

Recreational Red Snapper Sector Separation



Final Amendment 40 to the Fishery Management Plan for the Reef Fish Resources of the Gulf of Mexico

Including Final Environmental Impact Statement,
Fishery Impact Statement, Regulatory Impact Review,
and Regulatory Flexibility Act Analysis

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GULF OF MEXICO REEF FISH AMENDMENT 40 FINAL ENVIRONMENTAL IMPACT STATEMENT (FEIS) COVER SHEET

Red Snapper Amendment 40 to the Fishery Management Plan for the Reef Fish Resources of the Gulf of Mexico, including a Final Environmental Impact Statement (FEIS), Fishery Impact Statement, Regulatory Impact Review, and Regulatory Flexibility Act Analysis.

Abstract:

This FEIS is prepared pursuant to the National Environmental Policy Act to assess the environmental impacts associated with a regulatory action. The FEIS analyzes the impacts of a reasonable range of alternatives intended to establish a federal for-hire:other recreational red snapper allocation. The purpose of this action is to define distinct private angling and federal for-hire components of the recreational red snapper fishery and allocate red snapper resources between the components of the recreational sector to provide a basis for increased flexibility in future management of the recreational sector, and minimize the chance for recreational quota overruns which could jeopardize the rebuilding of the red snapper stock.

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ABBREVIATIONS USED IN THIS DOCUMENT

ABC	acceptable biological catch
ACL	annual catch limit
ACT	annual catch target
AM	accountability measure
CEA	Cumulative Effects Analysis
Council	Gulf of Mexico Fishery Management Council
DEIS	Draft Environmental Impact Statement
EA	Environmental Assessment
EEZ	exclusive economic zone
EFH	essential fish habitat
FEIS	Final Environmental Impact Statement
EJ	environmental justice
ESA	Endangered Species Act
FMP	Fishery Management Plan
Gulf	Gulf of Mexico
HAPC	habitat areas of particular concern
IFQ	individual fishing quota
IRFA	Initial Regulatory Flexibility Analysis
Magnuson-Stevens Act	Magnuson-Stevens Fishery Conservation and Management Act
mp	million pounds
MRIP	Marine Recreational Information Program
MRFSS	Marine Recreational Fisheries Statistics Survey
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
OFL	overfishing limit
OY	optimum yield
RFFA	Reasonable and foreseeable future action
RIR	Regulatory Impact Review
SEFSC	Southeast Fisheries Science Center
SERO	Southeast Regional Office of NMFS
SFA	Sustainable Fisheries Act
SRHS	Southeast Region Headboat Survey
SSC	Scientific and Statistical Committee
TAC	total allowable catch
TL	total length
VEC	valued environmental components
ww	whole weight

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EXECUTIVE SUMMARY

The Gulf of Mexico (Gulf) red snapper stock is overfished and currently under a rebuilding plan. As the stock has recovered, both commercial and recreational quotas have been allowed to increase per the rebuilding plan. The commercial sector has been managed under an individual fishing quota (IFQ) program since 2007 and landings have stayed below the commercial quota as each IFQ allocation holder is strictly monitored to ensure they do not land more than the pounds allocated to them. The recreational sector, which has experienced quota overages and shorter seasons recently, is managed under a quota, bag and size limits, and closed seasons. The recreational season length is determined through projections that rely on previous years' data. Even though the recreational quota has increased in recent years, the season length has decreased, in part because the average size of the fish harvested has increased (i.e., it takes fewer fish to fill the quota). Additionally, inconsistent state regulations have made harvest projections more difficult. To reduce the chances of the recreational sector exceeding its quota, the Gulf of Mexico Fishery Management Council (Council) asked the National Marine Fisheries Service (NMFS) to put in place an annual catch target (ACT) as an accountability measure for the 2014 fishing season. The ACT, which is what the recreational season length is based on, is reduced from the quota and reduces the chance the quota will be exceeded. The Council has also developed a framework action that would set an ACT for 2015 and beyond as well as put in place an overage adjustment to mitigate the effects should landings exceed the quota.

The reef fish recreational sector in the Gulf includes a private vessel component and a for-hire component and red snapper is a species within the reef fish fishery management unit. For-hire vessels include charter vessels and headboats where anglers pay the vessel operator to be taken on a fishing trip. The key distinction between charter vessels and headboats is how the fee is determined. On a charter vessel trip, the fee charged is for the entire vessel, regardless of how many passengers are carried, whereas the fee charged for a headboat trip is paid per individual angler. Those for-hire vessels with federal reef fish for-hire permits are allowed to fish for reef fish species like red snapper in federal waters, and those without federal permits are restricted to fishing for red snapper in state waters. Anglers on private vessels can fish for red snapper in both federal and state waters when red snapper fishing is open in those waters. Current recreational management measures such as season length, daily bag limits, and size limits are typically applied to the recreational sector as a whole, without making a distinction between the private and for-hire components.

Since 2004, there has been a moratorium on the issuance of new federal reef fish for-hire permits. This means that participation in the federal for-hire component is capped; no additional federal permits are available. This also means that access to these vessels is limited to the recreational anglers that can fit on these permitted vessels. On the other hand, there is no limit to the number of anglers fishing from private recreational vessels which may target reef fish species; it is an open entry fishery. There is also no limit to the number of state-licensed for-hire vessels. These state-licensed for-hire vessels may land federally managed species in state waters only; they may not take paying passengers on trips to land federally managed species from federal waters. Over time, the number of private recreational vessels has increased, while the number of vessels with federal for-hire permits has decreased. This has resulted over time in private vessel landings representing a greater proportion of the recreational quota as a whole.

With overall angler effort increasing, the moratorium on federal for-hire permits has limited growth in the for-hire industry and, in turn, anglers’ access to vessels. An evaluation of effort by fishing mode suggests that private recreational anglers now account for an increasing share of the red snapper-related effort in the Gulf. While private angling represented on average 33% of the red snapper angler-trips for the time interval between 1986 and 1990, the private vessels accounted for an average of 46% of angler-trips between 2005 and 2009. By 2011, 55% of the red snapper angler-trips in the Gulf were taken by anglers fishing from private vessels. A part of this shift is attributable to changes in state regulations where state waters are open when federal waters are closed. For 2014, while the season in federal waters was nine days long, Texas waters were open a total of 365 days, Louisiana for 286 days, Florida for 52 days, and Mississippi and Alabama for 21 days. Charter vessels and headboats with a reef fish for-hire permit are not allowed to fish in state waters for red snapper when federal waters are closed (GMFMC 2008b).

The purpose of this action is to define distinct private angling and federal for-hire components of the recreational red snapper fishery and allocate red snapper resources between these recreational components. Establishing separate components would provide a basis for flexible management approaches tailored to each component and reduce the likelihood for recreational quota overruns which could jeopardize the rebuilding of the red snapper stock. The need for the proposed action is to prevent overfishing while achieving the optimum yield, particularly with respect to recreational opportunities, while rebuilding the red snapper stock. Table 1 summarizes the management actions included in this amendment and indicates the preferred alternatives selected by the Council.

Table 1: Summary of Actions considered in Reef fish Amendment 40

Action 1: Establishment of Distinct Components within the Recreational Sector
Alternative 1: Maintain the current structure of the recreational sector. The recreational sector includes private anglers and all for-hire operators.
Preferred Alternative 2: Establish a red snapper federal for-hire component. The federal for-hire component would include all for-hire operators with a valid or renewable federal reef fish for-hire permit. Establish a private angling component that would include all other for-hire operators and private recreational anglers.
Alternative 3: Establish a voluntary red snapper federal for-hire component. The federal for-hire component would include only for-hire operators with a valid or renewable federal reef fish for-hire permit who elected to join the federal for-hire component. A fully transferable endorsement to the federal reef fish charter permit would be issued to those for-hire operators who elected to join the federal for-hire component. Establish a private angling component that would include all other for-hire operators and private recreational anglers. Opportunities to join or to opt out from the federal for-hire component are offered: <ul style="list-style-type: none"> Option a: once, at the implementation of the program Option b: every year Option c: every 3 years Option d: every 5 years

<p>Alternative 4: Establish a voluntary red snapper federal for-hire component. The federal for-hire component would include only for-hire operators with a valid or renewable federal reef fish for-hire permit who elected to join the federal for-hire component. A non-transferable endorsement to the federal reef fish charter permit would be issued to those for-hire operators who elected to join the federal for-hire component. Establish a private angling component that would include all other for-hire operators and private recreational anglers.</p> <p>Opportunities to join or to opt out from the federal for-hire component are offered:</p> <p>Option a: once, at the implementation of the program</p> <p>Option b: every year</p> <p>Option c: every 3 years</p> <p>Option d: every 5 years</p>
<p>Preferred Alternative 5: Establish a provision to sunset sector separation:</p> <p>Option a: 2 calendar years after implementation.</p> <p>Preferred Option b: 3 calendar years after implementation.</p> <p>Option c: 5 calendar years after implementation.</p>
<p>Action 2: Allocation of the Red Snapper Quota between the Components</p>
<p>Alternative 1: No Action - Do not Allocate the recreational quota between the federal for-hire and private angling components</p>
<p>Alternative 2: Allocate the recreational red snapper quota and ACT based on average landings between 1986 and 2013 (2010 excluded). Resulting federal for-hire and private angling allocations would be 48.9% and 51.1%, respectively.</p>
<p>Alternative 3: Allocate the recreational red snapper quota and ACT based on average landings between 1991 and 2013 (2010 excluded). Resulting federal for-hire and private angling allocations would be 46.9% and 53.1%, respectively.</p>
<p>Alternative 4: Allocate the recreational red snapper quota and ACT based on average landings between 1996 and 2013 (2010 excluded). Resulting federal for-hire and private angling allocations would be 44.7% and 55.3%, respectively.</p>
<p>Alternative 5: Allocate the recreational red snapper quota and ACT based on average landings between 2001 and 2013 (2010 excluded). Resulting federal for-hire and private angling allocations would be 40.5% and 59.5%, respectively.</p>
<p>Alternative 6: Allocate the recreational red snapper quota and ACT based on average landings between 2006 and 2013 (2010 excluded). Resulting federal for-hire and private angling allocations would be 35.7% and 64.3%, respectively.</p>
<p>Preferred Alternative 7: Allocate the recreational red snapper quota and ACT based on 50% of the average percentages landed by each component between 1986 and 2013 (2010 excluded) and 50% of the average percentages landed by each component between 2006 and 2013 (2010 excluded). Resulting federal for-hire and private angling allocations would be 42.3% and 57.7%, respectively.</p>
<p>Alternative 8: Allocate the recreational red snapper quota and ACT based on percentages of the quota landed by each component between 2011 and 2013. Resulting federal for-hire and private angling allocations would be 23.4% and 76.6%, respectively.</p>

Alternative 9: Allocate the recreational red snapper quota and ACT based on average landings between 1986 and 2003. Resulting federal for-hire and private angling allocations would be 54.0% and 46.0%, respectively.

Action 3: Recreational Closure Provisions

Alternative 1: Maintain the current recreational red snapper season closure provisions. The recreational red snapper ACT will be used to determine the recreational red snapper season length.

Preferred Alternative 2: Establish separate red snapper season closure provisions for the federal for-hire and private angling components. The federal for-hire red snapper ACT will be used to determine the federal for-hire red snapper season length. The private angling red snapper ACT will be used to determine the private angling red snapper season length.

Action 1 – Establishment of Private Angling and Federal For-hire Components

Action 1 would consider the establishment of a federal for-hire and private angling components within the recreational sector. Alternatives include: no action (**Alternative 1**) where the recreational sector would not be divided into two components; **Preferred Alternative 2** would establish the two components where all federally permitted for-hire vessels would be added to the federal for-hire component; and **Alternatives 3 and 4** would establish the two components where federal for-hire operators may opt into the federal for-hire component. **Alternatives 3 and 4** differ in that the endorsement used to identify which for-hire vessels are in the for-hire component are fully transferable under **Alternative 3** and not transferable under **Alternative 4**. **Alternatives 3 and 4** also have options for the frequency that vessel operators may choose to opt in or out of the for-hire component of just once (**Option a**), every year (**Option b**), every 3 years (**Option c**), and every 5 years (**Option d**). **Preferred Alternative 5** applies a sunset provision to Action 1, of 2 (**Option a**), 3 (**Preferred Option b**), and 5 years (**Option c**).

With respect to the physical and biological/ecological environments, the effects of this action regardless of the alternative selected as preferred would likely be minimal. Effects are tied to fishing effort where greater effort results in greater gear interactions with the physical environment or more removals and discards of targeted species in the biological/ecological environment. Whether the recreational sector is maintained as one component (**Alternative 1**, no action) or divided into two components (**Preferred Alternative 2** and **Alternatives 3-4**), the recreational quota would not change and therefore effort changes are likely to be relatively small. Under **Preferred Alternative 2** and **Alternatives 3-4**, there could be a shift in fishing effort compared to **Alternative 1** of the private angling component to state waters under conditions of incompatible state/federal fishing regulations (state waters open while federal waters are closed). This could increase the effects of fishing on the physical and biological/ecological environments in state waters and conversely reduce the effects in federal waters. Under **Alternatives 3 and 4**, this effect would be greater than under **Preferred Alternative 2** conditional on the number of for-hire operators who decide to opt out of the for-hire component. This action under **Preferred Alternative 2** and **Alternatives 3 and 4** could provide beneficial indirect affects to the red snapper stock through reductions in discards and reducing the likelihood of overfishing. Discards should decline as the number of fish caught should shift towards the federal for-hire component, which compared to the private angling component, has fewer discards. Because of

the limited number of federally permitted vessels and the fact that headboats regularly report landings, it is currently easier to both monitor and project landings of this component, thus, by separating the components, the chances of the federal for-hire sector exceeding its proposed annual catch limit (Action 3, Preferred Alternative 2) is reduced.

Under **Alternative 1**, the issues of differential access to fishing opportunities and declining access by the federal for-hire fleet would continue in the social environment. This is an issue of subtractability, where additional fishing by anglers in states with more generous regulations than federal regulations reduces the amount of fish available to be harvested by each angler in the sector as a whole. This is primarily a problem for the red snapper recreational season which must be closed when the recreational quota is reached. Anglers fishing from private vessels in states that provide additional fishing opportunities beyond the federal regulations would enjoy the greatest amount of fishing opportunities, compared to other Gulf recreational anglers. Nevertheless, red snapper are not uniformly distributed in all depths and habitats, and these opportunities depend on the presence of red snapper in state waters.

Preferred Alternative 2 and **Alternatives 3-4** would establish two distinct components within the recreational sector for the purpose of partitioning access to the recreational red snapper quota. The social effects of establishing a federal for-hire and private angling component would be expected to correspond with recreational participants' perspective. There are both avid supporters and objectors to establishing separate components; it is assumed that supporters expect positive effects and opponents expect to be affected negatively. Yet, social benefits would not result directly from establishing the separate components within the recreational sector. The actual effects resulting from establishing separate components would be indirect and result from how stakeholders or state marine resource departments respond to a federal decision to create separate components of federally permitted and non-federally permitted vessels, and from any subsequent management measures developed and applied to each component. Indirect social benefits for the private angling component would mainly be expected to result from management measures accounting for their specific needs and characteristics, including regional preferences for access to fishing opportunities. For the federal for-hire component, indirect social benefits would primarily result from mitigating the trend of decreasing access to red snapper by the federal for-hire component. For-hire operators, their angler passengers, and the communities where these vessels are homeported could also be expected to benefit as a result of increased stability of access to red snapper. However, these benefits could be decreased if the amount of red snapper harvested in state waters outside the federal season increases.

By requiring participation, **Preferred Alternative 2** provides less flexibility to federal for-hire operators than **Alternatives 3** and **4**. For federal for-hire operators who oppose establishing separate components, and those who will remain undecided until the specifics of how fishing opportunities will be distributed is determined, **Alternatives 3** and **4** allow these participants to decide in which component they prefer to operate. For the individual for-hire operator, positive effects would be expected by allowing them to decide which component is best for their business. The options under **Alternatives 3** and **4** would be expected to reflect this tradeoff in benefits between flexibility for individual operators, and the functioning of the component as a whole. The greater the frequency federal for-hire operators have to switch between components could possibly provide increased benefits to the operator that may correspond with unintended

consequences for the rest of the component, through some amount of instability of membership. Thus, for the federal for-hire component as a whole, **Options a** would be expected to be most beneficial for the federal for-hire component, followed by **Options d** and **Options c**. Considering the potential desire for flexibility of individual operators, these options would be ordered in reverse. Allowing federal for-hire operators to switch between components every year (**Options b**) would not be expected to be beneficial for individual federal for-hire operators or the component as a group, and would instead be expected to correspond with confusion among operators and their angler passengers.

This plan amendment provides the foundation for management to be tailored to each component of the recreational sector, but it does not establish different management measures for each component. Any component-specific management measures would be implemented subsequent to this plan amendment. Including a sunset provision would require the Council to revisit its decision to manage the components separately and determine whether the management approach should be continued. However, the potential benefits that may result from establishing separate management measures for each component would be diminished through the adoption of a sunset provision (**Preferred Alternative 5**). The management measures possible for evaluation and implementation for the separate components would be further restricted given the time available before the sunset. Among the options, the shortest time period before sector separation sunsets (**Option a**) would provide the recreational components with the least amount of flexibility to develop and implement management approaches tailored to their needs, followed by **Preferred Option b** and **Option c**.

In the economic environment, **Alternative 1** would continue to treat the recreational sector as a single entity for the management of red snapper. Therefore, **Alternative 1** would not be expected to result in any direct economic effects on recreational fishermen, for-hire operations, or associated shore-side businesses. However, maintaining the current management structure of the recreational sector may impede the implementation of management measures that would result in additional economic benefits to the federal for-hire and/or private angling components. **Preferred Alternative 2** would depart from the current structure of the recreational sector and establish distinct federal for-hire and private angling components for recreational red snapper management. The establishment of separate federal for-hire and private angling components is expected to provide opportunities to design and implement within each component flexible management approaches tailored to the characteristics and needs of each component, thereby potentially resulting in increases in economic value. For each component, the magnitude of potential economic benefits that could result from this action would primarily depend on the type and quality of the management measures implemented post sector separation.

Alternatives 3 and **4** would also establish red snapper federal for-hire and private angling components. However, as opposed to **Preferred Alternative 2**, which would include all federally-permitted for-hire operators in the federal for-hire component, **Alternatives 3** and **4** would only include those operators who elect to join the federal for-hire component. Therefore, the private angling component that would be established by **Alternatives 3** or **4** would include all other for-hire operators and private recreational anglers. The economic effects expected to result from **Alternatives 3** and **4** would be comparable to the effects expected from **Preferred Alternative 2** but would be reduced if some federal for-hire operators do not participate in the

federal for-hire component. The larger the number of federally-permitted operators who elect to opt out, the greater the expected reduction in potential economic benefits that may occur. However, compared to **Preferred Alternative 2**, **Alternatives 3** and **4** would grant added flexibility to individual for-hire operators to determine their participation and/or switch their membership from one component to the other. This added flexibility could potentially result in increased positive economic effects because operators would be able to select and adjust as needed the component deemed to be most beneficial to their business. With respect to the options considered under **Alternatives 3** and **4**, the more flexible the participation decision option, the better it may be for the vessel. Thus, the ranking (best to worst) of the options from the vessel perspective would be as ordered: **Option a-Option b-Option c-Option d**. As may be obvious from the discussion in the previous paragraph, from the management perspective, the ranking order of these options would be reversed.

The establishment of two components to the red snapper recreational sector would have direct effects on the administrative environment through additional rulemaking. Because **Alternative 1**, the no-action alternative, would not require rulemaking, it would have no effect on the administrative environment. The act of establishing the two components under **Preferred Alternative 2** and **Alternatives 3-4** is a one-time event, and thus these alternatives would have an equivalent burden to this environment though the minor direct administrative impacts associated with the rulemaking to implement the new components. **Alternatives 3** and **4** would allow owners of federally permitted for-hire vessels to opt into the federal for-hire component. This would require an additional administrative burden above what would be required by **Preferred Alternative 2** to develop and issue an endorsement to track who has decided to operate within the federal for-hire component or within the private recreational angler component. **Alternatives 3** and **4** also have four options for the frequency owners of federally permitted for-hire vessels can decide to opt out of the federal for-hire component. **Option a** would have the least administrative burden because the option would only present itself at the beginning of the program. **Options b-d** allow owners to opt out at different time frames. **Option b** would have the greatest burden as owners would be able to make this determination annually, while **Option d** would have the least burden of these three options because owners would only be able to make this decision every five years. **Option c**, every three years, would have effects intermediate to **Options b** and **d**. Finally, **Alternative 3** adds an extra level of administrative complexity (added burden) by allowing the federal for-hire component endorsements to be fully transferable. **Preferred Alternative 5** (the sunset provision) could either have beneficial or adverse effects on the administrative environment dependent on whether the components are allowed to expire without change (beneficial) or if further actions are developed through further rulemaking (adverse). **Options a-c** dictate how much time the Council would have to revise recreational red snapper management with **Option a** providing the least time to implement change and **option c** the greatest amount of time.

Action 2 – Allocation of the Recreational Red Snapper Quota between the Components of the Recreational Sector

Action 2 would set the allocation between the federal for-hire and private angling components. The Council selected Action 1, Alternative 2 as preferred, which establishes a mandatory sector separation. As a result, they removed two actions that would have adjusted the allocation for vessels opting out of the federal-for hire component as allowed for under Action 1, Alternatives

3 and 4. These actions and alternatives may be viewed in Appendix D.

Action 2 considers a variety of allocations between the federal for-hire and private angling components and the allocations would be applied to both the recreational quota and recreational ACT. These alternatives, excluding Alternative 1 (no action) are in Table 2.

Table 2. Summary of Action 2 alternatives including time intervals and federal for-hire and private angling component percent allocations. Note Alternative 1 (No action) is not included in this table.

Alternative	Time interval	Federal for-hire	Private angling
2	1986-2013*(a)	48.9%	51.1%
3	1991-2013*	46.9%	53.1%
4	1996-2013*	44.7%	55.3%
5	2001-2013*	40.5%	59.5%
6	2006-2013*(b)	35.7%	64.3%
Pref. 7	0.5(a) + 0.5 (b)	42.3%	57.7%
8	2011-2013	23.4%	76.6%
9	1986-2003	54.0%	46.0%

Regarding the physical and biological/ecological environments, the effects of this action regardless of the alternative selected as preferred would likely be minimal. Effects are tied to fishing effort where greater effort results in greater gear interactions with the physical environment or more removals and discards of targeted species in the biological/ecological environment. **Alternative 1**, no action, would not change the current fishing conditions. Thus no change in fishing effort is expected to occur in the short term because no new fishing regulations would be implemented; therefore, habitat-gear interactions would remain unchanged. However, should no action be taken, then the trend of an increasing private angling share of the harvest may continue in the long term. Based on bag limit analyses, the private angling component seems to be less efficient in harvesting red snapper. Therefore, any increase in the private-angling allocation would be expected to require more effort to catch fish compared to the for-hire component. In addition, this increase in effort would likely occur in state waters unless state and federal regulations become more compatible. Thus **Alternatives 1 and 8** (76.6% private angler), particularly for state waters, would likely have the greatest adverse effects, followed by **Alternative 6** (64.3%), **Alternative 5** (59.5%), **Preferred Alternative 7** (57.7%), **Alternative 4** (55.3%), **Alternative 3** (53.1%), **Alternative 2** (51.1%), and **Alternative 9** (46.0%).

Although no additional effects would be expected from **Alternative 1** on the social environment as the recreational red snapper sector would continue to be managed as a single sector, the issues of differential access to fishing opportunities would continue. This is also an issue of subtractability, where additional fishing by anglers in states with more generous regulations than federal regulations reduces the amount of fish available to be harvested by other anglers in the sector. This is primarily a problem for the shortening duration of the red snapper recreational season which must be closed when the recreational quota is reached. Under **Alternative 1**,

anglers fishing from private vessels in states that provide additional fishing opportunities beyond the federal regulations would continue to enjoy the greatest amount of fishing opportunities compared to other recreational anglers (Table 4.2.3.1), and thus benefit the most from status quo.

The allocations proposed in **Alternatives 2-9** are based on historical landings of different time series. The magnitude of any social effects would relate to the extent to which each component's average landings for an alternative's time series is greater or lesser than that component's current landings. The larger the proportion of the recreational red snapper quota allocated to one component, the smaller the proportion that, in turn, is allocated to the other component. The magnitude of the effects would in part reflect changes in effort subsequent to the implementation of an allocation. Evaluating potential effects is further complicated because this action considers only the proportions of a quota, and the quota is likely to change. Effects would be expected from changes in access to fishing opportunities resulting from quota changes. Also, the proportions provided in **Alternatives 2-9** demonstrate the relationship between the components in terms of the allocation: the greater the quota portion assigned to one component, which would be expected to provide greater benefits as more fish are allowed to be caught, the smaller the portion allocated to the other component. This means that for each component, expected effects would be determined by the difference between the fishing opportunities that would be provided by its allocation and the fishing opportunities currently available to the component.

For the economic environment, **Alternative 1** would not allocate the recreational red snapper quota between the federal for-hire and the private angling components. If the Council decides to establish distinct federal for-hire and private angling components (Action 1), **Alternative 1** would not be compatible with this decision and would impede the consideration, design and implementation of management measures tailored to the specific needs of each component.

Relative to the percentage of the recreational red snapper quota harvested by the federal for-hire component in 2013, the remaining alternatives (**Preferred Alternative 7** included) would increase the estimated percentage of the quota allocated to the federal for-hire component and accordingly decrease the percentage allocated to the private angling component. For **Alternatives 2-9**, allocations based on longer time series (including more of the earlier years of the dataset) would be more favorable to the federal for-hire component. The economic effects expected to result from alternative allocations between components are typically evaluated based on consumer and producer surplus changes relative to a baseline or status quo allocation. Because these components have not previously existed, there is no previously established baseline allocation between the federal for-hire and private angling components. The allocation of greater percentages of the recreational quota to the federal for-hire component would be expected to result in greater increases in for-hire trips and associated increases in consumer and producer surplus. However, the magnitude of the increase in for-hire trips that would be expected to result from a given allocation, which is determined by several factors including the demand for for-hire trips, is not known. Similarly, allocating greater proportions of the recreational quota to the private angling component would be expected to result in increases in private angler trips and in corresponding increases in consumer surplus. Inferences about changes in economic value are not provided because it cannot be assumed that the resource allocation within each component is efficient. As suggested by Holzer and McConnell (2014) and in a recent report (OECD 2014), changes in net benefit estimates based on the generally

accepted application of the equimarginal principle and associated inferences about economic efficiency are erroneous when each component's quota is not efficiently allocated within the component. Furthermore, policy prescriptions based on these inferences are invalid, and therefore, not useful. Based on the preceding discussion, all that can be concluded is that potential economic benefits accruing to each component would be expected to increase the more allocation each component receives.

The setting of allocations for the two recreational components (federal for-hire and private angling), is an administrative action and would have effects on the administrative environment through additional rulemaking and monitoring. Because **Alternative 1**, the no-action alternative, would not require rulemaking, it would have no effect on the administrative environment. The act of allocating between the two components would affect the administrative environment by requiring rulemaking to set the allocations and monitoring of landings to ensure the different components do not exceed their respective quotas. Because each alternative would require the same administrative actions to set up the component quotas, the effects of **Alternatives 2-9** (including **Preferred Alternative 7**) would likely be similar. Although **Alternatives 2-9** would increase the administrative burden, the effects are likely to be minimal. Setting the allocations would be a onetime event unless NMFS and the Council decide to change those allocations at a later date. Monitoring of the recreational harvest by the two components already occurs through various state and federal sampling programs.

Action 3 – Recreational season closure provisions

Action 3 considers how the recreational season closure provision would be implemented given the two components. No action (**Alternative 1**) would maintain the current recreational red snapper season closure provisions where the recreational red snapper ACT would be used to determine the recreational red snapper season length. **Preferred Alternative 2** would establish separate red snapper season closure provisions for the federal for-hire and private angling components. The component red snapper ACTs would be used to determine the components' federal red snapper season length. The ACTs, are an accountability measure and reduce the probability of exceeding the ACL. This action includes two alternatives. Because sector separation is a first step toward being able to tailor management measures to the characteristics of each component, the scope of Action 3 is limited to specifying separate season closures based on the existing June 1 season opening.

Adjusting the red snapper closure provisions would have no direct effects on the physical or biological/ecological environments regardless of whether **Alternative 1** or **Preferred Alternative 2** is selected. This is because this action just codifies how the closure is set, not the quota, ACT, or projected season length. The quota, ACT, and season length would be set in a separate framework action or plan amendment and analyzed accordingly with regard to how fishing practices are affected. However, if incompatible regulations for state and federal waters continue, the shift in private angling effort would continue in state waters. This could be exacerbated under **Preferred Alternative 2** should the season length in federal waters for the private angling component be further reduced. However, **Preferred Alternative 2** could provide biological benefits to the stock if dividing the recreational quota into two components leads to improved projections and monitoring of landings, thereby reducing the probability of overfishing. As mentioned for Action 1, because of the limited number of federally permitted

vessels and the fact that headboats regularly report landings, it is currently easier to both monitor and project landings of this component. Thus, the chances of the federal for-hire component exceeding its proposed quota and, by extension, the recreational sector quota, is reduced.

Additional effects on the social environment are not expected from **Alternative 1**, as the recreational harvest of red snapper must end once the quota is reached or projected to be reached. Even if separate components are established (Action 1) and fishing opportunities apportioned among the components (Action 2), the participants in both components are prohibited from further retaining red snapper once the recreational quota is reached or projected to be reached. **Preferred Alternative 2** would establish separate season closures for the components of the recreational sector. This could be expected to result in positive effects for both components, as neither would lose fishing opportunities as a result of a quota overage by the other component. However, should the recreational quota be met, recreational fishing for red snapper would need to be closed. Thus, if separate quotas and closures are established for each component, it is possible that one component with remaining quota could be shut down, should it be determined that the Gulf-wide recreational quota was met.

Although **Alternative 1** is compatible with the establishment of separate components within the recreational sector, it would significantly restrict the range of management measures that could be considered by the Council, resulting in significant reductions in the potential economic effects that could be expected from the implementation of sector separation. **Preferred Alternative 2** would depart from the status quo closure provision and establish separate closure provisions for the federal for-hire and private angling components. Each component would be closed when its red snapper allocation is projected to be met. Compared to **Alternative 1**, **Preferred Alternative 2** would therefore be expected to result in positive economic effects because, as opposed to the status quo, it would not impede the materialization of potential economic benefits expected to result from sector separation.

Closing a fishing season based on a quota is administrative action. Because **Alternative 1**, the no-action alternative, would not require additional rulemaking, it would not change the effects of such an action on the administrative environment. The act of closing two components rather than one sector under **Preferred Alternative 2** could require two season notices rather than one notice, thus adding some administrative burden. However, closing fishing seasons is a routine administrative action, so any additional effects from **Preferred Alternative 2** should be minimal.

Cumulative effects

A cumulative effects analysis identified six valued environmental components. These were: habitat; managed resources (red snapper and other reef fish species); vessel owners, captain and crew (commercial and for-hire); anglers; infrastructure; and administration. The cumulative effects of allocating recreational red snapper between the for-hire and private-angling components on the biophysical environment is likely neutral because it should not have much effect on overall fishing effort. For the socioeconomic environment, expected potential benefits would be determined by the percentage of the quota allocated to each component, resultant effort adjustments, and the management measures considered by the Council following the implementation of this amendment. One possible factor mitigating expected potential benefits of

managing the recreational sector based on two components is Magnuson-Stevens Act §407(d)(1), which requires recreational or commercial red snapper fishing to end when a sector catches its quota. The recreational sector includes both the federal for-hire and private angling components. Thus, when NMFS determines the total recreational red snapper fishing quota is reached, NMFS is required to prohibit the retention of red snapper caught during the rest of the fishing year regardless of whether one component still has quota available. The actions in Amendment 40 are not expected to have any impacts on the commercial sector, which is managed through an individual fishing quota program, size limits, and season-area closures.

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 an assessment of the likely biological/conservation, economic, and social effects of the conservation and management measures on fishery participants and their communities, participants in the fisheries conducted in adjacent areas under the authority of another Fishery Management Council, and the safety of human life at sea. Detailed discussion of the expected effects for all alternatives considered is provided in Chapter 4. The FIS provides a summary of these effects.

Red snapper is a federally managed species and is under a rebuilding plan. Under the Magnuson-Stevens Act, the recreational harvest of red snapper is limited to an annual quota and the recreational harvest of red snapper must be closed once the recreational sector's quota is determined to have been met. In recent years, some Gulf States have provided additional fishing opportunities to anglers in state waters when federal waters were closed. Red snapper landed outside of the federal season must be deducted from the annual quota. These additional fishing opportunities increase the difficulties for projecting the season length and constraining landings to within the quota. In recent years, the recreational quota has been exceeded routinely. In response, new accountability measures have been developed, including the use of a buffer on the quota, to reduce the likelihood of exceeding the quota.

