)(3)(i)(A) specify the following guidance in terms of probability of overfishing: The ''minimum time for rebuilding a stock'' (Tmin) means the amount of time the stock or stock complex is expected to take to rebuild to its MSY biomass level in the absence of any fishing mortality. In this context, the term ''expected'' means to have at least a 50 percent probability of attaining the Bmsy.

Under this strategy, the red snapper stock would have a 44% chance of rebuilding to SSB_{MSY} within the allowable 35 year timeframe. The Council believes that a rebuilding program with a 44% probability is a strategy that contains a level of risk that is unacceptable. Future adverse impacts to the stock and fishery would be expected if the rebuilding goals were not achieved.

Rejected Alternative 35. Define a rebuilding strategy for red snapper that sets the ACL at 0 (directed landings only). The AM would be to track catch per unit effort (CPUE) of red snapper via a fishery-independent monitoring program to track changes in biomass. CPUE would be evaluated every three years and adjustments would be made by the framework action being developed in Amendment 17B.

Rationale for elimination: The alternatives for the rebuilding strategy in the amendment were restructured. The alternative that would establish ACL equal to zero is no longer a separate action. The ACL equal to zero option is now a sub-alternative under each rebuilding strategy alternative. The Council believes that setting ACL to 0 versus a poundage will affect the accountability measures chosen and needs to be an option that is analyzed under each alternative.

Rejected Alternative 36. Allow harvest, possession, and retention of snapper grouper species in the closed area from 28 degrees north (Stuart, Florida) to 33 degrees north (Cape Romain, South Carolina) if fishermen possess a red snapper permit. Once the allowable harvest of red snapper for a permitted fishermen is reached all harvest, possession, and retention of snapper grouper species would be prohibited within the closed area. All harvest, possession, and retention of red snapper outside the closed area would be prohibited.

Allocation

Allocate a portion of the 79,000 lb whole weight ACL as non-directed removals; i.e., bycatch mortality, between the closure area and outside the closure area.

Sub-Alternative 10A. Define allocations for red snapper 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) 1986-2008) + (50% * average of recent catch trend (lbs) 2006-2008). The allocation would be 28% commercial; 28% for-hire commercial; and 43% private recreational.

Sub-Alternative 10B. Define allocations for red snapper 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 23% commercial and 76% recreational.

Sub-Alternative 10c. Define allocations for red snapper based upon landings from the ALS, MRFSS, and headboat databases. Allocate 40% commercial and 60% recreational.

Table 4-9. Red snapper landings by sector in Sub-Alternatives 10A, 10B, and 10C.

Allocation Alternative	Commercial	For-Hire	Private Rec
Sub-Alt 10a	8,373	8,672	12,859
Sub-Alt 10b	6,878	21,831	
Sub-Alt 10c	11,962	17,943	

Number of Permits

Establish designate vessels to fish in closed area. (Details to be inserted; see GA DNR's rules for administering a lottery system). NMFS-SERO shall issue permits in the initial or any subsequent permit year by lottery devised and operated by the agency. Council to consider alternatives on number of permits issued. Allocation action would be used to divide the number of permits among sectors.

Sub-Alternative 10D. Set number of red snapper permits at 1,000 (This is the maximum number Law Enforcement indicates it can monitor). Use allocation action to divide the number of permits among sectors.

Sub-Alternative 10B. Set number of red snapper permits at 500.

Sub-Alternative 10c. Set number of red snapper permits at 150.

Table 4-10 Allocations under Alternative 10

	Commercial	For-Hire	Private Rec	Total
Allocation	28%	29%	43%	100%
Allowable catch	8,373.4	8,672.5	12,859.2	29,905.0
Number or Permits Alt 10D	280	290	430	1,000
Catch per vessel lbs ww	30	30	30	30
Number or Permits Alt 10E	140	145	215	500
Catch per vessel lbs ww	60	60	60	60
Number or Permits Alt 10F	42	43	65	150
Catch per vessel lbs ww	199	199	199	199

Requirements of Permitted Fishermen
The following requirements would apply to fishermen with red snapper permits.

Table 4-11 Tracking and accountability measures for fishermen possessing red snapper permits.

