

Amendment 51 to the Snapper Grouper Fishery Management Plan of the South Atlantic Region

Catch Level Adjustments and Allocations for Snowy Grouper



Decision Document
June 2022

Background

The update to SEDAR 36 was completed in 2020. This assessment included revised estimates for recreational catch from the Marine Recreational Information Program (MRIP) based on the Fishing Effort Survey (FES). The South Atlantic snowy grouper stock is overfished and is experiencing overfishing. The Council received the results of the assessment and the SSC's catch level recommendations in March 2021 and began work on a plan amendment to adjust catch levels.

NMFS notified the Council on June 10, 2021, that management action is necessary for snowy grouper as the stock is undergoing overfishing and remains overfished. NMFS recommended

that the Council end overfishing of snowy grouper and continue stock rebuilding based on the results of SEDAR 36 Update.

Assessment Link: http://sedarweb.org/docs/suar/2020_SEDAR36U_SAR_November2020.pdf

Fishery Overview: https://safmc-shinyapps.shinyapps.io/SA_FisheryDataSnowyGrouper/

Table 1. Summary of the assessment, rebuilding plan, and amendment milestone history

Background Overview		
SEDAR History	Stock Status	
Assessment	Overfished	Overfishing
SEDAR 4 (2006)	X	X
SEDAR 36 (2013)	X	
SEDAR 36 Update (2020)	X	X
Current Rebuilding Plan		
Timeframe	Terminal Year	
34 yrs.	2042	
Amendment Action Schedule		
Assessment results reviewed	Mar-21	
Direction to start Amendment	Mar-21	
NMFS Letter Received	June 10 th , 2021	

Proposed management changes in this amendment

- Adjust catch levels (acceptable biological catch and annual catch limit) and revise annual optimum yield
- Revise sector allocations
- Reduce the commercial trip limit
- Modify the recreational season
- Modify the recreational accountability measures

Objectives for this meeting

- Review actions and alternatives
- Review Snapper Grouper AP feedback where appropriate
- Review preliminary analyses and summary effects sections
- Pick preferred alternatives
- Approve amendment for public hearings

Tentative amendment timing

March 2021	Reviewed SEDAR 36 Update results and direct staff to begin a plan amendment
September 2021	Review options paper and provide guidance to staff
October 2021	Obtain input from AP
December 2021	Review AP comments, review preliminary analyses, and approve for scoping
March 2022	Review scoping comments and make needed modifications
April 2022	Obtain input from AP
June 2022	Review modifications to the amendment, AP comments, select preferred alternatives, and approve for public hearings
July/August 2022	Conduct public hearings
September 2022	Review public hearing comments and approve all actions
December 2022	Review final draft amendment and consider approval for formal review

Council action at previous meeting

- Reviewed the February 2022 scoping comments
- Directed staff to work with the Council’s Citizen Science Program to create a project to gather supplemental data for snowy grouper, including outreach to dealers
 - Consider creating a diverse workgroup (Sea Grant, TIP samplers, dealers, state, and science center members)
- For **Action 1 (ABC, ACL, OY)**: removed Option 5 (ACL=OY=80% ABC) and selected Option 2 (ACL=OY=ABC) as the preferred alternative
- For **Action 2 (Allocations)**: Selected Option 2 (87.55% Com/12.45% Rec allocation) as the preferred alternative
- Directed staff to consider a weekly trip limit option for other snapper grouper species
- For **Action 3 (Commercial trip limit)**: Selected Option 1 (no action, 200 lbs gw trip limit) as the preferred alternative
 - Requested feedback from the AP on the selected preferred and consideration of a higher trip limit and regional management
- For **Action 4 (Establishing commercial spawning season closure)**: Removed the action based on the following rationale:

- MPAs currently help to protect spawning aggregations
- Current commercial closures act as a spawning season
- Collection of gonadal data may be beneficial
- For **Action 5 (Modify the recreational season)**: Requested two single wave Options (wave 3 and wave 4) for Action 4 (recreational season modifications)
 - Asked the Snapper Grouper AP to consider what would be the best season to account for regional differences
 - Requested analysis based on a more recent/stable time period

Purpose and Need Statements

The *purpose* of this fishery management plan amendment is to set an **overfishing limit**, acceptable biological catch level, revise the annual catch limits, annual optimum yield, and sector allocations for South Atlantic snowy grouper based on the results of the most recent stock assessment and modify management and accountability measures.

The *need* for this fishery management plan amendment is to end overfishing of South Atlantic snowy grouper, continue to rebuild the stock, and achieve optimum yield while minimizing, to the extent practicable, adverse social and economic effects.

Committee Action: SUGGEST MODIFICATIONS AS APPROPRIATE

Proposed Actions

1. Revise the acceptable biological catch, total annual catch limit, and annual optimum yield for snowy grouper

Purpose of Action

The snowy grouper total ACL is being revised to incorporate BSIA via the new ABC recommendations of the SSC, based on the SEDAR 36 Update (2020) stock assessment, as well as the updated recreational landings from the Marine Recreational Information Program's (MRIP) Fishing Effort Survey (FES).

Alternative 1 (No Action). The total annual catch limit and annual optimum yield for snowy grouper are **equal to the current** acceptable biological catch (218,848 pounds whole weight, 185,464 pounds gutted weight). The current acceptable biological catch is inclusive of recreational estimates from the Marine Recreational Information Program's Coastal Household Telephone Survey.

Preferred Alternative 2. Revise the acceptable biological catch and set it equal to the most recent recommendation from the Scientific and Statistical Committee. Revise the total annual catch limit and annual optimum yield for snowy grouper and set them **equal to the recommended** acceptable biological catch. The recommended acceptable biological catch is inclusive of recreational estimates from the Marine Recreational Information Program's Fishing Effort Survey.

Alternative 3. Revise the acceptable biological catch and set it equal to the most recent recommendation from the Scientific and Statistical Committee. Revise the total annual catch limit and annual optimum yield for snowy grouper and set them equal to **95% of the recommended** acceptable biological catch. The recommended acceptable biological catch is inclusive of recreational estimates from the Marine Recreational Information Program's Fishing Effort Survey.

Alternative 4. Revise the acceptable biological catch and set it equal to the most recent recommendation from the Scientific and Statistical Committee. Revise the total annual catch limit and annual optimum yield for snowy grouper and set them equal to **90% of the recommended** acceptable biological catch. The recommended acceptable biological catch is inclusive of recreational estimates from the Marine Recreational Information Program's Fishing Effort Survey.

Table 2. ACL, OY, and ABC options of proposed **Action 1**.

Options	ABC, total ACL, annual OY	Recreational landings data used
Alternative 1 (No Action)	ACL=OY=current ABC	MRIP-CHTS
Preferred Alternative 2	ACL=OY=updated ABC	MRIP-FES
Alternative 3	ACL=OY=95% updated ABC	MRIP-FES
Alternative 4	ACL=OY=90% updated ABC	MRIP-FES

Table 3. The total ACL for snowy grouper under **Alternatives 1 (No Action) – 4** in gutted weight

Option	Pounds Gutted Weight			
	2023	2024	2025	2026*
Alternative 1 (No Action)**	185,464	185,464	185,464	185,464
Preferred Alternative 2***	119,954	121,272	122,889	122,889
Alternative 3***	113,956	115,208	116,745	116,745
Alternative 4***	107,959	109,145	110,600	110,600

Discussion:

- When compared to the average total landings from 2015-2019 (lbs gw, inclusive of MRIP FES recreational landings) the proposed ACLs for 2023 through 2027 from **Preferred Alternative 2** are roughly 60,000 lbs gw below average total landings (**Figure 2**).

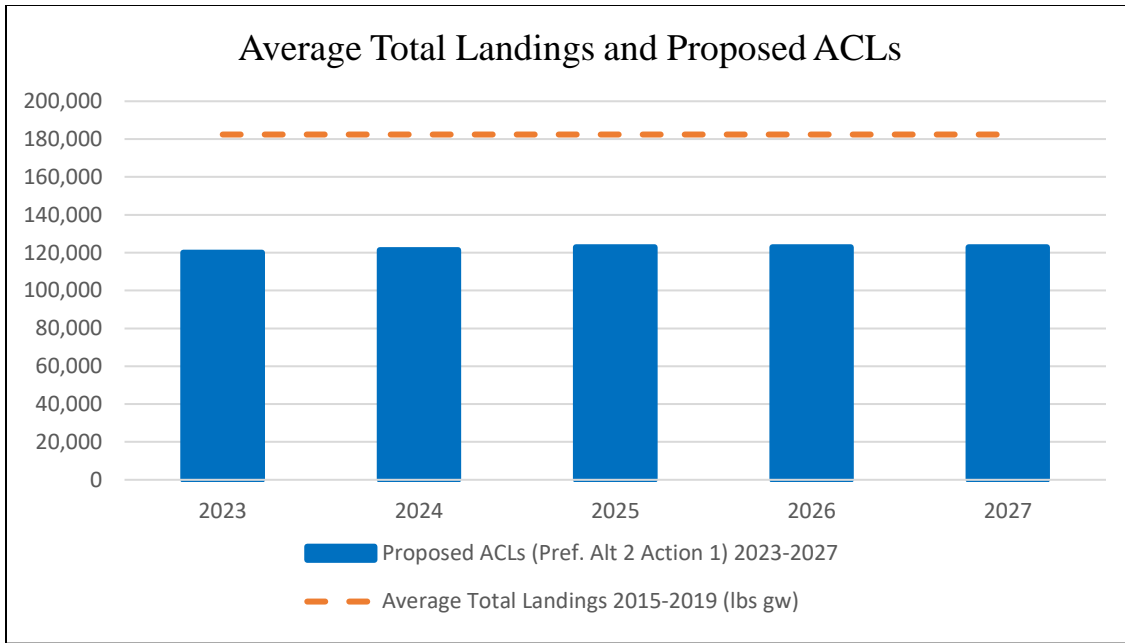


Figure 2. The comparison of the average total snowy grouper landings (inclusive of MREP recreational MRIP FES landings) from 2015-2019 (orange) and the proposed ACLs (2023-2027) under **Preferred Alternative 2** for **Action 1** (blue).

- Historically, commercial landings have been higher than recreational landings, however in recent years commercial landings have decreased closer to recreational landings (**Figure 3**).

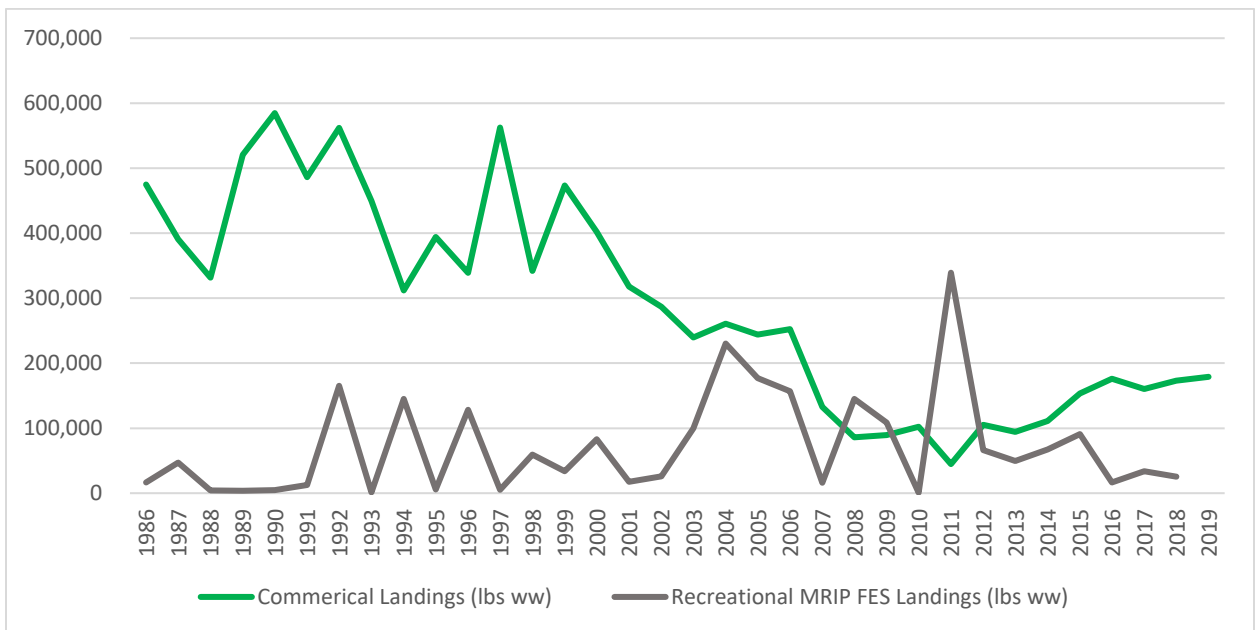


Figure 3. Commercial (green) and recreational MRIP FES (gray) landings in pounds whole weight from 1986 to 2019.