The recreational sector consists of for-hire vessels and privately owned vessels. Federal permits for for-hire vessels fishing in federal waters have been in moratorium since 2004; no new permits are available. Federally permitted for-hire vessels may not participate in the extended fishing opportunities provided by some states in state waters (GMFMC 2008b), but privately owned vessels may fish in both federal and state waters when open. For 2014, in addition to the nine-day federal season, Texas state waters were open for 356 days, Louisiana for 277 days, Florida for 43 days, and Mississippi and Alabama for 12 days. This has resulted in a decreasing proportion of red snapper landings represented by federally permitted for-hire vessels which were restricted to fishing for red snapper in federal waters and not in state waters. Since 1986, the percentage of the red snapper recreational quota harvested by federally permitted for-hire vessels has decreased from 66.2% in 1986, to 16.1% in 2013.

Amendment 40 to the Fishery Management Plan for the Reef Fish Resources of the Gulf of Mexico consists of three management actions. The first action would establish two components within the recreational sector: a federal for-hire component and a private angling component. The federal for-hire component would include all for-hire operators with a valid or renewable federal reef fish for-hire permit. The private angling component would include all other for-hire operators (e.g., state-licensed) and recreational anglers fishing from privately owned vessels. Establishing the distinct components would provide the basis for management approaches to be tailored to each component and to reduce the likelihood for recreational quota overruns which could jeopardize the rebuilding of the red snapper stock.

This action also includes a provision which would end the separation of the recreational sector into components after three years. The Gulf of Mexico Fishery Management Council (Council)

has expressed its intent to establish a management plan for the recreational sector under a regional approach. Specifying the date upon which sector separation would sunset would allow the Council to evaluate a regional approach for the entire recreational sector and require the Council to revisit its decision to manage the recreational components separately. On the other hand, including this provision would limit the management approaches which may be developed and applied to the components of the recreational sector, constraining the potential benefits that could result from tailoring management to each component.

The second action would allocate the recreational red snapper quota between the components established in Action 1. The federal for-hire component would be allocated 42.3% and the private angling component would be allocated 57.7% of the recreational red snapper quota. This allocation is based on average percentages landed by each component, based on 50% of the average percentages landed by each component between 1986 and 2013 and 50% of the average percentages landed by each component between 2006 and 2013, and removing landings for 2010 from both time series. This allocation relies on the longest time series available (1986-2013) and on a more recent time series (2006-2013), striking a balance between recreational anglers' long-term participation and recent participation.

The third action would establish separate season closure provisions for the federal for-hire component and the private angling component. A fishing season would be established for each component, the length of which would be estimated based on the allocation of each component. Although separate closures would be specified for each component, should the total recreational quota be determined to have been met, the recreational harvest of red snapper would be closed for the duration of the year, regardless of whether a component has remaining quota. Thus, the benefits of establishing separate quotas may be decreased.

Collectively, the actions in this plan amendment would establish the platform for which management measures may be adopted for each component of the recreational sector, but would not establish any management measures to be applied to the respective components. Any such management measures would be developed subsequently through the Council process using the appropriate document and required analyses.

The Gulf of Mexico red snapper stock is managed under the Council's Reef Fish Fishery Management Plan. Therefore, the actions of this amendment would not be expected to impact fishery participants in areas adjacent to the Gulf of Mexico, such as fisheries managed under the Caribbean and South Atlantic Councils' jurisdictions.

Biological Effects (Conservation Effects)

The establishment of sector separation (Actions 1-3) is not expected to have any direct effects for the biological environment as detailed in Section 4.1.1. This is because these actions do not change the overall red snapper recreational quota, so little change is expected in overall recreational red snapper fishing effort and removals of fish from the stock. However, establishing sector separation is expected to have indirect effects on the red snapper stock.

The most likely indirect effect on the red snapper stock from establishing the two components and subsequent allocation would be a reduction in discard mortality. The relative number of

discards has been found to be lower for the charter boat component than the private angling component (see Section 4.1.2). The allocation of 42.3% to the federal for-hire component has a higher federal for-hire percentage of landings by this component since 2008. This means proportionally that more red snapper fishing should be conducted by the federal for-hire component and reduce the overall amount of red snapper discards by the recreational sector, and by extension, reduce discard mortality. This would benefit the red snapper stock. However, this reduction in discards is likely minimal given red snapper is a part of a multi-species fishery, and so red snapper discards are expected to occur when recreational red snapper fishing is closed but reef fish fishing continues as other reef fish species are targeted.

Another beneficial indirect effect on the red snapper stock resulting from these actions should be a reduction in the probability of overfishing. Dividing the recreational sector fishing for red snapper could result in improved landings information. For example, efforts are underway to incorporate electronic reporting for all vessels in the federal for-hire component to improve accountability. (Currently, electronic reporting is required for headboats, only.) This improved information could lead to improved harvest projections and monitoring of landings. This should reduce the probability of annual catch limit overages.

Economic Effects

For the reasons summarized below and discussed in the amendment, the analysis of the expected economic effects of the actions in this proposed amendment does not include quantitative estimates for expected economic effects. Instead, detailed qualitative analyses are provided. The separation of the recreational sector into two components and allocation of the recreational red snapper quota between the components would allow the federal for-hire component to harvest a preset and non-decreasing portion of the recreational red snapper quota. This could potentially result in a more predictable season length, better business planning, and improvements to the economic performance of for-hire businesses. Conversely, the establishment of separate components and allocations to each component would limit the private angling component to harvesting the proportion of the recreational red snapper quota allocated to them, thereby halting the growth in the percentage of the recreational red snapper quota harvested by private anglers in recent years. Although an allocation would be established for the private angler component, increased harvest in state waters may require additional management measures by the Council to effectively manage and restrain red snapper harvest by this component. Sector separation, in and of itself, would only provide a platform for the future management measures that could be tailored to the specific characteristics and needs of each component, thereby possibly generating increased additional economic benefits. A quantitative evaluation of potential economic benefits that could result from sector separation would require, at a minimum, detailed information on the allocation of the recreational red snapper quota between the two components and on the management measures to be implemented once the new components are created.

The economic evaluation of recreational management measures, such as the establishment of separate components, would typically include quantitative estimates of the expected changes in economic value, as measured by changes in consumer surplus to recreational anglers by mode and producer surplus to for-hire operators. However, estimates of consumer surplus specific to each angler type (those fishing from private vessels and those fishing from for-hire vessels) are not available. Although it can be stated that curtailing the growth of fishing effort in the private

angling component may redistribute effort (fishing trips) to the federal for-hire component in subsequent years, the resulting effort levels that may develop in the two components are also unknown. In addition to generating consumer surplus, fishing activity by the federal for-hire component generates producer surplus to the for-hire vessels. If consumer surplus per angler trip is assumed constant across both components, increasing the share of the quota harvested by the federal for-hire component would likely result in an increase in economic value because of the associated increase in producer surplus. The size of any potential increase, however, would be determined by several unknown factors, including the demand for for-hire trips, the ability of the industry to respond to this demand and how these factors change once sector separation is implemented. As previously stated, the establishment of separate components is expected to provide opportunities to design and implement management approaches adapted to the specific needs and preferences of each component, thereby potentially resulting in increases in economic value. For each component, the magnitude of potential increased economic benefits that could result from this action would primarily rest on the type and quality of the management instruments implemented post sector separation. The incentive structure associated with the access to fishing privileges established to manage each component would constitute a key determinant of the magnitude of expected potential economic benefits.

The sunset provision could limit potential economic benefits expected from sector separation because the Council may not have the opportunity to implement potentially beneficial management measures requiring an extended time frame to be developed. Furthermore, even if management measures tailored to the specific needs of each component were implemented, a sunset clause could reduce potential economic benefits because these measures may not be in place for a time period long enough to fully yield the economic benefits anticipated. Conversely, by providing a date certain to revert to a recreational red snapper sector without components unless the Council takes specific action to extend sector separation, the sunset provision may contribute to a timelier cancellation of the federal for-hire and private angling components should unintended adverse economic effects arise or should the positive economic effects anticipated fail to materialize.

Compared to the percentage of the recreational red snapper quota harvested by the federal for-hire component in 2013, the Council's preferred allocation would increase the estimated percentage of the quota typically harvested by the federal for-hire component and accordingly decrease the percentage available for harvest to the private angling component. The economic effects expected to result from alternative allocations between components are usually evaluated based on consumer and producer surplus (economic value) changes relative to a baseline or status quo allocation. Because these components have not previously existed, there is no previously established baseline allocation between the federal for-hire and private angling components. The allocation of greater percentages of the recreational quota to the federal for-hire component would be expected to result in increases in for-hire trips and associated increases in consumer and producer surplus. However, the magnitude of the increase in for-hire trips that would be expected to result from a given allocation, which is determined by several factors including the demand for for-hire trips, is not known. Similarly, allocating greater proportions of the recreational quota to the private angling component would be expected to result in increases in private angler trips and in corresponding increases in consumer surplus. Changes in economic value are not estimated because it cannot be assumed that the resource allocation within each

component is efficient. As suggested by Holzer and McConnell (2014) and in a recent report (OECD 2014), changes in net benefit estimates based on the generally accepted application of the equi-marginal principle and associated inferences about economic efficiency are erroneous when each component's quota is not efficiently allocated within the component. Furthermore, policy prescriptions based on these inferences are invalid, and therefore, not useful. Based on the preceding discussion, all that can be concluded is that potential economic benefits accruing to each component would be expected to increase the more allocation that component receives.

Establishing separate closure provisions for the federal for-hire and private angling components would be expected to result in increased economic benefits because it would increase the management flexibility to implement component-specific measures designed to increase the economic benefits accruing to each component. Distinct components within the recreational sector, the allocation of the recreational quota between the components, and the establishment of separate closure provisions do not exempt the components from the requirements of Section 407(d) of the Magnuson-Stevens Act which requires that red snapper recreational fishing be halted once the recreational quota is caught. Therefore, potential economic benefits expected to result from sector separation with specific closure provisions for each component may be limited by this provision in the Act.

Social Effects

The actions of this amendment would affect the entire recreational sector, but impacts would depend on several factors including the red snapper regulations in a participant's state, the amount of fishing allowed in other Gulf States with less restrictive regulations than federal regulations, and the fishing mode (private or for-hire) used to access the fishery. A primary effect of establishing distinct components with separate allocations (Actions 1 and 2) would be to discontinue the decreasing proportion of landings from federally permitted for-hire vessels over time. This trend has resulted in fewer fishing opportunities, and an associated likely decline in social benefits, for for-hire anglers, operators, and associated businesses. The separation of the recreational sector into two components would allow the federal for-hire component to harvest a predetermined and non-decreasing portion of the recreational red snapper quota. As a result, although the season from year to year may continue to vary (as affected by changing rates of effort and harvest success within the for-hire component), it would not be as greatly influenced by harvest activity by the private component. Thus, while anglers fishing from private vessels benefit the most from status quo because they would not be constrained to a portion of the recreational quota, the current pattern of decreasing access for anglers fishing from federally permitted for-hire vessels would be allowed to continue.

Red snapper caught in extended seasons in state waters count toward filling the annual Gulf-wide quota. In projecting the length of the 2014 recreational season, it was estimated that 47% of the annual catch target (ACT) would be caught in state waters while federal waters are closed (Table 2.2.4b) as a result of state regulations that are less restrictive than federal regulations. Because of this expected harvest, the remaining quota only allowed for a 9-day federal season. Private anglers are able to participate in these extended fishing opportunities, while federally permitted for-hire vessels are not. As a result of this amendment, the allocation (Action 2) and separate season closures (Action 3) for each component would apportion fishing opportunities between the components and establish the federal season. Private anglers would fish under the

opportunities provided by the private angling component's allocation and would continue to enjoy the fishing opportunities provided in state waters. Because these state water landings would count toward the private angling quota, those anglers who are able to access red snapper in open state waters would be expected to enjoy more fishing opportunities than other private anglers for whom red snapper is not accessible in state waters. For example, red snapper are more accessible within Florida's state waters off the Panhandle than off the west Florida shelf. Nevertheless, all landings from the private angling component would count towards the private angling allocation.

Establishing separate season closures for the components (Action 3) should result in positive effects for both components, as neither would lose fishing opportunities as a result of a quota overage by the other component. However, even with separate season closures, when the Gulf-wide recreational quota is met, the recreational harvest of red snapper must end (Section 407(d) of the Magnuson-Stevens Act). Thus, the potential benefits of establishing separate quotas and season closures may not be realized without attending measures to ensure each component does not exceed its quota.

As a result of the actions proposed in this amendment, recreational anglers would not be expected to have additional incentives to participate in red snapper fishing under adverse weather or ocean conditions. Therefore, safety-at-sea issues would not be expected to arise from this action.

CHAPTER 1. INTRODUCTION

1.1 Background

The Gulf of Mexico (Gulf) red snapper stock is overfished and currently under a rebuilding plan. Consistent with the rebuilding plan, both commercial and recreational quotas have been allowed to increase as the stock has recovered. The commercial sector has been managed under an individual fishing quota (IFQ) program since 2007, and landings have stayed below the commercial quota as each IFQ allocation holder is strictly monitored to ensure they do not land more fish than pounds allocated to them through the program. The recreational sector, which has experienced quota overages and shorter seasons recently, is managed under a quota, bag and size limits, and closed seasons. The recreational season length is determined through projections that rely on previous years' landings information. Even though the recreational quota has increased in recent years, the season length has decreased, in part because the average size of the fish harvested has increased (i.e., it takes fewer fish to fill the quota). Additionally, inconsistent state regulations have made harvest projections more difficult. To minimize the chances of the recreational sector exceeding its quota, the Gulf of Mexico Fishery Management Council (Council) asked the National Marine Fisheries Service (NMFS) to put in place an annual catch target (ACT) as an accountability measure for the 2014 fishing season. The ACT, which is what the recreational season length is based on, is reduced from the quota and decreases the chance the quota will be exceeded. The Council has also transmitted for approval a framework action that would put in place an ACT for 2015 and beyond as well as put in place an overage adjustment to mitigate the effects should landings exceed the quota.

The recreational sector in the Gulf includes a private vessel component and a for-hire component. The for-hire component includes charter boats and headboats. Those for-hire vessels with federal reef fish for-hire permits are allowed to fish for red snapper in federal waters, and those without federal permits are restricted to fishing for red snapper in state waters. Current recreational management measures are typically applied to the recreational sector as a whole, without making a distinction between the private and for-hire components. Because recreational red snapper season lengths have been decreasing, red snapper fishing opportunities for both the for-hire and private angling components have been reduced. Some members of the recreational sector feel that if these two components are separated, then fishery management measures can be tailored for each component to improve for-hire and private angler red snapper fishing opportunities. In this document, sector separation is defined as the partition of a sector into distinct components. Specifically, the separation of the recreational sector would entail the partition of the sector into two distinct components, resulting in a private component (which would include state-permitted for-hire vessels that do not have a federal permit) and a federal for-hire component.

Since 2003, there has been a moratorium on the issuance of new federal reef fish for-hire permits. This means that participation in the federal for-hire component is capped; no additional federal permits are available. This also means that access to these vessels is limited to the recreational anglers that can fit on these permitted vessels. On the other hand, there is no limit to

the number of anglers fishing from private recreational vessels which may target reef fish species; it is an open entry fishery. There is also no limit to the number of state-issued permits for guideboats. These state-permitted for-hire vessels may land federally managed species in state waters only; they may not take paying passengers on trips to land federally managed species from federal waters. Over time, the number of private recreational licensed anglers has increased, while the number of vessels with federal for-hire permits has decreased (Figure 1.1.1). This has resulted over time in private vessel landings representing a greater proportion of the recreational quota as a whole (Figure 1.1.2). This change in vessel demographics is one issue that may be addressed by sector separation. Additionally, landings data for the private recreational component have a higher degree of uncertainty because of differences in how these data are collected. When private recreational landings estimates are combined with for-hire landings data, less effective management measures may be implemented in the recreational sector.

Management actions considering recreational sector separation have been included and subsequently removed from Reef Fish Amendment 32 (GMFMC 2011a) and from the Generic Annual Catch Limits/Accountability Measures (ACL/AM) Amendment (GMFMC 2011b). Analyses of sector separation were presented to the Gulf of Mexico Fishery Management Council (Council) in April and October 2011, and April 2012. At the April 2012 Council meeting, the Council indicated its intent to further discuss issues related to sector separation by initiating a plan amendment. The Council reviewed a scoping document at its June 2012 meeting, which considered sector separation for six reef fish species with existing sector allocations (commercial-recreational). The Council then requested that the sector separation scoping document be combined with the grouper allocation options paper, which was under development at the same time, and that the document only address red snapper and red, gag, and black groupers. At its August 2012 meeting, the Council reviewed the sector allocations document, moving to table further discussion until completion of the 2013 red snapper benchmark assessment.

In January 2013, the Council expressed its intent to resume discussion of red snapper allocation separate from sector separation, resulting in development of a public hearing draft for Red Snapper Allocation (Amendment 28). At the October 2013 meeting, the Council requested sector separation be addressed independently with the intent that this would be the first step towards regulating the different recreational components separately. This request resulted in Amendment 40. The Council decided to limit the scope of the action to just two components of the recreational sector – private angling and federal for-hire (see Appendix D). If the for-hire component also included state-permitted vessels, this action would be unmanageable because of difficulties in enforcing federal regulations on vessels that do not have a federal permit and are limited to state waters when fishing for reef fish. In addition, the Council determined to limit the scope to a single federal for-hire component rather than further separating federally permitted headboats and charter boats into their own components. This was done to simplify identifying these vessels (the same permit applies to headboats and charter boats) as well as allow the Council more flexibility in addressing for-hire management issues in future actions. This management flexibility also applies to developing regulations for the private-angling component.

Red Snapper ACL Designation

For red snapper management, rather than using ACLs, the Council has been referring to the sector quotas as the functional equivalent of sector ACLs, and the sum of all quotas as the stock ACLs. Although this alternative terminology is allowed under the National Standard 1 guidelines, it has been awkward. Furthermore, red snapper ACLs are not currently specified in the Code of Federal Regulations, although quotas are specified which accomplish the equivalent function. To simplify the language and apply the same ACL terminology to red snapper as is used for other stocks, Section 1.4 contains a statement to define ACLs for red snapper. This is a change in terminology with no impact on the environment.

Gulf of Mexico Fishery Management Council (Council)

- Responsible for conservation and management of fish stocks
- Consists of 17 voting members: 11 appointed by the Secretary of Commerce; 1 representative from each of the 5 Gulf States, the Southeast Regional Administrator of National Marine Fisheries Service (NMFS); and 4 non-voting members
- Responsible for developing fishery management plans and amendments, and recommends actions to NMFS for implementation

National Marine Fisheries Service (NMFS)

- Responsible for preventing overfishing while achieving optimum yield
- Approves, disapproves, or partially approves Council recommendations
- Implements regulations

To contextualize sector separation, this section provides background information on changes within the recreational sector focused around licenses, landings, and effort. Changes in the number of state fishing licenses, state for-hire permits, and federal for-hire permits are summarized, first. Next, information on recreational red snapper landings and effort is provided, including a comparison between annual landings and the quota, and increases in the number of angler trips for the entire recreational sector and by mode. Overall, these data suggest an increase in recreational effort over time as well as the growth in landings made from private vessels compared with for-hire vessels. Additionally, this section uses landings, quota, and effort (angler trips) data for red snapper, only. The ratio of landings over time between for-hire and private vessels varies for other reef fish species.

Permits and licenses

State Saltwater Recreational Fishing Licenses (resident and non-resident)

Between 2000 and 2012, most Gulf States recorded increases in the annual number of saltwater fishing licenses sold (Figure 1.1.1). During this time interval, the largest increase (79.4%) was recorded for the state of Texas. In Alabama, Florida, and Louisiana fishing licenses increased by 11.0%, 7.2%, and 21.6%, respectively. In Mississippi, the only state with a decrease in the number of fishing licenses during this interval, the number of licenses fell by 0.8%. Overall, the number of recreational saltwater fishing licenses in the Gulf increased by 33.3% (Figure 1.1.1). There is no limit on the number of state saltwater fishing licenses which may be sold.

State-Permitted For-Hire Vessels

Between 2000 and 2012, the number of state for-hire permits sold by Gulf States increased by 12% (Table 1.1.1). In 2012, Florida accounted for 62.3 % of the permits, the largest proportion. Alabama, Louisiana, Mississippi, and Texas accounted for 4.2%, 13.3%, 2.5%, and 17.5% of the permits, respectively. There is no limit on the number of state for-hire permits which may be sold. A large proportion of these state-permitted for hire vessels specialize in trips targeting non-reef fish species including red drum, spotted seatrout, and flounder. State-licensed for-hire vessels, however, are not permitted to harvest red snapper or other federally managed species from federal waters.

Table 1.1.1. Number of state-licensed for-hire vessels in the Gulf (by state) – 2000 to 2012.

Year	State					Total
	Alabama	Florida	Louisiana	Mississippi	Texas	
2000	143	2,957	476	124	1,635	5,335
2001	158	3,193	525	134	1,887	5,897
2002	167	3,303	562	136	1,862	6,030
2003	143	3,406	657	140	1,895	6,241
2004	158	3,355	678	186	903	5,280
2005	150	3,576	695	175	920	5,516
2006	141	3,177	603	146	929	4,996
2007	155	3,556	631	136	996	5,474
2008	197	3,596	664	146	1,095	5,698
2009	180	3,439	661	136	987	5,403
2010	269	3,472	714	152	1,028	5,635
2011	263	3,636	760	155	1,021	5,831
2012	251	3,704	793	151	1,047	5,950
% Change 2000-12	75.5	25.3	66.6	21.7	- 35.9	11.5

Source: Gulf States Marine Fisheries Commission, License & Fees for Alabama, Florida, Louisiana, Mississippi, and Texas in Their Marine Waters for the Year (2000-2012).

Federal For-hire Reef Fish Permits

Implemented in 2004, Amendment 20 (GMFMC 2003) established a moratorium on the sale of federal for-hire reef fish permits, effectively limiting the maximum number of permits to 1,693. Although existing permits are transferable, by 2013 the number of federal for-hire reef fish permits had decreased to 1,368, or by 19.2% (Table 1.1.2). In 2013, of the five Gulf States, Florida accounted for 58.8% of the permits, the largest proportion of federal for-hire reef fish permits. Texas (16.2%), Alabama (11.6%), Louisiana (8.9%), and Mississippi (3.4%) account for much smaller proportions of the permits in 2013. The decreasing number of federal for-hire permits is provided alongside the increasing number of saltwater fishing licenses sold to private anglers, in Figure 1.1.1.

Table 1.1.2. Number of federal reef fish for-hire permits – by state (2008 – 2013).

Year	State						Total
	Alabama	Florida	Louisiana	Mississippi	Texas	Other	
2008	154	931	110	57	243	24	1,519
2009	150	900	111	52	241	19	1,473
2010	147	865	110	52	237	21	1,432
2011	148	832	123	50	226	17	1,396
2012	155	814	123	48	221	17	1,378
2013	159	804	122	47	221	15	1,368

Source: National Marine Fisheries Service, Southeast Regional Office.

Gulf State Fishing License and Federal Charter Permits Sales

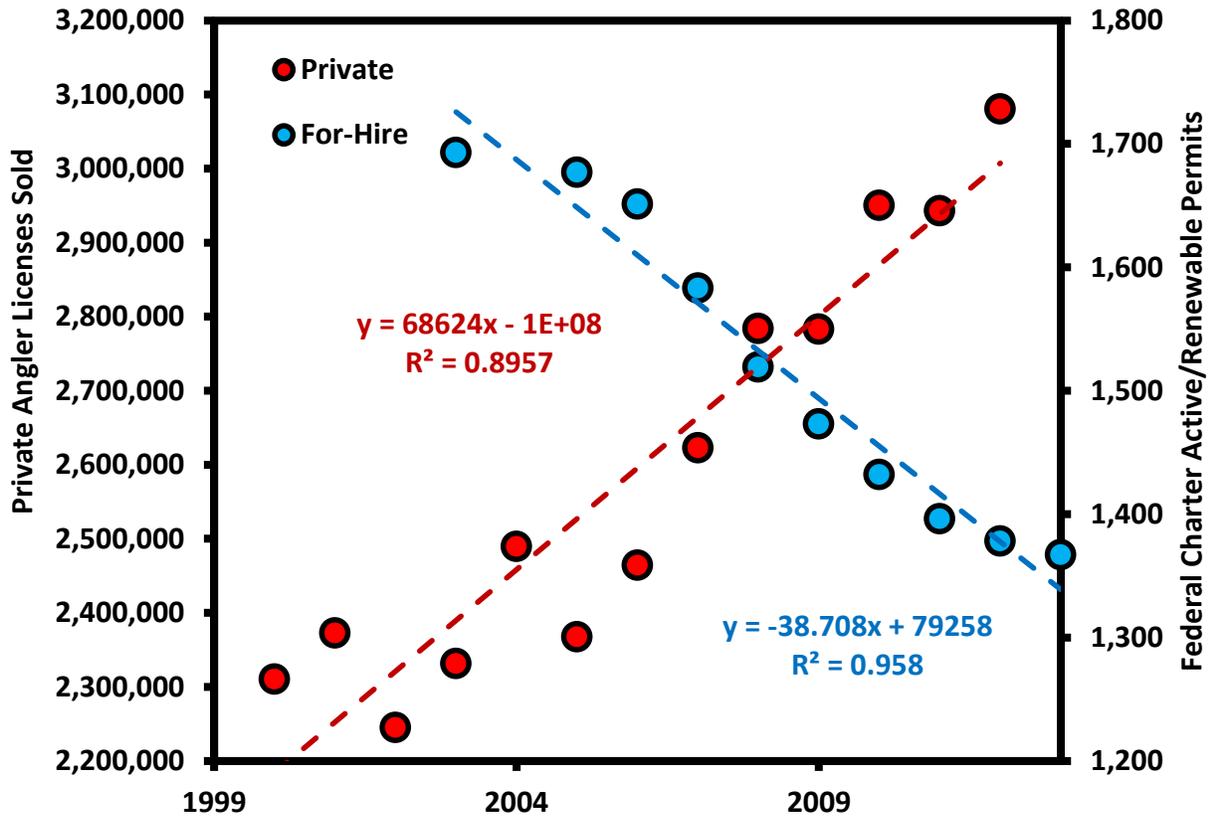


Figure 1.1.1. Relationship between the number of state recreational saltwater licenses (sold to residents and non-residents) and federal for-hire permits for all Gulf States. Source: Gulf Red Snapper Sector Separation Model, National Marine Fisheries Service, Southeast Regional Office (4/2011; data updated 8/7/14).

Figure 1.1.2 provides recreational landings from private vessels and for-hire vessels (1991-2013). For most of the 1990s, over one million more pounds of landings each year were made from for-hire vessels than private vessels, with the gap narrowing during the early 2000s. Since 2007, more red snapper have been landed from private vessels than for-hire vessels, Gulf-wide.

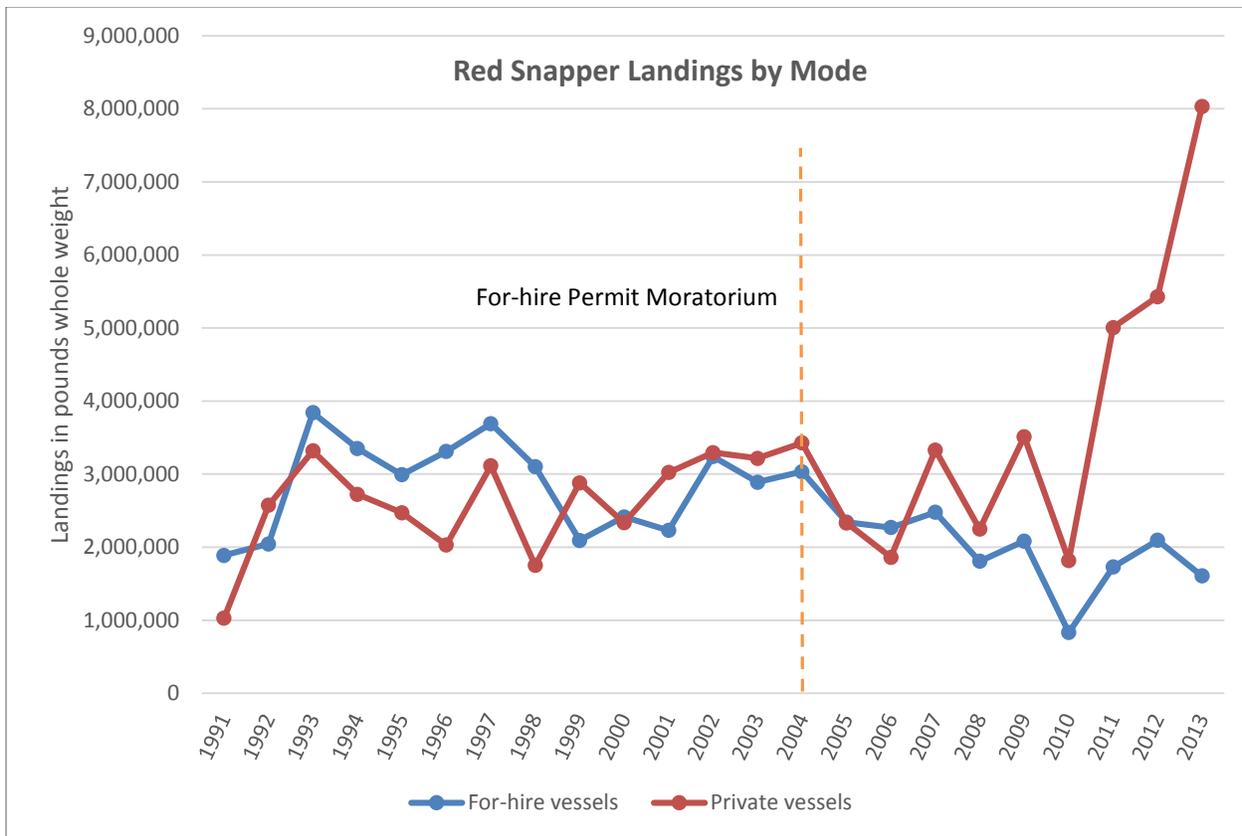


Figure 1.1.2. Red snapper recreational landings by private vessels (including state-licensed for-hire vessels) and federally permitted for-hire vessels (charters and headboats combined). Source: Calibrated MRIP landings, Southeast Fisheries Science Center recreational annual catch limit dataset.

Red snapper effort

Measured by number of angler trips, recreational angler effort steadily increased overall until just the last few years (Figure 1.1.3). An analysis of annual red snapper angler trips in the Gulf based on a series of 5-year averages illustrates an increase in recreational red snapper-related effort, where the average annual number of angler trips increased from 304,291 (1986-1990) to 582,460 (1996-2000), and to 584,298 (2009-2013) (Table 1.1.3). Recent increases in estimated angler trips can be attributed to two factors. One is the increase in fishing opportunities for private anglers because of recent extended state season lengths. The other, which is specific to 2013, is that changes in MRIP methodology in response to a National Research Council report (<http://dels.nas.edu/Report/Review-Recreational-Fisheries-Survey-Methods/11616>) may have influenced estimates of angler trips. These estimates are currently under review and may require some type of calibration with estimates from earlier years.

Table 1.1.3. Annual red snapper recreational angler-trips by state (1986 – 2013).

Year	State					Gulf Trips
	Alabama	Florida	Louisiana	Mississippi	Texas	
1986	31,449	171,637	60,588	8,221	42,203	314,098
1987	31,617	93,205	34,217	5,298	54,215	218,552
1988	42,064	206,117	43,425	13,985	56,143	361,734
1989	64,177	151,333	67,958	9,402	52,115	344,985
1990	85,116	81,972	52,209	13,486	49,302	282,085
1991	83,050	158,946	35,610	20,309	60,497	358,411
1992	123,852	120,303	61,278	52,238	78,097	435,768
1993	169,055	237,993	89,628	65,782	84,239	646,697
1994	143,342	184,805	90,601	50,746	104,911	574,405
1995	157,418	130,210	93,936	26,673	105,905	514,142
1996	138,714	158,274	62,638	26,171	107,500	493,298
1997	181,201	224,175	62,311	52,469	82,041	602,197
1998	131,929	301,408	46,937	27,621	91,734	599,629
1999	196,987	307,565	69,182	14,721	53,726	642,182
2000	148,473	278,982	69,568	12,644	65,331	574,997
2001	191,269	356,548	54,117	26,512	59,871	688,317
2002	211,446	328,965	26,640	40,746	71,866	679,663
2003	219,372	345,840	47,772	36,128	68,225	717,337
2004	158,617	391,044	45,062	14,389	71,411	680,524
2005	114,294	240,628	32,218	16,276	73,614	477,030
2006	88,734	301,779	68,422	12,615	89,043	560,592
2007	125,581	385,560	75,190	4,804	76,048	667,183
2008	64,479	277,517	40,408	9,640	39,279	431,322
2009	110,684	339,640	57,243	8,959	55,283	571,808
2010	29,601	214,893	3,468	5,659	49,174	302,795
2011	168,054	231,282	23,788	22,708	54,601	500,433
2012	119,172	249,265	53,671	13,589	49,976	485,673
2013	295,794	652,418	38,583	22,982	51,001	1,060,778

Source: National Marine Fisheries Service, Southeast Regional Office.

