

Amendment 46 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region

Options Paper



Amendment 46 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (Amendment 46) includes options for a permit for fishermen on private recreational vessels to fish for snapper grouper species and to revise private recreational reporting requirements.

4/24/2018

Purpose for Actions

Option 1

The *purpose* of Snapper Grouper Amendment 46 is to improve private recreational catch and release estimates for snapper grouper species.

Option 2

The *purpose* is to improve information on effort and catch (landed and released) of fish in the private recreational component of the recreational sector of the snapper grouper fishery.

Need for Actions

The *need* for the amendment is to improve the quantity, quality, and timeliness of data from the private recreational sector that targets snapper grouper species, while minimizing, to the extent practicable, adverse social and economic effects.

Why is the Council Considering Action?

To improve estimates of catch and effort from the recreational sector, the South Atlantic Fishery Management Council (Council) is considering a permit and/or reporting requirements for snapper grouper species. The Council and fishermen are concerned that using estimates from the Marine Recreational Information Program's (MRIP) to monitor catch of species with historically low catches, low annual catch limits (ACLs), or those that are only rarely encountered, does not accurately reflect true landings. State and wave specific estimates of catch are used to estimate the impact of management actions when the Council considers management actions with a season or spatial component. Therefore, it is important to have sufficient (typically greater than 30) intercepts per state and wave to accurately describe the impact of a management action to the fishery. MRIP can provide robust estimate of catch for species that are common, for example red drum. In 2017, it was estimated that there were 17 million trips in the South Atlantic region (from the North Carolina/Virginia border through Key West) from beach/bank, man-made structure, shore, and private vessels of which 11% either targeted or harvested red drum¹. If only one percent of the trips were intercepted, about 18,700 trips would have been sampled throughout the year in the South Atlantic region. The average number of trips sampled targeting or harvesting red drum would be 780 intercepts for state (4 states) and wave (2 months). Sampling level will vary by state and wave.

By contrast, in 2017, eight percent of trips from beach/bank, man-made structure, shore, and private vessels in federal waters targeted snapper grouper species. On these trips, fishermen can target a variety of federally-managed species in addition to snapper grouper complex species including king mackerel, dolphin, cobia, tuna, wahoo, marlin, etc. If, hypothetically, one in four trips targets or harvests species in the snapper grouper complex and one percent of the trips is intercepted, then 142 intercepts for each wave and state combined would occur for the 55 species

¹ Personal communication from the Nation Marine Fisheries Service, 4/17/2018

in the complex. These estimates far exceed what is typically observed for species in the snapper grouper complex. Since there are typically less than 30 samples of snapper grouper species per year in the MRIP survey, most snapper grouper species could be considered “rare event” species in the survey.

A permit for private recreational fishermen could be used to narrow the sampling unit from all coastal recreational fishermen to only fishermen targeting snapper grouper species. This refined sampling unit could help increase sampling effort to improve the number of intercepts per wave and state for rare event species. Additionally, reporting requirements for the private recreational fishery could increase the number of samples per wave and state. Catch estimates from self-reported data by fishermen would need to be validated before it can be used in management. It may take years to develop validated catch estimates; meanwhile, data collected through self-reported systems could be considered for use in stock assessments and analyses conducted for management.

How Does This Amendment Match the Council’s 2016-2020 Vision Blueprint for the Snapper Grouper Fishery?

The 2016-2020 Vision Blueprint for the Snapper Grouper Fishery (Vision Blueprint) was approved in December 2015 and is intended to inform management of the snapper grouper fishery through 2020. As such, the Vision Blueprint serves as a “living document” to help guide future management, builds on stakeholder input and how the South Atlantic Council envisions future management of the fishery, guides the development of new amendments that address priority objectives and strategies, and illustrates actions that could be developed through the regular amendment process. The Vision Blueprint is organized into four strategic goal areas: (1) Science, (2) Management, (3) Communication, and (4) Governance. Each goal area has a set of objectives, strategies, and actions. The actions in Amendment 46 correspond to different objectives and strategies in the Vision Blueprint.