Summary of Biological Effects:

- **Alternative 1 (No Action)** is not a viable alternative for consideration and therefore cannot be compared to other alternatives in terms of biological, economic, or social effects.
- **Alternative 2** would be expected to result in the least biological benefits and may increase discards
- For **Alternatives 3 and 4** the biological benefits increase with an increased buffer between the ABC and ACL.

Summary of Economic Effects:

- In general, ACLs that allow for more fish to be landed can result in increased economic benefits.
- Short-term economic benefits are expected to be highest under **Alternative 1 (No Action)** followed by **Preferred Alternative 2 Alternative 3 and Alternative 4**

Summary of Social Effects:

- **Alternative 1 (No Action)** would not update the snowy grouper ACL based on current information and would not provide the social benefits associated with up-to-date scientific information
- **Preferred Alternative 2** would be the most socially beneficial for fishermen, because it would provide the highest ACL that would be least likely to trigger an AM
- **Alternative 3, and Alternative 4** would provide less social benefit because of the lowered ACLs and increase chance of triggering an AM

Snapper Grouper AP Feedback (April 2022): No recommendations/comments pertaining to **Action 1**.

Committee Action:

- REVIEW ALTERNATIVE LANGUAGE
- REVIEW SUMMARY EFFECTS SECTIONS

2. Revise sector allocations and sector annual catch limits for snowy grouper

Purpose of Action

Snowy grouper allocations are being revised to incorporate the new catch level recommendations of the SSC, based on the SEDAR 36 Update (2020) stock assessment, as well as the updated recreational landings from the Marine Recreational Information Program's (MRIP) Fishing Effort Survey (FES).

Alternative 1 (No Action). Retain the current recreational sector and commercial sector allocations as 17% and 83%, respectively, of the revised total annual catch limit for snowy grouper.

Preferred Alternative 2. Allocate 87.55% of the revised total annual catch limit for snowy grouper to the commercial sector and 12.45% of the revised total annual catch limit for snowy grouper to the recreational sector.

Alternative 3. Allocate 73.36% of the revised total annual catch limit for snowy grouper to the commercial sector and 26.64% of the revised total annual catch limit for snowy grouper to the recreational sector.

Table 5. Allocation Alternatives for proposed **Action 2**. Sector ACLs are based on the Total ACL from Preferred Alternative 2 for Action 1.

Option	Commercial/recreational allocation	Basis for allocation
Alternative 1 (No Action)	83%/17%	Average landings from 1986-2005 used in Reg. Amendment 20 that incorporated CHTS recreational landings
Preferred Alternative 2	87.55%/12.45%	Updated Average landings from 1986-2005 incorporating MRIP FES recreational landings
Alternative 3	73.36%/26.64%	Comp ACL Amendment Allocation Formula that uses $(0.5 * \text{landings from 1986 to 2008}) + (0.5 * \text{landings from 2006 to 2008})$.

Table 6. The commercial and recreational sector allocations for snowy grouper based on Preferred Alternative 2 for Action 1. Recreational allocations were determined using an average weight from 2016-2018 from SEDAR 36 Update (8.93 lbs gw). The commercial season is split into two seasons: Season 1 (January 1 – June 30) receives 70% of the total ACL; Season 2 (July 1 – December 31) receives 30% of the total ACL. *The 2026 ACL would remain in place until modified.

Year	Total ACL (lbs gw)	Total ACL (numbers of fish)	Recreational ACL (numbers of fish)	Commercial ACL (lbs gw)		
				Total	Season 1	Season 2
Alternative 1 (No Action) (83% commercial/ 17% recreational)						
2023	119,954	15,624	2,284	99,562	69,693	29,869
2024	121,272	15,624	2,309	100,656	70,459	30,197
2025	122,889	15,624	2,339	101,998	71,399	30,599
2026*	122,889	15,624	2,339	101,998	71,399	30,599
Preferred Alternative 2 (87.55% commercial/ 12.45% recreational)						
2023	119,954	15,624	1,679	109,038	76,327	32,711
2024	121,272	15,624	1,698	110,236	77,165	33,071
2025	122,889	15,624	1,720	111,706	78,194	33,512
2026*	122,889	15,624	1,720	111,706	78,194	33,512
Alternative 3 (73.36% commercial/ 26.64% recreational)						
2023	119,954	15,624	3,573	88,046	61,632	26,414
2024	121,272	15,624	3,612	89,014	62,310	26,704
2025	122,889	15,624	3,661	90,201	63,141	27,060
2026*	122,889	15,624	3,661	90,201	63,141	27,060

Discussion:

- The commercial sector has been consistently harvesting at or above the sector ACL. The recreational sector has been harvesting below its current ACL but will likely be restricted by the new sector ACL under all alternatives.
- When compared to the average commercial landings from 2015-2019 (lbs gw) the proposed ACLs for 2023 through 2027 from **Preferred Alternative 2** are roughly 32,000 lbs gw below average commercial landings (**Figure 4**).

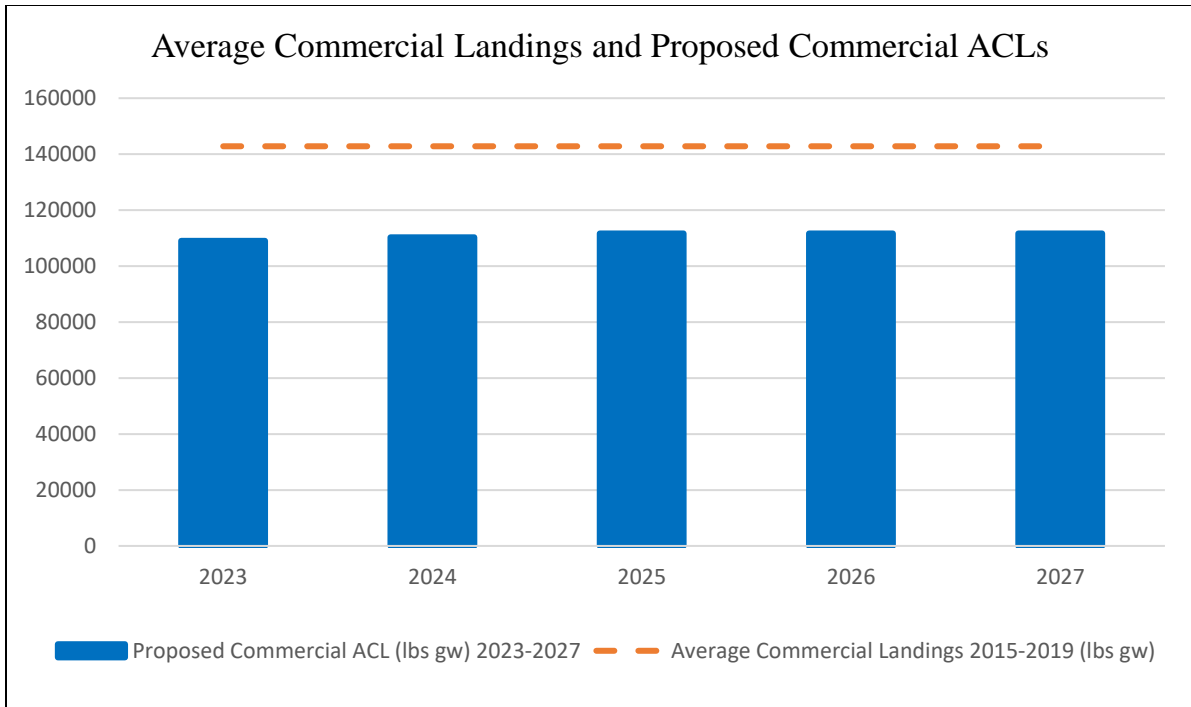


Figure 4. Average commercial landings (lbs gw) from 2015-2019 (orange) compared to the proposed commercial ACLs (blue) from **Preferred Alternative 2** from **Action 2**. Note that the updated commercial ACL is the total ACL for both season 1 and season 2.

- When compared to the average recreational landings from 2015-2019 (numbers of fish) the proposed ACLs for 2023 through 2027 from **Preferred Alternative 2** are roughly 3,300 fish below average recreational landings (**Figure 5**).

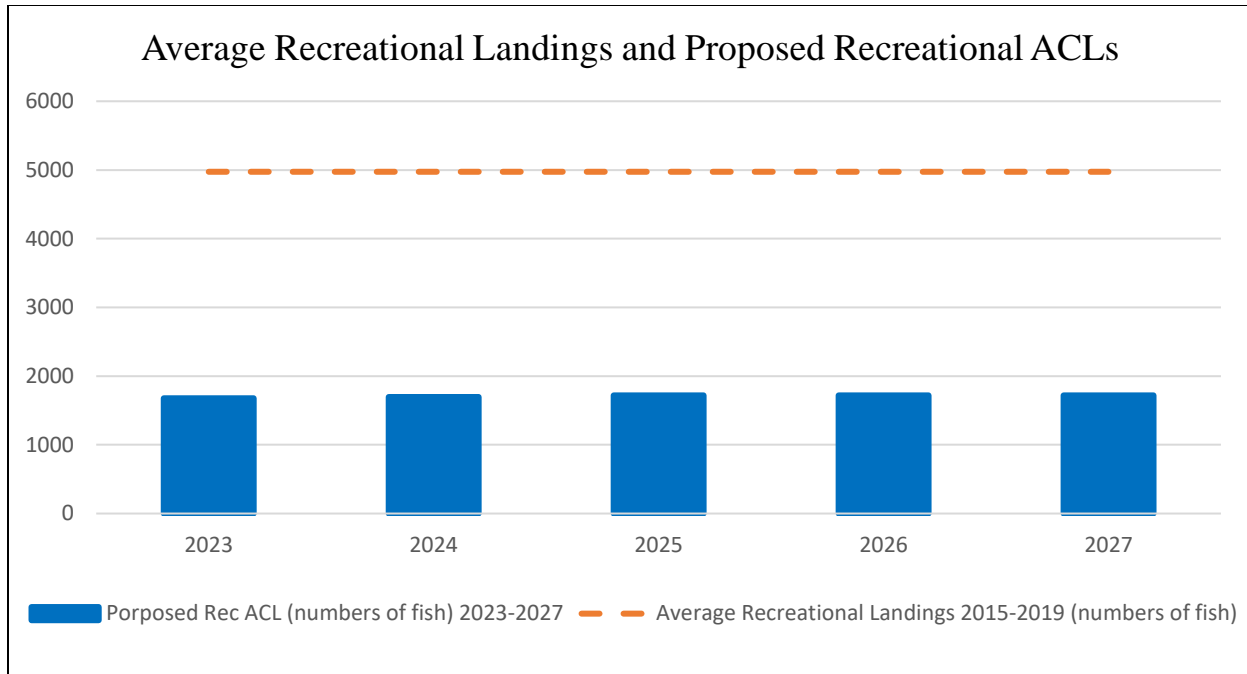


Figure 5. Average recreational landings (numbers of fish) from 2015-2019 (orange) compared to the proposed recreational ACLs (blue) from **Preferred Alternative 2** from **Action 2**.