Tracking and Accountability Measures	Commercial	For-Hire	Private Rec
Circle hooks	X	X	X
Bio sampling (if selected)	X	X	X
RS permit taken if violation	X	X	X
VMS Required	X	X	X
Electronic logbooks or similar	X	X	-
Real time message reporting	-	-	X
Video monitoring	X	X	-
Observers (if selected)	X	X	X

Outside the closure area: Subtract poundage allotment for area south of 28 degrees north and north of 33 degrees north (Cape Romain), off the 79,000 lb whole weight ACL.

South of 28 degrees (approx. Stuart FL) – 25,048 lbs whole weight
North of 33 degrees (Cape Romain SC) – 24,047 lbs whole weight
49,095 lbs whole weight (non-directed removals)
subtracted from the 79,000 lbs whole weight ACL.
Closure area: Using sub-alternative 10A, allocate the remaining poundage (79,000 – 49,095 lbs = 29,905 lbs whole weight) as directed removals to the three sectors based on Table 2, Alternative 3; Attachment 30:

28% - commercial 8,373 lbs
29% - for hire 8,673 lbs
43% - recreational 12,859 lbs

The IPT has recommended an allocation action for red snapper be included in the amendment, from which this portion of Alternative 10 could be derived. Couldn't the allocation just be part of the alternative?

(Team to verify numbers and convert to numbers of fish where appropriate)

(Determine number of fish) Problem with using number of fish is that average weight would increase as stock rebuilds.

Commercial

The red snapper commercial ACL within the closed area is 8,373 lbs whole number. Make X number of permits available to those that hold a Federal Snapper Grouper Commercial Permit that would allow the permit holder to fish for species in the Snapper Grouper FMU inside of the limited, designated snapper-grouper bottom fishing zone(s) using circle hooks. Commercial permit holders selected to fish the designated fishing zone would be selected by a lottery system. (Details to be inserted; see GA DNR's rules for administering a lottery system). NMFS-SERO shall issue permits in the initial or any subsequent permit year by lottery devised and operated by the agency. A subset would be selected by the SEFSC to bring in red snapper for biological sampling. If real-time reporting requirements are violated, the permit holder would be subjected to severe sanctions, up to and including permit revocation. Once the real-time monitoring indicates the poundage [i.e., red snapper discards] allocated to the commercial sector has been taken, all permits for that sector are rescinded.

The following tracking and accountability measures would be required for those with a permit to fish in the zone:

- VMS
- Real time electronic catch (directed and non-directed) reporting via electronic logbooks or team alternative real time reporting technology
- Video monitoring or observers (if selected)
- (The Council discussed requiring observers in at least in the first year to validate the video monitoring.)

For-Hire (Headboat and Charterboat)

The red snapper for-hire ACL within the closed area is 8,673 lbs whole weight. Make X number of permits available to those that hold a Federal Snapper Grouper For-Hire Permit that would allow the permit holder to fish for species in the Snapper Grouper FMU inside of the limited, designated snapper-grouper bottom fishing zone(s) using circle hooks. For-hire permit holders selected to fish the designated fishing zone would be selected by a lottery system. (Details to be inserted; see GA DNR's rules for administering a lottery system). NMFS-SERO shall issue permits in the initial or any subsequent permit year by lottery devised and operated by the agency. A subset would be selected by the SEFSC to bring in red snapper for biological sampling. If real-time reporting requirements are violated, the permit holder would be subjected to severe

sanctions, up to and including permit revocation. Once the real-time monitoring indicates the poundage [i.e., red snapper discards] allocated to the for-hire sector has been taken, all permits for that sector are rescinded.

The following tracking and accountability measures would be required for those with a permit to fish in the zone:

- Mandatory species ID training
- VMS
- Real time catch (directed and non-directed) reporting via logbooks??
- Video monitoring or Observers (if selected)
- (The Council discussed requiring observers in at least in the first year to validate the video monitoring.)

Private Recreational

The red snapper private recreational ACL within the zone is 12,859 lbs weight. Make X number of permits available that would allow the permit holder to fish for species in the Snapper Grouper FMU inside of the limited, designated snapper-grouper bottom fishing zone using circle hooks. Private recreational permit holders selected to fish the designated fishing zone would be selected by a lottery system. (Details to be inserted; see GA DNR's rules for administering a lottery system). NMFS-SERO shall issue permits in the initial or any subsequent permit year by lottery devised and operated by the agency. A subset would be selected by the SEFSC to bring in red snapper for biological sampling. If real-time reporting requirements are violated, the permit holder would be subjected to severe sanctions, up to and including permit revocation. Once the real-time monitoring indicates the poundage [i.e., red snapper discards] allocated to the private recreational sector has been taken, all permits for that sector are rescinded.