During Vision Meetings and scoping of Amendment 43, several fishermen expressed concern with the estimates of catch from the Marine Recreational Information Program. Some fishermen requested a recreational stamp/permit for snapper grouper fishing, **Action 1**, and to improve recreational estimates by requiring recreational fishermen to report their catch, **Action 2**. Permits and reporting requirements have been developed for federal recreational fisheries to improve estimates of effort or catch in the South Atlantic region; however, they have not been fully implemented. Currently, a coastal recreational fishing license issued through states is required for private recreational anglers as part of the 2007 Magnuson-Stevens Fishery Conservation and Management Act reauthorization to improve estimates of catch and effort. Federal permits are also required for charter vessel and headboat components (for-hire) of the

recreational sector that fish in federal waters. Furthermore, electronic logbook reporting is required for all federally permitted headboats. Headboat vessels selected for the Southeast Region Headboat Survey are required to report trip level data weekly. Some state charter vessels are currently required to report catch and effort information. In South Carolina, all for-hire vessels must submit a logbook for each trip. The Council submitted the South Atlantic For-Hire Reporting Amendment to the National Marine Fisheries Service for formal review in March 2017. The amendment would require federally permitted charter vessels to submit electronic logbooks for each trip on a weekly basis. If approved and implemented, the new requirements would eventually improve recreational catch and effort estimates in the region.

Possible Actions and Alternatives

Action 1. Establish a Private Recreational Snapper Grouper Permit to Fish For, Harvest or Possess Snapper Grouper Species in the South Atlantic Region.

Alternative 1 (No Action). A federal permit is not required when recreational snapper grouper fishing from private or rental vessels in the South Atlantic exclusive economic zone.

Alternative 2. Require a federal recreational permit for any vessel participating in the private angler component in the South Atlantic exclusive economic zone to fish for, harvest, or possess:

Sub-alternative 2a. red snapper.

Sub-alternative 2b. any species in the snapper grouper fishery management unit for which recreational harvest is allowed.

Sub-alternative 2c. deep-water species (misty grouper, snowy grouper, speckled hind*, warsaw grouper*, yellowedge grouper, wreckfish, blueline tilefish, golden tilefish, blackfin snapper, queen snapper, and silk snapper).

Alternative 3. Require a federal permit for private anglers participating in the South Atlantic exclusive economic zone to fish for, harvest, or possess:

Sub-alternative 3a. red snapper.

Sub-alternative 3b. any species in the snapper grouper fishery management unit for which recreational harvest is allowed.

Sub-alternative 3c. deep-water species (misty grouper, snowy grouper, speckled hind*, warsaw grouper*, yellowedge grouper, wreckfish, blueline tilefish, golden tilefish, blackfin snapper, queen snapper, and silk snapper).

Alternative 4. Request Florida, Georgia, South Carolina, and North Carolina develop a permit, endorsement, or license for private anglers to fish for, harvest, or possess:

Sub-alternative 4a. red snapper.

Sub-alternative 4b. any species in the snapper grouper fishery management unit for which recreational harvest is allowed.

Sub-alternative 4c. deep-water species (misty grouper, snowy grouper, speckled hind*, warsaw grouper*, yellowedge grouper, wreckfish, blueline tilefish, golden tilefish, blackfin snapper, queen snapper, and silk snapper).

*ACL for speckled hind and warsaw grouper are set to 0 and no harvest is allowed.

Discussion:

A private angler recreational snapper grouper permit would not be required for fishermen fishing on headboats or charter vessels in federal waters of the South Atlantic region. Permit requirements are required headboats and charter vessels operating in federal waters.

The first basis for a federal private angler recreational permit or license in the South Atlantic region was through the 2007 Reauthorization of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), which established regional registries for recreational fishermen. The Magnuson-Stevens Act required fishermen that engage in recreational fishing in the Exclusive Economic Zone (EEZ), for anadromous species, or for Continental Shelf resources beyond the EEZ to register in the regional or national registry. The Magnuson-Stevens Act allowed for a state exemption if the information collected by the state was deemed sufficient by the Secretary of Commerce. The program was required to be started before 2011 and many states had certified programs prior to 2011. The registry was designed based on recommendations from the National Research Council to improve recreational effort estimates. These changes resulted in improvements to the survey.

Recreational anglers in other regions are required to obtain additional federal permits and endorsements. Endorsements or permits (issued to a vessel) are required in the Mid-Atlantic Region for blueline and golden tilefish, halibut in Alaska, specific areas in the Pacific Islands, and species managed by the NMFS Highly Migratory Species (HMS) Division (**Table 1**). Highly migratory species include tunas, swordfish, billfishes, and sharks in federal waters.