Summary of Biological Effects:

- Biological effects are not expected to be significantly different across alternatives since allocation percentages are similar
- No expected effort shifts are expected for any alternative

Summary of Economic Effects:

- The alternatives in **Action 2** can be ranked for the commercial sector from a short-term economic perspective with **Preferred Alternative 2** having the highest potential benefits followed by **Alternative 1 (No Action)**, and **Alternative 3**.
- For the recreational sector, the ranking would be the opposite with **Alternative 3** having the highest potential benefits followed by **Alternative 1 (No Action)** and **Preferred Alternative 2**.
- In terms of total estimated net economic benefits for the action, the same ranking would apply as stated for the recreational sector.

Summary of Social Effects:

- **Alternative 1 (No Action)** would have no significant changes to social effects as it would retain the current allocation percentage.

- **Preferred Alternative 2** would increase the commercial allocation which could lead to negative social effects for recreational fishermen while **Alternative 3** would increase the recreational allocation and could have negative social effects for commercial fishermen.

Snapper Grouper AP Feedback (April 2022): No recommendations/comments pertaining to **Action 2**.

Committee Action:

- REVIEW ALTERNATIVE LANGUAGE
- REVIEW SUMMARY EFFECTS SECTIONS

3. Reduce the snowy grouper commercial trip limit

Purpose of Action

An approximately 43% reduction in harvest is needed to achieve the updated catch levels for snowy grouper. A commercial trip limit is being considered to achieve these reductions in catch while helping to ensure the longest period of access during each commercial season.

Preferred Alternative 1 (No Action). The commercial trip limit for snowy grouper is 200 pounds gutted weight.

Alternative 2. Reduce the commercial trip limit for snowy grouper to 150 pounds gutted weight

Alternative 3. Reduce the commercial trip limit for snowy grouper to 100 pounds gutted weight.

Discussion:

- Approximately 40% of the trips harvesting snowy grouper are estimated to have landed between 151 and 200 lbs gw (**Figure 6**; also see **Appendix I**). Trips estimated to have harvested greater than 200 lbs gw were normalized to 200 lbs gw when estimating potential reductions from lowering trip limit trip limit (**Table 10**).

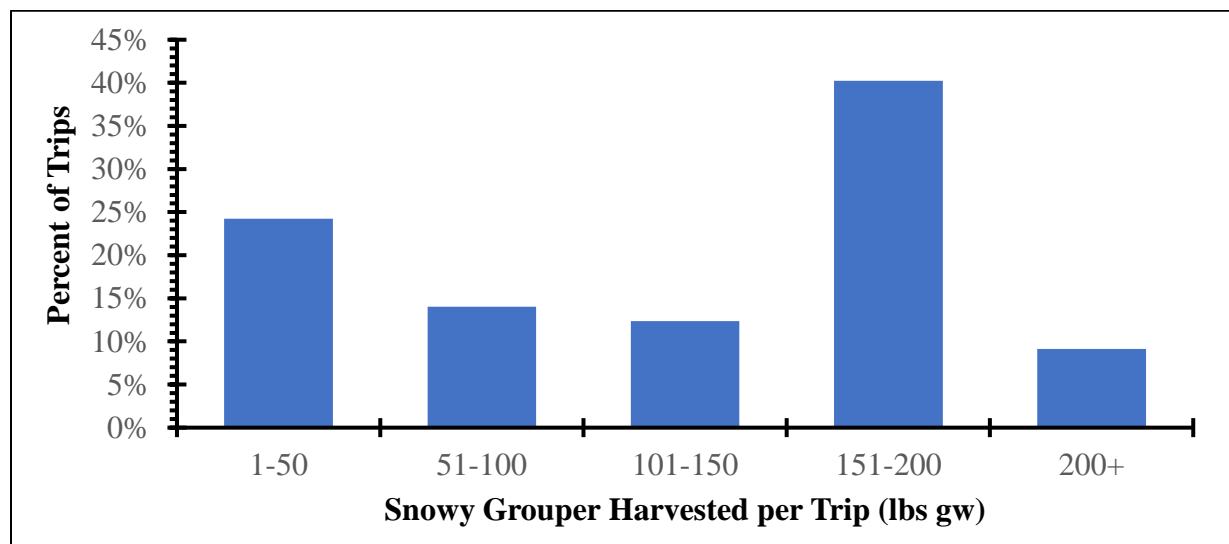


Figure 6. The percent of commercial trips (n=3,249) harvesting snowy grouper by bin from 2016 through 2019. Source: SEFSC commercial logbook [May 6, 2021].

Table 7. The predicted percent change in snowy grouper commercial landings per trip from reductions in the current 200-lb gw trip limit.

Current Trip Limit (lbs gw)	Potential Trip Limit (lbs gw)	Predicted Change in Landings
200-lb	150-lb	-16%
200-lb	100-lb	-38%

Summary of Preliminary Analyses:

- An analysis of the effects of the commercial trip limit reduction to the commercial season length was conducted for the commercial ACL from Preferred Alternative 2 (87.55% allocation, 109,038 lbs gw commercial ACL) in Action 2 (sector allocations).
- Under Preferred Alternative 2 from Action 2, season one was predicted to have a 4-month season with the 200 lbs trip limit, a 5-month season with the 150 lbs trip limit, and a 6-month season with the 100 lbs trip limit (no closures). Season 2 was predicted to have a 2-month season for the 200 lbs trip limit, a 3-month season for the 150 lbs trip limit, and a 4-month season for the 100 lbs trip limit (**Table 8**).

Table 8. The predicted season lengths for each trip limit for **Action 3**. Commercial ACL is reflective of Preferred Alternative 2 for Action 2 (109,038 lbs gw).

Trip Limit	Season 1 (Jan 1 - Jun 30) ACL (70%)	Closure Date	Season Length (95% CI)	Season 2 (Jul 1 - Dec 31) ACL (30%)	Closure Date	Season Length (95% CI)
200 lbs gw	76,327	22-Apr	Apr 8 - May 11	32,711	27-Aug	Aug 12 - Oct 17
150 lbs gw	76,327	8-May	Apr 23 - May 31	32,711	11-Sep	Aug 21 - No Closure
100 lbs gw	76,327	16-Jun	May 25 - No Closure	32,711	24-Oct	Sep 13 - No Closure

IPT RECOMMENDATION: The Council should discuss whether **Action 3** should be moved to Appendix E (Considered but Rejected) if they retain **Alternative 1 (No Action)** as the preferred alternative. The Council has discussed the following rationale for choosing **Alternative 1 (No Action)** as the preferred alternative:

- Any trip limit below 200 lbs would not be worth the trip to depths at which snowy are caught.
- Both the SG AP and public scoping comments shared these concerns, with some noting that a lower trip limit excludes them from the commercial snowy grouper fishery all together.

Summary of Biological Effects:

- Biological effects are not expected to differ between **Preferred Alternative 1 (No Action)**, **Alternative 2** and **Alternative 3** because of the current split season and commercial AMs in place.
- Reducing the commercial trip limit (**Alternatives 2 and 3**) may extend the length of the season compared to **Alternative 1 (No Action)**.

Summary of Economic Effects:

- Lower trip limits would allow for lower levels of revenue in more trips, thus potentially decreasing net economic benefits through decreased net revenue. In terms of potential net economic benefits, **Preferred Alternative 1 (No Action)** would provide the highest benefits followed by **Alternative 2** and **Alternative 3**.

Summary of Social Effects:

- Reducing the commercial trip limit may extend of the length of the season and avoid the negative social effects of triggering the AMs, in which case **Alternative 3** would provide the longest season followed by **Alternative 2** and **Preferred Alternative 1 (No Action)**.
- 51% of trips are harvesting 150 lbs gw or less of snowy grouper so **Alternative 2** is predicted to have the least amount of negative social effects based on how the fishery has been operating, followed by **Alternative 3** and **Preferred Alternative 1 (No Action)**.

Snapper Grouper AP Feedback (April 2022):

- The AP recommends retaining the 200 lbs gw trip limit (**Preferred Alternative 1 (No Action)**)
- AP recommends considering increasing the commercial trip limit
- The commercial snowy fishery does operate year-round, weather permitting, but historically April is a very important month.
- The golden tilefish hook and line boats rely on snowy to supplement their golden tilefish catch.
- Golden tilefish longline vessels catch snowy as bycatch throughout the golden tilefish longline season, nearing the end of the golden tilefish longline season, snowy and yellowedge are specifically targeted.

Committee Action:

- REVIEW SNAPPER GROUPE AP FEEDBACK
- REVIEW ALTERNATIVE LANGUAGE AND CONSIDER THE IPT'S RECOMMENDATION
- REVIEW SUMMARY EFFECTS SECTIONS

4. Modify the snowy grouper recreational season

Purpose of Action

An approximately 43% reduction in harvest is needed to achieve the updated catch levels for snowy grouper. Modifications to the recreational season are being considered to help constrain recreational harvest to these reduced catch levels.

Alternative 1 (No Action). The recreational snowy grouper season is May 1 to August 31.

Alternative 2. The recreational snowy grouper season is May 1 to June 30.

Alternative 3. The recreational snowy grouper season is July 1 to August 30.

Table 9. A summary of the alternatives for **Action 4**. Recreational harvest would be *open* during these times.

Alternative	Season Waves	Season Dates
Alternative 1 (No Action)	waves 3 and 4	May 1 - August 31
Alternative 2	wave 3 only	May 1 - June 30
Alternative 3	wave 4 only	July 1 - August 31

Discussion:

- The current recreational season for snowy grouper is May 1st through August 31st and recreational harvest is limited to one snowy grouper per vessel per day.
- The annual recreational landings of snowy grouper have been less than 10,000 fish every year from 2010 to 2019 except 2012 when landings were over 60,000 fish¹.
- It was noted in Regulatory Amendment 20 (2015) that most recreational landings, particularly in Monroe County, FL, occurred in May or June. An analysis of recent 3 years (2017-2019) of MRIP FES landings follow this trend with the exception of 2018 when recreational landings were highest in July and August. Projected landings are expected to peak in May and August (**Figure 4**).

¹ Note that the SERO ACL Monitoring webpage does not include snowy grouper landings from Monroe County, FL which were included in the landings stream as part of SEDAR 36 (2013) and SEDAR 36 Update (2020).

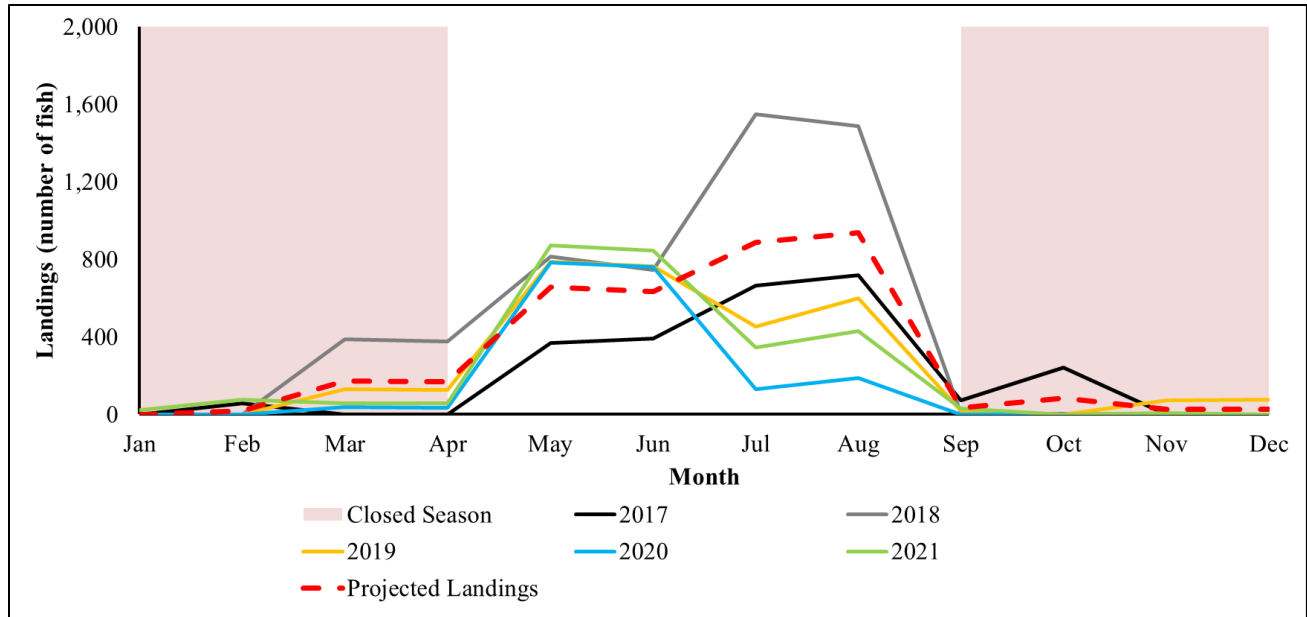


Figure 4. South Atlantic snowy grouper recreational landings by month from 2017-2019 and projected landings. All of the landing projections assume no landings between January 1 - April 30 and September 1 – December 31 for the season closure. Source: SEFSC MRIP FES Recreational ACL Database [March 17, 2022].

