

**Referendum Eligibility Requirements
for Amendment 41 to the Fishery
Management Plan for Reef Fish
Resources in the Gulf of Mexico**

ABBREVIATIONS USED IN THIS DOCUMENT

Council	Gulf of Mexico Fishery Management Council
CS	Consumer surplus
EEZ	Exclusive Economic Zone
FMP	Fishery Management Plan
GDP	Gross domestic product
Gulf	Gulf of Mexico
IFQ	Individual fishing quota
Magnuson-Stevens Act	Magnuson-Stevens Fishery Conservation and Management Act
MRIP	Marine Recreational Information Program
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NOR	Net operating revenue
PFQ	Permit fishing quota
PS	Producer surplus
Secretary	Secretary of Commerce
SEFSC	Southeast Fishery Science Center
SRHS	Southeast Region Headboat Survey

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CHAPTER 1. INTRODUCTION

The Gulf of Mexico Fishery Management Council (Council) is considering alternative management measures for the for-hire component of the recreational sector of the reef fish fishery in the Gulf of Mexico (Gulf). Amendment 41 to the Fishery Management Plan (FMP) for Reef Fish Resources in the Gulf of Mexico (Amendment 41) proposes to establish an allocation-based management approach for federally permitted for-hire vessels that do not participate in the Southeast Region Headboat Survey (SRHS), hence referred to as charter vessels. Amendment 41 considers five species for inclusion in the program: red snapper, gray triggerfish, greater amberjack, gag, and red grouper. The Council has selected the following three species as preferred: red snapper, gray triggerfish, and greater amberjack. Amendment 41 considers three types of programs: an individual fishing quota (IFQ) program; a permit fishing quota (PFQ) program; and a harvest tag program. The Council has selected the PFQ program as preferred. In an IFQ program, shares are allocated to an individual; in a PFQ program, shares are allocated to a permit and cannot be transferred separately from that permit. A harvest tag program does not use shares, only annual allocation, and distributes allocation to permits. The allocation would then be converted into harvest tags.

Section 303A(c)(6)(D) of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) stipulates that the Council may not submit, and the Secretary of Commerce (Secretary) may not approve, an IFQ program that has not first been approved by a majority of those voting in a referendum among eligible permit holders. The Magnuson-Stevens Act further stipulates that for multi-species permits in the Gulf, only those participants who have substantially fished the species proposed to be included in the program are eligible to vote in the referendum. NOAA General Counsel has determined both the IFQ and PFQ programs proposed in Amendment 41 would require a referendum. Because the Gulf charter/headboat permit for reef fish is a multi-species permit, the Council must define which participants have substantially fished for the species proposed to be included in the program.

This document specifies eligibility criteria for participation in the referendum that must be conducted prior to the Council's decision to submit Amendment 41 for Secretarial review. Because there is no permit or vessel specific data available for charter vessels, the Council intends to define those participants who have substantially fished for the proposed species as those persons who hold a valid or renewable permit on the day that the referendum rulemaking becomes effective.

CHAPTER 2. DESCRIPTION OF THE ECONOMIC ENVIRONMENT

2.1 Commercial Sector

This proposed action would only apply to a portion of the recreational sector (charter vessels). As a result, a description of the economic environment for the commercial sector is not provided.

2.2 Recreational Sector

This proposed action would only apply to charter vessels. As a result, a description of the economic environment for the headboat and private angler portions of the recreational sector is not provided.

Angler Effort

Recreational effort derived from the Marine Recreational Information Program (MRIP) database can be characterized in terms of the number of trips as follows:

- Target trips - 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 trips - 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 kept.
- Total recreational trips - The total estimated number of recreational trips in the Gulf of Mexico (Gulf), regardless of target intent or catch success.

Other measures of effort are available as well, such as directed trips (the number of individual angler trips that either targeted or caught a particular species).

