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Modifications to Mutton Snapper and Yellowtail Snapper Management Measures



Draft Amendment 55
to the Fishery Management Plan for the
Reef Fish Resources of the Gulf
and
Draft Amendment 44
to the Fishery Management Plan for the
Snapper Grouper Fishery of the South Atlantic Region

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ABBREVIATIONS USED IN THIS DOCUMENT

ABC	acceptable biological catch
ACL	annual catch limit
ACT	annual catch target
AM	accountability measures
APAIS	Access Point Angler Intercept Survey
BMSY	stock biomass level capable of producing an equilibrium yield of MSY
CHTS	Coastal Household Telephone Survey
Council	Gulf Council
Councils	Gulf and South Atlantic Fishery Management Councils
EA	Environmental Assessment
EIS	economic impact statement
FES	Fishing Effort Survey
FMP	Fishery Management Plan
GMFMC	Gulf of Mexico Fishery Management Council
GRFS	Gulf Reef Fish Survey
Gulf	Gulf of America (Formerly Gulf of Mexico)
IRFA	initial regulatory flexibility analysis
MFMT	maximum fishing mortality threshold
MRFSS	Marine Recreational Fishery Statistics Survey
MRIP	Marine Recreational Information Program
MSST	minimum stock size threshold
MSY	maximum sustainable yield
Magnuson-Stevens Act	Magnuson-Stevens Fishery Conservation and Management Act
NMFS	National Marine Fisheries Service
OFL	overfishing limit
OST	Office of Science and Technology
OY	optimum yield
RFA	Regulatory Flexibility Analysis
RIR	Regulatory Impact Review
Reef Fish FMP	Fishery Management Plan for the Reef Fish Resources in the Gulf
SDC	status determination criteria
SEDAR	Southeast Data, Assessment, and Review
SEFSC	Southeast Fisheries Science Center
SEIS	Supplemental Environmental Impact Statement
SERO	Southeast Regional Office
SPR	spawning potential ratio
SRFS	Florida State Reef Fish Survey
SRHS	Southeast Region Headboat Survey
SSB	spawning stock biomass

SSC	Scientific and Statistical Committee
South Atlantic Council	South Atlantic Fishery Management Council
TL	total length
USCG	United States Coast Guard
mp	million lb
ww	whole weight

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FISHERY IMPACT STATEMENT

The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) requires that a fishery impact statement (FIS) be prepared for all amendments to fishery management plans. The FIS contains: 1) an assessment of the likely biological, economic, and social effects of the conservation and management measures on fishery participants and their communities; 2) an assessment of any effects on participants in the fisheries conducted in adjacent areas under the authority of another Fishery Management Council; and 3) the safety of human life at sea. Detailed discussion of the expected effects for all proposed changes is provided in Chapter 4. The FIS provides a summary of these effects.

The Southeast Data, Assessment, and Review (SEDAR) stock assessments for southeastern U.S. mutton snapper (SEDAR 79) and yellowtail snapper (SEDAR 95) were completed using updated data through 2023, inclusive of updated recreational landings data. The Scientific and Statistical Committees (SSCs) of the Gulf Fishery Management Council (Gulf Council) and South Atlantic Fishery Management Council (South Atlantic Council; collectively, the Councils) concluded that both stock assessments were consistent with the best scientific information available (BSIA). The SSCs also provided overfishing limit (OFL) and acceptable biological catch (ABC) recommendations to the Councils for both species. The revised catch limits, jurisdictional apportionment, and sector allocations specified in Amendment 55 to the Fishery Management Plan for the Reef Fish Resources of the Gulf (Reef Fish FMP) and Amendment 44 to the Fishery Management Plan for the Snapper Grouper Resources of the South Atlantic (Snapper Grouper FMP) are expected to prevent overfishing and allow for sustainable harvest of southeastern U.S. mutton snapper and yellowtail snapper.

Amendment 55/44 considers four actions. Action 1 contains alternatives that would modify the southeastern U.S. mutton snapper jurisdictional apportionment and resulting catch limits between the Councils. **Preferred Option 3b** of **Preferred Alternative 3** would modify the OFL and ABC and the jurisdictional apportionment of the mutton snapper ABC and the regional annual catch limits (ACLs) using 50% of the average landings from 2014 – 2023 and 50% of the average landings from 2021 – 2023. This method apportions 15% of the stock ABC to the Gulf Council, and 85% to the South Atlantic Council, based on the recommendations of the Councils' SSCs for 2027 – 2028 and subsequent years. Each region's ACL would be set equal to its apportionment of the stock ABC. Monitoring of landings for mutton snapper would be inclusive of the Florida's State Reef Fish Survey (SRFS) for recreational private vessel landings, the federal Marine Recreational Information Program (MRIP) for federal for-hire and recreational shore landings, and the federal Southeast Region Headboat Survey (SRHS) for headboat landings. Recreational private vessel landings will also be inclusive of Louisiana and Mississippi Creel surveys, and the Texas Parks and Wildlife Department's Coastal Creel Survey; however, these surveys rarely observe mutton snapper and were not included in the estimation of recreational landings in SEDAR 79. Based on the catch limits represented by the Councils' choice in preferred alternative for Action 1, no change in how the fishery is prosecuted is expected.

Action 2 contains alternatives that would modify the southeastern U.S. yellowtail snapper jurisdictional apportionment and resulting catch limits between the Councils. **Preferred Alternative 4** would modify the OFL and ABC and the jurisdictional apportionment of the yellowtail snapper ABC and the regional ACLs using 50% of the average landings from 2014 – 2023 and 50% of the average landings from 2021 – 2023. This method apportions 17% of the stock ABC to the Gulf Council, and 83% to the South Atlantic Council, based on the recommendations of the Councils' SSCs for 2026 – 2028 and subsequent years. Each region's ACL would be set equal to its apportionment of the stock ABC. Monitoring of landings for yellowtail snapper would be inclusive of SRFS for recreational private vessel landings, MRIP for federal for-hire and recreational shore landings, and SRHS for headboat landings. Recreational private vessel landings will also be inclusive of Louisiana and Mississippi Creel surveys, and the Texas Parks and Wildlife Department's Coastal Creel Survey; however, these surveys rarely observe yellowtail snapper and were not included in the estimation of recreational landings in SEDAR 96. Based on the catch limits represented by the Councils' choice in preferred alternative for Action 2, no change in how the fishery is prosecuted is expected. Projections for yellowtail snapper include 2026 because of the split nature of the fishing year for yellowtail snapper, which begins August 1 and ends July 31. So, the 2026 catch projections cover the fishing year from August 1, 2026, to July 31, 2027, and so forth. **Preferred Option 4b** of **Preferred Alternative 4** would set the Gulf of America (Gulf) regional ACL equal to the Gulf jurisdictional apportionment of the stock ABC.

Action 3 would modify the southeastern U.S. mutton snapper sector allocations in the South Atlantic Council's jurisdiction only. The Gulf Council does not use sector allocations for mutton snapper. **Preferred Alternative 1** would retain the current commercial and recreational sector allocations as 17.02% and 82.98%, respectively, of the current South Atlantic total ACL for mutton snapper.

Action 4 would modify the southeastern U.S. yellowtail snapper sector allocations in the South Atlantic Council's jurisdiction only. The Gulf Council does not use sector allocations for yellowtail snapper. **Preferred Alternative 1** would retain the current commercial and recreational sector allocations as 52.56% and 47.44%, respectively, of the current South Atlantic total ACL for yellowtail snapper.

Biological Effects

Action 1, **Preferred Option 3b** of **Preferred Alternative 3** is not expected to have substantial impacts on the biological environment, so long as the stock OFL is not exceeded. The mutton snapper stock was estimated to be healthy as of 2023, and the proposed catch limits represent a considerable increase in allowable harvest. The multi-species nature of the reef fish and snapper grouper fisheries is expected to be maintained, and therefore the manner in which the fisheries are prosecuted is not expected to change.

Action 2, **Preferred Alternative 4** is not expected to have substantial impacts on the biological environment, so long as the stock OFL is not exceeded. The yellowtail snapper stock was estimated to be healthy as of 2023, and the proposed catch limits represents a modest decrease in total allowable harvest but would remove the management uncertainty buffer between the Gulf

ACL and the Gulf apportionment of the stock ABC due to the stock's overall health. The multi-species nature of the reef fish and snapper grouper fisheries is expected to be maintained, and therefore the manner in which the fisheries are prosecuted is not expected to change.

Action 3, **Preferred Alternative 1** is not expected to have substantial impacts on the biological environment. The multi-species nature of the snapper grouper fishery is expected to be maintained, and therefore the manner in which the fishery is prosecuted is not expected to change.

Action 4, **Preferred Alternative 1** is not expected to have substantial impacts on the biological environment. The multi-species nature of the snapper grouper fishery is expected to be maintained, and therefore the manner in which the fishery is prosecuted is not expected to change.

Economic Effects

Action 1, **Preferred Option 3b** of **Preferred Alternative 3** is not expected to result in substantial economic effects. Presently, mutton snapper fisheries in both regions experience year-round fishing seasons without closures resulting from catch limits being met. As such, the likelihood that either region would harvest proposed increases in available mutton snapper is very low. The total expected change in net economic benefits for both the recreational and commercial sectors in both regions can be calculated by summing the expected changes to the individual sectors. However, it is unlikely that either sector would be expected to experience economic effects from the proposed increases to either region's total ACL due to the fishing season already remaining open year-round.

Action 2, **Preferred Option 4b** of **Preferred Alternative 4** is not expected to result in substantial economic effects. Presently, yellowtail snapper fisheries in both regions experience year-round fishing seasons without closures resulting from catch limits being met. However, commercial quota closures have occurred in the past in the South Atlantic. Given the projected increase in the South Atlantic total available harvest from the preferred alternative in Action 2, the likelihood that this region would harvest its proposed increase in yellowtail snapper is low. Despite a reduction in the Gulf apportionment of the stock ABC in pounds and percentage, projections did not anticipate a closure. This decrease is attributable to a modification in the surveys and their respective units used to estimate recreational landings. Therefore, it is unlikely that either region would be expected to experience economic effects from the proposed changes to either region's total ACL.

In Action 3, there are no direct economic effects expected from **Preferred Alternative 1**. This result is expected in large part because of the combination of a static sector allocation scenario and the considerable increase in allowable harvest expected from Action 1 for mutton snapper. As such, both the recreational and commercial fishing sectors in the South Atlantic region are expected to continue fishing for mutton snapper as they presently do, with no ACL closures projected.

In Action 4, there are no direct economic effects expected from **Preferred Alternative 1**. This result is expected in large part because of the combination of a static sector allocation scenario and the modest increase in allowable harvest in the South Atlantic expected from Action 2 for yellowtail snapper. As such, both the recreational and commercial fishing sectors in the South Atlantic region are expected to continue fishing for yellowtail snapper as they presently do, with no ACL closures projected.

Social Effects

Action 1, **Preferred Option 3b** of **Preferred Alternative 3** would result in an increase in catch limits across regions and sectors and should result in broadly positive benefits for fishery participants who encounter mutton snapper because neither region is expected to experience closures to their fishing seasons.

Action 2, **Preferred Option 4b** of **Preferred Alternative 4** would result in broadly positive benefits for fishery participants who encounter yellowtail snapper because neither region is expected to experience closures to their fishing seasons.

In Action 3, there are no direct social effects expected from **Preferred Alternative 1**. Recent landings of mutton snapper have been below the recommended catch levels in Action 1. This indicates that the commercial and recreational ACLs for mutton snapper would not likely be reached under any of the proposed alternatives. As such, it is unlikely that fishermen would experience negative direct social effects from accountability measures being enacted, since the catch limit is unlikely to be met or exceeded.

In Action 4, there are no direct social effects expected from **Preferred Alternative 1**. Recent landings of yellowtail snapper have been below the recommended catch levels in Action 2. This indicates that the commercial and recreational ACLs for yellowtail snapper would not likely be reached under any of the proposed alternatives. As such, it is unlikely that fishermen would experience negative direct social effects from accountability measures being enacted, since the catch limit is unlikely to be met or exceeded.

Effects on Participants in the Fisheries Conducted in Adjacent Areas Under the Authority of another Fishery Management Council

The southeastern U.S. stocks of mutton snapper and yellowtail snapper are managed under the Gulf Council's Reef Fish FMP and the South Atlantic Council's Snapper Grouper FMP. Therefore, the actions of this amendment are not expected to impact fishery participants in areas adjacent to the Gulf or the South Atlantic, such as fisheries managed under the Caribbean and Mid-Atlantic Fishery Management Councils' respective jurisdictions.

Effects on Safety at Sea

Fishermen are not expected to have additional incentives to participate in mutton snapper and yellowtail snapper fishing under adverse weather or ocean conditions as a result of the revised catch limits in this document. The proposed catch limits are such that fishery closures for any

sector in either region are not expected, thereby reducing the possibility of derby fishing behavior. Therefore, safety-at-sea issues are not expected to result from this action.

CHAPTER 1. INTRODUCTION

1.1 Background

The southeastern U.S. stocks of mutton snapper (*Lutjanus analis*) and yellowtail snapper (*Ocyurus chrysurus*) are respectively considered to be single unit stocks in the Gulf of America (Gulf) and South Atlantic regions. While mutton snapper and yellowtail snapper are managed separately by the Gulf Fishery Management Council (Gulf Council) and the South Atlantic Fishery Management Council (South Atlantic Council; collectively, "the Councils"), determining the jurisdictional apportionment of the stock acceptable biological catch levels (ABC) requires the Councils to work collectively. The actions in Amendment 55 to the Fishery Management Plan (FMP) for the Reef Fish Resources of the Gulf (Reef Fish FMP) and Amendment 44 to the FMP for the Snapper Grouper Fishery of the South Atlantic Region (Snapper Grouper FMP) would update catch levels and modify the jurisdictional allocations of mutton snapper and yellowtail snapper in the Gulf and South Atlantic regions. This is a joint amendment to each Council's FMP and must be approved by both Councils. Actions include revising the stock overfishing limits (OFLs), stock ABCs, jurisdictional apportionment of the ABCs and annual catch limits (ACL) between the Gulf and South Atlantic, as well as the South Atlantic's sector allocations and sector ACLs. The stock OFLs and ABCs are based on the new Southeast Data, Assessment, and Review (SEDAR) 79 (2024) and SEDAR 96 (2025) stock assessments for mutton snapper and yellowtail snapper, respectively. These stock assessments were deemed consistent with the best scientific information available by both Councils' Scientific and Statistical Committees (SSC). While the Councils must agree on the recommended jurisdictional apportionments, they can independently recommend the conservation and management measures for their respective jurisdictions. Sector allocations and sector specific ACLs are not used for either species in the Gulf Council's jurisdiction; thus, no further discussion of Gulf sector allocations or ACLs for these species will be made in this document. The jurisdictions for each Council are shown in Figures 1.1.1 and 1.1.2.

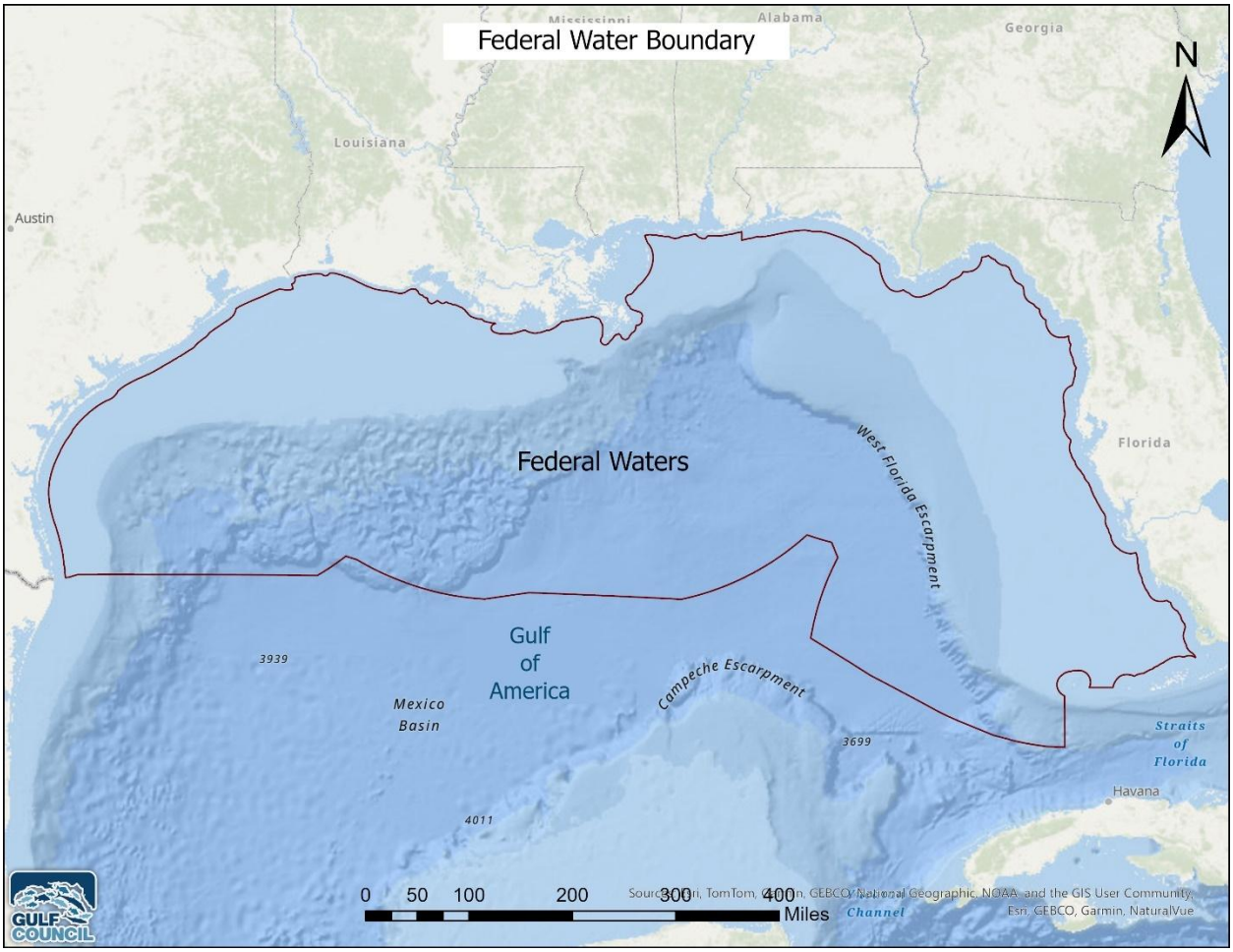


Figure 1.1.1. Jurisdictional boundaries of the Gulf Council.

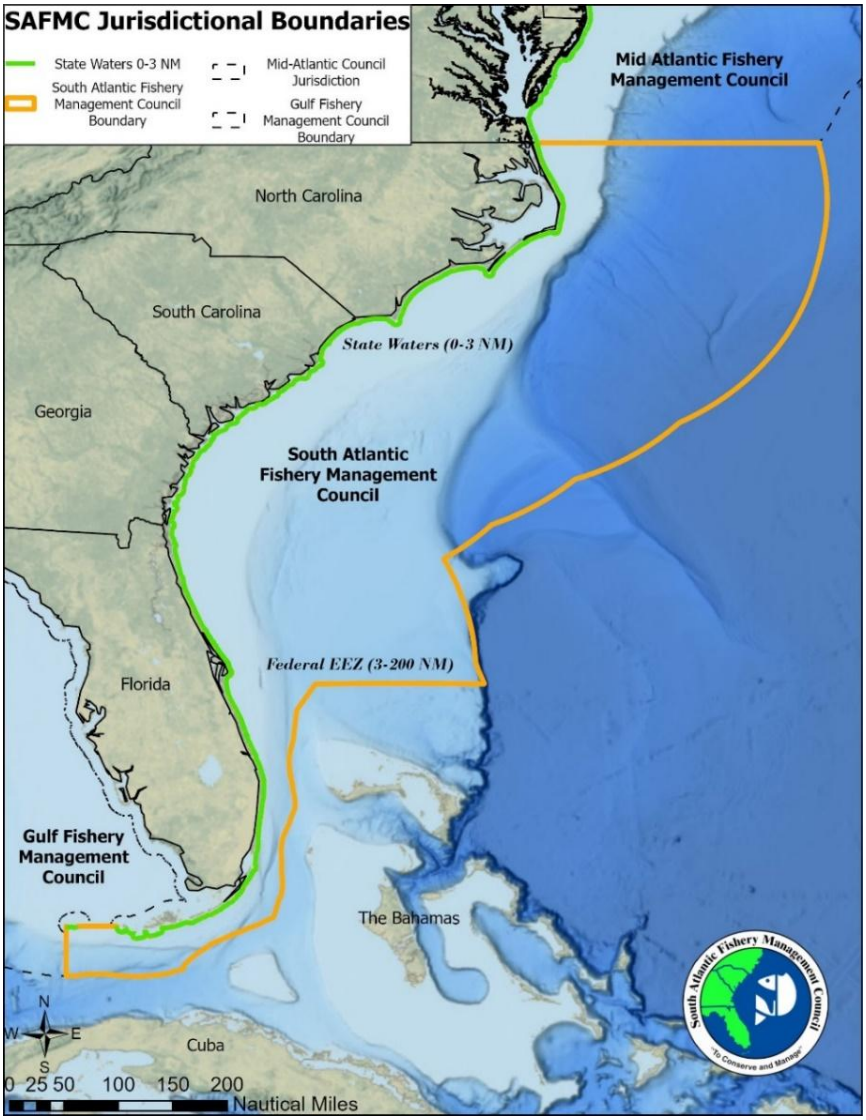


Figure 1.1.2. Jurisdictional boundaries of the South Atlantic Council.

In February 2025, the Councils' SSCs met to review new stock assessments for both mutton snapper and yellowtail snapper (see Sections 1.3 and 1.4 below). These stock assessments used recreational private vessel landings estimates from Florida's State Reef Fish Survey (SRFS) and found the respective stocks to be healthy as of 2023. After reviewing the stock assessments, the SSCs recommended updated catch advice for both species. In response, the Councils decided to update the jurisdictional allocations, regional catch levels, and South Atlantic sector allocations to reflect the health of the stocks, and the use of the new survey.

Current Management and Landings

The majority of commercial and recreational landings of mutton snapper and yellowtail snapper from federal waters are in Florida. Recreational landings in this area, especially in the Florida Keys, are monitored by various methods as described below (Figure 1.1.3 and Table 1.1.1).

Recreational landings estimates for both mutton snapper and yellowtail snapper are now inclusive of SRFS data, which produce more precise landings estimates than the previously used federal Marine Recreational Information Program (MRIP) for private recreational vessels. MRIP is still used to inform recreational shore mode landings, and MRIP's For-Hire Telephone Survey informs charter for-hire landings. The Southeast Region Headboat Survey (SRHS) is used to estimate headboat landings throughout the region and partition landings between the Gulf and South Atlantic near the Councils' jurisdictional boundary. The SRFS- and MRIP-informed catch estimates differ in how landings data in southwest Florida (i.e., Area D in the Western Keys [Figure 1.1.3.]) are attributed. Under the SRFS program, Areas D and E are split to provide additional geographic resolution and the private vessel landings in Area D are attributed to the Gulf, whereas landings in area E are attributed to the South Atlantic (Figure 1.1.3). Under MRIP, Area D is combined with Area E and these private vessel landings have historically been attributed to the South Atlantic Council's jurisdiction. The federal charter for-hire landings in Area D are also combined with Area E and under MRIP are attributed to the South Atlantic Council's jurisdiction. To attribute these charter for-hire landings more appropriately to a Council's jurisdiction, for the purposes of this amendment, the ratio of SRFS private vessel landings for the most recent four years of data (2021 – 2024) will be used to assign those historical charter for-hire landings for Areas D and E through 2024 (Table 1.1.1). This will allow for greater data resolution when determining jurisdictional apportionments and allocations between the Gulf and South Atlantic Council jurisdictions. A four-year reference period was chosen because it begins with the first year of full implementation of SRFS (2021) and goes through the most recent year of finalized recreational landings data (2024). MRIP shore mode landings in Areas D and E will continue to be attributed to the South Atlantic Council's jurisdiction since the overwhelming majority of those landings occur in South Atlantic waters (greater than 90%). Headboat landings in Area D (SRHS) have historically been attributed to the Gulf, and this practice continues. Table 1.1.2 describes which mode of recreational landings is attributed to which Council by survey for this amendment.

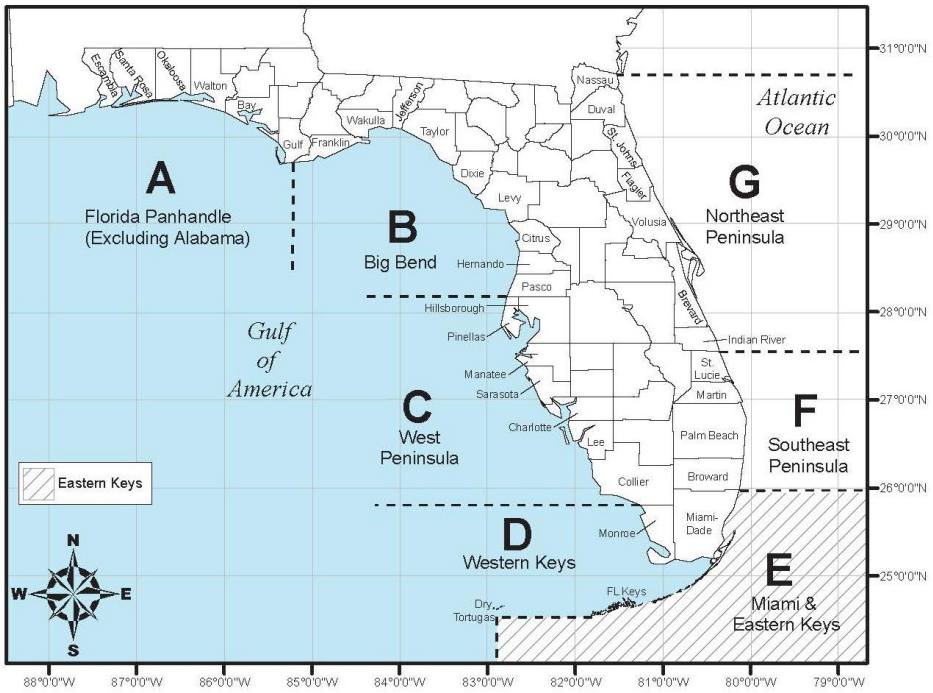


Figure 1.1.3. Map of survey areas used by Florida's SRFS program used to survey the offshore private recreational component of mutton snapper and yellowtail snapper catch and effort.

Table 1.1.1. A description of the ratio of SRFS private vessel landings for the most recent four years of data (2021 – 2024) for southeastern U.S. mutton snapper and yellowtail snapper. These ratios will be used to assign MRIP charter for-hire landings through 2024 for Areas D and E (Figure 1.1.3).

Species	Gulf	South Atlantic
Mutton snapper	16.731%	83.269%
Yellowtail snapper	6.393%	93.607%

Table 1.1.2. A description of how the recreational landings from southwest Florida (i.e., Area D) are attributed to the Gulf and South Atlantic Councils' jurisdictions.

Mode	Survey	Council
Offshore private vessel	SRFS	Gulf
Federal charter for-hire	MRIP	Gulf
Headboat	SRHS	Gulf
Shore	MRIP	South Atlantic

1.2 Purpose and Need

The purpose of these fishery management plan amendments is to revise the southeastern U.S. mutton snapper and yellowtail snapper stock overfishing limit, and stock acceptable biological catch, based on the results of the SEDAR 79 and SEDAR 96 stock assessments, respectively. The amendments would also revise the jurisdictional apportionment between the South Atlantic and Gulf Councils, the regional annual catch limits, and the South Atlantic sector allocations.

The need for these fishery management plan amendments is to update existing catch limits, jurisdictional apportionments of the ABC for mutton and yellowtail snapper, and South Atlantic sector allocations for southeastern U.S. mutton snapper and yellowtail snapper to be consistent with the best scientific information available, and achieve optimum yield while minimizing, to the extent practicable, adverse social and economic effects.

1.3 Mutton Snapper

The history of management regarding management modifications affecting mutton snapper can be found in Appendix A. A complete history of management for the Reef Fish FMP is available on the Council's website.[1] A complete history of management for the Snapper Grouper FMP is available on the South Atlantic Council's website.[2]

Stock Assessment

SEDAR 79 (2024) is the most recent stock assessment of southeastern U.S. mutton snapper and estimated the stock to be healthy (not overfished or undergoing overfishing) using data through 2023. The assessment used SRFS in place of MRIP survey data for estimating mutton snapper catch and effort from private recreational fishing vessels. Results of the assessment including current stock status determination criteria (SDC) are shown in Table 1.3.1.

Table 1.3.1. Summary of benchmarks and reference points used in the SEDAR 79 assessment for mutton snapper. Spawning stock biomass (SSB) is in metric tons (male and female combined SSB), whereas F is a harvest rate (total biomass killed all ages / total biomass age 1+). An SPR proxy of 30% is presented. Values highlighted in **green** indicate the stock is neither overfished, nor undergoing overfishing. F=fishing mortality; MSY=maximum sustainable yield); MFMT=maximum fishing mortality threshold; MSST=minimum stock size threshold.

Criteria	Definition	Value
$F_{MSYProxy}$	Equilibrium F to achieve 30% SPR, per year	0.149
MFMT	$F_{MSYProxy}$, per year	0.149
$F_{Current}$	Geometric mean of $F_{2021\text{-}2023}$, per year	0.08
$F_{Current}$/MFMT	Current overfishing status	**0.537**
$SSB_{MSYProxy}$	Equilibrium SSB at $F_{30\%SPR}$, in metric tons	3,352
MSST	0.75 * $SSB_{30\%SPR}$, in metric tons	2,514
$SSB_{Current}$	SSB in 2023, in metric tons	5,403
$SSB_{Current}/SSB_{MSYProxy}$	Stock status based on $SSB_{30\%SPR}$	1.62
$SSB_{Current}$/MSST	Stock status based on MSST	**2.15**

[1] https://gulfcouncil.org/fishery-management/implemented-amendments/reef-fish/
[2] https://safmc.net/fishery-management-plans/snapper-grouper/

The Gulf and South Atlantic SSCs met in February 2025 to review the SEDAR 79 stock assessment and yield projections. The South Atlantic Council's SDC for mutton snapper were used, as shown in the "Definitions" column of Table 1.3.1, because the majority of the stock occurs in the South Atlantic Council's jurisdiction. In addition, the South Atlantic Council defines optimum yield (OY) for mutton snapper as the yield corresponding to the stock ACL, which for mutton snapper, would also be equal to the ABC. The SSCs issued two joint consensus statements at the conclusion of their review of SEDAR 79. First, the SSCs agreed to use an alternative approach to determine the ABC from the previous stock assessment, because of differences in how the uncertainty in the OFL was characterized. Second, the SSCs used the geometric mean of the most recent five years of recruitment (2019 – 2023) for informing OFL and ABC projections. The OFL is set at $F_{30\%SPR}$, and the ABC is set at 75% of the yield at $F_{30\%SPR}$, for the years 2024 through 2028, as derived from the provided projections for 2024 through 2028. The resulting mutton snapper stock OFLs and ABCs for 2026 through 2028 are shown in Table 1.3.2, with the years 2024 through 2026 of the projections italicized and grayed out to show that those years will have passed before management changes can be implemented. For reference, the current OFL and ABC are shown in the legacy federal Marine Recreational Fisheries Statistics Survey (MRFSS) units in Table 1.3.3.

Table 1.3.2. OFL and ABC values for mutton snapper recommended by the SSCs, inclusive of SRFS data for recreational private vessels, based on the results of SEDAR 79 (2024) and using an MSY proxy of the yield when fishing at $F_{30\%SPR}$. Catch limits are in lb whole weight (ww).

	OFL ($F_{30\%SPR}$)	**ABC (75% of the yield at $F_{30\%SPR}$)**
2024	*3,280,143*	*2,498,073*
2025	*3,384,760*	*2,662,320*
2026	*3,363,706*	*2,725,359*
2027	3,313,030	2,752,377
2028+	3,270,355	2,772,615

Table 1.3.3. Current OFL and ABC values for mutton snapper, inclusive of MRFSS and using an MSY proxy of the yield when fishing at $F_{30\%SPR}$. Catch limits are in lb ww. These values are not directly comparable to those in Table 1.3.2.

	OFL ($F_{30\%SPR}$)	**ABC (P* = 0.375)**
2025+	850,077	798,300

Current Regulations

As mentioned, mutton snapper is managed separately by the Councils with some different management measures occurring in each jurisdiction. For example, while the South Atlantic Council uses sector allocations and commercial trip limits for mutton snapper, the Gulf Council does not. A summary of mutton snapper management measures, except catch limits, are shown in Table 1.3.4.

Table 1.3.4. Current management measures for mutton snapper by Council jurisdiction.

Species	Region	Jurisdictional Apportionment of ABC	Fishing Year	Daily Bag Limit	Trip Limit	Min Size Limit	Sector Allocations
Mutton Snapper	Gulf	18%	Jan 1 - Dec 31	5 per person within 10-snapper aggregate	None	18" total length (TL) both sectors	None
	South Atlantic	82%	Jan 1 - Dec 31	5 per person within 10-snapper aggregate	Jan 1 - Mar 31: 500 lb ww Apr 1 - Jun 30: 5 per person per day or 5 per person per trip Jul1 - Dec 31: 500 lb ww	18" TL both sectors	17.02% Com 82.98% Rec

Landings

Mutton snapper landings from 1986 through 2024 have varied with most occurring in the South Atlantic (Table 1.3.5 and Figure 1.3.1). Within each jurisdiction, sector landings have differed with the majority of landings in the Gulf attributed to the commercial sector, whereas a majority of the landings in the South Atlantic are attributed to the recreational sector (Table 1.3.5).

Table 1.3.5. Southeastern U.S. mutton snapper landings from 1986 through 2024. Comm = commercial. Rec = recreational. Data are in lb ww. Recreational landings are inclusive of SRFS for recreational private vessels and MRIP-FES for recreational shore landings.

Year	Gulf Comm	SA Comm	Gulf Rec	SA Rec	Gulf Total	SA Total	Stock Total
1986	79,090	325,481	97,465	530,414	176,555	855,895	1,032,450
1987	113,850	431,265	38,348	409,569	152,198	840,834	993,032
1988	123,352	301,892	98,432	601,566	221,784	903,458	1,125,242
1989	127,183	344,987	32,778	379,687	159,961	724,674	884,634
1990	109,628	300,972	211,694	223,667	321,322	524,639	845,961
1991	101,717	348,100	46,784	470,782	148,501	818,882	967,383
1992	97,475	299,531	51,337	444,010	148,812	743,541	892,354
1993	110,154	327,633	36,752	523,133	146,906	850,766	997,672
1994	81,432	272,464	12,602	258,588	94,034	531,052	625,085
1995	98,006	183,450	35,246	369,773	133,252	553,223	686,476
1996	94,674	196,466	29,249	222,644	123,923	419,110	543,033
1997	65,176	227,287	28,113	186,202	93,289	413,489	506,778
1998	72,697	283,211	42,363	272,393	115,060	555,604	670,663
1999	82,954	170,082	29,643	319,678	112,597	489,760	602,357
2000	67,468	137,192	6,932	309,810	74,400	447,002	521,401

2001	74,231	158,553	5,597	218,390	79,828	376,943	456,771
2002	75,014	158,384	13,620	356,172	88,634	514,556	603,190
2003	96,215	173,912	16,025	328,799	112,240	502,711	614,951
2004	197,326	152,329	10,650	268,853	207,976	421,182	629,158
2005	142,318	90,180	4,129	278,304	146,447	368,484	514,931
2006	133,512	155,181	43,624	560,423	177,136	715,604	892,740
2007	78,842	142,830	46,648	616,847	125,490	759,677	885,167
2008	51,001	107,069	83,087	976,930	134,088	1,083,999	1,218,087
2009	41,657	79,835	19,725	324,355	61,382	404,190	465,572
2010	51,337	77,014	12,628	364,366	63,965	441,380	505,345
2011	90,299	68,814	6,758	127,353	97,057	196,167	293,223
2012	82,402	84,759	47,034	371,345	129,436	456,104	585,540
2013	111,406	77,028	38,126	456,426	149,532	533,454	682,986
2014	129,383	98,584	16,558	505,425	145,941	604,009	749,950
2015	123,255	101,668	15,158	499,826	138,413	601,494	739,907
2016	78,146	72,172	20,447	623,888	98,593	696,060	794,653
2017	125,738	66,064	19,828	402,433	145,566	468,497	614,062
2018	138,752	84,307	23,295	373,152	162,047	457,459	619,506
2019	59,200	77,763	13,621	368,213	72,821	445,976	518,798
2020	62,474	79,820	69,555	499,895	132,029	579,715	711,744
2021	59,191	65,660	32,072	716,901	91,263	782,561	873,824
2022	66,544	64,111	25,461	482,595	92,005	546,706	638,711
2023	98,225	71,709	40,641	638,235	138,866	709,944	848,810
2024	86,575	52,764	58,133	720,679	144,708	773,443	918,151

Source: Commercial data are from a March 2026 data request to the Southeast Fisheries Science Center. Recreational data are from March 2026 data requests from the SRHS, SRFS, and MRIP.

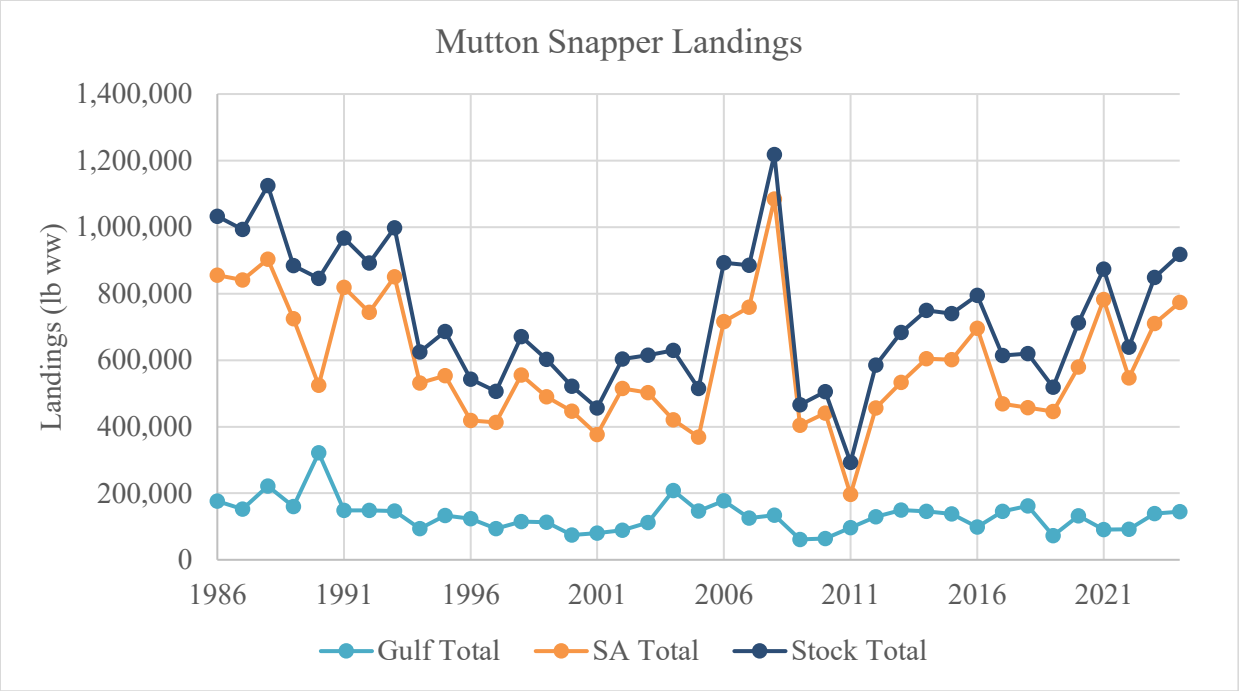


Figure 1.3.1. Southeastern U.S. mutton snapper landings from 1986 through 2024.
Source: Table 1.3.5.

1.4 Yellowtail Snapper

The history of management regarding management modifications affecting yellowtail snapper can be found in Appendix A. A complete history of management for the Reef Fish FMP is available on the Council's website.[3] A complete history of management for the Snapper Grouper FMP is available on the South Atlantic Council's website.[4]

Stock Assessment

SEDAR 96 (2025) is the most recent stock assessment of southeastern U.S. yellowtail snapper and estimated the stock to be healthy (not overfished or undergoing overfishing) using data through 2023. The assessment was inclusive of private recreational vessel landings estimates from SRFS (as also used in SEDAR 79 [2024]). Results of the yellowtail snapper stock assessment, including current stock SDC, are shown in Table 1.4.1.

[3] https://gulfcouncil.org/fishery-management/implemented-amendments/reef-fish/
[4] https://safmc.net/fishery-management-plans/snapper-grouper/

Table 1.4.1. Summary of benchmarks and reference points used in the SEDAR 96 assessment for yellowtail snapper. SSB is in metric tons (male and female combined SSB), whereas F is a harvest rate (total biomass killed all ages / total biomass age 1+). An SPR proxy of 30% is presented. Values highlighted in **green** indicate the stock is neither overfished, nor undergoing overfishing.

Criteria	Definition	Value
$F_{MSYProxy}$	Equilibrium F to achieve 30% SPR, per year	0.398
MFMT	$F_{MSYProxy}$, per year	0.398
$F_{Current}$	Geometric mean of $F_{2021-2023}$, per year	0.263
$F_{Current}$/MFMT	Current overfishing status	**0.661**
$SSB_{MSYProxy}$	Equilibrium SSB at $F_{30\%SPR}$, in metric tons	1,817
MSST	0.75 * $SSB_{30\%SPR}$, in metric tons	1,362
$SSB_{Current}$	SSB in 2023, in metric tons	2,518
$SSB_{Current}/SSB_{MSYProxy}$	Stock status based on $SSB_{30\%SPR}$	1.386
$SSB_{Current}$/MSST	Stock status based on MSST	**1.845**

The Gulf and South Atlantic SSCs met in February 2025 to review the SEDAR 96 stock assessment and yield projections. The South Atlantic Council defines OY for yellowtail snapper as the yield corresponding to the stock ACL, which for yellowtail snapper, would also be equal to the ABC. The SSCs issued two joint consensus statements at the conclusion of their review of SEDAR 96. First, the SSCs agreed to use an alternative approach from the South Atlantic Council's P* approach in its ABC Control Rule for yellowtail snapper, because of differences in how the uncertainty in the OFL was characterized. Second, the SSCs used the arithmetic mean of the most recent five years of recruitment (2019-2023) for informing OFL and ABC projections. The OFL is set at $F_{30\%SPR}$, and the ABC is set at 75% of the yield at $F_{30\%SPR}$, for the years 2024 through 2028, as derived from the provided projections for 2024 through 2028. The resulting yellowtail snapper stock OFLs and ABCs for 2024 through 2028 are shown in Table 1.4.2, with the years 2024 through 2026 of the projections italicized and grayed out to show that those years will have passed before management changes can be implemented. For reference, the current OFL and ABC are shown in the legacy federal MRFSS units in Table 1.4.3.

Table 1.4.2. OFL and ABC values for yellowtail snapper recommended by the SSCs, inclusive of SRFS units for recreational private vessels, based on the results of SEDAR 96 (2025) and using an MSY proxy of the yield when fishing at $F_{30\%SPR}$. Catch limits are in lb ww.

	OFL ($F_{30\%SPR}$)	ABC (75% of the yield at $F_{30\%SPR}$)
2024	*5,076,490*	*3,955,300*
2025	*4,767,230*	*3,973,088*
2026	*4,495,187*	*3,925,031*
2027	4,364,600	3,913,426
2028+	4,307,856	3,918,634

Table 1.4.3. Current OFL and ABC values for yellowtail snapper, in MRFSS units and using an MSY proxy of the yield when fishing at $F_{30\%SPR}$. Catch limits are in lb ww. These values are not directly comparable to those in Table 1.4.2.

	OFL ($F_{30\%SPR}$)	ABC (P* = 0.375)
2025+	4,510,000	4,050,000

Current Regulations

As mentioned, yellowtail snapper is managed separately by the Councils with some different management measures occurring in each jurisdiction. For example, while the South Atlantic Council uses sector allocations for yellowtail snapper, the Gulf Council does not. A summary of yellowtail snapper management measures, except catch limits, are shown in Table 1.4.4.

Table 1.4.4. Current management measures for yellowtail snapper by Council jurisdiction.

Species	Region	Jurisdictional Apportionment of ABC	Fishing Year	Daily Bag Limit	Trip Limit	Min Size Limit	Sector Allocations
Yellowtail Snapper	**Gulf**	**25%**	Aug 1 - Jul 31	10 fish per person within 10-snapper aggregate	none	12" TL both sectors	None
	South Atlantic	**75%**	Aug 1 - Jul 31	10 fish per person within 10-snapper aggregate	none	12" TL both sectors	52.56% Com 47.44% Rec

Landings

Yellowtail snapper landings have varied from 1992 through 2024, with most occurring in the South Atlantic (Table 1.4.5 and Figure 1.4.1). Landings prior to 1992 are highly uncertain and subject to a very low frequency of dockside intercepts (SEDAR 96 2025) and are not presented. Within each jurisdiction, sector landings have differed with the majority of landings in the Gulf occurring by the commercial sector, but landings from both sectors being similar in the South Atlantic (Table 1.4.5).

Table 1.4.5. Southeastern U.S. yellowtail snapper landings from 1992 through 2024. Comm = commercial. Rec = recreational. Data are in lb ww. Recreational landings are inclusive of SRFS for recreational private vessels and MRIP-FES for recreational shore landings.

Year	Gulf Comm	SA Comm	Gulf Rec	SA Rec	Gulf Total	SA Total	Stock Total
1992	186,285	1,630,890	179,968	1,134,783	366,253	2,765,673	3,131,926
1993	240,496	2,111,379	118,869	1,875,055	359,365	3,986,434	4,345,799
1994	255,995	1,907,487	83,063	1,369,322	339,058	3,276,809	3,615,867
1995	444,609	1,395,779	79,928	1,469,725	524,537	2,865,504	3,390,041
1996	485,884	968,758	52,865	934,412	538,749	1,903,170	2,441,919
1997	221,334	1,451,911	50,246	867,038	271,580	2,318,949	2,590,529
1998	340,070	1,184,746	47,803	815,725	387,873	2,000,471	2,388,345
1999	598,963	1,246,942	74,094	588,532	673,057	1,835,474	2,508,530
2000	357,030	1,234,971	25,123	572,003	382,153	1,806,974	2,189,127
2001	173,518	1,247,286	35,491	491,779	209,009	1,739,065	1,948,074
2002	286,472	1,124,280	47,834	697,121	334,306	1,821,401	2,155,707
2003	444,233	963,000	76,917	1,141,809	521,150	2,104,809	2,625,960
2004	471,274	1,009,274	89,446	1,144,999	560,720	2,154,273	2,714,993
2005	528,277	796,134	43,065	587,864	571,342	1,383,998	1,955,340
2006	524,561	711,811	120,478	1,142,283	645,039	1,854,094	2,499,133
2007	302,648	675,952	79,217	1,317,197	381,865	1,993,149	2,375,014
2008	332,936	1,037,783	119,292	1,824,381	452,228	2,862,164	3,314,393
2009	685,747	1,273,409	47,456	672,523	733,203	1,945,932	2,679,134
2010	364,699	1,297,785	46,207	755,103	410,906	2,052,888	2,463,794
2011	430,470	1,426,900	76,365	689,990	506,835	2,116,890	2,623,725
2012	395,974	1,678,561	44,907	848,936	440,881	2,527,497	2,968,378
2013	394,156	1,668,131	66,675	1,227,572	460,831	2,895,703	3,356,534
2014	466,969	1,544,093	59,093	1,668,607	526,062	3,212,700	3,738,762
2015	504,193	1,652,524	89,347	1,155,340	593,540	2,807,864	3,401,404
2016	317,794	1,943,368	65,233	1,253,097	383,027	3,196,465	3,579,492
2017	687,627	2,093,931	344,835	1,137,730	1,032,462	3,231,661	4,264,123
2018	532,942	1,421,476	87,018	1,154,395	619,960	2,575,871	3,195,831
2019	490,868	1,679,344	93,244	680,541	584,112	2,359,885	2,943,997
2020	218,733	1,177,277	100,181	1,100,888	318,914	2,278,165	2,597,079
2021	248,446	1,387,338	175,792	1,263,395	424,238	2,650,733	3,074,971
2022	304,302	1,474,795	301,012	1,259,034	605,314	2,733,829	3,339,143
2023	224,792	1,230,663	176,028	788,225	400,820	2,018,888	2,419,709
2024	233,400	1,212,436	176,865	799,580	410,265	2,012,016	2,422,280

Source: Commercial data are from a March 2026 data request to the Southeast Fisheries Science Center. Recreational data are from March 2026 data requests from the SRHS, SRFS, and MRIP.

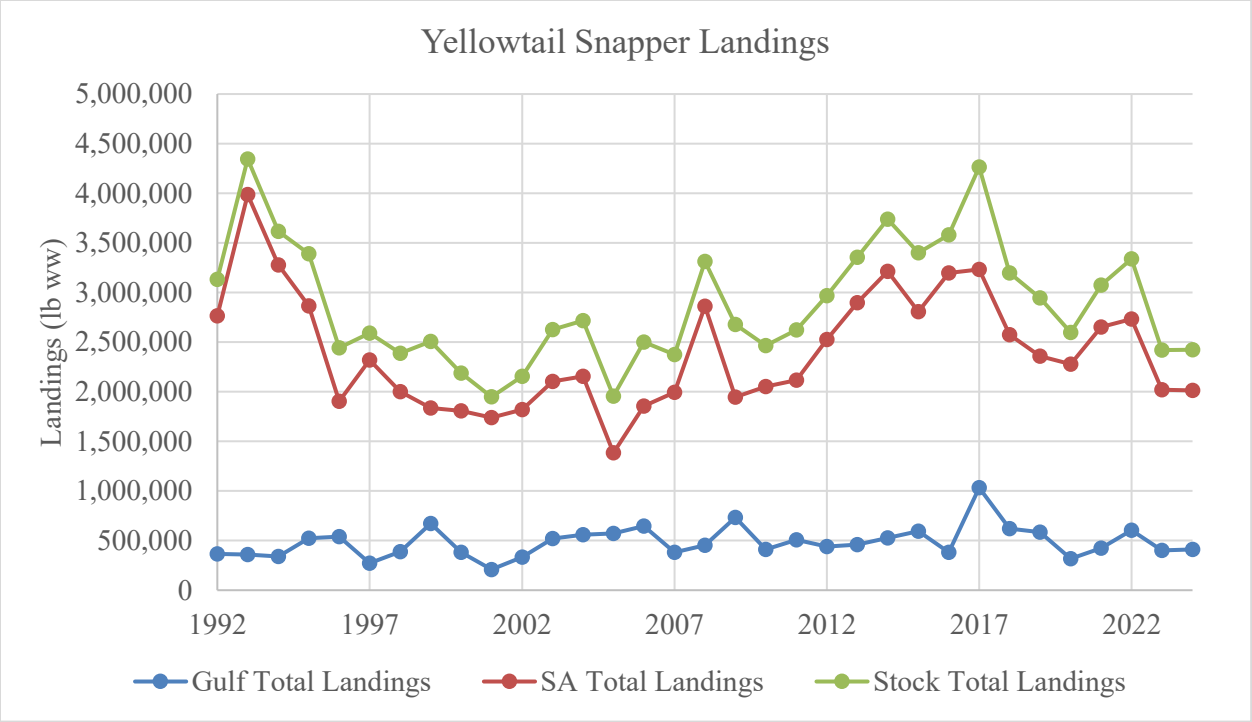


Figure 1.4.1. Southeastern U.S. yellowtail snapper landings from 1992 through 2024.
Source: Table 1.4.5.

CHAPTER 2. MANAGEMENT ALTERNATIVES

2.1 Action 1: Modification of Southeastern U.S. Mutton Snapper Overfishing Limit (OFL), Acceptable Biological Catch (ABC), Jurisdictional Apportionment, and Regional Annual Catch Limits (ACLs)

Alternative 1: No Action. Maintain the current OFL, ABC, jurisdictional apportionment of the ABC, and regional ACLs for southeastern U.S. mutton snapper. The jurisdictional apportionment of the mutton snapper stock ABC by region is based on the formula established in the Generic ACL/Accountability Measures (AM) Amendment and Comprehensive ACL Amendment (weighting 50% to the average catch history from 1990-2008 + 50% to the average catch history from 2006-2008), whereby 82% of the stock ABC is apportioned to the South Atlantic Fishery Management Council (South Atlantic Council), and 18% is apportioned to the Gulf Fishery Management Council (Gulf Council). The apportionment for mutton snapper was derived, in part, using data generated from the Marine Recreational Fisheries Statistics Survey (MRFSS). Each region's stock ACL equals its apportionment of the stock ABC. Catch limits are shown below in lb whole weight (ww).

	OFL ($F_{30\%SPR}$)	**ABC (P* = 0.375)**	**Gulf Apportionment and ABC (Gulf ACL) (18%)**	**South Atlantic Apportionment and ABC/ACL (82%)**
2025+	850,077	798,300	143,694	654,257[5]

Note: *Alternative 1 is inclusive of MRFSS. The SEDAR 79 (2024) stock assessment used the State of Florida's State Reef Fish Survey (SRFS) for recreational private vessel landings, the Marine Recreational Information Program (MRIP) for federal for-hire and recreational shore landings, and the Southeast Region Headboat Survey (SRHS) for headboat landings. Because the SEDAR 79 stock assessment, and the SSCs' catch limit recommendations from that assessment, are considered to be consistent with the best scientific information available (BSIA), Alternative 1 is not a viable alternative.*

Alternative 2: Modify the OFL and ABC and retain the current jurisdictional apportionment of the stock ABC for southeastern U.S. mutton snapper and modify regional ACLs based on the recommendations of the Councils' Scientific and Statistical Committees (SSCs) for 2027 and 2028 and subsequent years. Each region's ACL would be set equal to its apportionment of the stock ABC. For mutton snapper, 82% of the stock ABC is apportioned to the South Atlantic

[5] This is the value that is codified in the federal regulations at Section 622.193(o)(3). The mathematically correct value is 654,606 lb ww.

Council, and 18% is apportioned to the Gulf Council. Catch limits shown below are in lb ww and rounded to the nearest whole pound.[6]

	OFL ($F_{30\%SPR}$)	ABC (75% of the yield at $F_{30\%SPR}$)	Gulf Apportionment of ABC (ACL) (18%)	South Atlantic Apportionment and ABC/ACL (82%)
2027	3,313,030	2,752,377	495,428	2,256,949
2028+	3,270,355	2,772,615	499,071	2,273,544

Preferred Alternative 3: Modify the OFL and ABC and the jurisdictional apportionment of the mutton snapper ABC and the regional ACLs using the average of historic and recent landings, and the following reference period, based on the recommendations of the Councils' SSCs for 2027 and 2028 and subsequent years. Each region's ACL would be set equal to its apportionment of the stock ABC. Monitoring of landings for mutton snapper would be inclusive of SRFS for recreational private vessel landings, MRIP for federal for-hire and recreational shore landings, and SRHS for headboat landings. Catch limits shown below are in lb ww and rounded to the nearest whole pound.

Option 3a: Use 50% of the average landings from 2004 through 2023 and 50% of the average landings from 2021 through 2023. This method apportions 16% of the stock ABC to the Gulf Council, and 84% to the South Atlantic Council.

	OFL ($F_{30\%SPR}$)	ABC (75% of the yield at $F_{30\%SPR}$)	Gulf Apportionment and ABC/ACL (16%)	South Atlantic Apportionment and ABC/ACL (84%)
2027	3,313,030	2,752,377	440,380	2,311,997
2028+	3,270,355	2,772,615	443,618	2,328,997

Preferred Option 3b: Use 50% of the average landings from 2014 through 2023 and 50% of the average landings from 2021 through 2023. This method apportions 15% of the stock ABC to the Gulf Council, and 85% to the South Atlantic Council.

[6] For **Alternatives 2 & 3** in Action 1, monitoring of the landings for mutton snapper will be inclusive of SRFS for recreational private vessel landings, MRIP for federal for-hire and recreational shore landings, and SRHS for headboat landings.