Summary of Preliminary Analyses:

- A preliminary analysis of the recreational season was conducted using landings from 2015-2019 and 2017-2019 (**Table 10**). Based on these landings a predicted season length was determined for Preferred Alternative 2 from Action 2 (**Tables 11**). See Appendix G for full range of alternatives from Action 2.
- Because of the variability and uncertainty of the recreational landings data, season lengths vary depending on which historical range is analyzed.

Table 10. Average number of snowy grouper landed by the recreational sector by wave from the South Atlantic based on a three-year average (2017 to 2019) and a five-year average (2015 to 2019). Landings include trips reported from Monroe County, FL. The confidence interval was developed based on the standard deviation of the three years.

Three-year Average (2017-2019)			
Wave	Average	Confidence Interval	Average Number Per Month
Jan-Feb	20	0 - 598	10
Mar-Apr	342	0 - 806	11
May-Jun	1,290	0 - 3,120	645
Jul-Aug	1,824	938 - 2,710	912
Sep-Oct	116	0 - 270	58
Nov-Dec	0	0 - 126	0
Five-year Average (2015-2019)			
Wave	Average	Confidence Interval	Average Number Per Month
Jan-Feb	351	0 - 1,372	176
Mar-Apr	395	0 - 1,256	198
May-Jun	2,354	0 - 5,520	1,177
Jul-Aug	1,674	138 - 3,210	837
Sep-Oct	45	0 - 230	23
Nov-Dec	30	0 - 163	15

Table 11. The projected South Atlantic snowy grouper recreational landings (number of fish) and closure dates expected for each Alternative of Action 4 using a **three-year (2017-2019)** and **five-year (2015-2019) average** recreational landings baseline. **The recreational ACL options considered here assume sector allocations of 12.45% recreational and 87.55% commercial (Preferred Alternative 2 of Action 2).** Source: SEFSC MRIP FES Recreational ACL Database [March 17, 2022].

Alternative 1 (No Action): May 1 – August 31			
Year	Recreational ACL (numbers of fish)*	3-Year Average Baseline	5-Year Average Baseline
		Waves Open	Waves Open
2023	1,679	> 2 waves (aprx. 75 days)	< 1 wave (aprx. 44 days)
2024	1,698	> 2 waves (aprx. 75 days)	< 1 wave (aprx. 44 days)
2025	1,720	> 2 waves (aprx. 75 days)	< 1 wave (aprx. 44 days)
2026	1,720	> 2 waves (aprx. 75 days)	< 1 wave (aprx. 44 days)
Alternative 2: Wave 3 Option (May 1 – June 30)			
Year	Recreational ACL (numbers of fish)*	3-Year Average Baseline	5-Year Average Baseline
		Waves Open	Waves Open
2023	1,679	~ 1 wave (aprx. 61 days)	< 1 wave (aprx. 44 days)
2024	1,698	~ 1 wave (aprx. 61 days)	< 1 wave (aprx. 44 days)
2025	1,720	~ 1 wave (aprx. 61 days)	< 1 wave (aprx. 44 days)
2026	1,720	~ 1 wave (aprx. 61 days)	< 1 wave (aprx. 44 days)
Alternative 3: Wave 4 Option (July 1 – Aug 31)			
Year	Recreational ACL (numbers of fish)*	3-Year Average Baseline	5-Year Average Baseline
		Waves Open	Waves Open
2023	1,679	slightly < 1 wave (aprx. 58 days)	~ 1 wave (aprx. 61 days)
2024	1,698	slightly < 1 wave (aprx. 58 days)	~ 1 wave (aprx. 61 days)
2025	1,720	slightly < 1 wave (aprx. 58 days)	~ 1 wave (aprx. 61 days)
2026	1,720	slightly < 1 wave (aprx. 58 days)	~ 1 wave (aprx. 61 days)

- Changing the snowy grouper recreational fishing may affect the recreational blueline tilefish season. See Appendix E for co-catch analysis.

IPT Recommendation: During the March meeting the Council requested additional analysis for the recreational season for a more recent/more stable time period. The IPT discussed including more historical years (to accomplish a stable time period) and the most recent 2 years but decided that due to the following, that analysis would not be helpful:

- General high PSEs for recreational snowy grouper data.
- The regulatory changes in 2010 (vessel limit established, Amendment 17B), 2011 (deepwater prohibition, Amendment 17B), and 2012 (elimination of deepwater prohibition, Reg Amendment 11) make for a difficult comparison of the recreational sector.

Summary of Biological Effects:

- **Alternative 2** and **Alternative 3** would be expected to result in beneficial impacts to the stock as the season would be shorter and fishing mortality lower compared to **Alternative 1 (No Action)**.
- Biological effects would be similar among **Alternatives 2 and Alternative 3** since they are both equal in the number of months open.
- Snowy grouper spawn May through August (Kolmos et al., 2018). **Alternative 1 (No Action)** would result in the lowest biological benefit to spawning as the season would be open the duration of the spawning season. **Alternatives 2** and would close either the first or second wave of the spawning season and would be expected to provide greater biological benefits when compared to **Alternative 1 (No Action)**.

Summary of Economic Effects:

- If the ACL is not fully harvested it can lead to fewer short-term economic benefits, thus there is the potential for **Alternative 2** and **Alternative 3** to have lower economic benefits than **Alternative 1 (No Action)**.
- **Alternative 1 (No Action)** provides the longest fishing season (4 months), thus the highest potential short-term economic benefits, followed by **Alternative 2** and **Alternative 3**.

Summary of Social Effects:

- Participation in the snowy grouper portion of the snapper grouper fishery has historically been highest during wave three (May and June) followed by wave four (July and August), therefore **Alternative 2** and **Alternative 3** would allow recreational anglers access when participation is highest.
- **Alternative 2** and **Alternative 3** would reduce harvest during the snowy grouper spawning season when compared to the four-month season in **Alternative 1 (No Action)** which would contribute to rebuilding goals and provide long-term social benefits

Snapper Grouper AP Feedback (April 2022):

- The AP recommends **Alternative 2 (wave 3, May 1 – June 30)**.
- Weather can cause access issues with the recreational snowy fishery.
 - Florida has more year-round fishing for snowy grouper.
 - Recreational access has increased region-wide due to improved technology.
- Concerns over discards while targeting golden and blueline tilefish.
- Discussed a possible deepwater closure similar to the 240-fathom depth closure in 2011 but there was not consensus on this strategy.
- The AP would like to see snowy remain open during golden and blueline tilefish.
- Concerns over possible MRIP FES underestimates of the snowy grouper recreational catch.

- Snowy are being caught at around 360ft, where they are also catching golden and blueline tilefish on the same drops.
 - Possible habitat overlap?
- Concerns over fish being removed from the population North of Cape Hatteras NC where snowy are not federally managed. These fish are accounted for in the assessment for this species.
- AP felt that the 100% mortality rate used in the assessment was inaccurate as some fishermen noted that descended fish would become active on the line when they reached the depth caught.
 - Recommended increased education on deepwater best fishing practices.

Committee Action:

- REVIEW SNAPPER GROUPE AP FEEDBACK
- REVIEW ALTERNATIVE LANGUAGE AND SELECT PREFERRED
- REVIEW SUMMARY EFFECTS SECTIONS

5. Modify the snowy grouper recreational accountability measures

Purpose of Action

Modifications to the recreational accountability measures are being considered to separate the commercial and recreational accountability measure triggers and establish a viable accountability measure for the recreational sector.

Alternative 1 (No Action). If recreational landings reach or are projected to reach the recreational annual catch limit, recreational harvest of snowy is closed for the remainder of the fishing year, regardless of stock status, unless National Marine Fisheries Service determines that no closure is necessary based on the best scientific information available.

If recreational landings exceed the recreational annual catch limit, then during the following fishing year recreational landings will be monitored for a persistence in increased landings. If the total annual catch limit is exceeded and snowy grouper are overfished, the length of the recreational fishing season and the recreational annual catch limit are reduced by the amount of the recreational annual catch limit overage.

Alternative 2. For the snowy grouper recreational sector, National Marine Fisheries Service will annually announce the recreational fishing season start and end dates in the *Federal Register* and by other methods, as deemed appropriate. The fishing season will start on **(date)** and end on the date National Marine Fisheries Service projects the recreational annual catch limit will be met.

Alternative 3. If recreational landings exceed the recreational annual catch limit, reduce the length of the following year's recreational fishing season by the amount necessary to prevent the recreational annual catch limit from being exceeded in the following year. However, the length of the recreational season will not be reduced if the Regional Administrator determines, using the best scientific information available, that it is not necessary.

Alternative 4. If recreational landings reach or are projected to reach the recreational annual catch limit, recreational harvest of snowy grouper is closed for the remainder of the fishing year, regardless of stock status, unless National Marine Fisheries Service determines that no closure is necessary based on the best scientific information available.

If recreational landings exceed the recreational annual catch limit, reduce the length of the following year's recreational fishing season by the amount necessary to prevent the recreational annual catch limit from being exceeded in the following year. However, the length of the recreational season will not be reduced if the Regional Administrator determines, using the best scientific information available, that it is not necessary.

Table 14. A summary of accountability measures within each Alternative for **Action 5**.

	In-Season AM		Post Season AM	
	Triggers	AM	Triggers	AM
Alternative 1 (No Action)	Recreational landings reach/projected to reach recreational ACL	Current recreational season closes	<ul style="list-style-type: none"> Recreational landings exceed recreational ACL Total ACL exceeded Stock is overfished <p><i>*All 3 must occur for AM to take effect</i></p>	<ul style="list-style-type: none"> Recreational ACL for the following year reduced by the recreational overage Recreational season for the following year is reduced by the amount of the recreational overage
Alternative 2	NMFS will annually announce the recreational fishing season start and end dates			
Alternative 3	NONE		Recreational landings exceed recreational ACL <i>*no longer tied to total ACL and stock status</i>	Recreational season for the following year is reduced by the amount necessary to prevent the recreational ACL from being exceeded
Alternative 4	Recreational landings reach/projected to reach recreational ACL	Current recreational season closes	Recreational landings exceed recreational ACL <i>*no longer tied to total ACL and stock status</i>	Recreational season for the following year is reduced by the amount necessary to prevent the recreational ACL from being exceeded

Discussion:

- Snowy grouper currently has a recreational in-season accountability measure; however, this is not effective for constraining recreational landings to the ACL due to the relatively short season length and timeline of recreational data availability.

IPT Recommendation: The IPT recommends considering an additional alternative (**Alternative 4**) which retains the recreational in-season closure but “un-ties” the post-season AMs from the total ACL and stock status as in **Alternative 3**.

Summary of Biological Effects:

- Biological benefits would be expected to be greater for the alternative that provides the most timely and realistic option chosen to trigger and implement an AM, especially considering the reductions in harvest.
- Biological benefits to the snowy grouper stock would be greatest under **Alternative 1 (No Action)** and **Alternative 3**, followed by **Alternative 2** and **Alternative 4**.