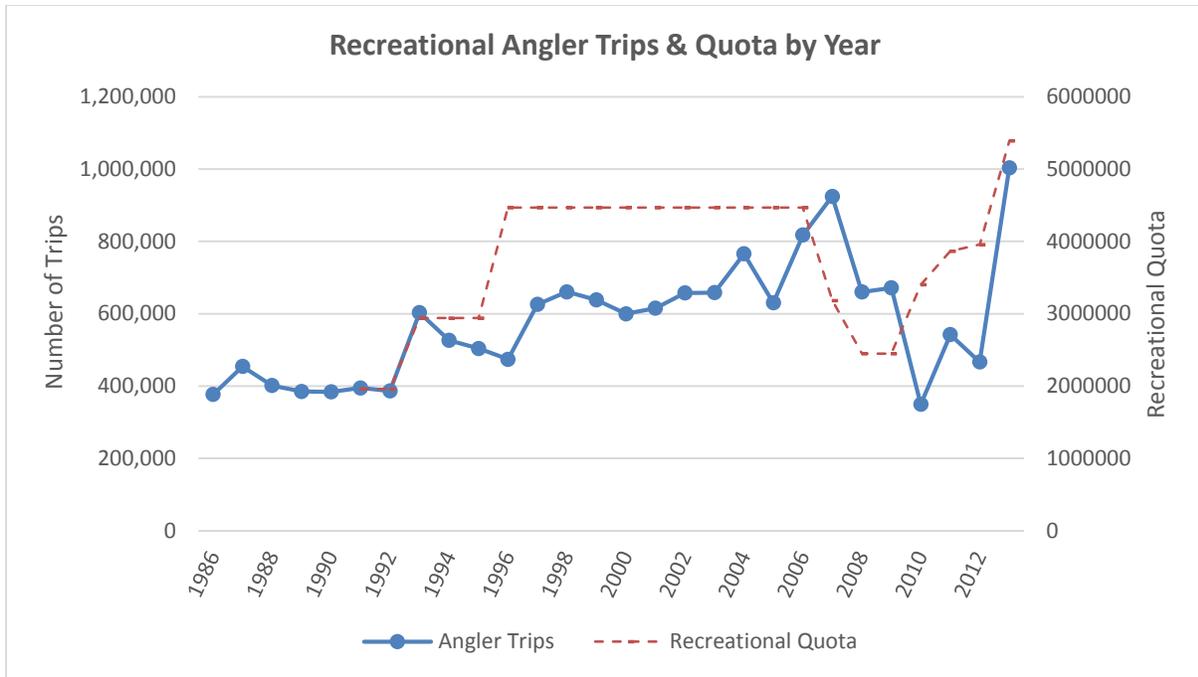


Figure 1.1.3. Number of red snapper recreational angler trips and quotas (1986-2013), Gulf-wide. Recreational allocations began in 1991 and recreational quotas began in 1997. Angler trips for Texas, from 2010-2013, include headboat trips only. Source: National Marine Fisheries Service, Southeast Regional Office.

While overall angler effort has increased, the moratorium on federal for-hire permits has limited growth in the industry and, in turn, anglers’ access to vessels. Information on the number of recreational angler trips targeting red snapper taken on private vessels and for-hire vessels is provided in Figure 1.1.4. An evaluation of effort by mode suggests that private recreational anglers now account for an increasing share of the red snapper-related effort in the Gulf. While private angling represented on average 44% of the red snapper angler-trips for the time interval between 1986 and 1990, the private vessels accounted for an average of 69% of angler-trips between 2009 and 2013 (Table 1.1.4). By 2013, 79% of the red snapper angler-trips in the Gulf were taken by anglers fishing from private vessels.

Table 1.1.4. Annual red snapper recreational angler-trips for two modes (1986-2013). For-hire mode includes state and federally permitted for-hire vessels.

Year	Private	For-Hire
1986	137,333	176,765
1987	99,246	119,306
1988	155,361	206,373
1989	149,792	195,193
1990	140,198	141,887
1991	152,440	205,971
1992	211,462	224,306
1993	271,553	375,144
1994	225,322	349,083
1995	227,270	286,872
1996	202,922	290,376
1997	236,126	366,071
1998	160,684	438,945
1999	298,205	343,977
2000	282,217	292,780
2001	424,662	263,655
2002	365,114	314,549
2003	427,267	290,070
2004	471,805	208,719
2005	304,604	172,426
2006	353,714	206,878
2007	448,143	219,040
2008	257,738	173,584
2009	369,853	201,955
2010	196,842	105,953
2011	316,096	184,336
2012	298,014	187,659
2013	842,112	218,666

Source: NMFS-SERO.

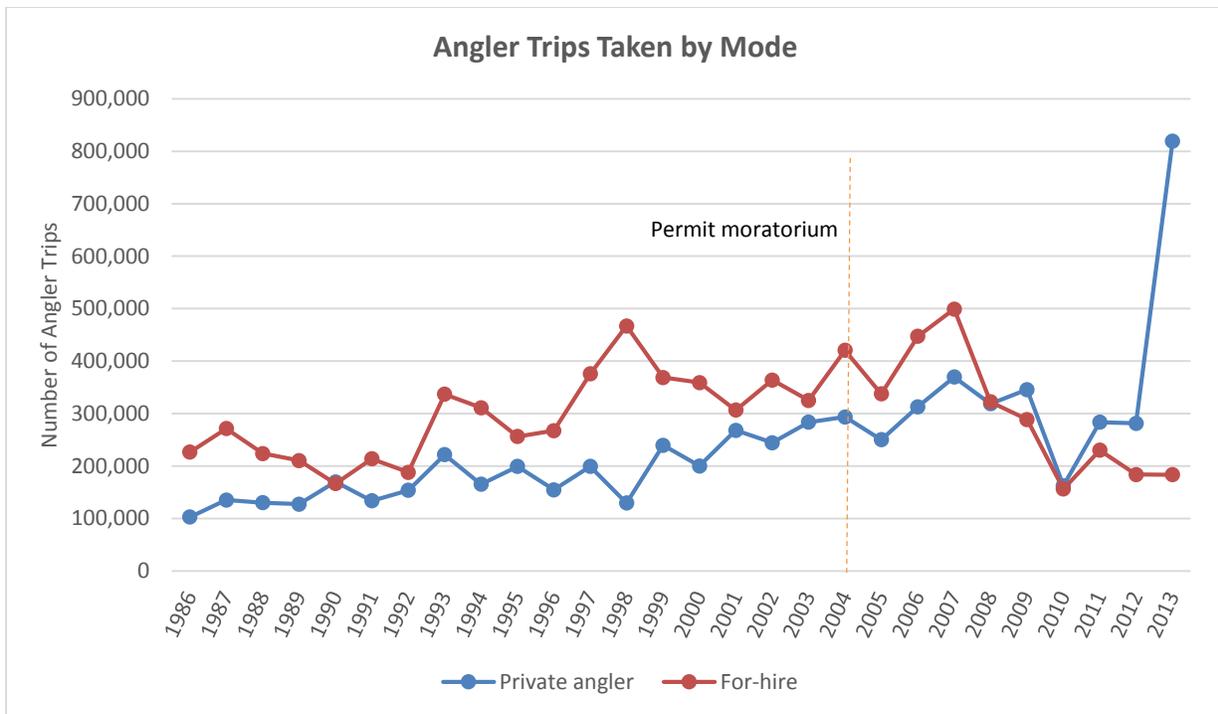


Figure 1.1.4. Number of red snapper angler trips taken on private and for-hire (all charter boats and headboats) vessels. Angler trips for Texas, from 2010-2013, include headboat trips only. Source: National Marine Fisheries Service, Southeast Regional Office.

Gulf-wide private/state-permitted guideboats and federal for-hire recreational landings are provided in Figure 1.1.5. Table 2.2.1.1 provides landings by year for the private and for-hire components and Table 2.2.1.2 includes the proportions of each group’s landings out of the total recreational landings. Since 1986, private angler landings have increased as a percentage of the total recreational landings, while landings from charter boats have decreased proportionally. Headboat landings have also decreased over time, but by a smaller percentage than charter boats.

The proportion of landings Gulf-wide by mode varies with a gradual shift toward private angler vessels in recent years, particularly since the permit moratorium began. The pattern of landings within each state, and the average proportion of landings for each state over time, vary from the Gulf-wide averages. Figures 1.1.6-1.1.10 provide the proportion of landings by mode for each Gulf State.

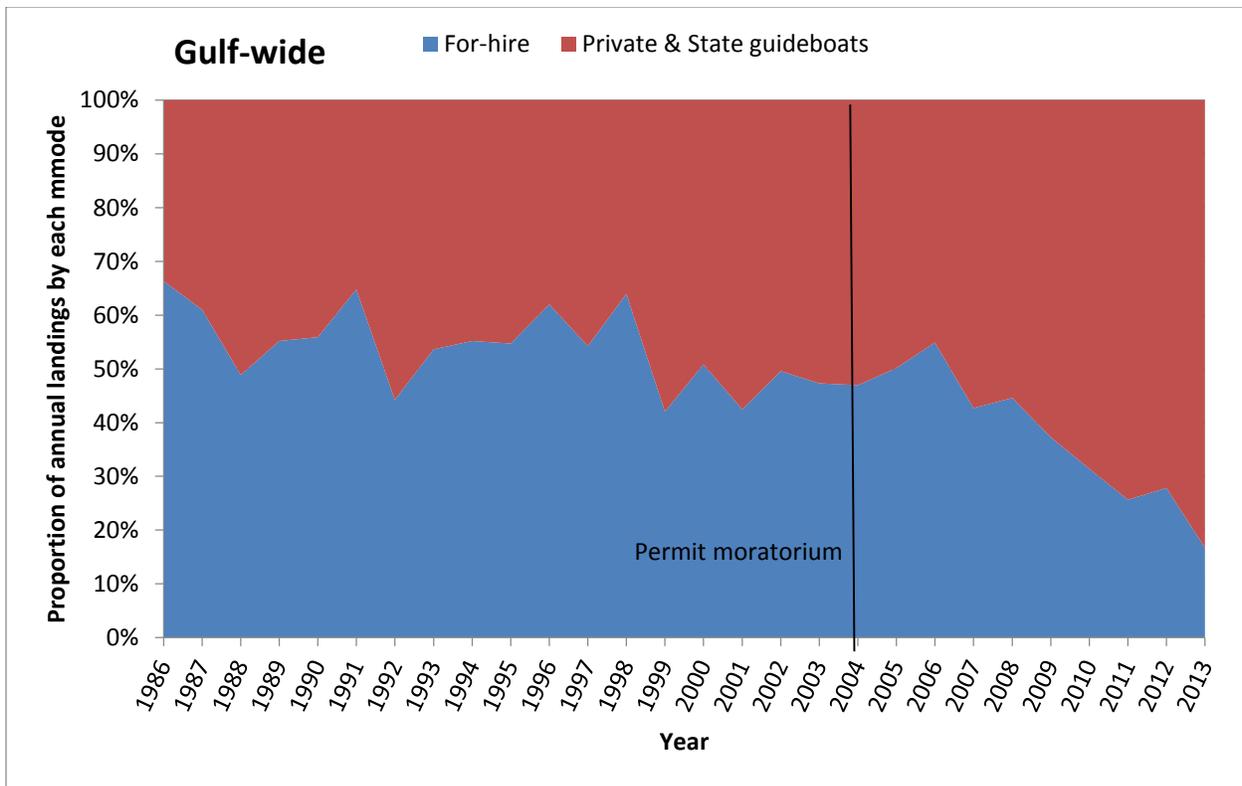


Figure 1.1.5. Gulf-wide: Proportion of recreational red snapper landings by mode (federal for-hire; private vessels and state-permitted guideboats) (1986-2013). Source: Calibrated MRIP landings, Southeast Fisheries Science Center, ACL database.

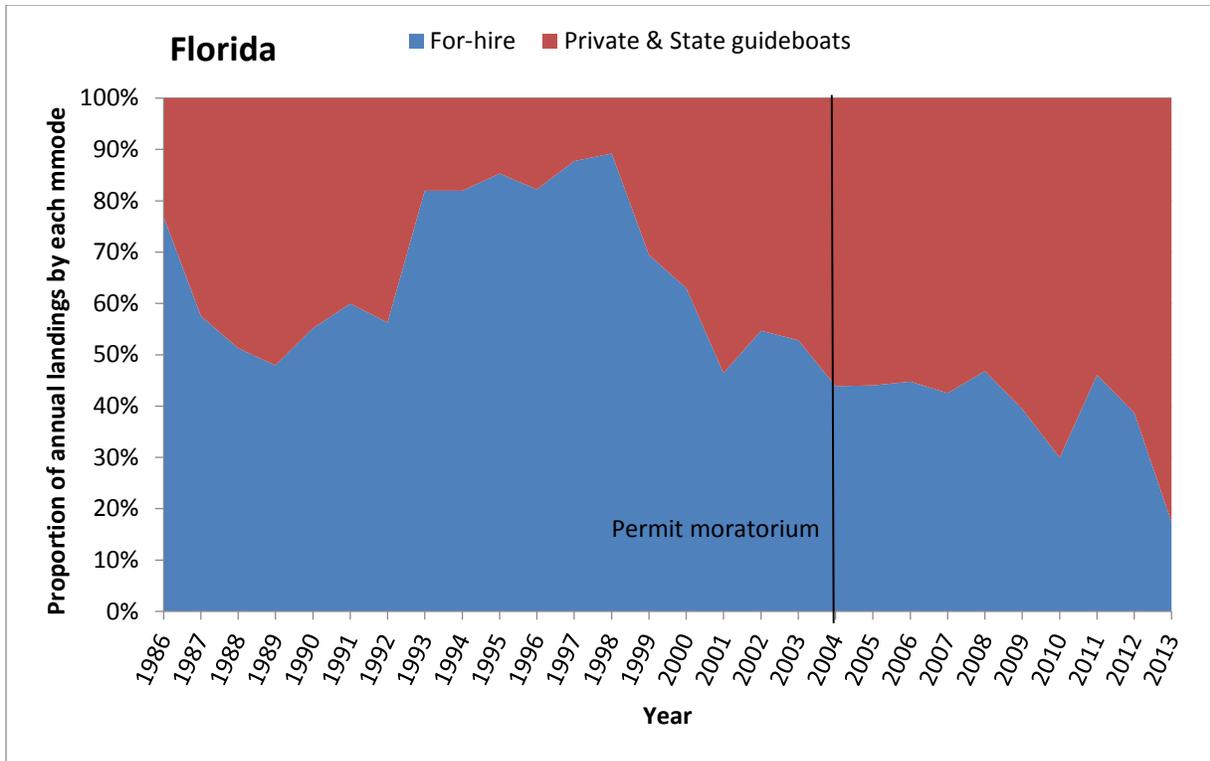


Figure 1.1.6. Florida: Proportion of recreational red snapper landings by mode (federal for-hire; private vessels and state-permitted guideboats) (1986-2013).

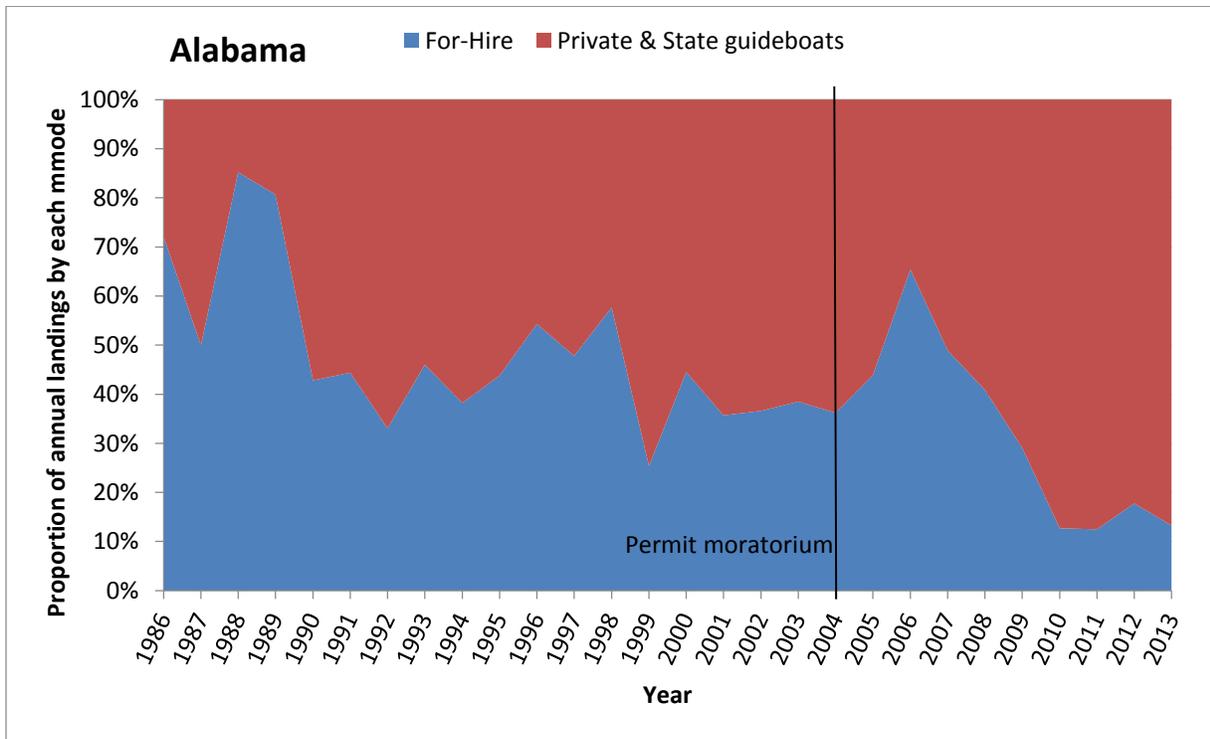


Figure 1.1.7. Alabama: Proportion of recreational red snapper landings by mode (federal for-hire; private vessels and state-permitted guideboats) (1986-2013).

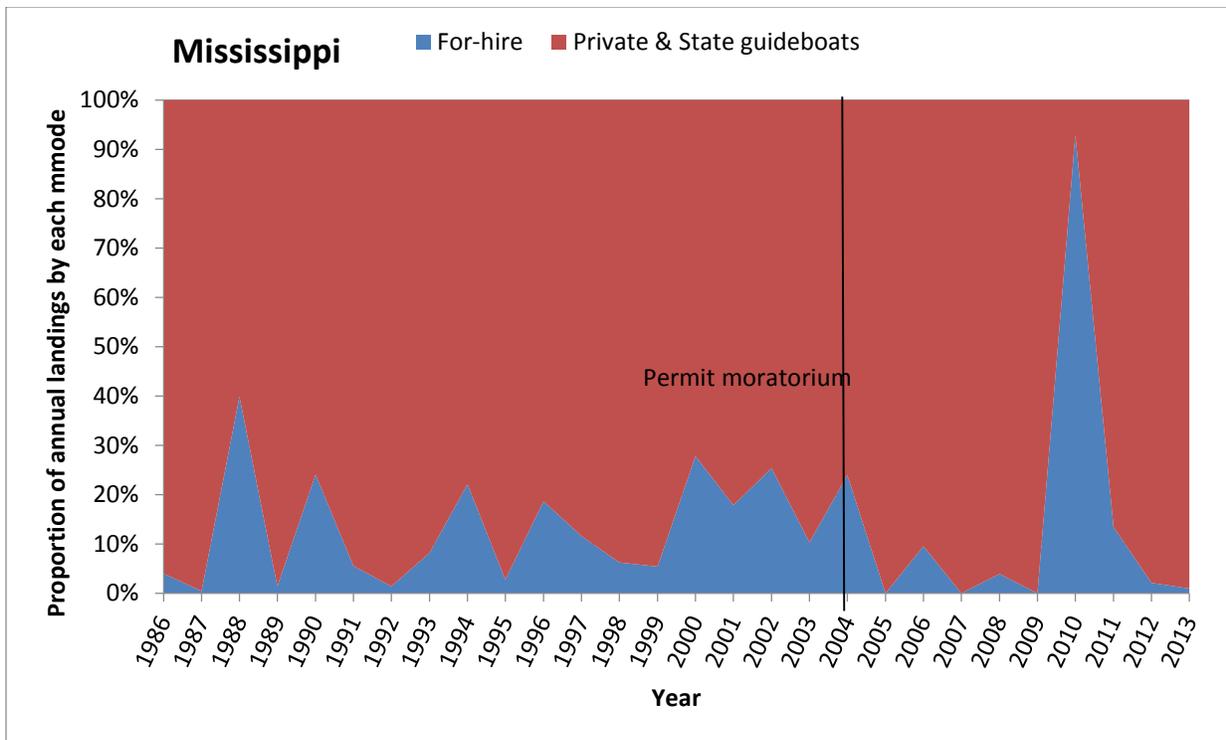


Figure 1.1.8. Mississippi: Proportion of recreational red snapper landings by mode (federal for-hire; private vessels and state-permitted guideboats) (1986-2013). For the years with 100% landings by private vessels, no data were available for for-hire landings.

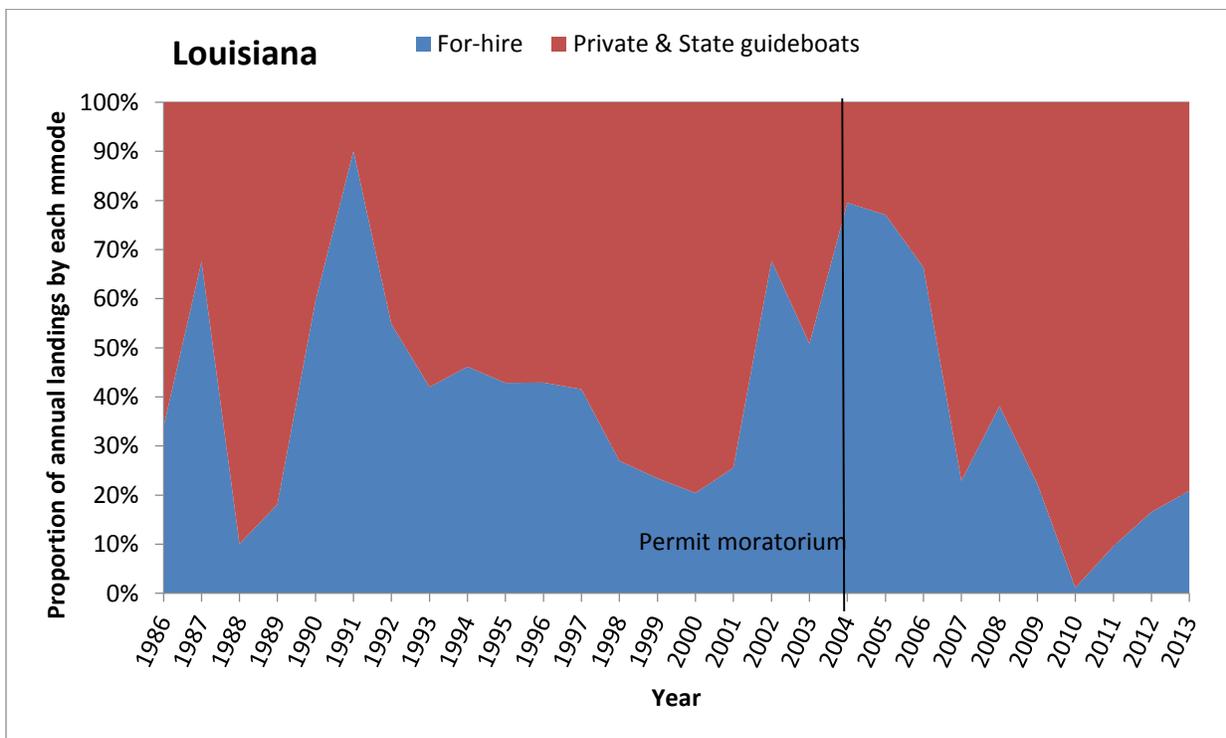


Figure 1.1.9. Louisiana: Proportion of recreational red snapper landings by mode (federal for-hire; private vessels and state-permitted guideboats) (1986-2013).

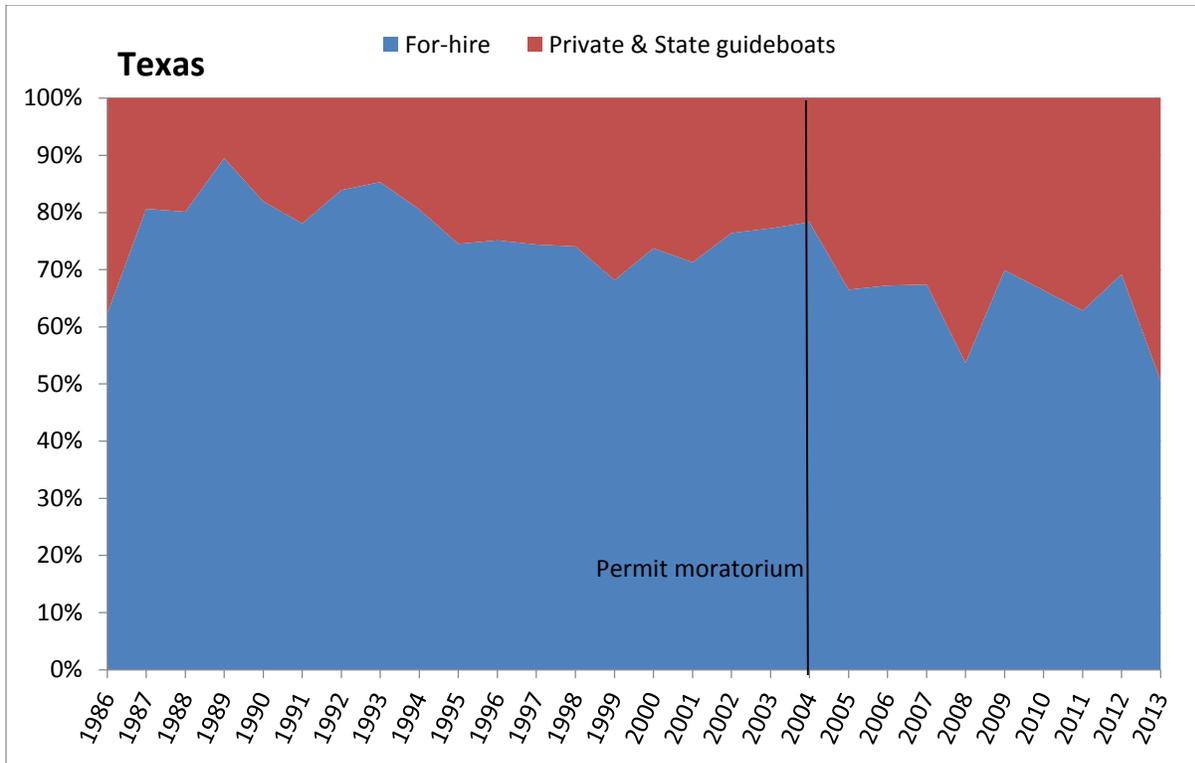


Figure 1.1.10. Texas: Proportion of recreational red snapper landings by mode (federal for-hire; private vessels and state-permitted guideboats) (1986-2013).

A separation of the recreational red snapper sector into two components could have additional implications. Section 407(d) of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) mandates that the recreational harvest of red snapper be closed once the recreational quota is reached. With separate federal for-hire and private angler quotas, it is possible that a component with remaining quota could be shut down, should it be determined that the Gulf-wide recreational quota has been met.

As with allocation decisions that determine access to a resource between user groups, sector separation is a controversial topic, strongly supported by some and opposed by others. Opponents of sector separation argue that separate allocations could deprive recreational fishermen of full access to the resource, particularly in situations where one component fails to fully harvest its allocation, but un-harvested allocation is unavailable to the other component. Proponents of sector separation suggest that it could improve accountability and management flexibility, allowing the federal for-hire and private angling components to potentially be managed with different regulations, such as fishing seasons, bag, and size limits. Proponents also argue that sector separation would allow the Council to consider alternative management approaches for each component, e.g., incentive-based approaches or the creation of organizations similar to angling management organizations proposed by Sutinen and Johnston (2003). It is important to emphasize that this amendment does not mandate inter-sector trading nor the development of an individual fishing quota (IFQ) program for the for-hire fleet.

1.2 Purpose and Need

The purpose of this action is to define, within the recreational sector, distinct private angling and federal for-hire components of the recreational red snapper fishery in the Gulf of Mexico and allocate the recreational red snapper quota between these recreational components. Establishing separate components within the recreational sector would provide a basis for flexible management approaches tailored to each component and reduce the likelihood for recreational quota overruns which could jeopardize the rebuilding of the red snapper stock. The need for the proposed action is to prevent overfishing while achieving the optimum yield, particularly with respect to recreational opportunities, while rebuilding the red snapper stock.

1.3 History of Management

This history of management covers events pertinent to red snapper allocation and setting quotas. A complete history of management for the FMP is available on the Council's website: http://www.gulfcouncil.org/fishery_management_plans/reef_fish_management.php and a history of red snapper management through 2006 is presented in Hood et al. (2007). The final rule for the Reef Fish Fishery Management Plan [FMP] (with its associated environmental impact statement [EIS]) (GMFMC 1981) was effective November 8, 1984, and defined the reef fish fishery management unit to include red snapper and other important reef fish.

Currently, the commercial sector fishing for red snapper is regulated by a 13-inch total length (TL) minimum size limit and managed under an individual quota program. Recreational fishing for red snapper is managed with a 16-inch TL minimum size limit, 2-fish bag limit, and a season beginning on June 1 and ending when the recreational quota is projected to be caught. Other reef fish fishery management measures that affect red snapper fishing include permit requirements for the commercial and for-hire fleets as well as season-area closures.

Red snapper allocation and quotas: The final rule for **Amendment 1** (GMFMC 1989) to the Reef Fish FMP (with its associated Environmental Assessment (EA), Regulatory Impact Review (RIR), and Initial Regulatory Flexibility Analysis [IRFA]) was effective in February 1990. The amendment specified a framework procedure for specifying the total allowable catch (TAC) to allow for annual management changes. A part of that specification was to establish a species' allocation. These were based on the percentage of total landings during the base period of 1979-1987. For red snapper, the commercial sector landed 51% and the recreational sector landed 49% of red snapper over the base period. **Amendment 1** also established a commercial quota of 3.1 million pounds. The recreational quota was established through a 1997 regulatory amendment (with its associated EA and RIR) (GMFMC 1995) with a final rule effective in October 1997. Prior to 1997, the recreational sector had exceeded its allocation of the red snapper TAC, though the overages were declining through more restrictive recreational management measures (see Section 3, Table 3.1.2). With the establishment of a recreational quota, the Regional Administrator was authorized to close the recreational season when the quota is reached as required by the Magnuson-Stevens Act. Commercial and recreational quotas,

recreational allocations, and commercial and recreational landings are provided in Table 3.1.2. The Council is evaluating whether the allocation should be changed in Amendment 28. At its April 2014 meeting, the Council requested an emergency rule to revise the recreational AMs for red snapper by applying a 20% buffer to the recreational quota, which resulted in a recreational annual catch target (ACT) of 4.312 million pounds whole weight (NMFS 2014). The Council's decision to request an emergency rule was made following the decision of the U.S. District Court for the District of Columbia in *Guindon v. Pritzker* (March 26, 2014). A framework action is being developed that would create an ACT and a quota overage adjustment to apply to the 2015 fishing year and beyond. At the June 2014 meeting, the Council selected as preferred to adopt an ACT based on a 20% buffer to the recreational quota. The Council also selected as preferred an overage adjustment such that the amount by which the recreational quota is exceeded in a fishing season is deducted from the following year's quota.

For-hire permit requirements: The requirement of permits to operate for-hire vessels in the Gulf exclusive economic zone for reef fish fishing was implemented through **Amendment 11** (with its associated EA, RIR, and IRFA) on April 1, 1996. The initial purpose of the permits was to address potential abuses in the two-day bag limit allowance. It was thought that by having a permit to which sanctions could be applied would improve compliance with the two-day bag limit. In addition, the permit requirement was seen as a way to enhance monitoring of the for-hire component of the recreational sector. **Amendment 20** (with its associated EA and RIR; GMFMC 2003), implemented on June 16, 2003, established a three-year moratorium on the issuance of new charter and headboat Gulf reef fish permits to limit further expansion in the for-hire fisheries, an industry concern, while the Council considered the need for more comprehensive effort management systems. This moratorium was extended indefinitely in **Amendment 25** (with its Supplemental EIS, RIR, and IRFA), implemented June 15, 2006).

1.4 ACL Designation for Red Snapper

The Magnuson-Stevens Reauthorization Act of 2006 required that ACLs be defined in 2010 for fisheries subject to overfishing; and in 2011 for all other fisheries. The NS1 guidelines allowed regional fishery management councils to propose alternative approaches for satisfying the ACL requirements of the Magnuson-Stevens Act, provided that the regional fishery management councils document their rationale for any alternative approaches. In 2010 and 2011, the Council continued its approach of setting a total allowable catch (TAC) rather than an ACL for red snapper, but established that TAC was functionally equivalent to ACL. In 2012, NMFS removed the TAC terminology from the 50 CFR Part 622 regulations. Consequently, framework actions in 2012 and 2013 to adjust red snapper catch levels established quotas that were functionally equivalent to sector-ACLs, and which in sum were functionally equivalent to the stock-ACL. This complies with the intent of the ACL requirements. However, ACLs were not defined at that time.

Since 2010, actions to change the red snapper catch levels have been implemented through framework actions which have set TAC or quotas that are functionally equivalent to ACLs. Section 407(d) of the Magnuson-Stevens Act requires recreational and commercial quotas for red snapper in the Gulf of Mexico. The current situation of not having an actual ACL, but rather

functional equivalents, has resulted in awkward wording when discussing and implementing red snapper catch levels. More importantly, accountability measures are triggered by ACLs being exceeded.