	OFL ($F_{30\%SPR}$)	ABC (75% of the yield at $F_{30\%SPR}$)	Gulf Apportionment and ABC/ACL (15%)	South Atlantic Apportionment and ABC/ACL (85%)
2027	3,313,030	2,752,377	412,857	2,339,520
2028+	3,270,355	2,772,615	415,892	2,356,723

Discussion:

The SEDAR 79 (2024) stock assessment of southeastern U.S. mutton snapper estimated the stock to be not overfished or experiencing overfishing as of 2023. The Councils' SSCs reviewed the stock assessment in February 2025, and recommended updated OFL and ABC values. Mutton snapper is a single stock throughout its range and is managed by the Gulf and South Atlantic Councils, with the stock ABC being apportioned between the Councils. The SEDAR 79 stock assessment used SRFS for recreational private vessel landings, MRIP for federal for-hire and recreational shore landings, and SRHS for headboat landings, and is consistent with BSIA. Because the current jurisdictional apportionment of the mutton snapper stock ABC is inclusive of recreational estimates from MRFSS, the Councils are considering options to update this jurisdictional apportionment, and their regional ACLs for mutton snapper. This is due in part to MRFSS no longer being considered consistent with BSIA.

Alternative 1 would maintain the current OFL, ABC, jurisdictional apportionment of the ABC, and regional ACLs for southeastern U.S. mutton snapper. In 2012, the National Marine Fisheries Service (NMFS) implemented comprehensive amendments to the Councils' fishery management plans to set ACLs for numerous stocks (GMFMC 2011, SAFMC 2012). In these amendments, the jurisdictional apportionment of the mutton snapper stock ABC by region was based on weighting 50% to the average catch history from 1990-2008 + 50% to the average catch history from 2006-2008, using data inclusive of MRFSS units. The result was a jurisdictional apportionment of 82% of the mutton snapper stock ABC to the South Atlantic Council, and 18% apportioned to the Gulf Council. Each region's stock ACL equals its apportionment of the stock ABC. Setting the ACL equal to the ABC is common for both Councils when a stock is healthy across its range and overruns of the stock ACL or ABC are uncommon. The apportionment and catch limits described in **Alternative 1** used MRFSS recreational estimates, which are no longer considered consistent with BSIA for mutton snapper (see Appendix B). Further, the Councils' SSCs have made revised OFL and ABC recommendations (see Table 1.3.2) based on the SEDAR 79 (2024) stock assessment of mutton snapper, the results of which are considered to be consistent with BSIA. Because **Alternative 1** is inconsistent with this updated scientific advice, it is not a viable alternative.

Alternative 2 would retain the current jurisdictional apportionment of the stock ABC for mutton snapper and establish regional ACLs based on the recommendations of the Councils' SSCs for 2027 and 2028 and subsequent years. Like **Alternative 1**, **Alternative 2** would apportion 82% of the mutton snapper stock ABC to the South Atlantic Council, and 18% to the Gulf Council. However, consistent with the data used in SEDAR 79 to generate the SSCs' updated catch advice, landings and quota monitoring for mutton snapper would be inclusive of SRFS for recreational private vessel landings, MRIP for federal for-hire and recreational shore landings,

and SRHS for headboat landings. Specifically, for MRIP charter for-hire landings from Areas D and E (Figure 1.1.3), ACL monitoring would be subject to applying the ratios listed in Table 1.1.1 for determining which landings are attributed to which Council. So, in practice, while **Alternative 2** uses the same percentages as those established in 2012 under **Alternative 1**, **Alternative 2** would use the updated landings monitoring method and catch advice from the Councils' SSCs. Each Council's regional ACL would continue to be set equal to its apportionment of the stock ABC since the mutton snapper stock is healthy and catch limit overruns are uncommon.

Preferred Alternative 3 would modify the jurisdictional apportionment of the mutton snapper ABC and the regional ACLs using the average of historic and recent landings. This method provides options for two reference periods of landings, and then weights equally at 50% each the average landings from the entire reference period, and then 50% from the most recent three years of the same reference period, using the same landings programs as would be used for quota monitoring for the recreational sector. **Preferred Alternative 3** would establish this modified jurisdictional apportionment and the regional ACLs based on the recommendations of the Councils' SSCs for 2027 and 2028 and subsequent years. Like **Alternative 2**, **Preferred Alternative 3** would monitor landings and set catch limits inclusive of SRFS for recreational private vessel landings, MRIP for federal for-hire and recreational shore landings, and SRHS for headboat landings. And again, for MRIP charter for-hire landings from Areas D and E (Figure 1.1.3), quota monitoring would be subject to applying the ratios listed in Table 1.1.1 for determining which landings are attributed to which Council. Chart

Preferred Alternative 3 offers two options for reference periods: 2004 through 2023 (**Option 3a**), and 2014 through 2023 (**Preferred Option 3b**). Applying the average of historic and recent landings approach to the 20-year reference period in **Option 3a** (50% of the average landings from 2004 – 2023 and 50% of the average landings from 2021 – 2023) results in 16% of the mutton snapper stock ABC being apportioned to the Gulf Council, and 84% to the South Atlantic Council. Using the 10-year reference period in **Preferred Option 3b** (50% of the average landings from 2014 – 2023 and 50% of the average landings from 2021 – 2023) results in 15% of the mutton snapper stock ABC being apportioned to the Gulf Council, and 85% to the South Atlantic Council. Despite including twice as many years of landings history as **Option 3a**, **Preferred Option 3b** results in a nearly identical jurisdictional apportionment of the ABC between the Councils. Each region's ACL would be set equal to its apportionment of the stock ABC, since the mutton snapper stock is healthy and catch limit overruns are uncommon. By using the most recent three years in each half of the historic and recent landings approach (**Option 3a** and **Preferred Option 3b**), the most recent trends in the fishery are most influential in determining the outcome of the apportionment. This is in contrast to **Alternative 2**, which uses a percentage that was informed by a much older reference period (50% to the average catch history from 1990-2008 + 50% to the average catch history from 2006-2008). Thus, while **Alternative 2** may provide consistency in methodology for determining the jurisdictional apportionment, the options in **Preferred Alternative 3** are more likely to capture recent changes in fishery dynamics and be more representative of future mutton snapper landings. For that same reason, **Preferred Option 3b** may also be more likely to capture the recent changes as a more recent time series is considered. Comparing the proposed catch limits in **Alternative 2** and the options in **Preferred Alternative 3** against the historical landings for mutton snapper by Council

over the last three years (Table 1.3.5) suggests that neither alternative would be expected to result in fishery closures due to a Council's apportionment of the mutton snapper stock ACL being exceeded (see also Appendix C).

2.2 Action 2: Modification of Southeastern U.S. Yellowtail Snapper, OFL, ABC, Jurisdictional Apportionment and Regional ACLs

Alternative 1: No Action. Maintain the current OFL, ABC, jurisdictional apportionment of the ABC, and regional ACLs for southeastern U.S. yellowtail snapper. The jurisdictional apportionment of the yellowtail snapper stock ABC by region is based on the formula established in the Generic ACL/AM Amendment and Comprehensive ACL Amendment (weighting 50% to the average catch history from 1993-2008 + 50% to the average catch history from 2006-2008), whereby 75% of the stock ABC is apportioned to the South Atlantic Council, and 25% is apportioned to the Gulf Council. The apportionment for yellowtail snapper was inclusive of MRFSS. The South Atlantic Council's regional ACL equals its apportionment of the stock ABC. The Gulf Council's regional ACL is reduced by 11% from its jurisdictional apportionment of the ABC using the Gulf Council's ACL/ACT Control Rule. Catch limits are shown below in lb ww.

	OFL ($F_{30\%SPR}$)	ABC (P* = 0.375)	Gulf Apportionment and ABC (25%)	Gulf ACL (89% of Gulf ABC)	South Atlantic Apportionment and ABC/ACL (75%)
2025+	4,510,000	4,050,000	1,012,500	901,125	3,037,500

Note: *Alternative 1 is inclusive of MRFSS. The SEDAR 96 (2025) stock assessment uses SRFS for recreational private vessel landings, MRIP for federal for-hire and recreational shore landings, and SRHS for headboat landings. Because the SEDAR 96 stock assessment, and the SSCs' catch limit recommendations from that assessment, are consistent with BSIA, Alternative 1 is not a viable alternative.*

Alternative 2: Modify the OFL and ABC and retain the current jurisdictional apportionment of the stock ABC for southeastern U.S. yellowtail snapper and modify regional ACLs based on the recommendations of the Councils' SSCs for 2026 through 2028 and subsequent years. The South Atlantic Council's regional ACL would be set equal to its apportionment of the stock ABC. For yellowtail snapper, 75% of the stock ABC is apportioned to the South Atlantic Council, and 25% is apportioned to the Gulf Council. Catch limits shown below are in lb ww and rounded to the nearest whole pound.[7]

> **Option 2a:** The Gulf regional ACL would be reduced 11% from the Gulf jurisdictional apportionment of the stock ABC, consistent with the buffer established in the Gulf Generic ACL/AM Amendment in 2012.

[7] For **Alternatives 2 – 4** in Action 2, monitoring of landings for yellowtail snapper would be inclusive of SRFS for recreational private vessel landings, MRIP for federal for-hire and recreational shore landings, and SRHS for headboat landings.

Option 2b: The Gulf regional ACL would be set equal to the Gulf jurisdictional apportionment of the stock ABC.

	OFL ($F_{30\%SPR}$)	ABC (75% of the yield at $F_{30\%SPR}$)	Gulf Apportionment and ABC/ACL (2b) (25%)	Gulf ACL @ 89% of Gulf ABC (2a)	South Atlantic Apportionment and ABC/ACL (75%)
2026	4,495,187	3,925,031	981,258	873,319	2,943,773
2027	4,364,600	3,913,426	978,357	870,737	2,935,070
2028+	4,307,856	3,918,634	979,659	871,896	2,938,976

Alternative 3: Modify the OFL and ABC and the jurisdictional apportionment of the yellowtail snapper ABC and the regional ACLs using the average of historic and recent landings, based on the recommendations of the Councils' SSCs for 2026 through 2028 and subsequent years. Use 50% of the average landings from 2004 through 2023 and 50% of the average landings from 2021 through 2023. This method apportions 17% of the stock ABC to the Gulf Council, and 83% to the South Atlantic Council. The South Atlantic Council's regional ACL would be set equal to its apportionment of the stock ABC. Catch limits shown below are in lb ww and rounded to the nearest whole pound.

Option 3a: The Gulf regional ACL would be reduced 11% from the Gulf jurisdictional apportionment of the stock ABC, consistent with the buffer established in the Gulf Generic ACL/AM Amendment in 2012.

Option 3b: The Gulf regional ACL would be set equal to the Gulf jurisdictional apportionment of the stock ABC.

	OFL ($F_{30\%SPR}$)	ABC (75% of the yield at $F_{30\%SPR}$)	Gulf Apportionment and ABC/ACL (3b) (17%)	Gulf ACL @ 89% of Gulf ABC (3a)	South Atlantic Apportionment and ABC/ACL (83%)
2026	4,495,187	3,925,031	667,255	593,857	3,257,776
2027	4,364,600	3,913,426	665,282	592,101	3,248,144
2028+	4,307,856	3,918,634	666,168	592,889	3,252,466

Preferred Alternative 4: Modify the OFL and ABC and the jurisdictional apportionment of the yellowtail snapper ABC and the regional ACLs using the average of historic and recent landings, based on the recommendations of the Councils' SSCs for 2026 through 2028 and subsequent years. Use 50% of the average landings from 2014 through 2023 and 50% of the average landings from 2021 through 2023. This method apportions 17% of the stock ABC to the Gulf Council, and 83% to the South Atlantic Council. The South Atlantic Council's regional ACL would be set equal to its apportionment of the stock ABC. Catch limits shown below are in lb ww and rounded to the nearest whole pound.

Option 4a: The Gulf regional ACL would be reduced 11% from the Gulf jurisdictional apportionment of the stock ABC, consistent with the buffer established in the Gulf Generic ACL/AM Amendment in 2012.

Preferred Option 4b: The Gulf regional ACL would be set equal to the Gulf jurisdictional apportionment of the stock ABC.

	OFL ($F_{30\%SPR}$)	ABC (75% of the yield at $F_{30\%SPR}$)	Gulf Apportionment and ABC/ACL (4b) (17%)	Gulf ACL @ 89% of Gulf ABC (4a)	South Atlantic Apportionment and ABC/ACL (83%)
2026	4,495,187	3,925,031	667,255	593,857	3,257,776
2027	4,364,600	3,913,426	665,282	592,101	3,248,144
2028+	4,307,856	3,918,634	666,168	592,889	3,252,466

Discussion:

The SEDAR 96 (2025) stock assessment of southeastern U.S. yellowtail snapper estimated the stock to be not overfished or experiencing overfishing as of 2023. The Councils' SSCs reviewed the stock assessment in February 2025, and recommended updated OFL and ABC values. Yellowtail snapper is a single stock throughout its range and is managed by the Gulf and South Atlantic Councils, with the stock ABC being apportioned between the Councils. The SEDAR 96 stock assessment used SRFS for recreational private vessel landings, MRIP units for federal for-hire and recreational shore landings, and SRHS units for headboat landings, and is consistent with BSIA. Because the current jurisdictional apportionment of the yellowtail snapper stock ABC is inclusive of recreational estimates from MRFSS, the Councils are considering options to update this jurisdictional apportionment and their regional ACLs for yellowtail snapper. Additionally, the Gulf regional ACL for yellowtail snapper is set 11% below its apportionment of the yellowtail snapper ABC. This buffer was created to account for management uncertainty in the Gulf Council's Generic ACL/AM Amendment (GMFMC 2011). This action contains options to reconsider that buffer.

Alternative 1 would maintain the current OFL, ABC, jurisdictional apportionment of the ABC, and regional ACLs for southeastern U.S. yellowtail snapper. Like for mutton snapper in Action 1, in 2012, NMFS implemented the Councils' jurisdictional apportionment of the yellowtail snapper stock ABC by region based on weighting 50% to the average catch history from 1993 through 2008 + 50% to the average catch history from 2006 through 2008, using data inclusive of MRFSS units for the recreational sector. The result was a jurisdictional apportionment of 75% of the yellowtail snapper stock ABC to the South Atlantic Council, and 25% apportioned to the Gulf Council. The South Atlantic Council's stock ACL is set equal to its apportionment of the stock ABC. Also, in 2012 (GMFMC 2011), the Gulf Council used its ACL/ACT Control Rule to reduce its regional ACL by 11% relative to its apportionment of the yellowtail snapper stock ABC. The Gulf Council performed this same measure for several stocks along with yellowtail snapper that were popularly targeted, but at the time did not have defined ACLs prior

to 2012. Setting the ACL equal to the ABC is common for both Councils when a stock is healthy across its range and overruns of the stock ACL are uncommon. Also, like mutton snapper, the apportionment and catch limits described in **Alternative 1** were inclusive of MRFSS, which is no longer considered consistent with BSIA for yellowtail snapper (see Appendix B). Further, the Councils' SSCs have made revised OFL and ABC recommendations (see Table 1.4.2) based on the SEDAR 96 (2025) stock assessment of yellowtail snapper, the results of which are considered to be consistent with BSIA. Because **Alternative 1** is inconsistent with this updated scientific advice, is not a viable alternative.

Of note, the fishing season in the Gulf and South Atlantic for yellowtail snapper begins on August 1 and closes on July 31 of the following year (GMFMC 2016, SAFMC 2016). Thus, the current catch limits under **Alternative 1** apply to that fishing year. For **Alternative 2**, **Alternative 3**, and **Preferred Alternative 4**, in order to apply the current fishing year to the SSC-proposed catch limits from Table 1.4.2, the stock OFL and stock ABC for yellowtail snapper for 2026 would apply to the 2026/2027 fishing year; the OFL and ABC for 2027 to the 2027/2028 fishing year; and the OFL and ABC for 2028 to the 2028/2029 fishing year and subsequent fishing years (Table 2.2.1). This method uses the inherent estimation of SSB and productivity in the same projection year in which the fishing year begins, which would invariably be more conservative for the portion of the following year before the fishing year concludes. Alternatively, and as an example, using the 2027 catch limit for the 2026/2027 fishing year would overestimate productivity and SSB in the year in which the fishing year starts (2026) compared to the projection year (2027). While the latter scenario is unlikely to result in overfishing for yellowtail, in principle and under tighter circumstances, it could.

Table 2.2.1. SSCs recommended OFL and ABC calendar year values for yellowtail snapper, based on the results of SEDAR 96 (2025) and using an MSY proxy of the yield when fishing at $F_{30\%SPR}$. Catch limits are in lb ww and are shown as applicable to the current yellowtail snapper fishing year regulations.

	OFL ($F_{30\%SPR}$)	**ABC (75% of the yield at $F_{30\%SPR}$)**
2026/2027	4,495,187	3,925,031
2027/2028	4,364,600	3,913,426
2028/2029+	4,307,856	3,918,634

Alternative 2 would retain the current jurisdictional apportionment of the stock ABC for yellowtail snapper and establish regional ACLs based on the recommendations of the Councils' SSCs for 2026 through 2028 and subsequent years. Like **Alternative 1**, **Alternative 2** would apportion 75% of the yellowtail snapper stock ABC to the South Atlantic Council, and 25% to the Gulf Council. However, consistent with the data used in SEDAR 96 to generate the SSCs' updated catch advice, landings and quota monitoring for yellowtail snapper would use SRFS for recreational private vessel landings, MRIP for federal for-hire and recreational shore landings, and SRHS for headboat landings. Specifically, for MRIP charter for-hire landings from Areas D and E (Figure 1.1.3), quota monitoring would be subject to applying the ratios listed in Table 1.1.1 for determining which landings are attributed to which Council. So, in practice, while **Alternative 2** uses the same percentages as those established in 2012 under **Alternative 1**,

Alternative 2 would use the updated landings monitoring method and catch advice from the Councils' SSCs. This jurisdictional apportionment may no longer be accurate to reflect current fishery dynamics since it is informed by the same reference period of years as **Alternative 1**. The South Atlantic Council's regional ACL would continue to be set equal to its apportionment of the stock ABC, since the stock is healthy and catch limit overruns are uncommon. As stated under **Alternative 1**, the Gulf Council typically adopts a similar approach when a stock is healthy and catch limit overruns are uncommon. Here in **Alternative 2**, two options for modifying the Gulf regional ACL relative to the Gulf Council's apportionment of the stock ABC are presented. **Option 2a** would retain the current 11% buffer between the Gulf Council's apportionment of the stock ABC and the Gulf regional ACL, which was established under the Generic ACL/AM Amendment (GMFMC 2011). Of note, if the current Gulf landings for 2020/2021 through 2023/2024, and the results of the SEDAR 96 (2025) stock assessment, are applied to the Gulf ACL/ACT Control Rule for yellowtail snapper, the buffer between the Gulf ACL and Gulf ACT would decrease to 8%. An option for an 8% buffer is not presented here (or elsewhere in Action 2) due to the Gulf Council's established practice of not using an ACT when a stock is considered healthy and seasonal closures are not anticipated. **Option 2b**, in recognition of the health of the yellowtail snapper stock per the SEDAR 96 stock assessment, would set the Gulf regional ACL equal to the Gulf Council's apportionment of the stock ABC for yellowtail snapper.

Alternative 3 and **Preferred Alternative 4** would modify the jurisdictional apportionment of the yellowtail snapper ABC and the regional ACLs using the average of historic and recent landings and would establish this modified jurisdictional apportionment and the regional ACLs based on the recommendations of the Councils' SSCs for 2026 through 2028 and subsequent years. Both **Alternative 3** and **Preferred Alternative 4** would monitor landings and set catch limits using SRFS for recreational private vessel landings, MRIP for federal for-hire and recreational shore landings, and SRHS for headboat landings, and would retain the South Atlantic Council's regional ACL being set equal to its apportionment of the stock ABC. For MRIP charter for-hire landings from Areas D and E (Figure 1.1.3), quota monitoring would be subject to applying the ratios listed in Table 1.1.1 for determining which landings are attributed to which Council. Also, like **Alternative 2**, two options for modifying the Gulf regional ACL relative to the Gulf Council's apportionment of the stock ABC are presented in both **Alternative 3** and **Preferred Alternative 4**. **Option 3a** in **Alternative 3** and **Option 4a** in **Preferred Alternative 4** would retain the current 11% buffer between the Gulf Council's apportionment of the stock ABC and the Gulf regional ACL, which was established under the Generic ACL/AM Amendment (GMFMC 2011). **Option 3b** in **Alternative 3** and **Preferred Option 4b** in **Preferred Alternative 4** would, in recognition of the health of the yellowtail snapper stock per the SEDAR 96 stock assessment, set the Gulf regional ACL equal to the Gulf Council's apportionment of the stock ABC for yellowtail snapper.

For determining the jurisdictional apportionment, **Alternative 3** applies the average of historic and recent landings approach to a 20-year reference period by using 50% of the average landings from 2004 through 2023 and 50% of the average landings from 2021 through 2023), using the same landings programs that quota monitoring would use for the recreational sector. This method results in 17% of the yellowtail snapper stock ABC being apportioned to the Gulf Council, and 83% to the South Atlantic Council. **Preferred Alternative 4** applies the average of

historic and recent landings approach to a 10-year reference period by using 50% of the average landings from 2014 through 2023 and 50% of the average landings from 2021 through 2023), with the same note about recreational data as in **Alternative 3**. This method also results in 17% of the yellowtail snapper stock ABC being apportioned to the Gulf Council, and 83% to the South Atlantic Council. Using the average of historic and recent landings approach focuses on the most recent trends in the fishery when determining the outcome of the apportionment. This is in contrast to **Alternative 2**, which uses a percentage that was informed by a much older reference period (50% to the average catch history from 1993-2008 + 50% to the average catch history from 2006-2008). Thus, while **Alternative 2** may provide consistency in methodology for determining the jurisdictional apportionment, **Alternative 3** and **Preferred Alternative 4** are more likely to capture recent changes in fishery dynamics and be more representative of future yellowtail snapper landings. Normally, **Preferred Alternative 4** would be more likely than **Alternative 3** to capture the recent changes as a more recent time series is considered. However, in this case, both **Alternative 3** and **Preferred Alternative 4** result in the same jurisdictional apportionment between the Councils for yellowtail snapper and are therefore identical with regard to effects.

Comparing the proposed catch limits in **Alternative 2** and the options in **Alternative 3** and **Preferred Alternative 4** against the historical landings for yellowtail snapper by Council over the last three years (Table 1.4.5, Appendix D) suggests that none of these alternatives would result in fishery closures for the South Atlantic due to its apportionment of the yellowtail snapper stock ACL being exceeded. However, for **Option 3a** in **Alternative 3** and **Option 4a** in **Preferred Alternative 4**, the proposed Gulf-specific ACT buffered 11% below the Gulf ACL is less than the highest estimated landings from the last three years (2022, in 2022 through 2024, Table 1.4.5), which may indicate Gulf vulnerability to a seasonal closure. Alternatively, for **Option 3b** in **Alternative 3** and **Preferred Option 4b** in **Preferred Alternative 4**, the proposed Gulf-specific ACL is approximately 10% above the highest estimated landings from the last three years (2022, in 2022 – 2024), which may indicate somewhat less vulnerability to a seasonal closure than **Option 3a** and **Option 4a**.

2.3 Action 3: Modification of Southeastern U.S. Mutton Snapper Sector Allocations in the South Atlantic

Preferred Alternative 1: No Action. Retain the current commercial and recreational sector allocations as 17.02% and 82.98%, respectively, of the current South Atlantic total annual catch limit for mutton snapper.

Alternative 2: Allocate 12.71% of the revised total annual catch limit for mutton snapper to the commercial sector and 87.29% of the revised total annual catch limit for mutton snapper to the recreational sector.

Alternative 3: Allocate 11.45% of the revised total annual catch limit for mutton snapper to the commercial sector and 88.55% of the revised total annual catch limit for mutton snapper to the recreational sector.

Table 2.3.1. Commercial and recreational annual catch limits for mutton snapper in the South Atlantic under the alternatives in Action 3. The sector annual catch limits are based on the Preferred Alternative 3b under Action 1.

Action 3 Alternative	Year	Action 1 Alternative Jurisdictional ABC/ACL	South Atlantic (SA) Apportionment and ABC/ACL	SA Commercial ACL (lb ww) /Allocation percentage	SA Recreational ACL Numbers of Fish/ Allocation percentage
Preferred Alternative 1 (No Action)	2026	Preferred Alternative 3b (15% Gulf/85% SA)	2,316,555	394,278/17.02%	371,021/82.98%
Preferred Alternative 1 (No Action)	2027	Preferred Alternative 3b (15% Gulf/85% SA)	2,339,520	398,186/17.02%	364,028/82.98%
Preferred Alternative 1 (No Action)	2028+	Preferred Alternative 3b (15% Gulf/85% SA)	2,356,723	401,114/17.02%	359,617/82.98%
Alternative 2	2026	Preferred Alternative 3b (15% Gulf/85% SA)	2,316,555	294,434/12.71%	382,781/87.29%
Alternative 2	2027	Preferred Alternative 3b (15% Gulf/85% SA)	2,339,520	297,353/12.71%	375,904/87.29%
Alternative 2	2028+	Preferred Alternative 3b (15% Gulf/85% SA)	2,356,723	299,539/12.71%	371,581/87.29%
Alternative 3	2026	Preferred Alternative 3b (15% Gulf/85% SA)	2,316,555	265,246/11.45%	386,219/88.55%
Alternative 3	2027	Preferred Alternative 3b (15% Gulf/85% SA)	2,339,520	267,875/11.45%	379,376/88.55%
Alternative 3	2028+	Preferred Alternative 3b (15% Gulf/85% SA)	2,356,723	269,845/11.45%	375,079/88.55%

Discussion:

The current sector allocations for mutton snapper in the South Atlantic (17.02% commercial and 82.98% recreational) were calculated by weighing 50% of the average catch history from 1990 through 2008 + 50% of the average catch history from 2006 through 2008. **Preferred Alternative 1 (No Action)** applies the percentages determined using the aforementioned formula to the updated South Atlantic ACL from **Preferred Alternative 3b** from Action 1. The commercial ACL is expressed in lb ww, whereas the recreational ACL is expressed in numbers of fish. To calculate the recreational ACL, the total and commercial ACLs were converted to numbers of fish using the average weight of a commercially caught mutton snapper (8.49 lb ww). Then, the recreational ACL in numbers of fish was calculated by subtracting the commercial allocation in numbers of fish from the total ACL in numbers of fish (SAFMC 2017). The commercial ACL was used to convert the recreational ACL because of the lower uncertainty in commercially reported average weight versus the estimated average weight from recreational survey programs. See Appendix E for full details on the methods used.

Alternative 2 would update the allocation formula by weighing 50% of the average catch history from 2004 through 2023 + 50% of the average catch history from 2021 through 2023. This results in a commercial sector allocation of 12.71% and a recreational sector allocation of 87.29%. **Alternative 3** would update the allocation formula by weighing 50% of the average catch history from 2014 through 2023 + 50% of the average catch history from 2021 through 2023. This results in a commercial sector allocation of 12.71% and a recreational sector allocation of 87.29%.

2.4 Action 4: Modification of Southeastern U.S. Yellowtail Snapper Sector Allocations in the South Atlantic

Preferred Alternative 1: No Action. Retain the current commercial and recreational sector allocations as 52.56% and 47.44%, respectively, of the current South Atlantic total annual catch limit for yellowtail snapper.

Alternative 2: Allocate 55.46% of the revised total annual catch limit for yellowtail snapper to the commercial sector and 47.44% of the revised total annual catch limit for yellowtail snapper to the recreational sector.

Alternative 3: Allocate 56.52% of the revised total annual catch limit for yellowtail snapper to the commercial sector and 43.48% of the revised total annual catch limit for yellowtail snapper to the recreational sector.

Table 2.4.1. Commercial and recreational annual catch limits for yellowtail snapper in the South Atlantic under the alternatives in Action 4. The sector annual catch limits are based on the Preferred Alternative 4b under Action 2.

Action 4 Alternative	Year	Action 2 Alternative Jurisdictional ABC/ACL	South Atlantic (SA) Apportionment and ABC/ACL	SA Commercial ACL (lb ww) /Allocation percentage	SA Recreational ACL Numbers of Fish/ Allocation percentage
Preferred Alternative 1 (No Action)	2026	Alternative 4b (17% Gulf/83% SA)	3,257,776	1,712,287/52.56%	1,545,489/47.44%
Preferred Alternative 1 (No Action)	2027	Alternative 4b (17% Gulf/83% SA)	3,248,144	1,707,224/52.56%	1,540,919/47.44%
Preferred Alternative 1 (No Action)	2028+	Alternative 4b (17% Gulf/83% SA)	3,252,466	1,709,496/52.56%	1,542,970/47.44%
Alternative 2	2026	Alternative 4b (17% Gulf/83% SA)	3,257,776	1,806,762/55.46%	1,451,013/44.54%
Alternative 2	2027	Alternative 4b (17% Gulf/83% SA)	3,248,144	1,801,420/55.46%	1,446,723/44.54%
Alternative 2	2028+	Alternative 4b (17% Gulf/83% SA)	3,252,466	1,803,818/55.46%	1,448,648/44.54%
Alternative 3	2026	Alternative 4b (17% Gulf/83% SA)	3,257,776	1,841,295/56.52%	1,416,481/43.48%
Alternative 3	2027	Alternative 4b (17% Gulf/83% SA)	3,248,144	1,835,851/56.52%	1,412,293//43.48%
Alternative 3	2028+	Alternative 4b (17% Gulf/83% SA)	3,252,466	1,838,294/56.52%	1,414,172/43.48%

Discussion:

The current sector allocations for yellowtail snapper South Atlantic (52.56% commercial and 47.44 percent recreational) were calculated by weighting 50% of the average catch history from

1990 through 2008 + 50% of the average catch history from 2006 through 2008. **Preferred Alternative 1 (No Action)** applies the percentages determined using the aforementioned formula to the updated South Atlantic ACL from Preferred Alternative 4b from Action 2.

Alternative 2 would update the allocation formula by weighing 50% of the average catch history from 2004 through 2023 + 50% of the average catch history from 2021 through 2023. This results in a commercial sector allocation of 55.46% and a recreational sector allocation of 44.54%. **Alternative 3** would update the allocation formula by weighing 50% of the average catch history from 2014 through 2023 + 50% of the average catch history from 2021 through 2023. This results in a commercial sector allocation of 56.52% and a recreational sector allocation of 43.48%.

CHAPTER 3. AFFECTED ENVIRONMENT

3.1 Description of the Physical Environment

3.1.1 Gulf of America

The physical environment for Gulf of America (Gulf) reef fish is detailed in the Environmental Impact Statement (EIS) for the Generic Essential Fish Habitat (EFH) Amendment (GMFMC 2004a), Generic EFH Amendment 3 (GMFMC 2005), and the Generic Annual Catch Limit/Accountability Measure (ACL/AM) Amendment (GMFMC 2011a), which are hereby incorporated by reference and summarized below.

The Gulf has a total area of approximately 600,000 square miles (1.5 million km^2), including state waters (Gore 1992). It is a semi-enclosed, oceanic basin connected to the Atlantic Ocean by the Straits of Florida and to the Caribbean Sea by the Yucatan Channel (Figure 3.1.1.1).

Oceanographic conditions are affected by the Loop Current, discharge of freshwater into the northern Gulf, and a semi-permanent, anti-cyclonic gyre in the western Gulf. The Gulf includes both temperate and tropical waters (McEachran and Fechhelm 2005). Gulf water temperatures range from 54º F to 84º F (12º C to 29º C) depending on time of year and depth of water. Mean annual sea surface temperatures ranged from 73º F through 83º F (23-28º C), including bays and bayous (Figure 3.1.1), between 1982 and 2009, according to satellite-derived measurements (NODC 2011).[8] In general, mean sea surface temperature increases from north to south with large seasonal variations in shallow waters.

[8] http://accession.nodc.noaa.gov/0072888

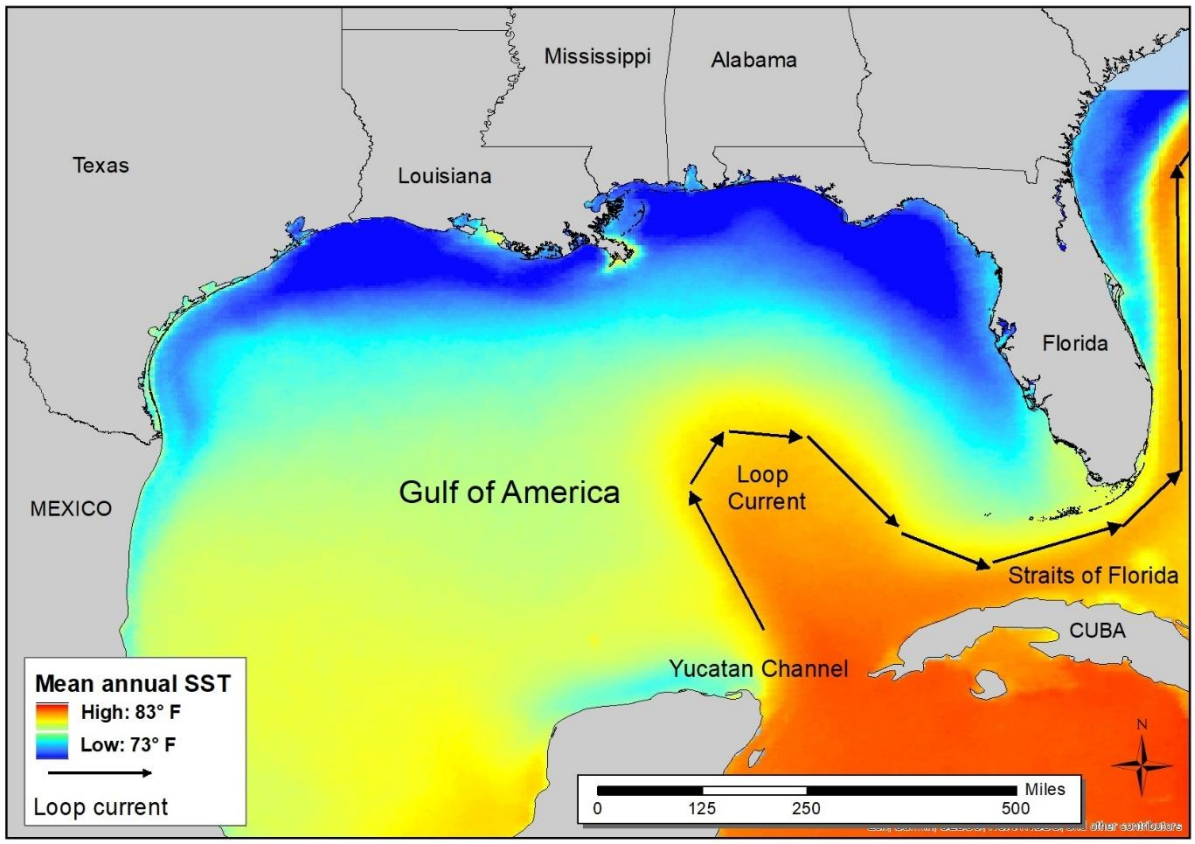


Figure 3.1.1.1. Mean annual sea surface temperature derived from the Advanced Very High-Resolution Radiometer Pathfinder Version 5 sea surface temperature data set.[9]

General Description of the Reef Fish Physical Environment in the Gulf

In general, reef fish are widely distributed in the Gulf, occupying both pelagic and benthic habitats during their life cycle. They generally have a planktonic larval stage that lives in the water column and feeds on zooplankton and phytoplankton (GMFMC 2004a). Juvenile and adult reef fish are typically demersal and usually associated with bottom topographies on the continental shelf (less than 100 m) which have high relief, i.e., coral reefs, artificial reefs, rocky hard-bottom substrates, ledges and caves, sloping soft-bottom areas, and limestone outcroppings. However, several species are found over sand and soft-bottom substrates. For example, some juvenile snapper (e.g., mutton, gray, red, dog, lane, and yellowtail snappers) and grouper (e.g., goliath, red, gag, and yellowfin groupers) are associated with inshore seagrass beds, mangrove estuaries, lagoons, and larger bay systems.

[9] https://www.ncei.noaa.gov/access/metadata/landing-page/bin/iso?id=gov.noaa.nodc:AVHRR_Pathfinder-NODC-v5.0-climatologies

Habitat Areas of Particular Concern (HAPC) and Environmental Sites of Special Interest

Detailed information pertaining to HAPCs is provided in Generic Amendment 3 (GMFMC 2005) and Amendment 9 to the Fishery Management Plan (FMP) for the Coral and Coral Reefs of the Gulf of Mexico, U.S. Waters (GMFMC 2018). Detailed information pertaining to the Gulf area closures and marine reserves is provided in Amendment 32 to the Fishery Management Plan for the Reef Fish Resources in the Gulf of Mexico (Reef Fish FMP; GMFMC 2011b). There are environmental sites of special interest that are discussed in the Generic EFH Amendment (GMFMC 2004a) that are relevant to reef fish management. These documents are hereby incorporated by reference.

Northern Gulf Hypoxic Zone

A large hypoxic zone forms every summer in the northern Gulf. It is the result of allochthonous materials and runoff from agricultural lands resulting in increasing nutrient inputs to multiple rivers. These tributaries feed into the Mississippi River, which disperses to the Gulf, and creates a temperature and salinity dependent layering of waters. The nutrient rich fresh waters from the Mississippi create seasonal, large algal blooms at the surface that eventually die, sink to the bottom, and decompose. This creates the oxygen-poor, hypoxic, bottom water layer unless front or storm events occur, which allows for mixing of the layers (Rabalais and Turner 2019). Mapping of the hypoxic zone began in 1985. For 2025, the extent of the hypoxic area was 4,402 square miles, double what it was in 2020 (2,116 square miles), but still less than the extent of the 2017 hypoxic area (8,776 square miles). The changes in hypoxic area can be attributed to changing amounts of river discharge and its associated nutrient load and storm events. The major factor for the reduced size in 2020 was the active storm season with Hurricane Hanna passing right over the zone, allowing for mixing of the waters. The 2025 hypoxia area was lower than the 5-year hypoxic area average (5,408 square miles), but still more than double the 1,930 square mile goal set by the Interagency Mississippi River and Gulf of America Hypoxia Task Force to be reached by 2035.[10] The hypoxic conditions in the northern Gulf directly impact less mobile benthic macroinvertebrates (e.g., polychaetes) by influencing density, species richness, and community composition (Baustian and Rabalais 2009; Breitburg et al. 2018). However, more mobile macroinvertebrates and demersal fishes are able to detect lower dissolved oxygen levels and move away from hypoxic conditions. Therefore, these organisms are indirectly affected by limited prey availability and constrained available habitat (Baustian and Rabalais 2009; Craig 2012).

Environmental Variability

Projections predict increases in sea-surface temperature and sea level; decreases in sea-ice cover; and changes in salinity, wave climate, and ocean circulation (Intergovernmental Panel on Climate Change). These changes are likely to affect plankton biomass and fish larvae abundance that could adversely impact fish, marine mammals, seabirds, and ocean biodiversity. Kennedy et al. (2002) and Osgood (2008) have suggested global climate variation could affect temperature

[10] http://gulfhypoxia.net

changes in coastal and marine ecosystems that can influence organism metabolism and alter ecological processes such as productivity and species interactions; change precipitation patterns and cause a rise in sea level which could change the water balance of coastal ecosystems; altering patterns of wind and water circulation in the ocean environment; and influence the productivity of critical coastal ecosystems such as wetlands, estuaries, and coral reefs. The National Oceanic and Atmospheric Administration (NOAA) Climate Web Portal predicts the average sea surface temperature in the Gulf will increase by approximately 2ºC for 2006-2100 compared to the average sea surface temperature from 1956-2005.

3.1.2 South Atlantic

Information on the habitat utilized by species managed under the FMP for the Snapper Grouper Fishery of the South Atlantic Region (Snapper Grouper FMP) is included in Volume II of the Fishery Ecosystem Plan (FEP II; SAFMC 2018) and in the SAFMC EFH User Guide (SAFMC 2024), which are incorporated here by reference. South Atlantic Fishery Management Council (South Atlantic Council)-designated EFH and EFH-HAPCs are described in the SAFMC EFH User Guide and spatial representations of these and other habitat-related layers are in the South Atlantic Council's SAFMC EFH Mapper.

Essential Fish Habitat

For current EFH information for species managed under the Snapper Grouper FMP information, refer to Appendix D.

Habitat Areas of Particular Concern

For current EFH-HAPC for species managed under the Snapper Grouper FMP, refer to Appendix D.

3.2 Description of the Biological and Ecological Environment

The biological environment of the Gulf and the South Atlantic, including for mutton snapper and yellowtail snapper, is described in detail in the Generic EFH Amendment (GMFMC 2004a) and the Generic ACL/AM Amendment (GMFMC 2011a), which are hereby incorporated by reference and summarized below.

3.2.1 Mutton Snapper

Life History

Mutton snapper is distributed within the Western Atlantic from Massachusetts, U.S. to southeastern Brazil with concentrations primarily in the Caribbean Sea and off southern Florida (Froese and Pauly 2023). The southeastern U.S. mutton snapper fishery is managed by the South Atlantic Council and the Gulf Fishery Management Council (Gulf Council; collectively, Councils) as separate management units with the boundary being U.S. Highway 1 in the Florida Keys west to the Dry Tortugas. The State of Florida also manages mutton snapper in state

waters, while other states in the Councils' jurisdictions defer to federal management regulations. Based on the recommendations in SEDAR 79 (2024), a single closed population in the Councils' jurisdictions is assumed for the purpose of stock assessment and management.

Mutton snapper occurs on the continental shelf areas as well as in clear waters around islands. The species forms small aggregations that disband during the night (Allen 1985). Mutton snapper feed both during the day and at night on fishes, shrimps, crabs, cephalopods, and gastropods (Allen 1985). These fish may be found at depths ranging from 80-310 feet (25-95 m) (Murray and Bester 2007). They are solitary fish, rarely found in groups or schools except during spawning aggregations (Domeier et al. 1996).

Mutton snapper forms aggregations when it spawns (Figuerola et al. 1997). Burton et al. (2005 and references therein) indicate that mutton snapper spawning occurs from May through July at Riley's Hump and peaks in June, as indicated by gonadosomatic indices (M. L. Burton, unpubl. data). Fish begin to aggregate for spawning around the full moon (Burton et al. 2005). Individuals have been observed in spawning condition in the U.S. Caribbean from February through July (Erdman 1976). Some spawning occurs during February to June off Puerto Rico, but spawning peaks during the week following the full moon in April and May. Spawning aggregations are known to occur north of St. Thomas, USVI, and south of St. Croix, USVI, in March, April, and May (Rielinger 1999). Spawning has also been reported from the Turks and Caicos, Florida, the Bahamas, and Cuba (Burton 2002, Barbieri and Colvocoresses 2003, Claro and Lindeman 2003). Garcia-Cagide et al. (2001) and Claro and Lindeman (2003), place peak spawning 6-7 days after the full moon during May and June.

Mutton snapper has a pelagic egg/larval stage that lasts for approximately 30 days, with high natural mortality (Houde 1987; D'Alessandro et al. 2010). In the Straits of Florida from the east Florida shelf (off Biscayne Bay) to the Great Bahama Bank, D'Alessandro et al. (2010) reported that mutton snapper larvae occurred most of the year with higher abundances from June to November when water temperatures were warmest and were more abundant in depths of 0 – 25 meters. Juvenile mutton snapper settles onto habitats such as nearshore seagrass beds less than 10 meters deep (Lindeman et al. 2000), and moving to and foraging in mangrove, estuarine, seagrass, and reef habitats (Bastos et al. 2022). Large adults are found in or near offshore reef and rock rubble habitats. Mutton snapper may have relatively high site fidelity, but larger movements (46 – 105 km) do occur (B. Cermak, J. Cortes, S. Wilms, FWC, unpublished data). Mutton snapper does not change sex (i.e., it is gonochoristic). Length and age at which 50% of females are sexually mature were estimated as 42.2 cm (16.6 inches) TL and 3.5 years, respectively, for spawning capable and actively spawning females (SEDAR 79 2024).

SEDAR 79 (2024) used otoliths from years 1977 – 2022. The majority of otoliths were found to be ages 3 to 5 (53.2%) and ages 2 – 9 comprised 86.1% of the data. Ages sampled from the recreational fishery constituted a total of 49.0% of all otoliths, predominantly from the headboat survey, while ages sampled from the commercial fishery made up 46.2%. Age data from fishery-independent sources totaled 4.7%. Most samples were from hook and line gear, and from Florida waters. Samples from the commercial fishery contained a higher proportion of older fish, with the oldest fish coming from southwest Florida. The current maximum observed age of mutton snapper based on sectional otoliths is 42 years (Florida Keys, 2015). Maximum

length for growth calculations in SEDAR 79 was estimated at 847 mm total length (TL). Natural mortality is calculated at 0.17 yr-1. Release mortality at a 30-meter depth was estimated to be approximately 30% across all fleets.

Stock Status

The mutton snapper stock has been assessed three times since 2006, and has been estimated to be healthy (i.e., not overfished, and not undergoing overfishing) by each stock assessment. Catch limits for mutton snapper were last modified as a result of a stock assessment in 2015. Data from the most recent stock assessment (SEDAR 79) are being considered for use in management in this document. A summary table of the mutton snapper stock assessments is found in Table 3.2.1.1.

Table 3.2.1.1. Summary of SEDAR stock assessments completed for southeastern U.S. mutton snapper, including the terminal (or last) year of data used by each stock assessment, the MSY proxy expressed as a percent of the spawning potential ratio (SPR), the minimum stock size threshold (MSST), and whether the stock was estimated to be overfished or experiencing overfishing.

SEDAR	Terminal Year	SPR%	MSST	Overfished?	Overfishing?
SEDAR 15A	2006	30%	(1-M) * B_{MSY}	No	No
SEDAR 15A Update	2013	30%	0.75 * SSB_{MSY}	No	No
SEDAR 79	2023	30%	0.75 * SSB_{MSY}	No	No

3.2.2 Yellowtail Snapper

Life History

Yellowtail snapper, *Ocyurus chrysurus*, occurs in the Western Atlantic, ranging from Massachusetts to southeastern Brazil, including the Gulf and Caribbean Sea, but is most common in the Bahamas, off south Florida, and throughout the Caribbean (Randall 1967, Fischer 1978, Allen 1985, Hoese and Moore 1998). Like mutton snapper, the southeastern U.S. yellowtail snapper fishery is managed by the Councils as separate management units with the boundary being U.S. Highway 1 in the Florida Keys west to the Dry Tortugas. The State of Florida also manages yellowtail snapper in state waters, while other states in the Councils' jurisdictions defer to federal management regulations. Based on the recommendations in SEDAR 96 (2025), a single closed population in the Councils' jurisdictions is assumed for the purpose of stock assessment and management. Most U.S. landings are from the Florida Keys and southeastern Florida.

Yellowtail snapper inhabits waters as deep as 180 m (590 ft), and usually is found well above the bottom (Allen 1985). Muller et al. (2003) state that adults typically inhabit sandy areas near offshore reefs at depths ranging from 10 to 70 m (33-230 ft). Thompson and Munro (1974) indicate that this species is most abundant at depths of 20-40 m (66-131 ft) near the edges of shelves and banks off Jamaica. Juveniles are usually found over back reefs and seagrass beds (Thompson and Munro 1974; Muller et al. 2003). Yellowtail snapper feeds primarily at night

(Friedlander et al. 2013) and opportunistically throughout the day (Cummings 2004). Juveniles feed primarily on plankton (Allen 1985; Thompson and Munro 1974). Adults eat a combination of planktonic (Allen 1985), pelagic (Thompson and Munro 1974), and benthic organisms, including fishes, crustaceans, worms, gastropods, and cephalopods (Allen 1985, Barbieri and Colvocoresses 2003). Bortone and Williams (1986) stated that both juveniles and adults feed on fish, shrimp, and crabs. Yellowtail snapper exhibits schooling behavior (Thompson and Munro 1974).

Yellowtail snapper spawns multiple times per year with indeterminate fecundity (Barbieri and Colvocoresses 2003). In the Florida Keys, spawning peaks during April to August, but can occur year-round (McClellan and Cummings 1998; Collins and Finucane 1989). Gonadosomatic indices from studies in the Florida Keys (e.g., Collins and Finucane 1989; Pinkard and Shenker 2001; Barbieri and Colvocoresses 2003) reported increasing values beginning in April and remained high through July or August. In Cuban waters, peak spawning occurs in April with another less intensive peak in September (Claro et al. 2001). Large spawning aggregations have been reported to form seasonally off the coasts of Cuba, the Turks and Caicos Islands, U.S. Virgin Islands, and during May – July southwest of Key West, FL, at Riley's Hump off the Dry Tortugas (Lindeman et al. 2000). Spawning occurs in offshore waters (Figuerola et al. 1997; Thompson and Munro 1974) and during the new moon (Figuerola et al. 1997).

Yellowtail snapper larvae undergo a relatively short pelagic existence, settling out in the sea grass after about 30-40 days of age (Lindeman 1997, D'Alessandro et al. 2010). Juveniles off St. Croix, U.S.V.I. were reported in the seagrass up to about 10 cm TL, and adults mainly inhabit hard rocky bottom, including patch reef, rubble, and also algal sand flats (Mateo and Tobias 2001). Juveniles have been reported in mangrove habitats off the southwest coast of Puerto Rico and Tortola British Virgin Islands (Kimmel 1985, Boulon 1988, Rooker and Dennis 1992 and also off the Netherlands Antilles (Nagelkerken et al. 2000). Juveniles are found in shallow coastal waters over back reefs, seagrass beds (especially turtle grass, *Thallasia testudinum*), and mangrove habitats (Kimmel 1985, Rooker and Dennis 1991, Boulon 1992, Cummings 2004). Dennis (1988) suggested that the mangrove prop root habitat may serve as an intermediary habitat refuge when the juveniles outgrow their seagrass habitat before emigration onto the coral reef area. Adults are associated with coral reefs and other hard bottom substrate and are generally found in schools above the substrate (Hoese and Moore, 1998, Herbig et al. 2019b) and at depths ranging from 10 – 70 meters (GMFMC 2013). Yellowtail snapper does not change sex (i.e., it is gonochoristic). Figuerola et al. (1997) estimated the length at which 50% of individuals are sexually mature as 22.4 cm (8.9 in) FL (males) and 19.2 cm (7.6 in) FL (females), based on fishery independent and dependent data collected off Puerto Rico.

SEDAR 96 (2025) evaluated otoliths from years 1980 through 2023. Age data for yellowtail snapper were predominantly from fishery-dependent age sources (55% commercial, 35% headboat, and 8% MRIP [private, charter, and shore modes]), while the number of ages from fishery independent sources was very low (2%). 74,402 yellowtail snapper otoliths were sampled by year in the state of Florida; half (50%) of the age data were of fish aged 2 and 3 years and fish aged 2 – 6 comprised 89% of the data. The maximum reported length for yellowtail snapper was 86.3 cm (34.2 in) TL (male) and 4.98 kg (11 lb) (International Game Fish Association 2023). Maximum age is 28 years (from North Carolina) with the oldest fish

collected from Florida waters at 20 years old (SEDAR 96 2025). Natural mortality is estimated at 0.223 yr-1 with a range of 0.198-0.558 yr-1 (SEDAR 96 2025). Release mortality was estimated to be 10% for the commercial, headboat, and MRIP fleets.

Stock Status

The yellowtail snapper stock has been assessed five times since 2003, and has been estimated to be healthy (i.e., not overfished, and not undergoing overfishing) by each stock assessment. Catch limits for yellowtail snapper were last modified as a result of a stock assessment in 2012. Data from more recent stock assessments have not yet been incorporated into management due to dynamic Council priorities and a shift in data units used to estimate landings for the stock. A summary table of the yellowtail snapper stock assessments is found in Table 3.2.2.1.

Table 3.2.2.1. Summary of SEDAR stock assessments completed for southeastern U.S. yellowtail snapper, including the terminal (or last) year of data used by each stock assessment, the MSY proxy expressed as SPR, MSST, and whether the stock was estimated to be overfished or experiencing overfishing.

SEDAR	Terminal Year	SPR%	MSST	Overfished?	Overfishing?
SEDAR 3	2001	35%	(1-M) * B_{MSY}	No	No
SEDAR 27A	2011	30%	(1-M) * B_{MSY}	No	No
SEDAR 64	2017	30%	0.75 * SSB_{MSY}	No	No
SEDAR 64 Update	2020	30%	0.75 * SSB_{MSY}	No	No
SEDAR 96	2023	30%	0.75 * SSB_{MSY}	No	No

3.2.3 General Information

Protected Species and Protected Species Bycatch

The National Marine Fisheries Service (NMFS) manages marine protected species in the Southeast region under the Endangered Species Act (ESA) and the Marine Mammal Protection Act (MMPA). A brief summary of these two laws and more information is available on NMFS Office of Protected Resources website.[11] There are 29 ESA-listed species or Distinct Population Segments (DPS) of marine mammals, sea turtles, fish, and corals managed by NMFS that may occur in federal waters of the South Atlantic or Gulf of America (Gulf). There are 91 stocks of marine mammals managed within the Southeast region plus the addition of the stocks such as North Atlantic right whales (NARW), and humpback, sei, fin, minke, and blue whales that regularly or sometimes occur in Southeast region managed waters for a portion of the year (Hayes et al. 2017). All marine mammals in U.S. waters are protected under the MMPA. The MMPA requires that each commercial fishery be classified by the number of marine mammals they seriously injure or kill. NMFS's List of Fisheries[12] classifies U.S. commercial fisheries into

[11] https://www.fisheries.noaa.gov/about/office-protected-resources
[12] https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-protection-act-list-fisheries/

three categories based on the number of incidental mortality or serious injury they cause to marine mammals.

The whale species that may be present in the South Atlantic and Gulf of Mexico (blue, sperm, sei, fin, NARW, and Rice's[13]) are listed as endangered under the ESA. Manatees, listed as threatened under the ESA, also occur in the Gulf and are the only marine mammal species in this area managed by the U.S. Fish and Wildlife Service.

Sea turtles, fish, and corals that are listed as threatened or endangered under the ESA occur in the South Atlantic and Gulf. These include the following: six species of sea turtles (Kemp's ridley, loggerhead (Northwest Atlantic Ocean distinct population segment (DPS), green (North Atlantic), leatherback, and hawksbill); five species of fish (Gulf sturgeon, smalltooth sawfish, Nassau grouper, oceanic whitetip shark, and giant manta ray) in the Gulf; nine species of fish in the South Atlantic (the smalltooth sawfish; five DPSs of Atlantic sturgeon; Nassau grouper; oceanic whitetip shark, and giant manta ray); six species of coral (elkhorn, staghorn, lobed star, mountainous star, boulder star, and rough cactus) in the Gulf; and seven species of coral (elkhorn coral, staghorn coral, rough cactus coral, pillar coral, lobed star coral, mountainous star coral, and boulder coral) in the South Atlantic. Critical habitat designated in the Gulf for corals, smalltooth sawfish, Gulf sturgeon, and the Northwest Atlantic Ocean DPS of loggerhead sea turtles, though only coral and loggerhead critical habitat occur in federal waters. Portions of designated critical habitat for NARW, the Northwest Atlantic DPS of loggerhead sea turtles, and corals occur within the South Atlantic federal waters.

The most recent biological opinion (BiOp) for the Reef Fish FMP was completed on September 30, 2011. The BiOp determined the operation of the Gulf reef fish fishery managed under the Reef Fish FMP is not likely to adversely affect ESA-listed marine mammals or coral and was not likely to jeopardize the continued existence of sea turtles (loggerhead, Kemp's ridley, green, hawksbill, and leatherback) or smalltooth sawfish. Since issuing the opinion, in memoranda dated September 16, 2014, and October 7, 2014, NMFS concluded that the activities associated with the Reef Fish FMP are not likely to adversely affect critical habitat for the Northwest Atlantic Ocean loggerhead sea turtle DPS and four species of corals (lobed star, mountainous star, boulder star, and rough cactus). On September 29, 2016, NMFS requested re-initiation of Section 7 consultation on the operation of reef fish fishing managed by the Reef Fish FMP because new species (i.e., Nassau grouper [81 FR 42268] and green sea turtle North Atlantic and South Atlantic DPSs [81 FR 20057]) were listed under the ESA that may be affected by the proposed action. NMFS documented a determination that the operation of the fishery to continue during the re-initiation period is not likely to adversely affect these species.