Summary of Economic Effects:

- In terms of potential short-term negative economic effects to the recreational sector, **Alternative 1 (No Action)** would have the highest potential negative economic effects since there is a payback provision, followed by **Alternative 4**, **Alternative 2**, and **Alternative 3**.

Summary of Social Effects:

- **Alternative 1 (No Action)** could result in in-season closures which would result in negative social effects. **Alternative 2** could result in foregone fishing opportunities if landings occur at a rate slower than projected
- **Alternative 3** and **4** both remove the total ACL and status trigger from the AM which result in the fishing year varying significantly from year to year, which could incur negative social effects
- **Alternative 3** would remove it and possibly cause negative social effects if the season were to close. **Alternative 4** would remove the in-season trigger, which would prevent negative social effects associated with an in-season closure whereas

Snapper Grouper AP Feedback (April 2022):

- The AP recommended, through a formal motion, adding an alternative that would retain the in-season AM and remove the stock status trigger from the post-season AM.

Committee Action:

- REVIEW SNAPPER GROUPE AP FEEDBACK
- REVIEW ALTERNATIVE LANGUAGE AND SELECT PREFERRED
- REVIEW SUMMARY EFFECTS SECTIONS

DRAFT MOTION: APPROVE AMENDMENT 51 FOR PUBLIC HEARINGS.

Appendices

A. Acceptable Biological Catch and Overfishing Limit

The SSC reviewed the snowy grouper stock assessment (SEDAR 36 Update 2020) at their January 2021 meeting. The SSC determined that the assessment addressed the terms of reference appropriately, was conducted using the BSIA, was adequate for determining stock status and supporting fishing level recommendations and addressed uncertainty consistent with expectations and available information. The SSC applied the ABC Control Rule and recommended an ABC and OFL for snowy grouper as total removals (including discards). These recommendations are expressed as landings in **Table 1. ABC/OFL recommendations in pounds whole weight are converted to pounds gutted weight using a 1.18 NMFS conversion factor. According to SEDAR 36 Update, 95.4% of total removals of snowy grouper are landings and 4.6% are dead discards.** Landings recommendations have been calculated to account for dead discards.

Table 1. South Atlantic Snowy grouper OFL and ABC recommendations (landings) in pounds gutted weight (lbs gw) and numbers of fish.

OFL RECOMMENDATIONS					
Year	Removals (lbs ww)	Removals (lbs gw)	Removals (numbers of fish)	Landings (lbs gw)	Landings (numbers of fish)
2023	194,000	164,407	21,000	156,844	20,034
2024	193,000	163,559	20,000	156,035	19,080
2025	192,000	162,712	20,000	155,227	19,080
2026	188,000	159,322	20,000	151,993	19,080
ABC RECOMMENDATIONS					
Year	Removals (lbs ww)	Removals (lbs gw)	Removals (numbers of fish)	Landings (lbs gw)	Landings (numbers of fish)
2023	148,000	125,424	16,000	119,954	15,624
2024	150,000	127,119	16,000	121,272	15,624
2025	152,000	128,814	16,000	122,889	15,624
2026	152,000	128,814	16,000	122,889	15,624

The current ABC and the total ACL for snowy grouper is 218,848 pounds (lbs) whole weight (ww) (185,464 lbs gw) (Regulatory Amendment 20, SAFMC 2015). Commercial and recreational sector ACLs are currently monitored using different units. The commercial sector ACL is monitored using gutted weight and the recreational sector ACL is monitored using numbers of fish. Few snowy grouper are observed in the recreational fishery and the low sample size can cause annual variation in the estimated average weight for snowy grouper. The Council will continue to track the recreational ACL in numbers of fish. The recreational ACL was converted to numbers of fish using projected annual average weights. Though the ABC in

numbers of fish is consistent throughout the projection timeframe, average weight as well as ABCs and ACLs measured by weight are expected to increase as the stock rebuilds.

B. Commercial ACL Analysis

Preliminary analyses are for the 2023 potential commercial annual catch limit (ACL) of 99,562 pounds (lbs) gutted weight (gw) with the current allocation (83% commercial and 17% recreational).

Commercial Trip Limits

The Southeast Fisheries Science Center (SEFSC) commercial logbook data (5/6/21) was used to examine trip limits in the South Atlantic snowy grouper commercial fishery. Currently, the fishery has a 200-lb gw trip limit that was implemented in August 2015. From 2016 through 2019, the commercial logbook had 3,249 trips recorded that harvested snowy grouper in the South Atlantic. Greater than 40% of the trips harvesting snowy grouper are estimated to have landed between 151 through 200 lbs gw (Figure A-1). Trips estimated to have harvested greater than 200 lbs gw were normalized to 200 lbs gw when estimating potential trip limit reductions. Estimated reductions from projected landings for potential trip limits are shown in Table A-1.

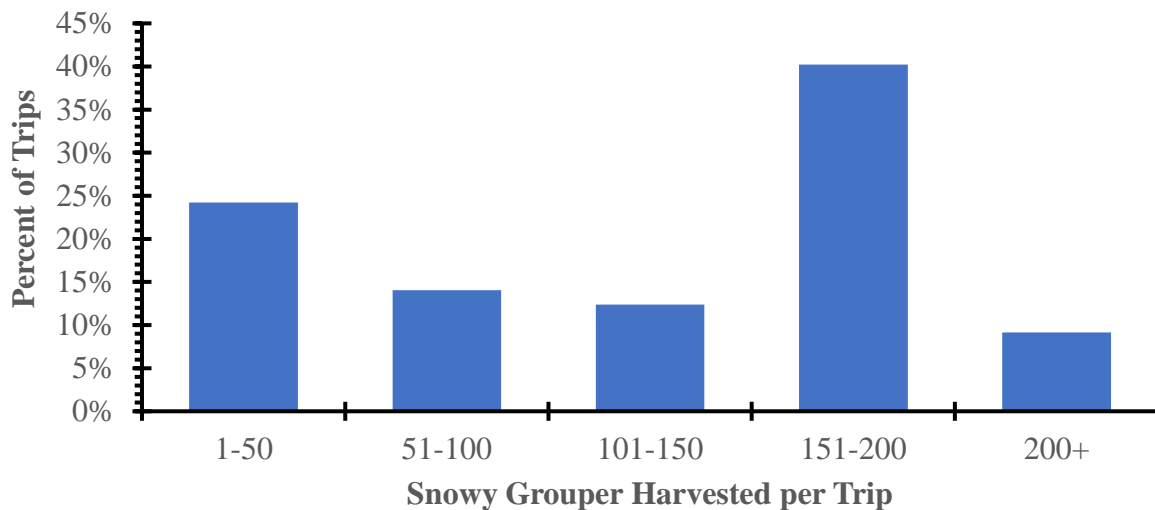


Figure A-1. The percent of commercial trips (n=3,249) harvesting snowy grouper by bin from 2016 through 2019. Source: SEFSC commercial logbook [May 6, 2021].

Table A-1. The predicted percent change in landings per trip from the current 200-lb gw trip limit.

Current Trip Limit (lbs gw)	Potential Trip Limit (lbs gw)	Predicted Change in Landings
200-lb	150-lb	-16%
200-lb	100-lb	-38%

Commercial Season Length

Landings for South Atlantic snowy grouper were obtained from the SEFSC commercial ACL file (4/5/21). Future landings were predicted by taking an average of the most recent three years of data for each month, as the most recent data are believed to be the best approximation of future harvest (Figure A-2). Due to fishery closures in recent years, it was necessary to go back to 2010 for some monthly landings later in the calendar year. All monthly landings prior to August 2015 (when the trip limit was increased from 100 to 200-lb gw) were adjusted using to account for the management change. For months with a closure that had the fishery open for the majority of the days, the landings were expanded using the ratio of total days in the month to those when the fishery was open. Season lengths were projected using daily catch rates with upper and lower 95% confidence intervals with the different trip limit options (Table A-2).

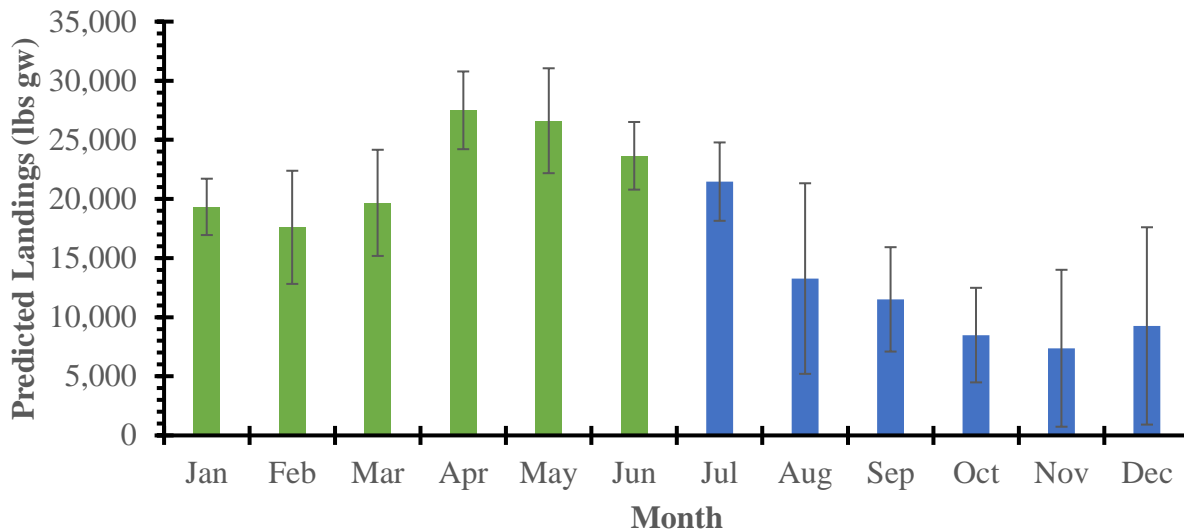


Figure A-2. The predicted monthly snowy grouper landings (lbs gw) based on current trip limits with 95% confidence interval. Source: SEFSC commercial ACL file [April 5, 2021].

Table A-2. The projected 2023 closure dates with an ACL of 99,562 lbs gw for snowy grouper by season with different trip limit options and 95% confidence interval (CI). Note that 70% of the ACL is allocated to the January through June season and 30% to the July through December season.

Season	ACL (lbs gw)	Trip Limit (gw)	Closure Date	Season Length (95% CI)
January 1 – June 30	69,693	200-lb	April 15	Apr 2 – May 1
January 1 – June 30	69,693	150-lb	April 29	Apr 15 – May 19
January 1 – June 30	69,693	100-lb	June 3	May 14 – No Closure
July 1 – December 31	29,869	200-lb	August 20	Aug 8 – Sep 28
July 1 – December 31	29,869	150-lb	September 2	Aug 16 – Nov 21
July 1 – December 31	29,869	100-lb	October 8	Sep 5 – No Closure

Commercial Season Closure Analysis for the Snowy Grouper Fishery
 Alisha Gray; November 12, 2021
 LAPP/DM Branch
 Southeast Regional Office

The South Atlantic Fishery Management Council (SAFMC) manages snowy grouper in South Atlantic federal waters under the Snapper Grouper Fishery Management Plan (Snapper Grouper FMP). Amendment 51 to the Snapper Grouper FMP proposes to adjust catch levels (annual catch limits), and revise sector allocations. This analysis investigates when the commercial sector will be expected to close under the proposed ACL and sector allocation changes using observed landings in pounds (lb) gutted weight (ww) between 2015 and 2019.

Table A-4. The projected closure dates with each ACL option for snowy grouper by season with different trip limit options and 95% confidence interval (CI). Note that 70% of the ACL is allocated to the January through June season and 30% to the July through December season.