Table 1. Recreational permits and endorsements issued by National Marine Fisheries Service regional offices or Highly Migratory Species Division.

Region/Division	Permit	Endorsement
Greater Atlantic Regional Fisheries Office	Tilefish*	
Alaska Regional Office	Subsistence Halibut	
Pacific Islands Regional Office	Area Specific**	
Highly Migratory Species Division	HMS	Shark

*Permit was delayed allowing for development of the reporting and permitting requirements.

**Permits include: Main Hawaiian Islands non-commercial Bottomfish, Northern Mariana Islands Bottomfish, Pacific Remote Island Areas Bottomfish, Pacific Remote Islands Areas Pelagic Troll and Handline, and Special Coral Reef Ecosystem Fishing permits, and Western and Central Pacific Convention Area Endorsement.

Each state in the South Atlantic region has specific requirements for certain gears, possession of certain species, or allows for enhanced data collection. All of the examples in **Table 2** are issued to an individual. In Florida, there is an additional stamp to possess reef fish (Gulf of Mexico), snook, and spiny lobster and a tag to harvest tarpon (for potential International Game Fish Association record). The Saltwater Information Permit is a free permit added to the freshwater fishing license in Georgia. The Recreational Commercial Gear License is an additional license required to use limited amounts of commercial gear in North Carolina. In South Carolina, a separate license is required to bait for shrimp.

Table 2. State issued permit, licenses, stamps, and tags in the South Atlantic region in addition to a coastal or freshwater recreational fishing license.

State	Permit	License	Stamp	Tag
Florida			Reef Fish, Snook, Spiny Lobster	Tarpon
Georgia	Saltwater			

North Carolina	Recreational Commercial Gear		
South Carolina	Shrimp Baiting		

A list of permits, licenses, endorsements, reporting cards, validation tools, stamps, and tags is provided as examples of other tools available (**Table 3**). Most of the state-issued permits are issued to an individual although there are some state-issued vessel permits. This is likely not a full list of all requirements for recreational fishermen. The list was developed from the fees and requirements page for each state.

Currently, there is no permit to fish for or possess snapper grouper complex species in the South Atlantic region (Florida does require a reef fish stamp for Gulf Reef Fish). A permit could be used to better refine the sampling unit for fishermen that target snapper grouper species and provide targeted outreach to an audience that targets snapper grouper species. During the Vision process for the Snapper Grouper Fishery Management Plan, stakeholders suggested requiring permitting and state by state or regional quotas. The permits with reporting requirements could be used to improve the resolution of the private recreational landings data in the South Atlantic region. Establishing a permit with reporting requirements could help to improve effort and landings estimates for the private recreational sector; therefore, enabling improved state by state or regional management in the future based on the increased data collected.

The permit (**Alternatives 2 and 3**) would be used to improve estimates of fishing effort for trips that target species in the snapper grouper fishery management unit and address stakeholder requests in the 2016-2020 Vision Blueprint. Less than 10% of the fishing trips occurring in the South Atlantic region occur in federal waters based on Marine Recreational Intercept Program (MRIP) data. Trips in federal waters include trips targeting cobia, dolphin, king mackerel, Spanish mackerel, and tuna, as well as snapper grouper species. A permit, with reporting requirements, may improve estimates of snapper grouper fishing without substantially increasing sampling effort in MRIP (although additional biological samples might be needed).

Permitting for Snapper Grouper Fishermen

Pros

- + Potential to improve estimate of recreational effort in the snapper grouper fishery.
- + Potential to improve estimate of recreational catch and release data.
- + Provides a defined group of recreational anglers to contact for outreach, catch and effort surveys, and socio-economic surveys.

Cons

- Increased regulatory burden on recreational fishermen, NMFS or state agency, and enforcement.
- Potentially no additional funds to implement/operate permitting system.

Permits, stamps, licenses, endorsements, and tags are tools that could be used to aid in the development of improved effort or catch estimates. These tools can be developed for vessels and individuals as indicated above. A permit issued to a vessel (**Alternative 2**) increases the permitting burden for a vessel owner/operator. A permit issued to an individual (**Alternative 3**)

would increase the permitting burden for all fishermen. The Council is considering if a permit should be issued to vessel or individual. Below is a short list of pros and cons for vessel and individual based permitting.