The following tracking and accountability measures would be required for those with a permit top fish in the zone:

- Mandatory species ID training
- VMS
- Real time text message reporting of catch (B1s and B2s)
- Video monitoring

Permit Numbers

At the September 2009 Council meeting, NMFS Law Enforcement personnel indicated that they could adequately monitor up to 1,000 vessels, using VMS. Under that scenario, the following number of permits would be distributed each year:

28% - commercial	280 boats
29% - for hire X 10 to obtain boat #	290 boats

43% - recreational	430 boats
	1000 boats

These calculations were brought forward by a Council member. It may not be possible to divvy this small number of fish among this many boats. Perhaps you can, if fishermen can really stay off the snapper, as the commercial guys assert that they can.

There was discussion that attrition in the commercial and for hire sectors would be so substantial as to allow everyone remaining to participate, so that a lottery wouldn't be necessary for that sector.

Costs

Applicant to procure the monitoring technology. VMS can be reimbursed; other technology such as video monitoring, electronic logbooks, etc. would be responsibility of the applicant.

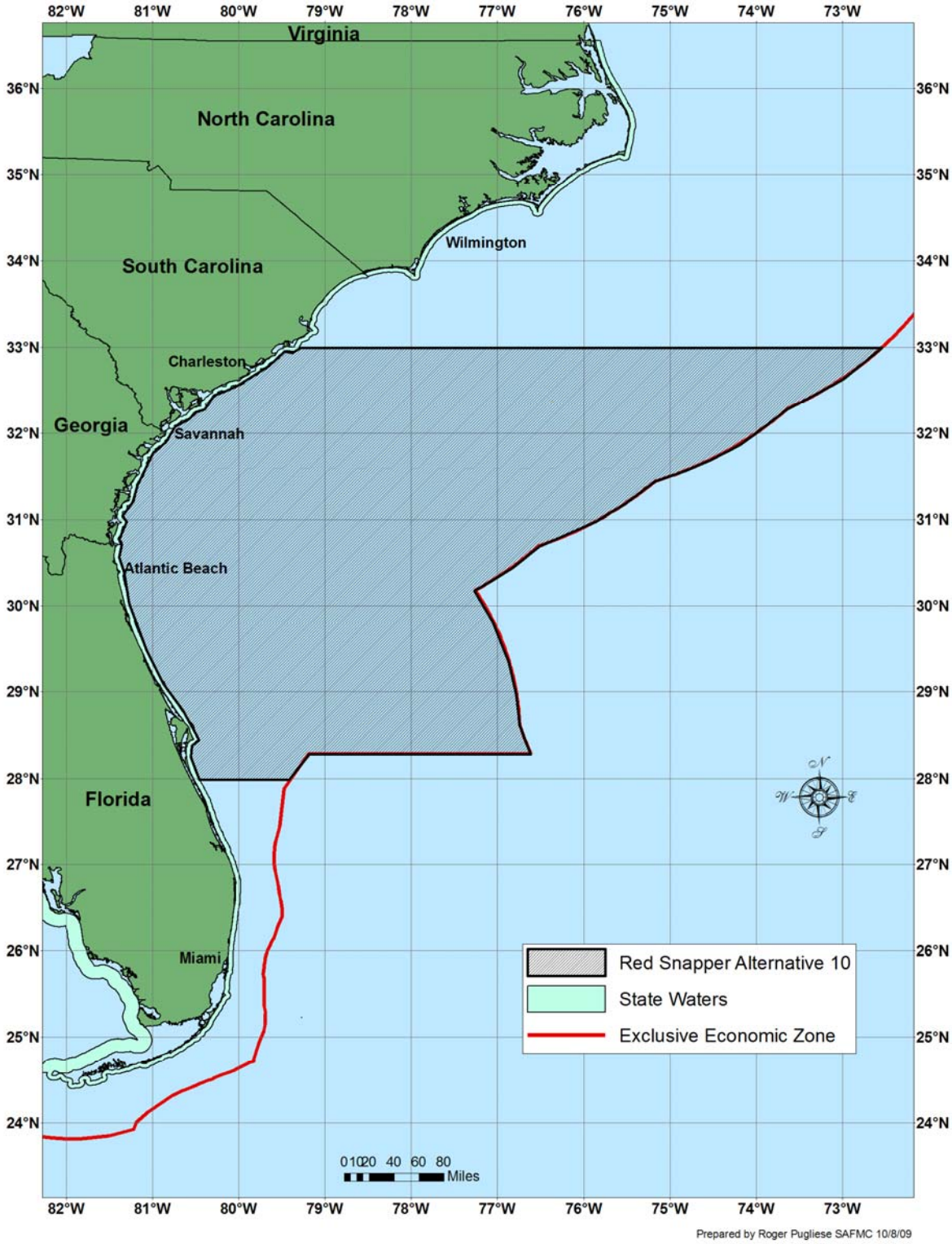


Figure 4-11 Map of proposed lottery program area under Alternative 10.

<u>Rational for elimination:</u> Examination of historical landings during 2003-2008 suggest the individual allocations among fishermen could be filled very quickly if there is no reduction in harvest (Table 4-25).

Table 4-25. Average red snapper landings during 2003-2008, average pounds caught per day during 2003-2008, allowable catch within proposed closed area, and estimated number of days to fill allocation for each sector assuming no reduction in effort or ability to avoid red snapper.

Landings	Commercial	For-Hire	Private
Pounds gw	78,418	149,020	206,674
pounds/day	215	408	566
Allowable landed catch	8,373	8,673	12,859
# days to fill allocation	39	21	23

Table 4-26 shows fishing in the closed area would last for a longer period of time if all red snapper were discarded. However, tracking discards would require fishermen to record weight or length, which would be converted to weight, prior to discarding a red snapper.

Table 4-26. Average red snapper landings during 2003-2008, average pounds caught per day during 2003-2008, allowable discards within proposed closed area, and estimated number of days to fill allocation for each sector assuming no reduction in effort or ability to avoid red snapper. Assumes 40% and 90% release mortality rates for the commercial and recreational sectors, respectively.