On January 22, 2018, NMFS published a final rule (83 FR 2916) listing the giant manta ray as threatened under the ESA. On January 30, 2018, NMFS published a final rule (83 FR 4153) listing the oceanic whitetip shark as threatened under the ESA. In a memorandum dated March

[13] The Gulf Bryde's whale has recently been identified as morphologically and genetically distinct from other whales under the Bryde's whale complex, warranting classification as a new species of baleen whale living in the Gulf to be named *Balaenoptera ricei* or Rice's whale.

6, 2018, NMFS revised the request for re-initiation of consultation on the Reef Fish FMP to address the listings of the giant manta and oceanic whitetip. In that memorandum, NMFS also determined that fishing under the Reef Fish FMP during the extended re-initiation period will not jeopardize the continued existence of the giant manta ray, oceanic whitetip shark, Nassau grouper, or the North Atlantic and South Atlantic DPSs of green sea turtles.

NMFS published a final rule on April 15, 2019, listing the Gulf Rice's whale as endangered. In a memorandum dated June 20, 2019, NMFS revised the re-initiation request to include the Rice's whale and determined that fishing under the Reef Fish FMP during the re-initiation period will not jeopardize the continued existence of any of the newly listed species discussed above.[14]

On August 9, 2023, NMFS published a final rule designating critical habitat for *M. ferox, O. annularis, O. faveolata*, and *O. franksi.* Prior to the publication of that final rule, the Southeast Regional Office's Sustainable Fisheries Division (SFD), in coordination with the Protected Resources Division (PRD), developed an ESA Section 7 action plan for ensuring that its ESA Section 7 responsibilities are addressed with respect to existing fishery management regimes (FMPs, and their implementing regulations). SFD and PRD concluded that that the only federally managed fisheries that may adversely affect critical habitat for the 5 corals are the fisheries that use trap gear and those specifically targeting parrotfish (any gear type) under the Puerto Rico, St. Thomas and St. John, and St. Croix Island-based FMPs. SFD is evaluating whether the fisheries that operate under the Reef Fish FMP may affect the critical habitat for these 4 corals.

The most recent BiOp on the conservation regulations under the ESA and the authorization of the South Atlantic snapper grouper fishery in federal waters under the Magnuson-Stevens Act, including the fishery managed by the FMP, on threatened and endangered species and designated critical habitat was completed on December 1, 2016. NMFS concluded that the snapper grouper fishing activities addressed in the consultation are not likely to jeopardize the continued existence of any threatened or endangered species.

Since completing the December 2016 BiOp, NMFS published several final rules that listed additional species and designated critical habitat. NMFS has reinitiated formal consultation to address these listings and concluded the authorization of the South Atlantic snapper grouper fishery in federal waters during the re-initiation period will not jeopardize the continued existence of any of the newly listed species. For summary information on the protected species that may be adversely affected by the snapper grouper fishery and how they are affected refer to Section 3.2.5 in Vision Blueprint Regulatory Amendment 27 to the FMP (SAFMC 2019).

There is no information to indicate marine mammals and birds rely on yellowtail or mutton snappers for food, and they are not generally caught by fishermen harvesting yellowtail or mutton snappers. Additionally, there is no evidence that the mutton snapper or yellowtail

[14] Any official change to the name of the species listed under the ESA as the Gulf of Mexico Bryde's whale has no effect on NMFS's conclusion that the activities associated with the Reef Fish FMP will not jeopardize the continued existence of the species during the revised reinitiation period.

fisheries are adversely affecting birds or bird populations. The primary gear type in the Gulf reef fish fishery and the South Atlantic snapper grouper fishery used to harvest yellowtail and mutton snappers is hook-and-line. This gear is classified in the proposed 2026 Marine Mammal Protection Act List of Fisheries as a Category III fishery (91 FR 24176; May 5, 2026), meaning the annual mortality and serious injury of a marine mammal resulting from the fishery is less than or equal to 1% of the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population. Additionally, there is no evidence that the Gulf and South Atlantic yellowtail and mutton snapper portions of the reef fish and snapper grouper fisheries as a whole are adversely affecting seabirds. Dolphins are the only species documented as interacting with the reef fish and snapper grouper fisheries. Bottlenose dolphin prey upon bait, catch, and/or released discards of fish from both the reef fish and snapper grouper fisheries. They are also a common predator around reef fish and snapper grouper vessels, feeding on the discards.

Bycatch

Detailed information on bycatch in the Gulf reef fish and South Atlantic snapper grouper fisheries is discussed in Appendix H (Bycatch Practicability Analysis [BPA]).

3.3 Description of the Economic Environment

Details on the economic environment of the recreational and commercial sectors of the broader reef fish fishery in the Gulf are provided in Amendment 48 to the Reef Fish FMP and Amendment 5 to the FMP for the Red Drum Fishery of the Gulf (GMFMC 2021c). Additional details on the economic environment of the commercial and recreational sectors of the South Atlantic snapper-grouper fishery are provided in Amendment 59 to the Snapper Grouper FMP (NMFS 2025), Amendment 51 to the Snapper Grouper FMP (SAFMC 2023), and Amendment 29 to the Snapper Grouper FMP (SAFMC 2020), which are incorporated herein by reference. This chapter reports on the general economic environment of the commercial and recreational sectors for mutton snapper and yellowtail snapper in both the Gulf and South Atlantic. Unless otherwise noted, all monetary values have been adjusted to 2025-dollar values using the U.S. Bureau of Economic Analysis, Gross Domestic Product: Implicit Price Deflator.

3.3.1 Gulf of America Commercial Sector

Any fishing vessel that harvests and sells mutton snapper or yellowtail snapper from the Gulf exclusive economic zone (EEZ) must possess a valid or renewable commercial Gulf reef fish permit, which is a limited access permit. The commercial sector of the reef fish fishery has been managed under a limited access program since 1992, which in turn capped the number of commercial reef fish permits. Therefore, new entrants must buy a permit in order to participate in the commercial sector. As shown in Table 3.3.1.1, the number of permits that were valid or renewable in a given year has continually decreased in the years after the red snapper (RS)-individual fishing quota (IFQ) program was implemented in 2007. This decline has continued since the grouper-tilefish (GT)-IFQ program was implemented in 2010, but at a slower rate. As of July 8, 2021, there were 825 valid or renewable commercial reef fish permits, 748 of which

were valid. A renewable permit is an expired permit that cannot be actively fished but can be renewed for up to one year after expiration.

Table 3.3.1.1. Number of valid or renewable Gulf commercial reef fish permits, 2016-2020.

Year	Number of Permits
2016	852
2017	850
2018	845
2019	842
2020	837

Source: NMFS SERO Sustainable Fisheries (SF) Access permits database. Accessed 10/17/22

The information in Tables 3.3.1.2 describes the landings and revenue for vessels that harvested Gulf mutton snapper in each year from 2020 through 2024, as well as their revenue from other Gulf and South Atlantic species. The number of active commercial vessels landing Gulf mutton snapper fluctuated annually, likely reflecting effort shifting across multi-species reef fish complexes. Revenues from landings of Gulf mutton snapper generally represent a small portion (< 1%) of total annual revenue for these active vessels. The majority of revenue is derived from other joint-caught (33%) species on the same trips or non-joint caught species (63%) landed on other trips during the year. This indicates a low financial dependency of these commercial vessels on Gulf mutton snapper within a broader diversified harvesting strategy. The average ex-vessel price per pound average $4.50/lb. over this time period. Although not shown in the table, the maximum annual value of all landings by a single Gulf mutton snapper vessel from 2020 through 2024 was $1.14 million in 2023.

Table 3.3.1.2. Economic characteristics of Gulf mutton snapper trips 2020 through 2024.

Year	# of Vessels	Gulf Mutton snapper landings (lb, gw)	Gulf Mutton snapper ex-vessel revenue	Joint catch ex-vessel revenue (same trip)	Non-joint catch ex-vessel revenue (other trips)	South Atlantic all species ex-vessel revenue	Average Revenue per Vessel
2020	131	52,236	$222,575	$5,848,475	$16,359,155	$548,697	$175,411
2021	113	51,495	$228,449	$7,375,912	$18,541,742	$574,124	$236,462
2022	108	56,177	$266,407	$9,008,972	$16,806,270	$751,944	$248,459
2023	142	88,161	$388,276	$11,330,597	$17,582,478	$461,413	$209,597
2024	133	73,184	$339,648	$10,067,486	$14,813,554	$1,107,855	$197,959
Average	**125**	**64,251**	**$289,071**	**$8,726,288**	**$16,820,640**	**$688,807**	**$211,522**

Source: Southeast Fisheries Science Center (SEFSC) Social Science Research Group (SSRG) Socioeconomic Panel (January 2025 version).

The information in Table 3.3.1.3 describes the landings and revenue for vessels that harvested Gulf yellowtail snapper in each year from 2020 through 2024, as well as their revenue from

other Gulf and South Atlantic species. The number of active commercial vessels landing Gulf yellowtail snapper fluctuated annually, likely reflecting effort shifting across multi-species reef fish complexes. Revenues from landings of Gulf yellowtail snapper generally represent a small portion (< 4%) of total annual revenue for these active vessels, but a greater portion than mutton snapper accounts for. The majority of revenue is derived from non-joint caught species (73%) landed on other trips during the year. Yellowtail vessels derived less revenue from other jointly caught (19%) species on the same trips than mutton vessels. The average ex-vessel price per pound average $4.79/lb. over this time period. Although not shown in the table, the maximum annual value of all landings by a single Gulf mutton snapper vessel from 2020 through was $3.73 million in 2020.

Table 3.3.1.3. Economic characteristics of Gulf yellowtail snapper trips 2020 through 2024

Year	# of Vessels	Gulf yellowtail snapper landings (lb, gw)	Gulf Yellowtail snapper ex-vessel revenue	Joint catch ex-vessel revenue (same trip)	Non-joint catch ex-vessel revenue (other trips)	South Atlantic all species ex-vessel revenue	Average Revenue per Vessel
2020	158	265,081	$1,139,887	$4,222,784	$21,494,876	$880,425	$175,557
2021	157	316,612	$1,512,699	$5,589,989	$22,707,342	$1,465,838	$199,209
2022	145	266,269	$1,334,668	$5,666,576	$22,576,543	$1,417,621	$213,761
2023	163	194,779	$949,517	$5,536,077	$22,445,576	$926,119	$183,174
2024	172	238,414	$1,182,893	$6,556,702	$19,950,955	$1,051,371	$167,104
Average	159	256,231	$1,223,933	$5,514,426	$21,835,059	$1,148,275	$186,929

Source: SEFSC SSRG Socioeconomic Panel (January 2025 version).

Economic Value

Estimates of economic returns are not directly available for the mutton snapper commercial sector in the Gulf. The most recent analysis, which calculated estimates of economic returns for Gulf reef fish and Gulf yellowtail snapper commercial fishing vessels, was performed by Liese (2023). Estimates of producer surplus (PS) can be calculated from the cost information contained in Liese (2023) in conjunction with estimates of annual revenue from the SEFSC Social Science Research Group Socioeconomic Panel. PS is total annual revenue minus variable costs, including the costs for fuel, other supplies, and hired crew, as well as the opportunity cost of an owner's time as captain. Net revenue from operations, which most closely represents economic profits to the owner(s), is total annual revenue minus variable and fixed costs, including the costs for fuel, other supplies, hired crew, vessel repair and maintenance, insurance, and overhead, as well as the opportunity cost of an owner's time as captain and the vessel's depreciation. According to Liese (2023), PS for commercial vessels that harvested Gulf reef fish was approximately 51% of their annual gross revenue, on average, from 2014 through 2018. Net revenue from operations was 32% of their annual gross revenue, on average, during this period. PS for commercial vessels that harvested Gulf yellowtail snapper was approximately 49.5% of their annual gross revenue, on average, from 2014 through 2018. Net revenue from operations was 24% of their annual gross revenue, on average, during this period. Applying the Gulf reef fish percentages to the results provided in Table 3.3.1.2 would result in an estimated per vessel

average annual PS of $107,876 and an average annual net revenue from operations of $67,687 per year. Applying the Gulf yellowtail snapper percentages to the results provided in Table 3.3.1.3 would result in an estimated per vessel average annual PS of $31,091 and an average annual net revenue from operations of $15,074 per year.

Changes in commercial mutton snapper and yellowtail snapper landings may result in changes in ex-vessel prices due to less (or more) domestic mutton snapper being available in markets. In turn, if the ex-vessel price is expected to change, gross revenue and thus consumer surplus (CS) would also be expected to change. While a quantitative approach to analyze the commercial CS and PS, it is typically used to examine the effects of marginal increases in an ACL. Qualitative descriptions are provided when evaluating broader regulatory changes such as this proposed regulatory action. Due to expected changes in the quantity purchased and any corresponding shifts in the ex-vessel price paid, the change in the commercial CS is generally assumed to be positive when commercial catch limits are increased.

Dealers

The information in Table 3.3.1.4 illustrates the purchasing activities of dealers that bought Gulf mutton snapper from vessels from 2020 through 2024. Additionally, the purchasing activities by these dealers of species harvested in the South Atlantic is shown to provide a full accounting of the purchasing of dealers that bought Gulf mutton snapper.

Total dealer purchases of Gulf mutton snapper landings are small relative to their total purchases of other Gulf reef fish and South Atlantic species. On average, dealers' purchases of Gulf mutton have made up less than 1% of total annual purchases. Purchases of other Gulf species comprised 79% of total annual purchases by these dealers. This indicates that Gulf dealers have very low financial dependency on Gulf mutton.

Table 3.3.1.4. Purchase statistics for dealers that bought Gulf mutton snapper from 2020-2024.

Year	Number of Dealers	Gulf mutton snapper purchases	Other Gulf species purchases	South species purchases	Total purchases
2020	41	$221,830	$50,546,861	$16,096,282	$66,864,973
2021	46	$219,686	$71,900,243	$12,532,828	$84,652,756
2022	41	$255,815	$71,274,052	$21,462,427	$92,992,294
2023	44	$358,281	$71,244,945	$18,374,725	$89,977,951
2024	56	$341,814	$62,096,363	$15,201,382	$77,639,560
Average	**46**	**$279,485**	**$65,412,493**	**$16,733,529**	**$82,425,507**

Source: SEFSC Fishing Communities Web Query Tool, Version 1. Accessed 03/10/2026.

The information in Table 3.3.1.5 illustrates the purchasing activities of dealers that bought Gulf yellowtail snapper from vessels from 2020 through 2024. Additionally, the purchasing activities by these dealers of species harvested in the South Atlantic is shown to provide a full accounting of the purchasing of dealers that bought Gulf yellowtail snapper.

Total dealer purchases of from yellowtail snapper landings are small relative to their total purchases of other Gulf reef fish and South Atlantic species. On average, dealers' purchases of Gulf yellowtail snapper have made up less than 1% of total annual purchases. Purchases of other Gulf species comprised 78% of total annual purchases by these dealers. This indicates that Gulf dealers have very low financial dependency on yellowtail snapper.

Table 3.3.1.5. Purchase statistics for dealers that bought Gulf yellowtail snapper 2020-2024.

Year	Number of Dealers	Gulf yellowtail snapper purchases	Other Gulf species purchases	South species purchases	Total purchases
2020	58	$772,082	$81,289,156	$21,687,480	$103,748,718
2021	52	$1,020,044	$87,448,435	$17,399,021	$105,867,500
2022	55	$1,281,571	$89,427,492	$26,734,111	$117,443,175
2023	57	$918,317	$76,528,453	$24,593,646	$102,040,417
2024	68	$998,014	$69,498,802	$16,431,580	$86,928,396
Average	**58**	**$998,006**	**$80,838,468**	**$21,369,168**	**$103,205,641**

Source: SEFSC Fishing Communities Web Query Tool, Version 1. Accessed 03/10/2026.

Imports

Imports of foreign seafood products compete within the domestic seafood market, and in the U.S., imports dominate many segments of that market. Imports also tend to be price setters (products that are able to set prices in a market, due to the influence of having a majority of market share). Seafood imports can have downstream effects on the local fish market. At the harvest level, imports can affect ex-vessel prices fishermen receive for landings. As substitutes to domestic production, imports tend to cushion the adverse economic effects on consumers resulting from a reduction in domestic landings. Imports that directly compete with domestic reef fish, including mutton and yellowtail snapper, are described in this section.

Groupers

According to NMFS' foreign trade data,[15] groupers are not exported. Imports of fresh and frozen grouper products, which also directly compete with domestic harvest of Gulf reef fish species, are described in this section. As shown in Table 3.3.1.6, imports of fresh grouper products peaked in 2023. Total value of fresh grouper imports has been increasing in recent years and averaged $63.0 million annually. The average price per pound (lb) product weight (pw) for fresh grouper products was $5.32 from 2020 through 2024. Although not shown in the table, these products primarily originated from Mexico, Brazil, and Panama from 2020 through 2024.

[15] https://www.fisheries.noaa.gov/foss/

Table 3.3.1.6. Annual lb and value of fresh grouper imports, 2020 through 2024.

Year	Total Pounds (lb)	Total Value	Price per Pound ($/lb)
2020	10,449,994	$46,394,887	$4.43
2021	12,246,904	$65,449,667	$5.34
2022	11,700,388	$66,946,463	$5.72
2023	12,628,176	$68,236,890	$5.41
2024	11,995,196	$68,346,048	$5.70
Average	**11,804,132**	**$63,074,791**	**$5.32**

Source: NOAA Foreign Trade Query Tool, accessed 10/20/24.

As shown in Table 3.3.1.7, imports of frozen grouper products peaked at 2.2 million lb pw in 2021 and have been declining since. Total revenue from frozen grouper increased sharply from $1.7 to $5.8 million from 2020 to 2021 but also declined nearly as sharply in 2022 to $2.9 million. The average price per lb pw for frozen grouper products was $2.30 from 2020 through 2024. Although not shown in the table, imports of frozen grouper products primarily originated in Brazil, Suriname, and Indonesia from 2020 through 2024.

Table 3.3.1.7. Annual lb and value of frozen grouper, 2020 through 2024.

Year	Total Pounds (lb)	Total Value	Price per Pound ($/lb)
2020	814,426	$1,718,333	$2.10
2021	2,190,003	$5,818,759	$2.66
2022	1,339,501	$2,942,717	$2.20
2023	1,154,097	$2,676,394	$2.31
2024	1,097,656	$2,459,846	$2.24
Average	**1,319,137**	**$3,123,210**	**$2.30**

Source: NOAA Foreign Trade Query Tool, accessed 08/18/24.

Snappers

Imports of fresh and frozen snapper products, which directly compete with domestic harvest of Gulf reef fish species, are described in this section. As shown in Table 3.3.1.8, imports of fresh snapper products were 32.4 million lb pw in 2020 and peaked at 36.0 million lb pw in 2021. Total revenue from snapper imports increased to a five-year high of $169 million in 2021. The average price per pound for fresh snapper products was $4.48 from 2020 through 2024, and prices varied over this period. Although not shown in the table, imports of fresh snapper products primarily originated in Mexico, Nicaragua, and Panama from 2020 through 2024.

Table 3.3.1.8. Annual lb and value of fresh snapper imports, 2020 through 2024.

Year	Total Pounds (lb)	Total Value	Price per Pound ($/lb)
2020	32,394,316	$129,401,869	$3.99
2021	35,969,857	$169,002,918	$4.70
2022	32,180,318	$150,937,686	$4.69
2023	32,108,363	$142,592,355	$4.44
2024	30,474,645	$139,494,605	$4.58
Average	**32,625,500**	**$146,285,887**	**$4.48**

Source: NOAA Foreign Trade Query Tool, accessed 10/20/24.

As shown in Table 3.3.1.9, total revenue from imports of frozen snapper increased from $55.2 million in 2020 to a five-year high of $75.7 million in 2021 followed by a 40% decrease through 2023. The average price per pound for frozen snapper products was $3.86, with a notable decrease from 2022 to 2023. Although not shown in the table, imports of frozen snapper product primarily originated in Brazil and Suriname, from 2020 through 2024.

Table 3.3.1.9. Annual lb and value of frozen snapper, 2020 through 2024.

Year	Total Pounds (lb)	Total Value	Price per Pound ($/lb)
2020	15,873,809	$55,208,728	$3.48
2021	18,224,848	$75,715,262	$4.15
2022	16,941,442	$70,812,484	$4.18
2023	11,701,409	$42,501,474	$3.64
2024	14,836,601	$57,206,691	$3.86
Average	**15,515,622**	**$60,288,928**	**$3.86**

Source: NOAA Foreign Trade Query Tool, accessed 10/20/24

Business Activity

The commercial harvest and subsequent sales and consumption of fish generates business activity as fishermen expend funds to harvest the fish and consumers spend money on goods and services, such as grouper purchased at a local fish market and served during restaurant visits. These expenditures spur additional business activity in the region(s) where the harvest and purchases are made, such as jobs in local fish markets, grocers, restaurants, and fishing supply establishments. In the absence of the availability of a given species for purchase, consumers would spend their money on substitute goods, such as other finfish or seafood products, and services, such as visits to different food service establishments. As a result, the analysis presented below represents a distributional analysis that only shows how economic impacts may

be distributed through regional markets. It should not be interpreted to represent the impacts if these species are not available for harvest or purchase.

Economic impact models can be used to determine the sources of the impacts. Each impact can be broken down into direct, indirect, and induced economic impacts. "Direct" economic impacts are the results of the money initially spent in the study area (e.g., country, region, state, or community) by the fishery or industry being studied. This includes money spent to pay for labor, supplies, raw materials, and operating expenses. The direct economic impacts from the initial spending create additional activity in the local economy, i.e., "indirect" economic impacts. Indirect economic impacts are the results of business-to-business transactions indirectly caused by the direct impacts. For example, businesses initially benefiting from the direct impacts will subsequently increase spending at other local businesses. The indirect economic impact is a measure of this increase in business-to-business activity, excluding the initial round of spending which is included in the estimate of direct impacts. "Induced" economic impacts are the results of increased personal income caused by the direct and indirect economic impacts. For example, businesses experiencing increased revenue from the direct and indirect impacts will subsequently increase spending on labor by hiring more employees, increasing work hours, raising salaries/wage rates, etc. In turn, households will increase spending at local businesses. The induced impact is a measure of this increase in household-to-business activity.

Estimates of the U.S. average annual business activity associated with the commercial harvest of Gulf mutton snapper and Gulf yellowtail snapper were derived using the model developed for and applied in NMFS (2024a)[16] and are provided in Table 3.3.1.10 and Table 3.3.1.11, respectively. Specifically, these impact estimates reflect the expected impacts from average annual gross revenues generated by landings of mutton and yellowtail snapper from 2020 through 2024. This business activity is characterized as jobs (full- and part-time equivalents), income impacts (wages, salaries, and self-employed income), value-added impacts (the difference between the value of goods or services and the cost of materials, supplies, and labor across the supply chain), and output impacts (gross business sales). Income impacts should not be added to output (sales) impacts because this would result in double counting.

The results provided here should be interpreted with caution. The results are based on average relationships developed through the analysis of many fishing operations that harvest many different species.

[16] A detailed description of the input/output model is provided in NMFS (2011).

Table 3.3.1.10. Average annual business activity (2020 through 2024) associated with the commercial harvest of mutton snapper in the Gulf.

Impact Type	Direct	Indirect	Induced	Total
Harvesters				
Employment	5.2	0.8	1.1	7
Income	$155,904	$28,954	$69,994	$254,852
Value added	$166,184	$104,225	$119,761	$390,170
Output	$288,765	$234,945	$232,510	$756,220
Primary dealers/processors				
Employment	1.9	0.8	1.3	4
Income	$89,719	$82,671	$78,198	$250,588
Value added	$95,639	$105,509	$147,225	$348,372
Output	$288,765	$217,504	$287,806	$794,075
Secondary wholesalers/distributors				
Employment	0.9	0.2	0.8	1.9
Income	$52,440	$15,604	$55,158	$123,201
Value added	$55,905	$26,166	$94,196	$176,266
Output	$140,427	$51,204	$183,197	$374,828
Grocers				
Employment	5.8	0.7	1.3	7.7
Income	$168,957	$56,137	$84,795	$309,888
Value added	$180,103	$90,462	$143,568	$414,133
Output	$288,765	$146,922	$281,863	$717,551
Restaurants				
Employment	8.6	0.6	1.4	10.6
Income	$161,709	$49,054	$92,630	$303,393
Value added	$172,364	$87,662	$156,056	$416,082
Output	$315,187	$137,176	$307,968	$760,331
Harvesters and seafood industry				
Employment	22.3	3	5.9	31.1
Income	$628,728	$232,419	$380,775	$1,241,923
Value added	$670,195	$414,022	$660,806	$1,745,024
Output	$1,321,909	$787,752	$1,293,343	$3,403,005

Table 3.3.1.11. Average annual business activity (2020 through 2024) associated with the commercial harvest of yellowtail snapper in the Gulf.

Impact Type	Direct	Indirect	Induced	Total
Harvesters				
Employment	21.8	3.4	4.5	29.7
Income	$660,102	$122,591	$296,357	$1,079,050
Value added	$703,628	$441,289	$507,072	$1,651,990
Output	$1,222,638	$994,763	$984,451	$3,201,852
Primary dealers/processors				
Employment	8	3.2	5.6	16.8
Income	$379,874	$350,032	$331,091	$1,060,996
Value added	$404,938	$446,726	$623,352	$1,475,016
Output	$1,222,638	$920,917	$1,218,577	$3,362,132
Secondary wholesalers/distributors				
Employment	3.6	0.8	3.5	8
Income	$222,031	$66,067	$233,539	$521,637
Value added	$236,703	$110,785	$398,828	$746,316
Output	$594,569	$216,800	$775,660	$1,587,029
Grocers				
Employment	24.5	2.8	5.4	32.7
Income	$715,366	$237,684	$359,024	$1,312,074
Value added	$762,560	$383,017	$607,872	$1,753,449
Output	$1,222,638	$622,073	$1,193,416	$3,038,127
Restaurants				
Employment	36.4	2.4	5.9	44.8
Income	$684,678	$207,695	$392,199	$1,284,571
Value added	$729,793	$371,162	$660,745	$1,761,700
Output	$1,334,510	$580,807	$1,303,942	$3,219,259
Harvesters and seafood industry				
Employment	94.3	12.6	25	131.9
Income	$2,662,051	$984,069	$1,612,209	$5,258,328
Value added	$2,837,621	$1,752,980	$2,797,869	$7,388,471
Output	$5,596,994	$3,335,359	$5,476,046	$14,408,398

3.3.2 Gulf of America Recreational Sector

The recreational sector is composed of the private and for-hire modes. The private mode includes anglers fishing from shore (all land-based structures) and private/rental boats. The for-

hire mode is composed of charter vessels and headboats (also called party boats). Charter vessels generally carry fewer passengers and charge a fee on an entire vessel basis, whereas headboats carry more passengers and payment is per person. The type of service, from a vessel- or passenger-size perspective, affects the flexibility to search different fishing locations during the course of a trip and target different species because larger concentrations of fish are required to satisfy larger groups of anglers. Recreational effort estimates presented below include trips in both state and federal waters to allow for the subsequent estimation of the associated business activity and economic impacts that occurs from this effort.

Angler Effort

Recreational effort derived from the MRIP database can be characterized in terms of the number of angler trips as follows:

- Target effort - The number of individual angler trips, regardless of duration, where the intercepted angler indicated that the species or a species in the species group was targeted as either the first or the second primary target for the trip. The species did not have to be caught.
- Catch effort - The number of individual angler trips, regardless of duration and target intent, where the individual species or a species in the species group was caught. The fish did not have to be harvested, such as catch and release trips for gamefish and other species.
- Total recreational trips - The total estimated number of recreational trips in the Gulf, regardless of target intent or catch success.

Other measures of effort are possible, such as directed trips (the number of individual angler trips that either targeted or caught a particular species). Estimates of target or catch effort for individual species and additional years, as well as other measures of directed effort, are available via NMFS' MRIP query tool.[17] Tables 3.3.2.1 - 3.3.2.4 describe the recreational target and catch trips for Gulf mutton and yellowtail snapper in federal and state waters from 2020 through 2024.

The private/rental boat mode comprised the majority of Gulf mutton snapper recreational target trips and catch trips, followed by the charter mode. The majority of recreational target and catch effort also occurred in Florida, with a small amount of effort recorded in Alabama and Mississippi. No recreational effort for mutton snapper was recorded in Texas. Overall, recreational effort for Gulf mutton snapper fluctuated annually, showing a slight overall upward trend in both target and catch trips over the five-year period.

Similar to mutton, 98% of average target effort for Gulf yellowtail snapper was by the private/rental mode. All recorded target effort for Gulf yellowtail snapper occurred off the west coast of Florida. Total catch trips for yellowtail snapper on average were higher than target trips, indicating that yellowtail snapper is more often incidentally caught, rather than targeted by recreational anglers. Catch trips increased over from 2020 until their peak in 2023. Catch trips declined slightly in 2024.

[17] https://www.fisheries.noaa.gov/data-tools/recreational-fisheries-statistics-queries

Table 3.3.2.1. Mutton snapper recreational target trips, by mode and state, 2020 through 2025.

Year	Alabama	Florida	Louisiana	Mississippi	Total
Charter					
2020	0	1,684	0	0	1,684
2021	0	987	0	0	987
2022	0	7,130	0	0	7,130
2023	0	1,250	0	0	1,250
2024	0	3,019	0	0	3,019
2025	0	4,806	0	0	4,806
Average	**0**	**3,146**	**0**	**0**	**3,146**
Private/Rental					
2020	0	19,820	0	0	19,820
2021	0	57,290	0	0	57,290
2022	0	103,212	0	0	103,212
2023	0	64,538	0	0	64,538
2024	0	129,476	0	0	129,476
2025	0	34,042	0	0	34,042
Average	**0**	**68,063**	**0**	**0**	**68,063**
Shore					
2020	0	4,052	0	0	4,052
2021	0	27,257	0	0	27,257
2022	0	163,348	0	0	163,348
2023	0	158,626	0	0	158,626
2024	0	207,205	0	0	207,205
2025	0	125,825	0	0	125,825
Average	**0**	**114,385**	**0**	**0**	**114,385**
All Modes					
2020	0	25,556	0	0	25,556
2021	0	85,534	0	0	85,534
2022	0	273,691	0	0	273,691
2023	0	224,414	0	0	224,414
2024	0	339,700	0	0	339,700
2025	0	164,673	0	0	164,673
Average	**0**	**185,595**	**0**	**0**	**185,595**

Source: SEFSC MRIP FES Recreational Dataset (June 15, 2026)

Table 3.3.2.2. Mutton snapper recreational catch trips, by mode and state, 2020 through 2025.

Year	Alabama	Florida	Louisiana	Mississippi	Total
Charter					
2020	0	43,186	0	0	43,186
2021	0	20,936	0	0	20,936
2022	0	31,079	0	0	31,079
2023	0	23,248	0	288	23,536
2024	0	20,674	0	0	20,674
2025	0	25,197	0	0	25,197
Average	**0**	**27,386**	**0**	**48**	**27,434**
Private/Rental					
2020	266	154,951	0	0	155,217
2021	0	143,977	0	0	143,977
2022	0	112,898	0	0	112,898
2023	0	215,070	0	0	215,070
2024	21,379	231,193	0	0	252,573
2025	0	196,256	0	404	196,661
Average	**3,608**	**175,724**	**0**	**67**	**179,399**
Shore					
2020	0	71,618	0	0	71,618
2021	0	73,537	0	0	73,537
2022	0	173,832	0	0	173,832
2023	0	337,888	0	0	337,888
2024	0	335,560	0	0	335,560
2025	0	219,857	0	0	219,857
Average	**0**	**202,049**	**0**	**0**	**202,049**
All Modes					
2020	266	269,755	0	0	270,020
2021	0	238,451	0	0	238,451
2022	0	317,809	0	0	317,809
2023	0	576,206	0	288	576,494
2024	21,379	587,427	0	0	608,806
2025	0	441,310	0	404	441,714
Average	**3,608**	**405,160**	**0**	**115**	**408,882**

Source: SEFSC MRIP FES Recreational Dataset (June 15, 2026)

Table 3.3.2.3. Yellowtail snapper recreational target trips, by mode and state, 2020 through 2025.

Year	Alabama	Florida	Louisiana	Mississippi	Total
Charter					
2020	0	10,057	0	0	10,057
2021	0	9,781	0	0	9,781
2022	0	17,689	0	0	17,689
2023	0	20,103	0	0	20,103
2024	0	24,513	0	0	24,513
2025	0	20,826	0	0	20,826
Average	0	17,162	0	0	17,162
Private/Rental					
2020	0	116,617	0	0	116,617
2021	0	135,845	0	0	135,845
2022	0	203,699	0	0	203,699
2023	0	159,238	0	0	159,238
2024	0	267,132	0	0	267,132
2025	0	134,362	0	0	134,362
Average	0	169,482	0	0	169,482
Shore					
2020	0	0	0	0	0
2021	0	8,104	0	0	8,104
2022	0	70,495	0	0	70,495
2023	0	57,558	0	0	57,558
2024	0	33,326	0	0	33,326
2025	0	64,069	0	0	64,069
Average	0	38,925	0	0	38,925
All Modes					
2020	0	126,674	0	0	126,674
2021	0	153,730	0	0	153,730
2022	0	291,884	0	0	291,884
2023	0	236,899	0	0	236,899
2024	0	324,971	0	0	324,971
2025	0	219,258	0	0	219,258
Average	0	225,569	0	0	225,569

Source: SEFSC MRIP FES Recreational Dataset (June 15, 2026)

Table 3.3.2.4. Yellowtail snapper recreational catch trips, by mode and state, 2020 through 2025.

Year	Alabama	Florida	Louisiana	Mississippi	Total
Charter					
2020	0	96,297	0	0	96,297
2021	0	74,765	0	0	74,765
2022	0	85,618	0	0	85,618
2023	0	105,735	0	0	105,735
2024	0	103,913	0	0	103,913
2025	0	78,883	0	0	78,883
Average	0	90,868	0	0	90,868
Private/Rental					
2020	0	320,239	0	0	320,239
2021	0	283,586	0	0	283,586
2022	0	427,133	0	0	427,133
2023	0	619,664	0	0	619,664
2024	0	639,682	0	5226	644,908
2025	0	464,823	0	0	464,823
Average	0	459,188	0	871	460,059
Shore					
2020	0	343,237	0	0	343,237
2021	0	224,249	0	0	224,249
2022	0	332,295	0	0	332,295
2023	0	522,410	0	0	522,410
2024	0	430,386	0	0	430,386
2025	0	468,656	0	0	468,656
Average	0	386,872	0	0	386,872
All Modes					
2020	0	759,772	0	0	759,772
2021	0	582,601	0	0	582,601
2022	0	845,046	0	0	845,046
2023	0	1,247,809	0	0	1,247,809
2024	0	1,173,980	0	5226	1,179,206
2025	0	1,012,362	0	0	1,012,362
Average	0	936,928	0	871	937,799

Similar analysis of recreational effort is not possible for the headboat mode in the Gulf because headboat data are not collected at the angler level. Estimates of effort by the headboat mode are

provided in terms of angler days, or the number of standardized full-day angler trips. [18] The stationary "fishing for demersal (bottom-dwelling) species" nature of headboat fishing, as opposed to trolling, suggests that most, if not all, headboat trips and, hence, angler days, are demersal or reef fish trips by intent.

Headboat angler days have been variable across the Gulf States from 2020 through 2024 (Table 3.3.2.5). On average (2020 through 2024), Florida accounted for the majority of headboat angler days reported, followed by Texas. Alabama, Mississippi, Louisiana combined accounted for only a small percentage (Table 3.3.2.5). Headboat effort in terms of angler days for the entire Gulf tended to be concentrated most heavily during the summer months of June through July (Figure 3.3.2.1).

Table 3.3.2.5. Gulf headboat angler days and percent distribution by state (2020 through 2024).

Year	Angler Days FL	Angler Days AL-MS-LA*	Angler Days TX	Percent Distribution FL	Percent Distribution AL-MS-LA	Percent Distribution TX
2020	126,794	14,819	51,498	65.66%	7.67%	26.67%
2021	181,632	17,041	71,344	67.27%	6.31%	26.42%
2022	149,368	18,263	62,705	64.85%	7.93%	27.22%
2023	149,735	15,757	58,279	66.91%	7.04%	26.04%
2024	146,544	12,874	57,074	67.69%	5.95%	26.36%
Average	**150,815**	**15,751**	**60,180**	**66.48%**	**6.98%**	**26.54%**

Source: NMFS Southeast Region Headboat Survey (SRHS) (2024).
*Headboat data from Mississippi and Louisiana are combined for confidentiality purposes.

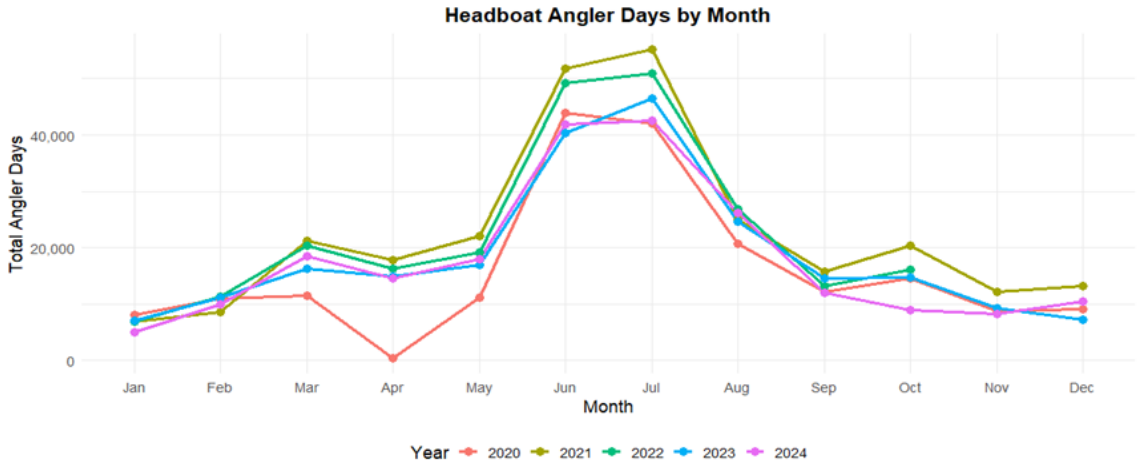


Figure 3.3.2.1. Gulf headboat angler days by year and month (2020 through 2024).
Source: NMFS SRHS (2024).

[18] Headboat trip categories include half-, three-quarter-, full-, and 2-day trips. A full-day trip equals one angler day, a half-day trip equals 0.5 angler days, etc. Angler days are not standardized to an hourly measure of effort and actual trip durations may vary within each category.

Permits

There are no specific federal permitting requirements for private recreational anglers to fish for Gulf reef fish species, such as mutton or yellowtail snapper. The same is true for private recreational vessel owners. Instead, private anglers are required either to possess a state recreational fishing permit that authorizes saltwater fishing in general, or to be registered in the federal National Saltwater Angler Registry system, subject to appropriate exemptions. As a result, it is not possible to identify with available data how many individual private anglers or private recreational vessels would be expected to be affected by the actions in this amendment. For anglers to fish for or possess reef fish species in or from the Gulf EEZ on for-hire vessels, those vessels are required to have a Gulf charter/headboat permit for reef fish (Gulf reef fish for-hire permit). As of August 26, 2021, there were 1,273 valid or renewable Gulf reef fish for-hire permits. The total number of valid or renewable Gulf reef fish for-hire permits has been relatively stable with less than a 1% change from year to year during 2016 through 2020 (Table 3.3.2.6). Note more recent permit information is currently unavailable.

Although the permit application collects information on the primary method of operation, the permit itself does not identify the permitted vessel as either a headboat or a charter vessel, and vessels may operate in both capacities. However, if a vessel meets the selection criteria used by the NMFS SRHS and is selected to report by the Science Research Director of the SEFSC, it is determined to operate primarily as a headboat and is required to submit harvest and effort information to the SRHS. As of July 31, 2024, 68 Gulf headboats were registered in the SRHS (R. Cheshire, NMFS SEFSC, pers. comm. 2024).

Table 3.3.2.6. Number of valid or renewable Gulf reef fish for-hire permits, 2016 through 2020.

Year	Number of Permits
2016	1,282
2017	1,280
2018	1,279
2019	1,277
2020	1,289

Source: NMFS SERO Sustainable Fisheries (SF) Access permits database (accessed 05/17/22).

Economic Value

Participation, effort, and harvest are indicators of the value of saltwater recreational fishing. However, a more specific indicator of value is CS, which is the difference between the maximum amount an angler would be willing to pay for a fish and the amount they actually do pay.[19] CS represents a savings of one's income that can be spent later on other goods and services, leading to an overall increase in utility or satisfaction for the angler and a benefit to the economy. All else equal, the amount anglers are willing to pay, and the costs of fishing can vary depending on expected catch rates, harvest rates, and existing regulations. The economic value of changes in expected catch rates, harvest rates, or existing regulations can be measured by any associated

[19] This difference assumes that income and the prices of other goods are constant.

changes in CS. However, because recreationally caught fish are non-market goods and there are no transaction data available, CS cannot be measured directly. Instead, using survey elicitation methods and stated or revealed preference models, it is possible to estimate willingness-to-pay (WTP) values[20] that are a close approximation to the individual CS an angler would derive from an additional fish that is caught and kept. Direct estimates of the WTP for mutton and yellowtail snapper are not available, but other estimates can serve as close proxies. Carter & Liese (SEFSC, Pers. Comm. May 16, 2023) recently utilized methods described in Carter, Liese, and Lovell (2022) to covert the option price for a 5 to10 fish increase in the snapper bag limit reported in Carter, Lovell, and Liese (2020) to the CS for a one fish increase in the expected harvest of snapper. Carter & Liese (SEFSC, Pers. Comm. May 16, 2023) estimated that the CS for one additional snapper kept is $23.15 (2025$).

Economic value for the for-hire component of the recreational sector can be measured in many ways. According to Savolainen et al. (2012), the average charter vessel operating in the Gulf is estimated to receive approximately $110,000 in gross revenue and $33,000 in net income (gross revenue minus variable and fixed costs) annually. The average headboat is estimated to receive approximately $334,000 in gross revenue and $98,000 in net income annually. Abbott and Willard (2017) suggest that Savolainen, et al.'s estimate of average annual gross revenue for headboats may be an underestimate, as data in the former suggest that average gross revenue in 2009 for the vessels in their sample was about $591,000. Further, their data suggest average annual gross revenue per vessel had increased to about $714,000 by 2014. However, Abbott and Willard's estimates are based on a sample of 17 headboats that chose to participate in the headboat collaborative program in 2014, while the Savolainen, et al. estimates are based on a random sample of 20 headboats. The headboats that participated in the collaborative program may be economic highliners, in which case Abbott and Willard's estimates would overestimate average annual gross revenue for Gulf headboats. D. Carter (SEFSC, Pers. Comm. 2018) recently estimated that average annual gross revenue for Gulf headboats was approximately $529,000 in 2017. This estimate is likely the best current estimate of annual gross revenue for Gulf headboats, as it is based on a relatively large sample of 63 boats, or more than 90% of the active fleet, and is more recent.

However, gross revenues overstate the annual economic value and profits generated by for-hire vessels. Economic value for for-hire vessels can be measured by PS per passenger trip (the amount of money that a vessel owner earns in excess of the cost of providing the trip). Estimates of revenue, costs, and trip net revenue (TNR) for trips taken by headboats and charter vessels in 2017 are available from Souza and Liese (2019). After accounting for transaction fees, supply costs, and labor costs, net revenue per trip was 42% of revenue for Gulf charter vessels and 54% of revenue for Southeast headboats,[21] or $965 and $2,241 respectively (Table 3.3.2.7). When TNR is divided by the number of anglers on a trip, it represents cash flow per angler (CFpA),

[20] These are measures of compensating surplus, or the amount of money that an angler would be willing to pay in order to harvest the additional fish, while maintaining the same level of utility.

[21] Southeast headboats include headboats operating in either the Gulf or South Atlantic. Souza and Liese (2019) state "the sample size available for headboats is limited (n=30) and, hence, the results are presented at an overall SE aggregation."

which approximates PS per angler trip. The estimated CFpA value for an average Gulf charter angler trip is $175 and the estimated CFpA value for an average Gulf headboat angler trip is $79 (Souza and Liese 2019). Estimates of CFpA for individual Reef Fish species or species-group target trips, in particular, are not available.

Table 3.3.2.7. Trip economics for offshore trips by Gulf charter vessels and Southeast headboats in 2017.

	Gulf Charter Vessels	**Southeast Headboats**
Revenue	100%	100%
Transaction Fees (% of revenue)	3%	6%
Supply Costs (% of revenue)	27%	19%
Labor Costs (% of revenue)	27%	22%
Net Revenue per trip including labor costs (% of rev)	**42%**	**54%**
Net Revenue per Trip	**$965**	**$2,241**
Average # of Anglers per Trip	5.5	28.2
Trip Net Cash Flow per Angler Trip	$175	$79

Business Activity

The desire for recreational fishing generates economic activity as consumers spend their income on various goods and services needed for recreational fishing. This spurs economic activity in the region where recreational fishing occurs. Note, in the absence of the opportunity to fish, the income would presumably be spent on other goods and services and these expenditures would similarly generate economic activity in the region where the expenditure occurs. As such, the analysis below represents a distributional analysis only.

Estimates of the business activity (economic impacts) associated with recreational angling for Gulf mutton and yellowtail snapper were calculated using average trip-level impact coefficients derived from the 2022 Fisheries Economics of the U.S. report (NMFS 2024a) and underlying data provided by the National Oceanic and Atmospheric Administration Office of Science and Technology. Economic impact estimates in 2022 dollars were adjusted to 2025 dollars using the annual, not seasonally adjusted, gross domestic product (GDP) implicit price deflator provided by the U.S. Bureau of Economic Analysis.

Business activity (economic impacts) for the recreational sector is characterized in the form of jobs (full- and part-time), income impacts (wages, salaries, and self-employed income), output impacts (gross business sales), and value-added impacts (contribution to the GDP in a state or region). Estimates of the average annual economic impacts (2020-2025) resulting from Gulf mutton and yellowtail snapper charter, private vessel, and shore target trips are provided in Table 3.3.2.8 and Table 3.3.2.9, respectively. Impacts within each table should not be added together because this would result in double counting. The average impact coefficients, or multipliers, used in the model are invariant to the "type" of effort (e.g., target or catch) and can therefore be directly used to measure the impact of other effort measures such as Gulf mutton or yellowtail snapper catch trips. To calculate the multipliers from Table 3.3.2.8 and Table 3.3.2.9, simply divide the desired impact measure (value-added impact, sales impact, income impact, or

employment) associated with a given state and mode by the number of target trips for that state and mode.

The estimates provided in Table 3.3.2.8 and Table 3.3.2.9 only apply at the state-level. Addition of the state-level estimates to produce a regional (or national) total may underestimate the actual amount of total business activity, because state-level impact multipliers do not account for interstate and interregional trading. It is also important to note that these economic impacts estimates are based on trip expenditures only and do not account for durable expenditures. Durable expenditures cannot be reasonably apportioned to individual species or species groups. As such, the estimates provided in Table 3.3.2.8 and Table 3.3.2.9 may be considered a lower bound on the economic activity associated with those trips that targeted Gulf mutton or yellowtail snapper. Estimates of the business activity associated with headboat effort are not available. Headboat vessels are not covered by MRIP in the Southeast, so, in addition to the absence of estimates of target effort, estimation of the appropriate business activity coefficients for headboat effort has not been conducted.

Table 3.3.2.8. Estimated average annual economic impacts (2020-2025) from Gulf charter, private vessel, and shore mutton snapper target trips, by state, * using state-level multipliers. All monetary estimates are in 2025 dollars in thousands.

Impact Type	FL
Charter Mode	
Value Added Impacts	$2,183
Sales Impacts	$3,458
Income Impacts	$1,488
Employment (Jobs)	30
Private/Rental Mode	
Value Added Impacts	$2,507
Sales Impacts	$4,189
Income Impacts	$1,230
Employment (Jobs)	23.1
Shore Mode	
Value Added Impacts	$6,788
Sales Impacts	$11,224
Income Impacts	$3,623
Employment (Jobs)	68.6
All Modes	
Value Added Impacts	$11,479
Sales Impacts	$18,871
Income Impacts	$6,341
Employment (Jobs)	121.8

*There was no recorded target effort for mutton snapper in Texas, Alabama and Mississippi. Louisiana data are currently unavailable.

Table 3.3.2.9. Estimated average annual economic impacts (2020 through 2025) from Gulf charter, private vessel, and shore yellowtail snapper target trips, by state, * using state-level multipliers. All monetary estimates are in 2025 dollars in thousands.

Impact Type	FL
Charter Mode	
Value Added Impacts	$11,910
Sales Impacts	$18,864
Income Impacts	$8,119
Employment (Jobs)	163.5
Private/Rental Mode	
Value Added Impacts	$6,244
Sales Impacts	$10,430
Income Impacts	$3,062
Employment (Jobs)	57.6
Shore Mode	
Value Added Impacts	$2,310
Sales Impacts	$3,820
Income Impacts	$1,233
Employment (Jobs)	23.4
All Modes	
Value Added Impacts	$20,464
Sales Impacts	$33,113
Income Impacts	$12,413
Employment (Jobs)	244.5

*There was no recorded target effort for yellowtail snapper in Texas, Alabama and Mississippi. Louisiana data are currently unavailable.

3.3.3 South Atlantic Commercial Sector

Any fishing vessel that harvests and sells mutton snapper or yellowtail snapper from the South Atlantic EEZ must possess a valid commercial South Atlantic snapper grouper permit, which is a limited access permit. After such a permit expires, it can be renewed or transferred up to one year after the date of expiration. As of August 26, 2021, there were 516 snapper grouper

unlimited permits[22] and 94 snapper grouper trip limited permits[23]. As shown in Table 3.3.3.1, the number of permits that were valid at any point in a given year decreased steadily from 2016 through 2020. There were approximately 2% fewer valid permits in 2020, relative to 2016.

Table 3.3.3.1. Number of valid South Atlantic snapper grouper permits, 2016 through 2020.

Year	Unlimited Permits	225-lb Trip-limited	Total Permits
2016	565	116	681
2017	554	114	668
2018	549	110	659
2019	543	108	651
2020	535	104	639

Source: NMFS SERO SF Access permits database. Accessed 10/17/22

The information in Table 3.3.3.2 describes the landings and revenue for vessels that possessed a valid commercial South Atlantic snapper grouper permit and harvested South Atlantic mutton snapper during the five-year time period, as well as their revenue from other South Atlantic and Gulf species. The number of active commercial vessels landing South Atlantic mutton snapper fluctuated annually, likely reflecting effort between the various species of the snapper grouper fishery. Revenues from South Atlantic mutton snapper landings generally represent a small portion of total annual revenue for these active vessels (2%). The majority of revenue is derived from other jointly caught species (26%) on the same trips or non-jointly caught (66%) species landed on other trips during the year. This indicates a relatively low financial dependency on South Atlantic mutton snapper. The ex-vessel price per pound for mutton snapper has experienced minor annual fluctuations over the five-year period. The average ex-vessel price for mutton snapper over this time period was $4.86 per pound.

[22] South Atlantic Unlimited Snapper Grouper (excluding Wreckfish permits*) also called the SG1 permit. This permit does not have a trip limit tied to the permit; however, permit holder must still abide by species-specific trip limits. An SG1 permit can be transferred to the current permit holder's immediate family (e.g., mother, father, brother, sister, son, daughter, or spouse).

[23] South Atlantic Snapper-Grouper 225-lb (excluding Wreckfish permits*) also called the SG2 permit. This permit has a 225 lb trip limit tied to the permit. Permit holders must still abide by species specific trip limits, not to exceed 225 lb of any combination of snapper grouper species on a single trip. This permit can only be transferred to a vessel owned or leased by the current permit holder.

Table 3.3.3.2. Economic characteristics of South Atlantic mutton snapper trips, 2020 through 2024.

YEAR	# of Vessels	SATL Mutton snapper landings (lb gw)	SATL Mutton snapper ex-vessel revenue	Joint catch ex-vessel revenue (same trip)	Non-joint catch ex-vessel revenue (other trips)	Gulf species ex-vessel revenue	Average Revenue per Vessel
2020	237	63,754	$293,225	$4,796,898	$9,447,691	$1,278,611	$66,736
2021	223	53,288	$265,001	$4,061,427	$9,827,398	$1,349,546	$69,522
2022	197	51,236	$263,331	$3,952,265	$10,092,320	$567,699	$75,511
2023	212	54,045	$258,293	$3,360,243	$9,470,438	$462,704	$63,923
2024	196	39,211	$192,009	$2,594,342	$8,694,785	$620,121	$61,741
Average	**213**	**52,307**	**$254,372**	**$3,753,035**	**$9,506,527**	**$855,736**	**$67,463**

Source: SEFSC SSRG Socioeconomic Panel (January 2025 version).

Similarly, the information in Table 3.3.3.3 describes the landings and revenue for vessels that harvested South Atlantic yellowtail snapper. The number of active commercial vessels landing South Atlantic yellowtail snapper varied annually. South Atlantic yellowtail snapper accounts for a greater portion of annual revenue (40%) for these commercial vessels compared to those that landed mutton snapper. Non-jointly caught species landed on other trips still account for the largest portion of annual revenue for these vessels (44%). Consequently, this demonstrates some degree of financial dependency on yellowtail snapper for these commercial vessels. The average ex-vessel price for yellowtail snapper over this time period was $4.90 per pound.

Table 3.3.3.3. Economic characteristics of South Atlantic yellowtail snapper trips 2020 through 2024.

YEAR	# of Vessels	SATL yellowtail snapper landings (lb gw)	SATL yellowtail snapper ex-vessel revenue	Joint catch ex-vessel revenue (same trip)	Non-joint catch ex-vessel revenue (other trips)	Gulf species ex-vessel revenue	Average Revenue per Vessel
2020	195	770,394	$3,366,495	$1,061,677	$6,028,798	$1,064,456	$59,084
2021	177	930,915	$4,543,933	$762,058	$4,821,384	$1,540,856	$65,922
2022	181	1,157,732	$5,903,701	$1,062,623	$5,173,750	$941,535	$72,274
2023	189	979,350	$4,830,925	$974,348	$4,937,471	$460,817	$59,278
2024	178	891,701	$4,529,508	$960,462	$4,276,240	$544,617	$57,926
Average	**184**	**946,018**	**$4,634,912**	**$964,233**	**$5,047,529**	**$910,456**	**$62,810**

Source: SEFSC SSRG Socioeconomic Panel (January 2025 version).

Economic Value

As stated in section 3.3.1.1, estimates of economic returns for commercial vessels that participate in the snapper grouper fishery are available from Liese (2023). According to Liese (2023), PS for commercial vessels that harvested South Atlantic snapper grouper was approximately 37.7%

of their annual gross revenue, on average. Net revenue from operations was 8.2% of their annual gross revenue, on average, during this period. Applying these percentages to the revenue results provided in Table 3.3.3.2 and Table 3.3.3.3 yields the estimated $25,434 and $23,679 per-vessel average annual PS and $5,532 and $5,150 average annual net revenue from operations for the South Atlantic mutton and yellowtail vessels, respectively.

Changes in commercial mutton and yellowtail snapper landings may result in changes in ex-vessel prices due to less (or more) domestic product being available in markets. In turn, if the ex-vessel price is expected to change, gross revenue and thus CS would also be expected to change. As mentioned previously, a qualitative approach is to analyze the commercial CS and PS is when evaluating broad regulatory changes. Similar to mutton snapper, due to expected changes in the quantity purchased and any corresponding shifts in the ex-vessel price paid, the change in the commercial CS is generally assumed to be positive when commercial yellowtail catch limits are increased.

Dealers

Commercial harvest of snapper grouper species in the EEZ may only be sold to dealers with a valid federal South Atlantic and Gulf dealer permit. The information in Table 3.3.3.4 illustrates the purchasing activities of dealers that bought South Atlantic mutton snapper from vessels, while Table 3.3.3.5 illustrates the purchasing activities for South Atlantic yellowtail snapper. Like vessels, dealer participation is fluid, and not all dealers purchase mutton or yellowtail snapper in each year. Total dealer purchases of mutton and yellowtail snapper landings are small relative to their total purchases of other South Atlantic and Gulf species. On average, dealers' purchases of these specific snappers make up a small percentage of their total annual purchases. The vast majority of their purchasing revenue is derived from other South Atlantic species. This indicates that South Atlantic dealers have very low financial dependency on either mutton or yellowtail snapper.