Permit Type for the Snapper Grouper Fishery

Vessel

Pros

- + Single permit would cover all anglers on the vessel.
- + Vessel registration number could be used to verify offshore fishing and reporting (if required).

Cons

- Social and economic information not gathered for each fisherman.
- Increased regulatory burden on vessel owner/operator.
- There is no information on the total number of anglers fishing for snapper grouper species.
- Permit would be issued for a vessel and each offshore fishing vessel would need a permit.
- No information gathered on those that harvest shore-based federal species or from vessels without registration numbers.

Individual

Pros

- + Information would be collected on each angler to improve socio-economic data.
- + Single permit for each individual and anglers would not be duplicated, if federally permitted.

Cons

- Difficult to determine if anglers are fishing offshore without reporting requirements or follow-up surveys.
- Increased regulatory burden on recreational fishermen.
- Increased administrative burden on NMFS since this will result in highest number of permits.

Table 3. Permit, licenses, endorsements, reporting cards, validation tools, stamps, and tags issued by states outside of the South Atlantic region in addition to a coastal or freshwater recreational fishing license.

State	Permit	License	Endorsement	Reporting Cards	Validation Tool	Stamp	Tag
Alabama		Cast Netting, Flounder Gigging, Crab Trap, Spearfishing		Snapper Check, Reef Fish			
Alaska						King Salmon	
California				Several Reporting Cards	Ocean Enhancement, Second Rod		
Connecticut	Lobster, Gillnet						
Delaware							
Hawaii			Bottom Fishing Vessel Registration				
Louisiana	Offshore Landings Permit	Recreational Fishing Gear					
Maine							
Maryland		Crabbing					
Massachusetts	Lobster						
Mississippi		Shrimping, Crabbing, Oyster		Tails N' Scales			
New Hampshire		Clam, Oyster					
New Jersey							
New York							
Oregon	Abalone, Scallop		Basin		Two Rod		Combined Angling
Pennsylvania							
Rhode Island							
Texas			Freshwater, Saltwater				Red Drum, Trotline, Trawl
Virginia		Commercial Gear for Recreational Use					
Washington			CR Salmon, Two- Pole				

The permit could be issued by NMFS, state agencies, or a private/public partnership. Each of the agencies or partnerships issuing the permit has pros and cons. Below are a short list of pros and cons for each of the identified permit issuers.

NMFS Issuing Permit

Pros

- + System could be based on or use the HMS system or National Saltwater Angler Registry.
- + A single permit could be used throughout the region.
- + Uniquely identify and track individuals who fish in multiple states.

Cons

- Southeast Regional Office of NMFS does not have a system set up to issue licenses or permits for private recreational anglers.
- Fees collected can only cover the cost of issuing permit.
- Limited staff and resources to develop a new permit.
- Thirty to sixty-day delay in issuing permit.

State Agency Issuing Permit

Pros

- + States are issuing the current saltwater license/permit.
- + States have infrastructure set up to issue licenses and permits.
- + Likely no delay in issuing permits since fishing license can be purchased online.

Cons

- License or permit may require state legislative action.
- No guarantee all states would create the license or permit.
- May require fishermen to purchase a permit for each state unless a reciprocal agreement is developed.
- Difficult to identify individuals who have multiple permits across states. Personal identifying information typically needed and that has security and sharing issues.
- May be difficult for federal enforcement to verify permit.
- There would not be a one-stop shop for enforcement officers to access a list of permit holders.
- Additional administrative burden to manage information from multiple states.

Private/Public Partnership

Pros

- + Allows for competitive markets to establish permitting software.
- + Permits can be established to link with reporting software.
- + Pilot project is developing mechanism for permitting.
- + No delay in permitting.

Cons

- Unknown cost to fishermen for use of permitting software.
- NMFS would need to establish standards for each software vendor and validate yearly.

- Searchable database would need to be established to store information and would need to have all vendors supply information.
- Fishermen may be required to purchase another permit if switching permitting application.
- Enforcement may be limited for a third party issued permit.

Action 2. Modify Reporting Requirements for Private Recreational Fishermen or Vessels.

Sub-Action 2.1 Who Reports

Alternative 1 (No Action). There is no reporting requirement for recreational anglers, either through paper or electronic unless the owner or operator to complete fishing records if selected by the Science and Research Director (SAFMC 2008).