NMFS has provided guidance that defining ACLs must take place in a plan amendment. Because “functional equivalents of ACLs” is the current terminology, defining ACLs has no impact on management of red snapper or on the environment. Therefore ACLs can be defined through a declaration rather than through a series of actions and alternatives. The purpose of this section is to define ACLs for red snapper through the following declaration.

In all regulatory actions for red snapper subsequent to this amendment, the quota for each sector shall be the ACL for that sector, and the sum of the quotas shall be the stock-ACL.

CHAPTER 2. MANAGEMENT ALTERNATIVES

2.1 Action 1 – Establishment of Private Angling and Federal For-hire Components

Alternative 1: Maintain the current structure of the recreational sector. The recreational sector includes private anglers and all for-hire operators.

Preferred Alternative 2: Establish a red snapper federal for-hire component. The federal for-hire component would include **all** for-hire operators with a valid or renewable federal reef fish for-hire permit. Establish a private angling component that would include all other for-hire operators and private recreational anglers.

Alternative 3: Establish a **voluntary** red snapper federal for-hire component. The federal for-hire component would include **only** for-hire operators with a valid or renewable federal reef fish for-hire permit **who elected to join** the federal for-hire component. A **fully transferable** endorsement to the federal reef fish charter permit would be issued to those for-hire operators who **elected to join** the federal for-hire component. Establish a private angling component that would include all other for-hire operators and private recreational anglers. Opportunities to join or to opt out from the federal for-hire component are offered:

Option a: once, at the implementation of the program

Option b: every year

Option c: every 3 years

Option d: every 5 years

Alternative 4: Establish a **voluntary** red snapper federal for-hire component. The federal for-hire component would include **only** for-hire operators with a valid or renewable federal reef fish for-hire permit **who elected to join** the federal for-hire component. A **non-transferable** endorsement to the federal reef fish charter permit would be issued to those for-hire operators who **elected to join** the federal for-hire component. Establish a private angling component that would include all other for-hire operators and private recreational anglers. Opportunities to join or to opt out from the federal for-hire component are offered:

Option a: once, at the implementation of the program

Option b: every year

Option c: every 3 years

Option d: every 5 years

Preferred Alternative 5: Establish a provision to sunset sector separation:

Option a: 2 calendar years after implementation.

Preferred Option b: 3 calendar years after implementation.

Option c: 5 calendar years after implementation.

Discussion

In its search for alternative approaches that could potentially improve the management of red snapper resources, particularly for the recreational sector, the Gulf of Mexico Fishery Management Council (Council) has considered and continues to evaluate a variety of management measures. These include the possible delegation of some management responsibilities to the states, the specification of data collection requirements, and a reconsideration of restrictions placed on segments of the recreational sector. In addition, segments of the recreational sector have initiated pilot programs intended to improve red snapper management in the recreational sector. The potential partition of the recreational sector proposed in this amendment falls within the range of measures under consideration. Furthermore, the National Research Council's conclusions and recommendations for recreational fisheries emphasized the differences between the for-hire sector and private anglers (NRC 2006).

The Council initially considered a separation of the recreational sector into a for-hire component that would include federally permitted for-hire vessels and state-permitted for-hire vessels. However, during the October 2013 meeting, the Council indicated that this partition would not be practicable because a sector that includes federally permitted for-hire vessels and state-permitted vessels would be unmanageable. Because the Council has no authority to manage or place constraints on state-permitted for-hire vessels, the Council has decided to consider a for-hire component limited to federally permitted vessels only. Therefore, the establishment of a federal for-hire component as proposed here reflects the Council's intent. The establishment of a federal for-hire component would expand the range of possible management avenues available to the Council as it continues to seek improvements in the management of recreational red snapper. Potential future improvements may include more flexibility for each segment and a better business environment for federally permitted for-hire operators. The extent to which the federal for-hire component and the private angling component would benefit from a partition of the recreational sector, with distinct red snapper quotas allocated to each component, rests on the quality of the management measures that would be implemented after the establishment of separate components.

Alternative 1 would not change the current management structure of red snapper fishing by the recreational sector. All participants in the recreational sector, private anglers and for-hire operators alike, would continue to be subject to the same set of regulations, including size and daily possession limits, and seasonal closures. **Alternative 1** would not recognize the specificities inherent to different components of the recreational sector and would limit the Council's ability to implement management measures specific to each component. The status quo alternative would continue to adopt a one size fits all approach to management and would curtail efforts to consider management approaches that may be more suitable to the various components of the recreational sector.

Preferred Alternative 2 would partition the recreational sector into two components. One would be a federal for-hire component including federally permitted for-hire operators and their angler clients, and the other would be the private angling component, including anglers fishing from private vessels and state-permitted for-hire vessels. **Preferred Alternative 2** would not grant federally permitted for-hire operators the flexibility to opt in or out of the federal for-hire

component. Once established, the red snapper federal for-hire component of the recreational sector would include all federally permitted for-hire operators. **Preferred Alternative 2** may adversely affect the quality of the interaction between the Council and its constituents, particularly those who are currently opposed to the establishment of a separate federal for-hire component.

The potential change to the current structure of the recreational sector and the establishment of distinct federal for-hire and private angling components has been extensively discussed by the Council and its constituents. These discussions have highlighted both clear support for the implementation of “sector separation” as well as marked opposition to the idea. In light of these considerations, the Council decided to include in this amendment alternatives that would allow for-hire operators to either join the federal for-hire component to be created or elect to stay within the private angling component. The motion directing staff to include a voluntary option in this amendment was approved during the October 2013 Council meeting. **Alternative 3** provides a range of options that would allow federal for-hire operators to determine the component of the recreational sector within which they would be included. In practical terms, the Council and the National Marine Fisheries Service (NMFS) would have to design and make available a vehicle (such as an electronic fillable form) to allow for-hire operators to opt in and join the federal for-hire component. Additionally, the creation of a voluntary federal for-hire component would require the establishment of a practicable and readily verifiable means to distinguish vessels operating under the federal for-hire component from those vessels that elected to be included in the private angling component. Under **Alternative 3**, NMFS would issue a fully transferable endorsement to the federal for-hire reef fish permit to those for-hire operators who join the federal for-hire component.

Alternative 3 Option a would give federally permitted for-hire operators one opportunity to select the component of the recreational sector within which they would like to be included. Upon implementation of this amendment, federally permitted for-hire operators could exercise their option to join the federal for-hire component or be a member of the private angling component. Although **Alternative 3** would grant greater flexibility than **Preferred Alternative 2**, it would not allow federally permitted for-hire operators to change their mind and switch between the components of the recreational sector once membership into the federal for-hire and private angling components have been established. These limitations may constitute a challenge for those for-hire operators who may wish to join the federal for-hire component in subsequent years.

Alternative 3 Options b-d would allow for-hire operators to switch their membership from one component of the recreational sector to the other at specified times. Federally permitted operators who initially opted out of the federal for-hire component would have the opportunity to reconsider and join the sector at a later date. Similarly, **Alternative 3 Options b-d** would allow operators who joined the federal for-hire component to change their mind and decide later that the private angling component would be a more suitable option. **Alternative 3 Option b**, which would offer federally permitted for-hire operators an opportunity to switch their membership on an annual basis would be the most flexible option. However, annual fluctuations in the membership of the federal for-hire and private angling components would likely increase the administrative burden and may affect the timely implementation of some recreational

management measures. If it is determined that continuously fluctuating sectors could impede the longer term management of the federal for-hire or private angling components, the Council may consider the establishment of longer time intervals between periods in which federally permitted for-hire operators are afforded opportunities to reconsider and switch their membership from one component to the other. **Alternative 3 Option c** would allow federally permitted for-hire operators to switch membership every three years. **Alternative 3 Option d** would extend the time interval during which full flexibility is granted to federally permitted for-hire operators and allow them to switch membership every five years.

Alternative 4 would also establish a voluntary federal for-hire component and grant fishermen the flexibility to join or opt out of the federal for-hire component at regular time intervals. Federal for-hire operators who do not elect to join the federal for-hire component would be members of the private angling component. With respect to the flexibility to join or opt out of the federal for-hire component, **Alternative 4** grants fishermen the same level of flexibility that **Alternative 3** would allow. As in **Alternative 3**, **Alternative 4** would offer opportunities to join or to opt out of the federal for-hire component once, at the implementation of the program (**Option a**), every year (**Option b**), every 3 years (**Option c**), or every 5 years (**Option d**). However, relative to the endorsement to the federal reef fish for-hire permit to be issued to those operators who elected to join the federal for-hire component, **Alternative 4** would be less flexible than **Alternative 3**. **Alternative 4** would issue a non-transferable endorsement to the federal reef fish for-hire permit to operators who elect to join the federal for-hire component.

For **Preferred Alternative 2** and **Alternatives 3-4**, separate for-hire and private angling components of the recreational sector would be established and the recreational quota would be divided between the components (Action 2). Additional implications may arise from Section 407(d) of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), which mandates the closure of the recreational harvest of red snapper in the Gulf of Mexico (Gulf) when the recreational quota is reached or projected to be reached. With sub-quotas of the recreational quota distributed to each component, it is possible that one component with remaining quota could be shut down, should it be determined that the Gulf-wide recreational quota has been met. The potential implications of such a closure could be mitigated in various ways, such as the adoption of component-specific management and accountability measures.

In response to public testimony provided during the October 2014 meeting, the Council elected to add a sunset provision to this regulatory action. Although most of the proponents of sector separation expressed opposition to the inclusion of a sunset clause, the Council determined that limiting the duration of the action would provide an incentive for the Council to continue to evaluate alternative management structures for the recreational sector as a whole and take action by the sunset date to either implement a new action or to extend sector separation.

The sunset options under **Preferred Alternative 5** propose timelines for ending sector separation, i.e., the establishment of distinct federal for-hire and private angling components and associated management measures included in this amendment. Sector separation would end after 2 years under **Option a**, after 3 years under **Preferred Option b**, and after 5 years under **Option c**. For **Option a**, **Preferred Option b**, and **Option c**, sector separation would expire at the end

of the second, third, or fifth calendar year of the program, respectively, regardless of the implementation date of this amendment. For example, if this amendment were to be implemented in May 2015, under **Preferred Option b**, sector separation would end December 31, 2017. Ending sector separation means that all regulations associated with all actions in this plan amendment would expire at the sunset date.

2.2 Action 2 – Allocation of the Recreational Red Snapper Quota between the Components of the Recreational Sector

Available red snapper landings data for the for-hire fleet typically combine landings from federally permitted and state-permitted for-hire vessels. Based on an approach proposed in a National Marine Fisheries Service-Southeast Regional Office report evaluating sector separation alternatives (SERO 2011), red snapper landings from federally permitted for-hire vessels were estimated by discounting the total for-hire red snapper landings by 7%, which approximates the maximum percentage landed by state-permitted for-hire vessels in the Gulf of Mexico. Following the implementation of Reef Fish Amendment 30B in 2009 (GMFMC 2008b), the percentage of Gulf-wide for-hire landings occurring from state waters has fluctuated, ranging from 7-15% (2010 excluded due to the Deepwater Horizon MC252 oil spill). These estimated percentages may include landings from federally permitted vessels fishing in state waters. Additionally, these percentages are contingent on other factors including red snapper availability in state waters. Amounts deducted from the aggregate for-hire landings were added to landings assigned to the private angling component, because state-permitted for-hire operators are included in the private angling component. Unless otherwise specified, landings and landing percentages assigned to the federal-for-hire and private angling components of the recreational sector reflect this adjustment. In addition, red snapper landings for the shore mode were subtracted from landings assigned to the private angling component, because they are typically excluded from landing estimates used in stock assessments.

Action 2 is only applicable if separate components are established in Action 1. Initially, this action had three sub-actions including providing alternatives to apportion the recreational quota among the components created in Action 1, and two actions for adjusting the baseline allocation should a voluntary federal for-hire component be established in Action 1. Because Action 1, Alternative 2 was selected as preferred, which establishes a mandatory sector separation where all federal for-hire vessels would be in the federal for-hire component, there is no need to adjust the baseline allocation determined in Action 2 for vessel operators who decide to opt out of the for-hire component. Thus, on August 28, 2014, the Council moved these actions to adjust the baseline allocation to the Alternatives Considered But Rejected section (Appendix D).

Alternative 1: Maintain the current structure of the recreational sector. Do not divide the recreational red snapper quota and annual catch target (ACT) into sub-quotas and sub-ACTs.

Alternative 2: Allocate the recreational red snapper quota and ACT based on average landings between 1986 and 2013 (2010 excluded). Resulting federal for-hire and private angling allocations would be 48.9% and 51.1%, respectively.

Alternative 3: Allocate the recreational red snapper quota and ACT based on average landings between 1991 and 2013 (2010 excluded). Resulting federal for-hire and private angling allocations would be 46.9% and 53.1%, respectively.

Alternative 4: Allocate the recreational red snapper quota and ACT based on average landings between 1996 and 2013 (2010 excluded). Resulting federal for-hire and private angling allocations would be 44.7% and 55.3%, respectively.

Alternative 5: Allocate the recreational red snapper quota and ACT based on average landings between 2001 and 2013 (2010 excluded). Resulting federal for-hire and private angling allocations would be 40.5% and 59.5%, respectively.

Alternative 6: Allocate the recreational red snapper quota and ACT based on average landings between 2006 and 2013 (2010 excluded). Resulting federal for-hire and private angling allocations would be 35.7% and 64.3%, respectively.

Preferred Alternative 7: Allocate the recreational red snapper quota and ACT based on 50% of the average percentages landed by each component between 1986 and 2013 (2010 excluded) and 50% of the average percentages landed by each component between 2006 and 2013 (2010 excluded). Resulting federal for-hire and private angling allocations would be 42.3% and 57.7%, respectively.

Alternative 8: Allocate the recreational red snapper quota and ACT based on percentages of the quota landed by each component between 2011 and 2013. Resulting federal for-hire and private angling allocations would be 23.4% and 76.6%, respectively.

Alternative 9: Allocate the recreational red snapper quota and ACT based on average landings between 1986 and 2003. Resulting federal for-hire and private angling allocations would be 54.0% and 46.0%, respectively.

Discussion

The partition of the recreational sector into two separate components, i.e., a federal for-hire component and a private angling component (Action 1), is a prerequisite for considering alternative allocations of the recreational red snapper quota in this action. Without the establishment of separate federal for-hire and private angling components, management alternatives included in Action 2 (except the status quo alternative) and in subsequent actions in this amendment would be irrelevant. Therefore, Action 2 assumes that, for red snapper, the recreational sector has been split into a federal for-hire component and private angling component and that all federal for-hire operators would join the newly established federal for-hire component.

Gulf-wide annual landings represented by charter boats, headboats, and private angling vessels are provided in Table 2.2.1. The annual red snapper landings and proportions represented by the federal for-hire component and the private angling component are provided in Table 2.2.1.

Table 2.2.1. Recreational red snapper landings for headboats, charter boats and private anglers in the Gulf of Mexico.

Year	Charter boat	Headboat	Total For-Hire	Private Anglers
1986	2,079,524	410,487	2,490,011	1,000,832
1987	959,787	411,040	1,370,827	718,719
1988	1,035,760	614,156	1,649,916	1,489,226
1989	758,132	986,440	1,744,572	1,195,768
1990	598,465	378,312	976,777	647,757
1991	1,547,479	483,672	2,031,151	885,975
1992	1,247,987	950,062	2,198,049	2,420,240
1993	2,747,350	1,384,389	4,131,740	3,029,525
1994	2,078,505	1,525,449	3,603,955	2,471,807
1995	1,858,805	1,357,623	3,216,428	2,247,314
1996	2,150,242	1,408,779	3,559,021	1,779,868
1997	2,664,158	1,304,411	3,968,569	2,835,661
1998	2,212,911	1,124,745	3,337,656	1,516,443
1999	1,550,424	698,967	2,249,391	2,723,016
2000	1,833,278	763,287	2,596,565	2,153,542
2001	1,824,487	573,486	2,397,972	2,854,313
2002	2,659,790	824,802	3,484,592	3,050,555
2003	2,314,990	791,897	3,106,886	2,998,557
2004	2,568,367	693,276	3,261,643	3,198,600
2005	1,994,407	526,337	2,520,744	2,155,175
2006	1,862,647	576,238	2,438,885	1,692,247
2007	2,178,799	487,004	2,665,803	3,142,992
2008	1,536,759	407,952	1,944,710	2,111,165
2009	1,435,057	805,893	2,240,950	3,355,906
2010	464,592	429,527	894,119	1,756,732
2011	1,227,734	630,562	1,858,296	4,875,813
2012	1,528,613	724,077	2,252,690	5,271,550
2013	1,284,067	445,276	1,729,343	7,909,451

Notes: Landings in pounds whole weight. Charter, headboat, and total for-hire landings have not been adjusted to account for state-licensed for-hire vessel landings. Headboat landings from Alabama and the Florida Panhandle were reported to the same headboat fishing area until 2013. These Area 23 headboat landings have been assigned to each state based on the Southeast Headboat Survey vessel landing records. Source: Calibrated MRIP landings, SEFSC Recreational ACL database.

The contrast between the open entry approach in place for private anglers and the moratorium imposed on federal for-hire reef fish permits is reflected in the progressive change in relative percentages harvested by each component. Also contributing to this change, federal for-hire vessels may not participate in the additional fishing opportunities provided to private anglers by states adopting different regulations for state waters. Over time, while the proportion of landings attributable to private anglers has been increasing, the relative share of landings by anglers fishing from federally permitted for-hire vessels has declined. This trend has been increasingly

noticeable in recent years. Therefore, anglers fishing from federal for-hire vessels would account for relatively greater shares of the recreational landings when averages are computed over longer time intervals (including earlier years). It follows that using more recent time intervals to compute average landings would correspond with a greater percentage of landings attributed to the private angling component.

Table 2.2.2. Red snapper landings for the federal for-hire and private angling components in pounds whole weight and percentage of the total recreational landings. For-hire landings summarized here were reduced by 7% and those landings were added to the private-angling component's landings to account for landings by state guide boats.

Year	Federal For-Hire Component		Private Angling Component	
	Pounds	Percent	Pounds	Percent
1986	2,315,710	66.3%	1,175,133	33.7%
1987	1,274,869	61.0%	814,677	39.0%
1988	1,534,422	48.9%	1,604,720	51.1%
1989	1,622,452	55.2%	1,317,888	44.8%
1990	908,402	55.9%	716,131	44.1%
1991	1,888,970	64.8%	1,028,156	35.2%
1992	2,044,186	44.3%	2,574,103	55.7%
1993	3,842,518	53.7%	3,318,746	46.3%
1994	3,351,678	55.2%	2,724,084	44.8%
1995	2,991,278	54.7%	2,472,464	45.3%
1996	3,309,889	62.0%	2,029,000	38.0%
1997	3,690,769	54.2%	3,113,461	45.8%
1998	3,104,020	63.9%	1,750,079	36.1%
1999	2,091,934	42.1%	2,880,473	57.9%
2000	2,414,806	50.8%	2,335,301	49.2%
2001	2,230,114	42.5%	3,022,171	57.5%
2002	3,240,671	49.6%	3,294,477	50.4%
2003	2,889,404	47.3%	3,216,039	52.7%
2004	3,033,328	47.0%	3,426,915	53.0%
2005	2,344,292	50.1%	2,331,627	49.9%
2006	2,268,163	54.9%	1,862,969	45.1%
2007	2,479,197	42.7%	3,329,598	57.3%
2008	1,808,581	44.6%	2,247,295	55.4%
2009	2,084,084	37.2%	3,512,772	62.8%
2010	831,530	31.4%	1,819,321	68.6%
2011	1,728,215	25.7%	5,005,894	74.3%
2012	2,095,001	27.8%	5,429,238	72.2%
2013	1,608,289	16.7%	8,030,505	83.3%

Source: Calibrated MRIP landings, SEFSC Recreational ACL database.

Estimated red snapper allocations considered in **Alternatives 2-9** are based on average percentages harvested by the federal for-hire and the private angling components during various time intervals selected from a 1986-2013 time series. Percentages computed were then applied

to the current red snapper recreational quota (5.39 million pounds (mp)). For each alternative, resulting allocations or quotas for the two components of the recreational sector are provided in Table 2.2.3. Due to the fishery closures and associated impacts from the Deepwater Horizon MC252 oil spill (see Section 3.3), the Council decided to exclude 2010 landings from the time intervals in **Alternatives 2-7**.

Table 2.2.3. Red snapper allocations for the federal for-hire and private angling components in percentage of the recreational quota and in pounds. The pounds allocated are based on a recreational quota of 5.39 mp.

Alternative	Time Intervals	Federal For-hire		Private		Total lbs
		lbs	%	lbs	%	
2	1986-2013*(a)	2,635,710	48.9	2,754,290	51.1	5,390,000
3	1991-2013*	2,527,910	46.9	2,862,090	53.1	5,390,000
4	1996-2013*	2,409,330	44.7	2,980,670	55.3	5,390,000
5	2001-2013*	2,182,950	40.5	3,207,050	59.5	5,390,000
6	2006-2013*(b)	1,924,230	35.7	3,465,770	64.3	5,390,000
Pref. 7	0.5(a)+0.5(b)*	2,279,970	42.3	3,110,030	57.7	5,390,000
8	2011-2013	1,261,260	23.4	4,128,740	76.6	5,390,000
9	1986-2003	2,910,600	54.0	2,479,400	46.0	5,390,000

* Time interval excludes 2010.

Table 2.2.4a provides the red snapper fishing season lengths that would have been observed in 2014 if sector separation was implemented. Estimated season lengths for the private angler component are provided assuming consistency or inconsistency between state and federal regulations. These estimates are not forecasts for future red snapper season lengths. Even under status quo, i.e., a single recreational sector, the length of the 2015 recreational red snapper season is not known.

When states adopt inconsistent, less restrictive regulations for state waters the length of the federal recreational red snapper season must be shortened to account for increased landings from state waters. NMFS manages red snapper Gulf-wide, and is required to constrain harvest to within a specified quota. Gulf States have the authority to establish less restrictive regulations for their state waters, but the harvest resulting from these additional fishing opportunities must be deducted from the Gulf-wide quota, reducing the available fishing opportunities for other anglers Gulf-wide. This primarily affects anglers fishing in Gulf States with consistent regulations, as well as those fishing from federally permitted for-hire vessels. But, this also affects anglers differently within a state, because red snapper availability and abundance within a state's waters can vary regionally. Anglers in areas where red snapper are available in state waters enjoy a greater proportion of the additional fishing opportunities provided by their state, compared with anglers fishing in other areas of the state where red snapper are rarely, if ever, present in state waters. For example, red snapper are frequently caught in state waters along the Florida Panhandle but few red snapper exist in state waters along the Florida Peninsula.

The amount of harvest taken in state waters outside of the federal season has increased in recent years, as states have adopted longer seasons in an attempt to provide their anglers with greater access. For example, over half of the recreational quota was projected to be caught outside of the federal season in 2014; the remaining recreational quota only allowed for a nine-day federal season to be set. Because federally permitted for-hire vessels may not partake in the additional fishing opportunities provided in some state waters, the proportion of landings from these vessels has decreased in recent years, while the proportion of landings by private anglers fishing under the less restrictive state regulations represents an increasing percentage of the recreational quota in the most recent years. Thus, there is a trade-off in the amount of allocation each component would receive, based on the time series selected for the allocation. The federal for-hire component would receive a larger allocation the farther the time series extends back in time, while the private angling component would receive a larger allocation from selecting an allocation based on the most recent years.

Table 2.2.4b provides the estimated landings for each Gulf State on which the 2014 recreational red snapper season was based, including estimated landings during and outside of the federal season. The proportion of each state's estimated landings to occur outside of the federal season is included. Alabama and Mississippi did not announce the additional fishing days to harvest red snapper in their state waters until after the nine-day season was put in place and therefore no estimates of landings from Alabama and Mississippi state waters were incorporated into the 2014 projections.

Table 2.2.4a. Red snapper allocations for the federal for-hire and private angling components in percentage and estimated season lengths if sector separation was implemented for the 2014 fishing season. Season length calculations are based on projections that do not include MRIP calibrated landings. Season lengths for 2015 have yet to be determined and are contingent several factors, including specification of the 2015 quota and ACT and landings observed during the 2014 season.

Alternative	Allocation		Federal Season Lengths		
	For-Hire	Private	For-Hire	Private (Inconsistent Regs)*	Private (Consistent Regs)
1	Status Quo		9**	9	18
2	48.9%	51.1%	38	0	12
3	46.9%	53.1%	37	0	13
4	44.7%	55.3%	34	1	13
5	40.5%	59.5%	31	2	14
6	35.7%	64.3%	27	3	15
Pref 7	42.3%	57.7%	33	1	14
8	23.4%	76.6%	19	6	18
9	54.0%	46.0%	42	0	11

* In 2014, state seasons were open off all states when federal waters were closed. However, the additional days provided by Alabama and Mississippi were not announced until after setting the 2014 season. The federal season length was shortened to account for landings occurring outside the federal season.

** For-hire season length would have been 18 days if all states adopted consistent fishing regulations.

Table 2.2.4b. Projections of landings (pounds) during and outside of the federal season for each Gulf State, used for setting the 2014 recreational red snapper fishing season, including the number of additional days outside of the federal season each Gulf State allowed red snapper harvest to be open in state waters.

State	Outside of Federal Season:		Projected landings in federal season (9 days)	Total projected landings	% of projected landings outside of federal season
	State waters open (days)	Projected landings			
Florida	43	1,270,521	701,737	1,972,258	64.4%
Alabama	[12*]	-	1,038,486	1,038,486	-
Mississippi	[12*]	1,282 ⁺	78,692	79,974	1.6%
Louisiana	277	653,839	98,868	752,707	86.9%
Texas	356	106,294	75,827	182,121	58.4%

Note: The total projected landings by state do not include red snapper landed by the Headboat Collaborative. When added, the total estimated landings equals the recreational ACT of 4.312 mp.

Source: NMFS-SERO. *Landings estimates for the 2014 season do not include the additional state water fishing days provided by Alabama and Mississippi after the nine-day season was put in place.

⁺The estimated landings outside of the federal season for Mississippi are based on a small amount of landings that occurred outside of the state and federal seasons in 2013.

The allocation considered in **Alternative 2** is based on average landings computed over the longest time series available (1986-2013) and would allocate 48.9% and 51.1% of the red snapper recreational quota to the federal for-hire and private angling components, respectively. **Alternatives 3-6**, would allocate increasing percentages of the recreational quota to the private angling component, because they are based on progressively more recent time intervals.

Preferred Alternative 7 would determine the percentages of the red snapper recreational quota allocated to the federal for-hire and private angling components by averaging the corresponding percentages that would be allocated to each component in **Alternatives 2 and 6**. **Preferred Alternative 7** would equally weigh average landings between 1986 and 2013 and landings between 2006 and 2013. This allocation approach has been used by the Council in previous allocation exercises, e.g., the jurisdictional apportionment of black grouper and yellowtail snapper resources between the Gulf and South Atlantic Councils.

Alternative 8 would allocate the recreational red snapper quota based on average percentages of the recreational red snapper quota harvested by each component during the last three years (2011-2013). **Alternative 8** would allocate 23.4% and 76.6% of the recreational red snapper quota to the federal for-hire component and to the private angling component, respectively.

Alternative 9 would allocate the recreational red snapper quota based on average percentages of the recreational red snapper quota harvested by each component until the year the moratorium on the issuance of new federal for-hire reef fish permits took effect. **Alternative 9** would allocate 54.0% and 46% of the recreational red snapper quota to the federal for-hire and private angling component, respectively.

2.3 Action 3 – Recreational season closure provisions

Alternative 1: Maintain the current recreational red snapper season closure provisions. The recreational red snapper ACT will be used to determine the recreational red snapper season length.

Preferred Alternative 2: Establish separate red snapper season closure provisions for the federal for-hire and private angling components. The federal for-hire red snapper ACT will be used to determine the federal for-hire red snapper season length. The private angling red snapper ACT will be used to determine the private angling red snapper season length.

Discussion

Alternative 1 would maintain the current red snapper season closure that applies to the recreational sector as a whole. Under this provision, the recreational harvest of red snapper in or from the Gulf exclusive economic zone (EEZ) is closed from January 1 through May 31 each year. During the closure, the bag and possession limit for red snapper taken in or from the Gulf EEZ is zero. Beginning June 1, the recreational red snapper season is open and does not close until the entire recreational quota is projected to be caught. At that point, the bag and possession limit for red snapper taken in or from the Gulf EEZ is zero for the remainder of the year.

Implemented by emergency rule, an ACT was put in place for the 2014 recreational red snapper season, which applied a 20% buffer to the recreational quota (NMFS 2014). The Council is expected to take final action in August 2014 on a framework action to permanently adopt an ACT (the 20% buffer of the emergency rule is the preferred alternative). The ACT of the framework action is expected to be implemented prior to the expiration of the emergency rule. Should the emergency rule expire and not be extended before the framework action is implemented, the recreational red snapper quota (equivalent to the ACL) would be used to determine the recreational red snapper season length (**Alternative 1**).

Under **Preferred Alternative 2**, there would be two red snapper season closures. One would be for the federal for-hire component of the recreational sector. The season would begin on June 1 and close when the federal for-hire red snapper ACT is projected to be caught. The other closure would be for all other vessels of the recreational sector, primarily comprised of private angling vessels, but would include for-hire vessels that wish to opt out of the for-hire quota under Action 3. For this component of the sector, the season would begin on June 1 and close when this component's ACT is projected to be caught.

Preferred Alternative 2 would provide three benefits should the quota be split under Action 1. The first would be if better landings information became available for one sector, then either in-season monitoring of the harvest or better projections could be used as the basis for the quota closure. For example, if electronic logbooks were used in the federal for-hire component, then this information could be used to determine when the federal for-hire component is closed. A second benefit to **Preferred Alternative 2** is that if for some reason effort in either of the two components were to be differentially affected, then the season for the sector experiencing the

reduced effort could be longer. For example, this could occur if fuel prices spiked resulting in a reduced number of offshore trips by the private angling component, or if a hurricane were to extensively damage some region where one component was better represented than the other. Finally, this alternative would provide the Council with more flexibility in managing these components. For example, some in the for-hire component have indicated they would be interested in having the recreational bag limit reduced to one fish to extend the season length. Should the Council agree to this course of action, then the bag limit could be reduced under another action (framework or plan amendment), and the for-hire component's season length would be extended to account for the reduced bag limit.

Although separate closure provisions would be adopted for each component under **Preferred Alternative 2**, Section 407(d) of the Magnuson-Stevens Act mandates the closure of the recreational harvest of red snapper when the recreational quota is reached or projected to be reached. Even with separate quotas and closures designated for each component, it is possible that one component with remaining quota could be shut down, should it be determined that the Gulf-wide recreational quota was met upon the season closure of the other component. This issue could potentially be mitigated through the adoption of component-specific management and accountability measures.

Note that this action is restricted to two alternatives. Because the Council sees sector separation as a first step toward being able to tailor management measures for each component in future actions, the Council limited the scope of Action 3 to season closure provisions based on the existing June 1 season opening to reduce confusion in the recreational sector while long-term, component-specific measures are developed.

CHAPTER 3. AFFECTED ENVIRONMENT

The actions considered in this environmental impact statement (EIS) would affect primarily recreational fishing for red snapper in federal and state waters of the Gulf of Mexico (Gulf). Descriptions of the physical, biological, economic, social, and administrative environments were completed in the EISs for Reef Fish Amendments 27/Shrimp Amendment 14 (GMFMC 2007), 30A (GMFMC 2008a), 30B (GMFMC 2008b), 32 (GMFMC 2011a), the Generic Essential Fish Habitat (EFH) Amendment (GMFMC 2004a), and the Generic Annual Catch Limits/Accountability Measures (ACL/AM) Amendment (GMFMC 2011b). Below, information on each of these environments is summarized or updated, as appropriate.

3.1 Description of the Red Snapper Component of the Reef Fish Fishery

A description of the fishery and affected environment relative to red snapper was last fully discussed in joint Reef Fish Amendment 27/Shrimp Amendment 14 (GMFMC 2007). This section updates the previous description to include additional information since publication of that EIS.

General Features

Commercial harvest of red snapper from the Gulf began in the mid-1800s (Shipp 2001). In the 1930s, party boats built exclusively for recreational fishing began to appear (Chester 2001). Currently, the commercial sector operates under an individual fishing quota (IFQ) program. In 2011, 362 vessels participated in the IFQ program (NMFS 2012a). The recreational sector operates in the following three modes: charter boats, headboats, and private vessels. In 2012 private vessels accounted for 70.0% of recreational red snapper landings, followed by charter boats (20.3%) and headboats (9.6%). On a state-by-state basis, Alabama accounted for the most landings (36.1%), followed by Florida (32.3%), Louisiana (19.2%), Texas (8.2%), and Mississippi (4.2%) (Table 3.1.1).

Table 3.1.1. Recreational red snapper landings in 2012 by state and mode.

State	Landings (lbs whole weight)				% by State
	Charter	Headboat	Private	All Modes	
FL (west)	806,118	205,830	1,420,620	2,432,568	32.3%
AL	445,816	71,482	2,197,377	2,714,675	36.1%
MS	1,406	5,894	306,854	314,154	4.2%
LA	236,145	21,999	1,188,763	1,446,907	19.2%
TX	39,128	419,671	157,937	616,736	8.2%
Total	1,528,613	724,876	5,271,551	7,525,040	
% by Mode	20.3%	9.6%	70.0%		100%

Source: Calibrated MRIP landings, Southeast Fisheries Science Center.