Option 1: 83% ACL= 99,562 lbs gw				
Season	ACL (lbs gw)	Trip Limit (lbs gw)	Closure Date	Season Length (95% CI)
January 1 – June 30	69,693	200	April 15	Apr 2 – May 1
January 1 – June 30	69,693	150	April 29	Apr 15 – May 20
January 1 – June 30	69,693	100	June 3	May 14 – No Closure
July 1 – December 31	29,869	200	August 20	Aug 8 – Sep 29
July 1 – December 31	29,869	150	September 3	Aug 16 – Dec 2
July 1 – December 31	29,869	100	October 8	Sep 4 – No Closure
Option 2: 87.55% ACL= 109,038 lbs gw				
Season	ACL (lbs gw)	Trip Limit (lbs gw)	Closure Date	Season Length (95% CI)
January 1 – June 30	76,327	200	April 22	Apr 8 – May 11
January 1 – June 30	76,327	150	May 8	Apr 23 – May 31
January 1 – June 30	76,327	100	June 16	May 25 – No Closure
July 1 – December 31	32,711	200	August 27	Aug 12 – Oct 17
July 1 – December 31	32,711	150	September 11	Aug 21 – No Closure
July 1 – December 31	32,711	100	October 24	Sep 13 – No Closure
Option 3: 73.36% ACL= 88,046 lbs gw				
Season	ACL (lbs gw)	Trip Limit (lbs gw)	Closure Date	Season Length (95% CI)
January 1 – June 30	61,632	200	April 6	Mar 23 – Apr 21
January 1 – June 30	61,632	150	April 19	Apr 5 – May 6
January 1 – June 30	61,632	100	May 18	May 1 – Jun 12
July 1 – December 31	26,414	200	August 12	Aug 3 – Sep 14
July 1 – December 31	26,414	150	August 24	Aug 10 – Oct 8
July 1 – December 31	26,414	100	September 21	Aug 26 – No Closure

The reliability of these results is dependent upon the accuracy of the underlying data and input assumptions. We have attempted to create a realistic baseline as a foundation for comparisons, under the assumption that projected future landings will accurately reflect actual future landings. These closure dates are our best estimate, but uncertainty still exists as economic conditions, weather events, changes in catch-per-unit effort, fisher response to management regulations, and a variety of other factors may cause departures from any assumption.

C. Recreational ACL Analysis

Landings data match landings data included in SEDAR 36 Update working paper 2020–S36Update–WP01 and were similar to the FES monitoring file (MRIP_FES_rec81_21wv1_11May21w2014_2020LACreel).

Data

Marine Recreational Information Program (MRIP) samples included trips that landed from North Carolina through the Florida Keys as reported in SEDAR 36 Update. The raw intercept data files were downloaded from the MRIP webpage and included trips for sub-region 6 (South Atlantic) plus Monroe County (State =Florida and County = Monroe). Data available included trips back to 1981. Headboat from the Southeast Region Headboat Survey (SRHS) are available to 1974 and were provided by the survey staff. MRIP landings data match landings data included in SEDAR 36 Update working paper 2020–S36Update–WP01 (Matter and Nuttall 2020) and total recreational landings were similar (within 20 fish each year) to the FES monitoring file (MRIP_FES_rec81_21wv1_11May21w2014_2020LACreel).

The IPT suggested the recreational seasonal analysis should include data from 2015 to 2019. This time period matches a regulation change in the fishery when the ACL increased from 521 fish and season was shortened to May through August. Data going back to 2010 were reviewed to see if dramatic shifts occurred in the seasonality of the catch due to the recreational season established in 2015.

The analysis included trips for Monroe County, FL where regulations differ between South Atlantic and Gulf of Mexico. Some of these trips may have been conducted in the Gulf of Mexico waters, where snowy grouper is included in a 4 grouper aggregate per person. The bag limit for the South Atlantic is one per vessel. It appears the trips were included in the assessment based on comparison of the data set used for this analysis and Table 1 from the SEDAR 36 Update Assessment working paper on recreational data (Matter and Nuttall 2020). Therefore, these trips were included in the seasonal analysis even though changes to SAFMC regulations would not change the landings of Snowy Grouper on the trips.

Review of Recreational Data Available for Snowy Grouper

Data on recreational trips were limited for Snowy Grouper. On average, 16 MRIP (private and charter boat combined) trips per year (min = 11 and max = 21) were sampled with Snowy Grouper landings and 18 headboat trips (min=8 and max = 33) reported landings of Snowy Grouper from 2015 to 2019. Due to the low sample size and high variability (relative) in landings, any seasonal analysis will have a high degree of uncertainty.

Analysis

Recreational data from private recreational vessel, charter boats, and headboats were summed up by wave and year from 2015 to 2019. Mean landings were calculated by wave. Confidence intervals were calculated as mean +/- 1.96 *standard deviation. A minimum value of 0 was used for confidence interval estimates that were less than zero.

Results

The annual recreational landings of Snowy Grouper have been less than 10,000 fish every year from 2010 to 2019 except 2012 when landings were over 60,000 fish. Charter and private recreational trips (estimated through MRIP) averaged 89% of the total recreational landings over the ten-year timeframe. Snowy Grouper were only observed through MRIP from trips that landed in North Carolina and Florida and most observations by SRHS occurred in North Carolina and Florida from 2010 to 2019. Snowy Grouper have not been observed through MRIP from trips the landed in Georgia since 1993 and South Carolina since 1982.

Recreational landings of Snowy Grouper from 2010 to 2019 tended to be highest in May - June wave or July - August wave (Figure A-5, 2011 included a deepwater closure for part of the year). There were rarely landings from November through February. Prior to the establishment of the recreational season for Snowy Grouper (2015), landings were most common in May through August but were reported in the March – April wave and September – October wave. From 2015 to 2019, the average landings were highest during the Snowy Grouper recreational fishing season May through August (Figure A-6, Table A-5). Landings were reported in January through April and most of these landings (55%) occurred in 2015, prior to the season being enacted.

There are extremely large confidence intervals based on the standard deviations. This indicates there will be significant uncertainty in estimating any impact from changing the recreational season. The confidence interval for all waves except wave 4 (July – August) are set to a minimum of zero to avoid negative numbers (Table A-5).

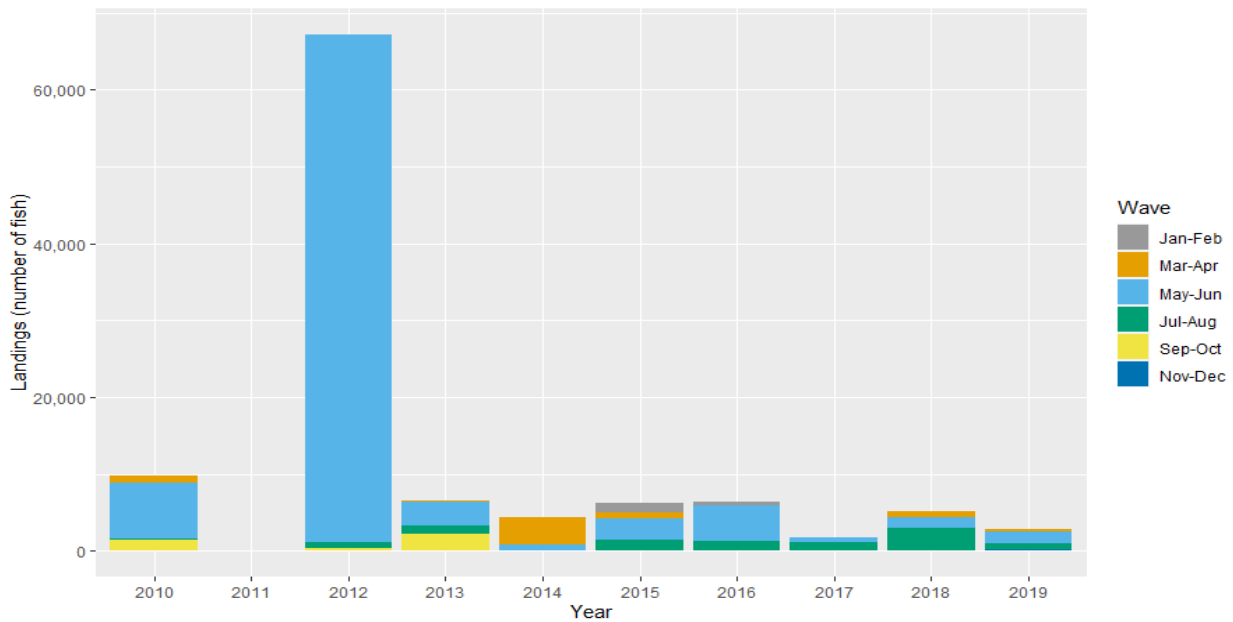


Figure A-5. Recreational landings of Snowy Grouper (number of fish) by year and wave from 2010 to 2019 for the South Atlantic region. Landings include trips reported from Key West, FL up to the Virginia and North Carolina border.

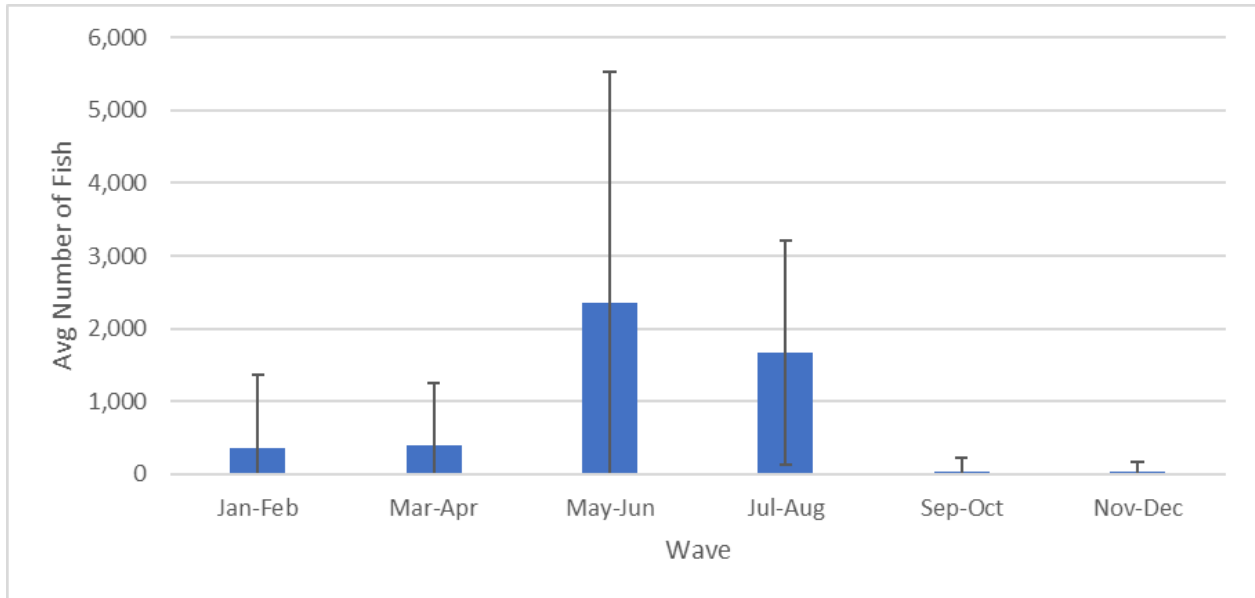


Figure A-6. Average number of Snowy Grouper landed in recreational sector by wave from the South Atlantic from 2015 to 2019. The landings included trips reported from Monroe County, FL. Blue bars represent the average landings and lines represent the 95% confidence interval.

Table A-5. Average number of Snowy Grouper landed by the recreational sector by wave from the South Atlantic from 2015 to 2019. The landings included trips reported from Monroe County, FL. The confidence interval was developed based on the standard deviation of the five years.

Wave	Average	Confidence Interval	Avg Number Per Month
Jan-Feb	351	0 - 1,372	175.5
Mar-Apr	395	0 - 1,256	197.5
May-Jun	2,354	0 - 5,520	1,177.0
Jul-Aug	1,674	138 - 3,210	837.0
Sep-Oct	45	0 - 230	22.5
Nov-Dec	30	0 - 163	15.0

D. Management History

Table A-6. The previous management measures and catch levels for South Atlantic snowy grouper.