Table 3.3.3.4. Dealer statistics for dealers that purchased mutton snapper landings by year, 2020 through 2024.

Year	Number of Dealers	SATL mutton snapper purchases	Other SATL species purchases	Gulf species purchases	Total purchases
2020	94	$347,194	$81,300,609	$20,096,248	$101,744,050
2021	91	$311,616	$84,775,734	$24,356,574	$109,443,924
2022	82	$320,073	$81,949,953	$26,913,474	$109,183,500
2023	85	$333,276	$68,140,038	$33,203,841	$101,677,156
2024	99	$249,369	$54,373,703	$17,081,897	$71,704,969
Average	**90**	**$312,306**	**$74,108,008**	**$24,330,407**	**$98,750,720**

Source: SEFSC Fishing Communities Web Query Tool, Version 1. Accessed 03/10/2026.

Table 3.3.3.5. Dealer statistics for dealers that purchased yellowtail snapper landings by year, 2020 through 2024.

Year	Number of Dealers	SATL yellowtail snapper purchases	Other SATL species purchases	Gulf species purchases	Total purchases
2020	81	$4,626,854	$70,235,967	$22,023,970	$96,886,791
2021	71	$6,142,546	$72,581,106	$26,702,471	$105,426,123
2022	78	$6,912,818	$54,045,828	$21,418,691	$82,377,336
2023	78	$5,575,501	$49,310,349	$23,964,431	$78,850,280
2024	95	$5,492,171	$45,521,988	$12,653,038	$63,667,197
Average	**81**	**$5,749,978**	**$58,339,048**	**$21,352,520**	**$85,441,546**

Source: SEFSC Fishing Communities Web Query Tool, Version 1. Accessed 03/10/2026.

Imports

A discussion on the imports of foreign seafood products that compete within the domestic seafood market of South Atlantic mutton and yellowtail snapper can be found in section 3.3.1.

Business Activity

Estimates of the U.S. average annual business activity associated with the commercial harvest of South Atlantic mutton snapper and yellowtail snapper were derived using the model developed for and applied in NMFS (2024a) and are provided in Table 3.3.3.6 and Table 3.3.3.7, respectively. This business activity is characterized as jobs (full- and part-time equivalents), income impacts (wages, salaries, and self-employed income), value-added impacts (the difference between the value of goods or services and the cost of materials, supplies, and labor across the supply chain), and output impacts (gross business sales). The results are based on average relationships developed through the analysis of many fishing operations that harvest many different species and should be interpreted accordingly.

Table 3.3.3.6. Average annual business activity (2020 through 2024) associated with the commercial harvest of mutton snapper in the South Atlantic.

Impact Type	Direct	Indirect	Induced	Total
Harvesters				
Employment	4.5	0.7	0.9	6.2
Income	$137,190	$25,478	$61,592	$224,261
Value added	$146,236	$91,714	$105,386	$343,336
Output	$254,103	$206,743	$204,600	$665,446
Primary dealers/processors				
Employment	1.7	0.7	1.2	3.5
Income	$78,950	$72,748	$68,811	$220,508
Value added	$84,159	$92,844	$129,552	$306,555
Output	$254,103	$191,396	$253,259	$698,757
Secondary wholesalers/distributors				
Employment	0.8	0.2	0.7	1.7
Income	$46,145	$13,731	$48,537	$108,413
Value added	$49,194	$23,025	$82,889	$155,108
Output	$123,570	$45,058	$161,207	$329,835
Grocers				
Employment	5.1	0.6	1.1	6.8
Income	$148,676	$49,398	$74,616	$272,690
Value added	$158,484	$79,603	$126,335	$364,422
Output	$254,103	$129,286	$248,029	$631,418
Restaurants				
Employment	7.6	0.5	1.2	9.3
Income	$142,298	$43,166	$81,511	$266,974
Value added	$151,674	$77,139	$137,324	$366,137
Output	$277,353	$120,710	$271,000	$669,063
Harvesters and seafood industry				
Employment	19.6	2.6	5.2	27.4
Income	$553,258	$204,520	$335,068	$1,092,846
Value added	$589,747	$364,325	$581,485	$1,535,557
Output	$1,163,232	$693,193	$1,138,095	$2,994,519

Table 3.3.3.7. Average annual business activity (2020 through 2024) associated with the commercial harvest of yellowtail snapper in the South Atlantic.

Impact Type	Direct	Indirect	Induced	Total
Harvesters				
Employment	82.6	12.8	17	112.4
Income	$2,499,742	$464,240	$1,122,274	$4,086,257
Total value added	$2,664,571	$1,671,119	$1,920,232	$6,255,921
Output	$4,630,010	$3,767,067	$3,728,019	$12,125,096
Primary dealers/processors				
Employment	30.3	12.1	21	63.5
Income	$1,438,544	$1,325,536	$1,253,807	$4,017,887
Value added	$1,533,459	$1,691,708	$2,360,572	$5,585,739
Output	$4,630,010	$3,487,421	$4,614,628	$12,732,059
Secondary wholesalers/distributors				
Employment	13.8	3	13.4	30.2
Income	$840,810	$250,189	$884,389	$1,975,388
Value added	$896,370	$419,534	$1,510,321	$2,826,224
Output	$2,251,574	$821,000	$2,937,347	$6,009,920
Grocers				
Employment	92.7	10.5	20.6	123.8
Income	$2,709,019	$900,086	$1,359,587	$4,968,692
Value added	$2,887,737	$1,450,448	$2,301,952	$6,640,137
Output	$4,630,010	$2,355,727	$4,519,346	$11,505,083
Restaurants				
Employment	137.8	9.2	22.5	169.5
Income	$2,592,806	$786,520	$1,485,217	$4,864,542
Value added	$2,763,653	$1,405,554	$2,502,174	$6,671,382
Output	$5,053,656	$2,199,457	$4,937,899	$12,191,012
Harvesters and seafood industry				
Employment	357.2	47.7	94.5	499.4
Income	$10,080,920	$3,726,570	$6,105,274	$19,912,765
Value added	$10,745,790	$6,638,362	$10,595,250	$27,979,403
Output	$21,195,259	$12,630,672	$20,737,239	$54,563,170

3.3.4 South Atlantic Recreational Sector

Tables 3.3.4.1 and 3.3.4.2 describe the recreational target and catch trips for South Atlantic mutton snapper in federal and state waters. Tables 3.3.4.3 and 3.3.4.4 describe target and catch trips for South Atlantic yellowtail snapper in federal and state waters.

The private/rental boat mode comprised the vast majority of South Atlantic recreational target trips and catch trips for both species, followed by the charter mode. The majority of recreational target and catch effort occurred in Florida, with only a small amount of target effort recorded in other South Atlantic states. Overall, recreational effort for South Atlantic mutton and yellowtail snapper fluctuated annually over the five-year period. Total catch trips for yellowtail snapper are higher than target trips, indicating that yellowtail snapper is frequently caught incidentally by recreational anglers targeting other reef fish.

Table 3.3.4.1. Mutton snapper recreational target trips, by mode and state, 2020 through 2025.

Year	Florida	Georgia	North Carolina	South Carolina	Total
Charter					
2020	2,760	0	0	0	2,760
2021	1,423	0	0	0	1,423
2022	1,580	0	0	0	1,580
2023	1,690	0	0	0	1,690
2024	1,927	0	0	0	1,927
2025	2,825	0	0	0	2,825
Average	**2,034**	**0**	**0**	**0**	**2,034**
Private/Rental					
2020	102,971	0	0	0	102,971
2021	90,688	0	0	0	90,688
2022	181,283	0	0	0	181,283
2023	289,859	0	0	0	289,859
2024	190,685	0	0	0	190,685
2025	178,059	0	0	0	178,059
Average	**172,257**	**0**	**0**	**0**	**172,257**
Shore					
2020	114,740	0	0	0	114,740
2021	18,810	0	0	0	18,810
2022	26,459	0	0	0	26,459
2023	6,861	0	0	0	6,861
2024	48,599	0	0	0	48,599
2025	24,070	0	0	0	24,070
Average	**39,923**	**0**	**0**	**0**	**39,923**
All Modes					
2020	220,471	0	0	0	220,471
2021	110,921	0	0	0	110,921
2022	209,321	0	0	0	209,321
2023	298,409	0	0	0	298,409
2024	241,210	0	0	0	241,210
2025	204,954	0	0	0	204,954
Average	**214,214**	**0**	**0**	**0**	**214,214**

Source: SEFSC MRIP FES Recreational Dataset (June 15, 2026)

Table 3.3.4.2. Mutton snapper recreational catch trips, by mode and state, 2020 through 2025.

Year	Florida	Georgia	North Carolina	South Carolina	Total
Charter					
2020	15,456	0	0	0	15,456
2021	17,630	0	0	0	17,630
2022	20,695	0	0	0	20,695
2023	14,926	0	0	0	14,926
2024	20,090	0	0	0	20,090
2025	13,573	0	169	0	13,742
Average	**17,062**	**0**	**28**	**0**	**17,090**
Private/Rental					
2020	238,891	0	0	0	238,891
2021	379,365	0	0	0	379,365
2022	468,486	0	0	0	468,486
2023	651,240	0	0	0	651,240
2024	486,975	0	0	910	487,885
2025	427,673	0	0	0	427,673
Average	**442,105**	**0**	**0**	**152**	**442,257**
Shore					
2020	94,698	0	0	0	94,698
2021	51,476	0	0	0	51,476
2022	146,424	0	0	0	146,424
2023	118,243	0	0	0	118,243
2024	372,686	0	0	0	372,686
2025	90,164	0	0	0	90,164
Average	**145,615**	**0**	**0**	**0**	**145,615**
All Modes					
2020	349,045	0	0	0	349,045
2021	448,471	0	0	0	448,471
2022	635,605	0	0	0	635,605
2023	784,409	0	0	0	784,409
2024	879,752	0	0	910	880,662
2025	531,410	0	169	0	531,579
Average	**604,782**	**0**	**28**	**152**	**604,962**

Source: SEFSC MRIP FES Recreational Dataset (June 15, 2026)

Table 3.3.4.3. Yellowtail snapper recreational target trips, by mode and state, 2020 through 2025.

Year	Florida	Georgia	North Carolina	South Carolina	Total
Charter					
2020	92	0	0	0	92
2021	2,857	0	0	0	2,857
2022	229	0	0	0	229
2023	1,037	0	0	0	1,037
2024	164	0	0	0	164
2025	3,788	0	0	0	3,788
Average	**1,361**	**0**	**0**	**0**	**1,361**
Private/Rental					
2020	137,437	0	0	0	137,437
2021	147,200	0	0	0	147,200
2022	99,284	0	0	0	99,284
2023	189,743	0	0	0	189,743
2024	79,910	0	0	0	79,910
2025	107,289	0	0	0	107,289
Average	**126,810**	**0**	**0**	**0**	**126,810**
Shore					
2020	0	0	0	0	0
2021	12,042	0	0	0	12,042
2022	0	0	0	0	0
2023	0	0	0	0	0
2024	0	0	0	0	0
2025	70,977	0	0	0	70,977
Average	**13,837**	**0**	**0**	**0**	**13,837**
All Modes					
2020	137,529	0	0	0	137,529
2021	162,099	0	0	0	162,099
2022	99,513	0	0	0	99,513
2023	190,780	0	0	0	190,780
2024	80,074	0	0	0	80,074
2025	182,054	0	0	0	182,054
Average	**142,008**	**0**	**0**	**0**	**142,008**

Source: SEFSC MRIP FES Recreational Dataset (June 15, 2026)

Table 3.3.4.4. Yellowtail snapper recreational catch trips, by mode and state, 2020 through 2025.

Year	Florida	Georgia	North Carolina	South Carolina	Total
Charter					
2020	6,090	0	0	0	6,090
2021	17,656	0	0	0	17,656
2022	13,703	0	0	0	13,703
2023	5,455	0	0	0	5,455
2024	11,958	0	179	0	12,137
2025	10,765	0	0	0	10,765
Average	**10,938**	**0**	**30**	**0**	**10,968**
Private/Rental					
2020	241,082	0	0	0	241,082
2021	403,532	0	0	0	403,532
2022	372,420	0	0	0	372,420
2023	502,437	0	266	0	502,703
2024	293,479	0	0	0	293,479
2025	287,480	0	1,030	0	288,510
Average	**350,072**	**0**	**216**	**0**	**350,288**
Shore					
2020	19,669	0	0	0	19,669
2021	111,388	0	0	0	111,388
2022	28,596	0	0	0	28,596
2023	63,505	0	0	0	63,505
2024	97,115	0	0	0	97,115
2025	52,565	0	0	0	52,565
Average	**62,140**	**0**	**0**	**0**	**62,140**
All Modes					
2020	266,841	0	0	0	266,841
2021	532,575	0	0	0	532,575
2022	414,719	0	0	0	414,719
2023	571,397	0	266	0	571,663
2024	402,552	0	179	0	402,731
2025	350,810	0	1,030	0	351,841
Average	**423,149**	**0**	**246**	**0**	**423,395**

Source: SEFSC MRIP FES Recreational Dataset (June 15, 2026)

Similar to the Gulf, analysis of recreational effort is not possible for the headboat mode using MRIP because headboat data are not collected at the angler level. As shown in Table 3.3.4.5, estimates of effort by the headboat mode are provided in terms of angler days, or the number of standardized full-day angler trips, collected via the NMFS SRHS. Headboat angler days have

been variable across the South Atlantic states, with Florida consistently accounting for the majority of headboat angler days reported. As displayed in Figure 3.3.4.1, headboat effort tends to be concentrated most heavily during the summer months.

Table 3.3.4.5. South Atlantic headboat angler days and percent distribution by state* (2020 through 2024).

Year	Angler Days NC	Angler Days SC	Angler Days FLE-GA	Percent Distribution NC	Percent Distribution SC	Percent Distribution FLE-GA
2020	14,154	34,080	84,005	10.70%	25.77%	63.53%
2021	19,719	47,908	120,367	10.49%	25.48%	64.03%
2022	16,140	38,748	104,989	10.10%	24.24%	65.67%
2023	16,115	35,814	105,673	10.23%	22.72%	67.06%
2024	12,654	32,529	109,336	8.19%	21.05%	70.76%
Average	**15,756**	**37,816**	**104,874**	**9.94%**	**23.85%**	**66.21%**

*Florida and Georgia are combined due to confidentiality constraints.

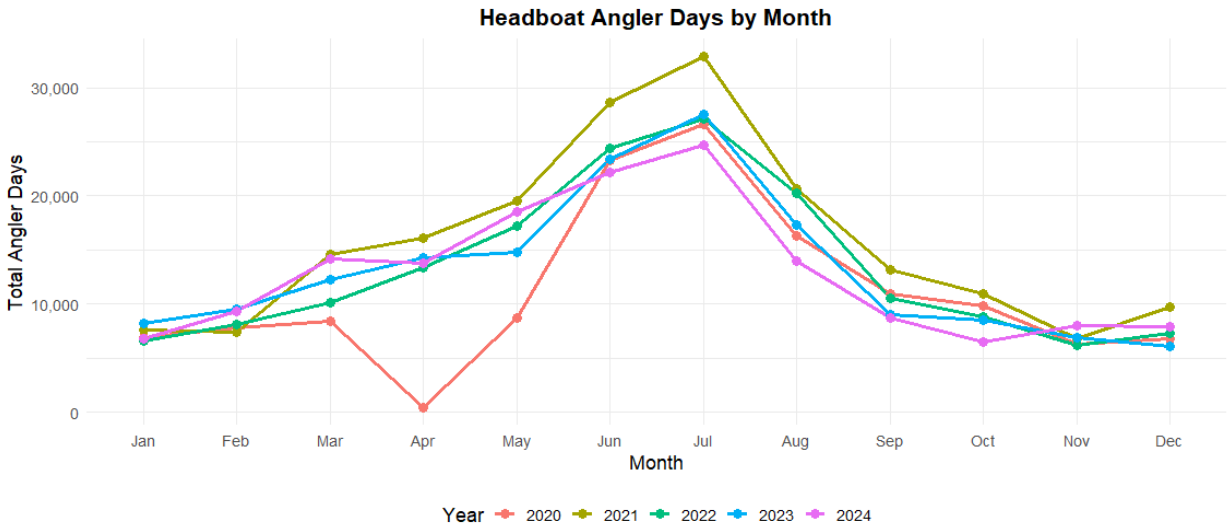


Figure 3.3.4.1. South Atlantic headboat angler days by year and month (2020 through 2024).
Source: NMFS SRHS (2024).

Permits

There are no specific federal permitting requirements for private recreational anglers to fish for South Atlantic snapper grouper species. Instead, private anglers are required either to possess a state recreational fishing permit that authorizes saltwater fishing in general, or to be registered in the federal National Saltwater Angler Registry system, subject to appropriate exemptions. As a result, it is not possible to identify exactly how many individual private anglers or private recreational vessels would be expected to be affected by specific regulatory actions. For anglers to fish for or possess snapper grouper species in or from the South Atlantic EEZ on for-hire vessels, those vessels are required to have a South Atlantic charter/headboat permit for snapper

grouper. The total number of valid or renewable South Atlantic for-hire permits has remained relatively stable over the past five years, exhibiting only minor year-to-year variations.

Table 3.3.4.6. Number of valid For-hire South Atlantic Snapper Grouper permits, 2016 through 2020.

Year	Number of Permits
2016	1,867
2017	1,982
2018	2,126
2019	2,183
2020	2,136

Source: NMFS SERO SF Access Permits Database 07/08/22.

Economic Value

Direct estimates of recreational CS for mutton and yellowtail snapper are not available, but similar to the Gulf, proxies are utilized. Carter & Liese recently estimated that the CS for one additional snapper kept is approximately $23.15 (2025$). Economic value for the for-hire component of the recreational sector is measured by PS per passenger trip (the amount of money that a vessel owner earns in excess of the cost of providing the trip). Estimates of revenue, costs, and trip net revenue (TNR) for offshore trips are available from Souza and Liese (2019) and are presented in Table 3.3.4.7. After accounting for transaction fees, supply costs, and labor costs, net revenue per trip was 54% of revenue for Southeast headboats, or $2,241 per trip. When TNR is divided by the average number of anglers on a trip, it represents cash flow per angler (CFpA), which approximates PS per angler trip. The estimated CFpA value for an average Southeast headboat angler trip is $77 (Souza and Liese 2019). Estimates of CFpA for individual species-specific target trips are currently unavailable.

Table 3.3.4.7. Trip economics for offshore trips by South Atlantic charter vessels and Southeast headboats in 2017 (2025$).

	South Atlantic Charter Vessels	Southeast Headboats
Revenue	100%	100%
Transaction Fees (% of revenue)	3%	6%
Supply Costs (% of revenue)	29%	19%
Labor Costs (% of revenue)	28%	22%
Net Revenue per trip including Labor costs (% of rev)	40%	54%
Net Revenue per Trip	$682	$2,241
Average # of Anglers per Trip	4.7	28.2
Trip Net Cash Flow per Angler Trip	$145	$79

Source: Souza and Liese (2019).

Business Activity

The desire for recreational fishing generates economic activity as consumers spend their income on various goods and services needed for recreational fishing. This spurs economic activity in the region where recreational fishing occurs. Estimates of the business activity (economic

impacts) associated with recreational angling for South Atlantic mutton and yellowtail snapper were calculated using average trip-level impact coefficients derived from the Fisheries Economics of the U.S. report (NMFS 2024a). Business activity is characterized in the form of jobs (full- and part-time), income impacts (wages, salaries, and self-employed income), output impacts (gross business sales), and value-added impacts (contribution to the GDP in a state or region). Estimates of the average annual economic impacts resulting from South Atlantic mutton and yellowtail snapper charter, private vessel, and shore target trips are provided in Table 3.3.4.8 and Table 3.3.4.9.

Table 3.3.4.8. Estimated average annual economic impacts (2020 through 2025) from South Atlantic charter, private vessel, and shore mutton snapper target trips, by state, * using state-level multipliers. All monetary estimates are in 2025 dollars in thousands.

Impact Type	FL
Charter Mode	
Value Added Impacts	$939
Sales Impacts	$1,491
Income Impacts	$656
Employment (Jobs)	13.4
Private/Rental Mode	
Value Added Impacts	$4,517
Sales Impacts	$7,597
Income Impacts	$2,124
Employment (Jobs)	41.2
Shore Mode	
Value Added Impacts	$794
Sales Impacts	$1,303
Income Impacts	$432
Employment (Jobs)	8.1
All Modes	
Value Added Impacts	$6,250
Sales Impacts	$10,391
Income Impacts	$3,212
Employment (Jobs)	62.6

*No reported target trips for NC, SC, or GA.

Table 3.3.4.9. Estimated average annual economic impacts (2020 through 2025) from South Atlantic charter, private vessel, and shore yellowtail snapper target trips, by state, * using state-level multipliers. All monetary estimates are in 2025 dollars in thousands.

Impact Type	FL
Charter Mode	
Value Added Impacts	$628
Sales Impacts	$998
Income Impacts	$439
Employment (Jobs)	8.9
Private/Rental Mode	
Value Added Impacts	$3,325
Sales Impacts	$5,593
Income Impacts	$1,564
Employment (Jobs)	30.3
Shore Mode	
Value Added Impacts	$275
Sales Impacts	$452
Income Impacts	$150
Employment (Jobs)	2.8
All Modes	
Value Added Impacts	$4,229
Sales Impacts	$7,042
Income Impacts	$2,152
Employment (Jobs)	42

*No reported target trips for yellowtail snapper in NC, SC, or GA.

3.4 Description of the Social Environment

This amendment affects the commercial and recreational management of mutton snapper and yellowtail snapper in the Gulf and South Atlantic. The following description presents baseline information on fishing participants and fishing communities. This description includes the current status of the fishery in order to present the communities that are expected to be primarily affected by the actions in this amendment because they are the most engaged in and/or reliant on the fisheries and is used to inform the social effects. Community level data are presented whenever possible in order to meet the requirements of National Standard 8 of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), which requires the consideration of the importance of fishery resources to human communities when changes to fishing regulations are considered.

3.4.1 Social Dimensions of the Fishery

Mutton Snapper

Mutton snapper is a stock centered in South Florida and the Florida Keys (SEDAR 15A 2008). Hook and line gear and longline are the predominant gear types for the commercial sector; however other gear types are also used, such as trap, diving, and other (SEDAR 79 2024). Most mutton snapper landings occur in Florida. Fishermen in the South Atlantic report that few mutton snapper are encountered off North Carolina; however, in Florida, there seems to be a shift toward mutton fishing because they are a reliable rod bender, are relatively closer to shore, and are very good table fare (SAFMC 2021). Recreational fishing for mutton snapper in the South Atlantic has been reported as having shifted from bottom fishing with bait to slow pitch jigging. In the South Atlantic, fishermen have reported that mutton snapper are caught commercially as bycatch because they are not typically caught in large enough amounts to make commercial targeting worthwhile. Mutton snapper is reported as being fairly important to the commercial sector because they are considered a nice bonus when encountered and because this catch is low volume and quality as table fare, there is nice profit and reliable market. Mutton is not reported as a target species for tourists and visiting recreational anglers in the South Atlantic; however, there is some local demand for for-hire trips. Mutton snapper are also reported as being a fairly important species for communities in the Florida Keys.

Yellowtail Snapper

Yellowtail are targeted commercially and recreationally, primarily in south Florida and the Florida Keys (SAFMC 2018b). Commercial and recreational fishermen in the South Atlantic, including for-hire captains, agree that yellowtail is more important to their communities than ever. Hook and line gear are the dominant gear type for yellowtail snapper for commercial fishermen throughout the Gulf and South Atlantic with the majority of commercial landings from the Florida Keys region (SEDAR 96 2025).

An ethnographic study by Stoffle and Stoltz (2021) explored the human-ecological relationships in the south Florida yellowtail snapper fishery through interviews with fishers and business owners about shifts in their target strategies over the past several decades. This information is incorporated by reference herein, but relevant portions are summarized here. Yellowtail has been reported by participants in the fishery as having been relied on for generations to provide revenue and food for residents of south Florida, especially those in the Florida Keys. Yellowtail was reported by participants as being more important than ever in current times and are utilized as a fallback species for for-hire trips, as meat for recreational fishermen, and as an important part of a commercial fisherman's annual round. Chumming is used to target yellowtail which usually involves a bucket, basket, or a bag of blocks of frozen and ground up menhaden to create a slick mixed with sand and oats in order to disguise the hooks, or involves the throwing of slop overboard, which is a mix of oats, seawater, and chum. Chumming causes a feeding frenzy for yellowtail, causing them to come to the surface. At the time of the study, all participants agreed that yellowtail stock was healthy, and that the population has been stable or had grown in the last 30 years. Participants also agreed that the fishing technique of power chumming has changed yellowtail snapper behavior, with one fisher noting that in a particular well-known location,

yellowtail have been seen aggregating by the boat before the chum was even dispersed into the water. Participants also agreed that yellowtail is a trip-saver for charter captains when weather or fishing is not good.

3.4.2 Gulf of America and South Atlantic Commercial Sector

Landings by State

Commercial landings by state are included to illustrate the geographic distribution of landings and importance of specific species by state. Landings are characterized by the port or city where the fisherman sells their catch. While the fish may have been caught elsewhere, landings data tracks the economic and social value the fish brings to a specific location.

Mutton Snapper

Gulf
Nearly all commercial mutton snapper catch in the Gulf was landed in west Florida (average of 99.9% from 2020-2024, SEFSC Commercial ACL Monitoring File), followed by small proportions in Louisiana and Texas. The landings for Louisiana and Texas are not reported because of confidentiality issues.

South Atlantic
The majority of commercial mutton snapper catch in the South Atlantic was landed in east Florida and Georgia (average of 84.9% from 2020-2024, SEFSC Commercial ACL Monitoring File), followed by South Carolina (11.7%), and North Carolina (3.4%). Georgia and east Florida are combined because of confidentiality issues; however, a minor amount of catch was caught in Georgia.

Yellowtail Snapper

Gulf
Nearly all commercial yellowtail snapper catch in the Gulf was landed in west Florida (average of 99.9% from 2020-2024, SEFSC Commercial ACL Monitoring File), followed by small proportions in Texas, Louisiana, and Alabama. The landings for Texas, Louisiana, and Alabama are not reported because of confidentiality issues; however, these states are presented in order of the magnitude of their landings, with the state with the greatest landings presented first.

South Atlantic
Nearly all commercial yellowtail snapper catch in the Gulf was landed in east Florida (average of 99.9% from 2020-2024, SEFSC Commercial ACL Monitoring File), followed by small proportions in South Carolina, North Carolina, and Georgia. The landings for South Carolina, North Carolina, and Georgia are not reported because of confidentiality issues; however, these states are presented in order of the magnitude of their landings, with the state with the greatest landings presented first.

Regional Quotient

These community descriptions identify top-ranking communities based on their "regional quotient" (RQ) for mutton snapper or yellowtail commercial landings in the Gulf and South Atlantic. The RQ represents a relative measure of a community's contribution, calculated as its proportion of the total regional landings for that species in a given year. Gulf and South Atlantic communities are analyzed together because Florida Keys communities contribute considerably to the landings for mutton snapper and yellowtail snapper, appearing in records for both regions. The RQ is reported individually only for the top fifteen communities by total landings for the years of 2020 through 2024 and communities are presented in the order of their total landings combined for all years. All other communities that landed the species are grouped as "Other Communities."

Mutton Snapper

Figure 3.4.2.1 shows the mutton snapper RQ in percentage of lb from 2020 to 2024. Mutton snapper landings by community are highly variable by year. The top mutton snapper communities are located in Florida and South Carolina, with the majority of the top communities located in southern Florida. About 15% of mutton snapper landings from 2020 to 2024 were landed in the top community of Key West, Florida. About 24% of mutton snapper landings were landed in the second and third ranked communities of Largo and Madeira Beach, Florida, combined. Largo and Madeira Beach are located in Pinellas County along the west coast of Florida. Other top west coast communities located nearby or in Pinellas County include Cortez and St. Petersburg, Florida. In addition to Key West, two other top communities are located in the Florida Keys (Key Largo and Islamorada). Along the east coast on Florida, two of the top communities are located in Duval County (Atlantic Beach and Jacksonville).

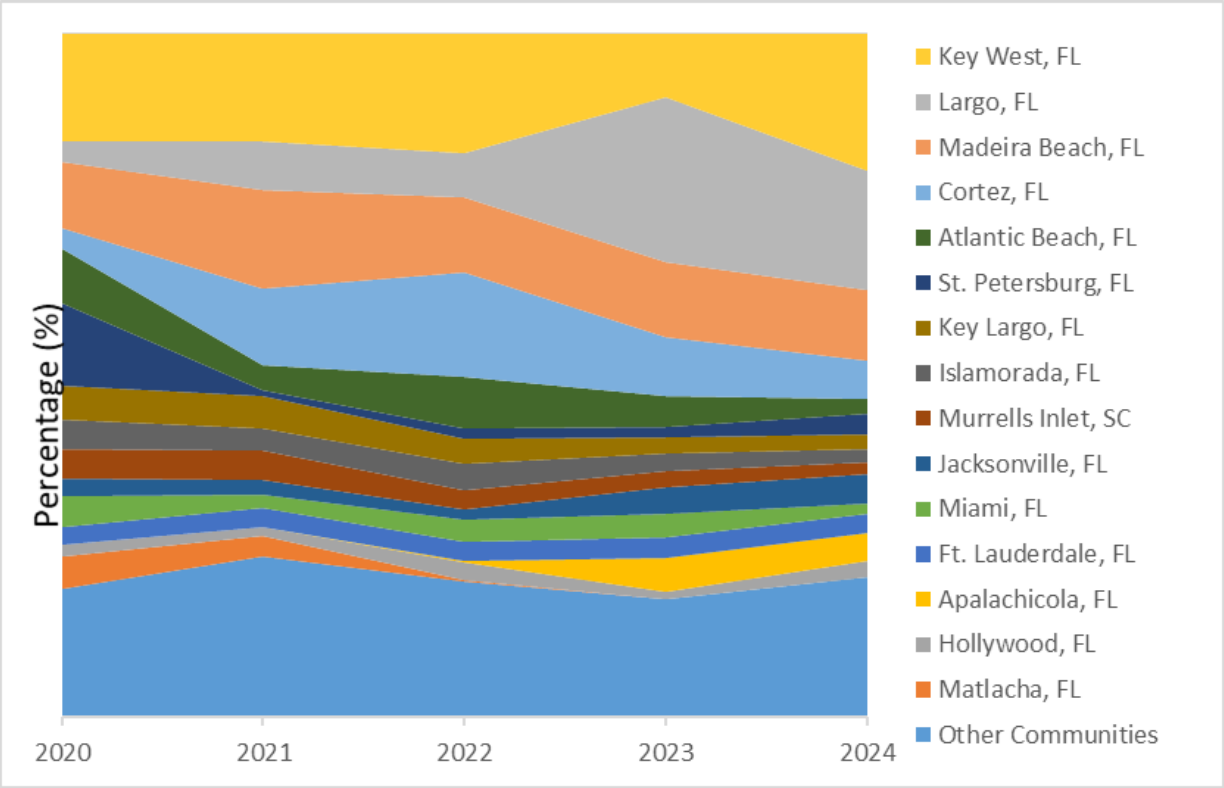


Figure 3.4.2.1. Regional Quotient (lb) for top Gulf and South Atlantic communities by mutton snapper landings from 2020 through 2024. The actual RQ values (y-axis) are omitted from the figure to maintain confidentiality.
Source: SERO, Community ALS.

Yellowtail Snapper

Figure 3.4.2.2 shows the yellowtail snapper RQ in percentage of lb from 2020 to 2024. Yellowtail snapper landings by community are variable by year; however, the top communities are relatively stable throughout the time series. The top yellowtail snapper communities are located in southern Florida, in the Florida Keys (Key West, Marathon, Key Largo, Islamorada, Cudjoe Key, and Tavernier) and Miami-Dade (Miami, Hialeah, Homestead, Miami Beach, and Palmetto Bay) and Broward (Hollywood, Fort Lauderdale, Lauderhill, and Cooper City) Counties. The top 15 communities include about 97% of the landings of yellowtail snapper. About 38% of yellowtail snapper landings from 2020 to 2024 were landed in the top community of Key West, Florida. About 23% of yellowtail landings were landed in the second ranked community of Miami, Florida.

Communities along the southwest coast of Florida are not included in Figure 3.4.2.2 and include a small proportion of yellowtail landings in comparison to the included communities (SERO Community ALS, 2020-2024). The top communities along the west coast of Florida include Marco Island, Naples, Largo, and Cortez.

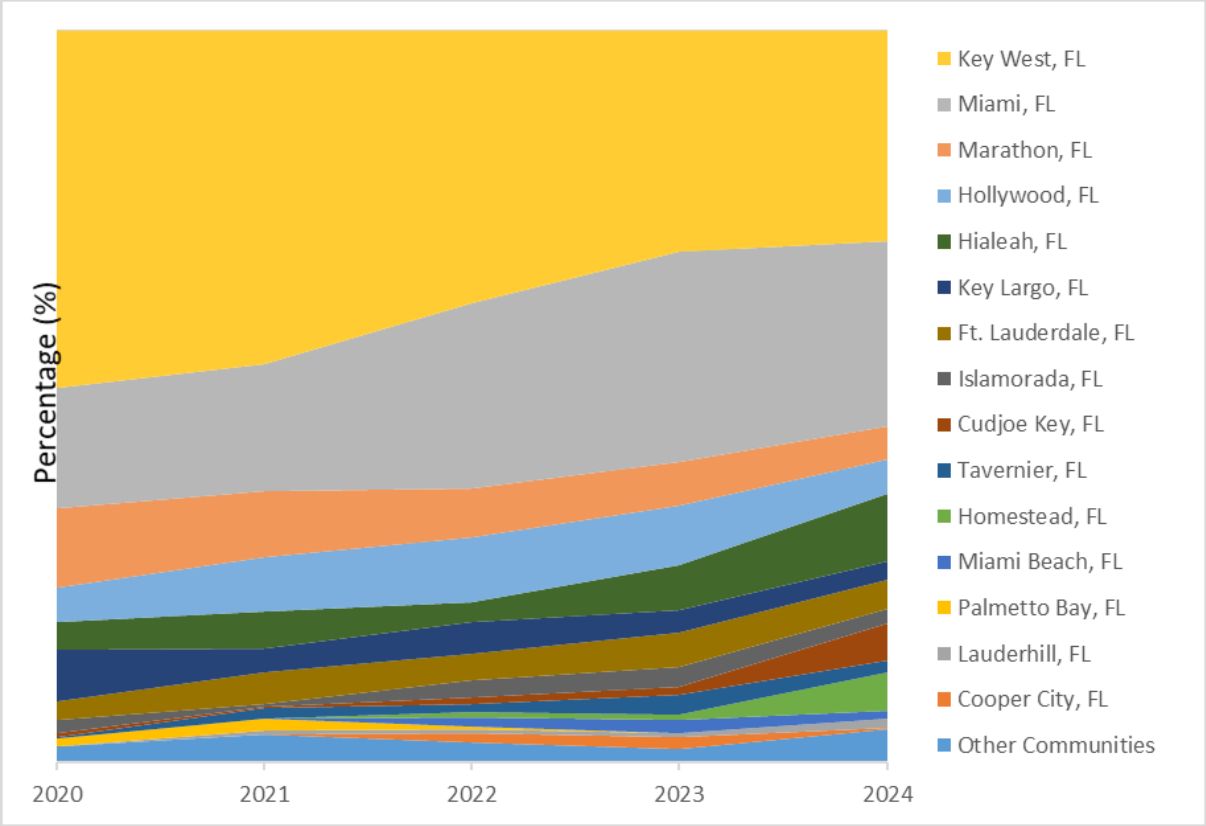


Figure 3.4.2.2. Regional Quotient (lb) for top Gulf and South Atlantic communities by yellowtail snapper landings from 2020 through 2024. The actual RQ values (y-axis) are omitted from the figure to maintain confidentiality.
Source: SERO, Community ALS.

Engagement and Reliance

In addition to examining the RQs and LQs to understand how Gulf and South Atlantic communities are engaged and reliant on fishing, indices were created using secondary data from permit and landings information for the commercial sector (Jepson and Colburn 2013, Jacob et al. 2013). Fishing engagement is primarily based on the absolute numbers of permits, landings, and value. The analysis used the number of vessels designated commercial by homeport and owner address, value of landings, and total number of commercial permits for each community. Fishing reliance includes the same variables as fishing engagement divided by population to give an indication of the per capita influence of this activity.

Taking the communities with the highest RQs, factor scores of both engagement and reliance for commercial fishing were plotted. Two thresholds of one and one-half standard deviation above the mean are plotted onto the graphs to help determine a threshold for significance. The factor scores are standardized; therefore, a score above one is also above one standard deviation. A score above one-half standard deviation is considered engaged or reliant, with anything above one standard deviation to be very engaged or reliant.

Figures 3.4.2.5 and 3.4.2.6 are an overall measure of a community's commercial fishing engagement and reliance and includes the communities with the strongest relationship to the commercial sector for mutton snapper and yellowtail snapper as depicted in Figures 3.4.2.1 and 3.4.2.2. Figures 3.4.2.5 and 3.4.2.6 are a continuation of each other and are presented by state in alphabetical order, followed by community name in alphabetical order within each state.

About half of the communities (Apalachicola, Atlantic Beach, Cortez, Fort Lauderdale, Homestead, Islamorada, Jacksonville, Key Largo, Key West, Madeira Beach, Marathon, Miami, Naples, and St. Petersburg, Florida and Murrells Inlet, South Carolina) in Figures 3.4.2.5 and 3.4.2.6 would be considered to be highly engaged in commercial fishing, as these communities are at or above one standard deviation of the mean factor score. In Florida, Cooper City, Cudjoe Key, Hialeah, Lauderhill, Marco Island, Matlacha, Miami Beach, and Palmetto Bay show the least amount of engagement in commercial fishing overall. Apalachicola, Cortez, Key West, Madeira Beach, Marathon, and Tavernier, Florida demonstrate a moderate to high level of commercial reliance.

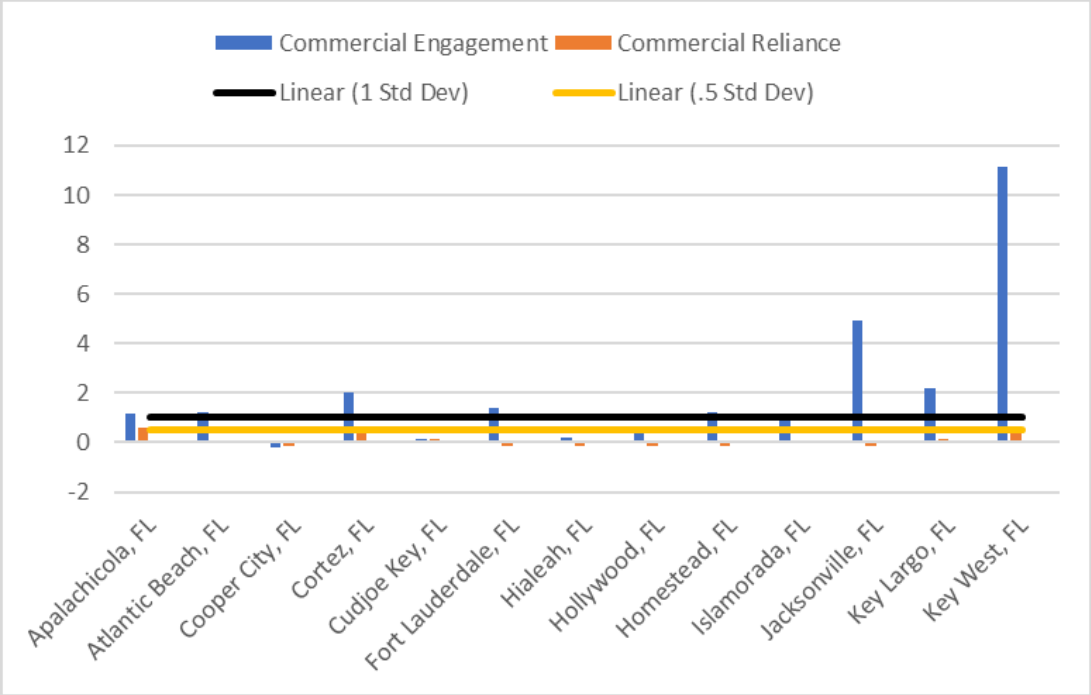


Figure 3.4.2.5. Commercial fishing engagement and reliance for top mutton snapper and yellowtail snapper communities.
Source: SERO Community Social Vulnerability Indicators Database 2022.

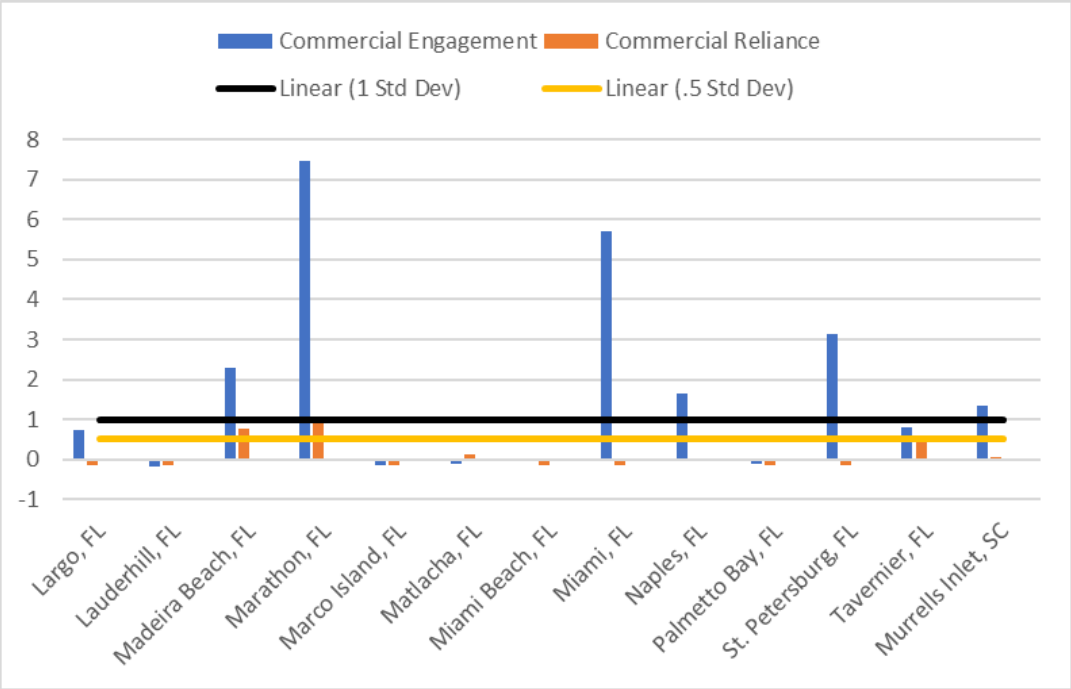


Figure 3.4.2.6. Commercial fishing engagement and reliance for top mutton snapper and yellowtail snapper communities continued.
Source: SERO Community Social Vulnerability Indicators Database 2022.

3.4.3 Gulf and South Atlantic Recreational Sector

Landings by State

Recreational landings by state are included to illustrate the geographic distribution of landings and importance of specific species by state. Landings are characterized by the port or city where the fisherman or vessel brings their catch ashore. While the fish may have been caught elsewhere, landings data tracks the economic and social value the fish brings to a specific location.

Mutton Snapper

Gulf
The majority of recreational mutton snapper landings in the Gulf came from waters adjacent to west Florida (average of 79.6% from 2020-2024, SEFSC ACL Monitoring File), followed by Alabama (18.9%), Louisiana (0.8%), and Texas (0.7%).

South Atlantic
Nearly all recreational mutton snapper landings in the South Atlantic came from waters adjacent to east Florida (average of 99.9% from 2020-2024, SEFSC ACL Monitoring File), followed by a small proportion of landings from South Carolina waters.

Yellowtail Snapper

Gulf
Nearly all recreational yellowtail snapper landings in the Gulf came from waters adjacent to west Florida (average of 99.9% from 2020-2024, SEFSC ACL Monitoring File), followed by a small proportion of landings from Louisiana and Texas waters.

South Atlantic
Nearly all recreational yellowtail snapper landings in the South Atlantic came from waters adjacent to east Florida (average of 99.9% from 2020-2024, SEFSC ACL Monitoring File), followed by a small proportion of landings from North Carolina and South Carolina waters.

Regional Quotient

These descriptions identify Gulf and South Atlantic communities based on their recreational headboat landings, measured by the RQ. The RQ is a relative measure representing a community's share of total regional SRHS landings. Data are presented by homeport, ranking communities by their average proportion of total SRHS landings for each species between 2020 and 2024. These figures illustrate the distribution of headboat landings for mutton snapper and yellowtail snapper at the community level. As the majority of current recreational data for private and charter vessels does not allow for species and community-level analysis, the SRHS RQ serves as a proxy for this type of analysis. These RQ figures provide an estimate for the community-level recreational importance for mutton snapper and yellowtail snapper. These figures provide the best information available to identify and describe the communities that might be impacted in the recreational mutton snapper and yellowtail snapper fisheries.

Mutton Snapper

Gulf
The Gulf communities with headboat landings of mutton snapper are located in Florida and Texas (Figure 3.4.3.1). The community of Stock Island, Florida ranks first for headboat landings of mutton snapper in the Gulf. Other top communities include the southern Florida communities of Marco Island, Key West, and Fort Myers Beach.

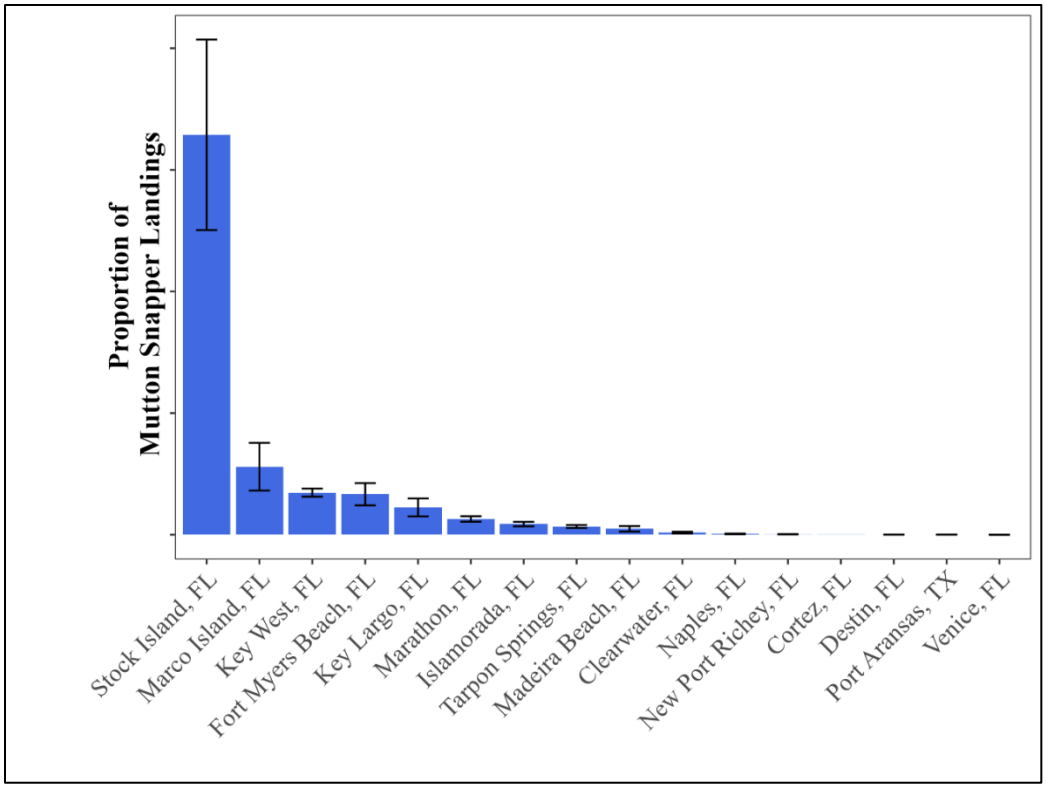


Figure 3.4.3.1. Regional Quotient for all Gulf communities included in the SRHS with mutton snapper landings from headboats from 2020 through 2024. The actual RQ values (y-axis) are omitted from the figure to maintain confidentiality.

South Atlantic

The South Atlantic communities with headboat landings of mutton snapper are located in Florida, South Carolina, North Carolina, and Georgia (Figure 3.4.3.2). The community of Jupiter, Florida ranks first for headboat landings of mutton snapper in the South Atlantic. The second ranked community of Riviera Beach, Florida is also located in Palm Beach County.

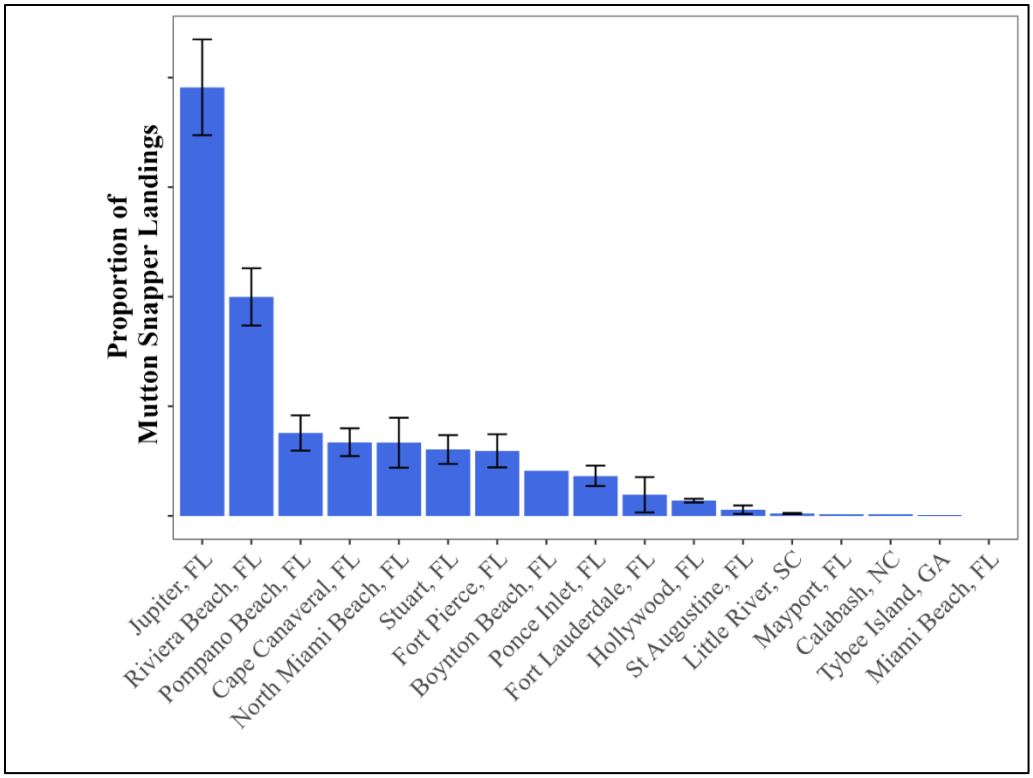


Figure 3.4.3.2. Regional Quotient for all South Atlantic communities included in the SRHS with mutton snapper landings from headboats from 2020 through 2024. The actual RQ values (y-axis) are omitted from the figure to maintain confidentiality.

Yellowtail Snapper

Gulf

The Gulf communities with headboat landings of yellowtail snapper are located in Florida (Figure 3.4.3.3). The top four ranked communities by headboat landings of yellowtail snapper in the Gulf include four Florida Keys communities (Islamorada, Marathon, Key West, and Key Largo).

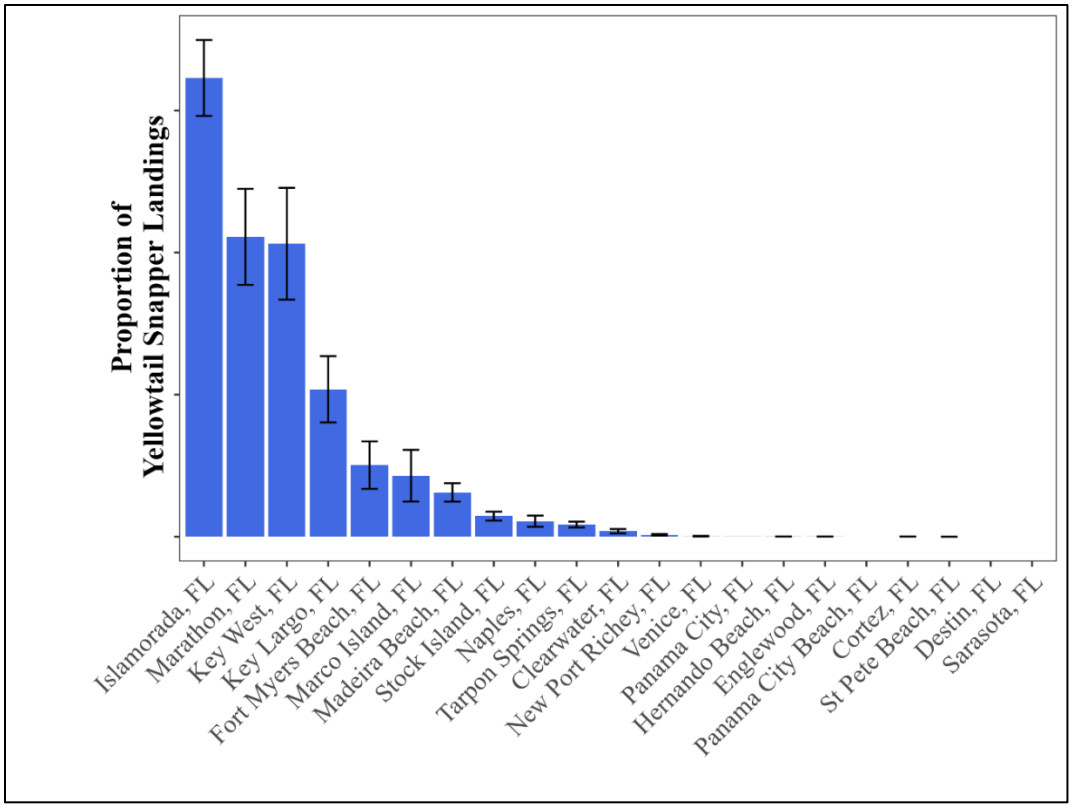


Figure 3.4.3.3. Regional Quotient for all Gulf communities included in the SRHS with yellowtail snapper landings from headboats from 2020 through 2024. The actual RQ values (y-axis) are omitted from the figure to maintain confidentiality.

South Atlantic

The South Atlantic communities with headboat landings of yellowtail snapper are located in Florida (Figure 3.4.3.4). The community of Pompano Beach, Florida ranks first for headboat landings of yellowtail snapper within the South Atlantic. Other top communities (North Miami Beach, Boynton Beach, Jupiter, and Riviera Beach, Florida) are also located in southeast Florida.