Amendment 41 considers five species for inclusion in the allocation-based management program: red snapper, gray triggerfish, greater amberjack, gag, and red grouper. Table 2.2.1 and Table 2.2.2 present estimates of target and catch trips on charter vessels associated with any of these species from 2012 through 2016¹. The vast majority of these target and catch trips were recorded in Florida. In 2014, there was a precipitous drop in Gulf charter trips that targeted the species considered in Amendment 41. This was likely due in part to the short 9-day federal recreational red snapper season. Estimated charter trips that targeted any of the aforementioned species rebounded in subsequent years, following Reef Fish Amendment 40 and the implementation of sector separation. Estimates for additional years, and other measures of

¹ The most recent five years are used for the purpose of describing the current affected human environment, rather than presenting data for allocation purposes.

directed effort, are available at <http://www.st.nmfs.noaa.gov/recreational-fisheries/access-data/run-a-data-query/queries/index>.

Table 2.2.1. Gulf recreational charter trips that targeted red snapper, gray triggerfish, greater amberjack, gag, or red grouper, or any combination thereof, by state.*

	Alabama	Florida	Louisiana**	Mississippi	Total
2012	16,937	92,864	9,235	74	119,110
2013	25,837	103,278	7,242	38	136,395
2014	12,613	57,319	N/A	0	69,932
2015	26,192	123,961	N/A	366	150,520
2016	34,849	118,808	N/A	1,287	154,945
Average	23,286	99,246	8,239	353	126,180

Source: MRIP database, SERO, NMFS.

*Texas information unavailable.

**MRIP estimates for Louisiana are not available after 2013. The average for Louisiana excludes 2014 through 2016.

Table 2.2.2. Gulf recreational charter trips that caught red snapper, gray triggerfish, greater amberjack, gag, or red grouper, or any combination thereof, by state.*

	Alabama	Florida	Louisiana**	Mississippi	Total
2012	26,740	268,100	13,949	74	308,862
2013	53,937	294,284	14,838	38	363,096
2014	43,943	250,056	N/A	0	293,999
2015	51,506	299,093	N/A	366	350,965
2016	58,870	298,297	N/A	1,525	358,692
Average	46,999	281,966	14,394	401	335,123

Source: MRIP database, SERO, NMFS.

*Texas information unavailable.

**MRIP estimates for Louisiana are not available after 2013. The averages for Louisiana exclude 2014 through 2016.

Permits

For-hire vessels are required to have a Gulf charter/headboat permit for reef fish (for-hire permit) to fish for or possess reef fish species in the Gulf exclusive economic zone (EEZ). These are limited access permits. On July 6, 2017, there were 1,311 vessels with a valid (non-expired) or renewable² for-hire reef fish permit (including historical captain permits). Although the for-hire 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

² A renewable permit is an expired permit that may not be actively fished, but is renewable for up to one year after expiration.

in both capacities. However, only federally permitted headboats are required to submit harvest and effort information to the National Marine Fisheries Service (NMFS) Southeast Region Headboat Survey (SRHS). Participation in the SRHS is based on determination by the Southeast Fishery Science Center (SEFSC) that the vessel primarily operates as a headboat. For purposes here, charter vessels are those vessels not participating in the SRHS. The number of charter vessels with a federal for-hire permit is provided in Table 3.1, along with the number of unique permit holders. As of July 6, 2017, there were 1,245 charter vessels with valid or renewable for-hire permits (including historical captain permits) and 1,129 unique permit holders (Table 3.1).

Information on Gulf charter boat operating characteristics is included in Savolainen et al. (2012) and is incorporated herein by reference.

Economic Value

With regard to for-hire businesses, economic value can be measured by producer surplus (PS) per passenger trip (the amount of money that a vessel owner earns in excess of the cost of providing the trip). Estimates of the PS per for-hire passenger trip are not available. Instead, net operating revenue (NOR), which is the return used to pay all labor wages, returns to capital, and owner profits, is used as a proxy for PS. The estimated NOR value is \$155 (2016 dollars³) per charter angler trip (C. Liese, NMFS SEFSC, pers. comm.). Estimates of NOR associated with trips that targeted red snapper, gray triggerfish, greater amberjack, gag, or red grouper, or any combination thereof, are not available.