Management Measures	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
ABC (lbs gw)	87,254	87,254	87,254	139,098	151,518	163,109	173,873	185,464	185,464	185,464	185,464
Total ACL (lbs gw)	87,254	87,254	87,254	139,098	151,518	163,109	173,873	185,464	185,464	185,464	185,464
Total Landings (lbs gw)										TBD	TBD
Total ACL Overage/Underage				134%	149%	92%	101%	94%	91%	TBD	TBD
Com. ACL (lbs gw)	82,900	82,900	82,900	115,451	125,760	135,380	144,315	153,935	153,935 (107,754/4 6,181)	153,935 (107,754/4 6,181)	TBD
Com. Landings (lbs gw)	89,148	79,829	94,031	130,088	149,385	135,825	146,874	151,889	154,753	(91,092/TB D)	TBD
Com. Overage/Underage (%)	107.5%	96.3%	113.4%	112.7%	118.8%	100.3%	101.8%	105.2%	100.5%	TBD	TBD
Rec. ACL (lbs gw)				23,647	25,758	27,729	29,558	31,529	31,529	31,529	31,529
Rec. ACL (numbers of fish)	523	523	523	4,152	4,483	4,819	4,983	4,983	4,983	5,315	5,315
Rec. Landings, "Old" MRIP (numbers of fish)	2,065	2,048	1,214	1,621	9,746	1,834	2,766	1,946	1,309	770	TBD
Rec. Overage/Underage	395%	392%	232%	39%	217%	38%	56%	39%	26%	14%	TBD
Rec. Bag Limit	1/person/day	1/person/day	1/person/day	1/vessel/day	1/vessel/day	1/vessel/day	1/vessel/day	1/vessel/day	1/vessel/day	1/vessel/day	TBD
Rec. Season	calendar year	calendar year	calendar year	May - Aug	May - Aug	May - Aug	May - Aug	May - Aug	May - Aug	May - Aug	TBD
Rec Allocation	5%	5%	5%	17%	17%	17%	17%	17%	17%	17%	TBD
Com. Trip Limit (lbs gw)	100	100	100	200	200	200	200	200	200	200	TBD
Com. Season	calendar year	calendar year	calendar year	calendar year	calendar year	calendar year	calendar year	calendar year	calendar year	calendar year (season 1/season 2)	TBD
Com. Allocations	95%	95%	95%	83%	83%	83%	83%	83%	83%	83%	TBD

E. CFR Recreational Accountability Measures

If recreational landings for snowy grouper, as estimated by the SRD, reach or are projected to reach the recreational ACL, the AA will file a notification with the Office of the Federal Register to close the recreational sector for the remainder of the fishing year regardless if the stock is overfished, unless NMFS determines that no closure is necessary based on the best scientific information available. On and after the effective date of such notification, the bag and possession limits for snowy grouper in or from the South Atlantic EEZ are zero.

If recreational landings for snowy grouper, as estimated by the SRD, exceed the recreational ACL, then during the following fishing year recreational landings will be monitored for a persistence in increased landings, and if necessary, the AA will file a notification with the Office of the Federal Register to reduce the length of the recreational fishing season and the recreational ACL by the amount of the recreational ACL overage, if snowy grouper are overfished based on the most recent Status of U.S. Fisheries Report to Congress, and if the combined commercial and recreational ACL specified in § 622.193(b)(1)(iii) is exceeded during the same fishing year. NMFS will use the best scientific information available to determine if reducing the length of the recreational fishing season and recreational ACL is necessary. When the recreational sector is closed as a result of NMFS reducing the length of the recreational fishing season and ACL, the bag and possession limits for snowy grouper in or from the South Atlantic EEZ are zero.

F. Co-Catch Analysis

South Atlantic snowy grouper catch analysis for the recreational sector
 Mike Larkin

Amendment 51 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic region (Amendment 51) is in the process of modifying regulations for South Atlantic snowy grouper. The South Atlantic Fishery Management Council members asked for an analysis of the species harvested and released with snowy grouper in the recreational sector in the South Atlantic. Snowy grouper recreational harvest and release information is collected in the South Atlantic region from two different recreational surveys: Marine Recreational Information Program (MRIP) and the Southeast Region Headboat Survey (Headboat). South Atlantic snowy grouper MRIP discard and harvest data from 2015 through 2019 was downloaded from the NOAA fisheries recreational landings website (fisheries.noaa.gov) in January of 2021. South Atlantic Headboat discard and harvest data was provided from the Southeast Fisheries Science Center in July of 2020.

The MRIP data resulted in 57 trips that either discarded or harvested snowy grouper. The species that were caught on these snowy grouper trips were isolated from looking at species caught on the same trip. Individual MRIP trips were defined by having the same trip identification code which is the MRIP variable called “ID_CODE”. The top ten species caught (discard and harvest) with snowy grouper on MRIP trips are show in Table 1. Ten of the 57 trips had snowy grouper that were discarded. The species caught on trips that discarded a snowy grouper are shown in Table 2. There were 47 MRIP trips that harvested snowy grouper and they are shown in Table 3.

Table A-7. Top ten species caught on trips that caught snowy grouper in the South Atlantic region from 2015 to 2019. This data came from MRIP which had 57 trips that caught snowy grouper. This includes both discard and harvest snowy grouper trips.

Species	Number of Trips
Dolphin	26
Blueline Tilefish	19
Black Sea Bass	10
Greater Amberjack	10
Blackfin Tuna	7
Gray Triggerfish	7
Almaco Jack	6
Wahoo	6
Yellowedge Grouper	6
Blackbelly Rosefish	5

Table A-8. Top five species caught on trips that discarded snowy grouper in the South Atlantic region from 2015 to 2019. This data came from MRIP which had 10 trips that discarded snowy grouper.

Species	Number of Trips
---------	-----------------

Yellowedge Grouper	1
Red Snapper	1
Black Sea Bass	1
Unidentified Shark	1
Bluefish	1

Table A-9. Top ten species caught on trips that harvested snowy grouper in the South Atlantic region from 2015 to 2019. This data came from MRIP which had 47 trips that released snowy grouper.

Species	Number of Trips
Dolphin	26
Blueline Tilefish	19
Black Sea Bass	10
Greater Amberjack	9
Blackfin Tuna	7
Gray Triggerfish	7
Almaco Jack	6
Wahoo	6
Yellowedge Grouper	5
Blackbelly Rosefish	5

The Headboat data were explored and resulted in 79 trips that either discarded and/or harvested snowy grouper. The species that were caught on these snowy grouper trips were isolated from looking at species caught on the same trip. Individual Headboat trips were defined by having the same trip identification code which is the Headboat variable called “COLLECTION”. The top ten species caught (discard and harvest) with snowy grouper on these Headboat trips are shown in Table 4. Of the 79 trips there was only 1 trip where snowy grouper were discarded and this same trip also had a harvest of snowy grouper. The species caught on this one Headboat trip with a snowy grouper discard were vermilion snapper, king mackerel, and almaco jacks. All of the Headboat trips that caught snowy grouper also harvested snowy grouper, so the list of species caught with harvested snowy grouper are shown in Table 4.

Table A-10. Top ten species caught on trips that caught snowy grouper in the South Atlantic region from 2015 to 2019. This data came from Headboat which had 79 trips that caught snowy grouper. This includes both discard and harvest snowy grouper trips.

Species	Number of Trips
Blueline Tilefish	56
Almaco Jack	51
Mutton Snapper	43
Blackfin Tuna	43
Blackfin Snapper	40
Scamp	40
Queen Snapper	40

Red Grouper	37
Black Grouper	35
Dolphin	35

G. Recreational Season Closure Analysis

LAPP/DM Branch
NOAA Fisheries Service
Southeast Regional Office
May 2022

The South Atlantic Fishery Management Council (SAFMC) manages snowy grouper in South Atlantic federal waters under the Snapper Grouper Fishery Management Plan (Snapper Grouper FMP). Amendment 51 to the Snapper Grouper FMP proposes to adjust annual catch limits (ACLs), revise sector allocations, and modify the recreational season. This analysis projects how long the recreational season will be for each of the season alternatives in Action 5 while incorporating the preferred alternatives in Action 1 (Alternative 2: ACL=ABC) and Action 2 (Alternative 1, No Action: 17% recreational and 83% commercial sector allocation). The recreational season will be expected to close under the proposed ACL, season, and sector allocation changes using observed landings in numbers of fish between 2017 and 2019.

Recreational

Recreational landings were obtained from the Southeast Fisheries Science Center (SEFSC) recreational ACL file (3/17/22; **Figure 1**). This dataset includes landings from the Texas Parks and Wildlife recreational creel survey (TPWD), Louisiana Department of Wildlife and Fisheries creel survey (LA Creel), Southeast Region Headboat Survey (SRHS) and Marine Recreational Information Program (MRIP). Monthly predicted landings are required to explore how the proposed ACLs and season options will impact the fishing season length. TPWD and SRHS data provide monthly landings estimates whereas MRIP and LACreel data are provided in two month waves (e.g., January and February = wave 1, March and April = wave 2, etc.). Monthly landings in January through April and September 1 through December 31 were minimal due to the seasonal closure that runs during those months. To estimate monthly landings, MRIP waves were used to estimate to monthly landings by assuming equal daily catch rates for months within a wave, and then SRHS landings were added back in. Future landings were predicted by taking an average of 2017 through 2019 landings for each month (**Table 1**). Because snowy grouper landings are quite variable, future landings were also predicted by taking an average of 2015 through 2019 landings for each month for comparison. To estimate future landings in September through November, which have historically been months closed to fishing, a range was provided using the average monthly landings in Wave 3 and Wave 4, since those were observed landings. More recent years (e.g., 2020 and 2021) were not used in predicting future landings due to a decrease in landings seen those years in response to the pandemic. These data were post-stratified to include Monroe County landings in South Atlantic landings. Based on the cumulatively summed projected recreational landings of snowy grouper, the recreational sector will be expected to be open between 61 and 98 days (**Table 2-4**), with variability found depending on which sector allocation option is selected in Action 2.

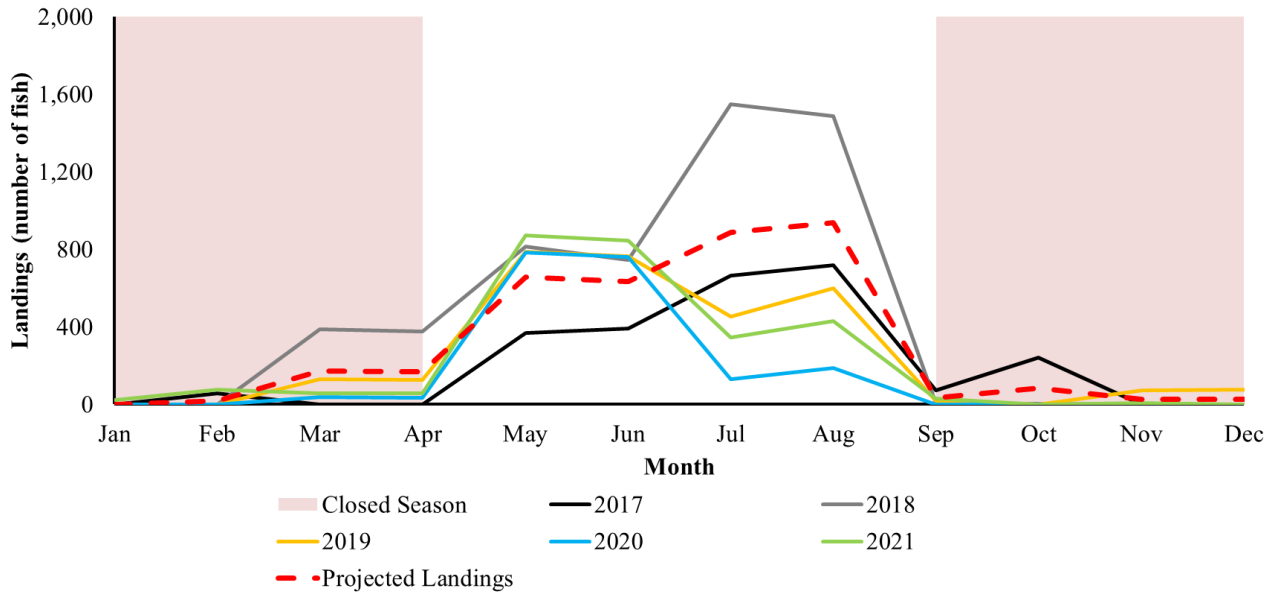


Figure 1. South Atlantic snowy grouper recreational landings by month from 2017-2019 and projected landings. All of the landing projections assume no landings between January 1 - April 30 and September 1 – December 31 for the season closure. Source: SEFSC MRIP FES Recreational ACL Database [March 17, 2022].