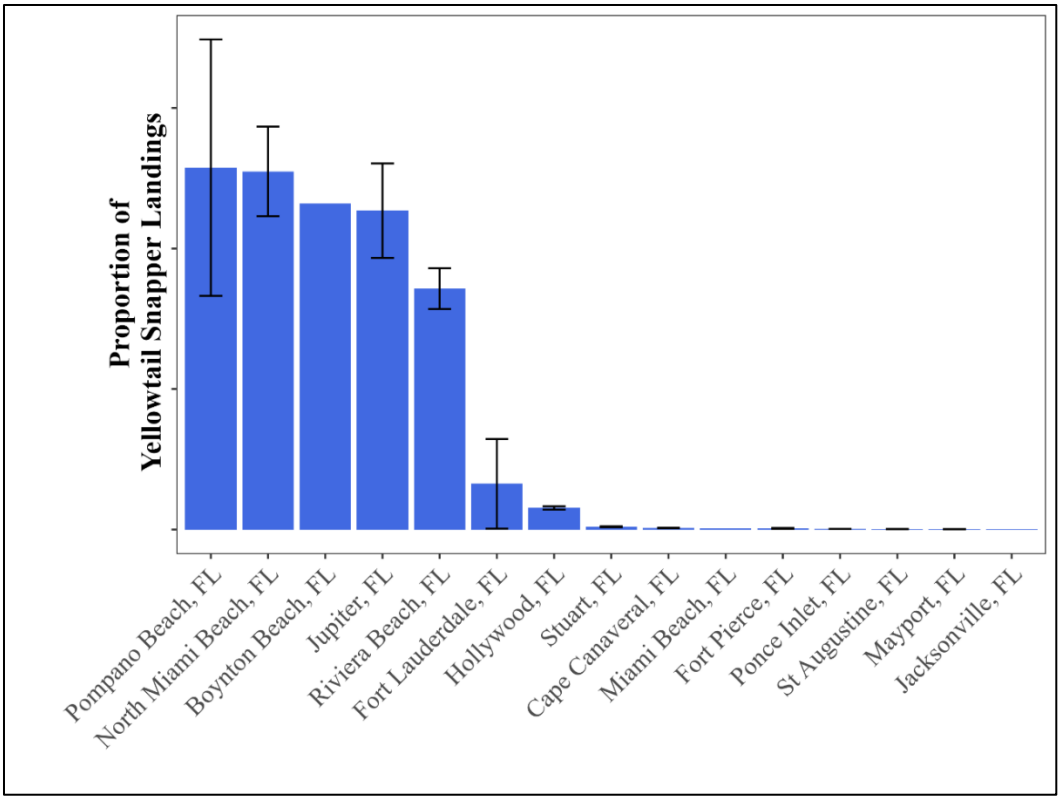


Figure 3.4.3.4. Regional Quotient for all South Atlantic communities included in the SRHS with yellowtail snapper landings from headboats from 2020 through 2024. The actual RQ values (y-axis) are omitted from the figure to maintain confidentiality.

Engagement and Reliance

Because limited data are available concerning how communities are engaged and reliant on specific species or species groups in the recreational sector, indices were created using secondary data from permit and infrastructure information for the southeast recreational fishing sector at the community level (Jacob et al. 2013; Jepson and Colburn 2013). Recreational fishing engagement is represented by the number of for-hire permits and vessels designated as "recreational" by homeport and owner address and the number of recreational fishing survey sites in a particular community. Fishing reliance includes the same variables as fishing engagement, divided by population. Factor scores of both engagement and reliance were plotted by community.

Figures 3.4.3.5 and 3.4.3.6 include Gulf and South Atlantic communities with headboat landings for mutton snapper and yellowtail snapper, as identified in Figures 3.4.3.1-3.4.3.4. These figures were combined for mutton snapper and yellowtail snapper because the included communities for both species overlap, and the recreational engagement and reliance data is not specific to these species. Figures 3.4.3.5 and 3.4.3.6 are a continuation of each other and are presented by state in alphabetical order, followed by community name in alphabetical order within each state. The majority of the included communities demonstrate high levels of recreational engagement. Six communities (Destin, Islamorada, Key West, Marathon, and Ponce Inlet, Florida and Port Aransas, Texas) demonstrate high levels of recreational reliance.

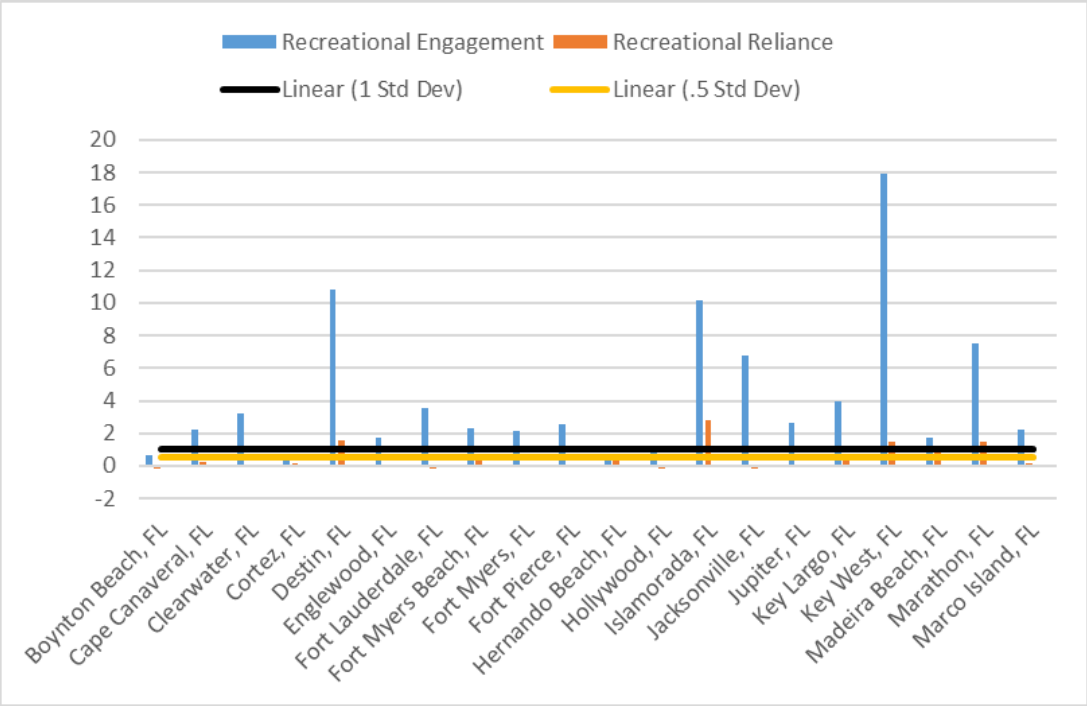


Figure 3.4.3.5. Recreational fishing engagement and reliance for mutton snapper and yellowtail snapper communities.
Source: SERO, Community Social Vulnerability Indicators Database 2022.

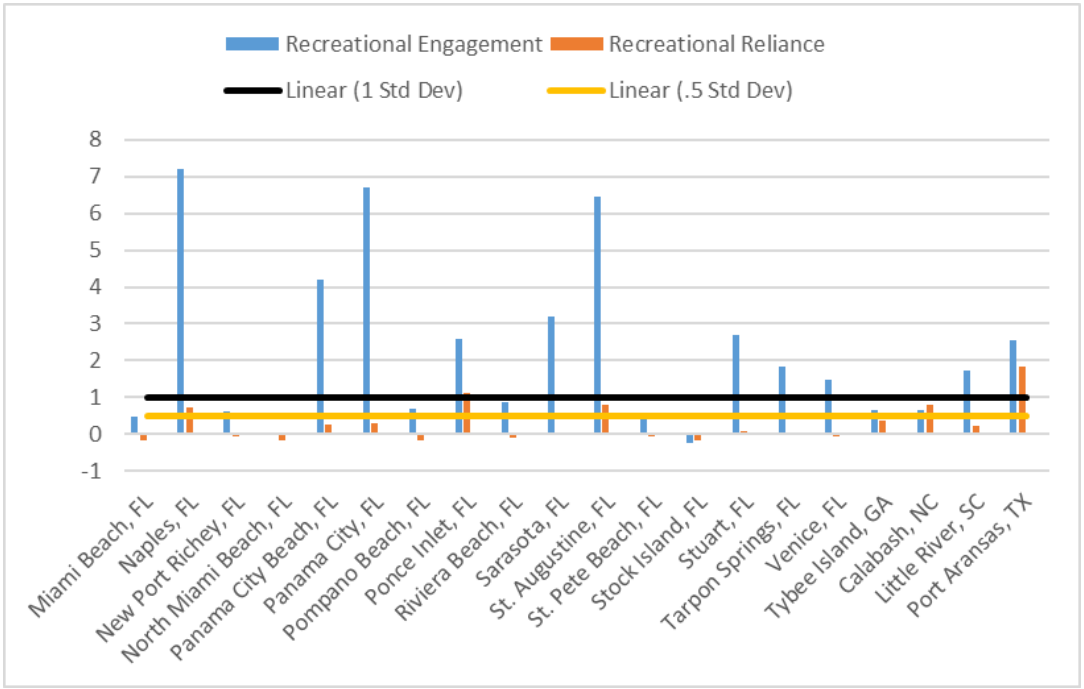


Figure 3.4.3.6. Recreational fishing engagement and reliance for mutton snapper and yellowtail snapper communities continued.
Source: SERO, Community Social Vulnerability Indicators Database 2022.

3.4.4 Social Vulnerability

A suite of indices was created using census data to examine the social vulnerability of coastal communities within the region. The three indices are poverty, population composition, and personal disruption. The variables included in each of these indices have been identified through literature as being important components that contribute to a community's vulnerability. Poverty includes poverty rates for different groups; population composition includes more single female-headed households, households with children under the age of five, minority populations, and those that speak English less than well; and personal disruption includes disruptions such as higher separation rates, higher crime rates, and unemployment. Increased rates in the indicators are signs of populations experiencing vulnerabilities. For those communities that exceed the threshold it would be expected that they might exhibit vulnerabilities to sudden changes or social disruption that might accrue from regulatory change.

Figures 3.4.4.1 and 3.4.4.2 provide social vulnerability rankings for place-based communities identified in Section 3.4 as important to commercial and recreational fishing for mutton snapper and yellowtail snapper. These figures were combined for mutton snapper and yellowtail snapper because the included communities for both species overlap, and the social vulnerability data included is not specific to these species. Figures 3.4.4.1 and 3.4.4.2 are a continuation of each other and are presented by state in alphabetical order, followed by community name in alphabetical order within each state. Several communities exceed the threshold of one standard deviation above the mean for at least one of the indices (Fort Pierce, Hialeah, Hollywood, Homestead, Miami Beach, Miami, North Miami Beach, Palmetto Bay, Pompano Beach, and Stock Island, Florida and Calabash, North Carolina). These communities would be the most likely to exhibit vulnerabilities to social or economic disruption resulting from regulatory change.

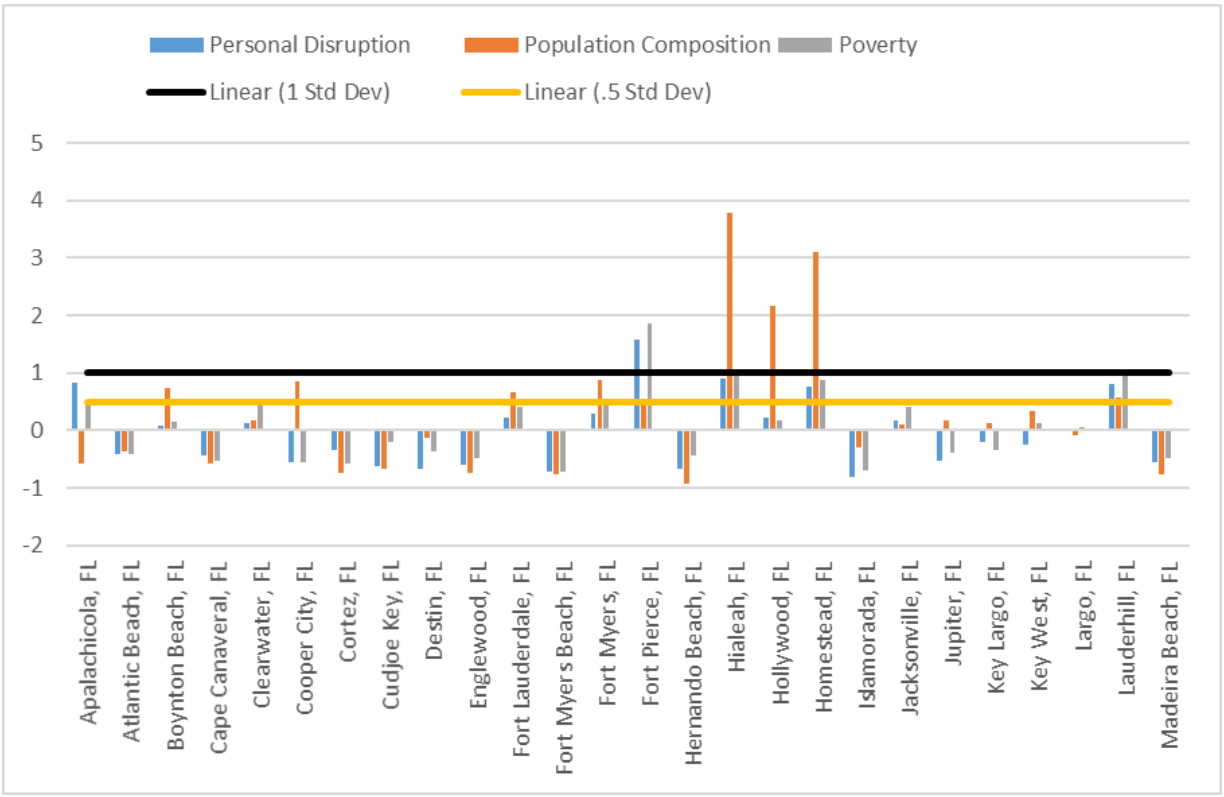


Figure 3.4.4.1. Social vulnerability indices for top commercial and recreational mutton snapper and yellowtail snapper communities.
Source: SERO, Community Social Vulnerability Indicators Database 2022.

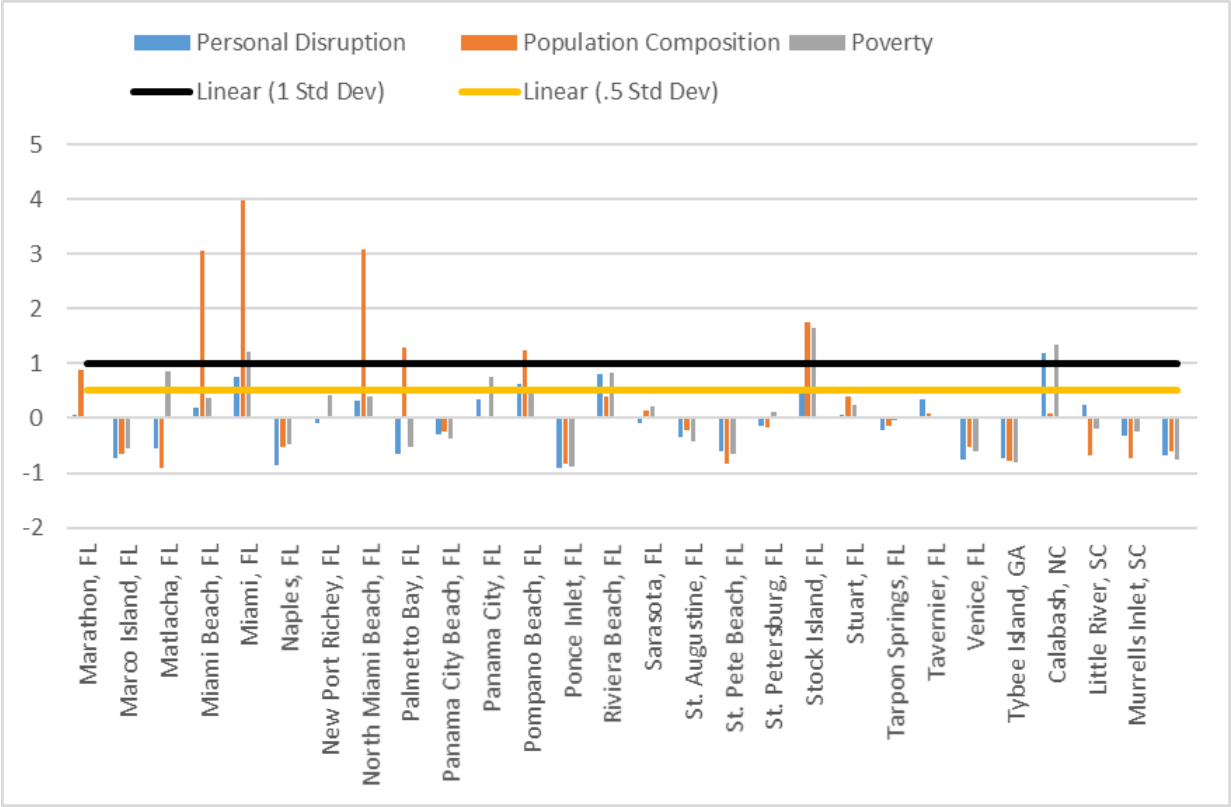


Figure 3.4.4.2. Social vulnerability indices for top commercial and recreational mutton snapper and yellowtail snapper communities continued.
Source: SERO, Community Social Vulnerability Indicators Database 2022.

The description of fishing activities presented here highlights which communities may be most involved in Gulf and South Atlantic mutton snapper and yellowtail snapper fishing. It is expected that the impacts from the regulatory action in this amendment, whether positive or negative, would most likely affect those communities identified above.

3.5 Description of the Administrative Environment

3.5.1 General Federal Fishery Management

Federal fishery management is conducted under the authority of the Magnuson-Stevens Act (16 U.S.C. 1801 *et seq*.), originally enacted in 1976 as the Fishery Conservation and Management Act. The Magnuson-Stevens Act claims sovereign rights and exclusive fishery management authority over most fishery resources within the EEZ. The EEZ is defined as an area extending 200 nautical miles from the seaward boundary of each of the coastal states. The Magnuson-Stevens Act also claims authority over U.S. anadromous species and continental shelf resources that occur beyond the EEZ.

The Secretary of Commerce (Secretary) is responsible for federal fishery management decision-making. Eight regional fishery management councils that represent the expertise and interests of constituent states provide recommendations to the Secretary. Regional councils are responsible

for preparing, monitoring, and revising management plans for fisheries needing management within their jurisdiction. The Secretary is responsible for reviewing and approving fishery management plans and amendments to those plans and promulgating regulations to implement proposed plans and amendments. In most cases, the Secretary has delegated this authority to NMFS.

3.5.2 Gulf Federal Fishery Management

The Gulf Council is responsible for advising on fishery resources in federal waters of the Gulf. These waters extend 200 nautical miles offshore from the seaward boundaries of Alabama, Florida, Louisiana, Mississippi, and Texas, as those boundaries have been defined by law. The length of the Gulf coastline is approximately 1,631 miles. Florida has the longest coastline extending 770 miles along its Gulf coast, followed by Louisiana (397 miles), Texas (361 miles), Alabama (53 miles), and Mississippi (44 miles).

The Gulf Council consists of seventeen voting members: 11 public members appointed by the Secretary; one each from the fishery agencies of Texas, Louisiana, Mississippi, Alabama, and Florida; and one from NMFS. The public is also involved in the fishery management process.

3.5.3 Gulf State Fishery Management

The purpose of state representation at the Council level is to ensure state participation in federal fishery management decision-making and to promote the development of compatible regulations in state and federal waters. The state governments of Texas, Louisiana, Mississippi, Alabama, and Florida have the authority to manage their respective state fisheries. Each of the five states exercises legislative and regulatory authority over their states' natural resources through discrete administrative units. Although each agency is the primary administrative body with respect to the states' natural resources, all states cooperate with numerous state and federal regulatory agencies when managing marine resources. A more detailed description of each state's primary regulatory agency for marine resources is provided on their respective web pages (Table 3.5.3.1).

Table 3.5.3.1. Gulf state marine resource agencies and web pages.

Gulf State Marine Resource Agency	Web Page
Alabama Marine Resources Division	http://www.outdooralabama.com/
Florida Fish and Wildlife Conservation Commission	http://myfwc.com/
Louisiana Department of Wildlife and Fisheries	http://www.wlf.louisiana.gov/
Mississippi Department of Marine Resources	http://www.dmr.ms.gov/
Texas Parks and Wildlife Department	http://tpwd.texas.gov/

3.5.4 South Atlantic Federal Fishery Management

The South Atlantic Council is responsible for advising on fishery resources in federal waters of the South Atlantic. These waters extend 200 nautical miles offshore from the seaward boundaries of North Carolina, South Carolina, Georgia, and Florida, as those boundaries have been defined by law. The length of the South Atlantic coastline is approximately 1,168 miles.

Florida has the longest coastline extending 580 miles along its Atlantic coast, followed by North Carolina (301 miles), South Carolina (187 miles), and Georgia (100 miles).

The South Atlantic Council consists of thirteen voting members: 8 public members appointed by the Secretary (two per state); one each from the fishery agencies of North Carolina, South Carolina, Georgia, and Florida; and one from NMFS. The public is also involved in the fishery management process.

3.5.5 South Atlantic State Fishery Management

The purpose of state representation at the Council level is to ensure state participation in federal fishery management decision-making and to promote the development of compatible regulations in state and federal waters. The state governments of North Carolina, South Carolina, Georgia, and Florida have the authority to manage their respective state fisheries. Each of these four states exercise legislative and regulatory authority over their states' natural resources through discrete administrative units. Although each agency is the primary administrative body with respect to the states' natural resources, all states cooperate with numerous state and federal regulatory agencies when managing marine resources. A more detailed description of each state's primary regulatory agency for marine resources is provided on their respective web pages (Table 3.5.5.1).

Table 3.5.5.1. South Atlantic state marine resource agencies and web pages.

South Atlantic State Marine Resource Agency	Web Page
North Carolina Division of Marine Fisheries	https://www.deq.nc.gov/about/divisions/marine-fisheries
South Carolina Department of Natural Resources	https://www.dnr.sc.gov/divisions/marine.html
Georgia Department of Natural Resources	https://coastalgadnr.org/marine-fisheries
Florida Fish and Wildlife Conservation Commission	http://myfwc.com/

CHAPTER 4. ENVIRONMENTAL CONSEQUENCES

4.1 Action 1: Modification of Southeastern U.S. Mutton Snapper Overfishing Limit (OFL), Acceptable Biological Catch (ABC), Jurisdictional Apportionment, and Regional Annual Catch Limits (ACLs)

4.1.1. Effects on the Physical Environment

Effects from fishing on the physical environment are generally tied to fishing effort. The greater the fishing effort, the more gear interacts with the bottom. Different gear types have different levels of impact. Commercial and recreational reef fish fishing in the Gulf of America (Gulf), and snapper grouper fishing in the South Atlantic, uses vertical line gear (rod and reel, bandit gear for commercial vessels) most frequently, which can interact with and affect bottom habitat. Commercial longline fishing gear, which interacts with bottom habitat over the length of the deployed gear, may also capture snapper species like mutton snapper in the Gulf. However, in the South Atlantic, possession of mutton snapper when commercial fishing with longline gear is prohibited. Longline gear, upon retrieval, can abrade, snag, and dislodge smaller rocks, corals, and sessile invertebrates (Hamilton 2000; Barnette 2001). Direct underwater observations of longline gear in the Pacific halibut fishery by High (1998) noted that the gear could sweep across the bottom. A study that directly observed deployed longline gear (Atlantic tilefish portion of the snapper-grouper fishery) found no evidence that the gear shifted significantly, even when set in currents (Grimes et al. 1982). Spears are used by both the recreational and commercial sector to harvest mutton snapper but represent a relatively minor component of both. Barnette (2001) summarized a previous study that concluded spearfishing on reef habitat may result in some coral breakage. In addition, there could be some impacts from divers touching coral with their hands or from re-suspension of sediment by fins (Barnette 2001).

Anchor damage is also associated with vertical line fishing vessels, particularly by the recreational sector where anglers may repeatedly visit well-marked fishing locations over reef fish sites (Bohnsack 2000). Fouled fishing gear may entangle and harm deep-water coral habitats and may also contribute to algal growth on and adjacent to fouled gear (Bohnsack 2000). Barnette (2001) suggested that physical impacts may include entanglement and minor degradation of benthic species from line abrasion and the use of weights (sinkers). The cumulative effects of repeated anchoring could damage the hard bottom areas where reef fish fishing occurs, as well as repeated drops of weighted fishing rigs onto the reef. However, since the mid-2010s, private recreational and charter for-hire vessels, and some commercial vertical line vessels, have increasingly adopted the use of bow-mounted electric trolling motors with global positioning system (GPS), allowing these vessels to remain at a geographic point without the need of a traditional anchor (Capt. Dylan Hubbard, pers. comm, 2024). The continued adoption of this method of staying on location when fishing would be expected to decrease physical interactions with the physical environment by these vessels from traditional anchoring practices.

Modifying the jurisdictional apportionment and catch limits for southeastern U.S. mutton snapper is not expected to result in significant effects on the physical environment as both sectors are not expected to change the current practices used in the multi-species reef fish fishery in the Gulf, or the snapper grouper fishery in the South Atlantic. Further, this analysis is considerate of the southeastern U.S. mutton snapper stock as a whole, as opposed to perceived effects within a Council jurisdiction. The catch limits under **Alternative 1** (No Action) are based on the Marine Recreational Fisheries Statistics Survey (MRFSS) and SEDAR 15A Update (2015). MRFSS and the results from the SEDAR 15A Update are no longer considered consistent with the best scientific information available (see Section 1.3). The catch limits proposed in **Alternative 2**, and **Option 3a** and **Preferred Option 3b** in **Preferred Alternative 3**, would result in a substantial increase in potential mutton snapper harvest; however, at present, neither the commercial nor the recreational sector in the Gulf or the South Atlantic is landing what might be allocated to them by way of either **Alternative 2** or the options in **Preferred Alternative 3** (compare to recent landings in Table 1.3.5, for reference). Currently, both fishing sectors in both regions are open to year-round harvest, and that dynamic is not expected to change with the increase in catch limits expected from **Alternative 2** and the options in **Preferred Alternative 3** (see Appendix C for detailed fishery closure analyses). Thus, the effects on the physical environment of **Alternative 2** and the options in **Preferred Alternative 3** are not expected to be measurably different from **Alternative 1** as fishing would continue to occur exactly as it does at present. Any impacts to the physical environment, including to vulnerable marine and coastal ecosystems, are expected to be minor because modifications to the jurisdictional apportionment and catch limits would not change the fishing methods used or alter the execution of the reef fish fishery in the Gulf, or the snapper grouper fishery in the South Atlantic, as a whole.

4.1.2. Effects on the Biological and Ecological Environment

Effects from fishery management actions as they relate to Gulf reef fish species have been discussed in detail in GMFMC (2011a) and are incorporated here by reference. Similar effects as they relate to South Atlantic snapper-grouper species have been discussed in detail in SAFMC (2011) and are incorporated here by reference. Management actions that affect the biological and ecological environments primarily relate to the impacts of fishing on a species' population size, life history, and the role of the species within its habitat. Removal of fish from a population through fishing reduces the overall population size. Fishing gear types have different selectivity patterns, which refer to a fishing method's ability to target and capture a species by size (length) and age. Selectivity patterns also include discards, which are mostly composed of sublegal sized fish or fish caught during seasonal closures, and the mortality associated with releasing these fish.

Fishing can affect life history characteristics, such as growth and maturation rates. Reproduction may also be impacted by fishing. An aggregating species is particularly vulnerable to fishing because it is concentrated at specific locations. Mutton snapper are aggregating spawners, and as such may be more vulnerable to harvest during peak spawning months (May and June; Keel et al. 2025). This problem may be magnified because of the depth at which a species is found. At the deeper depths, it is common for snapper species to be increasingly vulnerable to mortality from barotrauma when hooked at depth and then reeled to the surface.

This analysis is considerate of the southeastern U.S. mutton snapper stock as a whole, as opposed to perceived effects within a Council jurisdiction. The catch limits under **Alternative 1** (No Action) are based on MRFSS and SEDAR 15A Update (2015), neither of which are considered consistent with the best scientific information available (see Section 1.3). Thus, **Alternative 1** is not a viable alternative. SEDAR 79 (2024) and subsequent catch limit recommendations from the Councils' SSCs are considered consistent with the best scientific information available, and were used to inform **Alternative 2**, and **Option 3a** and **Preferred Option 3b** in **Preferred Alternative 3**. So long as the stock overfishing limit (OFL) specified by the SSCs is not exceeded in a fishing year, overfishing would not be estimated to have occurred, and negative biological effects would not be expected for the southeastern U.S. mutton snapper stock. The catch limits proposed for **Alternative 2**, and **Option 3a** and **Preferred Option 3b** in **Preferred Alternative 3**, are considerably higher than recent landings in either Council's jurisdiction (see Table 1.3.5, for reference). Given this fact, allowing the harvests prescribed in either **Alternative 2** or either of the options in **Preferred Alternative 3** is not expected to result in negative effects to the biological environment. The probability of these catch limits being exceeded to the extent that the stock OFL in a fishing year would also be exceeded is estimated to be remote (see Appendix C for fishery closure analyses).

Expected effects on discards and bycatch of co-occurring species

Bycatch does occur within the reef fish fishery in the Gulf, and the snapper grouper fishery in the South Atlantic. If fish are released due to catch limits, seasons, or other regulatory measures, these fish are considered bycatch. In general, reducing bycatch provides biological benefits to managed species as well as benefits to the fishery through less waste, higher yields, and, thus, less forgone yield. In some cases, actions are approved that can increase bycatch through regulatory discards such as increased minimum sizes and closed seasons. Under these circumstances, biological benefit to the managed species through the approved action is estimated to outweigh any increases in discards from the action. With regard to Action 1 of this amendment, no significant changes in bycatch and overall biodiversity are expected regardless of the alternative. Catch rates and fishing effort are projected to remain similar to status quo as the execution of the reef fish and snapper grouper fisheries is not expected to change. The predicted effects on discards and bycatch of co-occurring species are applicable to all actions in this amendment and are further described in Appendix H (Bycatch Practicability Analysis).

Expected effects to protected species

Bycatch of protected species can occur when targeting reef fish in the Gulf, or snapper grouper in the South Atlantic. Specifically, sea turtles have been observed to be incidentally captured by the bottom longline component of the Gulf reef fish fishery. These captures can result in injury or mortality of the animal (GMFMC, 2010). However, the most recent biological opinion (NMFS 2011a) for the Reef Fish FMP and re-initiation memos concluded that the operation of the fishery is not likely to jeopardize the continued existence of sea turtles or other species listed under the Endangered Species Act (ESA). This fishery is also not expected to adversely affect marine mammals. The primary gear types used by the commercial sector (longline and hook-and-line) were classified in the 2026 Marine Mammal Protection Act List of Fisheries as a

Category III fishery (91 FR 24176; May 5, 2026) with regard to marine mammal species, indicating the gear has little effect on these populations.

This action would not significantly modify the way in which the Gulf and South Atlantic fisheries are prosecuted in terms of gear types, overall effort, seasons, or areas fished. Therefore, there are no additional impacts on ESA-listed species or designated critical habitats anticipated as a result of this action (see Section 3.2 for a more detailed description of ESA-listed species and critical habitat in the action areas), regardless of the alternative selected. In the multi-species fishery, fishing effort may shift to or from other species and away or towards mutton snapper specifically but is not expected to change the prosecution of the fishery as a whole. The predicted effects on ESA-listed species and designated critical habitats are applicable to all actions in this amendment.

4.1.3. Effects on the Economic Environment

Alternative 1 maintains the current OFL, ABC, jurisdictional apportionment of the ABC, and regional ACLs for southeastern U.S. mutton snapper. Because **Alternative 1** is inclusive of MRFSS, it is not comparable with the values for **Alternative 2** or either option with **Preferred Alternative 3**. Therefore, the average landings from the Gulf and from the South Atlantic from 2020 through 2024 are used as proxies for **Alternative 1**. In the Gulf, the commercial sector averaged 74,602 lb whole weight (ww), while the recreational sector averaged 45,172 lb ww; the commercial sector accounted for 63.01% of landings from 2020 through 2024, while the recreational sector accounted for 36.99% of landings. In the South Atlantic, the commercial sector averaged 66,813 lb ww, while the recreational sector averaged 611,661 lb ww (or 145,669 fish, as number of mutton snapper is how the catch limit for the recreational sector is specified for the South Atlantic). The South Atlantic has sector allocations for mutton snapper of 17.02% commercial and 82.98% recreational. The Gulf does not use sector allocations for mutton snapper.

Alternative 2 modifies the OFL and ABC, retains the current jurisdictional apportionment of the stock ABC, and modifies regional ACLs. The Gulf ACL is 495,428 lb ww in 2027 and 499,071 in 2028 and subsequent years (+). Applying the sector percentage of landings averaged from 2020 through 2024, the commercial sector would be expected to land 312,169 lb ww in 2027 and 314,464 lb ww in 2028+, and recreational sector would be expected to land 183,259 lb ww in 2027 and 184,606 in 2028+. The South Atlantic ACL is 2,256,949 lb ww in 2027 and 2,273,544 lb ww in 2028+. Applying the South Atlantic's sector allocations for mutton snapper, the commercial sector's ACL would be 384,133 lb ww in 2027 and 386,957 lb ww in 2028+, and the recreational sector's ACL would be 1,872,816 lb ww (or 351,180 fish) in 2027 and 1,886,587 lb ww (or 346,625 fish) in 2028+. For **Alternative 2** and the options in **Preferred Alternative 3**, the South Atlantic recreational ACL in number of fish is calculated by taking the stock ABC from SEDAR 79 (2024), applying the 82% jurisdictional apportionment for the South Atlantic, and subtracting out the commercial ACL expressed in number of fish (which is calculated by dividing the South commercial ACL by the average commercial weight from 2020-2024 of 8.49 lb ww). The number of fish representing the recreational catch limits by year for mutton snapper in this action decrease from 2027 to 2028+, despite the corresponding catch limit in lb increasing between the same years. This is in response to how the catch projections were calculated. These

projections assume constant recruitment, selectivity (the length of the fish likely to be caught by the recreational sector), and retention (the length of fish likely to be kept after being caught by the recreational sector). Under these assumptions, the average length and concurrently, the average weight, of fish expected to be retained by the recreational sector is expected to increase over the short term. Thus, as the average weight of fish caught increases, the number of fish necessary to equal the catch limit in weight decreases.

Preferred Alternative 3, **Option 3a** modifies the OFL and ABC and the jurisdictional apportionment of the stock ABC and the regional ACLs. The Gulf ACL is 440,380 lb ww in 2027 and 443,618 in 2028+. Applying the sector percentage of landings averaged from 2020 through 2024, the commercial sector would be expected to land 277,483 lb ww in 2027 and 279,524 lb ww in 2028+, and recreational sector would be expected to land 162,897 lb ww in 2027 and 164,094 in 2028+. The South Atlantic ACL is 2,311,997 lb ww in 2027 and 2,328,997 lb ww in 2028+. Applying the South Atlantic's sector percentages for mutton snapper, the commercial sector's ACL would be 393,502 lb ww in 2027 and 396,395 lb ww in 2028+, and the recreational sector's ACL would be 1,918,495 lb ww (or 359,745 fish) in 2027 and 1,932,602 lb ww (or 355,386 fish) in 2028+.

Preferred Alternative 3, **Preferred Option 3b** modifies the OFL and ABC and the jurisdictional apportionment of the stock ABC and the regional ACLs. The Gulf ACL is 412,857 lb ww in 2027 and 415,892 in 2028+. Applying the sector percentage of landings averaged from 2020 through 2024, the commercial sector would be expected to land 260,141 lb ww in 2027 and 262,054 lb ww in 2028+, and recreational sector would be expected to land 152,716 lb ww in 2027 and 153,838 in 2028+. The South Atlantic ACL is 2,339,520 lb ww in 2027 and 2,356,723 lb ww in 2028+. Applying the South Atlantic's sector percentages for mutton snapper, the commercial sector's ACL would be 398,186 lb ww in 2027 and 401,114 lb ww in 2028+, and the recreational sector's ACL would be 1,941,334 lb ww (or 364,028 fish) in 2027 and 1,955,609 lb ww (or 359,617 fish) in 2028+.

Recreational Sector

Estimated changes in economic value to recreational fishermen are approximated by multiplying the expected change in the number of fish harvested by a consumer surplus (CS) estimate. The most recent proxy for a CS estimate for mutton snapper is the estimated value of the CS for a 1-fish change in the aggregate snapper bag limit. A value of $23.15 (Carter, Liese, and Lovell 2022; values updated to 2025$) reflects recreational willingness-to-pay (WTP) for 1 additional snapper harvested.

Table 4.1.3.1 shows the changes in expected landings (lb ww) for the Gulf recreational sector and in number of fish for the South Atlantic recreational ACL under **Alternative 2**, **Preferred Alternative 3**, **Option 3a**, and **Preferred Alternative 3**, **Preferred Option 3b** from the proxies of Gulf average recreational landing in lb ww and of South Atlantic average recreational landings in number of fish under **Alternative 1**. The expected change in landings assumes that the recreational sectors in the Gulf and in the South Atlantic, respectively, land all mutton snapper available to them annually. With that assumption, by region, **Preferred Alternative 3**, **Preferred Option 3b** would be expected to have the greatest positive economic effect for the South Atlantic, followed by **Preferred Alternative 3**, **Option 3a** and then **Alternative 2**;

however, **Alternative 2** would be expected to have the greatest positive economic effect for the Gulf, followed by **Preferred Alternative 3**, **Option 3a**, and then **Preferred Alternative 3**, **Preferred Option 3b**. With the regions combined, the greatest positive effects to the recreational sectors would be expected from **Preferred Alternative 3**, **Preferred Option 3b**, followed by **Preferred Alternative 3**, **Option 3a** and then **Alternative 2**.

However, given that neither region has routinely harvested their current ACL or experienced a closure in recent years, the assumption that the recreational sectors in both regions would land the large, proposed increases in availability of mutton snapper is unlikely. The magnitude of the increases is noted in Table 4.1.3.1 in the columns for the expected change in recreational landings, as a percentage, which is relative to the 2020 through 2024 recreational landings in each respective region. As a result, the aforementioned qualitative description of expected economic effects, rather than a quantitative description, would be appropriate.

Table 4.1.3.1. Expected change in the recreational sector's landings from **Alternative 2** and **Preferred Alternative 3**, **Option 3a** and **Preferred Option 3b**, compared to **Alternative 1** if all mutton available are landed.

		Gulf		South Atlantic	
	Year	**Expected Change in Rec Landings (lb ww)**	**Expected Change in Rec Landings (lb ww), as a %**	**Expected Change in Rec Landings (# fish)**	**Expected Change in Rec Landings (# fish), as a %**
Alt 2 – Proxy for Alt 1	2027	138,087	306%	205,511	141%
	2028+	139,434	309%	200,956	138%
Preferred Alt 3, Option 3a – Proxy for Alt 1	2027	117,725	261%	214,076	147%
	2028+	118,922	263%	209,707	144%
Preferred Alt 3, Preferred Option 3b – Proxy for Alt 1	2027	107,544	238%	218,359	150%
	2028+	108,666	241%	213,948	147%

The producer surplus (PS) of the for-hire component of the recreational sector, composed of charter vessels and headboats, would be impacted by a change in the number of targeted trips. In the long run, factors of production, such as labor and capital, can be used elsewhere in the economy, and so only short-term changes to PS are expected. In the Gulf, headboat trips take a diverse set of anglers on a single vessel, generally advertising an assorted range of species to be caught. Therefore, an assumption that no headboat trips would be gained or lost due to a change in the recreational ACL would be reasonable. However, charter vessel trips that are targeting mutton snapper may be added by anglers and are the focus of the recreational sector PS analysis. As neither the South Atlantic recreational sector for mutton snapper, nor the Gulf mutton snapper fishery, have routinely harvested their current ACL, nor have they been subject to closures, no additional for-hire trips are expected to occur as a result of the increases in the South Atlantic's recreational ACL and in the Gulf's total ACL. Therefore, no economic effects to the for-hire

component of either region's recreational sectors are expected from the proposed catch limit increases in **Alternative 2**, or **Preferred Alternative 3**, **Option 3a**, or **Preferred Alternative 3**, **Preferred Option 3b**.

The expected net economic benefits to the recreational sector are a summation of the changes in the recreational sector's CS and PS. It is unlikely that either of the components of the recreational sector would be expected to experience economic effects from the proposed increases to either region's total ACL, since neither jurisdiction has routinely harvested their current ACL and neither jurisdiction has ever been subject to an in-season closure.

Commercial Sector

For the commercial sector in the Gulf, the comparison of effects is based on the 2020 through 2024 commercial sector's percentage of landings applied to the Gulf's total ACL from **Alternative 2**, **Preferred Alternative 3**, **Option 3a**, and **Preferred Alternative 3**, **Preferred Option 3b** relative to the average commercial landings from 2020 through 2024, as a proxy for **Alternative 1**. For the commercial sector in the South Atlantic, the comparison of effects is based on the commercial sector's allocation (17.02%) of the South Atlantic's total ACL from **Alternative 2**, **Preferred Alternative 3**, **Option 3a**, and **Preferred Alternative 3**, **Preferred Option 3b** relative to the average commercial landings from 2020 through 2024, as a proxy for **Alternative 1**. The expected change in landings shown in Table 4.1.3.2 assumes that the commercial sectors in the Gulf and in the South Atlantic, respectively, land all mutton snapper available to them annually. To calculate expected changes in commercial CS, own-price flexibility[24] for the Gulf and South Atlantic's mutton snapper commercial fisheries would be required to derive the expected average price change. Keithly and Tabarestani (2018) estimated an uncompensated own-price flexibility for "other snapper" of -0.533. However, this value is best suited for marginal changes in an ACL. As seen in Table 4.1.3.2, the expected changes in commercial landings, as a percentage, relative to the 2020-2024 commercial landings by region would not be considered marginal changes. As a result, a quantitative analysis cannot be conducted with available data. However, given that neither region has experienced a closure in recent years, nor have they routinely harvested their current ACL, it is unlikely that the commercial sectors in the Gulf or the South Atlantic would land the large, proposed catch limit increases in mutton snapper. As a result, no direct economic effects to the commercial sectors would be expected from the proposed catch limit increases. Should either of the commercial sectors land some of the catch limit increases proposed, decreases in ex-vessel prices may be expected, which would result in increases in commercial CS. Positive, negative, or no expected changes to the commercial revenue and PS would be dependent on the elasticities of the supply curves in each region.

[24] The own-price flexibility is the percentage change in a product's price relative to the percentage change of a product's quantity sold. This shows the responsiveness of a product's price to the quantity being sold.

Table 4.1.3.2. Expected change in the commercial sector's landings from **Alternative 2** and **Preferred Alternative 3**, **Option 3a** and **Preferred Option 3b**, compared to **Alternative 1** if all mutton available are landed.

		Gulf		South Atlantic	
	Year	**Expected Change in Comm Landings (lb ww)**	**Expected Change in Comm Landings (lb ww), as a %**	**Expected Change in Comm Landings (lb ww)**	**Expected Change in Comm Landings (lb ww), as a %**
Alt 2 – Proxy for Alt 1	2027	237,567	318%	317,320	475%
	2028+	239,862	322%	320,144	479%
Preferred Alt 3, Option 3a – Proxy for Alt 1	2027	202,881	272%	326,689	489%
	2028+	204,922	275%	329,582	493%
Preferred Alt 3, Preferred Option 3b – Proxy for Alt 1	2027	185,539	249%	331,373	496%
	2028+	187,452	251%	334,301	500%

The expected net economic benefits to the commercial sector are a summation of the changes in the commercial sector's CS and PS. It is unlikely that the commercial sector would be expected to experience economic effects from the proposed increases to either region's total ACL since neither region has routinely harvested their current ACL and neither jurisdiction has ever been subject to an in-season closure.

Net Economic Benefits

The total expected change in net economic benefits for both the recreational and commercial sectors can be calculated by summing the expected changes to the individual sectors. However, as discussed for each sector, it is unlikely that either sector would be expected to experience economic effects from the proposed increases to either region's total ACL.

4.1.4. Effects on the Social Environment

This action would affect communities and fishery participants who catch, sell, consume, or otherwise engage with southeastern U.S. mutton snapper in the South Atlantic and the Gulf by increasing catch limits, revising jurisdictional apportionments between the South Atlantic and the Gulf, and modifying the data units used for data collection and quota monitoring.

Additional effects are typically not expected as a result of **Alternative 1** (No Action), but there is a likelihood that if the existing ACL is maintained, the ACL could be exceeded. The current OFL and regional (South Atlantic and Gulf) ACLs were exceeded in 2024 (Table 1.3.5); if

current fishing effort continues, an in-season closure could occur.[25] In-season closures pose challenges to fishery participants, resulting in negative social effects due to a lack of access to the fishery during the fishing year and a disruption of pre-existing plans for the fishing season. However, **Alternative 1** is not a viable option as it is not consistent with best scientific information available.

Alternative 2 and **Preferred Alternative 3, Option 3a** and **Preferred Option 3b** result in an increase to the stock OFL and ABC and to each region's ACL. Each of these alternatives offer the same stock OFL and ABC but differ in their allotment of quota between jurisdictions. **Alternative 2** updates the catch advice following the SEDAR 79 stock assessment, but retains the current jurisdictional apportionments, which were established using MRFSS data. Compared to **Alternative 2**, **Preferred Alternative 3**, **Option 3a** and **Preferred Option 3b** both result in a higher apportionment to the South Atlantic than the Gulf. **Preferred Option 3b** uses more recent landings history in the calculation of this apportionment and sees 85% of the stock apportioned to the South Atlantic and 15% to the Gulf; this apportionment is 84-16 in **Option 3a**, and 82-18 in **Alternative 2** and **Alternative 1**. Although **Preferred Option 3b** sees the least amount of quota apportioned to the Gulf, relative to **Option 3a** and **Alternative 2,** any negative effects will likely be limited. As the highest recorded landings of mutton snapper in the Gulf was 321,322 lb ww (1990), it is unlikely that the Gulf will reach any ACL over 400,000 lb ww if fishing effort is comparable to historic levels. Negative social effects as a result of a change in ACL occur primarily when the new ACL is lower than historic or possible catch levels. In this context, fishermen must adjust their fishing patterns by changing their behavior and patterns of harvest and reducing the number of fish of a species that they have historically caught, which can result in a loss of income or food source. As Gulf landings have never exceeded the amount set by any of the viable alternatives, these negative social consequences are unlikely.

All viable alternatives in this action would modify the units used for monitoring the recreational sector from MRFSS to a combination of SRFS, MRIP-FES, and SRHS; no changes would be made to how landings are monitored for the commercial sector. This shift from federal to state administrated modes of data collection for the private recreational sector is ongoing for a number of Florida-specific species (e.g., red grouper in GFMC 2026). SRFS private recreational monitoring is complementary with MRIP, but stakeholders may have different perceptions about the efficacy and accuracy of state (SRFS) versus federal (MRIP) institutions. Where federal permit holders (commercial fishermen and charter operators) are likely to have some level of experience with federal fisheries data collection, private recreational anglers would likely have less experience and less access to information about federal fisheries. Private recreational anglers, particularly those that also target state-managed species, might be more familiar with the state's role in fisheries management and research. A shift to a form of private recreational data measurement associated with the state rather than federal government may be experienced positively or negatively by stakeholders depending on their prior experience interacting with and relationships with particular governance institutions.

[25] In the Gulf, as per 50 CFR 622.41(o), if landings exceed the stock ACL, then during the following fishing year, if landings reach or are projected to reach the stock ACL, then the fishery would be closed for the remainder of that year. In the South Atlantic, an in-season accountability measure is monitored by sector (see 50 CFR 622.193(o)).

Overall, as the viable alternatives would result in an increase in catch limits across regions and sectors, this should see broadly positive benefits for fishery participants who encounter mutton snapper. The effects experienced across sectors in the South Atlantic, where there are sector allocations set between the commercial and recreational sector for mutton snapper, will be discussed further in Section 4.3.4.

4.1.5. Effects on the Administrative Environment

Actions to set harvest as recommended by the Councils and implemented by NMFS are mostly routine and conducted through the process as established by the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act).

Alternative 1 (No Action) is not expected to affect the administrative environment by retaining the current OFL, ABC, and jurisdictional apportionment. However, **Alternative 1** would result in a greater administrative burden due to the need to convert landings back to MRFSS for management purposes. **Alternative 2, Preferred Alternative 3 Option 3a,** and **Preferred Option 3b** would no longer require NMFS to convert landings from MRIP-FES to MRFSS. This conversion is model-derived and decreases in precision with time. Changing the OFL, the ABC, or the jurisdictional apportionment, is not something that is codified, so modifying those under **Alternative 2, Preferred Alternative 3 Option 3a,** and **Preferred Option 3b** would result in no administrative effect. There is also no effect on the administrative environment for law enforcement as law enforcement officers do not monitor catch limits but would only continue to monitor compliance with any established closed season. Some increased administrative burden is anticipated under **Alternative 2, Preferred Alternative 3 Option 3a,** and **Preferred Option 3b** with respect to outreach as it relates to notifying stakeholders of the changes to the OFL, ABC, jurisdictional apportionment, and regional ACLs. However, engaging in rulemaking to implement changes in management is routine and occurs whenever revised catch recommendations are implemented. No effects from this action are expected to be significant.

4.2 Action 2: Modification of Southeastern U.S. Yellowtail Snapper, OFL, ABC, Jurisdictional Apportionment and Regional ACLs

4.2.1. Effects on the Physical Environment

General effects of fishing on the physical environment are described in Section 4.1.1. Only one appreciable difference occurs for southeastern U.S. yellowtail snapper. The most common commercial fishing practice for yellowtail snapper is hook-and-line fishing behind the vessel, using a chum slick (a large amount of natural chum drifting away from the stern of the fishing vessel). The chum slick draws the fish to the surface, where they feed directly behind the stern of the fishing vessel. This practice is not expected to result in a detectable effect to the physical environment.

Modifying the jurisdictional apportionment and catch limits for southeastern U.S. yellowtail snapper is not expected to result in significant effects on the physical environment as both sectors are not expected to change the current practices used in the multi-species reef fish fishery in the Gulf, or the snapper grouper fishery in the South Atlantic. Further, this analysis is considerate of the southeastern U.S. yellowtail snapper stock as a whole, as opposed to perceived effects within a Council jurisdiction. The catch limits under **Alternative 1** (No Action) are based on MRFSS and O'Hop et al. 2012. MRFSS and the results from O'Hop et al. are no longer considered consistent with the best scientific information available (see Section 1.4). The catch limits proposed in **Option 2a** and **Option 2b** in **Alternative 2**, **Option 3a** and **Option 3b** in **Alternative 3**, and **Option 4a** and **Preferred Option 4b** in **Preferred Alternative 4** would result in an increase in potential yellowtail snapper harvest. However, at present, neither the commercial nor the recreational sector in the Gulf or the South Atlantic is landing what might be allocated to them by way of the options in **Alternative 2**, the options in **Alternative 3**, or the options in **Preferred Alternative 4** (see recent yellowtail snapper landings in Table 1.4.5). This analysis is valid regardless of whether the buffer between the Gulf ACL and annual catch target (ACT) is retained (**Option 2a** in **Alternative 2**, **Option 3a** in **Alternative 3** or **Option 4a** in **Preferred Alternative 4**) or eliminated (**Option 2b** in **Alternative 2**, **Option 3b** in **Alternative 3** or **Preferred Option 4b** in **Preferred Alternative 4**). Historically, commercial fishery closures for yellowtail snapper harvest in the South Atlantic have occurred as recently as the 2018/2019 fishing year but have not occurred since. Currently, both fishing sectors in both regions are open to year-round harvest, and that dynamic is not expected to change with the increase in catch limits expected from the options in **Alternative 2**, the options in **Alternative 3**, or the options in **Preferred Alternative 4** (see Appendix C for detailed fishery closure analyses). Thus, the effects on the physical environment of the options in **Alternative 2**, the options in **Alternative 3**, or the options in **Preferred Alternative 4** are not expected to be measurably different from **Alternative 1** as fishing would continue to occur exactly as it does at present. Any impacts to the physical environment are expected to be minor because modifications to the jurisdictional apportionment and catch limits would not change the fishing methods used or alter the execution of the reef fish fishery in the Gulf, or the snapper grouper fishery in the South Atlantic, as a whole.

4.2.2. Effects on the Biological and Ecological Environment

General effects of fishing on the biological environment are described in Section 4.1.2. Specific to yellowtail snapper, hook-and-line fishing behind commercial vessels is common, using a chum slick to attract the fish to the surface. Yellowtail snapper then feed close to the stern of the commercial vessel, while fishermen use small hooks with natural bait and "cane poles" (rods with ~15' of monofilament fishing line tied to the tip) or spinning reels to catch the fish. While yellowtail snapper is allowed but uncommon in commercial longline fishing in the Gulf, its retention while fishing with longline gear is prohibited in the South Atlantic Council's jurisdiction. Unlike mutton snapper, yellowtail snapper is observed to spawn year-round, with spawning highest during summer months (Keel et al. 2025).

This analysis is considerate of the southeastern U.S. yellowtail snapper stock as a whole, as opposed to perceived effects within a Council jurisdiction. The catch limits under **Alternative 1** (No Action) are based on MRFSS and O'Hop et al. 2012, neither of which are considered consistent with the best scientific information available (see Section 1.4). Thus, **Alternative 1** is not a viable alternative. SEDAR 96 (2025) and subsequent catch limit recommendations from the Councils' SSCs are considered consistent with the best scientific information available and were used to inform **Option 2a** and **Option 2b** in **Alternative 2**, **Option 3a** and **Option 3b** in **Alternative 3**, and **Option 4a** and **Preferred Option 4b** in **Preferred Alternative 4**. So long as the stock OFL specified by the SSCs is not exceeded in a fishing year, overfishing would not be estimated to have occurred, and negative biological effects would not be expected for the southeastern U.S. yellowtail snapper stock. The catch limits proposed for the options in **Alternative 2**, the options in **Alternative 3**, and the options in **Preferred Alternative 4** are higher than recent landings in either Council's jurisdiction (see Table 1.4.5, for reference). Given this fact, allowing the harvests prescribed in either of the options in **Alternative 2,** either of the options in **Alternative 3**, or either of the options in **Preferred Alternative 4** is not expected to result in negative effects to the biological environment. Further, fishery closures are not expected as a result of a Council's jurisdictional apportionment of the yellowtail snapper ABC, or any decremented catch limit like the ACT in the Gulf, being exceeded (see Appendix C for fishery closure analyses).

Despite this estimation of no net negative biological effects, a difference in positive biological effects is estimated for the Gulf between the options in **Alternative 2**, the options in **Alternative 3** and the options in **Preferred Alternative 4**. **Option 2a** in **Alternative 2, Option 3a** in **Alternative 3** and **Option 4a** in **Preferred Alternative 4** would all retain the current 11% buffer between the Gulf apportionment of the stock ABC (Gulf ACL) and the Gulf ACT. The Gulf fishing season for yellowtail snapper would be set and monitored based on this catch level under each alternative. These catch levels would be lower than those under **Option 2b** in **Alternative 2, Option 3b** in **Alternative 3** and **Preferred Option 4b** in **Preferred Alternative 4**, all of which would eliminate the 11% buffer and thus allow additional harvest in the Gulf. Therefore, positive effects would be expected to be greater under **Option 2a** in **Alternative 2, Option 3a** in **Alternative 3** and **Option 4a** in **Preferred Alternative 4**, as these management alternatives would be estimated to result in less harvest of yellowtail snapper. However, as mentioned previously, yellowtail snapper harvest in the Gulf is not projected to reach the current or proposed catch limits, so no new effects on the yellowtail snapper stock in the Gulf are expected.

Expected effects on discards and bycatch of co-occurring species

Expected effects on discards and bycatch of co-occurring species under the alternatives in Action 2 are not expected to differ from those described in Action 1 under Section 4.1.2.

Expected effects to protected species

Expected effects to protected species under the alternatives in Action 2 are not expected to differ from those described in Action 1 under Section 4.1.2.

4.2.3. Effects on the Economic Environment

Alternative 1 maintains the current OFL, ABC, jurisdictional apportionment of the ABC, and regional ACLs for southeastern U.S. yellowtail snapper. Because **Alternative 1** is inclusive of MRFSS, it is not comparable with the values for any options with **Alternative 2**, **Alternative 3**, or **Preferred Alternative 4**. Therefore, the average landings from the Gulf and from the South Atlantic from 2020 through 2024 are used as proxies for **Alternative 1**. In the Gulf, the commercial sector averaged 245,935 lb ww, while the recreational sector averaged 185,976 lb ww; the commercial sector accounted for 58.08% of landings from 2020 through 2024, while the recreational sector accounted for 41.92% of landings. Since the Gulf does not have sector allocations for yellowtail snapper, the sector percentage of landings in the Gulf are applied to the Gulf's regional ACL under the options with **Alternative 2**, **Alternative 3**, or **Preferred Alternative 4** to determine how much the commercial and recreational sectors, respectively, may be expected to harvest. In the South Atlantic, the commercial sector averaged 1,296,502 lb ww, while the recreational sector averaged 1,042,224 lb ww. The South Atlantic has sector allocations for yellowtail of 52.56% commercial and 47.44% recreational.