The red snapper stock has been found to be in decline or in an overfished condition since the first red snapper stock assessment in 1986 (Parrack and McClellan 1986). The first red snapper rebuilding plan was implemented in 1990 through Amendment 1 (GMFMC 1989). From 1990 through 2009, red snapper harvest was managed through the setting of an annual total allowable catch (TAC). This TAC was allocated with 51% going to the commercial sector and 49% to the recreational sector. Beginning in 2010, TAC was phased out in favor of an ACL as a result of revisions to the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act). The red snapper rebuilding plan has not formally adopted the use of the term ACL. However, by allocating the acceptable biological catch (ABC) between the commercial and recreational sectors, and then setting quotas for each sector that do not exceed those allocations, the terminology and approaches used in the red snapper rebuilding plan are consistent with the use of ACLs.

Amendment 1 also established a 1990 commercial red snapper quota of 3.1 million pounds (mp) whole weight (ww) (Table 3.1.2). There was no explicit recreational quota or allocation specified in Amendment 1, only a bag limit of 7 fish and a minimum size limit of 13 inches total length. Beginning in 1991, an explicit recreational allocation in pounds was based on 49% of the TAC was specified, and this allocation was specified through Council action until 1997 when the recreational allocation was changed to a quota (Table 3.1.2). Based on the 51:49 commercial to recreational sector allocation, the commercial quota implied a TAC of about 5.2 mp in 1990, followed by explicit TACs of 4.0 mp in 1991 and 1992, 6.0 mp in 1993 through 1995, and 9.12 mp from 1996 through 2006 (Table 3.1.2). The TAC was reduced to 6.5 mp in 2007 and 5.0 mp in 2008 and 2009 as the Gulf of Mexico Fishery Management Council (Council) shifted from a constant catch rebuilding plan to a constant fishing mortality rebuilding plan (GMFMC 2007). Under a constant fishing mortality rate rebuilding plan, the ABC is allowed to increase as the stock rebuilds, thus the ABCs for 2010, 2011, and 2012 were increased to 6.945, 7.530, and 8.080 mp, respectively¹.

In July 2013, the Council reviewed a new benchmark assessment (SEDAR 31 2013) which showed that the red snapper stock was rebuilding faster than projected, partly due to strong recruitment in some recent years. Initially in 2013, a scheduled increase in the ABC to 8.690 mp was cancelled due to an overharvest in 2012 by the recreational sector. After an analysis of the impacts of the overharvest on the red snapper rebuilding plan, the 2013 ABC was increased to 8.460 mp. However, once the new benchmark assessment was completed, the Scientific and Statistical Committee (SSC) increased the ABC for 2013 to 13.5 mp with the caveat that catch levels would have to be reduced in future years unless recruitment returned to average levels. After incorporating a buffer to reduce the possibility of having to later reduce the quota, the Council further increased the 2013 commercial and recreational quotas to a combined 11.0 mp (5.61 mp and 5.39 mp, respectively) (GMFMC 2013a). The Council plans to maintain the 11.0 mp combined quota for 2014 and 2015 based on SSC recommendations, though a 2014 stock assessment may lead to a revised combined quota for 2015.

¹ Note the allocation for the commercial and recreational quotas shifted from the TAC to the ABC in 2010.

Table 3.1.2. Red snapper landings and overage/underage by sector, 1986-2013. Landings are in mp ww. Commercial quotas began in 1990. Recreational allocations began in 1991 and recreational quotas began in 1997. Summing the recreational allocation/quota and the commercial quota yields the total allowable catch (TAC) for the years 1991-2009 and the acceptable biological catch (ABC) for 2010-2013.

Year	Recreational			Commercial			Total		
	Allocation Quota	Actual landings	Difference	Quota	Actual landings	Difference	TAC/ABC	Actual landings	Difference
1986	na	3.491	na	na	3.700	na	na	6.470	na
1987	na	2.090	na	na	3.069	na	na	4.883	na
1988	na	3.139	na	na	3.960	na	na	6.528	na
1989	na	2.940	na	na	3.098	na	na	5.754	na
1990	na	1.625	na	3.1	2.650	-0.450	na	4.264	na
1991	1.96	2.917	+0.957	2.04	2.213	+0.173	4.0	5.130	+1.130
1992	1.96	4.618	+2.658	2.04	3.106	+1.066	4.0	7.724	+3.724
1993	2.94	7.161	+4.221	3.06	3.374	+0.314	6.0	10.535	+4.535
1994	2.94	6.076	+3.136	3.06	3.222	+0.162	6.0	9.298	+3.298
1995	2.94	5.464	+2.524	3.06	2.934	-0.126	6.0	8.398	+2.398
1996	4.47	5.339	+0.869	4.65	4.313	-0.337	9.12	9.652	+0.532
1997	4.47	6.804	+2.334	4.65	4.810	+0.160	9.12	11.614	+2.494
1998	4.47	4.854	+0.384	4.65	4.680	+0.030	9.12	9.534	+0.414
1999	4.47	4.972	+0.502	4.65	4.876	+0.226	9.12	9.848	+0.728
2000	4.47	4.750	+0.280	4.65	4.837	+0.187	9.12	9.587	+0.467
2001	4.47	5.252	+0.782	4.65	4.625	-0.025	9.12	9.877	+0.757
2002	4.47	6.535	+2.065	4.65	4.779	+0.129	9.12	11.314	+2.194
2003	4.47	6.105	+1.635	4.65	4.409	-0.241	9.12	10.514	+1.394
2004	4.47	6.460	+1.990	4.65	4.651	+0.001	9.12	11.111	+1.991
2005	4.47	4.676	+0.206	4.65	4.096	-0.554	9.12	8.772	-0.348
2006	4.47	4.131	-0.339	4.65	4.649	-0.001	9.12	8.780	-0.340
2007	3.185	5.809	+2.624	3.315	3.153	-0.162	6.5	8.962	+2.462
2008	2.45	4.056	+1.606	2.55	2.461	-0.089	5.0	6.517	+1.517
2009	2.45	5.597	+3.147	2.55	2.461	-0.089	5.0	8.058	+3.058
2010	3.403	2.651	-0.752	3.542	3.362	-0.180	6.945	6.013	-0.932
2011	3.866	6.734	+2.868	3.664	3.562	-0.102	7.53	10.296	+2.766
2012	3.959	7.524	+3.565	4.121	4.000	-0.121	8.08	11.524	+3.444
2013	5.390	9.639	+4.249	5.610	5.399	-0.211	11.00	15.038	+4.038

Sources: Recreational landings from the Southeast Fisheries Science Center including landings from the Marine Recreational Information Program, Texas Parks and Wildlife Department, and the Southeast Headboat Survey. Commercial landings from the Southeast Data Assessment and Review 31 Data Workshop Report (1990-2006), commercial quotas/catch allowances report from the National Marine Fisheries Service /Southeast Regional Office IFQ landings website (2007-2013): <http://sero.nmfs.noaa.gov/sf/ifq/CommercialQuotasCatchAllowanceTable.pdf>. Commercial quotas/landings in gutted weight were multiplied by 1.11 to convert to ww. Values highlighted in red are those where landings exceeded quotas.

Both the commercial and recreational sectors have had numerous allocation or quota overruns. Table 3.1.2 shows a comparison of quotas and actual harvests from 1990 through 2013. The recreational sector has had allocation/quota overruns in 21 out of 23 years in which an allocation or quota was specified, while the commercial sector has had quota overruns in 10 of 23 years. However, the commercial sector has not had overruns since 2005, including the years 2007 onward when the commercial harvest of red snapper has operated under an IFQ program.

Recreational Red Snapper Sector

Red snapper are an important component of the recreational sector's harvest of reef fish in the Gulf. Red snapper are caught from charter boats, headboats (or party boats), and private anglers fishing primarily from private or rental boats. Red snapper are primarily caught with hook-and-line gear in association with bottom structures. Recreational red snapper harvest allocations since 1991 have been set at 49% of the TAC, or 1.96 mp in 1991 and 1992, 2.94 mp for 1993 through 1995, and 4.47 mp in 1996. In 1997, a 4.47 mp recreational quota was created and it was maintained at this level through 2006. In 2007, the recreational quota was reduced to 3.185 mp. It was reduced again to 2.45 mp in 2008 and 2009. Since 2010, the recreational quota has been increased each year: 3.403 mp in 2010, 3.866 mp in 2011, 3.959 mp in 2012, and 5.390 mp in 2013 (Table 3.1.3).

Before 1984, there were no restrictions on the recreational harvest of red snapper. In November 1984, a 12-inch total length size limit was implemented, but with an allowance for five undersized fish per person. In 1990, the undersized allowance was eliminated, and the recreational sector was managed through bag and size limits with a year-round open season. In 1997, the recreational red snapper allocation was converted into a quota with accompanying quota closure should the sector exceed its quota. Recreational quota closures occurred in 1997, 1998, and 1999, becoming progressively shorter each year even though the quota remained a constant 4.47 mp.

A fixed recreational season of April 21 through October 31 (194 days) was established for 2000 through 2007. However, National Marine Fisheries Service (NMFS) returned to variable length seasons beginning in 2008. Under this management approach, due to a lag in the reporting of recreational catches, catch rates over the course of the season were projected in advance based on past trends and changes in the average size of a recreationally harvested red snapper. The recreational season opened each year on June 1 and closed on the date when the quota was projected to be reached. In 2008, the season length was reduced from 194 days to 65 days in conjunction with a reduction in quota to 2.45 mp. The season length then increased to 75 days in 2009. In 2010, the recreational red snapper season was originally projected to be 53 days. However, due to reduced effort and large emergency area closures resulting from the Deepwater Horizon MC252 oil spill, catches were below projections, and a one-time supplemental season of weekend only openings (Friday, Saturday, and Sunday) was established from October 1 through November 22. This added 24 fishing days to the 2010 season for a total of 77 days. In 2011, the season was reduced to 48 days despite an increase in the quota, due to an increase in the average size of a recreationally harvested fish. In 2012 the season was initially scheduled to be 40 days, but was extended to 46 days to compensate for the loss of fishing days due to storms (Table 3.1.3). For 2013, an increase in the ABC occurred too late to extend the June recreational

season, so the Council requested that NMFS reopen the recreational season on October 1 for whatever number of days would be needed to harvest the additional quota. NMFS estimated that the additional recreational quota would take 14 days to be caught, and therefore announced a supplemental season of October 1 through 14.

Table 3.1.3. Red snapper recreational landings vs. allocation/quota and days open, bag limit, and minimum size limits 1986-2013. Landings are in mp ww. Minimum size limits are in inches total length. Recreational allocations began in 1991, and became quotas in 1997.

Year	Allocation/ Quota	Actual landings	Difference	% over or under	Days open	Bag limit	Minimum size limit
1986	na	3.491	na		365	none	13
1987	na	2.090	na		365	none	13
1988	na	3.139	na		365	none	13
1989	na	2.940	na		365	none	13
1990	na	1.625	na		365	7	13
1991	1.96	2.917	+0.957	+49%	365	7	13
1992	1.96	4.618	+2.658	+136%	365	7	13
1993	2.94	7.161	+4.221	+144%	365	7	13
1994	2.94	6.076	+3.136	+107%	365	7	14
1995	2.94	5.464	+2.524	+86%	365	5	15
1996	4.47	5.339	+0.869	+19%	365	5	15
1997	4.47	6.804	+2.334	+52%	330	5	15
1998	4.47	4.854	+0.384	+9%	272	4	15
1999	4.47	4.972	+0.502	+11%	240	4	15
2000	4.47	4.750	+0.280	+6%	194	4	16
2001	4.47	5.252	+0.782	+17%	194	4	16
2002	4.47	6.535	+2.065	+46%	194	4	16
2003	4.47	6.105	+1.635	+37%	194	4	16
2004	4.47	6.460	+1.990	+45%	194	4	16
2005	4.47	4.676	+0.206	+5%	194	4	16
2006	4.47	4.131	-0.339	-8%	194	2	16
2007	3.185	5.809	+2.624	+82%	194	2	16
2008	2.45	4.056	+1.606	+66%	65	2	16
2009	2.45	5.597	+3.147	+128%	75	2	16
2010	3.403	2.651	-0.752	-22%	53 + 24 = 77	2	16
2011	3.866	6.734	+2.868	+74%	48	2	16
2012	3.959	7.524	+3.565	+90%	46	2	16
2013	5.390	9.639	+4.249	+79%	42	2	16

Sources: Southeast Fisheries Science Center including landings from the Marine Recreational Information Program, Texas Parks and Wildlife Department, and the Southeast Headboat Survey (May 2013). Values highlighted in red are those where landings exceeded quotas.

During the six years when the recreational harvest was an allocation, not a quota (1991 – 1996), actual recreational harvests in pounds of red snapper exceeded the allocation every year. During

the period when the recreational harvest was managed as a quota (1997 – 2013), actual recreational harvest in pounds of red snapper exceeded the quota in 15 out of 17 years, including 5 of the last 6 years (Table 3.1.3). Historical recreational landings estimates have recently been revised to reflect changes in methodology under the Marine Recreational Information Program (MRIP).

For-hire vessels have operated under a limited access system with respect to the issuance of new for-hire permits for fishing reef fish or coastal migratory pelagics since 2003. A total of 3,340 reef fish and coastal migratory pelagic charter permits were issued under the moratorium, and they are associated with 1,779 vessels. Of these vessels, 1,561 have both reef fish and coastal migratory pelagics permits, 64 have only reef fish permits, and 154 have only coastal migratory pelagics permits.

Savolainen et al. (2012) surveyed the charter and headboat fleets in the Gulf. They found that most charter boat trips occurred in the exclusive economic zone (68%) and targeted rig-reef species (64%; snappers and groupers). Pelagic (mackerel and cobia) trips accounted for 19% of trips. If examined by state, more trips targeted rig-reef species with the exception of Louisiana where rig-reef species and pelagic species had almost the same proportion of trips. In a similar survey conducted in 1998, Holland et al. (1999) found species targeted by Florida charter boat operators were king mackerel (41%), grouper (~37%), snapper (~34%), cobia (25%), and Spanish mackerel (20%). For the rest of the Gulf, Sutton et al. (1999) using the same survey reported that the majority of charter boats targeted snapper (91%), king mackerel (89%), cobia (76%), and tuna (55%).

For headboats, Savolainen et al. (2012) reported that most head boats target offshore species and fish in federal waters (81% of trips), largely due to vessel size and consumer demand. On average, 84% of trips targeted rig-reef species, while only 10 % targeted inshore species and 6% pelagic species. Holland et al. (1999) reported approximately 40% of headboats did not target any particular species. The species targeted by the largest proportion of Gulf coast Florida headboats were snapper (60%), grouper (60%) and sharks (20%) with species receiving the largest percentage of effort red grouper (46%), gag 33%), black grouper (20%), and red snapper (7%). For the other Gulf States, Sutton et al. (1999) reported that the majority of headboats targeted snapper (100%), king mackerel (85%), shark (65%), tuna (55%), and amberjack (50%). The species receiving the largest percentage of total effort by headboats in the four-state area were snapper (70%), king mackerel (12%), amberjack (5%), and shark (5%).

Commercial Red Snapper Sector

In the Gulf, red snapper are primarily harvested commercially with hook-and-line and bandit gear, with bandit gear being more prevalent. Longline gear captures a small percentage of total landings (generally < 5%; SEDAR 31 2013). Current regulations prohibit longline gear for the harvest of reef fish inside of 50 fathoms west of Cape San Blas. East of Cape San Blas, longline gear is prohibited for harvest of reef fish inside of 20 fathoms from September through May. From June through August, the longline boundary is shifted out to 35 fathoms to protect foraging sea turtles.

Between 1990 and 2006, the principal method of managing the commercial sector for red snapper was with quotas set at 51% of TAC and seasonal closures after each year's quota was filled. The result was a race for fish in which fishermen were compelled to fish as quickly as possible to maximize their catch of the overall quota before the season was closed. The fishing year was characterized by short periods of intense fishing activity with large quantities of red snapper landed during the open seasons. The result was short seasons and frequent quota overruns (Table 3.1.4). From 1993 through 2006, trip limits, limited access endorsements, split seasons and partial monthly season openings were implemented in an effort to slow the race for fish. At the beginning of the 1993 season, 131 boats qualified for red snapper endorsements on their reef fish permits that entitled them to land 2,000 lbs of red snapper per trip.

In 2007, a commercial red snapper IFQ program was implemented to reduce overcapacity and mitigate race to fish conditions. Each vessel that qualified for the program was issued shares as a percentage of the commercial quota. The number of shares was based on historical participation. At the beginning of each year, each shareholder is issued allocation in pounds based on the number of shares they have. Each shareholder is then allowed to harvest, sell or lease their allocation to other fishermen, or purchase allocation from other fishermen. In addition, shares can be bought and sold. As a result of this program, the commercial red snapper season is no longer closed since 2007, but a commercial vessel cannot land red snapper unless it has sufficient allocation in its vessel account to cover the landing poundage. Thus, the IFQ program has ended quota overruns (Table 3.1.4). Recently, a 5-year review of the IFQ program was completed (GMFMC 2013b) and the Council is working to determine if changes are needed to the program. The five-year review found that the IFQ program had mixed success reducing overcapacity, but was successful in mitigating derby fishing behavior and preventing quota overages (Agar et al, 2014).

Table 3.1.4. Commercial red snapper harvest (ww) vs. days open, 1986-2013.

Year	Quota	Actual landings	Days Open (days that open or close at noon are counted as half-days) (“+” = split season)
1986	na	3.700	365
1987	na	3.069	365
1988	na	3.960	365
1989	na	3.098	365
1990	3.1	2.650	365
1991	2.04	2.213	235
1992	2.04	3.106	52½ + 42 = 94½
1993	3.06	3.374	94
1994	3.06	3.222	77
1995	3.06	2.934	50 + 1½ = 51½
1996	4.65	4.313	64 + 22 = 86
1997	4.65	4.810	53 + 18 = 71
1998	4.65	4.680	39 + 28 = 67
1999	4.65	4.876	42 + 22 = 64
2000	4.65	4.837	34 + 25 = 59
2001	4.65	4.625	50 + 20 = 70
2002	4.65	4.779	57 + 24 = 81
2003	4.65	4.409	60 + 24 = 84
2004	4.65	4.651	63 + 32 = 95
2005	4.65	4.096	72 + 48 = 120
2006	4.65	4.649	72 + 43 = 115
2007	3.315	3.183	IFQ
2008	2.55	2.484	IFQ
2009	2.55	2.484	IFQ
2010	3.542	3.392	IFQ
2011	3.664	3.594	IFQ
2012	4.121	4.036	IFQ
2013	5.559	5.449	IFQ

Sources: Southeast Data Assessment and Review 31 Data Workshop Report (1990-2011 landings), commercial quotas/catch allowances report from National Marine Fisheries Service/Southeast Regional Office Individual Fishing Quota landings website (2012-2013 landings): http://sero.nmfs.noaa.gov/sustainable_fisheries/ifq/documents/pdfs/commercialquotascatchallowancetable.pdf

Commercial quotas/landings in gutted weight were multiplied by 1.11 to convert to ww. Values highlighted in red are those where landings exceeded quotas.

3.2 Description of the Physical Environment

The Gulf has a total area of approximately 600,000 square miles (1.5 million km²), 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 3.2.1). 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 54° F to 84° F (12° C to 29° C) depending on time of year and depth of water. Mean annual sea surface temperatures ranged from 73 ° F through 83° F (23-28° C) including bays and bayous (Figure 3.2.1) between 1982 and 2009, according to satellite-derived measurements (NODC 2012: <http://accession.nodc.noaa.gov/0072888>). In general, mean sea surface temperature increases from north to south with large seasonal variations in shallow waters.

The physical environment for Gulf reef fish, including red snapper, is also detailed in the EIS for the Generic EFH Amendment (GMFMC 2004a) and the Generic ACL/AM Amendment (GMFMC 2011b). In general, reef fish are widely distributed in the Gulf, occupying both pelagic and benthic habitats during their life cycle. A planktonic larval stage 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 (<100m) 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, juvenile red snapper are common on mud bottoms in the northern Gulf, particularly off Texas through Alabama. Also, some juvenile snapper (e.g. mutton, gray, red, dog, lane, and yellowtail snappers) and grouper (e.g. Goliath grouper, red, gag, and yellowfin groupers) have been documented in inshore seagrass beds, mangrove estuaries, lagoons, and larger bay systems.

In the Gulf, fish habitat for adult red snapper consists of submarine gullies and depressions, coral reefs, rock outcroppings, gravel bottoms, oilrigs, and other artificial structures (GMFMC 2004a); eggs and larvae are pelagic; and juveniles are found associated with bottom inter-shelf habitat (Szedlmayer and Conti 1998) and prefer shell habitat over sand (Szedlmayer and Howe 1997). Adult red snapper are closely associated with artificial structures in the northern Gulf (Szedlmayer and Shipp 1994; Shipp and Bortone 2009) and larger individuals have been found to use artificial habitats, but move further from the structure as they increase in size and based on the time of day (Topping and Szedlmayer 2011). Detailed information pertaining to the closures and preserves is provided in the February 2010 Regulatory Amendment (GMFMC 2010) and is incorporated here by reference.

There are environmental sites of special interest that are discussed in the Generic EFH Amendment (GMFMC 2004a) that are relevant to red snapper management. These include the longline/buoy area closure, the Edges Marine Reserve, Tortugas North and South Marine Reserves, individual reef areas and bank habitat areas of particular concern (HAPCs) of the northwestern Gulf the Florida Middle Grounds HAPC, the Pulley Ridge HAPC, and Alabama Special Management Zone. These areas are managed with gear restrictions to protect habitat and

specific reef fish species. These restrictions are detailed in the Generic EFH Amendment (GMFMC 2004a).

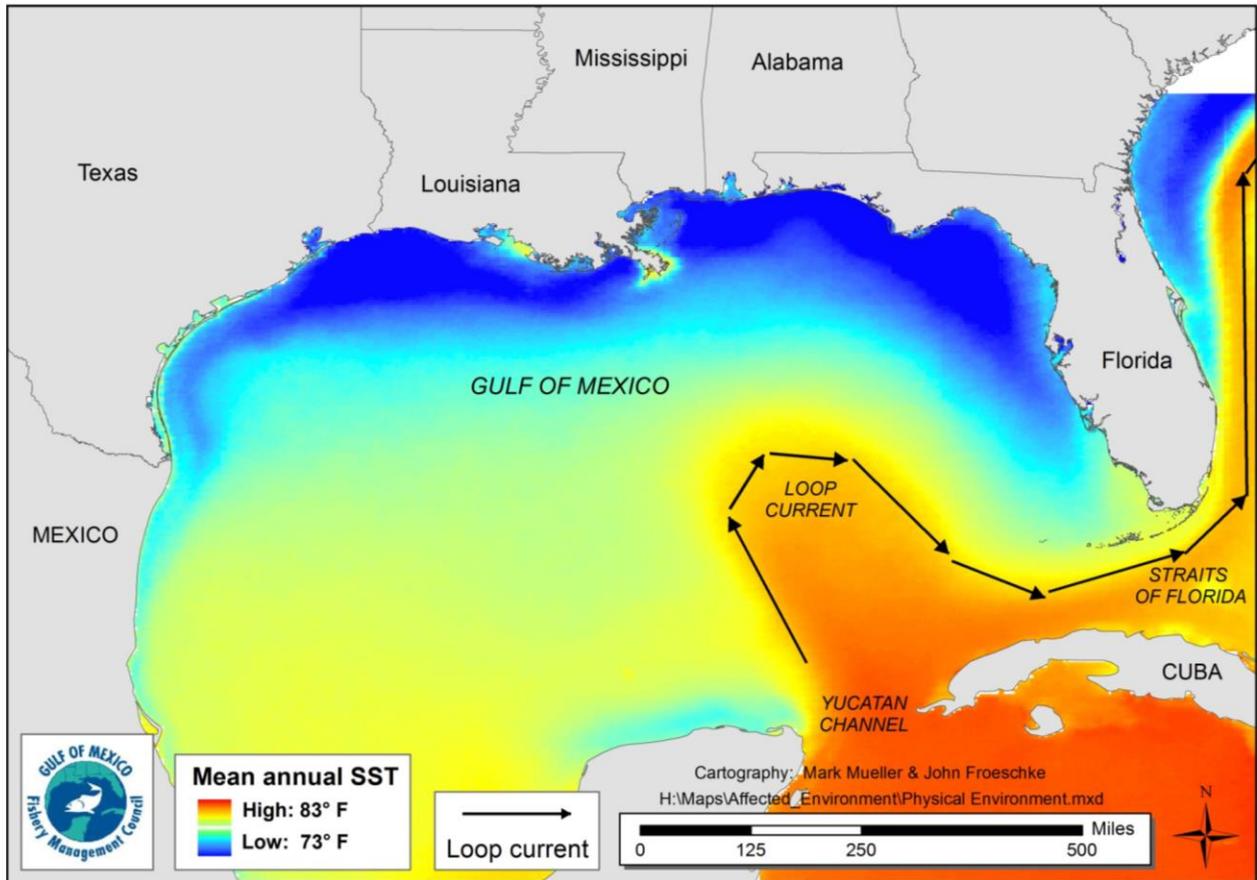


Figure 3.2.1. Physical environment of the Gulf including major feature names and mean annual sea surface temperature as derived from the Advanced Very High Resolution Radiometer Pathfinder Version 5 sea surface temperature data set (<http://accession.nodc.noaa.gov/0072888>)

3.3 Description of the Biological Environment

The biological and ecological environment of the Gulf, including the species addressed in this amendment, is described in detail in the final EIS for the Generic EFH Amendment (GMFMC 2004a) and is incorporated here by reference, and summarized below.

Definition of Overfishing

In January 2012, the Generic ACL/AM Amendment (GMFMC 2011b) became effective. One of the provisions in this amendment was to redefine overfishing. In years when there is a stock assessment, overfishing is defined as the fishing mortality rate exceeding the maximum fishing mortality threshold. In years when there is no stock assessment, overfishing is defined as the catch exceeding the overfishing limit (OFL). Note that, because the overfishing threshold is now re-evaluated each year instead of only in years when there is a stock assessment, this status for red snapper and other reef fish could change on a year-to-year basis.

Red Snapper Life History and Biology

Red snapper demonstrate the typical reef fish life history pattern (Appendix C). Eggs and larvae are pelagic while juveniles are found associated with bottom features or over barren bottom. Spawning occurs over firm sand bottom with little relief away from reefs during the summer and fall. Most females are mature by age two and almost all are mature by age 5 (Woods 2003). Red snapper have been aged up to 57 years (Wilson and Nieland 2001). In the late 1990s, most caught by the directed fishery were 2- to 4-years old (Wilson and Nieland 2001), but a recently completed stock assessment suggests that the age and size of red snapper in the directed fishery has increased in recent years (SEDAR 31 2013). A more complete description of red snapper life history can be found in the EIS for the Generic EFH Amendment (GMFMC 2004a) and in the supporting documentation for SEDAR 31².

Status of the Red Snapper Stock

Southeast Data Assessment and Review (SEDAR) 31 Benchmark Stock Assessment

Commercial harvest of red snapper from the Gulf began in the mid-1800s (Shipp 2001). In the 1930s, party boats built exclusively for recreational fishing began to appear (Chester 2001). The first stock assessment conducted by National Marine Fisheries Service (NMFS) in 1986 suggested that the stock was in decline (Parrack and McLellan 1986) and as early as 1988 (Goodyear 1988) the stock biomass has been found to be below threshold levels.

The most recent red snapper stock assessment was completed in 2013 (SEDAR 31 2013). The primary assessment model selected for the Gulf red snapper stock evaluation assessment was Stock Synthesis (Methot 2010). Stock Synthesis is an integrated statistical catch-at-age model which is widely used for stock assessments in the United States and throughout the world. The

² Southeast Fisheries Science Center, SEDAR 31
(http://www.sefsc.noaa.gov/sedar/Sedar_Workshops.jsp?WorkshopNum=31)

results of the SEDAR 31 assessment, including an assessment addendum that was prepared after a review of the SEDAR Assessment Panel Report by the SEDAR Review Panel, was presented to the Scientific and Statistical Committee (SSC) in May 2013. Under the base model, it was estimated that the red snapper stock has been overfished since the 1960s.

Although the red snapper stock continues to recover, spawning stock biomass was estimated to remain below both the minimum stock size threshold and the spawning stock size associated with maximum sustainable yield proxy of a biomass level corresponding to a spawning stock biomass of 26% spawning potential ratio. Therefore, the SSC concluded that the stock remains overfished. With respect to overfishing, the current fishing mortality rate (geometric mean of 2009-2011) was estimated to be below both fishing mortality at the 26% spawning potential ratio proxy. Therefore, the SSC concluded the stock is not currently experiencing overfishing.

Even though the red snapper recreational harvest exceeded its quota in 2012, the total catch (recreational and commercial combined) remained below the OFL. Therefore, as of 2012, overfishing is not occurring in the red snapper stock.

A red snapper update assessment scheduled for late in 2014 is expected to re-evaluate the acceptable biological catch (ABC) for 2015 and beyond.

General Information on Reef Fish Species

The National Ocean Service collaborated with NMFS and the Council to develop distributions of reef fish (and other species) in the Gulf (SEA 1998). The National Ocean Service obtained fishery-independent data sets for the Gulf, including SEAMAP, and state trawl surveys. Data from the Estuarine Living Marine Resources Program contain information on the relative abundance of specific species (highly abundant, abundant, common, rare, not found, and no data) for a series of estuaries, by five life stages (adult, spawning, egg, larvae, and juvenile) and month for five seasonal salinity zones (0-0.5, 0.5-5, 5-15, 15-25, and >25 parts per thousand). National Ocean Service staff analyzed these data to determine relative abundance of the mapped species by estuary, salinity zone, and month. For some species not in the Estuarine Living Marine Resources Program database, distribution was classified as only observed or not observed for adult, juvenile, and spawning stages.

In general, reef fish are widely distributed in the Gulf, occupying both pelagic and benthic habitats during their life cycle. Habitat types and life history stages are summarized in Appendix C and can be found in more detail in GMFMC (2004a). In general, both eggs and larval stages are planktonic. Larvae feed on zooplankton and phytoplankton. Exceptions to these generalizations include the gray triggerfish that lay their eggs in depressions in the sandy bottom, and gray snapper whose larvae are found around submerged aquatic vegetation. Juvenile and adult reef fish are typically demersal, and are usually associated with bottom topographies on the continental shelf (<328 feet; <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. Juvenile red snapper are common on mud bottoms in the northern Gulf, particularly from Texas to Alabama. Also, some juvenile snappers (e.g. mutton, gray, red, dog, lane, and yellowtail

snappers) and groupers (e.g. goliath grouper, red, gag, and yellowfin groupers) have been documented in inshore seagrass beds, mangrove estuaries, lagoons, and larger bay systems (GMFMC 1981). More detail on hard bottom substrate and coral can be found in the Fishery Management Plan (FMP) for Corals and Coral Reefs (GMFMC and SAFMC 1982).

Status of Reef Fish Stocks

The Reef Fish FMP currently encompasses 31 species (Table 3.3.2). Eleven other species were removed from the FMP in 2012 through the Generic ACL/AM Amendment (GMFMC 2011b). Stock assessments and stock assessment reviews have been conducted for 13 species and can be found on the Council (www.gulfcouncil.org) and SEDAR (www.sefsc.noaa.gov/sedar) websites.

The assessed species are:

- Red Snapper (SEDAR 7 2005; SEDAR 7 Update 2009; SEDAR 31 2013)
- Vermilion Snapper (Porch and Cass-Calay 2001; SEDAR 9 2006c; SEDAR 9 Update 2011a)
- Yellowtail Snapper (Muller et al. 2003; SEDAR 3 2003; O'Hop et al. 2012)
- Mutton Snapper (SEDAR 15A 2008)
- Gray Triggerfish (Valle et al. 2001; SEDAR 9 2006a; SEDAR 9 Update 2011b)
- Greater Amberjack (Turner et al. 2000; SEDAR 9 2006b; SEDAR 9 Update 2010)
- Hogfish (Ault et al. 2003; SEDAR 6 2004b)
- Red Grouper (NMFS 2002; SEDAR 12 2007; SEDAR 12 Update 2009)
- Gag (Turner et al. 2001; SEDAR 10 2006; SEDAR 10 Update 2009)
- Black Grouper (SEDAR 19 2010)
- Yellowedge Grouper (Cass-Calay and Bahnick 2002; SEDAR 22 2011b)
- Tilefish (Golden) (SEDAR 22 2011a)
- Atlantic Goliath Grouper (Porch et al. 2003; SEDAR 6 2004a; SEDAR 23 2011)

The NMFS Office of Sustainable Fisheries updates its Status of U.S. Fisheries Report to Congress on a quarterly basis utilizing the most current stock assessment information. The most recent update can be found at: <http://www.nmfs.noaa.gov/sfa/statusoffisheries/SOSmain.htm>. The status of both assessed and unassessed stocks as of the writing of this report is shown in Table 3.3.1.

Table 3.3.1. Species of the Reef Fish FMP grouped by family.