Participation, effort, and harvest are indicators of the value of saltwater recreational fishing. However, a more specific indicator of value is the satisfaction that anglers experience over and above their costs of fishing. The monetary value of this satisfaction is referred to as consumer surplus (CS). The value or benefit derived from the recreational experience is dependent on several quality determinants, which include fish size, catch success rate, and the number of fish kept. These variables help determine the value of a fishing trip and influence total demand for recreational fishing trips. For example, the estimated value of the CS for catching and keeping a second red snapper on an angler trip is approximately \$81 (values updated to 2016 dollars), and decreases thereafter (approximately \$54 for a third red snapper, \$40 for a fourth red snapper, and \$31 for a fifth red snapper) (Carter and Liese 2012). In comparison, the estimated value of the CS for catching and keeping a grouper is approximately \$103 for the second fish, \$69 for the third fish, \$51 for the fourth fish, and \$40 for the fifth fish (Carter and Liese 2012).

The foregoing estimates of economic value should not be confused with economic impacts associated with recreational fishing expenditures. Although expenditures for a specific good or service may represent a proxy or lower bound of value (a person would not logically pay more for something than it was worth to them), they do not represent the net value (benefits minus cost), nor the change in value associated with a change in the fishing experience.

³ Converted to 2016 dollars using the annual, not seasonally adjusted GDP implicit price deflator provided by the U.S. Bureau of Economic Analysis.

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. It should be clearly noted that, 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 red snapper on charter vessels were calculated using average trip-level impact coefficients derived from the 2015 Fisheries Economics of the U.S. report (NMFS 2017) and underlying data provided by the National Oceanic and Atmospheric Administration (NOAA) Office of Science and Technology. Economic impact estimates in 2015 dollars were adjusted to 2016 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 (sales) impacts (gross business sales), and value-added impacts (difference between the value of goods and the cost of materials or supplies). Estimates of the average annual economic impacts (2012-2016) resulting from Gulf recreational charter trips that targeted red snapper, gray triggerfish, greater amberjack, gag, or red grouper, or any combination thereof, are provided in Table 2.2.3. The average impact coefficients, or multipliers, used in the model are invariant to the “type” of effort and can therefore be directly used to measure the impact of other effort measures such as charter catch trips. To calculate the multipliers from Table 2.2.3, simply divide the desired impact measure (sales impact, value-added impact, income impact or employment) associated with a given state by the number of target trips for that state.

The estimates provided in Table 2.2.3 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.

Table 2.2.3. Estimated annual average economic impacts (2012-2016) from Gulf recreational charter trips that targeted red snapper, gray triggerfish, greater amberjack, gag, or red grouper, or any combination thereof, by state, using state-level multipliers.* All monetary estimates are in 2016 dollars (in thousands).

	FL	AL	MS	LA**
Target Trips	99,246	23,286	353	8,239
Value Added Impacts	\$35,675	\$7,375	\$79	\$2,562
Sales Impacts	\$64,660	\$14,125	\$160	\$4,440
Income Impacts	\$23,288	\$5,036	\$55	\$1,724
Employment (Jobs)	517	119	1	30

Source: effort data from MRIP; economic impact results calculated by NMFS SERO using NMFS (2017) and underlying data provided by the NOAA Office of Science and Technology.

*Texas effort data unavailable.

**Average annual target trips and economic impacts for LA are based only on 2012 and 2013, because MRIP effort estimates are unavailable for LA after 2013.

CHAPTER 3. ELIGIBILITY CRITERIA

The decision to identify participants who have substantially fished in terms of permit holdings does not consider dependency on the fishery as a criterion because there is no existing data that would allow the Gulf of Mexico Fishery Management Council (Council) to determine those who are dependent on the fishery as a source of income. Nor is it possible for the Council to identify participants who have substantially fished based on a threshold for annual landings because, annual landings data for federally permitted for-hire vessels not participating in the Southeast Region Headboat Survey (SRHS) does not exist. Given the geographic range for the three Council preferred species considered in Amendment 41, it is expected that permit holders land at least one of these species annually. Red snapper are found throughout the Gulf and are a predominate species in the northern Gulf. Greater amberjack is also found throughout the Gulf. Gray triggerfish are distributed Gulf-wide, but are concentrated in the central and eastern Gulf. However, these three species are not landed uniformly by charter vessels around the Gulf. Very little red snapper is reported as landed in the Florida Keys and Mississippi, while charter vessels in the Florida Panhandle and Alabama land the majority of red snapper. The recreational landings of gray triggerfish mainly occur in Florida and Alabama. The recreational landings for greater amberjack are mostly in Florida. Thus, given the data limitations, the Council has determined that those participants who have ‘substantially fished’ these species in this context are those persons who hold a valid or renewable permit on the day that the referendum rulemaking becomes effective. Gag are also distributed throughout the Gulf, although concentrated in the eastern Gulf, especially the west Florida shelf. Red grouper are primarily in the eastern Gulf, and recreational landings are predominately in Florida. If gag and red grouper were included, the eligible voters would not change.