Alternative 2. The Science and Research Director selects a percentage of permitted vessels that fish for or possess snapper grouper species to submit electronic reports by the captain/owner of such vessel

Sub-alternative a. 1%

Sub-alternative 2b. 10%

Sub-alternative 2c. 50%

Sub-alternative 2d. 100%

Alternative 3. The Science and Research Director selects a percentage of private recreational fishermen that fish for or possess snapper grouper species to submit electronic reports:

Sub-alternative a. 1%

Sub-alternative 3b. 10%

Sub-alternative 3c. 50%

Sub-alternative 3d. 100%

Alternative 4. Promote voluntary electronic reporting by private recreational fishermen.

Sub-Action 2.2. Reporting Frequency

Alternative 1 (No Action). There is no reporting requirement for recreational anglers, either through paper or electronic unless the owner or operator to complete fishing records if selected by the Science and Research Director (SAFMC 2008).

Alternative 2. Require trip level catch and effort electronic reports to be completed prior to arrival at the dock.

Alternative 3. Require trip level catch and effort electronic reports to be completed weekly.

Alternative 4. Require trip level catch and effort electronic reports to be completed monthly.

Discussion:

Reporting requirements for headboats developed in the Joint South Atlantic/Gulf of Mexico Generic Charter/Headboat Reporting in the South Atlantic Amendment (2013) require headboats to report each trip electronically. A similar amendment requiring electronic reporting for charter boats (South Atlantic For-Hire Amendment) has been approved by the Council and is under review by NMFS.

The current language for private recreational vessel reporting requirements was developed in Amendment 15A (SAFMC 2008) and approved by the Council and the Secretary of Commerce. However, that requirement is not effective because of issues under the Paperwork Reduction Act and review and approval through the Office of Management and Budget. The language states “the owner or operator of a vessel that fishes for or lands South Atlantic snapper grouper in or from the South Atlantic EEZ who is selected to report by the Science and Research Director (SRD) must--

- (1) Maintain a fishing record for each trip, or a portion of such trips as specified by the SRD, on forms provided by the SRD. Completed fishing records must be submitted to the SRD monthly and must either be made available to an authorized statistical reporting agent or be postmarked no later than 7 days after the end of each month. Information to be reported is indicated on the form and its accompanying instructions.
- (2) Participate in the NMFS-sponsored electronic logbook and/or video monitoring reporting program as directed by the SRD.”

It is not known if or when this reporting requirement would become effective.

Requiring reporting could improve data on the private recreational fishery especially when landings are confined to a short time period, infrequently sampled, or are rare events. Reporting is required by states for some salmon species harvest in the Pacific, required by some states for reef fish or red snapper in the Gulf of Mexico, required by Texas for harvesting one red drum over 28 inches, required by HMS for landing of swordfish, billfishes, and Atlantic tunas, and proposed for tilefishes by Mid-Atlantic Fishery Management Council (**Table 4**). Both Snapper Check and Tails N' Scales are in the process of MRIP certification so that estimates derived from those programs can be used as an alternative to MRIP.

For many species in the snapper grouper complex, there are few intercepts for individual species (**Table 5**). Electronic data reporting systems can be developed to allow anglers to report varying levels of information. In MyFishCount, an electronic data reporting system designed for the snapper grouper fishery, fishermen can report species, number of fish kept and released, length and weight of fish, location fished, depth fished, hook type, hook location, time fished, number of anglers, reason for releasing fish, and treatment for released fish. This information allows anglers the flexibility to report the level of information they are comfortable supplying. During the red snapper mini-season in 2017, information on length of fish was collected for caught and released red snapper. A size distribution for red snapper caught during the mini-season can be developed from these data. Beginning in June 2018, MyFishCount will be available for fishermen to report information on all snapper grouper species as well as many other species managed in the South Atlantic region. Data from this pilot project cannot be used to track landings compared to the annual catch limit until data are verified, which could take years. Electronic data reported by fishermen can be used to improve management of the private recreational fishery by better describing where the fishery operates, depth of capture of targeted species, important locations for the fishery, seasonality of catch, target species, length distribution of kept and released fish, hook types used, reason for releasing fish, and treatment of released fish. If the information is voluntary only, the information provided by fishermen can be

considered as ancillary in future fishery management plans and stock assessments. If the information came from a robust sampling design or a full census, the information may have the potential to be used directly in future fisheries management and stock assessments.