Alternative 2 modifies the OFL and ABC, retains the current jurisdictional apportionment of the stock ABC as 25% Gulf and 75% South Atlantic, and modifies regional ACLs. **Alternative 2**, **Option 2a** reduces the Gulf regional ACL by 11% from the Gulf jurisdictional apportionment of the stock ABC, whereas **Alternative 2**, **Option 2b** has no such reduction. Table 4.2.3.1 displays, for the options within **Alternative 2**, **Alternative 3**, and **Preferred Alternative 4**, the South Atlantic's commercial and recreational ACLs and the 2020 through 2024 commercial and recreational sector landings percentage applied to the Gulf regional ACL. **Alternative 3** modifies the OFL and ABC, modifies the jurisdictional apportionment of the stock ABC as 17% Gulf and 83% South Atlantic and modifies regional ACLs. **Alternative 3**, **Option 3a** reduces the Gulf regional ACL by 11% from the Gulf jurisdictional apportionment of the stock ABC, whereas **Alternative 3**, **Option 3b** has no reduction. **Preferred Alternative 4** modifies the OFL and ABC, modifies the jurisdictional apportionment of the stock ABC to 17% Gulf and 83% South Atlantic and modifies regional ACLs. **Preferred Alternative 4**, **Option 4a** reduces the Gulf regional ACL by 11% from the Gulf jurisdictional apportionment of the stock ABC, whereas **Alternative 4**, **Preferred Option 4b** has no reduction.

Alternative 3, **Option 3a** would have the same result for the Gulf regional ACL as **Preferred Alternative 4**, **Option 4a**; **Alternative 3**, **Option 3b** would have the same result for the Gulf

regional ACL as **Preferred Alterative 4**, **Preferred Option 4b**. **Alternative 3**, **Options 3a** and **3b** would have the same result for the South Atlantic regional ACL and sector ACLs as **Preferred Alternative 4**, **Option 4a** and **Preferred Option 4b**.

Table 4.2.3.1. South Atlantic's commercial and recreational ACLs and the 2020 through 2024 commercial and recreational sector landings percentage applied to the Gulf regional ACL, for the options within **Alternative 2**, **Alternative 3**, and **Preferred Alternative 4**.

		Gulf		South Atlantic	
	Year	**2020-2024 Comm Sector Landings % Applied to Gulf Regional ACL**	**2020-2024 Rec Sector Landings % Applied to Gulf Regional ACL**	**Commercial ACL**	**Recreational ACL**
Alt 2, Option 2a	2027	505,724	365,013	1,542,673	1,392,397
	2028+	506,397	365,499	1,544,726	1,394,250
Alt 2, Option 2b	2027	568,230	410,127	1,707,224	1,540,920
	2028+	568,986	410,673	1,709,496	1,542,970
Alt 3, Option 3a	2027	343,892	248,209	1,707,224	1,540,920
	2028+	344,350	248,539	1,709,496	1,542,970
Alt 3, Option 3b	2027	386,396	278,886	1,707,224	1,540,920
	2028+	386,910	279,258	1,709,496	1,542,970
Preferred Alt 4, Option 4a	2027	343,892	248,209	1,707,224	1,540,920
	2028+	344,350	248,539	1,709,496	1,542,970
Preferred Alt 4, Preferred Option 4b	2027	386,396	278,886	1,707,224	1,540,920
	2028+	386,910	279,258	1,709,496	1,542,970

Recreational Sector

Estimated changes in economic value to recreational fishermen are approximated by multiplying the expected change in the number of fish harvested by a CS estimate. The most recent proxy for a CS estimate for a snapper is the estimated value of the CS for a 1-fish change in the aggregate snapper bag limit. A value of $23.15 (Carter, Liese, and Lovell 2022; values updated to 2025$) reflects recreational willingness-to-pay (WTP) for 1 additional snapper harvested.

Table 4.2.3.2 shows the changes in expected landings, in lb ww from the Gulf recreational sector and from the South Atlantic recreational ACL under the options in **Alternative 2**, **Alternative 3**,

and **Preferred Alternative 4** from the proxies of Gulf and South Atlantic average recreational landings in lb ww under **Alternative 1**. The expected change in landings assumes that the respective recreational sectors in the Gulf and South Atlantic land all yellowtail snapper available. With that assumption, by region, all of the options in **Alternative 3** and **Preferred Alternative 4** would be expected to have the identically greatest, positive economic effect for the South Atlantic, followed jointly by both options in **Alternative 2**; however, **Alternative 2**, **Option 2b** would be expected to have the greatest positive economic effect for the Gulf, followed by **Alternative 2**, **Option 2a**, then jointly by **Alternative 3**, **Option 3b** and **Preferred Alternative 4, Preferred Option 4b**, and then jointly by **Alternative 3**, **Option 3a** and **Preferred Alternative 4**, **Option 4a**. With the regions combined, the greatest positive effects to the recreational sectors would be expected jointly from **Alternative 3**, **Option 3b** and **Preferred Alternative 4**, **Preferred Option 4b**, followed jointly by **Alternative 3**, **Option 3a** and **Preferred Alternative 4**, **Option 4a**, then **Alternative 2**, **Option 2b**, and lastly by **Alternative 2**, **Option 2a**.

However, given that neither region has harvested their current ACL or experienced an in-season closure in recent years, the assumption that the recreational sectors in the Gulf and South Atlantic would land the large, proposed catch limit increases in yellowtail snapper is unlikely. The magnitude of the increases is noted in Table 4.2.3.2 in the columns for the expected change in recreational landings, as a percentage, which is relative to the 2020-2024 recreational landings in the respective region. As a result, the aforementioned qualitative description of expected economic effects, rather than a quantitative description, would be appropriate.

Table 4.2.3.2. Expected change in the recreational sector's landings from the options with **Alternative 2**, **Alternative 3**, and **Preferred Alternative 4** compared to **Alternative 1** if all yellowtail snapper available are landed.

		Gulf		South Atlantic	
	Year	**Expected Change in Rec Landings (lb ww)**	**Expected Change in Rec Landings (lb ww), as a %**	**Expected Change in Rec Landings (lb ww)**	**Expected Change in Rec Landings (number of fish), as a %**
Alt 2, Option 2a – Proxy for Alt 1	2027	179,037	196%	350,173	34%
	2028+	179,523	197%	352,026	34%
Alt 2, Option 2b – Proxy for Alt 1	2027	224,151	221%	350,173	34%
	2028+	224,697	221%	352,026	34%
Alt 3, Option 3a – Proxy for Alt 1	2027	62,233	133%	498,696	48%
	2028+	62,563	134%	500,746	48%
Alt 3, Option 3b – Proxy for Alt 1	2027	92,910	150%	498,696	48%
	2028+	93,282	150%	500,746	48%
Preferred Alt 4, Option 4a – Proxy for Alt 1	2027	62,233	133%	498,696	48%
	2028+	62,563	134%	500,746	48%
Preferred Alt 4, Preferred Option 4b – Proxy for Alt 1	2027	92,910	150%	498,696	48%
	2028+	93,282	150%	500,746	48%

The PS of the for-hire component of the recreational sector, composed of charter vessels and headboats, would be impacted by a change in the number of targeted trips. In the long run, factors of production, such as labor and capital, can be used elsewhere in the economy, and so only short-term changes to PS are expected. In the Gulf, headboat trips take a diverse set of anglers on a single vessel, generally advertising an assorted range of species to be caught. Therefore, an assumption that no headboat trips would be gained or lost due to a change in the recreational ACL would be reasonable. However, charter vessel trips that are targeting yellowtail snapper may be added by anglers and are the focus of the recreational sector PS analysis. As neither the South Atlantic yellowtail recreational sector nor the Gulf yellowtail snapper fishery have harvested their current ACL, nor have they been subject to closures, and the season cannot be further lengthened, no additional for-hire trips are expected to occur as a result of the increases in the South Atlantic's recreational ACL and in the Gulf's total ACL. Therefore, no economic effects to the for-hire component of the recreational sectors are expected from the

proposed catch limit increases in the options with **Alternative 2**, **Alternative 3**, or **Preferred Alternative 4**.

The expected net economic benefits to the recreational sector are a summation of the changes in the recreational sector's CS and PS. It is unlikely that either of the components of the recreational sector would be expected to experience economic effects from the proposed increases to either region's total ACL since neither region has harvested their current ACL and neither jurisdiction has ever been subject to an in-season closure.

Commercial Sector

For the commercial sector in the Gulf, the comparison of effects is based on the 2020 through 2024 commercial sector's percentage of landings applied to the Gulf's total ACL with the options with **Alternative 2**, **Alternative 3**, and **Preferred Alternative 4** relative to the average commercial landings from 2020 through 2024, as a proxy for **Alternative 1**. For the commercial sector in the South Atlantic, the comparison of effects is based on the commercial sector's allocation (52.56%) of the South Atlantic's total ACL from **Alternative 2**, **Alternative 3**, and **Preferred Alternative 4,** relative to the average commercial landings from 2020 through 2024, as a proxy for **Alternative 1**. The expected change in landings shown in Table 4.2.3.3 assumes that the commercial sectors in the Gulf and in the South Atlantic, respectively, land all yellowtail snapper available to them annually. To calculate expected changes in commercial CS, own-price flexibility[26] for the Gulf and South Atlantic's yellowtail snapper commercial sectors would be required to derive the expected average price change. Keithly and Tabarestani (2018) estimated an uncompensated own-price flexibility for "other snapper" of -0.533. However, this value is best suited for marginal changes in an ACL. As seen in Table 4.2.3.3, the expected changes in commercial landings, as a percentage, relative to the 2020 through 2024 commercial landings by region would not be considered marginal changes. As a result, a quantitative analysis cannot be conducted with available data. However, given that neither region has experienced a closure in recent years, nor have they routinely harvested their current ACL, it is unlikely that the commercial sectors in the Gulf or the South Atlantic would land the large, proposed catch limit increases in yellowtail snapper. As a result, no direct economic effects to the commercial sectors would be expected from the proposed catch limit increases. Should either of the commercial sectors land some of the increases in the catch limits proposed, decreases in the ex-vessel prices may be expected, which would result in increases in commercial CS. Positive, negative, or no expected changes to the commercial revenue and PS would be dependent on the elasticities of the supply curves in each region.

[26] The own-price flexibility is the percentage change in a product's price relative to the percentage change of a product's quantity sold. This shows the responsiveness of a product's price to the quantity being sold.

Table 4.2.3.3. Expected change in the commercial sector's landings from the options with **Alternative 2**, **Alternative 3**, and **Preferred Alternative 4**, compared to **Alternative 1** if all yellowtail snapper available are landed.

		Gulf		South Atlantic	
	Year	**Expected Change in Comm Landings (lb ww)**	**Expected Change in Comm Landings (lb ww), as a %**	**Expected Change in Comm Landings (lb ww)**	**Expected Change in Comm Landings (lb ww), as a %**
Alt 2, Option 2a – Proxy for Alt 1	2027	259,789	106%	246,171	19%
	2028+	260,462	106%	248,224	19%
Alt 2, Option 2b – Proxy for Alt 1	2027	322,295	131%	246,171	19%
	2028+	323,051	131%	248,224	19%
Alt 3, Option 3a – Proxy for Alt 1	2027	97,957	40%	410,722	32%
	2028+	98,415	40%	412,994	32%
Alt 3, Option 3b – Proxy for Alt 1	2027	140,461	57%	410,722	32%
	2028+	140,975	57%	412,994	32%
Preferred Alt 4, Option 4a – Proxy for Alt 1	2027	97,957	40%	410,722	32%
	2028+	98,415	40%	412,994	32%
Preferred Alt 4, Preferred Option 4b – Proxy for Alt 1	2027	140,461	57%	410,722	32%
	2028+	140,975	57%	412,994	32%

The expected net economic benefits to the commercial sector are a summation of the changes in the commercial sector's CS and PS. It is unlikely that the commercial sector would be expected to experience economic effects from the proposed increases to either region's total ACL since neither region has routinely harvested their current ACL and neither jurisdiction has ever been subject to an in-season closure in recent years.

Net Economic Benefits

The total expected change in net economic benefits for both the recreational and commercial sectors can be calculated by summing the expected changes to the individual sectors. However, as discussed for each sector, it is unlikely that either sector would be expected to experience economic effects from the proposed increases to either region's total ACL.

4.2.4. Effects on the Social Environment

This action would affect communities and fishery participants who catch, sell, consume, or otherwise engage with southeastern U.S. yellowtail snapper. This action would, depending on the alternatives: decrease the stock catch limit, re-apportion the stock catch limit from the Gulf to the South Atlantic, change how the Gulf ACL is set, and switch from the use of MRFSS to SRFS, MRIP, and SRHS for data collection. As discussed in Section 4.1.4., a shift from the use of federal data units to state data units for the private angling sector could affect stakeholder trust in fisheries data collection dependent upon their prior opinions and experiences.

A change in the ACL would not directly positively or negatively affect fishery participants unless there is a decreased or increased chance that the ACL would be met or exceeded, which could restrict harvest opportunities. For the Gulf, the fishery closure analysis (Appendix D) demonstrates that if any of the alternatives are selected it is unlikely that the ACL would be met if fishing effort is consistent with recent historic (2020 through 2024) levels. For the South Atlantic, closure predictions are analyzed based on sector. A sector-specific analysis will be discussed further in Section 4.4.4. If patterns of fishing effort more resembled earlier years, for example, the period between 2014 through 2019, where the South Atlantic landings exceeded 3,000,000 lb ww three times and Gulf landings exceeded 580,000 lb ww four times (Table 1.4.5), then it is possible that any decrease in the ACL could increase the likelihood of an in-season closure for either region.

Additional effects are typically not expected as a result of **Alternative 1** (No Action), but there is a likelihood that if the jurisdictional apportionments are maintained, the ACL could be exceeded in the South Atlantic. **Alternative 1** would not result in a decrease in the ACL but would maintain the existing jurisdictional apportionments, which could lead to in-season closures in the South Atlantic. In-season closures pose challenges to fishery participants, resulting in negative social effects due to a lack of access to the fishery during the fishing year and a disruption of pre-existing plans for the fishing season. **Alternative 1** is not a viable option as it is not consistent with best scientific information available.

Alternative 2, **Alternative 3**, and **Preferred Alternative 4** result in a gradual decrease of the stock OFL and an overall decrease in the ABC. The difference between the status quo and the 2028+ ABC would be 131,366 lb ww which is a decrease that would be distributed across jurisdictions differently based on the alternatives. **Alternative 2** updates the catch advice following the SEDAR 96 stock assessment but retains the current jurisdictional apportionments (25% to the Gulf and 75% to the South Atlantic), which were established using MRFSS data. Compared to **Alternative 2, Alternative 3** and **Preferred Alternative 4** would re-apportion the ACL across regions based on recent historic landings, with **Alternative 3** drawing from a longer time series and **Preferred Alternative 4** drawing from a shorter time series. Both result in a higher apportionment to the South Atlantic than the Gulf although both time series result in 17% of the ABC/ACL to the Gulf and 83% to the South Atlantic. **Option 2a**, **Option 3a**, and **Option 4a** for each viable alternative keep the Gulf ACL set at 89% of the Gulf ABC, while **Option 2b**, **Option 3b**, and **Preferred Option 4b** eliminate this buffer and set the ACL equal to the Gulf apportionment of the stock ABC.

Alternative 3 and **Preferred Alternative 4** result in a reduction in the Gulf apportionment, to a point where if the buffer remained (**Option 3a** and **Option 4a**), the ACL could be set lower than some recent years of landings. If the buffer between the Gulf ACL and its apportionment of the ABC was removed, as in **Option 3b** and **Preferred Option 4b**, there could be a risk of exceeding the Gulf ACL. Since 2014, only one year of landings are in excess of the Gulf ACL that would be set by **Option 3b** or **Preferred Option 4b,** while four years of landings are in excess of the Gulf ACL that would be set by **Option 3a** or **Option 4a**. Negative consequences for fishery participants in the Gulf would be more likely if **Option 3a** or **Option 4a** were selected than **Option 3b** or **Preferred Option 4b**, as there could be more risk that the ACL would be exceeded, which could result in an in-season closure. As the Gulf ACL is highest in **Alternative 2, Option 2b,** this option could have a lesser likelihood of resulting in negative consequences for fishery participants. A removal of a buffer between the Gulf apportionment of the stock ABC and the Gulf ACL could see a higher risk of the stock experiencing overfishing, which would have broad negative social effects on harvesters by increasing the likelihood of closures and requiring more effort for less landings. As there is already a buffer in place between the stock OFL and ABC, the stock is currently deemed to be healthy, and recent landings do not indicate that overfishing would occur, it is unlikely that the removal of a buffer would lead to overfishing.

In the South Atlantic, landings have frequently exceeded the status quo apportionment (**Alternative 1**) since 2014. **Alternative 2** would result in a reduction of the South Atlantic ACL, which could increase the likelihood of the ACL being exceeded and accountability measures such as early seasonal closures triggered[27]. **Alternative 3** and **Preferred Alternative 4** would result in an increase in the South Atlantic's ACL, which could allow for increased harvest opportunities by reducing the likelihood of an early season closure. This would be broadly beneficial for all fishery participants in the South Atlantic.

Communities in the Florida Keys and near Miami are likely to be most affected by this action (Section 3.4). These are communities with high recreational and commercial engagement and include some with above average recreational and commercial reliance. Yellowtail snapper is considered a "fall back species" for the charter industry, and an important species targeted by commercial fishermen in South Florida (Stoffle and Stoltz 2021, 45). The communities most engaged in the harvest of yellowtail snapper are those either exclusively located on the Atlantic (Miami area) or have access to both the Gulf and the Atlantic (Florida Keys). As this action would result in an ACL increase for the South Atlantic, participants in these communities should experience increased access to the fishery, provided that they are permitted to fish in the South Atlantic, as the projection does not show landings exceeding these increased ACLs.

Overall, minimal effects are expected as a result of this action. Although this action would see an overall reduction in the ABC for southeastern U.S. yellowtail snapper, **Preferred Alternative 4**, **Preferred Option 4b** will minimize the negative effects by resulting in an increase in the South Atlantic ACL and a reduction in the Gulf ACL to an amount that is still above almost all

[27] 50 CFR 622.193(n)

years of recent historic landings. The effects experienced across sectors in the South Atlantic, where there are sector allocations set between the commercial and recreational sector for yellowtail snapper, will be discussed further in Section 4.4.4.

4.2.5. Effects on the Administrative Environment

Alternative 1 (No Action) is not expected to affect the administrative environment by retaining the current OFL, ABC, and jurisdictional apportionment. However, it would result in an increased administrative burden due to the need to convert landings back to MRFSS for management. **Alternative 2 Option 2a, Alternative 2 Option 2b, Alternative 3 Option 3a, Alternative 3 Option 3b, Preferred Alternative 4 Option 4a,** and **Preferred Option 4b** would no longer require NMFS to convert landings from MRIP-FES to MRFSS. This conversion is model-derived and decreases in precision over time. Changing the OFL, the ABC, the jurisdictional apportionment, or a catch limit buffer, is not something that is codified, so modifying those under the options in **Alternative 2**, the options in **Alternative 3**, or the options in **Preferred Alternative 4** would result in no administrative effect. There is also no effect on the administrative environment for law enforcement as law enforcement officers do not monitor catch limits but would only continue to monitor compliance with any established closed season. Some increased administrative burden is anticipated under the options in **Alternative 2**, the options in **Alternative 3**, and the options in **Preferred Alternative 4** with respect to outreach as it relates to notifying stakeholders of the changes to the OFL, ABC, jurisdictional apportionment, and regional ACLs. However, engaging in rulemaking to implement the changes in management is routine and occurs whenever revised catch recommendations are implemented. No effects from this action are expected to be significant.

4.3 Action 3: Modification of Southeastern U.S. Mutton Snapper Sector Allocations in the South Atlantic

4.3.1. Effects on the Physical Environment

Effects on the physical environment as a result of modifying sector allocations in the South Atlantic for mutton snapper are not expected to differ from those described in Action 1. See Section 4.1.1 for full details.

4.3.2. Effects on the Biological and Ecological Environment

All alternatives for Action 3 would allocate the total ACL between the South Atlantic commercial and recreational sectors based on the updated South Atlantic catch levels under Action 1 which are inclusive of recreational estimates from the MRIP and SRFS programs and are based on catch level recommendations from SEDAR 79 (2024). These catch levels are considered as the best scientific information available (BSIA). No biological and ecological effects are expected from **Preferred Alternative 1 (No Action)** because the current South Atlantic commercial and recreational allocation percentages would be retained. The revised sector ACLs are higher than recent landings in the South Atlantic and no sector closures are expected. **Alternative 2** and **Alternative 3** would shift allocation from the commercial sector to the recreational sector by 4.31% and 5.57% respectively (Table 2.3.1). Because the commercial sector has effective in-season and post-season accountability measures (AMs) in place to prevent the commercial ACL from being exceeded, the shift in allocation to the recreational sector in **Alternatives 2** and **Alternative 3** could incur negative biological effects on the mutton snapper stock relative to **Preferred Alternative 1 (No Action)**.

Since 2012, the commercial sector averaged 65.13% of the commercial ACL and only reached over 90% of the commercial ACL in two years (2014 and 2015)[28]. Since 2012 the recreational sector average 71.2% of the recreational ACL and only reached over 90% of the recreational ACL in two years (2015 and 2020)[29]. No biological effects are expected under any alternative for this action as all alternatives are constrained by the total South Atlantic ACL developed in Action 1 and neither sector is expected to harvest their ACL and therefore experience an ACL closure for any alternatives (See Appendix C for analysis).

Expected effects on discards and bycatch of co-occurring species

Expected effects on discards and bycatch of co-occurring species under the alternatives in Action 3 are not expected to differ from those described in Action 1 under Section 4.1.2.

[28] Source: https://www.fisheries.noaa.gov/southeast/commercial-fishing/2026-preliminary-south-atlantic-commercial-landings

[29] Source: https://www.fisheries.noaa.gov/southeast/recreational-fishing/2026-and-2025-2026-south-atlantic-recreational-landings

Expected effects to protected species

Expected effects to protected species under the alternatives in Action 3 are not expected to differ from those described in Action 1 under Section 4.1.2.

4.3.3. Effects on the Economic Environment

In general, revisions to sector allocations and the resulting sector ACLs that allow for more fish to be landed can result in increased economic benefits if harvest increases without notable effects on the stock of a given fish species. The sector ACL does not directly impact the fishery for a species unless harvest changes, fishing behavior changes, or the sector ACL is exceeded, thereby potentially triggering AMs such as harvest closures or other restrictive measures. As such, sector ACLs that are set above observed landings in a fishery for a species and do not change harvest or fishing behavior would not have realized economic effects each year. Nevertheless, sector ACLs set above observed harvest levels do create a gap between the sector ACL and typical landings that may be utilized in years of exceptional abundance or accessibility of a species, thus providing the opportunity for increased landings and a reduced likelihood of triggering restrictive AMs. As such there are potential economic benefits from sector allocations and ACLs that allow for such a gap between average landings and the ACL.

As a result of an increase to the South Atlantic's regional ACL (Action 1), the revised sector ACLs for South Atlantic mutton snapper in **Preferred Alternative 1 (No Action)**, **Alternative 2**, and **Alternative 3** are all higher than the observed landings in recent years. Based on average landings over the most recent five years of available data (2020 through 2024), future landings would be expected to continue to be below the potential new sector ACLs for both the commercial and recreational sectors, regardless of the alternative that is chosen, and thus the sector ACLs are not constraining on harvest or expected to alter fishing activity (Appendix C). As such, no direct economic effects are anticipated from **Preferred Alternative 1 (No Action)**, **Alternative 2**, or **Alternative 3** in the short-term. There would be no anticipated change in direct net economic benefits to the commercial sector, including CS for seafood consumers or PS for commercial vessels or dealers. Additionally, there would be no anticipated change in direct net economic benefits to the recreational sector, including CS for anglers or PS in the for-hire component of the recreational sector.

Although there are no anticipated direct economic effects from Action 3, the potential economic benefits resulting from the gap between average landings and the sector ACL allow the alternatives considered in this action to be ranked. The greater the sector ACL, the greater the potential economic benefits from that alternative. For the recreational sector, **Alternative 3** would provide the highest potential economic benefits, followed by **Alternative 2** and then **Preferred Alternative 1 (No Action)**. For the commercial sector, the ranking would be the opposite, with **Preferred Alternative 1 (No Action)** providing the highest potential economic benefits, followed by **Alternative 2** and then **Alternative 3**.

4.3.4. Effects on the Social Environment

Preferred Alternative 1 (No Action) would maintain the current sector allocation percentages and may have few social effects as both sectors would retain higher catch limits than recent landings. With **Alternative 2** and **Alternative 3**, there would be a decrease in the commercial percentage compared to **Alternative 1 (No Action)**, which could have some negative social effects for the commercial sector if the fishing season were to close early. Additionally, commercial fishermen may negatively perceive this change due to the potential decrease in fishing opportunity if landings were to increase. There could be concerns about long-term social effects such as regulatory closure induced changes in fishing behavior or business operations; especially if other actions further decreased harvest opportunities. Only status quo or slight positive effects are expected for the recreational sector as the alternatives under this action either retain or increase their allocation.

Many different social effects may result as other allocation discussions occur, and perceptions are formed. There may be resistance to further decreasing a given sector's percentage allocation, due to concerns about fairness, equitability, and effects on the lower sector's overall access to the resource. It is difficult to predict the social effects with any allocation scheme as it would depend upon other actions in conjunction with this one. A reduction in allocation for one sector may be compounded by a restrictive choice of ABC or ACL (Action 1 and Action 2) and may have further effects that could be either negative or positive depending upon the combination of effects. Therefore, the choice of an allocation would need to be assessed with other actions within this amendment to determine the overall social effects and whether short-term social losses are offset by any long-term biological gains.

Short term negative social effects may be observed if a sector's ACL is reached, and AMs are triggered. However, recent landings of mutton snapper have been below the catch levels recommended in Action 1 – Preferred Alternative 3, indicating that the commercial and recreational ACLs for mutton snapper would not likely be reached under the any of the alternatives proposed in Action 3. The AMs can have substantial social effects because, when triggered, they can restrict harvest. While the negative effects are usually short-term, they may at times induce other indirect effects through changes in fishing behavior or business operations that could have long-term social and biological effects. Examples may include increased pressure on another species, or fishermen having to stop fishing due to regulatory closures. However, restrictions on harvest contributing to sustainable management goals are expected to be beneficial to fishermen and communities in the long term.

4.3.5. Effects on the Administrative Environment

No effects are expected on the administrative environment from the alternatives under Action 3. Sector ACLs for mutton snapper already exist in the regulations. Neither sector is expected to close as a result of reaching its ACL. Minor administrative burdens are expected related to updating the new catch limits and education and dissemination of the new sector ACLs to the stakeholders. No effects from this action are expected to be significant.

4.4 Action 4: Modification of Southeastern U.S. Yellowtail Snapper Sector Allocations in the South Atlantic

4.4.1. Effects on the Physical Environment

Effects on the physical environment as a result of modifying sector allocations of South Atlantic yellowtail snapper are not expected to differ from those described in Action 2ffects of South Atlantic sector allocations of yellowtail snapper are not expected to differ from those described in Action 2. See Section 4.2.1 for full details.

4.4.2. Effects on the Biological and Ecological Environment

All alternatives for Action 4 would allocate the total ACL between the South Atlantic commercial and recreational sectors based on updated South Atlantic catch levels under Action 2 which are inclusive of recreational estimates from the MRIP and SRFS programs and are based on catch level recommendations from SEDAR 96 (2025). These catch levels are considered BSIA. No biological and ecological effects are expected from **Preferred Alternative 1 (No Action)** because the current South Atlantic commercial and recreational allocation percentages would be retained. The revised sector ACLs are higher than recent landings in the South Atlantic and no sector closures are expected. **Alternative 2** and **Alternative 3** would shift allocation from the recreational sector to the commercial sector by 2.90% and 3.96% respectively (Table 2.4.1).

Since 2012, the commercial sector averaged 87.86% of the commercial ACL, with closures occurring in October 2015, June 2017, and June 2018[30]. Since 2012 the recreational sector averaged 42.46% of the recreational ACL[31]. No biological effects are expected under any alternative for this action as all alternatives are constrained by the total South Atlantic ACL developed in Action 2 and neither sector is expected to harvest their ACL and therefore experience an ACL closure for any alternatives (See Appendix C for analysis).

Expected effects on discards and bycatch of co-occurring species

Expected effects on discards and bycatch of co-occurring species under the alternatives in Action 4 are not expected to differ from those described in Action 1 under Section 4.1.2.

Expected effects to protected species

Expected effects to protected species under the alternatives in Action 4 are not expected to differ from those described in Action 1 under Section 4.1.2.

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[30] Source: https://www.fisheries.noaa.gov/southeast/commercial-fishing/2026-preliminary-south-atlantic-commercial-landings

[31] Source: https://www.fisheries.noaa.gov/southeast/recreational-fishing/2026-and-2025-2026-south-atlantic-recreational-landings

4.4.3. Effects on the Economic Environment

The generalities of economic effects as they relate to sector allocations relative to catch limits are described in Section 4.3.3.

As a result of an increase to the South Atlantic's regional ACL (Action 2), the revised sector ACLs for South Atlantic yellowtail snapper in **Preferred Alternative 1 (No Action)**, **Alternative 2**, and **Alternative 3** are all higher than the observed landings in recent years. Based on average landings over the most recent five years of available data (2020/2021 through 2023/2024), future landings would be expected to continue to be below the potential new sector ACLs for both the commercial and recreational sectors, regardless of the alternative that is chosen, and thus the sector ACLs are not constraining on harvest or expected to alter fishing activity (Appendix C). As such, no direct economic effects are anticipated from **Preferred Alternative 1 (No Action)**, **Alternative 2**, and **Alternative 3** in the short-term. There would be no anticipated change in direct net economic benefits to the commercial sector, including CS for seafood consumers or PS for commercial vessels or dealers. Additionally, there would be no anticipated change in direct net economic benefits to the recreational sector, including CS for anglers or PS in the for-hire component of the recreational sector.

Although there are no anticipated direct economic effects from Action 4, the potential economic benefits resulting from the gap between average landings and the sector ACL allow the alternatives considered in this action to be ranked. The greater the sector ACL, the greater the potential economic benefits from that alternative. For the recreational sector, **Preferred Alternative 1 (No Action)** would provide the highest potential economic benefits, followed by **Alternative 2** and then **Alternative 3**. For the commercial sector, the ranking would be the opposite, with **Alternative 3** providing the highest potential economic benefits, followed by **Alternative 2** and then **Preferred Alternative 1 (No Action)**.

4.4.4. Effects on the Social Environment

Preferred Alternative 1 (No Action) would maintain the current sector allocation percentages and may have few social effects as both sectors would retain higher catch limits than recent landings. With **Alternative 2** and **Alternative 3**, there would be a decrease in the recreational percentage compared to **Preferred Alternative 1 (No Action)**, which could have some negative social effects to the recreational sector if the fishing season were to close early. Additionally, recreational fishermen may negatively perceive this change due to the potential decrease in fishing opportunity if landings were to increase. There could be concerns about long-term social effects such as regulatory closure induced changes in fishing behavior or business operations; especially if other actions further decreased harvest opportunities. Only status quo or slight positive effects are expected for the commercial sector as the alternatives under this action either retain or increase their sector allocation.

The possibility for variable associative social effects with other catch limit and allocation actions also exists for this action. Short term negative social effects may be observed if a sector's ACL is reached, and AMs are triggered. However, recent landings of yellowtail snapper have been

below the catch levels recommended in Action 2 – Preferred Alternative 4, indicating that the commercial and recreational ACLs for yellowtail snapper would not likely be reached under the any of the alternatives proposed in Action 3. The AMs can have substantial social effects because, when triggered, they can restrict harvest. While the negative effects are usually short-term, they may at times induce other indirect effects through changes in fishing behavior or business operations that could have long-term social and biological effects. Examples include increased fishing pressure on another species, or fishermen having to stop fishing due to regulatory closures. However, restrictions on harvest contributing to sustainable management goals are expected to be beneficial to fishermen and communities in the long term.

4.4.5. Effects on the Administrative Environment

No effects are expected on the administrative environment from the alternatives under Action 4. Sector ACLs for yellowtail snapper already exist in the regulations. Neither sector is expected to close as a result of reaching its ACL. Minor administrative burdens are expected related to updating the new catch limits and education and dissemination of the new sector ACLs to the stakeholders. No effects from this action are expected to be significant.

4.5 Cumulative Effects Analysis

Cumulative effects are those effects that result from incremental impacts of a proposed action when added to other past, present, and reasonably foreseeable future actions (RFFA), regardless of which agency (federal or non-federal) or person undertakes such actions. Cumulative effects can result from individually minor but collectively significant actions that take place over a period of time. The cumulative effects analysis in this environmental assessment evaluates the following five criteria.

1. The area in which the effects of the proposed action will occur - The affected area of these proposed actions encompasses the state and federal waters of the Gulf and South Atlantic, as well as Gulf and South Atlantic communities that are dependent on reef fish and snapper grouper fishing (Figures 1.1.1 and 1.1.2). Most relevant to these proposed actions are mutton snapper and yellowtail snapper and persons who fish for those species. For more information about the area in which the effects of this proposed action would occur, please see Chapter 3 (Affected Environment) and Chapter 4 (Environmental Consequences), which describe these important resources as well as other relevant features of the human environment.

2. The effects that are expected in that area from the proposed action - The proposed actions would modify the southeastern U.S. mutton snapper and yellowtail snapper OFLs, ABCs, jurisdictional apportionment, and regional ACLs, and in the South Atlantic, catch allocations between the recreational and commercial sectors. The environmental consequences of the proposed actions are analyzed in Sections 4.1, 4.2, 4.3, and 4.4, and are not expected to be significant. The combined actions are not expected to have significant effects on the physical environment, as they are not expected to alter how the mutton snapper and yellowtail snapper portions of the reef fish and snapper grouper fisheries are prosecuted (Sections 4.1.1, 4.2.1, 4.3.1, and 4.4.1). These measures are expected to have non-significant but positive effects on the biological environment because the actions would be consistent with the best scientific information available (Sections 4.1.2, 4.2.2, 4.3.2, and 4.4.2). Regulatory discards are not expected to increase because the respective fishing season durations are not expected to close prior to the end of the respective fishing years, which is status quo for both fisheries. Additionally, it is likely that positive effects for the social and economic environments would occur due to the actions taken in response to the stocks being estimated as healthy, and because quota closures are not expected (Sections 4.1.3, 4.2.3, 4.3.3, 4.4.3, 4.1.4, 4.2.4, 4.3.4, and 4.4.4). The actions are not expected to significantly affect the administrative environment (Sections 4.1.5, 4.2.5, 4.3.5, and 4.4.5), adversely or beneficially.

3. Other past, present and RFFAs that have or are expected to have impacts in the area - There are numerous actions under development in the Gulf and South Atlantic annually. Many of these activities are expected to have impacts associated with them and are listed below.

Other fishery related actions - The cumulative effects associated with other pertinent actions are summarized in the History of Management (Appendix A). Currently, there are several present and RFFAs that are being considered by the Councils for the Reef Fish FMP in the Gulf and Snapper-Grouper FMP in the South Atlantic, or implemented by NMFS, which could affect reef fish and snapper-grouper stocks. There are multiple documents currently being considered for

implementation by NMFS that could directly affect reef fish species. Descriptions of these actions can be found on each Council's website.[32]

5. The overall impact that can be expected if the individual impacts are allowed to accumulate - These actions, combined with other past actions, present actions, and RFFAs, are not expected to have significant beneficial or adverse effects on the physical and biological environments. Any effects are expected to be positive but are not expected to substantially change the way the reef fish or snapper-grouper fisheries are prosecuted (Sections 4.1.1, 4.1.2, 4.2.1, 4.2.2, 4.3.1, 4.3.2, 4.4.1, and 4.4.2). For the social and economic environments, some negative short-term but positive long-term effects are expected to result for fishing communities if the fishing seasons were to close (Sections 4.1.3, 4.1.4, 4.2.3, 4.2.4, 4.3.3, 4.3.4, 4.4.3, and 4.4.4). However, projections show that no jurisdictions or sectors are projected to close under any of the alternatives (Appendix C). Even if harvest was to increase in the future, positive effects to the stocks are anticipated due to accountability measures in place, with resulting positive economic effects expected from maintaining healthy stocks. Overall, these effects are likely minimal, as the proposed action, along with other past actions, present actions, and RFFAs, are not expected to alter the way the fisheries are prosecuted. Because it is unlikely there would be any changes in how each fishery is prosecuted, these actions, combined with past actions, present actions, and RFFAs, are not expected to have significant adverse effects on public health or safety.

6. Summary - The proposed actions are not expected to have individual significant effects on the physical, biological, economic, or social environments. Any effects of the proposed action, when combined with other past actions, present actions, and RFFAs are not expected to be significant. The effects of the proposed actions are, and will continue to be, monitored through collection of landings data by NMFS, individual state programs, stock assessments and stock assessment updates, life history studies, economic and social analyses, and other scientific observations. Landings data for the recreational sector in the Gulf and South Atlantic are presently collected through MRIP and the Southeast Region Headboat survey, Louisiana Creel Survey, Mississippi Creel Survey, Alabama Creel Survey, Florida State Reef Fish Survey, and the Texas Parks and Wildlife Department. The cumulative social and economic effects of past, present, and future amendments may be described as increasing fishing opportunities, resulting in positive social and economic impacts. The proposed actions in this environmental assessment are expected to result in important long-term benefits to fishing communities and associated businesses that harvest mutton snapper and yellowtail snapper.

[32] https://gulfcouncil.org/fishery-management/amendments-under-development/
https://safmc.net/fishery-management-plans/snapper-grouper/

CHAPTER 5. REGULATORY IMPACT REVIEW

This section will be included in a subsequent draft.

CHAPTER 6. REGULATORY FLEXIBILITY ACT ANALYSIS

This section will be included in a subsequent draft.

CHAPTER 7. LIST OF AGENCIES, ORGANIZATIONS, AND PERSONS CONSULTED

1. National Marine Fisheries Service:
   - Southeast Fisheries Science Center
   - Southeast Regional Office
     i. Protected Resources
     ii. Habitat Conservation
     iii. Sustainable Fisheries

2. NOAA General Counsel
3. U.S. Coast Guard
4. Alabama Department of Conservation and Natural Resources/Marine Resources Division
5. Florida Fish and Wildlife Conservation Commission
6. Louisiana Department of Wildlife and Fisheries
7. Mississippi Department of Marine Resources
8. Texas Parks and Wildlife Department
9. North Carolina Department of Marine Fisheries
10. South Carolina Department of Natural Resources
11. Georgia Department of Natural Resources

CHAPTER 8. LIST OF PREPARERS

PREPARERS

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Kelli O'Donnell	Fishery Biologist	Co-Lead – Amendment development, physical, biological, ecological, and administrative analyses	SERO
Nikhil Mehta	Fishery Biologist	Co-Lead – Amendment development, physical, biological, ecological, and administrative analyses	SERO
Matt Freeman	Economist	Economic analyses	Gulf Council
David Records	Economist	Economic analyses	SERO
John Hadley	Economist	Economic analyses	South Atlantic Council
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Mike Larkin	Fishery Biologist	Data analyses	SERO

REVIEWERS

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Anne Kersting	Attorney	Legal review	NOAA GC
Scott Sandorf	Technical writer and editor	Regulatory writer	SERO
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Carrie Simmons	Fishery Biologist	Review	Gulf Council
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NOAA GC = National Oceanic and Atmospheric Administration General Counsel; SEFSC = Southeast Fisheries Science Center; SERO = Southeast Regional Office of the National Marine Fisheries Service

CHAPTER 9. REFERENCES

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APPENDIX A. HISTORY OF MANAGEMENT

This section focuses specifically on management modifications affecting southeastern U.S. mutton snapper and yellowtail snapper catch limits, sector allocations, and retention limits. A complete history of management for the Reef Fish FMP is available on the Gulf Council's website.[33] A complete history of management for the Snapper Grouper FMP is available on the South Atlantic Council's website.[34]

Mutton Snapper and Yellowtail Snapper – Gulf

Original Reef Fish FMP (GMFMC 1983), including environmental impact statement (EIS), regulatory impact review (RIR), and regulatory flexibility analysis (RFA) and implemented in November 1984, implemented regulations designed to rebuild declining reef fish stocks, included: (1) prohibitions on the use of fish traps, roller trawls, and powerhead-equipped spear guns within an inshore stressed area; (2) a minimum size limit of 13 inches total length (TL) for red snapper with the exceptions that for-hire boats were exempted until 1987 and each angler could keep 5 undersized fish; and, (3) data reporting requirements. It also established a calendar fishing year for managed reef fish species.

Amendment 1 to the Reef Fish FMP (GMFMC 1989), including an environmental assessment (EA), RIR, and IRFA, and implemented in May 1990, set objectives to stabilize long-term population levels of all reef fish species by establishing a survival rate of biomass into the stock of spawning age fish to achieve at least 20% spawning stock biomass per recruit by January 1, 2000. It allowed a 2-day possession limit for charter vessels and head boats on trips that extend beyond 24 hours, provided the vessel has two licensed operators aboard as required by the U.S. Coast Guard, and each passenger can provide a receipt to verify the length of the trip; established a longline and buoy gear boundary at the 50-fathom depth contour west of Cape San Blas, Florida, and the 20-fathom depth contour east of Cape San Blas, inshore of which the directed harvest of reef fish with longline gear and buoy gear was prohibited, and the retention of reef fish captured incidentally in other longline operations (e.g., sharks) was limited to the recreational daily bag limit; limited trawl vessels to the recreational size and daily bag limits of reef fish; established fish trap permits (up to 100 fish traps per permit holder); and established a commercial reef fish vessel permit. It also established a 12-inch total length (TL) minimum size limit on mutton and yellowtail snapper.

Amendment 31 to the Reef Fish FMP (GMFMC 2009), including a final SEIS, RIR and IRFA, implemented May 2010, prohibited the use of bottom longline gear shoreward of a line approximating the 35-fathom contour from June through August; established a longline endorsement; and restricted the total number of hooks onboard each reef fish bottom longline vessel to 1,000, of which only 750 may be rigged for fishing.

[33] https://gulfcouncil.org/fishery-management/implemented-amendments/reef-fish/
[34] https://safmc.net/fishery-management-plans/snapper-grouper/

Generic ACL/AM Amendment (GMFMC 2011), including a final SEIS, RIR and IRFA, implemented January 2012, addressed a requirement in the Reauthorized Magnuson-Stevens Act of 2006 to establish ACLs and AMs for federally managed species. This amendment also established a stock ACL of 725,000 lb gutted weight and ACT of 645,000 lb gutted weight for yellowtail snapper for the Gulf. However, the ACT was never used for management purposes. This amendment also established jurisdictional allocation between the South Atlantic and Gulf.

A **Framework Action to the Reef Fish FMP (GMFMC 2012)**, including EA, RIR and IRFA, implemented September 2013, increases the Gulf of Mexico yellowtail snapper annual catch limit from 725,000 lb round weight to 901,125 lb round weight, and removes the requirement to have onboard and use venting tools when releasing reef fish.

A **Framework Action to the Reef Fish FMP (GMFMC 2016)**, including EA, RIR and IRFA, implemented March 2017, changes the commercial and recreational yellowtail snapper fishing year so that it opens on August 1 and runs through July 31, each year. The framework action also modifies the circle hook requirement so that the use of circle hooks is not required while commercial fishing with natural bait for yellowtail snapper south of Cape Sable (the line extending due west from 25°09' N. latitude off the west coast of Monroe County, Florida, to the Gulf and South Atlantic Councils' shared boundary).

Amendment 44 to the Reef Fish FMP (GMFMC 2017) including EA, RIR and IRFA, implemented December 2017, standardized the MSST for certain reef fish species. The MSST is used to determine whether a stock is overfished; if the biomass of the stock falls below the threshold, then the stock is overfished. The MSST for several reef fish species was set equal to 50% of the biomass at MSY. This amendment was approved on December 21, 2017.

A **Framework Action to the Reef Fish FMP (GMFMC 2017)**, including EA, RIR and IRFA, implemented July 2018, removes the annual catch target (ACT) for mutton snapper and decreases the annual catch limit (ACL) to 134,424 lb for 2018 and 139,392 lb for 2019. The amendment also sets the recreational mutton snapper bag limit at 5-snapper per day within the 10-snapper aggregate bag limit and increases the commercial and recreational minimum size limit to 18 inches.

Amendment 48 to the Reef Fish FMP (GMFMC 2021) including EA, RIR and IRFA, implemented June 2022, modifies status determination criteria for reef fish species with undefined criteria. For stocks assessed across the South Atlantic and Gulf Councils' jurisdictions (goliath grouper, mutton snapper, yellowtail snapper, and black grouper), sets MSST using existing definitions of MSST defined by the South Atlantic Council. Set the MSST = $0.75*B_{MSY}$ for the remaining species. Also specifies an MSY proxy and MFMT consistent with definitions used for these species by the South Atlantic Fishery Management Council.

Mutton Snapper and Yellowtail Snapper – South Atlantic

Snapper Grouper FMP (SAFMC 1983)
The Snapper Grouper FMP included provisions to prevent growth overfishing in thirteen species in the snapper grouper complex and established a procedure for preventing overfishing in other

species; established minimum size limits for red snapper, yellowtail snapper, red grouper, Nassau grouper, and black sea bass; established a 4-inch trawl mesh size to achieve a 12-inch total length minimum size limit for vermilion snapper; and included additional harvest and gear limitations.

Snapper Grouper Amendment 4 (SAFMC 1992)
This amendment established a 12-inch total length minimum for yellowtail snapper in the South Atlantic.

Snapper Grouper Amendment 8 (SAFMC 1997)
This amendment established initial eligibility for two limited entry snapper grouper permits: a non-transferable permit with a 225-pound trip limit and transferrable unlimited landings permit in the South Atlantic.

Snapper Grouper Amendment 9 (SAFMC 1998)
Snapper grouper Amendment 9 established a recreational 20-fish snapper aggregate inclusive of all snappers that did not currently have a bag limit for the South Atlantic region.

Snapper Grouper Amendment 11 (SAFMC 1998)
Amendment 11 defined MSY for snapper grouper species, including yellowtail snapper, as a proxy of 30% static spawning potential ratio (SPR), the OY as 40% static SPR and the OFL as the fishing mortality rate (F) in excess of the fishing mortality rate at 30% static SPR, which is the snapper grouper MSY proxy.

Snapper Grouper Amendment 17A (SAFMC 2010)
This amendment required the use of non-stainless steel, and non-offset circle hooks, when fishing for or possessing snapper grouper species with hook and line gear north of 28º N Latitude. The circle hook requirement was not required below 28º N Latitude to exclude the yellowtail fishery, which is unable to use circle hooks.

Comprehensive Annual Catch Limit Amendment (SAFMC 2011)
This amendment established ACL Control Rule, ABC levels, ACLs, sector and jurisdictional allocations, recreational ACTs, and accountability measures for species not undergoing overfishing, including mutton snapper and yellowtail snapper.

Snapper Grouper Regulatory Amendment 15 (SAFMC 2013)
This amendment revised the total South Atlantic ACL and set it equal to the South Atlantic ABC based on the 2012 Florida Fish and Wildlife Research Institute (FWRI) stock assessment. Regulatory Amendment 15 also updated both the commercial and recreational sector allocations for the South Atlantic region.

Snapper Grouper Regulatory Amendment 21 (SAFMC 2014)
Regulatory Amendment 21 modified the minimum stock size threshold (MSST) for select species (including yellowtail snapper) to 75% of spawning stock biomass at maximum sustainable yield (SSB_{MSY}) for the South Atlantic portion of the stock.

Snapper Grouper Regulatory Amendment 25 (SAFMC 2016)
This amendment modified both the commercial and recreational yellowtail snapper fishing season from a calendar year to August 1 – July 31 in the South Atlantic.

Snapper Grouper Amendment 41 (SAFMC 2018)
Amendment 41 specified the following for mutton snapper: MSY, MSST, ACL and OY, recreational ACT, increased the minimum size to 18 inches TL, designated spawning months for regulatory purposes, modified the recreational bag limit to 5 fish per person per day, and modified the commercial trip limit to 5 fish per person per day during the spawning months.

APPENDIX B. RECREATIONAL DATA COLLECTION PROGRAMS

Federal Data Collection Programs

The National Marine Fisheries Service (NMFS) created the MRFSS in 1979. In the Gulf, MRFSS collected recreational catch and effort data, including DWG species, beginning in 1981. MRFSS included both offsite telephone surveys and onsite interviews at marinas and other points where recreational anglers fish. In 2008, MRIP replaced MRFSS to meet increasing demand for more precise, accurate, and timely recreational catch estimates. Until 2013, recreational catch, effort, and participation were estimated through a suite of independent but complementary surveys: telephone surveys of households and for-hire vessel operators that collected information about recreational fishing activity and an angler intercept survey that collected information about the fish that were caught.

MRIP Access Point Angler Intercept Survey (APAIS) began incorporating a new survey design in 2013. This new design addressed concerns regarding the validity of the survey approach, specifically that trips recorded during a given time period are representative of trips for a full day, by extending the time period dockside samplers stayed at an assigned location (Foster et al. 2018). The more complete temporal coverage with the new survey design provides for consistent increases or decreases in APAIS angler catch rate statistics, which are used in stock assessments and management, for at least some species (NMFS 2019).

To assess fishing effort in the for-hire component, MRIP samplers contact charter vessel operators (a weekly sample of 10% of the fleet) by telephone to conduct the For-Hire Telephone Survey (FHTS) for fishing effort. Charter vessel operators are required to report all trips taken during selected weeks (effort only) whenever they are selected to participate in this portion of the MRIP survey. The FHTS has a stratified design, with for-hire vessels as sampling units, and is stratified by state, sub-state region (applicable to Florida only), vessel type (charter or headboat [as defined by the USCG]), and sample week within the two-month wave.

MRIP transitioned from the legacy Coastal Household Telephone Survey (CHTS) to a new mail survey (Fishing Effort Survey; FES) in 2015, and in 2018, MRIP-FES replaced MRIP-CHTS for the private angler mode. Both survey methods collect data needed to estimate marine recreational fishing effort (number of fishing trips) by shore and private/rental boat anglers on the Atlantic and Gulf coasts. MRIP-CHTS used random-digit dialing of homes in coastal counties to contact anglers. The new mail-based FES uses angler license and registration information as one way to identify and contact anglers (supplemented with data from the U.S. Postal Service, which includes virtually all U.S. households). Because FES and CHTS are so different, NMFS conducted side-by-side testing of the two methods and found that, in general, total recreational fishing effort estimates generated from the FES are higher — and in some cases substantially higher — than the CHTS estimates (NMFS 2019). This is because the FES is designed to measure fishing activity more accurately than the CHTS, albeit while recognizing a greater degree of uncertainty in those landings estimates. This increase in estimated effort is not because there was a sudden rise in fishing effort, but rather because FES better targets actual

fishery participants through the directed mail survey. Likewise, the increase in uncertainty about the effort estimates reflects uncertainty that was also present in CHTS but went unaccounted due to biases that were identified as FES was developed. NMFS developed a calibration model to allow historic effort estimates using MRIP-CHTS to be compared to new estimates from MRIP-FES.

State of Florida's Supplemental Effort Survey

In 2017, the State of Florida formally created the Gulf Reef Fish Survey to monitor private angling landings and discards of select reef fish species harvested in state and federal waters in the Gulf. In 2020, that survey was expanded statewide and renamed the State Reef Fish Survey (SRFS), and additional species were added. SRFS was created to be compatible with MRIP-CHTS; however, calibrated historical landings for SRFS are somewhat larger for the recreational sector than that estimated by MRIP-CHTS, but much lower than estimated by MRIP-FES. SRFS reports landings and discards monthly in numbers, with a conversion to weight based on that used by MRIP. SRFS uses a combination of dockside intercepts from SRFS and APAIS to estimate catch-per-unit-effort from private recreational vessels. In order to obtain complete estimates of recreational catch for stock assessment, SRFS private recreational landings and discard estimates have to be combined with recreational shore and charter for-hire catch informed by MRIP-FES, as well as headboat catch informed by the Southeast Region Headboat Survey (SRHS). Thus, when "SRFS" is referred to further in this document with respect to SEDAR 72, it encompasses all of these sources of data combined. SRFS/GRFS (Gulf Reef Fish Survey) has been running in some capacity since 2015, and full capacity since 2017.

2023 MRIP-FES Pilot Study and 2024 Comprehensive Study

At the August 2023 Council meeting, the NMFS Office of Science and Technology (OST) discussed the release of a pilot study (NMFS 2023[35]), which evaluated potential respondents' bias (e.g., recall error) in the mail portion of the recreational FES survey used to estimate effort. The 2023 pilot study evaluated this bias for a portion of the year across several states, and preliminary results suggest the order of the questions in the survey led to overestimation of fishing effort by MRIP-FES. As a result of this, NMFS OST conducted a more comprehensive pilot study which began in 2024 and is expected to end data collection in 2025. NMFS OST plans to produce a public report with key findings and estimate comparisons in summer 2025 and determine if a new design will be implemented in 2026, pending study results and peer review. In mid-2026, NMFS OST is expecting to produce calibrated historical effort estimates to reflect the findings of the updated survey design for use in future stock assessments and fisheries management. Prior to when data calibration is finalized in spring 2026, any expectation about results would be speculative. After the updated survey data are finalized, it will then be available for evaluation by data users (e.g., the Southeast Fisheries Science Center, Southeast Regional Office, and the Council).

[35] https://www.fisheries.noaa.gov/recreational-fishing-data/fishing-effort-survey-research-and-improvements

APPENDIX C. FISHERY CLOSURE ANALYSES

The Gulf and South Atlantic Fishery Management Councils (Councils) are exploring changes to the overfishing limit (OFL), acceptable biological catch (ABC), and annual catch limits (ACLs) for Southeastern US mutton snapper and yellowtail snapper, respectively, in Amendment 55 to the Fishery Management Plan for Reef Fish Resources of the Gulf (Reef Fish Amendment 55) and Amendment 44 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (Snapper Grouper Amendment 44), together (Reef Fish 55/Snapper Grouper 44). The amendments consider different apportionments between the Gulf and South Atlantic regions and modify the OFL and ABC for each species. Reef Fish 55/Snapper Grouper 44 also determines the ACLs using different averages of historic and recent landings.

C-1. Southeastern U.S. Mutton Snapper Gulf Season Prediction Analysis

A summary of the cumulative landings of the five most recent fishing years of complete Gulf of America (Gulf) mutton snapper landings (Figure C.1.1) are compared against the ACLs being considered for the Gulf region. The Gulf region has a stock ACL where the commercial and recreational landings are combined and then compared against an ACL. The recent annual Gulf mutton snapper landings are below the Gulf ACLs being considered except under Alternative 1. However, the ACL in Alternative 1 is based on the legacy Marine Recreational Fishing Statistics Survey recreational estimates, which are no longer considered consistent with the best scientific information available for mutton snapper. Further, the Councils' Scientific and Statistical Committees have made revised OFL and ABC recommendations based on the SEDAR 79 (2024) stock assessment of mutton snapper, the results of which are considered to be consistent with the best scientific information available. Because Alternative 1 is inconsistent with this updated scientific advice, is not a viable alternative. Therefore, it is likely that future Gulf mutton snapper landings will not exceed the ACLs being considered for the Gulf in Reef Fish 55/Snapper Grouper 44.