Common Name	Scientific Name	Stock Status
Family Balistidae – Triggerfishes		
Gray Triggerfish	<i>Balistes capriscus</i>	Overfished, no overfishing
Family Carangidae – Jacks		
Greater Amberjack	<i>Seriola dumerili</i>	Overfished, no overfishing
Lesser Amberjack	<i>Seriola fasciata</i>	Unknown
Almaco Jack	<i>Seriola rivoliana</i>	Unknown
Banded Rudderfish	<i>Seriola zonata</i>	Unknown
Family Labridae - Wrasses		
Hogfish	<i>Lachnolaimus maximus</i>	Unknown
Family Malacanthidae - Tilefishes		
Tilefish (Golden)	<i>Lopholatilus chamaeleonticeps</i>	Not overfished, no overfishing
Blueline Tilefish	<i>Caulolatilus microps</i>	Unknown
Goldface Tilefish	<i>Caulolatilus chrysops</i>	Unknown
Family Serranidae - Groupers		
Gag	<i>Mycteroperca microlepis</i>	Overfished, no overfishing
Red Grouper	<i>Epinephelus morio</i>	Not overfished, no overfishing
Scamp	<i>Mycteroperca phenax</i>	Unknown
Black Grouper	<i>Mycteroperca bonaci</i>	Not overfished, no overfishing
Yellowedge Grouper	* <i>Hyporthodus flavolimbatus</i>	Not overfished, no overfishing
Snowy Grouper	* <i>Hyporthodus niveatus</i>	Unknown
Speckled Hind	<i>Epinephelus drummondhayi</i>	Unknown
Yellowmouth Grouper	<i>Mycteroperca interstitialis</i>	Unknown
Yellowfin Grouper	<i>Mycteroperca venenosa</i>	Unknown
Warsaw Grouper	* <i>Hyporthodus nigritus</i>	Unknown
**Atlantic Goliath Grouper	<i>Epinephelus itajara</i>	Unknown
Family Lutjanidae - Snappers		
Queen Snapper	<i>Etelis oculatus</i>	Unknown
Mutton Snapper	<i>Lutjanus analis</i>	Not overfished, no overfishing
Blackfin Snapper	<i>Lutjanus buccanella</i>	Unknown
Red Snapper	<i>Lutjanus campechanus</i>	Overfished, no overfishing
Cubera Snapper	<i>Lutjanus cyanopterus</i>	Unknown
Gray Snapper	<i>Lutjanus griseus</i>	Unknown
Lane Snapper	<i>Lutjanus synagris</i>	Unknown
Silk Snapper	<i>Lutjanus vivanus</i>	Unknown
Yellowtail Snapper	<i>Ocyurus chrysurus</i>	Not overfished, no overfishing
Vermilion Snapper	<i>Rhomboplites aurorubens</i>	Not overfished, no overfishing
Wenchman	<i>Pristipomoides aquilonaris</i>	Unknown

Notes: * In 2013 the genus for yellowedge grouper, snowy grouper, and warsaw grouper was changed by the American Fisheries Society from *Epinephelus* to *Hyporthodus* (American Fisheries Society 2013).

**Atlantic goliath grouper is a protected grouper and benchmarks do not reflect appropriate stock dynamics. In 2013 the common name was changed from goliath grouper to Atlantic goliath grouper by the American Fisheries Society to differentiate from the Pacific goliath grouper, a newly named species (American Fisheries Society 2013).

Protected Species

There are 40 species protected by federal law that may occur in the Gulf. Thirty-nine of these are under the jurisdiction of NMFS, while the West Indian manatee (*Trichechus manatus*) is managed by the U.S. Fish and Wildlife Service. Of the species under NMFS's jurisdiction, 27 are marine mammals that are protected under the Marine Mammal Protection Act (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 (LOF) classifies U.S. commercial fisheries into three categories based on the number of incidental mortality or serious injury they cause to marine mammals. More information about the LOF and the classification process can be found at: <http://www.nmfs.noaa.gov/pr/interactions/lof/>. Five of these marine mammal species are also listed as endangered under the Endangered Species Act (ESA) (i.e., sperm, sei, fin, blue, and humpback). In addition to those five marine mammals, five sea turtle species (Kemp's ridley, loggerhead, green, leatherback, and hawksbill), two fish species (Gulf sturgeon and smalltooth sawfish), and five coral species (elkhorn, staghorn, lobed star, mountainous star, and boulder star) are also protected under the ESA. Designated critical habitat for smalltooth sawfish, Gulf sturgeon, and the Northwest Atlantic Ocean distinct population segment of loggerhead sea turtles also occur within nearshore waters of the Gulf, though only loggerhead critical habitat occurs in federal waters.

NMFS has conducted specific analyses ("Section 7 consultations") to evaluate potential effects from the Gulf reef fish fishery on species and critical habitats protected under the ESA. On September 30, 2011, the Protected Resources Division released a biological opinion (Opinion), which concluded that the continued operation of the Gulf reef fish fishery is not likely to jeopardize the continued existence of sea turtles (loggerhead, Kemp's ridley, green, hawksbill, and leatherback) or smalltooth sawfish (NMFS 2011a). The Opinion also concluded that other ESA-listed species are not likely to be adversely affected by the FMP. An incidental take statement was issued specifying the amount and extent of anticipated take, along with reasonable and prudent measures and associated terms and conditions deemed necessary and appropriate to minimize the impact of these takes. The Council addressed further measures to reduce take in the reef fish fishery's longline component in Amendment 31 (GMFMC 2009).

Subsequent to the completion of the biological opinion, NMFS published final rules listing 20 new coral species (September 10, 2014), and designating critical habitat for the Northwest Atlantic Ocean distinct population segment of loggerhead sea turtles (July 10, 2014). NMFS addressed these changes in a series of consultation memoranda. In a consultation memorandum dated October 7, 2014, NMFS assessed the continued operation of the Gulf reef fish fishery's potential impact on the newly-listed coral species occurring in the Gulf (3 species of *Orbicella* and *Mycetophyllia ferox*) and concluded the fishery is not likely to adversely affect any of the protected coral species. Similarly, in a consultation memorandum dated September 16, 2014, NMFS assessed the continued authorization of South Atlantic and Gulf of Mexico fisheries' potential impacts on loggerhead critical habitat and concluded the Gulf reef fish fishery is not likely to adversely affect the newly designated critical habitat.

Marine Mammals

The gear used by the Gulf reef fish fishery is classified in the Marine Mammal Protection Act 2015 proposed List of Fisheries as a Category III fishery (79 FR 14418) and is not unchanged from the 2014 list. This classification indicates the annual mortality and serious injury of a marine mammal stock resulting from any 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. Dolphins are the only species documented as interacting with these fisheries. Bottlenose dolphins prey upon on the bait, catch, and/or released discards of fish from the reef fish fishery. They are also a common predator around reef fish vessels, feeding on the discards. Marine Mammal Stock Assessment Reports and additional information are available on the NMFS Office of Protected Species website: <http://www.nmfs.noaa.gov/pr/sspecies/>.

Turtles

Green, hawksbill, Kemp's ridley, leatherback, and loggerhead sea turtles are all highly migratory and travel widely throughout the Gulf. The following sections are a brief overview of the general life history characteristics of the sea turtles found in the Gulf region. Several volumes exist that cover the biology and ecology of these species more thoroughly (i.e., Lutz and Musick (eds.) 1997, Lutz et al. (eds.) 2003).

Green sea turtle hatchlings are thought to occupy pelagic areas of the open ocean and are often associated with *Sargassum* rafts (Carr 1987, Walker 1994). Pelagic stage green sea turtles are thought to be carnivorous. Stomach samples of these animals found ctenophores and pelagic snails (Frick 1976, Hughes 1974). At approximately 20 to 25 cm carapace length, juveniles migrate from pelagic habitats to benthic foraging areas (Bjorndal 1997). As juveniles move into benthic foraging areas a diet shift towards herbivory occurs. They consume primarily seagrasses and algae, but are also known to consume jellyfish, salps, and sponges (Bjorndal 1980, 1997; Paredes 1969; Mortimer 1981, 1982). The diving abilities of all sea turtles species vary by their life stages. The maximum diving range of green sea turtles is estimated at 110 m (360 ft) (Frick 1976), but they are most frequently making dives of less than 20 m (65 ft.) (Walker 1994). The time of these dives also varies by life stage. The maximum dive length is estimated at 66 minutes with most dives lasting from 9 to 23 minutes (Walker 1994).

The **hawksbill's** pelagic stage lasts from the time they leave the nesting beach as hatchlings until they are approximately 22-25 cm in straight carapace length (Meylan 1988, Meylan and Donnelly 1999). The pelagic stage is followed by residency in developmental habitats (foraging areas where juveniles reside and grow) in coastal waters. Little is known about the diet of pelagic stage hawksbills. Adult foraging typically occurs over coral reefs, although other hard-bottom communities and mangrove-fringed areas are occupied occasionally. Hawksbills show fidelity to their foraging areas over several years (van Dam and Diéz 1998). The hawksbill's diet is highly specialized and consists primarily of sponges (Meylan 1988). Gravid females have been noted ingesting coralline substrate (Meylan 1984) and calcareous algae (Anderes Alvarez and Uchida 1994), which are believed to be possible sources of calcium to aid in eggshell production. The maximum diving depths of these animals are not known, but the maximum length of dives is estimated at 73.5 minutes. More routinely, dives last about 56 minutes (Hughes 1974).

Kemp's ridley hatchlings are also pelagic during the early stages of life and feed in surface waters (Carr 1987, Ogren 1989). Once the juveniles reach approximately 20 cm carapace length they move to relatively shallow (less than 50m) benthic foraging habitat over unconsolidated substrates (Márquez-M. 1994). They have also been observed transiting long distances between foraging habitats (Ogren 1989). Kemp's ridleys feeding in these nearshore areas primarily prey on crabs, though they are also known to ingest mollusks, fish, marine vegetation, and shrimp (Shaver 1991). The fish and shrimp Kemp's ridleys ingest are not thought to be a primary prey item but instead may be scavenged opportunistically from bycatch discards or from discarded bait (Shaver 1991). Given their predilection for shallower water, Kemp's ridleys most routinely make dives of 50 m or less (Soma 1985, Byles 1988). Their maximum diving range is unknown. Depending on the life stage a Kemp's ridleys may be able to stay submerged anywhere from 167 minutes to 300 minutes, though dives of 12.7 minutes to 16.7 minutes are much more common (Soma 1985, Mendonca and Pritchard 1986, Byles 1988). Kemp's ridleys may also spend as much as 96% of their time underwater (Soma 1985, Byles 1988).

Leatherbacks are the most pelagic of all ESA-listed sea turtles and spend most of their time in the open ocean. Although they will enter coastal waters and are seen over the continental shelf on a seasonal basis to feed in areas where jellyfish are concentrated. Leatherbacks feed primarily on cnidarians (medusae, siphonophores) and tunicates. Unlike other sea turtles, leatherbacks' diets do not shift during their life cycles. Because leatherbacks' ability to capture and eat jellyfish is not constrained by size or age, they continue to feed on these species regardless of life stage (Bjorndal 1997). Leatherbacks are the deepest diving of all sea turtles. It is estimated that these species can dive in excess of 1000 m (Eckert et al. 1989) but more frequently dive to depths of 50 m to 84 m (Eckert et al. 1986). Dive times range from a maximum of 37 minutes to more routines dives of 4 to 14.5 minutes (Standora et al. 1984, Eckert et al. 1986, Eckert et al. 1989, Keinath and Musick 1993). Leatherbacks may spend 74% to 91% of their time submerged (Standora et al. 1984).

Loggerhead hatchlings forage in the open ocean and are often associated with *Sargassum* rafts (Hughes 1974, Carr 1987, Walker 1994, Bolten and Balazs 1995). The pelagic stage of these sea turtles are known to eat a wide range of things including salps, jellyfish, amphipods, crabs, syngnathid fish, squid, and pelagic snails (Brongersma 1972). Stranding records indicate that when pelagic immature loggerheads reach 40-60 cm straight-line carapace length they begin to live in coastal inshore and nearshore waters of the continental shelf throughout the U.S. Atlantic (Witzell 2002). Here they forage over hard- and soft-bottom habitats (Carr 1986). Benthic foraging loggerheads eat a variety of invertebrates with crabs and mollusks being an important prey source (Burke et al. 1993). Estimates of the maximum diving depths of loggerheads range from 211 m to 233 m (692-764ft.) (Thayer et al. 1984, Limpus and Nichols 1988). The lengths of loggerhead dives are frequently between 17 and 30 minutes (Thayer et al. 1984, Limpus and Nichols 1988, Limpus and Nichols 1994, Lanyon et al. 1989) and they may spend anywhere from 80 to 94% of their time submerged (Limpus and Nichols 1994, Lanyon et al. 1989).

All five species of sea turtles are adversely affected by the Gulf reef fish fishery. Incidental captures are relatively infrequent, but occur in all commercial and recreational hook-and-line and longline components of the reef fish fishery. Captured sea turtles can be released alive or can be

found dead upon retrieval of the gear as a result of forced submergence. Sea turtles released alive may later succumb to injuries sustained at the time of capture or from exacerbated trauma from fishing hooks or lines that were ingested, entangled, or otherwise still attached when they were released. Sea turtle release gear and handling protocols are required in the commercial and for-hire reef fish fisheries to minimize post-release mortality.

Fish

Historically the **smalltooth sawfish** in the U.S. ranged from New York to the Mexico border. Their current range is poorly understood but believed to have contracted from these historical areas. In the South Atlantic region, they are most commonly found in Florida, primarily off the Florida Keys (Simpfendorfer and Wiley 2004). Only two smalltooth sawfish have been recorded north of Florida since 1963 (the first was captured off North Carolina in 1963 and the other off Georgia in 2002 (National Smalltooth Sawfish Database, Florida Museum of Natural History)). Historical accounts and recent encounter data suggest that immature individuals are most common in shallow coastal waters less than 25 meters (Bigelow and Schroeder 1953, Adams and Wilson 1995), while mature animals occur in waters in excess of 100 meters (Simpfendorfer pers. comm. 2006). Smalltooth sawfish feed primarily on fish. Mullet, jacks, and ladyfish are believed to be their primary food resources (Simpfendorfer 2001). Smalltooth sawfish also prey on crustaceans (mostly shrimp and crabs) by disturbing bottom sediment with their saw (Norman and Fraser 1938, Bigelow and Schroeder 1953).

Smalltooth sawfish are also affected by the Gulf reef fish fishery, but to a much lesser extent. Smalltooth sawfish primarily occur in the Gulf off peninsular Florida. Incidental captures in the commercial and recreational hook-and-line components of the reef fish fishery are rare events, with only eight smalltooth sawfish estimated to be incidentally caught annually, and none are expected to result in mortality (NMFS 2005). Fishermen in this fishery are required to follow smalltooth sawfish safe handling guidelines. The long, toothed rostrum of the smalltooth sawfish causes this species to be particularly vulnerable to entanglement in fishing gear.

Northern Gulf of Mexico Hypoxic Zone

Every summer in the northern Gulf, a large hypoxic zone forms. It is the result of excess nutrients from the Mississippi River and a seasonal layering of waters in the Gulf (see <http://www.gulfhypoxia.net/>). The layering of the water is temperature and salinity dependent and prevents the mixing of higher oxygen content surface water with oxygen-poor bottom water. For 2014, the extent of the hypoxic area was estimated to be 5,052 square miles and is similar the running average for over the past five years of 5,543 square miles Gulf (see <http://www.gulfhypoxia.net/>).

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). However, more mobile macroinvertebrates and demersal fishes (e.g., red snapper) are able to detect lower dissolved oxygen levels and move away from hypoxic conditions. Therefore, these organisms are indirectly effect by limiting prey availability and constraining available habitat (Baustian and Rabalais 2009, Craig 2012). For red snapper, Courtney et al. (2013) have conjectured that the hypoxic zone could have an indirect

positive effect on red snapper populations in the western Gulf. They theorize that increased nutrient loading may be working in ‘synergy’ with abundant red snapper artificial habitats (oil platforms). Nutrient loading likely increases forage species biomass and productivity providing ample prey for red snapper residing on the oil rigs, thus increasing red snapper productivity.

Climate change

Kennedy et al. (2002) and Osgood (2008) have suggested global climate change could affect temperature 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. For reef fishes, Burton (2008) speculated climate change could cause shifts in spawning seasons, changes in migration patterns, and changes to basic life history parameters such as growth rates. In addition, the distribution of native and exotic species may change with increased water temperature, as may the prevalence of disease in keystone animals such as corals and the occurrence and intensity of toxic algae blooms. Hollowed et al. (2013) provided a review of projected effects of climate change on the marine fisheries and dependent communities. Integrating the potential effects of climate change into the fisheries assessment is currently difficult due to the time scale differences (Hollowed et al. 2013). The fisheries stock assessments rarely project through a time span that would include detectable climate change effects.

Deepwater Horizon MC252 Oil Spill

On April 20, 2010 an explosion occurred on the Deepwater Horizon MC252 oil rig approximately 36 nautical miles (41 statute miles) off the Louisiana coast. Two days later the rig sank. An uncontrolled oil leak from the damaged well continued for 87 days until the well was successfully capped by British Petroleum on July 15, 2010. The Deepwater Horizon MC252 oil spill affected at least one-third of the Gulf area from western Louisiana east to the Florida Panhandle and south to the Campeche Bank in Mexico (Figure 3.3.1).

As reported by the National Oceanic and Atmospheric Administration Office of Response and Restoration (NOAA 2010), the oil from the Deepwater Horizon MC252 spill is relatively high in alkanes, which can readily be used by microorganisms as a food source. As a result, the oil from this spill is likely to biodegrade more readily than crude oil in general. The Deepwater Horizon MC252 oil is also relatively much lower in polyaromatic hydrocarbons. Polyaromatic hydrocarbons are highly toxic chemicals that tend to persist in the environment for long periods of time, especially if the spilled oil penetrates into the substrate on beaches or shorelines. Like all crude oils, MC252 oil contains volatile organic compounds (VOCs) such as benzene, toluene, and xylene. Some VOCs are acutely toxic but because they evaporate readily, they are generally a concern only when oil is fresh.³

³ Source: http://sero.nmfs.noaa.gov/sf/deepwater_horizon/OilCharacteristics.pdf

In addition to the crude oil, over a million gallons of the dispersant, Corexit 9500A[®], was applied to the ocean surface and an additional hundreds of thousands of gallons of dispersant was pumped to the mile-deep well head (National Commission 2010). No large-scale applications of dispersants in deep water had been conducted until the Deepwater Horizon MC252 oil spill. Thus, no data exist on the environmental fate of dispersants in deep water. However, a study found that, while Corexit 9500A[®] and oil are similar in their toxicity, when Corexit 9500A[®] and oil were mixed in lab tests, toxicity to microscopic rotifers increased up to 52-fold (Rico-Martínez et al. 2013). This suggests that the toxicity of the oil and dispersant combined may be greater than anticipated.

Oil could exacerbate development of the hypoxic “dead” zone in the Gulf as could higher than normal input of water from the Mississippi River drainage. For example, oil on the surface of the water could restrict the normal process of atmospheric oxygen mixing into and replenishing oxygen concentrations in the water column. In addition, microbes in the water that break down oil and dispersant also consume oxygen; this could lead to further oxygen depletion.

Changes have occurred in the amount and distribution of fishing effort in the Gulf in response to the oil spill. This has made the analysis of the number of days needed for the recreational sector to fill its quota more complex and uncertain, and will make the requirement to allow the recreational sector to harvest its quota of red snapper while not exceeding the quota particularly challenging. Nevertheless, substantial portions of the red snapper population are found in the northwestern and western Gulf (western Louisiana and Texas) and an increasing population of red snapper is developing off the west Florida continental shelf. Thus, spawning by this segment of the stock may not be impacted, which would mitigate the overall impact of a failed spawn by that portion of the stock located in oil-affected areas. An increase in lesions were found in red snapper in the area affected by the oil, but Murowski et al. (2014) found that the incidence of lesions had declined between 2011 and 2012. The 2013 stock assessment for red snapper (SEDAR 31, 2013) showed a steep decline in the 2010 recruitment; however, the recruitment increased in 2011 and 2012.

As a result of the Deepwater Horizon MC252 spill, a consultation pursuant to ESA Section 7(a)(2) was reinitiated. As discussed above, on September 30, 2011, the Protected Resources Division released a biological opinion, which after analyzing best available data, the current status of the species, environmental baseline (including the impacts of the recent Deepwater Horizon MC252 oil release event in the northern Gulf), effects of the proposed action, and cumulative effects, concluded that the continued operation of the Gulf reef fish fishery is not likely to jeopardize the continued existence of green, hawksbill, Kemp’s ridley, leatherback, or loggerhead sea turtles, nor the continued existence of smalltooth sawfish (NMFS 2011a).

For additional information on the Deepwater Horizon MC252 oil spill and associated closures, see:

http://sero.nmfs.noaa.gov/deepwater_horizon_oil_spill.htm.

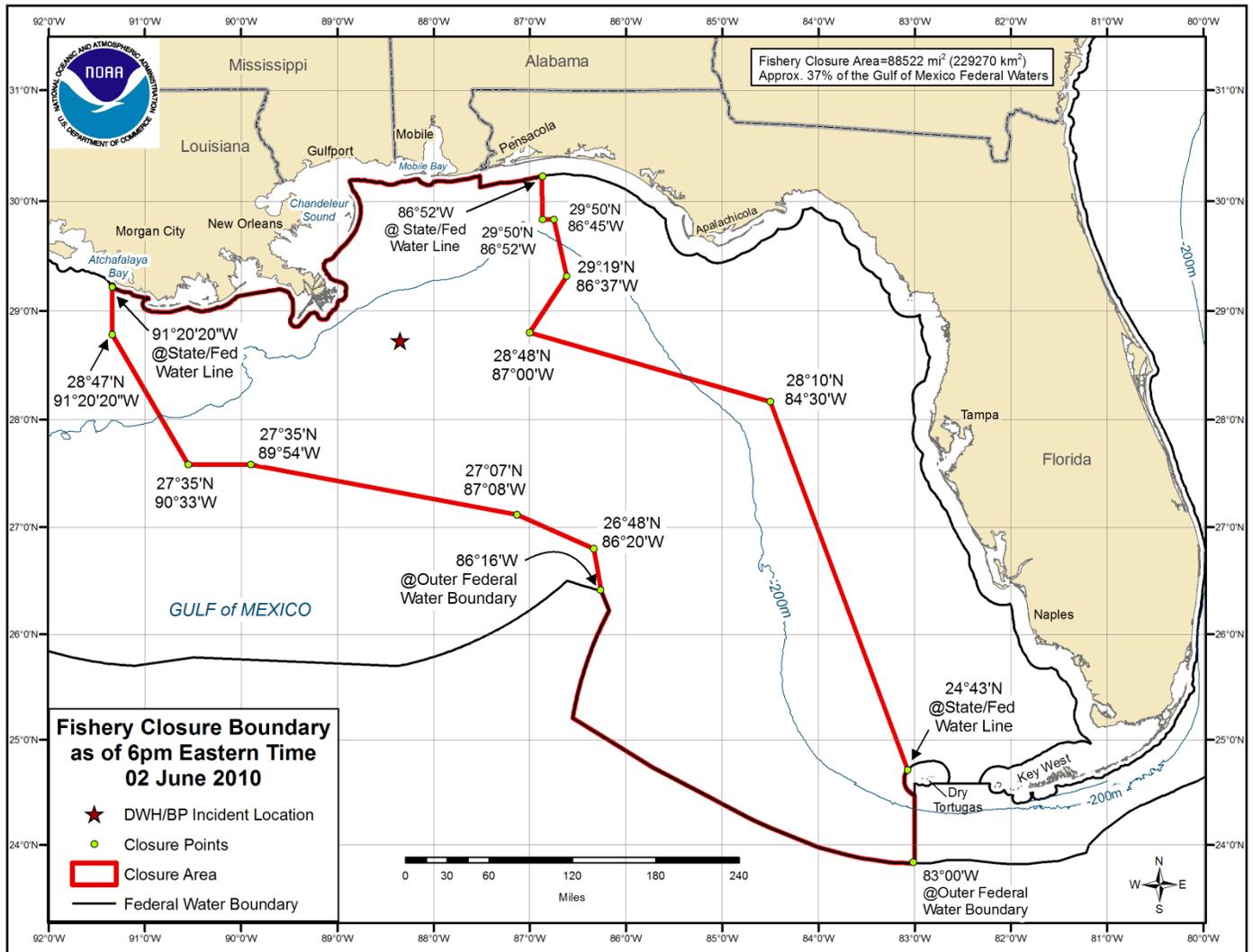


Figure 3.3.1. Fishery closure at the height of the Deepwater Horizon MC252 oil spill.

3.4 Description of the Social Environment

This section provides a historical background and a current description of recreational red snapper fishing for which the proposed actions will be evaluated in Chapter 4. The following description focuses on the management of the recreational sector, as the proposed actions in this amendment apply only to the recreational sector.

Context of recreational red snapper management in the Gulf

Although the recreational sector is often described as “open access,” open entry is more accurate as a true open access resource lacks rules of usage (Feeny et al. 1990). However, the federal for-hire component of the recreational sector is not open entry, as there is a moratorium on the issuance of new federal for-hire permits. Thus, part of the recreational sector is open entry, while the other is not. For the recreational sector, harvest constraints are implemented primarily by reductions to the bag limit and shortening of the fishing season. The bag limit has been reduced from seven red snapper per angler per day in 1990 (when the sector allocation was established), to five fish in 1995, four fish in 1998, and two fish in 2007 (Figure 3.4.1). In 1997, the recreational season was shortened for the first time from year round and has been getting shorter ever since. From 2008 through 2012, the recreational season averaged 62 days in length.

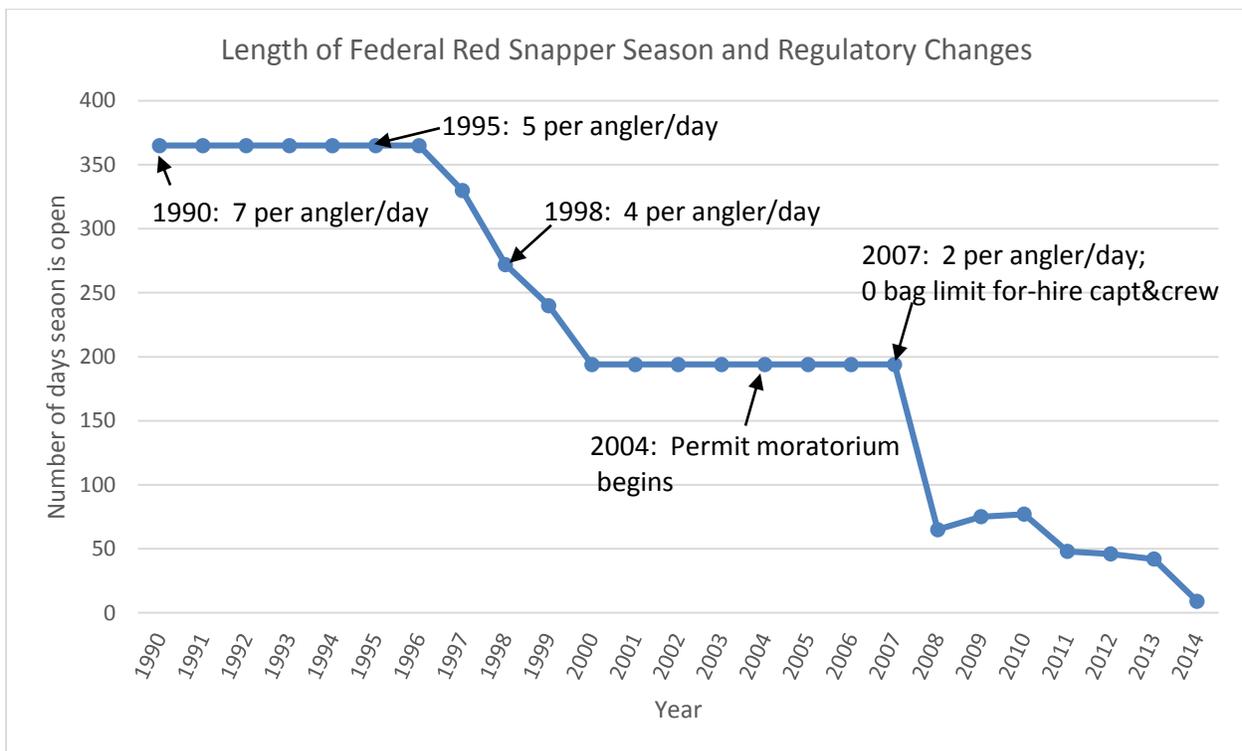


Figure 3.4.1. Length of federal recreational red snapper fishing season, with date of changes in bag limits, trip limits, and implementation of the for-hire permit moratorium. State-water red snapper seasons are not included, but have represented an increasing proportion of landings in recent years.

The practice in recent years of projecting season length for a given quota based on past effort has not prevented the quota from being exceeded (Figure 3.4.2). Without attending measures to actually stop harvest when the quota is met, a quota does not on its own constitute an output control. There is a disjunction between management measures used to constrain the rate of recreational harvest, and attempts to estimate the rate of harvest under such measures, as anglers modify their fishing activity in response to new access restrictions. Even with additional quota, continuing to rely on existing management measures to slow harvest may allow two problems to continue. First, the harvest coming from the recreational sector will continue to face the problems of “subtractability” and “excludability,” where the resource is open to anyone able to access it during a particular time. Without rules governing who has access to the resource (excludability), the effects of smaller returns are shared among all participants (subtractability; Feeny et al. 1990; McCay and Acheson 1987).

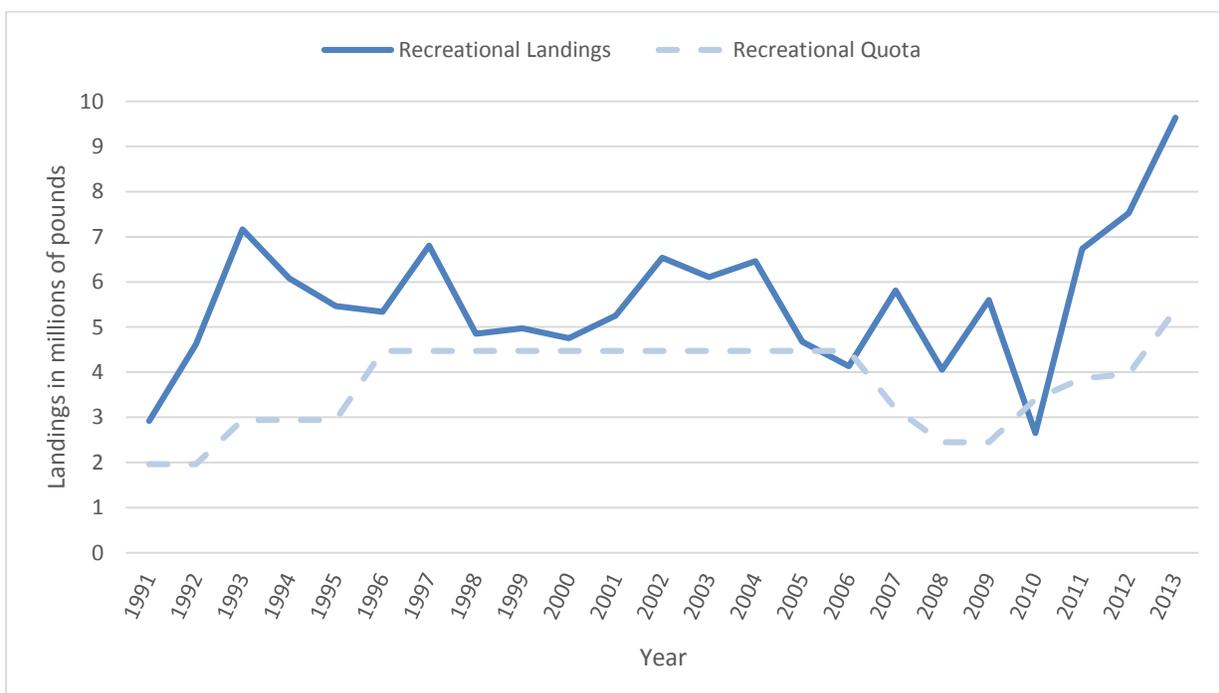


Figure 3.4.2. Recreational landings (solid line) and quotas (dotted line) in millions of pounds whole weight. Source: Calibrated MRIP landings, SEFSC.

The second problem concerns the quota overages. Alongside the short seasons, increases in average weight of fish, and lag time to calculate landings from MRIP, quota overages are likely to continue under the system of predicting season length based on past fishing effort. Faced with a shorter season for a desired target species, individual anglers rationally adjust their effort and fishing activity. With no restrictions on entry by private vessels to the fishery (excludability), new participants join as well. This has resulted in an inverse relationship between season length and effort, where the shorter the length of the recreational fishing season, the more red snapper have been landed per day (Figure 3.4.3). It cannot be assumed that the pattern of increasing effort during a shortening season would reverse, where an increase in the length of the season would correspond with a proportional reduction in effort. Furthermore, not all recreational red snapper landings occur during the federal season. In recent years, an increasing amount of red

snapper is harvested from state waters when federal waters are closed, thus the number landed per day does not reflect actual in-season effort, especially during the most recent years.