Table 4. Reporting requirements by agency or state. Reporting app is the name of the reporting application that can be used to report, reporting card/tag lists the species for which reporting is required with a reporting card or tag, reporting station indicates the fish must be reported to a reporting station, and reporting agent is a requirement for the Halibut Community Harvest Permit.

Agency/ State	Reporting App	Reporting Card/Tag	Reporting Station	Reporting Agent
HMS	Fish Reporting			
NMFS Alaska Region Office				Halibut Community Harvest Permit Coordinator
Mid-Atlantic Fishery Management Council	Tilefish and Blueline Tilefish*			
Alabama	Snapper Check, Reef Fish			
Alaska		King Salmon		
California		Several Species		
Maryland			HMS Species	
Mississippi	Tails N' Scales			
North Carolina			HMS Species	
Oregon		Salmon, Steelhead, Sturgeon, Halibut		
Texas		Red Drum over 28 inches		
Washington		Columbia River Salmon		

*Proposed and is still under development.

Table 5. Number of MRIP intercepts from 2014 to 2016 for the private vessel component of the recreational sector for species included in Snapper Grouper Amendment 26 (in development). Species listed average greater than 30 intercepts per year. Red = less than or equal to 10 intercepts, yellow = 11 to 30 intercepts, and green = greater than 30 intercepts.

Component	Year	Species	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6
Private	2014	Black Sea Bass	26	45	219	207	145	77
Private	2014	Gray Snapper	40	16	126	120	66	78
Private	2014	Mutton Snapper	18	9	35	22	11	27
Private	2014	Gray Triggerfish	10	12	39	48	11	11
Private	2014	Yellowtail Snapper	33	3	37	37	13	14
Private	2014	Lane Snapper	14	5	34	28	12	22
Private	2014	White Grunt	21	5	27	29	10	10
Private	2014	Greater Amberjack	1	2	17	25	2	4
Private	2014	Vermilion Snapper	1	1	13	31	3	7
Private	2014	Gag	12	4	10	13	12	13
Private	2014	Almaco Jack	0	1	2	7	1	2
Private	2014	Hogfish	9	1	2	12	1	3
Private	2014	Red Grouper	15	2	10	5	0	8
Private	2014	Jolthead Porgy	10	3	8	2	3	2
Private	2014	All SG Species	244	121	619	638	304	295
Private	2015	Black Sea Bass	8	51	209	172	130	75
Private	2015	Gray Snapper	65	54	102	114	69	47
Private	2015	Mutton Snapper	16	26	37	27	21	14
Private	2015	Gray Triggerfish	4	20	36	21	14	12
Private	2015	Yellowtail Snapper	12	28	45	27	23	14
Private	2015	Lane Snapper	11	14	24	11	20	12
Private	2015	White Grunt	4	8	30	18	5	7
Private	2015	Greater Amberjack	0	5	26	17	6	4
Private	2015	Vermilion Snapper	0	12	22	16	9	5
Private	2015	Gag	6	6	9	12	16	6
Private	2015	Almaco Jack	0	2	18	23	24	1
Private	2015	Hogfish	3	14	6	13	0	0
Private	2015	Red Grouper	1	5	4	3	2	2
Private	2015	Jolthead Porgy	4	9	6	1	8	3
Private	2015	All SG Species	143	280	625	516	367	212
Private	2016	Black Sea Bass	31	127	207	146	154	106
Private	2016	Gray Snapper	30	31	80	78	62	49
Private	2016	Mutton Snapper	12	14	35	29	4	13
Private	2016	Gray Triggerfish	11	14	39	31	10	17
Private	2016	Yellowtail Snapper	7	16	18	17	2	14
Private	2016	Lane Snapper	7	11	18	13	4	11
Private	2016	White Grunt	8	9	27	20	5	18
Private	2016	Greater Amberjack	3	3	38	35	6	1
Private	2016	Vermilion Snapper	5	3	27	22	3	12
Private	2016	Gag	3	2	16	13	7	7
Private	2016	Almaco Jack	2	0	9	3	0	0
Private	2016	Hogfish	1	2	15	6	2	5
Private	2016	Red Grouper	7	4	8	5	1	10
Private	2016	Jolthead Porgy	3	5	8	9	1	2
Private	2016	All SG Species	139	259	586	456	264	282

Sub-Action 2.1 Alternative 1 is the only alternative that would not require validation be conducted before the estimate of effort or landings could be used to track the ACL. **Alternative 1** continues to use MRIP to track ACLs and to analyze catch and effort for snapper grouper species. MRIP has indicated the potential to develop new methods to improve estimates of effort and catch.