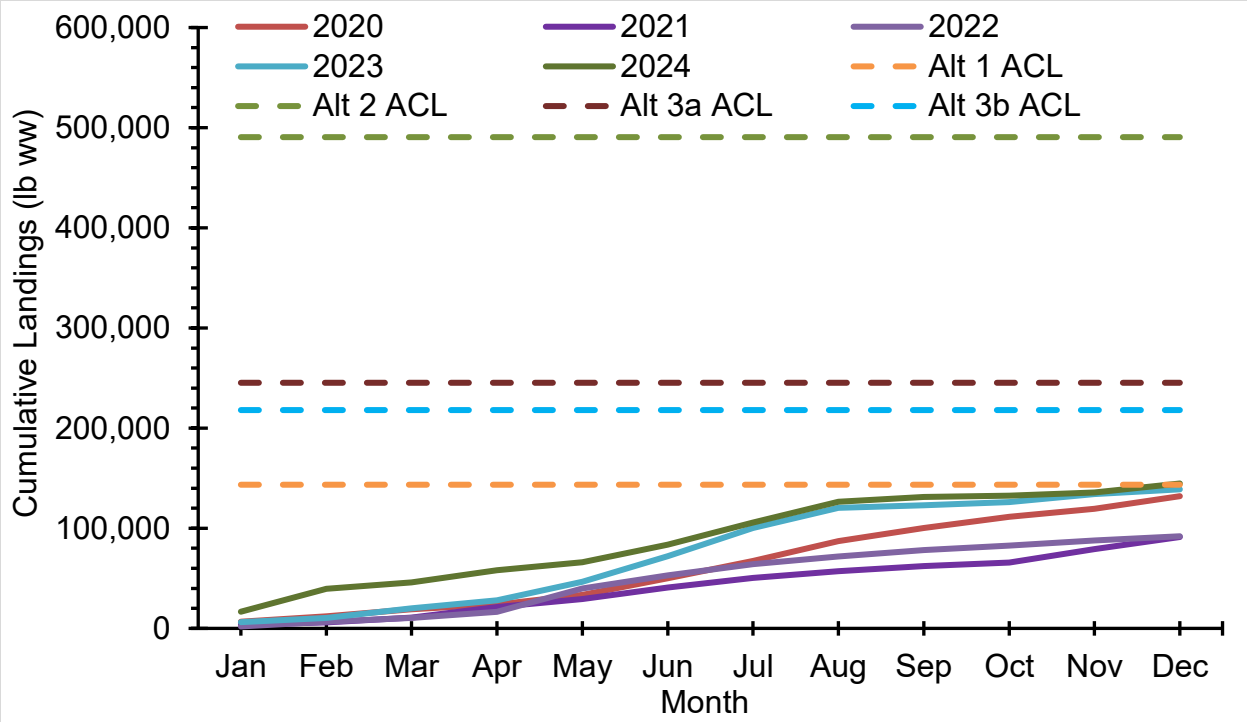


Figure C.1.1. Gulf mutton snapper commercial and recreational cumulative landings by month for the years of 2020 through 2024. The dashed lines are the Gulf ACLs being considered in Reef Fish 55/Snapper Grouper 44 in Action 1.

C-2. Southeastern U.S. Mutton Snapper South Atlantic Recreational Season Prediction Analysis

A summary of the cumulative landings of the five most recent fishing years of complete South Atlantic mutton snapper recreational landings (Figure C.2.1) are compared against the recreational ACLs being considered for the South Atlantic region. The recent annual South Atlantic mutton snapper landings are below the South Atlantic recreational ACLs being considered except under Alternative 1. However, the recreational ACL in Alternative 1 is based on the legacy Marine Recreational Fishing Statistics Survey recreational estimates, which are no longer considered consistent with the best scientific information available for mutton snapper. Therefore, it's likely that future South Atlantic mutton snapper recreational landings will not exceed the recreational ACLs being considered for the South Atlantic region in Reef Fish 55/Snapper Grouper 44.

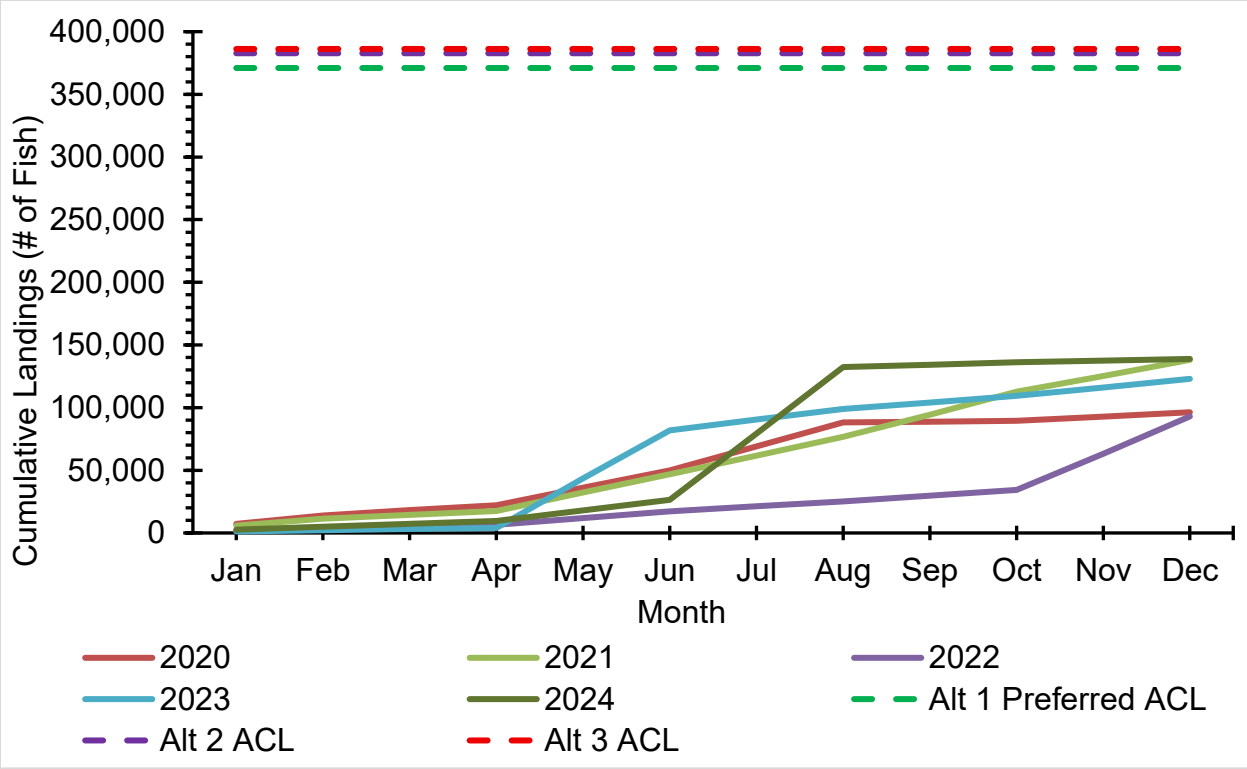


Figure C.2.1. South Atlantic mutton snapper cumulative recreational landings by month for the years of 2020 through 2024. Landings are in number of fish. The dashed lines are the Action 3 South Atlantic recreational ACLs being considered in Reef Fish Amendment 55/Snapper Grouper Amendment 44. All alternatives for this action are based on the preferred South Atlantic total ACL from Action 1 (Preferred Alternative 3b).

C-3. Southeastern U.S. Mutton Snapper South Atlantic Commercial Season Prediction Analysis

A summary of the cumulative landings of the five most recent fishing years of complete South Atlantic mutton snapper commercial landings (Figure C.3.1) are compared against the commercial ACLs being considered for the South Atlantic region. The recent annual South Atlantic mutton snapper commercial landings are below the South Atlantic commercial ACLs being considered. Therefore, it's likely that future South Atlantic mutton snapper commercial landings will not exceed the commercial ACLs being considered for the South Atlantic region in Reef Fish 55/Snapper Grouper 44.

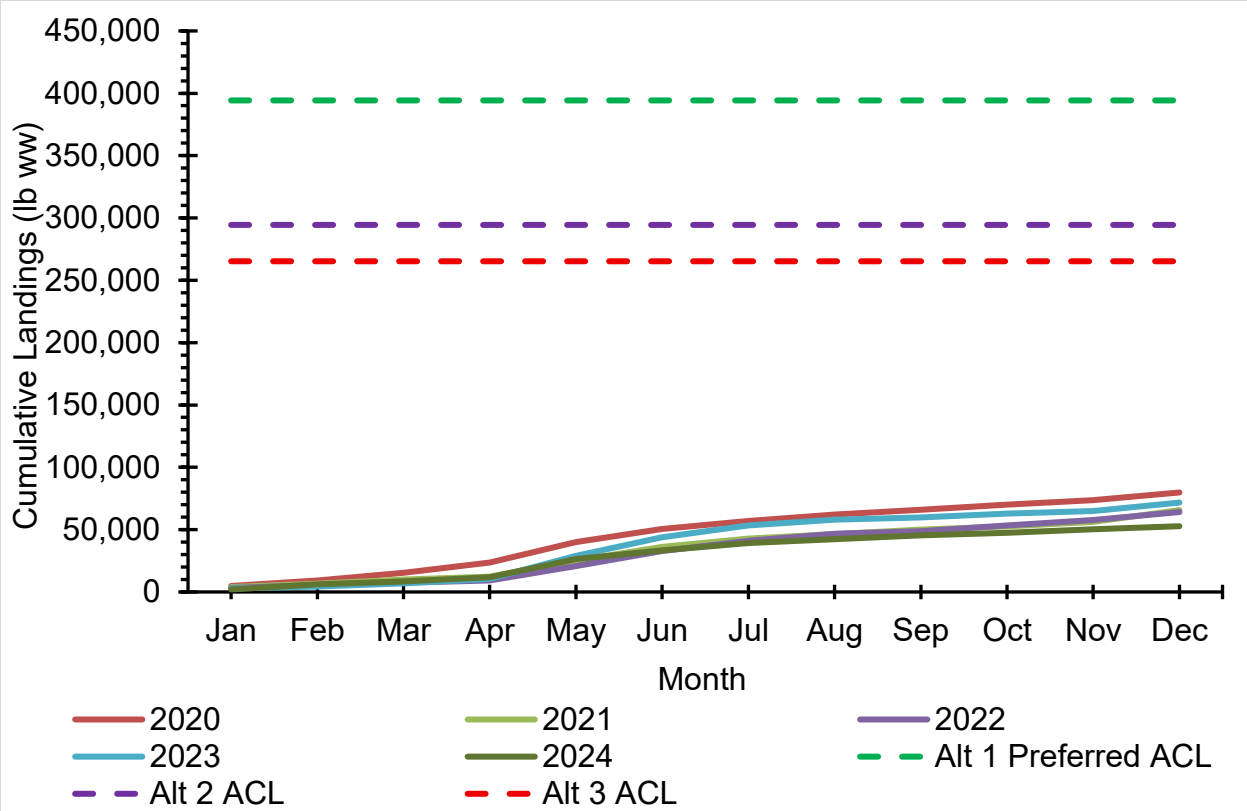


Figure C.3.1. South Atlantic mutton snapper cumulative commercial landings by month for the years of 2020 through 2024. The dashed lines are the Action 3 South Atlantic commercial ACLs being considered in Reef Fish Amendment 55/Snapper Grouper Amendment 44. All ACL alternatives for this action are based on the preferred South Atlantic total ACL from Action 1 (Preferred Alternative 3b).

C-4. Southeastern U.S. Yellowtail Snapper Gulf Season Prediction Analysis

The Gulf apportionment of the yellowtail snapper stock ABC and ACL is monitored by combining the commercial and recreational landings. The current Gulf ACL is set 11% below the Gulf apportionment of the stock ABC (Alternative 1 in Action 2). The fishing season for this stock is from August 1 through July 31. A summary of the cumulative landings of the five most recent fishing years of complete landings from 2019/2020 through 2023/2024 is shown in Figure C.4.1. All of the recent fishing year landings are below the Gulf ACLs being considered the document, regardless of whether the buffer between the Gulf apportionment of the stock ABC and the Gulf ACL is retained or removed. Therefore, it is likely that future Gulf yellowtail snapper landings will be below the ACLs being considered for the Gulf in Reef Fish 55/Snapper Grouper 44.

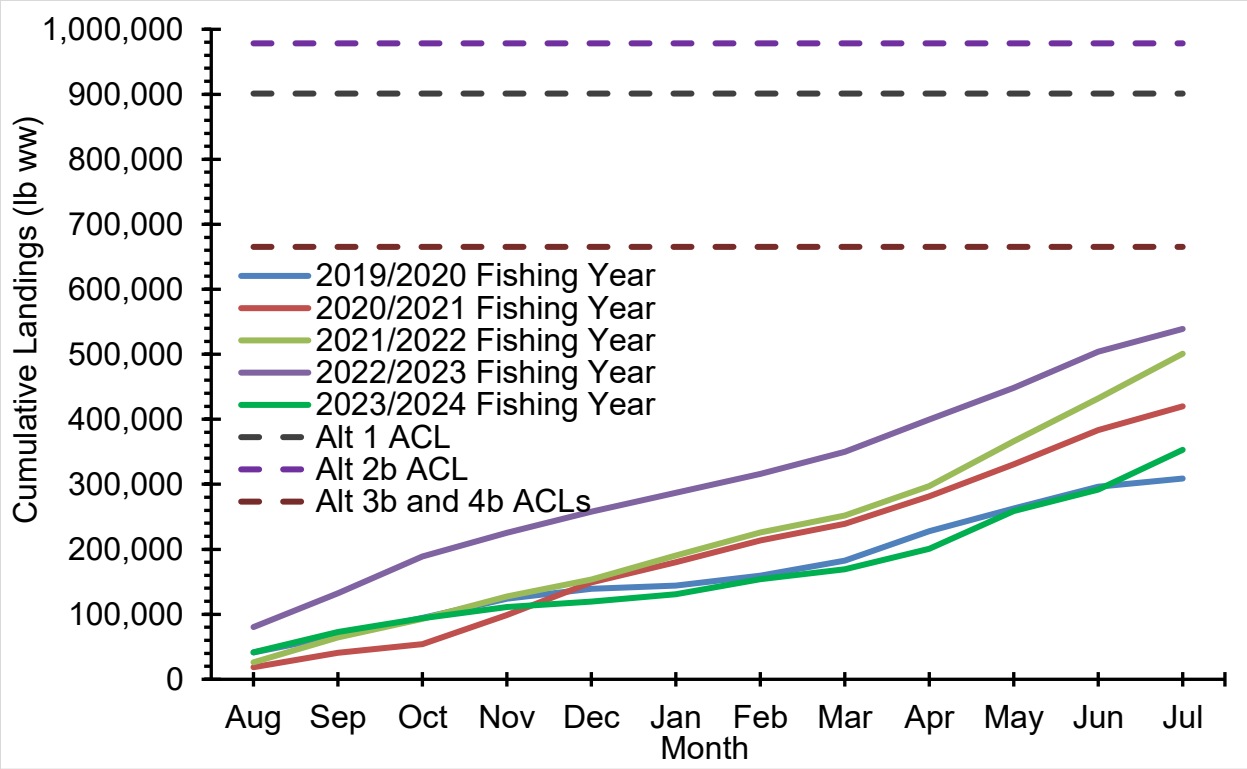


Figure C.4.1. Gulf yellowtail snapper commercial and recreational cumulative landings by month for the fishing years of 2019/2020 through 2023/2024. The dashed lines are the Gulf ACLs being considered in Reef Fish 55/Snapper Grouper 44 in Action 2. Alternative 1 retains a buffer between the Gulf apportionment of the stock ABC and the Gulf ACL. Option b in Alternatives 2, 3, and 4 show the Gulf ACL if the buffer is removed. Options a for Alternatives 2, 3, and 4 are not presented because the Gulf Council prefers to remove the buffer due to the health of the stock.

C-5. Southeastern U.S. Yellowtail Snapper South Atlantic Recreational Season Prediction Analysis

The South Atlantic apportionment of the yellowtail snapper stock ABC and ACL is monitored by separate commercial and recreational landings. This analysis focuses on the recreational sector. The fishing season for the recreational sector is from August 1 through July 31. A summary of the cumulative landings of the four most recent fishing years of complete landings from 2020/2021 through 2023/2024 is shown in Figure C.5.1. All of the recent fishing year recreational landings are below the South Atlantic ACLs being considered. Therefore, it is likely that future South Atlantic yellowtail snapper recreational landings will be below the ACLs being considered for the Gulf in Reef Fish 55/Snapper Grouper 44.

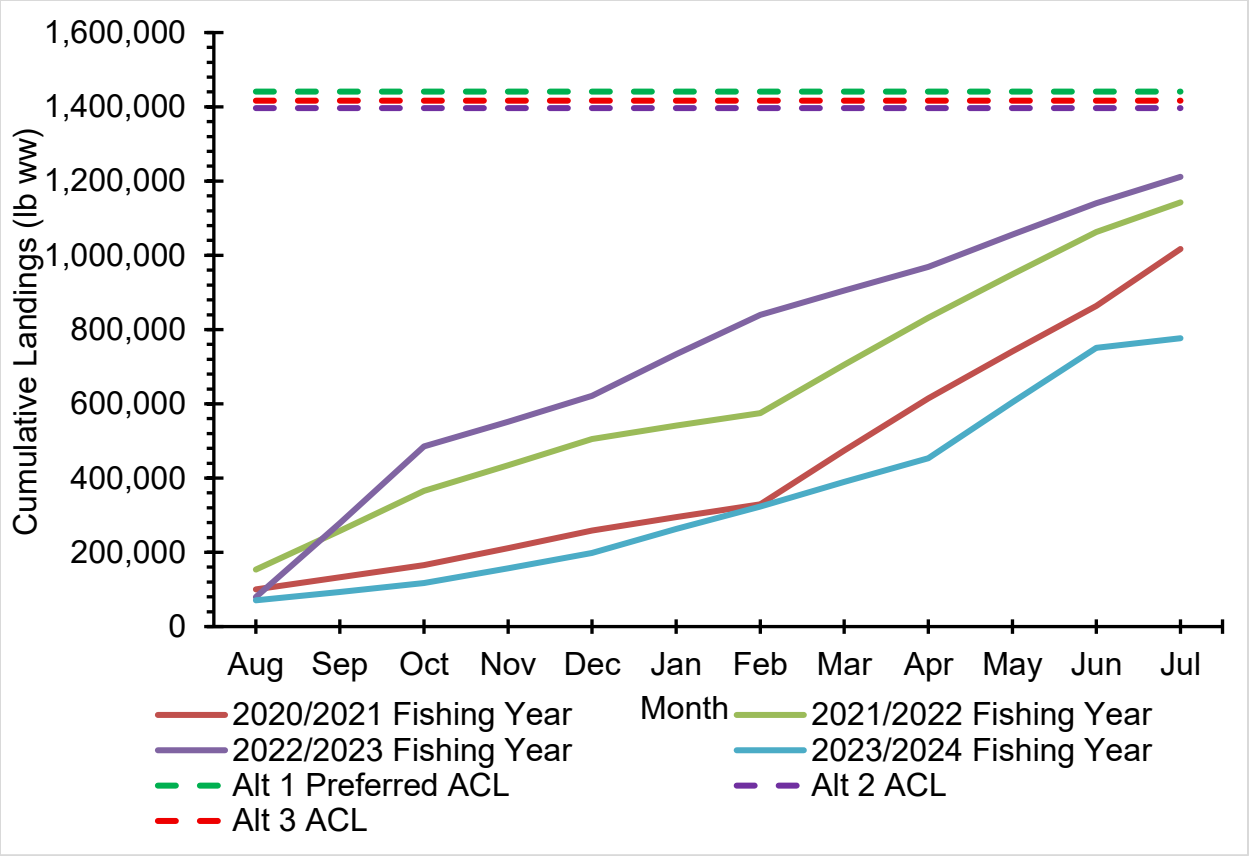


Figure C.5.1. South Atlantic yellowtail snapper recreational cumulative landings by month for the fishing years of 2020/2021 through 2023/2024. The dashed lines are the South Atlantic ACLs being considered in Reef Fish Amendment 55/Snapper Grouper Amendment 44 in Action 4 which is based on the preferred South Atlantic total ACL from Action 2 (Preferred Alternative 4b)

C-6. Southeastern U.S. Yellowtail Snapper South Atlantic Commercial Season Prediction Analysis

The South Atlantic apportionment of the yellowtail snapper stock ABC and ACL is monitored by separate commercial and recreational landings. This analysis focuses on the commercial sector. The fishing season for the commercial sector is from August 1 through July 31. A summary of the cumulative landings of the four most recent fishing years of complete commercial landings from 2020/2021 through 2023/2024 is shown in Figure C.6.1. All of the recent fishing year commercial landings are below the South Atlantic ACLs being considered. Therefore, it is likely that future South Atlantic yellowtail snapper commercial landings will be below the ACLs being considered for the Gulf in Reef Fish 55/Snapper Grouper 44.

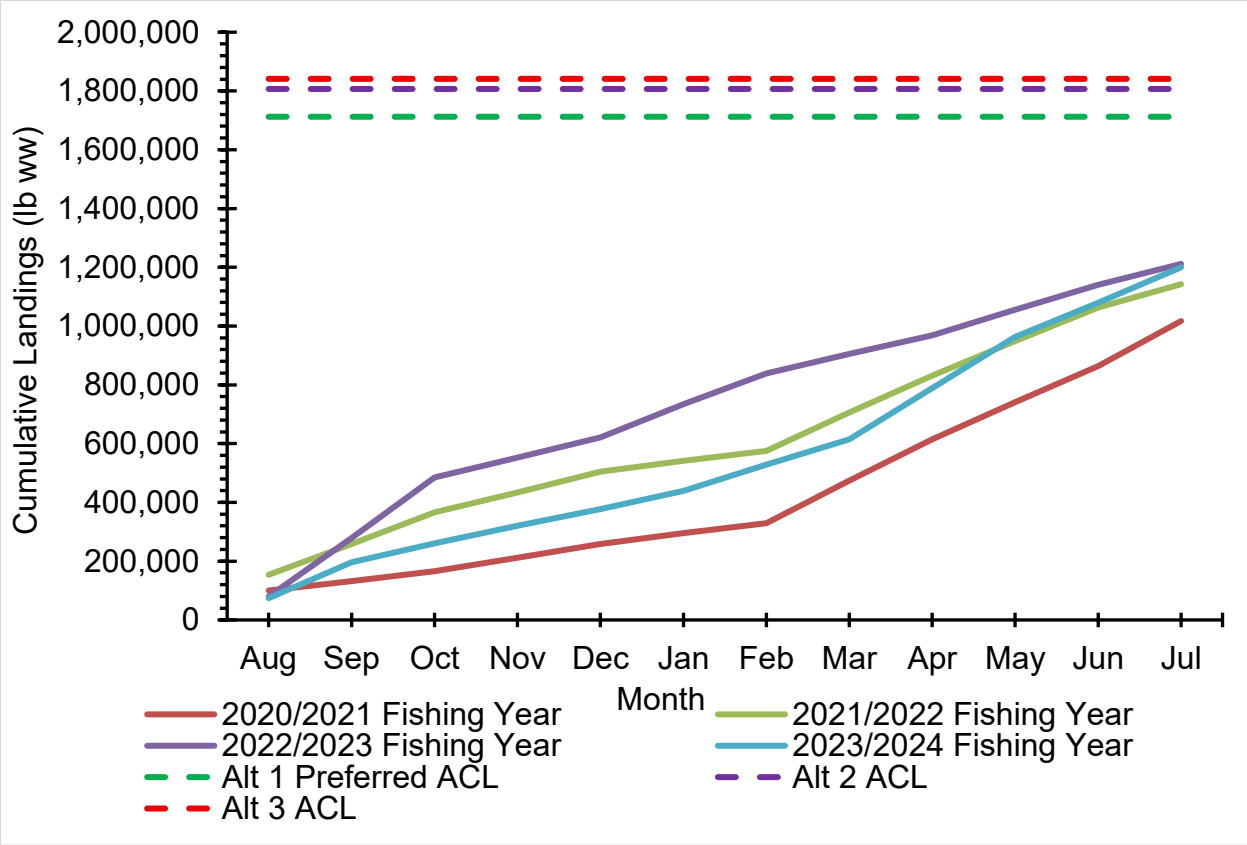


Figure C.6.1. South Atlantic yellowtail snapper commercial cumulative landings by month for the fishing years of 2020/2021 through 2023/2024. The dashed lines are the South Atlantic ACLs being considered in Reef Fish Amendment 55/Snapper Grouper Amendment 44 in Action 4 which is based on the preferred South Atlantic total ACL from Action 2 (Preferred Alternative 4b).

APPENDIX D. SOUTH ATLANTIC ESSENTIAL FISH HABITAT AND ECOSYSTEM BASED FISHERY MANAGEMENT

1.1 EFH and EFH-HAPC Designations and Cooperative Habitat Policy Development

Summary
The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) requires federal fishery management councils and the National Marine Fisheries Service (NMFS) to designate essential fish habitat (EFH) for species managed under federal fishery management plans (FMP). Federal regulations that implement the EFH program encourage fishery management councils and NMFS to designate subsets of EFH to highlight priority areas for conservation and management. These subsets of EFH are called EFH-Habitat Areas of Particular Concern (EFH-HAPCs or HAPCs) and are designated based on ecological importance, susceptibility to human-induced environmental degradation, susceptibility to stress from development, or rarity of the habitat type.

Information supporting EFH and EFH-HAPC designations was updated (pursuant to the EFH Final Rule) in Fishery Ecosystem Plan (FEP) II (SAFMC 2018). Additional detailed information supporting the EFH designations appears in FEP I (SAFMC 2009a), individual FMPs, general information on the EFH provisions of the Magnuson-Stevens Act and its implementing regulations (50 CFR 900 Subparts J and K), and the EFH User Guide (SAFMC 2024).

In addition to implementing regulations to protect habitat from degradation due to fishing activities, the Council cooperates with NMFS to comment on non-fishing projects or policies that may impact EFH. The Council established a Habitat and Ecosystem Advisory Panel (AP) and adopted a comment and policy development process that was recently revised in the Habitat Blueprint (SAFMC 2023). Members of the AP serve as the Council's habitat contacts and professionals in the field and have guided the Council's development of the policy statements. To access these policy statements, refer to the habitat website: https://safmc.net/fishery-management-plans/habitat/

Habitat Conservation
The Council has been proactive in advancing habitat conservation through extensive fishing gear restrictions in all Council FMPs and by directly managing habitat and fisheries affecting those habitats through two FMPs: the FMP for Coral, Coral Reefs and Live/Hard Bottom Habitat of the South Atlantic Region (Coral FMP; SAFMC 1984) and the FMP for the Sargassum Fishery of the South Atlantic Region (SAFMC 2003).

Ecosystem Approach to Conservation and Management of Deep-water Ecosystems
Building on the long-term conservation approach, the Council facilitated the evolution of the Habitat Plan into FEP (SAFMC 2009a) and FEP II (SAFMC 2018) to assemble information on the physical, biological, and human/institutional context of ecosystems within which fisheries are

managed. These two documents were intended to initiate the transition from single species management to Ecosystem-Based Fisheries Management (EBFM) in the region. To support this, the South Atlantic Council adopted broad goals: (1) maintaining or improving ecosystem structure and function; (2) maintaining or improving economic, social, and cultural benefits from resources; and (3) maintaining or improving biological and cultural diversity.

Through Comprehensive Ecosystem-Based Amendment 1 (CE-BA 1; SAFMC 2009b), Comprehensive Ecosystem-Based Amendment 2 (SAFMC 2011), and Coral Amendment 8 (SAFMC 2013), the South Atlantic Council established and expanded deep-water coral HAPCs (CHAPCs) and co-designated them as EFH-HAPCs.

1.2 EFH for species managed under the Snapper Grouper FMP

EFH for species managed under the Snapper Grouper FMP includes coral reefs, live/hard bottom, submerged aquatic vegetation, artificial reefs and medium to high profile outcroppings on and around the shelf break zone from shore to at least 183 meters (m) (but to at least 610 m for wreckfish) where the annual water temperature range is sufficiently warm to maintain adult populations of members of this largely tropical complex. EFH includes the spawning area in the water column above the adult habitat and the additional pelagic environment, including *Sargassum*, required for larval survival and growth, up to and including settlement. In addition, the Gulf Stream is EFH because it provides a mechanism to disperse snapper grouper species larvae.

For specific life stages of estuarine dependent and nearshore snapper grouper species, EFH includes areas inshore of the 31 m contour, such as attached macroalgae; submerged rooted vascular plants (seagrasses); estuarine emergent vegetated wetlands (saltmarshes, brackish marsh); tidal creeks; estuarine scrub/shrub (mangrove fringe); oyster reefs and shell banks; unconsolidated bottom (soft sediments); artificial reefs; and coral reefs and live/hard bottom.

1.3 HAPC for species managed under the Snapper Grouper FMP

EFH-HAPC for species managed under the Snapper Grouper FMP include medium to high profile offshore hard bottoms where spawning normally occurs; localities of known or likely periodic spawning aggregations; nearshore hard bottom areas; The Point, The Ten Fathom Ledge, and Big Rock (North Carolina); The Charleston Bump (South Carolina); mangrove habitat; seagrass habitat; oyster/shell habitat; all coastal inlets; all state-designated nursery habitats of particular importance to snapper grouper (e.g., Primary and Secondary Nursery Areas designated in North Carolina); pelagic and benthic Sargassum; Hoyt Hills for wreckfish; the Oculina Bank HAPC; all hermatypic coral habitats and reefs; manganese outcroppings on the Blake Plateau; and Council-designated Special Management Zones (SMZ).Areas that meet the criteria for EFH-HAPCs include habitats required during each life stage (including egg, larval, post-larval, juvenile, and adult stages).

EFH-HAPCs for Golden Tilefish includes irregular bottom comprised of troughs and terraces inter-mingled with sand, mud, or shell hash bottom. Mud-clay bottoms in depths of 150-300m are HAPC. Golden tilefish are generally found in 80-540 m, but most commonly found in 200 m depths. EFH-

HAPC for Blueline Tilefish includes irregular bottom habitats along the shelf edge in 45-65 m depth; shelf break; or upper slope along the 100-fathom contour (150-225 m); hard bottom habitats characterized as rock overhangs, rock outcrops, manganese-phosphorite rock slab formations, or rocky reefs in the South Atlantic Bight; and the Georgetown Hole (Charleston Lumps) off Georgetown, South Carolina.

EFH-HAPCs for the Snapper Grouper complex include the following deep-water marine protected areas (MPA) as designated in Amendment 14 to the Snapper Grouper FMP: Snowy Grouper Wreck MPA, Northern South Carolina MPA, Edisto MPA, Charleston Deep Artificial Reef MPA, Georgia MPA, North Florida MPA, St. Lucie Hump MPA, and East Hump MPA.

The Council established the Special management Zone (SMZ) designation process in 1983 in the Snapper Grouper FMP, and SMZs have been designated in federal waters off North Carolina, South Carolina, Georgia, and Florida since that time. The purpose of the original SMZ designation process, and the subsequent specification of SMZs, was to protect snapper grouper populations at the relatively small, permitted artificial reef sites and "create fishing opportunities that would not otherwise exist." Thus, the SMZ designation process was centered on protecting the relatively small habitats, which are known to attract desirable snapper grouper species.

In CE-BA 1 (SAFMC 2009b), the Council determined that SMZs met the criteria to be EFH-HAPCs for species included in the Snapper Grouper FMP. Since CE-BA 1 (SAFMC 2009b), the Council has designated additional SMZs in the Snapper Grouper FMP including Spawning SMZs. The SMZ and EFH-HAPC designations serve similar purposes in identifying and protecting valuable and unique habitat for the benefit of fish populations, which are important to both fish and fishers. Therefore, the Council determined that a designated SMZ meets the criteria for an EFH-HAPC designation, and the Council intends that all SMZs designated under the Snapper Grouper FMP also be designated as EFH-HAPCs under the Snapper Grouper FMP.

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APPENDIX E. SOUTH ATLANTIC MUTTON SNAPPER WEIGHT CONVERSION

Developed by South Atlantic Council Staff
May 4, 2026

E.1 Background

Recreational and commercial fishery datasets were analyzed to identify the most appropriate basis for converting the recreational sector's allocation from lb to numbers of fish. Tracking the recreational sector in numbers of fish is warranted because recreational catch monitoring is conducted at the individual fish level, with lengths and weights recorded for a fraction fish landed. While this individual-based data collection supports direct enumeration, it also introduces additional measurement and estimation error relative to weight-based reporting.
The commercial sector, by contrast, reports landings in lb for a trip, providing a weight-based record that is generally more consistent and stable across years. Sampling occurs dockside on some trips with a random sample of lengths taken to describe the catch composition. Because the two sectors use fundamentally different reporting units, converting between them requires a mean weight conversion factor, which carries inherent uncertainty.
To minimize the risk of exceeding the total Annual Catch Limit (ACL) through conversion error, it is recommended that the ACL for one sector be calculated directly in its native reporting unit, and the remaining sector's ACL be derived by subtracting that sector's contribution from the total ACL. This approach confines conversion uncertainty to a single sector and provides an approach that prevents exceeding the combined ACL.

E.2 Recommendation

Use the commercial average weight from 2020 to 2024 as the basis to develop the recreational ACL in numbers of fish because:

- There are more length samples taken from commercial catches (**Figure A-5**).
- Commercial mean weight varied by 0.22 lb over the time period [(recreational fishery varied by 1.98 lb), **Figure A-5**)].
- The uncertainty associated with the commercial average weight is smaller (**Figure A-5**); and
- The commercial data has smaller annual distribution shifts in weights observed compared to the recreational data [(KS-D values), **Table A-1**].

The average weight of Mutton Snapper in the commercial fishery was **8.49 lb whole weight (95% CI – 8.34-8.63 lb).**

E.3 Data and Methods

E.3.1 Data Sources and Preparation

Recreational catch data were obtained from the Marine Recreational Information Program (MRIP) and commercial landings data were obtained from SEFSC Trip Interview Program (TIP). Both datasets were analyzed to evaluate the stability of annual fish weight distributions and to identify the most appropriate basis for converting the recreational sector's allocation from lb to numbers of fish. All lengths were converted to maximum total length using species-specific conversion equations from SEDAR 79 (Table 2.13.1). Maximum total length was subsequently converted to weight (kilograms) using the length-weight relationship specified in the final equation of that table. All distributional comparisons and mean weight estimates were conducted on the derived weight values rather than on lengths directly. This approach was adopted to avoid the bias introduced by applying the nonlinear length-weight relationship after averaging, as converting a mean length to weight does not yield the same result as computing the mean of individually converted weights, which is the quantity of direct relevance for translating a weight-based allocation to numbers of fish.

E.3.2 Recreational Fishery Data

MRIP catch records were expanded using the domain-level sample weights for lengths (wp_size), which account for the survey design and provide estimates representative of the total recreational catch. Proportional length frequency distributions and weighted mean weights were computed annually using these expansion weights.

Imputed length and weight records were retained in the analysis. In some years, imputed records comprised up to approximately 40% of available length samples. Although the distributions of imputed and observed lengths were nearly identical, imputed records carried substantially higher expansion weights (wp_size) than observed records. Excluding imputed records would therefore have disproportionately reduced the contribution of highly expanded observations, introducing systematic bias into the weighted mean weight estimate. To minimize this potential bias, all imputed records were included.

E.3.3 Commercial Fishery Data

Commercial length records were filtered to retain only random samples, as identified by the sample design designation in the dataset. Commercial samples were treated as a simple random sample; no expansion weights were applied. Individual fish lengths were converted to maximum total length and subsequently to weight using the same SEDAR 79 equations applied to the recreational data (SEDAR 2024).

E.3.4 Stability Analysis

Annual weight distributions for both fleets were compared across all pairwise year combinations using the two-sample Kolmogorov-Smirnov (KS) test. The KS test was applied to the derived

individual fish lengths and weights. Lengths are provided as a first test. KS test on weights is consistent with the objective of characterizing weight-based variability for quota conversion purposes and avoiding artifacts of the nonlinear length-weight transformation. Mean KS D-statistics were computed across all year pairs for each fleet as an index of inter-annual distributional stability, with lower values indicating greater consistency across years. The KS D-statistic measures the maximum vertical difference between two distributions. A lower KS D-statistic means that there is greater consistency between the estimates indicating improved prediction for future estimates based on past observed values.

E.3.5 Mean Weight Estimation

A pooled grand mean weight was calculated for the commercial fleet across all years (2020–2024) using the unweighted arithmetic mean of all individual fish weight observations, with a 95% confidence interval derived from the standard error ($SE = s/\sqrt{n}$). This pooled estimate serves as the recommended conversion factor for translating commercial lb to numbers of fish. Annual mean weights were also calculated separately for each year to characterize inter-annual variability and support assessment of the stability of the conversion factor over time. For the recreational fleet, annual mean weights were computed as expansion-weighted means using wp_size, with standard errors adjusted for the effective sample size ($n_{eff} = (\sum w_i)^2 / \sum w_i^2$) to account for heterogeneity in expansion weights.

E.4 Results and Discussion

E.4.1 Recreational Results

Mutton Snapper harvested in the recreational fishery ranged from 8 to 34 inches in maximum total length. The most commonly caught fish measured between 15 and 20 inches, though the size of fish landed varied noticeably from year to year (**Figure E.4.1.1**). Many of the smallest fish are coming from the shore mode.

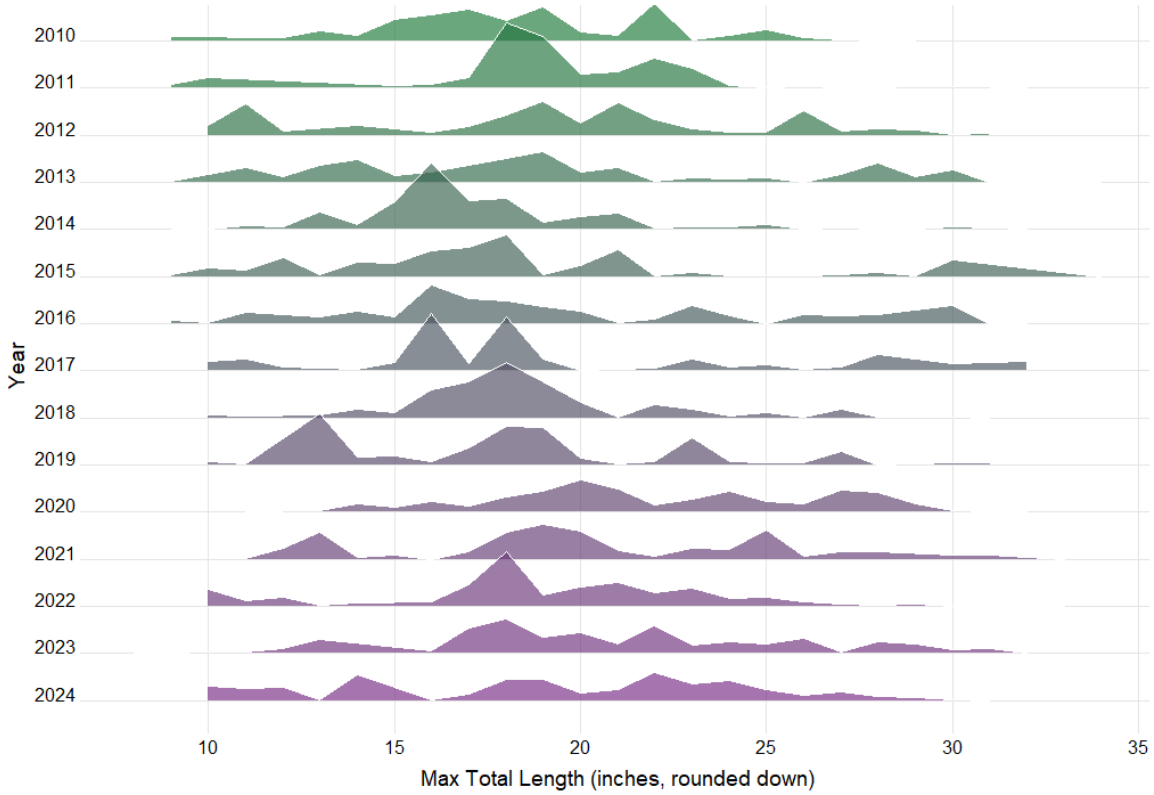


Figure E.4.1.1. Expanded maximum total length distribution of recreationally landed Mutton Snapper in the South Atlantic region estimated through Marine Recreational Interview Program, 2010 to 2024.

Following the 2018 increase in the minimum size limit to 18 inches total length, the average size of recreationally harvested Mutton Snapper increased, which is consistent with the intent of that management action. From 2020 to 2024, the annual average length of recreationally caught fish ranged from approximately 18.2 to 22 inches (**Figure E.4.1.2**).

To assess whether the annual catch compositions were consistent enough to support a reliable weight-based conversion factor, the length distributions were compared across years using a standard statistical test. Results indicated that the 2019 catch composition differed substantially from all subsequent years, which is consistent with the fishery adjusting to the new size limit during that transition period. Because 2019 represented an atypical year compared to 2020 to 2024, it was excluded from the conversion factor analysis. The years 2020 through 2024 showed more consistent catch compositions but each year there were significant differences in the year-to-year comparisons in the length distribution (**Table E.4.1.1**).

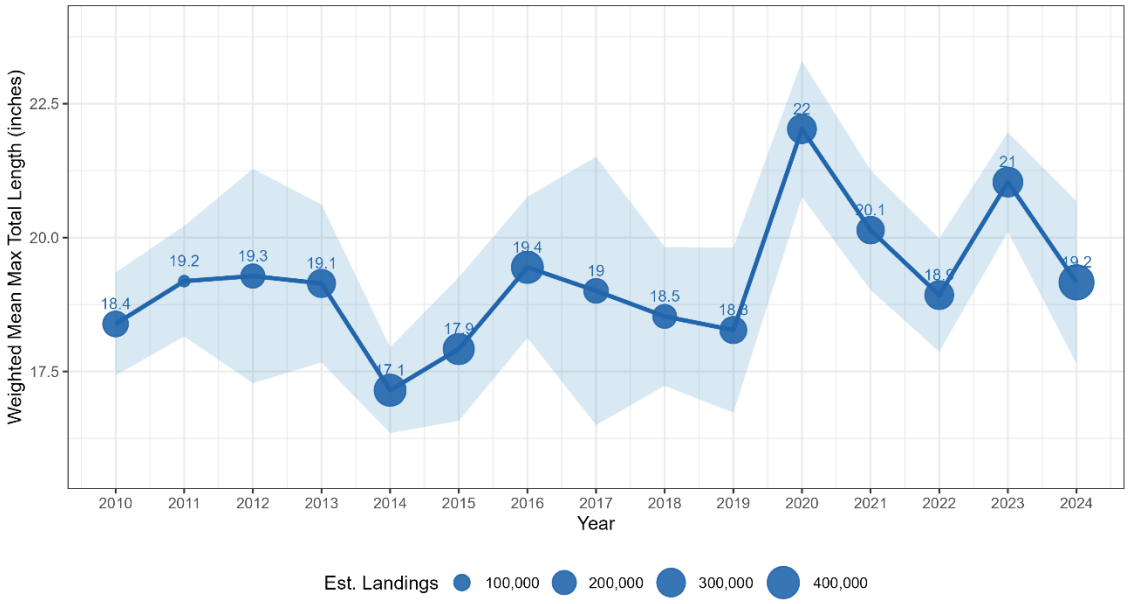


Figure E.4.1.2. Weighted mean maximum total length of recreationally landed Mutton Snapper in the South Atlantic region, 2010 to 2024. Data were collected through the Marine Recreational Information Program. The shaded area represents the 95% confidence interval for the mean and size of points are scaled to the estimated landings. Values above the points are the weighted means.

Table E.4.1.1. Kolmogorov-Smironov (KS) D statistic tests of length and weight of landed Mutton Snapper for recreational (MRIP) and commercial (TIP) commercial data from 2020 to 2024.

		Length		Weight	
Dataset	YearPair	KS D	KS p value	KS D	KS p value
MRIP	2020 vs 2021	0.204	<.0001	0.224	<.0001
MRIP	2020 vs 2022	0.302	<.0001	0.315	<.0001
MRIP	2020 vs 2023	0.155	<.0001	0.183	<.0001
MRIP	2020 vs 2024	0.248	<.0001	0.248	<.0001
MRIP	2021 vs 2022	0.166	<.0001	0.190	0.000
MRIP	2021 vs 2023	0.105	<.0001	0.126	0.032
MRIP	2021 vs 2024	0.126	<.0001	0.174	<.0001
MRIP	2022 vs 2023	0.186	<.0001	0.188	<.0001
MRIP	2022 vs 2024	0.161	<.0001	0.168	<.0001
MRIP	2023 vs 2024	0.199	<.0001	0.201	<.0001
TIP	2020 vs 2021	0.115	0.002	0.095	0.025
TIP	2020 vs 2022	0.073	0.074	0.081	0.050
TIP	2020 vs 2023	0.148	<.0001	0.120	0.001
TIP	2020 vs 2024	0.116	0.001	0.120	0.002
TIP	2021 vs 2022	0.075	0.111	0.063	0.281
TIP	2021 vs 2023	0.105	0.007	0.109	0.006
TIP	2021 vs 2024	0.058	0.452	0.084	0.097
TIP	2022 vs 2023	0.097	0.006	0.072	0.105
TIP	2022 vs 2024	0.050	0.504	0.052	0.541
TIP	2023 vs 2024	0.047	0.059	0.056	0.433

E.4.2 Commercial Results

Mutton Snapper harvested in the commercial fishery ranged from 11 to 37 inches in maximum total length. The most commonly caught fish measured between 18 and 27 inches. In the most recent years (2020 to 2024), the range of sizes landed narrowed and the annual catch compositions became more consistent with one another, suggesting the fishery stabilized following the 2018 regulatory change (**Figure E.4.2.1**).

Comparing the commercial and recreational mean length trends reveals two noteworthy differences. First, the average length of commercially caught Mutton Snapper was more consistent from year to year over the 2020 to 2024 period. Second, the uncertainty around those annual averages was smaller for the commercial fleet than for the recreational fleet. Together, these differences indicate that the commercial data provide a more stable and precise characterization of the typical size of fish being harvested, which has direct implications for the reliability of any weight-to-number conversion factor derived from those data.

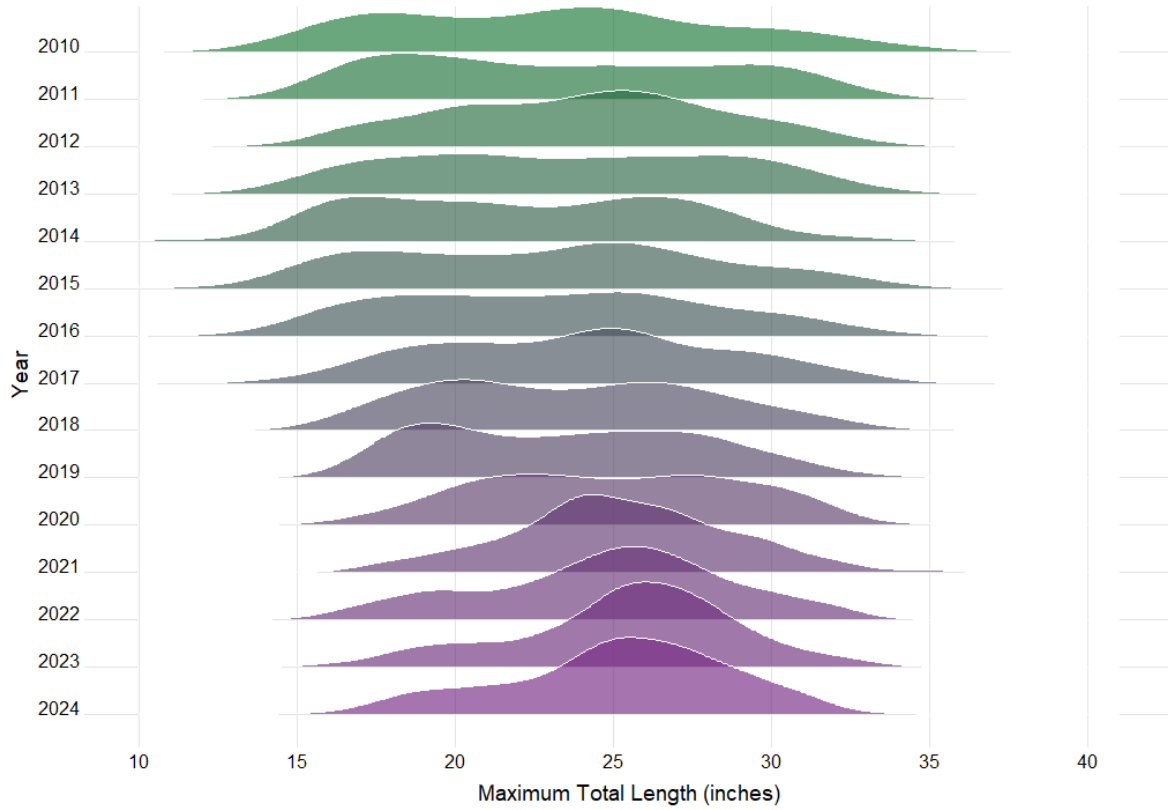


Figure E.4.2.1. Observed maximum total length distribution of commercially landed Mutton Snapper in the South Atlantic region collected through the Trip Interview Program, 2010 to 2024.

Following the 2018 increase in the minimum size limit to 18 inches total length, the average size of commercially harvested Mutton Snapper increased from 24 inches to 25 inches. From 2020 to 2024, the annual average length of commercially caught fish ranged from approximately 24.8 to 25.4 inches (**Figure E.4.2.2**).

To further evaluate the consistency of the commercial catch composition over time, annual length distributions were compared across years using the same statistical approach applied to the recreational data. As observed in the recreational fleet, the 2019 catch composition differed substantially from those of subsequent years, consistent with the fishery still adjusting to the new size limit during that transition period. From 2020 to 2024, the annual catch compositions were more similar to one another, though approximately half of the year-to-year comparisons still showed detectable statistical differences (**Table E.4.1.1**). Despite this, the degree of variation observed was notably smaller than that found in the recreational fishery, further supporting the use of the commercial fleet as the more reliable basis for developing a weight-to-number conversion factor.

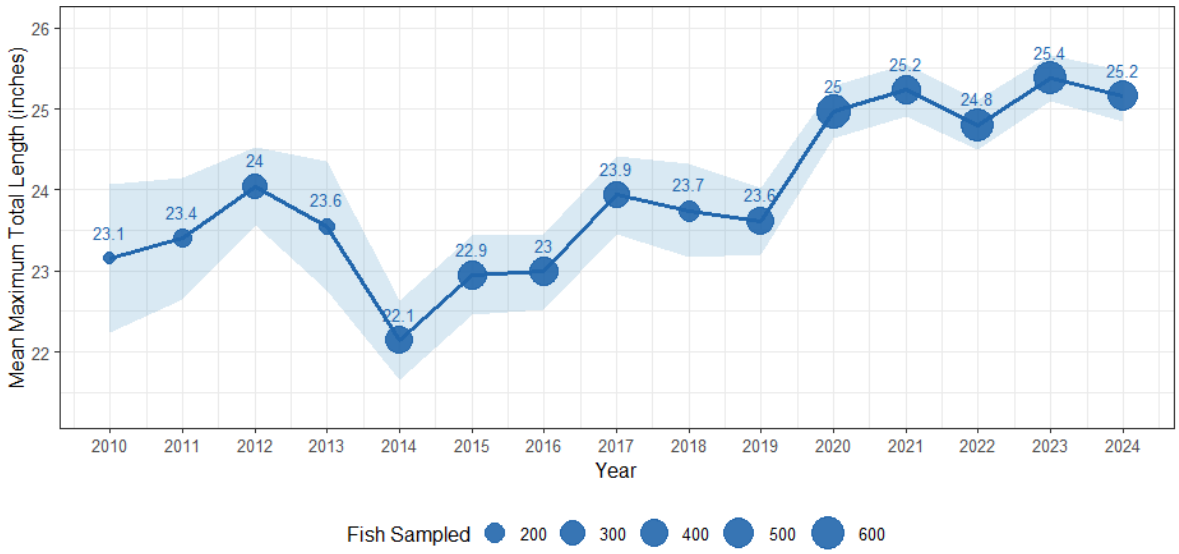


Figure E.4.2.2. Mean maximum total length of commercially landed Mutton Snapper in the South Atlantic region, 2010 to 2024. Data were collected through the Trip Interview Program. The shaded area represents the 95% confidence interval for the mean and size of points are scaled to the estimated landings. Values above the points are the means.

E.4.3 Weight Distribution from 2020 to 2024

Since individual weight is the desired estimate, pairwise Kolmogorov-Smirnov (KS) comparisons of estimated fish weight distributions across all year combinations from 2020 to 2024 and found that the commercial fishery exhibited substantially greater year-to-year stability than the recreational fishery both in shifts the mean total weight of individual fish (**Figure E.4.3.1**) and weight distributions (**Table E.4.1.1**). The mean weight of commercially landed Mutton Snapper ranged from 3.79 to 3.89 kilograms (8.36 to 8.57 lb) and the mean weight of recreationally landed Mutton Snapper ranged from 1.73 to 2.63 kilograms (3.81 to 5.80 lb). For 2020–2024, weight distribution data from the commercial fleet had a mean KS D-statistic of 0.085 (max = 0.120) compared to 0.202 (max = 0.315) for the weight distribution from the recreational fleet, representing a greater than 2-fold difference in average distributional shift. These results support the use of commercial mean weight as the more stable anchor for annual quota conversion from lb to numbers of fish.

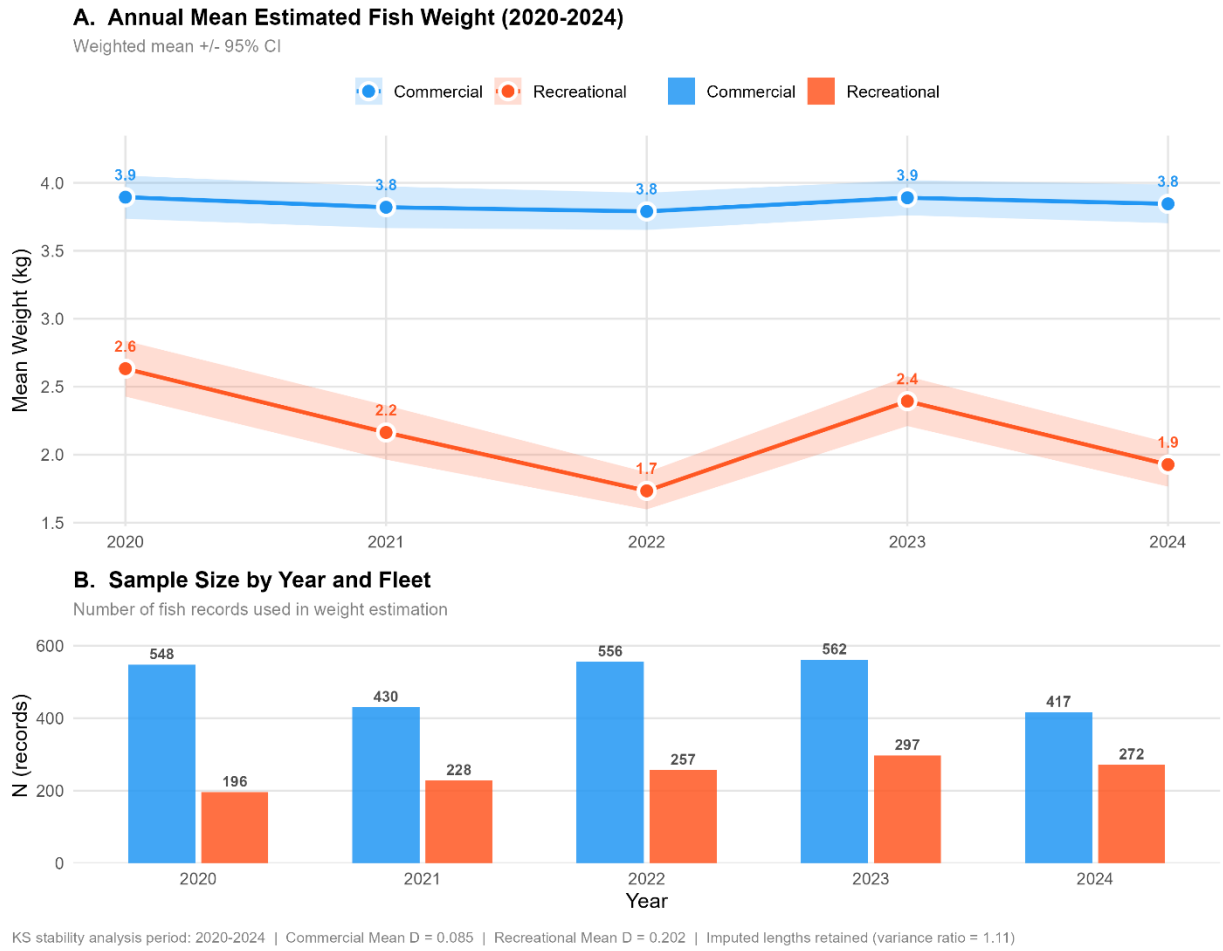


Figure E.4.3.1. A. Annual mean weight of commercially (blue) and recreationally landed Mutton Snapper from 2020 to 2024 based on Trip Interview Program Sampling and Marine Recreational Information Program sampling. B. Yearly sample sizes are provided for each program. The recreational samples include imputed values.

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APPENDIX F. OTHER APPLICABLE LAW

The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) (16 U.S.C. 1801 et seq.) provides the authority for management of stocks included in fishery management plans (FMP) in federal waters of the exclusive economic zone. However, management decision-making is also affected by a number of other federal statutes designed to protect the biological and human components of U.S. fisheries, as well as the ecosystems that support those fisheries. Major laws affecting federal fishery management decision-making include the Endangered Species Act (Section 3.3.3) and Executive Order (E.O.) 12866 (Regulatory Planning and Review, Chapter 5). Other applicable laws are summarized below.