Landings	Commercial	For-Hire	Private
Pounds gw	78,418	149,020	206,674
pounds/day	215	408	566
Allowable catch	9,303	21,683	32,148
# days to fill allocation	43	53	57

Landings and discards of red snapper would be tracked for each of the sectors via real time electronic reporting, which would require the instillation of electronic log books and additional administrative personnel to track the data provided. Permit holders assigned a red snapper allocation would be required to estimate the length and weight of all discarded red snapper. In order to accurately record the weight discarded red snapper the instillation of a scale onboard each vessel may be necessary, but not practical. Not only would each vessel fishing under the lottery system be required to install electronic logbook equipment, they would also be required to carry VMS, and carry observers, if selected. Both of which may be cost prohibitive for fishery participants or NOAA Fisheries Service.

This alternative could result in a substantial reduction in the number of historical participants and also result in the fishery for snapper grouper species being closed for a large part of the year. Additionally, fishermen could choose to split their allocation and auction off portions of it to the highest bidders, which could increase the number of boats on the water and possibly increase bycatch. It is unlikely a program this complex could be implemented by the time a final rule for Amendment 17A is published or even shortly thereafter.

Rejected Alternative 37. Define the boundaries of the closures with a greater number of waypoints (compared to alternatives under consideration) in order to follow the bathymetric contours to a greater degree. The alternatives are shown below.

Alternative 3B
(66-240ft; 4 grid)

Alternative 3C
(98-240 ft; 4 grid)

Alternative 3D
(98-300 ft; 4 grid)

Alternative 4B
(66-240ft; 7 grid)

Alternative 4C
(98-240 ft; 7 grid)

Alternative 4D
(98-300 ft; 7 grid)

<u>Rationale for elimination</u>:

The Council decided to develop spatial closures with a fewer number of waypoints based upon recommendations from the Law Enforcement Advisory Panel (AP). The AP recommended any closure include the fewest number of waypoints with straightened lines along the eastern and western edges. The AP stated straightened lines with obtuse angles would minimize the confusion amongst fishermen and avoid situations where fishermen would stray into the areas where fishing is prohibited.