Sub-Action 2.1 Alternative 2 enables the Science and Research Director to select a portion or all owner/operators of permitted vessels to report. It is estimated that less than 1% of the private angler trips are intercepted through MRIP². Although sampling 1% of trips might be sufficient to reduce proportional standard error (PSE) below 40% for some species like black sea bass, it is not sufficient for some important species in the snapper grouper complex. The recommended PSE levels developed by the Atlantic Coast Cooperative Statistics Programs indicated that PSEs less than 40% are adequate for use in management, 40 to 60% should be used with caution, and greater than 60% should be used with extreme caution (ACCSP 2016). The following lists the annual PSEs for popular or targeted recreational snapper grouper species from 2014 to 2017. Wave or state estimates would have higher PSEs for each species. The private recreational harvest PSEs exceeded 60% for black grouper in 2014 and 2017, gag in 2017, golden tilefish in 2014, 2015, and 2017, red grouper in 2015, red snapper in 2015, scamp in 2014, 2015, and 2017, and snowy grouper from 2014 to 2017³. The private recreational harvest PSEs were between 40 and 60% for black grouper in 2015 and 2016, blueline tilefish from 2014 to 2017, golden tilefish in 2016, hogfish in 2014, red grouper in 2017, red porgy from 2014 to 2017, red snapper in 2017, and scamp in 2016. PSEs for black sea bass, gray snapper, gray triggerfish, mutton snapper, vermilion snapper, white grunt, and yellowtail snapper was less than 40% each year and annual values are adequate for management. Some species like wreckfish do not have a PSE because they have not been intercepted through the survey.

Species with high PSEs are likely to low intercept numbers. Self-reported logbooks, if administered as a census or within a probability design, could be used to increase the sample size of numbers of trips reported. The Mid-Atlantic Fishery Management Council is proposing to require 100% vessel reporting in the for-hire and private recreational sectors for blueline and golden tilefish since they are rare event species. Many species in the snapper grouper fishery management unit are rare event species. Requiring reporting of landings could help to improve the accuracy and precision of the private recreational landings if compliance is high. The Council can consider a range of options for the percent of fishermen required to report.

Similarly, **Sub-Action 2.1 Alternative 3** enables the Science and Research Director to select a portion or all private recreational fishermen to report. This reporting option shifts the reporting burden from the owner/operator of a vessel to each angler. This may increase in the number of reports for each species, depending on the percentage selected.

² SAFMC 2016 SSC Meeting Attachment 23a MRIP Int Reliability RS

³ Personal communication from the Nation Marine Fisheries Service, 5/22/2018

Currently, MyFishCount, an electronic reporting program, is piloted in the South Atlantic Region. This program has been well received by fishermen and promoted by private recreational fishing organizations and environmental organizations as an opportunity to improve upon the current data available for red snapper. This is a voluntary reporting system allows anglers to report for the vessel or individual anglers (**Sub-Action 2.1 Alternative 4**). Voluntary reporting programs need outreach programs to maintain reporting and prevent attrition in the program.

Vessel Based Reporting (Sub-Action 2.1 Alternative 2)

Example: Atlantic Tunas, Swordfish, Billfishes, and Sharks with HMS app in Atlantic, Tilefish in Mid-Atlantic Region (not currently implemented), Cobia in Virginia, Red Snapper with Tails -n-Scales in Mississippi and Snapper Check in Alabama.

Pros

- + Single report is used to record entire catch, but angler level information could be collected in this report.
- + Highest potential for compliance.
- + Reporting errors minimized since only one record is reported.
- + Owner/operator can track fishing trips and performance.
- + Easiest to validate since each vessel has an identifier.
- + Potential to allow vessel owner/operator to track fishing trips and catch.
- + Methods for this type of program have been certified through MRIP.

Cons

- Increased reporting burden on vessel owner/operator.
- State enforcement officers would need access to federal database to verify reports.
- Estimating an appropriate percentage to supply an accurate estimate and low Percent Standard Error to be used for management actions and/or stock assessment inclusion.
- Vessel owner/operator may not be fishing but would be required to report.

Individual Based Reporting (Sub-Action 2.1 Alternative 3)

Example: Fish report cards in Alaska, California, Oregon, and Washington.