Another factor compounding the problem of quota overages is the increase in the average weight of a recreationally landed red snapper under the rebuilding plan, which has resulted in each angler’s bag limit weighing more. Thus, the rate at which the quota is caught accelerates. That recreational anglers as a sector are said to “exceed the quota” is not a reflection of individual angler compliance, but rather, reflects rational changes to fishing activity under situations of decreased access, and the inability of the existing management system to close harvest before the quota is met. Examples of management changes that may reduce quota overages include the adoption of accountability measures or implementation of real time quota monitoring.

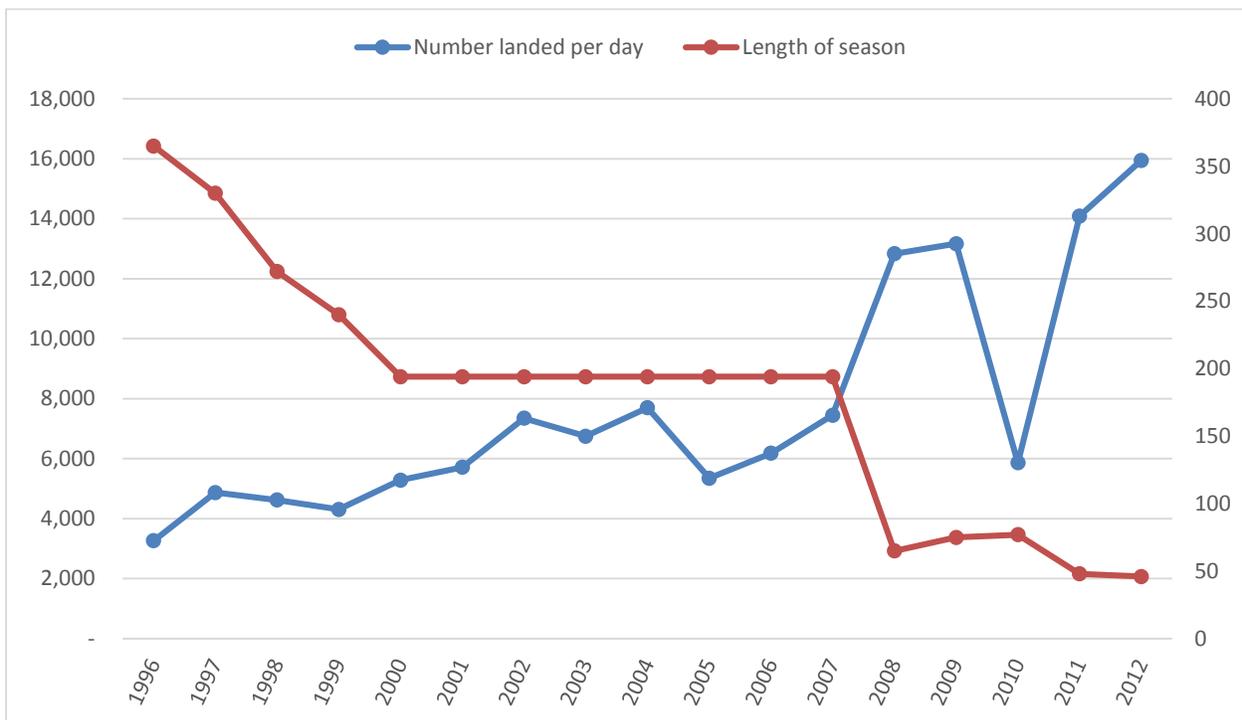


Figure 3.4.3. Length of federal recreational red snapper season in days (red line, right axis) and landings divided by average weight of fish and number of days in the season (blue line, left axis), providing an average number of red snapper landed per day the federal season was open (1996-2012). In recent years, a greater proportion of landings occur outside of the federal season when state waters are open. Source: Southeast Fisheries Science Center, recreational ACL dataset (Sept 2013).

Recreational anglers can access red snapper fishing by private vessels and for-hire vessels. Both modes share the same bag limit and fishing season; however, additional restrictions are placed on the for-hire fleet, to which private vessels are not subject. Since 2007, captain and crew of for-hire vessels have been prohibited from retaining a bag limit, and there are mandatory reporting requirements for headboats to report all landings and discards. In 2004, a moratorium was put in place on the issuance of federal for-hire permits. As with commercial permits, no new federal for-hire permits may be issued, but existing permits may be transferred. There is no mechanism to limit entry by private recreational vessels.

Thus, the issue of excludability described above reflects private recreational vessels only. During the federal open season, participation is limited to a finite number of federally permitted for-hire vessels, but there is no restriction to the number of private vessels that may harvest red snapper. Since the permit moratorium became effective, the number of federally permitted for-hire vessels has decreased, while the number of private fishing licenses has increased. Coupled with the extended fishing opportunities in some state waters in which federally permitted for-hire vessels may not participate, the proportion of red snapper landed by each component of the recreational sector has shifted toward private vessel landings representing a greater proportion of the recreational quota (Figure 1.1.2). For the years 1991-2013 (excluding 2010), private-angler landings of red snapper represent 53.1% of recreational landings, but represent 76.6% for just the last three years (2011-2013). For-hire vessel landings of red snapper have decreased proportionally for these same years, from 46.9% to 23.4% of the recreational landings.

3.4.1 Fishing Communities

This section provides a description of where recreational fishing for red snapper occurs. The description is based on the geographical distribution of landings of red snapper and federal for-hire permits, and the relative importance of red snapper for recreational communities. This spatial approach enables discussion of fishing communities and the importance of fishery resources to those communities, as required by National Standard 8.

Recreational Fishing Communities

Red snapper is harvested recreationally in all states in the Gulf. However, as the red snapper stock has continued to rebuild, the proportion of landings made up by the eastern Gulf States (Alabama and western Florida) has increased compared to the western Gulf States (Texas and Louisiana). The majority of the recreational catch is landed in Florida and Alabama (Table 3.4.1.1). Fishermen in other Gulf States are also involved in recreational red snapper fishing, but these states represent a smaller percentage of the total recreational landings.

Table 3.4.1.1. Percentage of total recreational red snapper landings by state for 2011-2013.

State	2011	2012	2013
AL	53.6%	36.1%	43.9%
FL (Gulf Coast)	29.3%	32.3%	40.8%
LA	8.9%	19.2%	6.0%
MS	1.0%	4.2%	4.5%
TX	7.2%	8.2%	4.9%

Source: Calibrated MRIP landings, SEFSC.

Red snapper landings for the recreational sector are not available at the community level, making it difficult to identify communities as dependent on recreational fishing for red snapper. Although commercial landings are available at the community level, it cannot be assumed that the proportion of commercial red snapper landings among other species in a community would

be similar to its proportion among recreational landings within the same community because of sector differences in fishing practices and preferences.

While there are no landings data at the community level for the recreational sector (except for headboats, see below), Table 3.4.1.2 offers a ranking of communities based upon the number of charter permits and charter permits divided by population. The count includes both reef fish and coastal migratory pelagic for-hire permits. This is a crude measure of the reliance upon recreational fishing and is general in nature and not specific to red snapper. Ideally, additional variables quantifying the importance of recreational fishing to a community would be included (such as the amount of recreational landings in a community, availability of recreational fishing related businesses and infrastructure, etc.); however, these data are not available at this time. Because the analysis used discrete geo-political boundaries, Panama City and Panama City Beach had separate values for the associated variables. Calculated independently, each still ranked high enough to appear in the list suggesting a greater importance for recreational fishing in that region. At this time, it is not possible to examine the intensity of recreational fishing activity at the community level for a specific species. However, it is likely that those communities that have a higher rank in terms of charter activity and have a dynamic commercial fishery for red snapper will likely have a vigorous recreational red snapper fishery. The communities that meet those criteria are: Destin, Panama City, and Panacea, Florida; Freeport, Texas; and Venice and Grand Isle, Louisiana.

Table 3.4.1.2. Average community rank by total number of charter permits by community* and population.

Community	State	Charter Permits	Rank Charter Permits	Charter Permit/Pop	Rank Charter Permits/Pop	Average Rank
Orange Beach	AL	223	3	0.0358	6	5
Destin	FL	234	2	0.0186	16	9
Port Aransas	TX	96	8	0.0250	11	10
Steinhatchee	FL	44	23	0.0307	7	15
Dauphin Island	AL	44	23	0.0277	9	16
Apalachicola	FL	45	21	0.0204	15	18
Port O'Connor	TX	33	35	0.0306	8	22
Freeport	TX	78	10	0.0062	46	28
Carrabelle	FL	30	43	0.0244	13	28
Venice	LA	20	60	0.0862	2	31
Grand Isle	LA	27	44	0.0167	21	33
Panama City	FL	159	4	0.0043	62	33
Panama City Beach	FL	77	11	0.0053	55	33
Port Saint Joe	FL	27	44	0.0076	39	42
Cedar Key	FL	18	68	0.0184	17	43
Saint Marks	FL	13	81	0.0408	4	43
Panacea	FL	20	60	0.0116	32	46
Matagorda	TX	14	78	0.0184	18	48
Madeira Beach	FL	25	49	0.0058	51	50

* Total number of charter permits does not correspond to number of vessels; a vessel may have several different types of charter permits. Source: Southeast Regional Office, 2008.

Destin and Panama City are likely more reliant with regard to recreational fishing as they have numerous charter operations. When visiting charter service websites from these two communities photos of red snapper are very prominent and advertised as a key target species.⁴ Panama City is less reliant upon red snapper and located in a more rural area than the other communities. In terms of occupation it has the lowest percentage working in farming, forestry, and fishing, yet it does have the largest percentage class of worker in that category. All of these communities are considered to be primarily involved in fishing based upon their community profiles (Impact Assessment, Inc. 2005).

The Orange Beach Red Snapper World Championship Tournament, billed as “Alabama’s state celebration of recreational saltwater fishing,”⁵ was an annual event in March. Dauphin Island, Alabama also has a number of charter services that specialize in bottom fishing, especially for red snapper.⁶ All three Alabama communities are considered primarily involved in fishing as noted in the profiles of fishing communities for both states (Impact Assessment, Inc. 2006). Red snapper fishing is featured at Pascagoula charter websites⁷ and the community ranks third with regard to value of red snapper landings out of total commercial landings. Pascagoula is regarded as primarily involved in fishing according to its community profile (Impact Assessment, Inc. 2006).

Venice and Grand Isle, Louisiana, are also ranked among the top recreational fishing communities. A sampling of charter service websites from these communities indicates they do feature red snapper as a target species but not as prominently as charter services from other states.

Red snapper are also an important species for charter fishing in Galveston and Freeport, Texas. Many of the charter services include photos of red snapper catches on their website and note that this species is one of their prime target species.⁸ However, many inshore species like trout and redfish are more prominently displayed. Matagorda and Freeport are noted as being primarily involved in fishing while Galveston is secondarily involved.

Charter Boats and Headboats by Community

Charter boats and headboats target red snapper throughout the Gulf. At this time it is not possible to determine which species are targeted by specific charter vessels and associate those vessels with their homeport communities (other than to glean information from various charter websites as was done for the descriptions above for specific communities). However, harvest data are available for headboats by species and can be linked to specific communities through the homeport identified for each vessel. These data are available for headboats registered in the Southeast Headboat Survey (HBS; see Section 3.3.2.2 for a discussion of the survey).

⁴ <http://www.fishdestin.com/fishinggallery.html>; and <http://www.jubileefishing.com/>

⁵ http://www.cityoforangebeach.com/pages_2007/pdfs/events/2009/2009_Snapper_Tournament.pdf

⁶ <http://gulfinfo.com/fishing.htm>

⁷ <http://www.jkocharters.com/1938863.html>

⁸ <http://www.texasaltwaterfishingguide.com/> or <http://www.matagordabay.com/>

In 2013, 68 federal for-hire vessels in the Gulf were registered in the HBS (K. Brennen, NMFS SEFSC, pers. comm.). Forty-five of these vessels landed red snapper in 2013 (HBS, SERO LAPPs/DM database). The majority of these headboats with red snapper landings are registered in Florida, with smaller numbers of vessels registered in the other Gulf States (Table 3.4.1.3).

Table 3.4.1.3. Number of federal for-hire vessels in the Gulf registered in the HBS with landings of red snapper in 2013, by state.

State	Number of Vessels
AL	8
FL	25
LA	2
MS	4
TX	16

Source: SEFSC HBS Data (2014).

Headboats with red snapper landings are based in 14 homeports (10 homeports were located in Florida, 2 in Texas, and 2 in Louisiana). The top four homeports represent about 79% of the red snapper landings by vessels participating in the HBS (SERO LAPPs/DM database, 2013). Homeports with the greatest landings of red snapper include South Padre Island, Texas (27% of red snapper landed by HBS vessels in 2013); Port Aransas, Texas (20%); Panama City Beach, Florida (16%); and Destin, Florida (16%; SEFSC HBS 2014). Other homeports represent a small portion of landings and include fewer than three vessels; therefore, landings are not reported to maintain confidentiality.

To present additional information about the charter boats and headboats that are engaged in recreational fishing, all vessels with a federal for-hire permit for reef fish, including historical captain permits, are included in the following analysis as a proxy. However, it cannot be assumed that every included permitted vessel is engaged in red snapper fishing.

The majority of federal for-hire permits for reef fish are held by operators in Florida (58.8% in 2013), followed by Texas (16.2%), Alabama (11.6%), Louisiana (8.9%), Mississippi (3.4%), and other states (1%; Table 3.4.1.4). The distribution of permits by state has followed a similar pattern throughout the last five years. These data may deviate from the numbers included elsewhere in the document because of the date on which data were gathered. Data included in Table 3.4.1.4 are based on the number of permits throughout the year, rather than from a specific date, and include permits that were valid or renewable sometime during the year. However, if the permit was sold, then only the most current permit has been counted.

Table 3.4.1.4. Number of federal for-hire permits for Gulf reef fish including historical captain permits, by state and year.

State	2009	2010	2011	2012	2013
AL	150	147	148	155	159
FL	900	865	832	814	804
LA	111	110	123	123	122
MS	52	52	50	48	47
TX	241	237	226	221	221
Other	19	21	17	17	14
Total	1,473	1,432	1,396	1,378	1,367

Source: NMFS Southeast Regional Office permit office.
Includes valid and renewable permits.

Federal for-hire permits are held by those with mailing addresses in a total of 323 communities, located in 22 states (Southeast Regional Office (SERO) permit office, February 13, 2014). The communities with the most federal for-hire permits are provided in Table 3.4.1.5. Figure 3.4.1.1 shows the spatial distribution of for-hire permits around the Gulf. A pattern of abundance for for-hire permits is evident, with large clusters of for-hire permitted vessels in Florida communities along the Panhandle, in the greater Tampa Bay area, in the Naples-Fort Meyers-Marco Island area, and in the Florida Keys; in Alabama (Orange Beach, Mobile, and Gulf Shores); in Texas (Port Aransas, Galveston, Freeport, Corpus Christi, and Houston); and in Mississippi (Biloxi, Ocean Springs, and Gulfport).

Table 3.4.1.5. Top ranking communities based on the number of federal for-hire permits, including historical captain permits, in descending order.

Community	State	Permits
Destin	FL	67
Orange Beach	AL	47
Key West	FL	45
Panama City	FL	43
Naples	FL	36
Pensacola	FL	30
Panama City Beach	FL	29
Sarasota	FL	19
Port Aransas	TX	19
Galveston	TX	18
Clearwater	FL	17
Marco Island	FL	17
Fort Walton Beach	FL	15
Gulf Breeze	FL	15
Biloxi	MS	15
St. Petersburg	FL	14
Chauvin	LA	14
Gulf Shores	AL	12
Marathon	FL	12
Port St. Joe	FL	12
Freeport	TX	12

Source: NMFS SERO permit office, February 13, 2014.

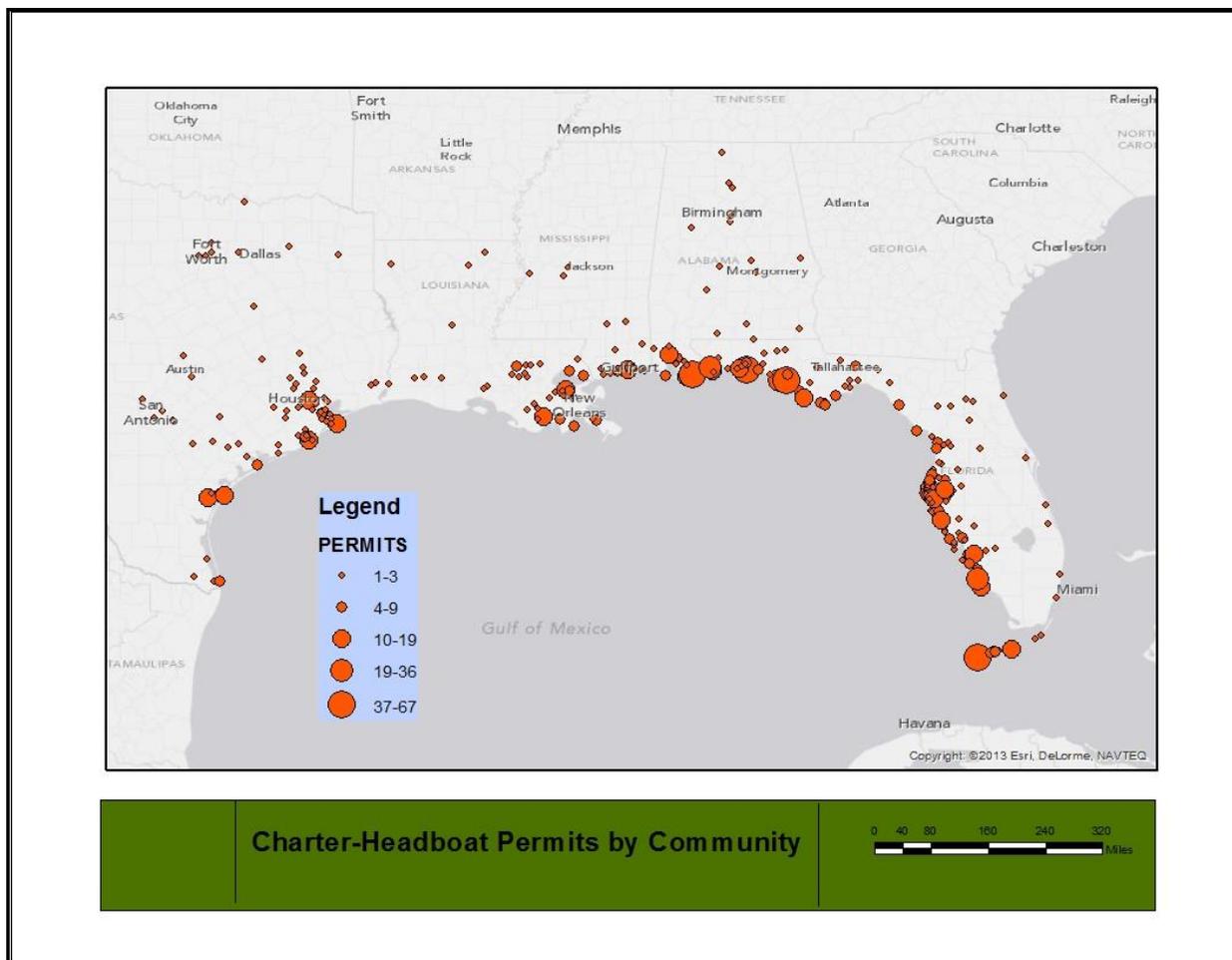


Figure 3.4.1.1. Distribution of federal for-hire permits, including historical captain permits in Gulf States, by community. Source: NMFS SERO permit office, February 13, 2014.

3.4.2 Environmental Justice Considerations

Executive Order 12898 requires federal agencies conduct their programs, policies, and activities in a manner to ensure individuals or populations are not excluded from participation in, or denied the benefits of, or subjected to discrimination because of their race, color, or national origin. In addition, and specifically with respect to subsistence consumption of fish and wildlife, federal agencies are required to collect, maintain, and analyze information on the consumption patterns of populations who principally rely on fish and/or wildlife for subsistence. The main focus of Executive Order 12898 is to consider “the disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories...” This executive order is generally referred to as environmental justice (EJ).

To evaluate EJ considerations for the proposed actions, information on poverty and minority rates is examined at the county level. Information on the race and income status for groups at the different participation levels (vessel owners, crew, dealers, employees, etc.) is not available.

Because the proposed actions would be expected to affect fishermen and associated industries in several communities along the Gulf coast and not just those profiled, it is possible that other counties have poverty or minority rates that exceed the EJ thresholds.

Table 3.4.2.1. Environmental Justice thresholds (2010 U.S. Census data) for coastal Gulf counties. Only coastal counties (west coast for Florida) with minority and/or poverty rates that exceed the state threshold are listed.

State	County/Parish	Minority Rate	Minority Threshold*	Poverty Rate	Poverty Threshold*
Florida		39.5	47.4	13.2	15.8
	Dixie	8.7	38.7	19.6	-3.8
	Franklin	19.2	28.2	23.8	-8.0
	Gulf	27	20.4	17.5	-1.7
	Jefferson	38.5	8.9	20.4	-4.6
	Levy	17.9	29.5	19.1	-3.3
	Taylor	26.2	21.2	22.9	-7.1
Alabama		31.5	37.8	16.8	20.2
	Mobile	39.5	-1.7	19.1	1.1
Mississippi		41.2	49.4	21.4	25.7
Louisiana		38.2	45.8	18.4	22.1
	Orleans	70.8	-25.0	23.4	-1.3
Texas		52.3	62.7	16.8	20.1
	Cameron	87.4	-24.7	35.7	-15.6
	Harris	63.5	-0.8	16.7	3.4
	Kenedy	71.7	-9.0	52.4	-32.3
	Kleberg	75	-12.3	26.1	-6.0
	Matagorda	51.9	10.8	21.9	-1.8
	Nueces	65.5	-2.8	19.7	0.4
	Willacy	89	-26.3	46.9	-26.8

*The county minority and poverty thresholds are calculated by comparing the county minority rate and poverty estimate to 1.2 times the state minority and poverty rates. A negative value for a county indicates that the threshold has been exceeded. No counties in Mississippi exceed the state minority or poverty thresholds.

To identify the potential for EJ concern, the rates of minority populations (non-white, including Hispanic) and the percentage of the population that was below the poverty line were examined. Because this proposed action could be expected to affect fishermen and associated businesses in numerous communities along the Gulf coast, census data (available at the county level, only) have been assessed to examine whether any coastal counties have poverty or minority rates that exceed the EJ thresholds. The threshold for comparison that was used was 1.2 times the state average for minority population rate and percentage of the population below the poverty line. If

the value for the county was greater than or equal to 1.2 times the state average, then the county was considered an area of potential EJ concern (EPA 1999). Census data for the year 2010 was used. Estimates of the state minority and poverty rates, associated thresholds, and county rates are provided in Table 3.4.2.1; note that only counties that exceed the minority threshold and/or the poverty threshold are included in the table.

While some counties and communities expected to be affected by this proposed amendment may have minority or economic profiles that exceed the EJ thresholds and, therefore, may constitute areas of concern, significant EJ issues are not expected to arise as a result of this proposed amendment. No adverse human health or environmental effects are expected to accrue to this proposed amendment, nor are these measures expected to result in increased risk of exposure of affected individuals to adverse health hazards. The proposed management measures would apply to all participants in the affected area, regardless of minority status or income level, and information is not available to suggest that minorities or lower income persons are, on average, more dependent on the affected species than non-minority or higher income persons. There are no known claims for customary usage or subsistence consumption of Gulf red snapper by any population including tribes or indigenous groups. The harvest of red snapper is conducted offshore requiring boat access. Thus, it is unlikely that there would be any EJ concerns resulting from the actions in this amendment, which would disproportionately affect minorities or those in poverty.

3.5 Description of the Economic Environment

3.5.1 Commercial Sector

A description of the commercial sector of the red snapper component of the Gulf reef fish fishery is contained in GMFMC (2013b) and is incorporated herein by reference. Because this action would only change management of the recreational sector, updates of the information on the commercial sector are not provided.

3.5.2 Recreational Sector

3.5.2.1 Angler Effort

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

1. 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 second primary target for the trip. The species did not have to be caught.
2. 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 kept.
3. 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 the number of catch trips (the number of individual angler trips that catch a particular species regardless of target intent), and directed trips (the number of individual angler trips that either targeted or caught a particular species), among other measures. Estimates of the number of red snapper target trips for the shore, charter, and private/rental boat modes in the Gulf for 2011-2013 are provided in Table 3.5.2.1.1. Estimates of red snapper target effort for additional years, and other measures of directed effort, are available at <http://www.st.nmfs.noaa.gov/recreational-fisheries/access-data/run-a-data-query/queries/index>. These estimates do not include adjustment for the MRIP re-calibration discussed in Chapter 2 because re-calibrated effort estimates are not available at this time. The effect of future re-calibration of the effort estimates is unknown.

Table 3.5.2.1.1. Red snapper recreational target trips, by mode, 2011-2013*.

	Alabama**	West Florida	Louisiana	Mississippi	Total**
Shore Mode					
2011	0	0	0	0	0
2012	0	0	0	0	0
2013	0	0	0	0	0
Average	0	0	0	0	0
Charter Mode					
2011	19,011	29,642	1,424	0	50,077
2012	16,610	24,653	7,203	74	48,540
2013	21,965	32,864	7,240	38	62,107
Average	19,195	29,053	5,289	37	53,575
Private/Rental Mode					
2011	116,886	113,021	19,900	16,790	266,597
2012	72,031	136,595	43,547	13,515	265,688
2013	224,078	457,519	24,496	21,434	727,527
Average	137,665	235,712	29,314	17,246	419,937
All Modes					
2011	135,897	142,663	21,324	16,790	316,674
2012	88,641	161,248	50,750	13,589	314,228
2013	246,043	490,383	31,736	21,472	789,634
Average	156,861	264,765	34,603	17,284	473,512

*Texas information unavailable. 2013 estimates are preliminary.

Source: Personal communication from the NMFS, Fisheries Statistics Division April 8, 2014.

Note: these estimates may vary from those derived from other sources or estimation methodologies.

**Red snapper target effort for the shore mode in Alabama was recorded in each of the three years examined (resulting in estimates of 808 trips, 1,639 trips, and 434 trips for 2011, 2012, and 2013, respectively) and not in any of the other three states. However, because red snapper is not commonly caught in the shore mode, these estimates have not been included in the table.

Table 3.5.2.1.2. Headboat angler days.

Year	West Florida/Alabama	Louisiana/Mississippi	Texas	Total
2011	157,025	3,657	47,284	207,966
2012	161,975	3,680	51,776	217,431
2013	174,800	3,406	55,749	233,955
Average	164,600	3,581	51,603	219,784

Source: HBS.

Headboat data do not support the estimation of target effort because target intent is not collected. Table 3.5.2.1.2 contains estimates of the number of headboat angler days for all Gulf States for 2011-2013. Estimates from previous years are available in GMFMC (2013a) and are incorporated herein by reference.

3.5.2.2 Permits

The for-hire fleet is comprised of charter vessels and headboats (party boats). Although charter vessels tend to be smaller, on average, than headboats, the key distinction between the two types of operations is how the fee is determined. On a charter boat trip, the fee charged is for the entire vessel, regardless of how many passengers are carried, whereas the fee charged for a headboat trip is paid per individual angler.

A federal for-hire vessel permit has been required for reef fish since 1996 and the fleet currently operates under a limited access system. On May 29, 2014, there were 1,336 valid (non-expired) or renewable Gulf Charter/Headboat Reef Fish permits. A renewable permit is an expired permit that may not be actively fished, but is renewable for up to one year after expiration. 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 in both capacities. However, only federally permitted headboats are required to submit harvest and effort information to the HBS. Participation in the HBS is based on determination by the Southeast Fishery Science Center (SEFSC) that the vessel primarily operates as a headboat. Sixty-seven vessels were registered in the HBS as of April 8, 2014 (K. Brennen, NMFS SEFSC, pers. comm.).

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

There are no specific federal permitting requirements for recreational anglers to fish for or harvest reef fish. Instead, anglers are required to possess either a state recreational fishing permit that authorizes saltwater fishing in general, or 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 anglers would be expected to be affected by this proposed action. (Note: although it is not a federal permit, Louisiana has developed an offshore angler permit. Tabulation of these permits would be expected to provide an estimate of only a small portion of the total number of individual anglers expected to be affected by this proposed action.)

3.5.2.3 Economic Value

Economic value can be measured in the form of consumer surplus per red snapper trip for anglers (the amount of money that an angler would be willing to pay for a fishing trip in excess of the cost of the trip) and producer surplus per passenger trip for for-hire vessels (the amount of money that a vessel owner earns in excess of the cost of providing the trip). The estimated value of the consumer surplus per red snapper angler trip for a trip on which the angler is allowed to harvest two red snapper is \$58.43 (GMFMC 2010; value updated to 2013 dollars). Estimates of

the consumer surplus per fish, instead of per angler trip, for red snapper and other saltwater species are provided in Carter and Liese (2012).

Estimates of the producer surplus per for-hire passenger trip are not available. Instead, net operating revenues, which are the return used to pay all labor wages, returns to capital, and owner profits, are used as the proxy for producer surplus. The estimated net operating revenue (2013 dollars) is \$160.13 per target charter angler trip and \$53.01 per target headboat angler trip regardless of species targeted or catch success (C. Liese, NMFS SEFSC, pers. comm.). Estimates of net operating revenue per red snapper trip are not available.

3.5.2.4 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 red snapper were derived using average impact coefficients for recreational angling for all species, as derived from an add-on survey to the MRFSS to collect economic expenditure information, as described and utilized in NMFS (2011b). Estimates of the average expenditures by recreational anglers are also provided in NMFS (2011b) and are incorporated herein by reference.

Recreational fishing generates business activity (economic impacts). Business activity for the recreational sector is characterized in the form of full-time equivalent jobs, 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 red snapper target effort (2011-2013) and associated business activity (2013 dollars) are provided in Table 3.5.2.4.1. As discussed above, other measures of red snapper effort can be estimated, such as, for example, catch effort or directed effort. Estimates of business activity by effort “type” are not available. As a result, estimation of the business activity associated with a different measure of red snapper activity would utilize the same coefficients (e.g., output impact per trip) used to generate the estimates provided in Table 3.5.2.4.1. These coefficients are not provided here; however, they are easily generated from the information in Table 3.5.2.4.1 by dividing the measure of impact in the table by the respective number of target trips. For example, the output impact coefficient for the shore mode in Alabama is approximately \$79 ($\$75,991/960 = \79.16). If another measure (number of trips) of red snapper effort for the Alabama shore mode, for example, direct effort, were available, the business activity associated with this measure would be calculated by multiplying that estimate of the number of red snapper trips by \$79.16.

The estimates provided in Table 3.5.1 only apply at the state-level. These numbers should not be added across the region. Addition of the state-level estimates to produce a regional (or national total) could either under- or over-estimate the actual amount of total business activity because of

the complex relationship between different jurisdictions and the expenditure/impact multipliers. Neither regional nor national estimates are available at this time.

Estimates of the business activity associated with headboat effort are not available. Headboat vessels are not covered in the MRFSS/MRIP 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 3.5.2.4.1. Summary of red snapper target trips (2011-2013 average) and associated business activity (thousand 2013 dollars). Output and value added impacts are not additive.

	Alabama**	West Florida	Louisiana	Mississippi	Texas
Shore Mode					
Target Trips	0	0	0	0	*
Output Impact	\$0	\$0	\$0	\$0	*
Value Added Impact	\$0	\$0	\$0	\$0	*
Jobs	0	0	0	0	*
Private/Rental Mode					
Target Trips	137,665	235,712	29,314	17,246	*
Output Impact	\$8,666,295	\$11,579,138	\$2,586,528	\$532,155	*
Value Added Impact	\$4,744,600	\$6,885,390	\$1,272,145	\$255,047	*
Jobs	84	107	22	4	*
Charter Mode					
Target Trips	19,195	29,053	5,289	37	*
Output Impact	\$10,813,363	\$9,870,872	\$2,724,291	\$12,439	*
Value Added Impact	\$5,952,394	\$5,852,411	\$1,546,848	\$7,009	*
Jobs	134	94	26	0	*
All Modes					
Target Trips	156,861	264,765	34,603	17,283	*
Output Impact	\$19,479,657	\$21,450,010	\$5,310,819	\$544,594	*
Value Added Impact	\$10,696,993	\$12,737,801	\$2,818,992	\$262,056	*
Jobs	218	201	49	4	*

*Because target information is unavailable, associated business activity cannot be calculated.

Source: effort data from the MRFSS/MRIP, economic impact results calculated by NMFS SERO using the model developed for NMFS (2011).

**See discussion on Alabama red snapper target effort for the shore mode in Table 3.5.2.1.1.

3.6 Description of the Administrative Environment

3.6.1 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 exclusive economic zone, an area extending 200 nautical miles from the seaward boundary of each of the coastal states, and authority over U.S. anadromous species and continental shelf resources that occur beyond the exclusive economic zone.

Responsibility for federal fishery management is shared by the Secretary of Commerce (Secretary) and eight regional fishery management councils that represent the expertise and interests of constituent states. Regional councils are responsible for preparing, monitoring, and revising management plans for fisheries needing management within their jurisdiction. The Secretary is responsible for promulgating regulations to implement proposed plans and amendments after ensuring management measures are consistent with the Magnuson-Stevens Act and with other applicable laws summarized in Appendix A. In most cases, the Secretary has delegated this authority to NMFS.