Table 1. Average number of snowy grouper landed by the recreational sector by wave from the South Atlantic based on a three-year average (2017 to 2019) and a five-year average (2015 to 2019). Landings include trips reported from Monroe County, FL. The confidence interval was developed based on the standard deviation of the three years.

Three-year Average (2017-2019)			
Wave	Average	Confidence Interval	Average Number Per Month
Jan-Feb	20	0 - 598	10
Mar-Apr	342	0 - 806	11
May-Jun	1,290	0 - 3,120	645
Jul-Aug	1,824	938 - 2,710	912
Sep-Oct	116	0 - 270	58
Nov-Dec	0	0 - 126	0
Five-year Average (2015-2019)			
Wave	Average	Confidence Interval	Average Number Per Month
Jan-Feb	351	0 – 1,372	176
Mar-Apr	395	0 – 1,256	198
May-Jun	2,354	0 – 5,520	1,177
Jul-Aug	1,674	138 – 3,210	837
Sep-Oct	45	0 - 230	23
Nov-Dec	30	0 - 163	15

Table 2. The projected South Atlantic snowy grouper recreational landings (number of fish) and closure dates expected for each Alternative of Action 5 using a three-year (2017-2019) and five-year (2015-2019) average. The recreational ACL options considered here assume current sector allocations of 17% recreational and 83% commercial (Alternative 1 of Action 2). Source: SEFSC MRIP FES Recreational ACL Database [March 17, 2022].

Alternative 1 (No Action): May 1 – August 31					
Year	Recreational ACL (numbers of fish)*	3-Year Average Closure Date	3-Year Average Days Open	5-Year Average Closure Date	5-Year Average Days Open
2023	2,284	August 4	95	June 29	59
2024	2,309	August 5	96	June 29	59
2025	2,339	August 6	97	June 30	60
2026	2,339	August 6	97	June 30	60
Alternative 2: Wave 3 Option (May 1 – June 31)					
Year	Recreational ACL (numbers of fish)*	3-Year Average Closure Date	3-Year Average Days Open	5-Year Average Closure Date	5-Year Average Days Open
2023	2,284	No Closure (1,290 fish)	60	June 29	59
2024	2,309	No Closure (1,290 fish)	60	June 29	59
2025	2,339	No Closure (1,290 fish)	60	June 30	60
2026	2,339	No Closure (1,290 fish)	60	June 30	60
Alternative 3: Wave 4 Option (July 1 – Aug 31)					
Year	Recreational ACL (numbers of fish)*	3-Year Average Closure Date	3-Year Average Days Open	5-Year Average Closure Date	5-Year Average Days Open
2023	2,284	No Closure (1,824 fish)	61	No Closure (1,674 fish)	61
2024	2,309	No Closure (1,824 fish)	61	No Closure (1,674 fish)	61
2025	2,339	No Closure (1,824 fish)	61	No Closure (1,674 fish)	61
2026	2,339	No Closure (1,824 fish)	61	No Closure (1,674 fish)	61
Overall Season Length Analysis: Wave 3 Option (May 1 – Dec 31)					
Year	Recreational ACL (numbers of fish)*	3-Year Average Closure Date	3-Year Average Days Open	5-Year Average Closure Date	5-Year Average Days Open
2023	2,284	August 4	95	June 29	59
2024	2,309	August 5	96	June 29	59
2025	2,339	August 6	97	June 30	60
2026	2,339	August 6	97	June 30	60
Overall Season Length Analysis: Wave 4 Option (July 1 – Dec 31)					
Year	Recreational ACL (numbers of fish)*	3-Year Average Closure Date	3-Year Average Days Open	5-Year Average Closure Date	5-Year Average Days Open
2023	2,284	Sept 16 - Sept 22	77 – 83	Sept 16 - Sept 22	77 – 83
2024	2,309	Sept 16 - Sept 23	77 – 84	Sept 17 - Sept 23	78 – 84
2025	2,339	Sept 17 - Sept 24	78 – 85	Sept 17 - Sept 24	78 – 85
2026	2,339	Sept 17 - Sept 24	78 – 85	Sept 17 - Sept 24	78 – 85

Note: All alternatives to Action 5 assume the proposed ACLs set equal to the ABC (Preferred Alternative 2 of Action 1). All ACLs and projected landings are in numbers of fish.

*The recreational ACLs presented are inclusive of recreational landings tracked using the MRIP Fishing Effort Survey.

Table 3. The projected South Atlantic snowy grouper recreational landings (number of fish) and closure dates expected for each Alternative of Action 5 using a three-year (2017-2019) and five-year (2015-2019) average. The recreational ACL options considered here assume current sector allocations of 12.45% recreational and 87.55% commercial (Alternative 2 of Action 2). Source: SEFSC MRIP FES Recreational ACL Database [March 17, 2022].

Alternative 1 (No Action): May 1 – August 31					
Year	Recreational ACL (numbers of fish)*	3-Year Average Closure Date	3-Year Average Days Open	5-Year Average Closure Date	5-Year Average Days Open
2023	1,679	July 14	74	June 13	43
2024	1,698	July 15	75	June 14	44
2025	1,720	July 15	75	June 14	44
2026	1,720	July 15	75	June 14	44
Alternative 2: Wave 3 Option (May 1 – June 31)					
Year	Recreational ACL (numbers of fish)*	3-Year Average Closure Date	3-Year Average Days Open	5-Year Average Closure Date	5-Year Average Days Open
2023	1,679	No Closure (1,290 fish)	61	June 13	43
2024	1,698	No Closure (1,290 fish)	61	June 14	44
2025	1,720	No Closure (1,290 fish)	61	June 14	44
2026	1,720	No Closure (1,290 fish)	61	June 14	44
Alternative 3: Wave 4 Option (July 1 – Aug 31)					
Year	Recreational ACL (numbers of fish)*	3-Year Average Closure Date	3-Year Average Days Open	5-Year Average Closure Date	5-Year Average Days Open
2023	1,679	Aug 27	57	No Closure (1,674 fish)	61
2024	1,698	Aug 27	57	No Closure (1,674 fish)	61
2025	1,720	Aug 28	58	No Closure (1,674 fish)	61
2026	1,720	Aug 28	58	No Closure (1,674 fish)	61
Overall Season Length Analysis: Wave 3 Option (May 1 – Dec 31)					
Year	Recreational ACL (numbers of fish)*	3-Year Average Closure Date	3-Year Average Days Open	5-Year Average Closure Date	5-Year Average Days Open
2023	1,679	July 14	74	June 13	43
2024	1,698	July 15	75	June 14	44
2025	1,720	July 15	75	June 14	44
2026	1,720	July 15	75	June 14	44
Overall Season Length Analysis: Wave 4 Option (July 1 – Dec 31)					
Year	Recreational ACL (numbers of fish)*	3-Year Average Closure Date	3-Year Average Days Open	5-Year Average Closure Date	5-Year Average Days Open

2023	1,679	Aug 27	57	Sept 1	62
2024	1,698	Aug 27	57	Sept 1	62
2025	1,720	Aug 28	58	Sept 2	63
2026	1,720	Aug 28	58	Sept 2	63

Note: All alternatives to Action 5 assume the proposed ACLs set equal to the ABC (Preferred Alternative 2 of Action 1). All ACLs and projected landings are in numbers of fish.

*The recreational ACLs presented are inclusive of recreational landings tracked using the MRIP Fishing Effort Survey.

Table 4. The projected South Atlantic snowy grouper recreational landings (number of fish) and closure dates expected for each Alternative of Action 5 using a three-year (2017-2019) and five-year (2015-2019) average. The recreational ACL options considered here assume current sector allocations of 26.64% recreational and 73.36% commercial (Alternative 3 of Action 2). Source: SEFSC MRIP FES Recreational ACL Database [March 17, 2022].

Alternative 1 (No Action): May 1 – August 31					
Year	Recreational ACL (numbers of fish)*	3-Year Average Closure Date	3-Year Average Days Open	5-Year Average Closure Date	5-Year Average Days Open
2023	3,573	No Closure (3,115 fish)	122	Aug 15	106
2024	3,612	No Closure (3,115 fish)	122	Aug 16	107
2025	3,661	No Closure (3,115 fish)	122	Aug 18	109
2026	3,661	No Closure (3,115 fish)	122	Aug 18	109
Alternative 2: Wave 3 Option (May 1 – June 31)					
Year	Recreational ACL (numbers of fish)*	3-Year Average Closure Date	3-Year Average Days Open	5-Year Average Closure Date	5-Year Average Days Open
2023	3,573	No Closure (1,290 fish)	61	No Closure (1,674 fish)	61
2024	3,612	No Closure (1,290 fish)	61	No Closure (1,674 fish)	61
2025	3,661	No Closure (1,290 fish)	61	No Closure (1,674 fish)	61
2026	3,661	No Closure (1,290 fish)	61	No Closure (1,674 fish)	61
Alternative 3: Wave 4 Option (July 1 – Aug 31)					
Year	Recreational ACL (numbers of fish)*	3-Year Average Closure Date	3-Year Average Days Open	5-Year Average Closure Date	5-Year Average Days Open
2023	3,573	No Closure (1,824 fish)	62	No Closure (1,674 fish)	61
2024	3,612	No Closure (1,824 fish)	62	No Closure (1,674 fish)	61
2025	3,661	No Closure (1,824 fish)	62	No Closure (1,674 fish)	61
2026	3,661	No Closure (1,824 fish)	62	No Closure (1,674 fish)	61
Overall Season Length Analysis: Wave 3 Option (May 1 – Dec 31)					

Year	Recreational ACL (numbers of fish)*	3-Year Average Closure Date	3-Year Average Days Open	5-Year Average Closure Date	5-Year Average Days Open
2023	3,573	Sept 16 – Sept 22	138 - 144	Aug 15	106
2024	3,612	Sept 17 – Sept 24	138 - 144	Aug 16	107
2025	3,661	Sept 18 – Sept 26	138 - 144	Aug 18	109
2026	3,661	Sept 18 – Sept 26	138 - 144	Aug 18	109
Overall Season Length Analysis: Wave 4 Option (July 1 – Dec 31)					
Year	Recreational ACL (numbers of fish)*	3-Year Average Closure Date	3-Year Average Days Open	5-Year Average Closure Date	5-Year Average Days Open
2023	3,573	Oct 29 – Nov 22	181 – 205	Oct 19 - Nov 9	171 – 192
2024	3,612	Oct 30 – Nov 24	182 – 207	Oct 21 – Nov 10	173 – 193
2025	3,661	Nov 1 – Nov 26	184 – 209	Oct 22 – Nov 12	174 – 195
2026	3,661	Nov 1 – Nov 26	184 – 209	Oct 22 – Nov 12	174 – 195

Note: All alternatives to Action 5 assume the proposed ACLs set equal to the ABC (Preferred Alternative 2 of Action 1). All ACLs and projected landings are in numbers of fish.

*The recreational ACLs presented are inclusive of recreational landings tracked using the MRIP Fishing Effort Survey.

The reliability of these results is dependent upon the accuracy of the underlying data and input assumptions. We have attempted to create a realistic baseline as a foundation for comparisons, under the assumption that projected future landings will accurately reflect actual future landings. These closure dates are our best estimate, but uncertainty still exists as economic conditions, weather events, changes in catch-per-unit effort, fisher response to management regulations, and a variety of other factors may cause departures from any assumption.

Literature Cited

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