Pros

- + Increased description of individual catch composition.
- + Increased socio-economic data on individual anglers.
- + Allows individual to track their fishing trips and catch.
- + Methods for estimating catch with electronic catch cards have been developed on west coast.

Cons

- Increased reporting burden on all fishermen.
- Potential for duplicate reporting of some catch and errors due to number of reports.
- State enforcement officers would need access to federal database to verify reports.

Voluntary Reporting (Sub-Action 2.1 Alternative 4)

Examples: iSnapper in Texas, iAngler, MyFishCount

Pros

- + No reporting burden for fishermen.
- + Allows individual to track their fishing trips and catch.

- + Reporting fishermen want to report their catch.
- + Methods for estimating catch from this type of program have been developed.

Cons

- No requirement for compliance.
- Would require NMFS standards (type approval) so that form input bias does not occur.
- Biased reporting can potentially overestimate or underestimate effort and catch.
- Recall bias may also exist if there is a delay in reporting, which could affect both catch and effort values.
- Least likely to have fishermen report catch.
- Reporting rates will vary over time as desire to report changes.

Sub-Action 2.2 Alternative 2 has three options for reporting options. The most onerous reporting requirement would require fishermen to report prior to disembarking from the vessel (**Sub-Action 2.2 Alternative 2a**). This allows enforcement to verify that a report is provided and reduces the potential for recall bias. Recall bias occurs when people forget less impactful memories and remember only more impactful memories. Recall bias has been well documented in medical literature where they documented patients are more likely to remember the timing and description of an emergency room visit that required surgery compared to an emergency room visit for the flu. Some species in the snapper grouper complex such as red snapper and grouper are more likely to be remembered than other species. Weekly reporting (**Sub-Action 2.2 Alternative 2b**) would have higher recall bias compared to **Sub-Action 2.2 Alternative 2a** but lower than monthly reporting (**Sub-Action 2.2 Alternative 2c**). Weekly (**Sub-Action 2.2 Alternative 2b**) and monthly reporting (**Sub-Action 2.2 Alternative 2c**) would be more difficult to enforce since fishermen would not be required to report catch until after their trip has been completed.

Reporting Before Disembarking (Sub-Action 2.2 Alternative 2a)

Pros

- + Improves enforcement of reporting requirement for landed fish.
- + Ensures independence between reporting and validation.
- + Lowest recall bias.
- + Reduces avidity bias.
- + Data are more rapidly available for consideration in management.
- + If daily QA/QC, more likely to identify and correct typos and other incorrectly entered or missing information.

Cons

- Fishermen would be required to complete report on the water or at the dock.
- Limited connectivity available in some regions for reporting (wifi, satellite, 4G).
- Requires mobile electronic technology.

Weekly Reporting (Sub-Action 2.2 Alternative 2b)

Pros

- + Data are available for consideration in management weekly.
- + Matches reporting requirements for other recreational fisheries.

- + Ability to contact fishermen for corrections may result in correct information.

Cons

- Difficult for enforcement to verify reports.
- Recall bias increased from **Sub-Action 2.2 Alternative 2a**.
- Trips catch are confused in reporting if multiple trips taken (e.g., Day 1 catches were placed with trip location information from Day 2 which was in a different area).
- Longer time frame for applying information to in-season monitoring.

Monthly Reporting (Sub-Action 2.2 Alternative 2c)

Pros

- + Fewest number of times reports are due.

Cons

- Highest potential for recall and other biases.
- Difficult for enforcement and compliance to verify reports.
- If fishermen wait to reporting date, then requires longest time to enter data.

References

ACCSP (Atlantic Coast Cooperative Statistics Program). 2016. Proceedings of the workshop on Percent Standard Error (PSE) of Recreational Fishing Data. Workshop Date: Sept 25, 2014. Alexandria, VA. p 131.

SAFMC (South Atlantic Fishery Management Council). 2008. Amendment 15A to the Snapper Grouper Fishery Management for the South Atlantic Region. Charleston, SC.

Draft Timeline

Draft options paper reviewed – March 2018

Scoping draft paper presented to Council – June 2018

Scoping hearings – August 2018

Review scoping comments and revise actions/alternatives – September 2018

Review effects analysis and approve for public hearings – December 2018

Public hearings – January/February 2019

Review public hearings comments and approve all actions and alternatives – March 2019

Final action to approve for Secretarial review – June 2019