Participation is limited to valid and renewable federal for-hire permit holders who do not participate in the SRHS, and thus are not eligible to participate in Amendment 42. Each permit held on the day that the referendum rulemaking becomes effective would provide the permit holder with one vote in the referendum. Gulf charter/headboat permits for reef fish can be held by an individual, business, or multiple individuals and/or businesses. The combined set of entities is considered to be a unique permit holder. A unique permit holder may hold more than one Gulf charter/headboat permit. Permit stacking (i.e., multiple permits on the same vessel) is not allowed for these permits. Therefore, if a unique permit holder holds more than one Gulf charter/headboat permit, these permits are associated with different vessels. While the majority of permit holders hold one permit, roughly 6% of unique permit holders have more than one permit, and these permit holders hold 15% of all permits (Table 3.1). As of July 6, 2017, there were 1,245 Gulf charter/headboat permits for reef fish that would be eligible to vote in the referendum.

Table 3.1. Number of Gulf charter/headboat permits for reef fish held by the number of unique permit holders that are not participating in the SRHS.

Number of permits held	Number of unique permit holders	Total permits held
1	1060	1060
2	50	100
3	12	36
4+	7	49

Source: NMFS-SERO permit office database accessed July 6, 2017.

CHAPTER 4. EXPECTED IMPACTS

Establishing eligibility for referendum participants is an essentially administrative action, and is not expected to directly or indirectly affect the physical, biological, or ecological environments. The current determination of eligibility requirements for referendum participation is not expected to result in direct or indirect economic or social effects. However, if some participants are excluded from eligibility, there could be indirect economic and social impacts due to their inability to participate in the referendum. Limited effects on the administrative environment are expected due to costs associated with identifying eligible voters and administering the referendum.

CHAPTER 5. NEXT STEPS

After voting for the eligibility requirements, the Gulf of Mexico Fishery Management Council (Council) would request the National Marine Fisheries Service (NMFS) publish a proposed rule. NMFS would take comments on the proposed eligibility requirements and then, if appropriate, publish a final rule. The Council must choose all preferred alternatives for the program in Amendment 41 before the referendum takes place, but cannot take final action on Amendment 41 until after the referendum is completed.

On the effective date of the final rule, NMFS would determine the final pool of voters and mail ballots. Voters would have one month to return their signed ballots to NMFS. After compiling the votes, NMFS would inform the Council of the results. A majority of those voting in the referendum must approve the program. If the referendum fails, the Council may modify the program by picking different preferred alternatives and request another referendum. If the referendum passes, the Council would then consider voting to submit Amendment 41 to the Secretary of Commerce (Secretary) for review. During Secretarial review, NMFS would solicit comments on the amendment. NMFS would also publish a proposed rule with regulations for an allocation-based management program that would be implemented if the amendment is approved. Comments on the amendment and the proposed rule would be considered by NMFS before approval of the amendment and publication of the final rule to implement the chosen allocation-based management program.

CHAPTER 6. REFERENCES

Carter, D.W. and C. Liese. 2012. The Economic Value of Catching and Keeping or Releasing Saltwater Sport Fish in the Southeast USA. *North American Journal of Fisheries Management*, 32:4, 613-625. <http://dx.doi.org/10.1080/02755947.2012.675943>

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Savolainen, M. A., R. H. Caffey, and R. F. Kazmierczak, Jr. 2012. Economic and Attitudinal Perspectives of the Recreational For-hire Fishing Industry in the U.S. Gulf of Mexico. Center for Natural Resource Economics and Policy, LSU AgCenter and Louisiana Sea Grant College Program, Department of Agricultural Economics and Agribusiness, Louisiana State University, Baton Rouge, LA. 171 p. Available at: <http://www.laseagrant.org/wp-content/uploads/Gulf-RFH-Survey-Final-Report-2012.pdf>