1.1 Administrative Procedure Act (APA)

All federal rulemaking is governed under the provisions of the APA (5 U.S.C. Subchapter II), which establishes a "notice and comment" procedure to enable public participation in the rulemaking process. Among other things under the APA, the National Marine Fisheries Service (NMFS) is required to publish notification of proposed rules in the *Federal Register* and to solicit, consider and respond to public comment on those rules before they are finalized. The APA also establishes a 30-day wait period from the time a final rule is published until it takes effect, with some exceptions. Amendment 55 to the FMP for the Reef Fish Resources of the Gulf (RF Amendment 55) and Amendment 44 to the FMP for the Snapper Grouper Resources of the South Atlantic (SG Amendment 44) complies with the provisions of the APA through the Gulf and South Atlantic Council's (together Councils) extensive use of public meetings, requests for comments and consideration of comments. The proposed rule associated with this plan amendment will have a request for public comments, which complies with the APA, and upon publication of the final rule, unless the rule falls within an APA exception, there will be a 30-day waiting period before the regulations are effective.

1.2 Information Quality Act (IQA)

The IQA (Public Law 106-443) effective October 1, 2002, requires the government to set standards for the quality of scientific information and statistics used and disseminated by federal agencies. Information includes any communication or representation of knowledge such as facts or data, in any medium or form, including textual, numerical, cartographic, narrative, or audiovisual forms (includes web dissemination, but not hyperlinks to information that others disseminate; does not include clearly stated opinions).

Specifically, the Act directs the Office of Management and Budget (OMB) to issue government wide guidelines that "provide policy and procedural guidance to federal agencies for ensuring and maximizing the quality, objectivity, utility, and integrity of information disseminated by federal agencies." Such guidelines have been issued, directing all federal agencies to create and disseminate agency-specific standards to: (1) ensure information quality and develop a pre-dissemination review process; (2) establish administrative mechanisms allowing affected persons to seek and obtain correction of information; and (3) report periodically to the OMB on the number and nature of complaints received.

Scientific information and data are key components of FMPs, amendments, and regulations, consistent with National Standard 2 of the Magnuson-Stevens Act, which requires the use of best scientific information available. They should also properly reference all supporting materials and data and be reviewed by technically competent individuals. With respect to original data generated for FMPs and amendments, it is important to ensure that the data are collected according to documented procedures or in a manner that reflects standard practices accepted by the relevant scientific and technical communities. Data will also undergo quality control prior to being used by the agency and a pre-dissemination review. RF Amendment 55 and SG Amendment 44 are based on BSIA, and in consistent with the directives of the IQA.

1.3 Coastal Zone Management Act (CZMA)

Section 307(c)(1) of the federal CZMA of 1972 requires that all federal activities that directly affect the coastal zone be consistent with approved state coastal zone management programs to the maximum extent practicable. While it is the goal of the Council to have management measures that complement those of the states, federal and state administrative procedures vary, and regulatory changes are unlikely to be fully instituted at the same time. The Councils believe the actions in this plan amendment are consistent to the maximum extent practicable with the Coastal Zone Management Plans of Alabama, Florida, Louisiana, Mississippi, Texas, Georgia, South Carolina, and North Carolina. Pursuant to Section 307 of the CZMA, this determination will be submitted to the responsible state agencies who administer the approved Coastal Zone Management Programs in the States of Alabama, Florida, Louisiana, Mississippi, Texas, Georgia, South Carolina, and North Carolina.

1.4 National Historic Preservation Act

The National Historic Preservation Act (NHPA) of 1966, (Public Law 89-665; 16 U.S.C. 470 *et seq.*) is intended to preserve historical and archaeological sites in the United States of America. Section 106 of the NHPA requires federal agencies to evaluate the impact of all federally funded or permitted projects for sites on listed on, or eligible for listing on, the National Register of Historic Places and aims to minimize damage to such places.

Historical research indicates that over 2,000 ships have sunk on the Federal Outer Continental Shelf between 1625 and 1951; thousands more have sunk closer to shore in state waters during the same period. Only a handful of these have been scientifically excavated by archaeologists for the benefit of generations to come. Further information can be found at: http://www.boem.gov/Environmental-Stewardship/Archaeology/Shipwrecks.aspx

The proposed action does not adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places nor is it expected to cause loss or destruction of significant scientific, cultural, or historical resources. In the Gulf of America (Gulf), the *U.S.S. Hatteras*, located in federal waters off Texas, and the USS Monitor in federal waters off North Carolina are listed in the National Register of Historic Places. Fishing activity already occurs in the vicinity of these sites, but the proposed action would have no additional adverse impacts on listed historic resources, nor would they alter any regulations intended to protect them.

1.5 Executive Order 12612: Federalism

E.O. 12612 requires agencies to be guided by the fundamental federalism principles when formulating and implementing policies that have federalism implications. The purpose of the Order is to guarantee the division of governmental responsibilities between the federal government and the states, as intended by the framers of the Constitution. No federalism issues have been identified relative to the actions proposed in this document and associated regulations. Therefore, preparation of a Federalism assessment under E.O. 12612 is not necessary.

1.6 Executive Order 12962: Recreational Fisheries

E.O. 12962 requires federal agencies, in cooperation with states and tribes, to improve the quantity, function, sustainable productivity, and distribution of U.S. aquatic resources for increased recreational fishing opportunities through a variety of methods. Additionally, the E.O. establishes a seven-member National Recreational Fisheries Coordination Council responsible for, among other things, ensuring that social and economic values of healthy aquatic systems that support recreational fisheries are considered by federal agencies in the course of their actions, sharing the latest resource information and management technologies, and reducing duplicative and cost-inefficient programs among federal agencies involved in conserving or managing recreational fisheries. The National Recreational Fisheries Coordination Council also is responsible for developing, in cooperation with federal agencies, states and tribes, a Recreational Fishery Resource Conservation Plan to include a five-year agenda. Finally, the Order requires NMFS and the U.S. Fish and Wildlife Service to develop a joint agency policy for administering the ESA.

The alternatives considered in RF Amendment 55 and SG Amendment 44 are consistent with the directives of E.O. 12962.

1.7 Executive Order 13089: Coral Reef Protection

The E.O. on Coral Reef Protection requires federal agencies whose actions may affect U.S. coral reef ecosystems to identify those actions, utilize their programs and authorities to protect and enhance the conditions of such ecosystems, and, to the extent permitted by law, ensure actions that they authorize, fund, or carry out do not degrade the condition of that ecosystem. By definition, a U.S. coral reef ecosystem means those species, habitats, and other national resources associated with coral reefs in all maritime areas and zones subject to the jurisdiction or control of the United States (e.g., federal, state, territorial, or commonwealth waters).

Regulations are already in place to limit or reduce habitat impacts within the Florida Keys National Marine Sanctuary and the Flower Garden Banks National Marine Sanctuary. Additionally, NMFS approved and implemented Generic Amendment 3 for Essential Fish Habitat (GMFMC 2005) and Coral Amendment 9 (GMFMC 2018), which established additional habitat areas of particular concern (HAPCs) and gear restrictions to protect corals throughout the Gulf. Appendix C summarizes the actions taken by in the South Atlantic to protect corals.

There are no implications to coral reefs by the actions proposed in RF Amendment 55 and SG Amendment 44.

1.8 Executive Order 13158: Marine Protected Areas (MPAs)

E.O. 13158 was signed on May 26, 2000, to strengthen the protection of U.S. ocean and coastal resources through the use of MPAs. The E.O. defined MPAs as "any area of the marine environment that has been reserved by federal, state, territorial, tribal, or local laws or regulations to provide lasting protection for part or all of the natural and cultural resources therein." It directs federal agencies to work closely with state, local and non-governmental partners to create a comprehensive network of MPAs "representing diverse U.S. marine ecosystems, and the Nation's natural and cultural resources." There are several marine protected areas, HAPCs, and gear-restricted areas in the eastern and northwestern Gulf, and the South Atlantic. The existing areas are entirely within federal waters of the Gulf and the South Atlantic. They do not affect any areas reserved by federal, state, territorial, tribal or local jurisdictions

The alternatives considered in RF Amendment 55 and SG Amendment 44 are consistent with the directives of E.O. 13158.

1.9 Small Business Act (SBA)

Enacted in 1953, the SBA requires that agencies assist and protect small-business interests to the extent possible to preserve free competitive enterprise. The objectives of the SBA are to foster business ownership by individuals who are both socially and economically disadvantaged; and to promote the competitive viability of such firms by providing business development assistance including, but not limited to, management and technical assistance, access to capital and other forms of financial assistance, business training, and counseling, and access to sole source and limited competition federal contract opportunities, to help firms achieve competitive viability. Because most businesses associated with fishing are considered small businesses, NMFS, in implementing regulations, must assess how those regulations will affect small businesses. RF Amendment 55 and SG Amendment 44 contain an assessment of how the regulations being implemented will affect small businesses.

1.10 Public Law 99-659: Vessel Safety

Public Law 99-659 amended the Magnuson-Stevens Act to require that an FMP amendment must consider, and may provide for, temporary adjustments (after consultation with the U.S. Coast Guard and persons utilizing the fishery) regarding access to a fishery for vessels that would be otherwise prevented from participating in the fishery because of safety concerns related to weather or to other ocean conditions. No vessel would be forced to participate in Gulf and South Atlantic fisheries under adverse weather or ocean conditions as a result of management regulations proposed in this amendment. No concerns have been raised by Gulf or South Atlantic fishermen or by the U.S. Coast Guard that the proposed management measures directly or indirectly pose a hazard to crew or vessel safety under adverse weather or ocean conditions.

APPENDIX G. CONSIDERED BUT REJECTED

The following management alternatives were considered by the Gulf Fishery Management Council (Gulf Council) and South Atlantic Fishery Management Council (South Atlantic Council; collectively, "the Councils") and were ultimately not included for further evaluation for the reasons stated.

Action 3: Modification of Southeastern U.S. Mutton Snapper Sector Allocations in the South Atlantic

Alternative 2. Allocate 17.02% of the revised total annual catch limit for mutton snapper to the commercial sector and 82.98% of the revised total annual catch limit for mutton snapper to the recreational sector.

Alternative 5. Allocate 9.29% of the revised total annual catch limit for mutton snapper to the commercial sector in year one, 9.69% in year two, and 9.98% in year three and thereafter. Allocate 90.71% of the revised total annual catch limit for mutton snapper to the recreational sector in year one, 90.31% in year two, and 90.02% in year three and thereafter.

Alternative 6. Allocate 9.85% of the revised total annual catch limit for mutton snapper to the commercial sector in year one, 10.24% in year two, and 10.53% in year three and thereafter. Allocate 90.15% of the revised total annual catch limit for mutton snapper to the recreational sector in year one, 89.76% in year two, and 89.47% in year three and thereafter.

Justification for removal: The Councils evaluated these allocation alternatives for dividing the South Atlantic Council's jurisdictional apportionment of the southeastern U.S. mutton snapper stock acceptable biological catch (ABC). The Councils subsequently determined these alternatives to be inconsistent with the South Atlantic Council's sector allocation goals and objectives. Alternative 2 in Action 3 was functionally similar to Alternative 1 and was removed. Alternative 5 and Alternative 6 were developed for a scenario where the catch limits were expected to change substantially in magnitude from the status quo. Further, the annually changing nature of the sector allocations as proposed would create uncertainty for stakeholders and increased administrative burden for quota monitoring. As such, these alternatives were also removed from further consideration.

Action 4: Modification of Southeastern U.S. Yellowtail Snapper Sector Allocations in the South Atlantic

Alternative 2. Allocate 52.56% of the revised total annual catch limit for yellowtail snapper to the commercial sector and 47.44% of the revised total annual catch limit for yellowtail snapper to the recreational sector.

Alternative 5. Allocate 55.28% of the revised total annual catch limit for yellowtail snapper to the commercial sector in year one, 55.30% in year two, and 55.29% in year three and thereafter.

Allocate 44.72% of the revised total annual catch limit for yellowtail snapper to the recreational sector in year one, 44.70% in year two, and 44.71% in year three and thereafter.

Alternative 6. Allocate 55.44% of the revised total annual catch limit for yellowtail snapper to the commercial sector in year one, 55.45% in year two, and 55.45% in year three and thereafter. Allocate 44.56% of the revised total annual catch limit for yellowtail snapper to the recreational sector in year one, 44.55% in year two, and 44.55% in year three and thereafter.

Justification for removal: The Councils evaluated these allocation alternatives for dividing the South Atlantic Council's jurisdictional apportionment of the southeastern U.S. yellowtail snapper stock ABC. The Councils subsequently determined these alternatives to be inconsistent with the South Atlantic Council's sector allocation goals and objectives. Alternative 2 in Action 4 was functionally similar to Alternative 1 and was removed. Alternative 5 and Alternative 6 were developed for a scenario where the catch limits were expected to change substantially in magnitude from the status quo. Further, the annually changing nature of the sector allocations as proposed would create uncertainty for stakeholders and increased administrative burden for quota monitoring. As such, these alternatives were also removed from further consideration.

APPENDIX H. BYCATCH PRACTICABILITY ANALYSES (BPA)

Background

National Standard 9 of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) requires that conservation and management measures, to the extent practicable, minimize bycatch, and to the extent bycatch cannot be avoided, minimize the mortality of such bycatch. Bycatch is defined as fish harvested in a fishery, but not sold or retained for personal use. This definition includes both economic and regulatory discards. Economic discards are generally undesirable from a market perspective because of their species, size, sex, and/or other characteristics. Regulatory discards are fish required by regulation to be discarded, but also include fish that may be retained but not sold. Bycatch and bycatch mortality can negatively affect a stock by reducing the number of fish that survive and are available to harvest.

The National Standard 9 Guidelines, at 50 CFR 600.350(d)(3), identify ten factors to consider in determining whether a management measure minimizes bycatch or bycatch mortality to the extent practicable. These are:

1. Population effects for the bycatch species.
2. Ecological effects due to changes in the bycatch of that species (effects on other species in the ecosystem).
3. Changes in the bycatch of other species of fish and the resulting population and ecosystem effects.
4. Effects on marine mammals and birds.
5. Changes in fishing, processing, disposal, and marketing costs.
6. Changes in fishing practices and behavior of fishermen.
7. Changes in research, administration, and enforcement costs and management effectiveness.
8. Changes in the economic, social, or cultural value of fishing activities and non-consumptive uses of fishery resources.
9. Changes in the distribution of benefits and costs.
10. Social effects.

In this amendment, the Gulf Council and South Atlantic Fishery Management Council (together Councils) are considering new catch levels for southeastern U.S. mutton snapper and yellowtail snapper, the jurisdictional apportionment of those catch levels between the regions, and in the South Atlantic, sector allocations and catch limits. These actions are based on the most recent stock assessments which are considered consistent with the best scientific information available. Because both species have historically remained open to fishing year-round in both jurisdictions, bycatch and discards of these species are estimated to be low. Implementation of these updated catch limits still project the fishing seasons to remain open year-round in both jurisdictions for both species (Appendix C). This BPA outlines the amount and type of bycatch and discards that are experienced in the mutton snapper and yellowtail snapper portions of the Gulf of America (Gulf) reef fish and South Atlantic snapper grouper fisheries.

Bycatch Reporting Requirements and Methodology

For the commercial sector, the vessel reporting requirement is achieved through logbooks. Fishermen with Commercial South Atlantic Unlimited Snapper Grouper or 225-lb Trip Limit Snapper Grouper Permits, who are selected by the Science and Research Director, are required to maintain and submit fishing records through the National Marine Fisheries Service (NMFS) Southeast Fisheries Science Center (SEFSC) Commercial Logbook. Discard data are collected using the Supplemental Discard Logbook that is sent to a 20% stratified random sample of the active commercial permit holders in the fishery. In addition to the number of self-reported discards per trip and gear, the SEFSC Supplemental Discard Logbook attempts to quantify the reason why discarding occurs using four codes.[36] Fishermen can specify multiple reasons for a species discarded on the same trip and gear.

1) Regulation – Not legal size: Animals that would have been sold, however local or federal size limits forbid it.
2) Regulation – Out of season: Animals that would have been sold, however the local or federal fishing season is closed.
3) Regulation – Other: Animals that would have been sold, however a local or federal regulation other than size or season, forbids it (Other than size or season, i.e., protected species, not properly permitted).
4) Market conditions: Animals that have no market value (rotten, damaged).

Additionally, all gear interactions and condition of turtles, mammals, birds, and fish including smalltooth sawfish need to be recorded.

For the recreational sector, estimates of discards from private recreational and charter fishermen are collected through the Marine Recreational Information Program's (MRIP) Fishing Effort Survey (FES). MRIP-FES replaced the Marine Recreational Fishery Statistics Survey. The Southeast Region Headboat Survey (SRHS), which includes limited headboat observer sampling, collects discard information from headboat vessels.

Mutton Snapper

Population Effects for the Bycatch Species

Amount and Type of Bycatch and Discards

Commercial Sector

Mutton snapper overlaps with several other commonly targeted and caught reef fish and snapper grouper species. While mutton snapper may not be specifically targeted, it is probable that it will be incidentally caught while targeting any of the species in Tables H.5 and H.6 due to being

[36] More information on the discard logbook is available here https://www.fisheries.noaa.gov/about/southeast-fisheries-science-center.

found in similar habitats and depth. The SEDAR 79 assessment (2024) used a 30% discard mortality rate for both the commercial and recreational sectors stock wide.

Gulf

In the Gulf region, most mutton snapper by weight is harvested with longline followed by hook-and-line gear. Table H.1 lists the species that contributed the most harvest (by weight) on trips that also harvested mutton snapper in the Gulf. This analysis was conducted by isolating all of the 2021 through 2025 commercial logbook reported trips that had at least one pound of mutton snapper harvest in the Gulf region. Landings were then summed by harvest weight for each species, and the top six were listed. There were two species (red grouper and red snapper) on those trips that had a least one pound of mutton snapper which had more harvest of other species than mutton snapper. This suggests that mutton snapper may not have been the specific target species and instead may have been incidental bycatch itself if it was an Individual Fishing Quota (IFQ) trip, as species requiring allocation to harvest tend to be prioritized higher. However, other reef fish species are harvested on these trips whether targeted or not.

Table H.1. Top six species caught on commercial trips where at least one pound of mutton snapper was caught in the Gulf during 2021 through 2025.

Species	Percent of Harvest
Red Grouper	53.1%
Red Snapper	20.9%
Gag	4.2%
Yellowedge Grouper	2.5%
Scamp	1.8%
Yellowtail Snapper	1.6%
Black Grouper	1.2%

Source: SEFSC Commercial Logbook (June 2026)

South Atlantic

In the South Atlantic region, most mutton snapper by weight is harvested with hook-and-line gear, followed by spearfishing and traps. Possession of mutton snapper when commercial longline fishing is prohibited. Table H.2 lists the species that contributed the most harvest (by weight) on trips that harvested mutton snapper in the South Atlantic. This analysis was conducted by isolating all of the 2021 through 2025 commercial logbook reported trips that had at least one pound of mutton snapper harvest in the South Atlantic region. Landings were then summed by harvest weight for each species, and the top six were listed. There were four species (vermilion snapper, yellowtail snapper, greater amberjack, and gag) on those trips that had a least one pound of mutton snapper which had more harvest of other species than mutton snapper. There is not an IFQ program in the South Atlantic. This suggests that mutton snapper may be targeted more frequently in this jurisdiction on general snapper grouper fishing trips where the species overlap.

Table H.2. Top six species caught on commercial trips where at least one pound of mutton snapper was caught in the South Atlantic during 2021 through 2025.

Species	Percent of Harvest
Vermilion Snapper	19.8%
Yellowtail Snapper	15.1%
Greater Amberjack	13.3%
Gag	7.3%
Gray Triggerfish	5.7%
Black Grouper	4.9%
Almaco Jack	4.2%

Source: SEFSC Commercial Logbook (June 2026)

Recreational Sector

For the recreational sector, during 2021 through 2025, estimates of the number of recreational discards were available from MRIP and the NMFS SRHS (Tables H.5 and H.6). The MRIP system classifies recreational catch into three categories:

- Type A - Fishes that were caught, landed whole, and available for identification and enumeration by the interviewers.
- Type B - Fishes that were caught but were either not kept or not available for identification:
    - Type B1 - Fishes that were caught and filleted, released dead, given away, or disposed of in some way other than Types A or B2.
    - Type B2 - Fishes that were caught and released alive.

From 2021 through 2025, information for charter trips came from two sources. Charter vessels for the fishery were selected to report by NMFS to maintain a fishing record for each trip, or a portion of such trips as specified, and on forms provided by the agency. Harvest and bycatch information was monitored by MRIP. Since 2000, a 10% sample of charter vessel captains were called weekly to obtain trip level information, such as date, fishing location, target species, etc. In addition, the standard dockside intercept data were collected from charter vessels and charter vessel clients were sampled through the standard random digital dialing of coastal households. Precision of charter vessel effort estimates has improved by more than 50% due to these changes (Van Voorhees et al. 2000).

Harvest from headboats was monitored by NMFS. Collection of discard data began in 2004. Daily catch records (trip records) were filled out by the headboat operators, or in some cases by NMFS-approved headboat samplers based on personal communication with the captain or crew. Headboat trips were subsampled for data on species lengths and weights. Biological samples (scales, otoliths, spines, reproductive tissues, and stomachs) were obtained as time allowed. Lengths of discarded fish were occasionally obtained but these data were not part of the headboat database.

Recent improvements have been made to the recreational survey of MRIP, formerly called Marine Recreational Fisheries Statistics Survey. Beginning in 2013, samples were drawn from a known universe of fishermen rather than randomly dialing coastal households. Other improvements have been and will be made that should result in better estimating recreational catches and the variances around those catch estimates.

Although there are little available data on recreational discards, the discard rates are thought to be similar to those for the commercial vertical line fishery and may be even lower since there is no marketability of retained fish. However, differences between recreational sector discards and commercial vertical line discards are speculative because there is great uncertainty in what influences decisions to discard mutton snapper in each sector.

In the Gulf and South Atlantic regions, most mutton snapper by weight are harvested with hook-and-line gear followed by minimal spearfishing. Tables H.3 and H.4 list the species that contributed the most harvest (by weight) on trips that harvested mutton snapper in each of these regions. This analysis was conducted by isolating all of the 2021 through 2025 NMFS SEFSC recreational data that had at least one pound of mutton snapper harvest. Then the landings were summed by harvest weight for each species, and the top seven were listed. Similar co-occurring species were caught in each jurisdiction, most likely due to the same gear type and method for harvest for the recreational sector.

Table H.3. Top six species caught on recreational trips where at least one pound of mutton snapper was caught in the Gulf during 2021 through 2025.

Species	Percent of Harvest
Gray Snapper	17.2%
Yellowtail Snapper	14.0%
Yellow Jack	8.6%
White Grunt	5.8%
Lane Snapper	4.6%
Bluestriped Grunt	2.8%

Source: SEFSC Annual Catch Limit (ACL) recreational data (May 2026)

Table H.4. Top six species caught on recreational trips where at least one pound of mutton snapper was caught in the South Atlantic during 2021 through 2025.

Species	Percent of Harvest
Gray Snapper	4.5%
Yellowtail Snapper	2.6%
White Grunt	1.8%
Blue Runner	1.4%
Leatherjacket	1.2%
Little Tunny	1.0%

Finfish Bycatch Mortality

From 2021 through 2025, the Gulf private recreational mutton snapper landings (89,587 fish) and discards (267,864 fish) were higher than for either the headboat or charter boat modes. Recreational charter landings had the second highest landings and discards of the recreational modes. From 2020 through 2024, the commercial sector for mutton snapper in the Gulf landed 74,602 lb and discarded 150 mutton snapper per year (Table H.5).

Similar to the Gulf, the 2021 through 2025 South Atlantic private recreational mutton snapper landings (155,242 fish) and discards (895,084 fish) were higher than for either the headboat or charter boat modes. Recreational charter landings had the second highest landings and discards of the recreational modes. In 2020 through 2024, the commercial sector for mutton snapper in the South Atlantic landed 66,813 lb and discarded 296 mutton snapper per year (Table H.6).

Overall, the South Atlantic had more mutton snapper recreational landings and discards than the Gulf with private recreational landings and discards being the highest across both jurisdictions. However, the Gulf had more commercial mutton landings, but less discards than the South Atlantic.

Gulf

The Gulf reef fish fishery is characterized by moderately high discards, especially of black grouper, black sea bass, gag, gray snapper, gray triggerfish, greater amberjack, hogfish, red grouper, red snapper, and tomtate (Table H.5). The majority of discards originate from handline/electric rig and trap gear, with some discards from trolling gear, and relatively low discards from other gear types. It is possible that trip-level reporting leads to the relatively high discard estimates from trolling gear; these may be sets using another gear on a trip declared as a trolling gear trip. It is difficult to compare the ratio of commercial landings to commercial discards in Table H.5 because commercial landings are reported in pounds and discards are reported in numbers of fish. However black grouper, gag, gray triggerfish, red grouper, and red snapper discards appear to be high relative to landed commercial catch.

Table H.5. Annual mean headboat, MRIP, and commercial estimates of landings and discards in the Gulf during 2021 through 2025. Headboat, MRIP (charter and private) landings are in numbers of fish (N); commercial landings are in pounds (lb). Discards represent numbers of fish that were caught and released alive. Due to commercial data availability the commercial landings were generated from 2020 through 2024 data.

Species	HEADBOAT			CHARTER			PRIVATE			COMMERCIAL	
	Landings (N)	Discards (N)	Ratio (D:L)	Landings (N)	Discards (N)	Ratio (D:L)	Landings (N)	Discards (N)	Ratio (D:L)	Landings (lb)	Discards (N)
Almaco jack	7,767	506	7%	31,364	7,234	23%	44,921	37,448	83%	33,683	48
Atlantic spadefish	1,172	16	1%	2,485	2,390	96%	130,839	105,023	80%	4,035	8
Banded rudderfish	2,756	302	11%	17,230	525	3%	4,173	1,135	27%	9,140	105
Bar jack	162	17	10%	1,073	864	81%	607	14,227	2344%	63,602	7
Black grouper	23	30	130%	1,069	2,163	202%	8,541	25,552	299%	27,364	1,647
Black sea bass	5,531	9,937	180%	13,113	25,885	197%	366,837	1,360,974	371%	53,422	10
Blackfin snapper	484	2	0%	628	0	0%	1,119	0	0%	6,687	8
Blueline tilefish	1,642	2	0%	1,758	1	0%	3,690	579	16%	86,727	641
Coney	4	0	0%	0	0	0%	0	0	0%	27	0
Cubera snapper	11	0	0%	158	0	0%	1,537	427	28%	1,546	0
Gag	1,741	12,543	720%	24,306	237,191	976%	154,267	1,656,437	1074%	535,563	9,257
Golden tilefish	319	0	0%	477	0	0%	13,690	0	0%	264,725	412
Goliath grouper	2	48	2400%	0	10,607	0%	0	63,501	0%	0	203
Gray snapper	38,522	6,616	17%	338,995	387,307	114%	2,369,137	7,796,008	329%	104,674	166
Gray triggerfish	5,019	104,853	2089%	47,941	388,769	811%	132,345	1,815,150	1372%	49,684	2,712
Graysby	1,401	53	4%	4,115	123	3%	10,058	3,338	33%	53	40
Greater amberjack	714	2,396	336%	11,755	24,625	209%	25,337	93,875	371%	220,841	1,346
Hogfish	2,602	3,624	139%	19,072	34,023	178%	101,087	117,258	116%	8,861	293
Jolthead porgy	2,317	133	6%	11,926	2,118	18%	51,999	208	0%	25,097	84
Knobbed porgy	1,118	40	4%	9,804	2,390	24%	20,476	71	0%	2,159	2
Lane snapper	58,461	15,415	26%	249,308	183,302	74%	1,031,043	1,249,027	121%	24,434	267
Lesser amberjack	30	15	50%	228	374	164%	378	845	224%	1,284	10
Margate	29	0	0%	79	74	94%	6,948	22,343	322%	0	3
Misty grouper	3	0	0%	0	0	0%	0	0	0%	1,794	0

Species	HEADBOAT			CHARTER			PRIVATE			COMMERCIAL	
	Landings (N)	Discards (N)	Ratio (D:L)	Landings (N)	Discards (N)	Ratio (D:L)	Landings (N)	Discards (N)	Ratio (D:L)	Landings (lb)	Discards (N)
Mutton snapper	1,353	125	9%	14,109	21,119	150%	89,587	267,864	299%	74,602	150
Queen snapper	2,182	3	0%	45	0	0%	224	0	0%	13,464	0
Red grouper	3,484	52,385	1504%	105,828	540,916	511%	326,766	2,698,318	826%	2,554,704	136,511
Red hind	57	2	4%	146	33	23%	3	737	24,567%	1,404	3
Red porgy	20,119	390	2%	96,562	1,021	1%	93,691	36,921	39%	121,117	43
Red snapper	116,508	99,648	86%	360,294	581,727	161%	1,665,346	4,631,272	278%	7,093,304	37,871
Rock hind	268	7	3%	1,278	24	2%	5,703	274	5%	477	2
Sailors choice	0	0	0%	23	0	0%	13,893	2,310	17%	0	0
Sand tilefish	74	0	0%	1,409	74	5%	3,688	4,398	119%	497	5
Saucereye porgy	85	2	2%	979	0	0%	3,295	0	0%	0	0
Scamp	2,442	1,546	63%	20,264	8,206	40%	49,457	84,244	170%	160,639	435
Scup	1	0	0%	0	0	0%	0	0	0%	85,266	0
Silk Snapper	2,282	1	0%	1,454	0	0%	105	0	0%	39,389	31
Snowy grouper	766	0	0%	935	115	12%	2,801	3,093	110%	79,201	40
Tomtate	108,173	38,021	35%	53,095	247,154	465%	498,014	1,301,816	261%	0	69
Vermilion snapper	390,548	33,868	9%	899,503	133,382	15%	1,353,704	500,556	37%	963,075	7,238
White grunt	485,542	53,505	11%	684,909	422,357	62%	2,287,742	2,968,160	130%	3,978	38
Whitebone porgy	4,783	212	4%	5,105	0	0%	11,860	0	0%	1,431	0
Yellowedge grouper	311	0	0%	420	4	1%	3,917	0	0%	535,563	252
Yellowfin grouper	17	0	0%	9	0	0%	0	0	0%	47	0
Yellowmouth grouper	25	0	0%	49	64	131%	205	0	0%	252	0
Yellowtail snapper	11,876	1,566	13%	234,623	127,409	54%	682,014	1,235,500	181%	226,690	579

Sources: MRIP data from SEFSC Recreational ACL Dataset (May 2026); Headboat data from SEFSC Headboat Logbook CRNF files (expanded; May 2026); Commercial landings data from SEFSC Commercial ACL Dataset (September 2025) with discard estimates from expanded SEFSC Commercial Discard Logbook (August 2026).

South Atlantic

The South Atlantic snapper grouper fishery is characterized by moderately high discards, especially of black grouper, black sea bass, cubera snapper, gray snapper, mutton snapper, red

grouper, and red snapper (Table H.6). The majority of discards originate from handline/electric rig and trap gear, with some discards from trolling gear, and relatively low discards from other gear types. It's possible that trip-level reporting leads to the relatively high discard estimates from trolling gear; these may be sets using another gear on a trip declared as a trolling gear trip. It is difficult to compare the ratio of commercial landings to commercial discards in Table H.6 because commercial landings are reported in pounds and discards are reported in numbers of fish; however red snapper discards appear to be high relative to landed commercial catch.

Table H.6. Annual mean headboat, MRIP, and commercial estimates of landings and discards in the South Atlantic during 2021 through 2025. Headboat, MRIP (charter and private) landings are in numbers of fish (N); commercial landings are in pounds (lb). Discards represent numbers of fish that were caught and released alive. Due to commercial data availability the commercial landings were generated from 2020 through 2024 data.

Species	HEADBOAT			CHARTER			PRIVATE			COMMERCIAL	
	Landings (N)	Discards (N)	Ratio (D:L)	Landings (N)	Discards (N)	Ratio (D:L)	Landings (N)	Discards (N)	Ratio (D:L)	Landings (lb)	Discards (N)
Almaco jack	8,997	824	9%	15,180	4,046	27%	78,154	156,567	200%	129,048	1,905
Atlantic spadefish	184	717	390%	461	500	108%	41,240	69,866	169%	6,371	100
Banded rudderfish	9,673	565	6%	1,103	418	38%	3,440	7,934	231%	11,840	29
Bar jack	114	29	25%	468	1,333	285%	11,678	11,963	102%	4,073	5
Black grouper	90	251	279%	416	826	199%	6,263	12,403	198%	62,217	47
Black sea bass	24,600	275,460	1120%	28,682	174,368	608%	271,637	5,663,644	2085%	68,751	4,452
Blackfin snapper	2,153	69	3%	494	20	4%	1,028	2,776	270%	2,708	29
Blueline tilefish	1,265	13	1%	15,550	0	0%	22,029	285	1%	117,151	249
Coney	56	2	4%	4	0	0%	156	1,828	1172%	19	0
Cubera snapper	122	1,289	1057%	168	6,911	4114%	5,432	124,275	2288%	5,273	25
Gag	360	0	0%	2,209	0	0%	14,818	0	0%	168,807	1,274
Golden tilefish	0	1,029	0%	0	2,053	0%	0	29,187	0%	362,379	23
Goliath grouper	4	16	400%	0	0	0%	0	440	0%	0	43
Gray snapper	32,823	9,268	28%	40,106	78,345	195%	1,164,826	5,069,759	435%	74,607	585
Gray triggerfish	19,836	12,046	61%	45,512	11,890	26%	274,664	348,266	127%	217,116	1,510

Species	HEADBOAT			CHARTER			PRIVATE			COMMERCIAL	
	Landings (N)	Discards (N)	Ratio (D:L)	Landings (N)	Discards (N)	Ratio (D:L)	Landings (N)	Discards (N)	Ratio (D:L)	Landings (lb)	Discards (N)
Graysby	5,456	12,974	238%	1,455	223	15%	26,290	17,807	68%	408	10
Greater amberjack	2,054	1,870	91%	14,995	4,287	29%	33,737	36,985	110%	449,185	891
Hogfish	37	170	459%	948	35	4%	18,766	7,277	39%	18,502	11
Jolthead porgy	5,293	281	5%	2,627	258	10%	73,620	2,945	4%	4,527	3
Knobbed porgy	3,543	190	5%	475	0	0%	5,164	129	2%	7,432	0
Lane snapper	40,498	17,228	43%	25,538	17,862	70%	423,800	542,711	128%	2,333	78
Lesser amberjack	195	66	34%	405	585	144%	3,196	170	5%	8,915	18
Margate	342	33	10%	21	32	152%	5,074	3,756	74%	15	3
Misty grouper	1	2	200%	0	0	0%	0	342	0%	155	0
Mutton snapper	7,119	15,194	213%	6,181	23,712	384%	155,242	895,084	577%	66,813	296
Queen snapper	665	1	0%	0	0	0%	853	0	0%	1,100	5
Red grouper	1,249	10,764	862%	506	2,961	585%	16,047	117,106	730%	28,327	763
Red hind	64	25	39%	40	0	0%	1,979	110	6%	2,894	13
Red porgy	2,781	2,960	106%	2,664	3,209	120%	26,996	53,472	198%	52,402	3,697
Red snapper	1,771	41,411	2338%	4,437	105,021	2367%	204,062	2,091,890	1025%	125,815	9,976
Rock hind	507	151	30%	214	0	0%	1,215	4,380	360%	4,086	18
Sailors choice	724	121	17%	403	206	51%	56,319	15,999	28%	0	0
Sand tilefish	847	677	80%	1,498	203	14%	16,776	40,244	240%	1,344	13
Saucereye porgy	10	1	10%	0	0	0%	0	0	0%	8	0
Scamp	657	662	101%	809	861	106%	8,347	12,032	144%	50,450	643
Scup	15,276	185	1%	1,519	1,125	74%	3,408	33,063	970%	141	30
Silk Snapper	1,377	35	3%	1,394	38	3%	6,032	132	2%	42,224	86
Snowy grouper	243	3	1%	531	296	56%	3,610	1,320	37%	122,156	161
Tomtate	38,930	39,646	102%	18,005	61,964	344%	311,673	1,366,474	438%	369	267

Species	HEADBOAT			CHARTER			PRIVATE			COMMERCIAL	
	Landings (N)	Discards (N)	Ratio (D:L)	Landings (N)	Discards (N)	Ratio (D:L)	Landings (N)	Discards (N)	Ratio (D:L)	Landings (lb)	Discards (N)
Vermilion snapper	106,409	61,959	58%	110,796	53,878	49%	524,449	917,799	175%	683,315	14,932
White grunt	113,329	54,807	48%	10,968	4,675	43%	315,230	340,089	108%	8,727	27
Whitebone porgy	3,098	69	2%	2,628	1,016	39%	48,881	25,338	52%	181	0
Yellowedge grouper	33	0	0%	17	0	0%	532	0	0%	20,208	234
Yellowfin grouper	1	1	100%	0	0	0%	0	0	0%	841	0
Yellowmouth grouper	6	5	83%	0	0	0%	0	0	0%	6,895	0
Yellowtail snapper	89,986	61,831	69%	16,700	11,976	72%	457,995	684,653	149%	1,218,594	3,800

Sources: MRIP data from SEFSC Recreational ACL Dataset (May 2026); Headboat data from SEFSC Headboat Logbook CRNF files (expanded; May 2026); Commercial landings data from SEFSC Commercial ACL Dataset (September 2025) with discard estimates from expanded SEFSC Commercial Discard Logbook (August 2026).

Yellowtail Snapper

Population Effects for the Bycatch Species

Amount and Type of Bycatch and Discards

Commercial Sector

Yellowtail snapper overlaps with several other commonly targeted and caught reef fish and snapper grouper species. However, the most common commercial fishing practice for yellowtail snapper utilizes a chum slick to draw the fish to the surface where they are caught by hook-and-line. This practice specifically targets yellowtail snapper and very little bycatch is caught on these trips. However, it is probable that yellowtail snapper will be incidentally caught while targeting any of the species in Tables H.5 and H.6.

Gulf

In the Gulf region, most yellowtail snapper by weight are harvested with hook-and-line gear followed by minimal spearfishing. Table H.7 lists the species that contributed the most harvest (by weight) on trips that harvested yellowtail snapper in the Gulf. This analysis was conducted by isolating all of the 2021 through 2025 commercial logbook reported trips that had at least one pound of yellowtail snapper harvest in the Gulf region. Then the landings were summed by harvest weight for each species, and the top six were listed in Table H.7. On the isolated Gulf trips that caught yellowtail snapper there were two species (red grouper and red snapper) which had more harvest (in lb) than yellowtail snapper. Similar to mutton snapper, this may suggest

that yellowtail snapper may not have been the specific target species and instead may have been incidental bycatch itself if it was an IFQ trip as the species where quota is needed to harvest tend to be higher prioritized. However, other reef fish species are harvested on these trips whether targeted or not.

Table H.7. Top six species caught on commercial trips where at least one pound of yellowtail snapper was caught in the Gulf during 2021 through 2025.

Species	Percent of Harvest
Red Grouper	36.1%
Red Snapper	22.3%
Vermilion Snapper	3.3%
Gag	2.8%
Mutton Snapper	2.6%
Gray Snapper	2.3%
Yellowedge Grouper	0.9%

Source: SEFSC Commercial Logbook (June 2026)

South Atlantic

In the South Atlantic region, most yellowtail snapper by weight are harvested with hook-and-line gear, followed by spearfishing and traps. Table H.8 lists the species that contributed the most harvest (by weight) on trips that harvested yellowtail snapper in the South Atlantic. This analysis was conducted by isolating all of the 2021 through 2025 commercial logbook reported trips that had at least one pound of yellowtail snapper harvest in the South Atlantic region. Then the landings were summed by harvest weight for each species, and the top six were listed in Table H.8. For the isolated South Atlantic yellowtail snapper trips there were two species (king mackerel and Spanish mackerel) which had more harvest than yellowtail snapper. There is not an IFQ program in the South Atlantic. This suggests that yellowtail snapper may be targeted more frequently in this jurisdiction on general snapper grouper fishing trips where the species overlap and different fishing methods for harvest are used to maximize catch.

Table H.8. Top six species caught on commercial trips where at least one pound of yellowtail snapper was caught in the South Atlantic during 2021 through 2025.

Species	Percent of Harvest
King Mackerel	24.9%
Spanish Mackerel	11.3%
Vermilion Snapper	6.6%
Greater Amberjack	5.8%
Golden Tilefish	4.8%
Little Tunny	2.5%
Gag Grouper	2.0%

Source: SEFSC Commercial Logbook (June 2026)

Recreational Sector
Additional discard information for both the Gulf and the South Atlantic can be found in the mutton snapper Amount and Type of Bycatch Section of the BPA.

In the Gulf and South Atlantic regions, most yellowtail snapper by weight are harvested with hook-and-line gear followed by minimal spearfishing. Tables H.9 and H.10 list the species that contributed the most harvest (by weight) on trips that harvested yellowtail snapper in each of these regions. This analysis was conducted by isolating all of the 2021 through 2025 NMFS SEFSC recreational data that had at least one pound of yellowtail snapper harvest. Then the landings were summed by harvest weight for each species, and the top seven were listed. Similar co-occurring species were caught in each jurisdiction, most likely due to the same gear type and method for harvest for the recreational sector.

Table H.9. Top six species caught on recreational trips where at least one pound of yellowtail snapper was caught in the Gulf during 2021 through 2025.

Species	Percent of Harvest
Gray Snapper	16.8%
Yellow Jack	12.4%
White Grunt	8.7%
Lane Snapper	8.3%
Mutton Snapper	4.1%
Vermilion Snapper	3.7%

Table H.10. Top six species caught on recreational trips where at least one pound of yellowtail snapper was caught in the South Atlantic during 2021 through 2025

Species	Percent of Harvest
White Grunt	8.0%
Gray Snapper	4.7%
Blue Runner	2.9%
Vermilion Snapper	2.2%
Mutton Snapper	2.2%
Bermuda Chub	1.8%

Finfish Bycatch Mortality

From 2021 through 2025, the Gulf private recreational vessel yellowtail snapper landings (682,014 fish) and discards (1,235,500 fish) were higher than for either the headboat or charter boat modes. Recreational charter landings had the second highest landings and discards of the recreational modes. From 2020 through 2024, the commercial sector for yellowtail snapper in the Gulf landed 226,690 lb and discarded 579 yellowtail snapper per year (Table H.5).

From 2021 through 2025, the South Atlantic private recreational vessel yellowtail snapper landings (457,995 fish) and discards (684,653 fish) were higher than for either the headboat or

charter boat modes. Unlike the Gulf though, it was recreational headboat landings that had the second highest landings and discards of the recreational modes. From 2020 through 2024, the commercial sector for yellowtail snapper in the South Atlantic landed 1,218,594 lb and discarded 3,800 yellowtail snapper per year (Table H.6).

Overall, the Gulf had more yellowtail snapper recreational landings and discards than the South Atlantic, but still had yellowtail snapper private recreational landings and discards being the highest across both jurisdictions. Additionally, the commercial sector in the South Atlantic had more yellowtail landings and discards than the Gulf.

Other Bycatch

U.S. fisheries are classified under the Marine Mammal Protection Act (MMPA) according to the level of interactions that result in incidental mortality or serious injury of marine mammals. In the most recent List of Fisheries (91 FR 24176; May 5, 2026), the bottom longline/hook-and-line components of the Gulf commercial reef fish fishery and the South Atlantic Snapper Grouper Fisheries are listed as Category III fisheries under the MMPA. Category III contains fisheries where annual mortality and serious injury of a marine mammal stock resulting from any fishery is less than or equal to 1 percent of the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock, while allowing that stock to reach or maintain its optimum sustainable population. The risk of serious injury or mortality to marine mammals resulting from the recreational sector of the reef fish fishery, which uses similar gear (i.e., handlines, rod and reel, spears, etc.), is also expected to be low, although interactions with dolphins are known to occur.

Species listed under the Endangered Species Act (ESA) can interact with the gear types used to harvest mutton snapper and yellowtail snapper in the Gulf and South Atlantic. More details can be found in Section 3.2.3 of this document.

Three primary orders of seabirds are represented in the Gulf and South Atlantic; Procellariiformes (petrels, albatrosses, and shearwaters), Pelecaniformes (pelicans, gannets and boobies, cormorants, tropic birds, and frigate birds), and Charadriiformes (phalaropes, gulls, terns, noddies, and skimmers) (Clapp et al., 1982; Harrison, 1983). Several species, including piping plover and roseate tern are listed by the U.S. Fish and Wildlife Service as either endangered or threatened. Note the brown pelican and bald eagle had been listed as endangered or threatened but have subsequently been delisted. Human disturbance of nesting colonies and mortalities from birds being caught on fishhooks and subsequently entangled in monofilament line are primary factors affecting sea birds. Oil or chemical spills, erosion, plant succession, hurricanes, storms, heavy tick infestations, and unpredictable food availability are other threats. There is no evidence that the directed mutton snapper or yellowtail snapper portion of the reef fish and snapper grouper fisheries are adversely affecting seabirds.

Both Councils have taken various actions to reduce bycatch of non-targeted species and actively promote best fishing practices (see Appendix A; https://gulfcouncil.org/fishing-regulations/angler-resources/; https://safmc.net/best-fishing-practices/)

Practicability of Management Measures in Directed Fisheries Relative to their Impacts on Bycatch and Bycatch Mortality

Population effects for the bycatch species (mutton snapper and yellowtail snapper)

Measures considered in this amendment would: 1) Revise mutton snapper and yellowtail snapper catch levels; 2) jurisdictional apportionments of those catch levels; 3) and in the South Atlantic, sector allocations and subsequent sector catch limits. See Chapter 2 for detailed text of the actions and alternatives and Chapter 4 for detailed effects analysis.

No change in bycatch of mutton snapper is expected as catch limits are increasing in both jurisdictions. Additionally, the fishing season is projected to remain open year-round just as it is currently. Bycatch of yellowtail snapper may be expected to result in loss of yield due to reduced catch limits in both jurisdictions. However, similar to mutton snapper, the fishing season for yellowtail snapper is projected to remain open year-round just as it is currently. For both species, no closures in either the commercial or the recreational sectors in both jurisdictions are expected as a result of the preferred alternatives in Actions 1-4. Therefore, bycatch is expected to remain similar to what it is currently for both species in both jurisdictions. In addition, the minimum size limits, trip limits, and bag limits for both mutton snapper and yellowtail snapper are remaining the same, which further supports similar bycatch to what is occurring currently. Both stocks are anticipated to be resilient to this amount of bycatch as they have both remained healthy and not considered overfished or undergoing overfishing across multiple stock assessments.

Ecological effects due to changes in the bycatch of mutton snapper and yellowtail snapper (effects on other species in the ecosystem)

The ecological effects of bycatch mortality are the same as fishing mortality from directed fishing efforts. If not properly managed and accounted for, either form of mortality could potentially reduce stock biomass to an unsustainable level. As mentioned in the above section, actions have been taken, and are underway to reduce bycatch and enhance data reporting for reef fish and snapper grouper species. Better bycatch and discard data would provide a better understanding of the composition and magnitude of catch and bycatch, enhance the quality of data provided for stock assessments, increase the quality of assessment output, and lead to better decisions regarding additional measures to reduce bycatch.

Relationships among species in marine ecosystems are complex and poorly understood, making the nature and magnitude of ecological effects difficult to predict. The Councils' Scientific and Statistical Committees accepted the projections from SEDAR 79 and SEDAR 96 for the purposes of developing management advice. Both mutton snapper and yellowtail snapper are opportunistic predators that feed on benthic and pelagic fishes, squid, and crustaceans (See Section 3.2). Retaining similar fishing mortality due to the fishing season being projected to remain open year-round is expected to result in similar competition for prey that goes on currently with other predators.

The proposed mutton snapper and yellowtail snapper catch limits are not expected to result in increased effort towards other species within and outside the reef fish and snapper grouper complexes as fishing is already open year-round. Both stocks are considered healthy with abundances increasing. Therefore, a reduction in discards of these species is not expected. It is possible as the stocks continue to grow, they could assert more predation pressure on other co-occurring forage and competitor species, which may also result in decreased populations of those species.

Although the changes in mutton snapper and yellowtail snapper catch limits and the overall health and growth of the stocks are likely to have some impact on other species in the ecosystem, the effects are difficult to quantify due to the complex nature of the ecosystem in which they live. It is unlikely though that allowing the mutton snapper and yellowtail snapper populations to increase to more historic population levels in the long term would negatively impact other species in the ecosystem.

Changes in the bycatch of other species of fish and invertebrates and the resulting population and ecosystem effects

Amendment 55/44 is not expected to affect major changes in bycatch of other fish species (see Sections 1 and 2 of this BPA). While bycatch may be higher of other species for longline gear, bycatch of other species is only incidental in the hook-and-line fishery for mutton snapper and yellowtail snapper. Additionally, bycatch is not expected to change because the fishing season for both species is currently and projected to remain open year-round. Furthermore, improved data monitoring and reporting measures have been implemented and are proposed to improve in the near future, which could be expected to reduce bycatch and discards.

Population and ecosystem effects resulting from changes in the bycatch of other species of fish and invertebrates are difficult to predict. Fishermen may continue to catch other species while also catching mutton snapper or yellowtail snapper. In the Gulf, red grouper, red snapper, yellowedge grouper, scamp, yellowtail snapper, and black grouper are commonly caught while also fishing for mutton snapper. Red grouper, red snapper, vermilion snapper, gag, mutton snapper, gray snapper, and yellowedge grouper are commonly caught while also fishing for yellowtail snapper. Of these species, gag is overfished. In addition, red snapper and gag are operating under rebuilding plans (NMFS June 30, 2026, Summary of Stock Status for the Fish Stock Sustainability Index (FSSI) and Non-FSSI Stocks). In the South Atlantic, vermilion snapper, yellowtail snapper, greater amberjack, gag, gray triggerfish, black grouper, and almaco jack are commonly caught while also fishing for mutton snapper. King mackerel, Spanish mackerel, vermilion snapper, greater amberjack, golden tilefish, little tunny, and gag are commonly caught while also fishing for yellowtail snapper. Of these species, gag is overfished and the overfished status of gray triggerfish, almaco jack, and little tunny is unknown. In addition, gag is operating under a rebuilding plan (NMFS June 30, 2026, Summary of Stock Status for FSSI and Non-FSSI Stocks).

Regulatory discards substantially contribute to fishing mortality in all of these reef fish, snapper grouper, and coastal migratory pelagic species, especially when captured in deeper waters. However, given that the majority of the deeper water species bycatch are caught in the Gulf, it is

possible these are occurring under direct IFQ species harvest instead and it is mutton snapper that is the bycatch. Yellowtail snapper is caught mainly in shallower waters where discards have a better chance at survival. As mentioned previously, due to the fishing season continuing to remain open year-round, bycatch of species commonly caught while fishing for mutton snapper or yellowtail snapper are expected to remain the same.

Effects on marine mammals and birds

Please refer to the Other Bycatch Section.

Changes in fishing, processing, disposal, and marketing costs

No changes to processing, disposal, or marketing costs are expected from this amendment because it does not alter the type of product landed. Additionally, there are ample domestic and imported substitutes available if desired for dealers, processors, and retailers to which to shift. However, with both sectors projecting to remain open year-round for both species in both jurisdictions, no economic loss is expected. For a more complete discussion of the changes in fishing costs associated with the various management actions, see Sections 4.1.3, 4.2.3, 4.3.3, and 4.4.3 of this amendment.

Changes in fishing practices and behavior of fishermen

Despite the changes in catch limits, measures proposed in this action are expected to have neutral impacts on fishing practices for both species in both jurisdictions as fishing is projected to continue remaining open year-round. Additionally, because the permits required by mutton snapper and yellowtail snapper fishermen also allow them to harvest other reef fish and snapper grouper species, the effects of this action on commercial fishing practices are expected to be minimal. Similar results are expected for the recreational sector.

Changes in research, administration, and enforcement costs and management effectiveness

Proposed measures are not expected to negatively affect research, administration and enforcement costs and management effectiveness. The potential impacts on the administrative environment depend on the action necessary to compare landings to the catch limits and the likelihood of needing to implement a commercial or recreational closure or take additional action to prevent overfishing. However, projections show there most likely will not be a need to implement in-season closures, which continues status quo for the most recent years of fishing for both species.

Changes in the economic, social, or cultural value of fishing activities and non-consumptive uses of fishery resources

The value of fishing and non-consumptive uses of fishery resources is expected to have neutral impacts for both species in both jurisdictions as fishing is projected to continue remaining open

year-round (also see Section 3.5). Likewise, because the permits required by mutton snapper and yellowtail snapper fishermen also allow them to harvest other reef fish and snapper grouper species, the effects of this action on commercial fishing practices are expected to be minimal. Similar results are expected for the recreational sector. Overall, short-term negative effects in the economic, social, and cultural value of fishing activities and non-consumptive uses of fishery would be expected if the fisheries did close but are likely to be largely mitigated because of the multi-species nature of the reef fish and snapper grouper fisheries, which would allow fishermen to target other species when fishing for mutton snapper and yellowtail snapper was not permitted. This would be less true for the commercial sector, as it is expected to possibly have some revenue lost if a closure occurs. However, no closures for both species in both areas of jurisdiction and both commercial and recreational sectors are expected as a result of the actions in this amendment.

For a more complete discussion, see sections 3.3 and 3.4 and sections 4.1.3, 4.2.3, 4.3.3, 4.4.3, 4.1.4, 4.2.4, 4.3.4, and 4.4.4 of this document.

Changes in the distribution of benefits and costs

The distribution of benefits and costs expected from proposed actions in the environmental assessment are discussed in Sections 3.3 and 3.4. Economic and social effects of the proposed actions are addressed in sections 4.1.3, 4.2.3, 4.3.3, 4.4.3, and 4.1.4, 4.2.4, 4.3.4, and 4.4.4, respectively, of this document.

Social effects

Bycatch is considered wasteful because it reduces overall yield obtained from the fishery. Increased catch limits are proposed for mutton snapper in both jurisdictions. Therefore, only positive social effects are anticipated. Lower catch limits for yellowtail snapper in both jurisdictions would normally be expected to have negative social effects, however, no recreational or commercial season closures are projected under any actions and alternatives. Increased bycatch is not expected to occur for this reason.

Conclusions

Analysis of the ten bycatch practicability factors indicates there would likely be positive biological impacts associated with the changes in catch limits for both mutton snapper and yellowtail snapper regardless of if they are increased or reduced due to the stocks remaining not overfished or undergoing overfishing and the fishing seasons continuing to remain open year-round. Healthy stocks can typically handle larger catch limits. In the case of yellowtail snapper, the reduction in catch limits allows the stock to be harvested at sustainable levels. All alternatives are expected to maintain similar bycatch and mortality of target and co-occurring species and retain the fishing season remaining open year-round. For these reasons, it is unlikely that negative social and economic effects to both the commercial and recreational sectors for either species in either jurisdiction will occur.

Bycatch and bycatch mortality have been reduced to the extent practicable through the management measures implemented under the Reef Fish FMP and Snapper Grouper FMP over time, as described above. No additional measures to reduce bycatch and bycatch mortality were considered in this amendment because there is not a current need to achieve further reductions. Thus, the management measures currently in place minimizes bycatch or bycatch mortality to the extent practicable, consistent with other national standards and maximization of net benefits to the Nation.

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APPENDIX I. PUBLIC COMMENTS RECEIVED

Public Hearing Summary

Reef Fish Amendment 55/Snapper Grouper Amendment 44: Modifications to Mutton Snapper and Yellowtail Snapper Management Measures

Virtual Meeting

October 20, 2026

Council / Staff	**South Atlantic Council / Staff**
CJ Sweetman – Council Member	Jessica McCawley – Council Member
Ryan Rindone	Allie Iberle
Leonardo Eguia	Michael Schmidtke
Emily Muehlstein	Christina Curtis

0 Members of the public attended; 0 Members of the public spoke.

Written Comment Summary

August 18, 2026 – October 20, 2026

32 Public Hearing video views.

1 comment received.

- Fishing for these species continues to improve so we need to ensure that the Gulf retains a robust portion of quota since landings will likely increase.