The Council is responsible for fishery resources in federal waters of the Gulf. These waters extend to 200 nautical miles offshore from the nine-mile seaward boundary of the states of Florida and Texas, and the three-mile seaward boundary of the states of Alabama, Mississippi, and Louisiana. The length of the Gulf coastline is approximately 1,631 miles. Florida has the longest coastline of 770 miles along its Gulf coast, followed by Louisiana (397 miles), Texas (361 miles), Alabama (53 miles), and Mississippi (44 miles).

The 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 through participation on advisory panels and through Council meetings that, with few exceptions for discussing personnel matters, are open to the public. The regulatory process is also in accordance with the Administrative Procedures Act, in the form of “notice and comment” rulemaking, which provides extensive opportunity for public scrutiny and comment, and requires consideration of and response to those comments.

Regulations contained within FMPs are enforced through actions of the National Oceanic and Atmospheric Administration’s Office of Law Enforcement, the United States Coast Guard, and various state authorities. To better coordinate enforcement activities, federal and state enforcement agencies have developed cooperative agreements to enforce the Magnuson-Stevens Act. These activities are being coordinated by the Council’s Law Enforcement Advisory Panel and the Gulf States Marine Fisheries Commission’s Law Enforcement Committee, which have developed joint enforcement agreements and cooperative enforcement programs (www.gsmfc.org).

The red snapper stock in the Gulf is classified as overfished, but no longer undergoing overfishing. A rebuilding plan for red snapper was first implemented under Amendment 1 (GMFMC 1989), and has undergone several revisions. The current rebuilding plan was established in Reef Fish Amendment 27/Shrimp Amendment 14 (GMFMC 2007), and calls for rebuilding the stock to a level capable of supporting maximum sustainable yield on a continuing basis by 2032. Periodic adjustments to the ACL and other management measures needed to affect rebuilding are implemented through regulatory amendments.

3.6.2 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 Gulf States exercises legislative and regulatory authority over their respective state's 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 in Amendment 22 (GMFMC 2004b).

CHAPTER 4. ENVIRONMENTAL CONSEQUENCES

4.1 Action 1 – Establishment of Private Angling and Federal For-hire Components

Action 1 would consider the establishment of a federal for-hire and private angling components within the recreational sector. Alternatives include no action (Alternative 1), establishment of the components where all for-hire vessels would be added to the federal for-hire component (Preferred Alternative 2), and establishment of the components where federal for-hire operators may opt into the federal for-hire component (Alternatives 3 and 4). Alternatives 3 and 4 differ in that the endorsement used to identify which for-hire vessels are in the for-hire component are fully transferable under Alternative 3 and not transferable under Alternative 4. Alternatives 3 and 4 also have options for the frequency that vessel operators may choose to opt in or out of the for-hire component of just once (option a), every year (option b), every 3 years (option c), and every 5 years (option d). Preferred Alternative 5 would set a sunset provision for the separate components of either 2 (option a), 3 (preferred option b), or 5 years (option c).

4.1.1 Direct and Indirect Effects on the Physical Environment

Sections 3.2, 3.3, and GMFMC (2004a, 2004b, and 2007) describe the physical environment and habitat used by red snapper. In summary, adult red snapper targeted by the reef fish fishery are found around hard bottom habitat. In terms of red snapper fishing, most commercial red snapper fishermen use handlines (mostly bandit rigs and electric reels, occasionally rod-and-reel) with a small percentage (generally <5% annually) caught with bottom longlines (see Section 3.1). Recreational red snapper fishing almost exclusively uses vertical-line gear, most frequently rod-and-reel (See Section 3.1). The following describes the effects of handline fishing gear on the physical environment. Because the actions of this amendment apply only to the recreational sector and longlines are used exclusively by the commercial sector, the effects of longline gear will not be discussed here. A summary of effects from longline gear on the physical environment can be found in GMFMC (2011b).

Handline gear (rod-and-reel) used in recreational fishing for reef fish is generally suspended over hard bottom because many managed reef fish species occur higher over this type of substrate than over sand or mud bottoms (GMFMC 2004a). Recreational fishing with rod-and-reel lays gear on the bottom. The terminal part of the gear is either lifted off the bottom or left contacting the bottom. Sometimes the fishing line can become entangled on coral and hard bottom outcroppings. The subsequent algal growth can foul and eventually kill the underlying coral (Barnette 2001). Researchers conducting studies in the restricted fishing area at Madison-Swanson reported seeing lost fishing line on the bottom, much of which appeared to be older and covered with invertebrate growth (A. David, Southeast Fisheries Science Center, pers. comm.), a clear indication that bottom fishing has had an impact on the physical environment prior to fishing being prohibited in the area (GMFMC 2003).

Anchor damage is also associated with handline fishing vessels, particularly by the recreational sector where fishermen may repeatedly visit well marked fishing locations. Bohnsack (2000)

points out that “favorite” fishing areas such as reefs are targeted and revisited multiple times, particularly with the advent of global positioning technology. The cumulative effects of repeated anchoring could damage the hard bottom areas where fishing for red snapper occurs.

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. This action alone should have no direct or indirect effect on the physical environment regardless of the alternative because it would only establish at most two different components to the recreational sector. Whether the recreational sector is maintained as one component (**Alternative 1**, no action), divided into two components (**Preferred Alternative 2** and **Alternatives 3-4** regardless of the options), or the components continue from two, three, or five years (**Preferred Alternative 5, Option a, Preferred Option b, Option c**, respectively), the recreational quota would not change and any future changes in fishing effort would be due to other factors and independent of the presence or length of the sunset period.

4.1.2 Direct and Indirect Effects on the Biological/Ecological Environment

Direct and indirect effects from fishery management actions have been discussed in detail in Reef Fish Amendment 22 and Reef Fish Amendment 27/Shrimp Amendment 14 (GMFMC 2004b and 2007) and in several red snapper framework actions (GMFMC 2010, 2012a, 2013a) and are incorporated here by reference. Potential impacts of the 2010 Deepwater Horizon MC252 oil spill on the biological/ecological environment are discussed in Section 3.3 and the January 2011 Framework Action (GMFMC 2011c) and are also incorporated here by reference. These impacts may include recruitment failure and reduced fish health. Management actions that affect this environment mostly 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 the population through fishing reduces the overall population size. Fishing gears have different selectivity patterns which refer to a fishing method’s ability to target and capture organisms by size and species. This would include the number of discards, mostly sublegal fish or fish caught during seasonal closures, and the mortality associated with releasing these fish.

Fishing can affect life history characteristics of reef fish such as growth and maturation rates. For example, Fischer et al. (2004) and Nieland et al. (2007) found that the average size-at-age of red snapper had declined and associated this trend with fishing pressure. Woods (2003) found that the size at maturity for Gulf red snapper had also declined and speculated this change may also have been due to increases in fishing effort. The reef fish fishery can also affect species outside the reef fish complex. Specifically, sea turtles have been observed to be directly affected by the longline component of the Gulf reef fish fishery. These effects occur when sea turtles interact with fishing gear and result in an incidental capture injury or mortality and are summarized in GMFMC (2009). However, for sea turtles and other listed species, the most recent biological/ecological opinion for the Reef Fish Fishery Management Plan concluded authorization of the Gulf reef fish fishery managed in the reef fish plan is not likely to jeopardize the continued existence of sea turtles, smalltooth sawfish, or *Acropora* species (NMFS 2011a). In addition, the primary gear used by the recreational sector (hook-and-line) was classified in the 2014 List of Fisheries (79 FR 14418, April 14, 2014) as a Category III fishery with regard to

marine mammal species, indicating this gear has little effect on these populations (see Section 3.3 for more information).

The most likely indirect effect on the red snapper stock from this action would be on discard mortality. Regulatory discards are fish that are caught, but not kept because they are too small, would put a fisherman over the bag limit, or are caught out of season. A certain percentage of these fish die and are called dead discards. The most recent red snapper stock assessment (SEDAR 31 2013) estimated dead discard rates for the recreational sector at 10%. However, the number of discards relative to the landed fish may differ between components. For example, the relative number of landed fish between the charter boat and private angling components over the time period 1981-2011 was 45% to 55%, respectively (Data Workshop Report Figure 4.11.1 in SEDAR 31 2013). But the relative number of discards over the same time period was much lower for the charter boat component than the private angling component at 31% to 69%, respectively (Data Workshop Report Figure 4.11.4 in SEDAR 31 2013). Thus, the relative number of discarded fish compared to landed fish is less for charter boat fishing than for private angling. It should be noted that similar numbers of fish were not available for headboat trips and so a similar comparison could not be made for this portion of the component.

Alternative 1, no action, would not split the recreational sector into two components, so no change in effects on the biological/ecological environment is expected. Given the discussion above, it is difficult to know whether the effects from **Preferred Alternative 2** and **Alternatives 3-4** (regardless of the options) associated with discard mortality are adverse or beneficial. If the allocation does not change from current levels, then there will be no change in effects. However, if the allocation allows an increase in the number of fish harvested by for-hire vessels, this may cause a decrease in the number of red snapper discards (and dead discards) providing a benefit to the stock. If the allocation goes in the other direction, then this could adversely affect the stock. The direction of the effects would be dependent on what the allocation is between the two components set in Action 2 and the duration of the effects (two years to indefinitely) would be dependent on the selection of **Preferred Alternative 5 (Option a, Preferred Option b, or Option c)**. For **Preferred Alternative 5, Option a** (2 years) would have the shortest period of effects, followed by **Preferred Option b** (3 years) and **Option c** (5 years), respectively. Not selecting **Alternative 5** as preferred would allow the federal for-hire and private angling components to continue indefinitely.

Another likely indirect effect from this action would be a reduction in the probability of red snapper overfishing by the recreational sector. If better landings information became available for one component, then either in-season monitoring of the harvest or better projections could be used to reduce the likelihood that a component does not exceed its quota/annual catch limit. This would particularly be true for the federally permitted for-hire component. Because of the limited number of federally permitted vessels and the fact that headboats regularly report landings, it is currently easier to both monitor and project landings of this component. In addition, federally permitted headboat operators are required to submit electronic logbooks and efforts are underway to extend this type of reporting to federally permitted charter vessels – actions that should improve harvest information for this sector. Thus, the selection of **Preferred Alternative 2** and **Alternatives 3-4** that establish the components could indirectly benefit the stock compared to **Alternative 1** by reducing the probability of overfishing through better monitoring of the

stock. **Preferred Alternative 5** would limit these effects with **Option a** (2 years) limiting the effects most and **Option c** (5 years) the least. Not selecting **Alternative 5** as preferred would allow the federal for-hire and private angling components to continue indefinitely.

4.1.3 Direct and Indirect Effects on the Social Environment

Although a shared set of federal management measures is used to regulate the recreational harvest of red snapper Gulf-wide, participants' opportunities to harvest red snapper depend on several factors including the red snapper regulations in a participant's state, the amount of fishing allowed in other Gulf States with less restrictive regulations than federal regulations, and the fishing mode (private or for-hire) used to access the fishery. Recreational vessels with a federal for-hire permit must abide by federal regulations if stricter than state regulations; recreational vessels without a federal permit (including private vessels and state-licensed for-hire vessels) are able to participate in any additional fishing opportunities provided by their state. These additional fishing opportunities are primarily provided through a longer fishing season in state waters; federal for-hire vessels are limited to fishing for red snapper only during the federal season (Table 4.1.3.1).

The open entry system in which an unrestricted number of private vessels may enter the fishery has contributed to a decrease in the percentage of the recreational red snapper quota landed by federal for-hire vessels, reducing the fishing opportunities of anglers who do not have access to private vessels and must rely on for-hire services. Under **Alternative 1**, differential access to fishing opportunities between the private angling and federal for-hire components and the resulting decline in access by the federal for-hire fleet would continue. This is an issue of subtractability, where additional fishing by anglers in states with less restrictive regulations than federal regulations reduces the amount of fish available to be harvested by each angler in the sector as a whole. This is primarily a problem for the federal red snapper recreational season which must be closed when the recreational quota is reached (Section 407(d) of the Magnuson-Stevens Fisheries Conservation and Management Act [Magnuson-Stevens Act]). Under **Alternative 1**, anglers fishing from private vessels in states that provide additional fishing opportunities beyond the federal regulations enjoy the greatest amount of fishing opportunities, compared to all other Gulf recreational anglers (Table 4.1.3.1). Nevertheless, red snapper are not uniformly distributed in all depths and habitats, and these opportunities depend on the presence of red snapper in state waters. For example, red snapper may be frequently encountered within Florida's nine miles of state waters off the Panhandle, but anglers fishing in state waters off the central west coast of Florida are not likely to encounter harvestable red snapper.

Table 4.1.3.1. Comparison of fishing opportunities (Alternative 1) allowed among recreational vessels in state and federal waters, in states with consistent and inconsistent regulations for red snapper.

Allowed to fish in:	All States during federal season		States with additional fishing opportunities	
Fishing from:	State waters	EEZ	State waters	EEZ
Private vessels	Yes	Yes	Yes	No
State-permitted for-hire vessels	Yes	No	Yes	No
Federally permitted for-hire vessels	Yes	Yes	No	No

Preferred Alternative 2 and **Alternatives 3-4** would establish two distinct components within the recreational sector for the purpose of partitioning access to the recreational red snapper quota. The social effects of establishing a federal for-hire and private angling component would be expected to correspond with recreational participants’ perspective. There are both avid supporters and objectors to establishing separate components; it is assumed that supporters expect positive effects and opponents expect to be affected negatively. Yet, social benefits would not result directly from establishing the separate components within the recreational sector. The actual effects resulting from establishing separate components would be indirect and result from how stakeholders and state marine resource departments respond to a federal decision to create separate components of federally permitted and non-federally permitted vessels, and from any subsequent management measures developed and applied to each component. Indirect social benefits for the private angling component would be expected to result from management measures accounting for their specific needs and characteristics, including regional preferences for access to fishing opportunities. For the federal for-hire component, indirect social benefits would primarily result from mitigating the trend of decreasing access to red snapper by the federal for-hire component. For-hire operators, their angler passengers, and the communities where these vessels are homeported would then be expected to benefit as a result of increased stability of access to red snapper. However, these benefits could be decreased as the amount of red snapper harvested in state waters outside the federal season increases.

Preferred Alternative 2 would require all federal for-hire operators to participate in an established federal for-hire component, while **Alternatives 3** and **4** would allow federal for-hire operators to decide whether to participate in the federal for-hire component or to remain within the private angling component. By requiring participation, **Preferred Alternative 2** provides less flexibility to federal for-hire operators than **Alternatives 3** and **4**. For individual for-hire operators, positive effects would be expected by allowing them to decide which component is best for their operation. However, establishing a voluntary federal for-hire component, thereby allowing those operators who do not wish to participate to be managed under the private angling component (**Alternatives 3** and **4**), would be expected to diminish the potential benefits of establishing separate components, particularly for the federal for-hire component.

The options under **Alternatives 3** and **4** would be expected to reflect this tradeoff in benefits between flexibility for individual operators, and the functioning of the component as a whole. A greater frequency for federal for-hire operators to switch between components could possibly

provide increased benefits to the operator that may correspond with unintended consequences for the rest of the component, through some amount of instability in membership of the for-hire component. Thus, for the federal for-hire component as a whole, **Options a** would be expected to be most beneficial for the federal for-hire component, followed by **Options d** and **Options c**.

Considering the potential desire for flexibility of individual operators, these options would be ordered in reverse. However, allowing federal for-hire operators to switch between components every year (**Options b**) would not be expected to be beneficial for the component, and would instead be expected to correspond with added uncertainty.

Alternative 3 would provide an additional measure of flexibility compared to **Alternative 4**, by allowing the endorsement denoting participation in the federal for-hire component to be fully transferable to another federal for-hire operator. Positive effects may be expected for the individual federal for-hire operators engaged in the transfer, but the indirect effects that would accrue to the component as a whole would be expected to be negative. Depending on the method selected to distribute fishing opportunities among vessels (Action 2), it is likely that indirect unintended consequences would result. For example, fishing opportunities may be initially distributed based on vessel capacity, but there is no prohibition on the operator transferring the endorsement to a vessel of different capacity.

Preferred Alternative 5 would establish a sunset provision, ending sector separation after 2 years (**Option a**), 3 years (**Preferred Option b**), or 5 years (**Option c**). Selecting an option as preferred means sector separation would be in place for the number of years specified. This plan amendment provides the foundation for management to be tailored to each component of the recreational sector, but it does not establish different management measures for each component. Potential component-specific management measures could be implemented subsequent to this plan amendment.

The effects of including a sunset provision are mixed. On the one hand, adoption of a sunset provision would require the Council to revisit its decision and determine whether the management approach for separate federal for-hire and private angling components should be continued. For example, the Council has expressed its interest in adopting a regional approach to managing the recreational sector. On the other hand, the potential benefits that may result from establishing separate management measures for each component of the recreational sector would be diminished through the adoption of a sunset provision. The range of management measures available would be restricted to those the Council could develop and implement before the sunset occurs. Furthermore, any distinct management approaches applied to a component would cease at the time of the sunset. Thus, a plan amendment that takes as much time to develop as the term of the sunset would become irrelevant and not be implemented. For example, while changes to the season structure or bag limit may be possible to enact for the short-term (these may be modified through a framework action), management approaches such as a harvest tag program, which would require a longer time frame to develop, may not be feasible under the constraints of a sunset provision.

Among the options, the shortest time period before sector separation sunsets (**Option a**) would provide the recreational components with the least amount of flexibility to develop and

implement management approaches tailored to their needs, followed by **Preferred Option b** and **Option c**.

As noted in Section 3.4.1, the only recreational landings of red snapper reported at the community level are from those headboats participating in the Southeast Headboat Survey (HBS). Although it is possible to identify the communities with the most landings of red snapper by headboats, it is not possible to determine whether these same communities are where the most landings of red snapper by private anglers are made. It may be assumed that a greater proportion of anglers fishing from for-hire vessels compared with private vessels do not reside in the community where landings are made, as for-hire vessels would be expected to provide access to more coastal visitors than privately owned vessels. Nevertheless, both coastal residents and visiting anglers access red snapper from private vessels and for-hire vessels. Given that fishing infrastructure such as marinas and tackle shops are used by anglers fishing from charter boats, headboats, and private vessels, it is assumed that communities from which for-hire vessels and private angling vessels depart overlap, rather than being distinct communities. Thus, there are not federal for-hire communities and private angling communities for which different effects may result from this action.

4.1.4 Direct and Indirect Effects on the Economic Environment

Alternative 1 would continue to treat the recreational sector as a single entity for the management of red snapper. The Council would continue to apply the same set of red snapper management measures, e.g., bag and size limits and seasons, to private recreational anglers, for-hire recreational anglers, and for-hire operators. Federal angler licensing requirements also would continue to be the same for both private and for-hire anglers. **Alternative 1** would not affect the current recreational harvest or other customary uses of recreational red snapper. Therefore, **Alternative 1** would not be expected to result in any direct economic effects on recreational fishermen, for-hire operations, or associated shore-side businesses. However, maintaining the current management structure of the recreational sector may impede the implementation of management measures that could result in additional economic benefits to the federal for-hire and/or private angling components. Tailoring management measures to the specific needs of the separate harvesting components would be expected to result in improved use of the resource, better timing of effort and other resources associated with harvest activities, and associated increases in economic benefits. Although it may be possible to establish different regulations for private and for-hire anglers for some management tools, the current treatment of these entities as a single management unit, which would continue under **Alternative 1**, may impede the ability or speed at which such can be accomplished. Different regulations for these two groups of anglers may be capable of achieving improved management of the red snapper resource and increased economic benefits. If the current management approach of treating the two groups of anglers as a single unit impedes the ability to establish different management, then **Alternative 1** would be expected to result in adverse indirect economic effects due to forgone opportunities to improve the management of red snapper in the recreational sector. These potential indirect economic effects cannot be quantified at this time because they would be determined by the nature and efficacy of subsequent management measures implemented by the Council following the establishment of separate components within the recreational sector.

Preferred Alternative 2 would depart from the current structure of the recreational sector and establish distinct federal for-hire and private angling components for recreational red snapper management. The federal for-hire component would include all for-hire operators with a valid or renewable federal charter/headboat reef fish permit (for-hire permit) and their angler clients. On May 29, 2014, there were 1,336 valid or renewable federal reef fish for-hire permits. The private angling component would include private recreational anglers and state-permitted for-hire operators and their angling clients. The private angling component includes participants in the recreational red snapper fishery that do not possess a federal permit. In and of itself, sector separation, or the establishment of distinct components within the recreational sector, would only be a prerequisite to the future design and implementation of management measures that could be tailored to account for the specific needs of each component, thereby possibly generating additional economic benefits. A quantitative evaluation of potential economic benefits that could result from recreational sector separation would require detailed information on the allocation of the recreational red snapper quota between the two components and on the management measures to be implemented once the new components are created. Although the expected economic effects of the alternative allocations considered in this amendment are discussed in Section 4.2.4., management measures that will be implemented post sector separation have yet to be determined. In the absence of such information, a qualitative discussion of potential economic effects is offered in this section. It is noted that an evaluation of sector separation for red snapper provided by Doerpinghaus et al. (2013, 2014) suggests that sector separation would result in economic benefits compared to the current structure of the recreational sector. However, this evaluation is of limited use in policy decision-making due to the tenuous nature of assumptions made in the study.

In recent years, the percentage of the red snapper recreational quota harvested by the federal for-hire component has steadily decreased, while the percentage landed by the private angling component has increased. Between 1986 and 2013, the percentage of the red snapper recreational quota harvested by the federal for-hire component decreased from 66.2% to 16.1% (Table 2.2.). A primary consequence of the establishment of distinct components with separate red snapper allocations for each component would be to stop this decrease. The separation of the recreational sector into two components would allow the federal for-hire component to harvest a predetermined and non-decreasing portion of the recreational red snapper quota. As a result, although the season from year to year may continue to vary (as affected by changing rates of effort and harvest success within the for-hire component), it would not be as greatly influenced by harvest activity by the private component. This could potentially result in a more predictable season length, better business planning, and improvements to the economic performance of for-hire businesses. Conversely, the establishment of separate components and allocations to each component would limit the private angling component to harvesting the proportion of the recreational red snapper quota allocated to them. In addition to the establishment of separate components, additional management measures would need to be considered by the Council to further mitigate the uncontrolled growth (due to the open access management of private anglers) of the amount of red snapper harvested by the private angling component. In and of itself, the separation of the recreational sector into two distinct components would not shield either component from the Magnuson-Stevens Act provisions in Section 407(d) which require that recreational harvest of red snapper in the EEZ be halted once the recreational red snapper quota is met. The economic evaluation of recreational management measures, such as the

establishment of separate components, would typically include estimates of the expected changes in economic value, as measured by changes in consumer surplus to recreational anglers and producer surplus to for-hire operators. Definitions and estimates of these measures are provided in Section 3.5.2.3. Estimates of consumer surplus specific to each angler type (private and for-hire) are not available. Although it can be stated that curtailing the growth of fishing effort in the private angling component may redistribute effort (fishing trips) to the federal for-hire component in subsequent years, the resulting effort levels that may develop in the two components are unknown. In addition to generating consumer surplus, fishing activity by the federal for-hire component generates producer surplus to the for-hire vessels. If consumer surplus per angler trip is constant across both components, increasing the share of the quota harvested by the federal for-hire component would likely result in an increase in economic value because of the associated increase in producer surplus. The size of any potential increases, however, would be determined by several factors, including the demand for for-hire trips, the ability of the industry to respond to this demand and how these factors change.

The establishment of separate federal for-hire and private angling components is expected to provide opportunities to design and implement within each component flexible management approaches tailored to the specific needs and preferences of each component, thereby potentially resulting in increases in economic value. For each component, the magnitude of potential increased economic benefits that could result from this action would primarily rest on the type and quality of the management instruments implemented post sector separation. The property rights structure associated with the access to fishing privileges established to manage each component would constitute a key determinant of the magnitude of expected potential economic benefits. Following the separation of the recreational sector in components, continued management of the federal for-hire and private angling components using traditional command and control approaches, e.g., bag and size limit and season closures, would miss opportunities to increase economic value in each component and the fishery as a whole. It is noted that, even with sector separation, the continued reliance on command and control management would not affect the for-hire fleet's incentives to overinvest in fishing inputs. In general, incentive-based management approaches, i.e., management measures based on well-specified property rights, would be expected to generate greater increases in economic value. The use of incentive-based instruments in recreational fisheries management is relatively limited but includes noteworthy examples such as the recent halibut catch sharing plan for the charter for-hire (guided sport) and commercial fisheries in Alaska⁹ and the halibut experimental recreational fishery in Canada¹⁰. These programs establish market-based transfer mechanisms between the commercial and the for-hire sector (Alaska) or all segments of the recreational sector (Canada). In the Gulf, attempts to evaluate the use of market-based measures in the management of recreational red snapper include the ongoing Gulf Headboat Collaborative Exempted Fishing Permit and the proposed Alabama Charter Program. In addition, the Gulf Council approved a motion to initiate the development of an IFQ-type program for the for-hire industry and will appoint in June 2014 an advisory panel to assist in this effort.

⁹ Final rule published in the Federal Register 78 FR 75844, December 12, 2013.

¹⁰ <http://www.pac.dfo-mpo.gc.ca/fm-gp/commercial/ground-fond/halibut-fletan/docs/2014/presentation-eng.html>

Alternatives 3 and 4 would also establish red snapper federal for-hire and private angling components. However, as opposed to **Preferred Alternative 2**, which would include all federally-permitted for-hire operators in the federal for-hire component, **Alternatives 3 and 4** would only include those operators who elect to join the federal for-hire component. Therefore, in addition to the federally permitted for-hire operators who opted out of the federal for-hire component, the private angling component that would be established by **Alternatives 3 or 4** would include all other for-hire operators and private recreational anglers.

Alternatives 3 and 4 would provide federally-permitted for-hire operators the opportunity to join or opt out of the federal for-hire component once, at the implementation of the program (**Option a**), every year (**Option b**), every 3 years (**Option c**), or every 5 years (**Option d**). To distinguish members of the federal for-hire component from federally-permitted for-hire operators that opt out of the component, under **Alternative 3**, a fully transferable permit endorsement would be issued to the operators who elect to join the federal for-hire component. In contrast, the endorsement that would be issued under **Alternative 4** would be non-transferable. It is important to emphasize that the endorsements (transferable or not) in **Alternatives 3 and 4** are only considered as an enforcement mechanism.

The economic effects expected to result from **Alternatives 3 and 4** would be comparable to the effects expected from **Preferred Alternative 2** but would be reduced if some federal for-hire operators do not participate in the federal for-hire component. This reduction in economic benefits, if it occurs, would originate from the resultant reduction in the allocation of red snapper quota to the federal for-hire component, and the fact that management measures tailored to the specific needs of this sector as a whole would encompass fewer vessels. The larger the number of federally-permitted operators who elect to opt out, the greater the expected reduction in potential economic benefits that may occur. In addition, there is limited economic incentives for federally permitted operators to opt out of the federal for-hire component and join the private angling component because current regulations prohibit federally permitted for-hire vessels from harvesting red snapper when the federal season is closed. However, compared to **Preferred Alternative 2**, **Alternatives 3 and 4** would grant added flexibility to individual for-hire operators to determine their participation and/or switch their membership from one component to the other. This added flexibility could potentially result in increased positive economic effects at the individual vessel level because operators would be able to select and adjust, as needed, their participation in the component deemed to be most beneficial to their business. From this perspective, **Alternative 3** would be expected to result in potentially more economic benefits than **Alternative 4** because it would allow the endorsement to be fully transferable. However, the implementation of a voluntary federal for-hire component may adversely affect the Council's management strategies for recreational red snapper, thereby potentially resulting in negative economic effects, as well as increase the administrative costs of management. For example, under **Alternatives 3 or 4 (Options b-d)** if wide fluctuations in the membership of each component are observed (due to a sizeable number of for-hire operators switching their membership), variations in the portions of the recreation quota allotted to each component would increase the challenges to estimating season length, and render the implementation of management measures, such as the distribution of fish tags or other methods of access to fishing privileges, that the Council may consider less effective. The greater the flexibility to opt in or out, or transfer the endorsement, the greater the potential adverse economic effects associated with these management and administrative complications. As such, the management and

administrative challenges, and associated adverse economic effects, stemming from potential membership fluctuations would be heightened under **Alternative 3**, compared to **Alternative 4** and **Preferred Alternative 2**, because of the fully transferable endorsement it would grant to members of the federal for-hire component. A transferable endorsement, would for example allow endorsements to be moved during a given fishing season from operators who typically do not harvest much red snapper to operators who do, rendering estimated season and harvest targets unreliable. With respect to the options considered under **Alternatives 3** and **4**, the more flexible the participation decision option, the better it may be for the vessel operator. Thus, the ranking (best to worst) of the options from the vessel operators' perspective would be as ordered: **Option a-Option b-Option c-Option d**. As may be obvious from the discussion in the previous paragraph, from the management perspective, the ranking order of these options would be reversed.

Overall, because of the uncertainty associated with of the future management measures that may be tailored for each component, it is not possible to rank these alternatives based on quantitative or qualitative estimates of the resultant expected economic effects. Increased management flexibility, as would occur under the establishment of separate components under **Preferred Alternative 2**, **Alternative 3**, and **Alternative 4**, should allow the development of tailored management more closely attuned to sector needs and, therefore, result in increased economic benefits compared to **Alternative 1**. Determining whether the potential adverse economic effects accruing to more complicated management and administration that would be associated with the increased participant flexibility enabled by **Alternatives 3** and **4** negate the potential increased economic benefits accruing to participants, however, is not possible with available data and associated uncertainties.

Preferred Alternative 5 would add a sunset clause to the establishment of separate federal for-hire and private angling components. **Option a**, **Preferred Option b** and **Option c** would sunset sector separation after 2, 3, and 5 years, respectively. Economic benefits expected to result from the establishment of separate components within the recreational sector would mainly rest on the allocation of the recreational red snapper quota between the components and on the management measures implemented within each component post-sector separation. Therefore, the addition of a sunset provision could be expected to limit potential economic benefits expected from sector separation because the Council may not have the opportunity to implement potentially beneficial management measures requiring an extended time frame to be developed. Furthermore, even if management measures tailored to the specific needs of each component were implemented, a sunset clause could reduce potential economic benefits expected to result from sector separation because these measures may not be in place for a time period long enough to fully yield the economic benefits anticipated. Based on the preceding discussion, when comparing sunset options proposed in **Preferred Alternative 5**, greatest potential economic benefits would be expect to result from **Option c**, followed by **Preferred Option b**, and **Option a**. By providing a date certain to revert to a recreational red snapper sector without components unless the Council takes specific action to extend sector separation, the addition of a sunset provision may contribute to a timelier cancellation of the federal for-hire and private angling components if unintended adverse economic effects arise or if the positive economic effects expected to occur fail to materialize. Under this scenario, the ordinal ranking of the options provided in this section could be reversed.

4.1.5 Direct and Indirect Effects on the Administrative Environment

The establishment of two components to the red snapper recreational sector would have direct effects on the administrative environment through additional rulemaking. Because **Alternative 1**, the no-action alternative, would not require rulemaking, it would have no effect on the administrative environment. The act of establishing the two components under **Preferred Alternative 2** and **Alternatives 3-4** is a one-time event, and thus these alternatives would have an equivalent burden to this environment though the minor direct administrative impacts associated with the rulemaking to implement the new components. **Alternatives 3** and **4** would allow owners of federally permitted for-hire vessels to opt into the federal for-hire component. This would require an additional administrative burden above what would be required by **Preferred Alternative 2** to develop and issue an endorsement to track who has decided to operate within the federal for-hire component or within the private recreational angler component. **Alternatives 3** and **4** also have four options for the frequency owners of federally permitted for-hire vessels can decide to opt out of the federal for-hire component. **Option a** would have the least administrative burden because the option would only present itself at the beginning of the program. **Options b-d** allow owners to opt out at different time frames. **Option b** would have the greatest burden as owners would be able to make this determination annually, while **Option d** would have the least burden of these three options because owners would only be able to make this decision every five years. **Option c**, every three years, would have effects intermediate to **Options b** and **d**. Finally, **Alternative 3** adds an extra level of administrative complexity (added burden) by allowing the federal for-hire component endorsements to be fully transferable.

Although **Preferred Alternative 2** and **Alternatives 3 and 4** would increase the administrative burden, the effects are likely not too onerous. The National Marine Fisheries Service (NMFS) currently has a system in place to issue, transfer, and monitor permits and endorsements in the Constituency Service Branch at the Southeast Regional Office. Therefore, any additional administrative burden would be in adding these new requirements to the existing NMFS program and not requiring the development of a new program.

Preferred Alternative 5 would add a sunset provision to Action 1. The length of time until this action would sunset would be two years (**Option a**), three years (**Preferred Option a**), or five years (**Option a**). This alternative could either have beneficial or adverse effects on the administrative environment. If the establishment of two components to the red snapper recreational sector is implemented and further action is not taken by the Council or NMFS, then the recreational sector would revert to its current state with no federal for-hire and private angling components. This would be beneficial to the administrative environment in that no further action would be needed to revert to current conditions. However, it is highly likely the Council would need to take other actions to manage the recreational sector fishing for red snapper, so such benefits to the red snapper management would likely be short lived. If the Council continued to develop further actions to address issues in the recreational sector that require federal for-hire and private angling components, then the Council and NMFS would need to take further administrative action to continue the existence of these components. This would adversely affect the administrative environment through further rulemaking. The likelihood of this occurring would be greatest under **Option a**, and least under **Option c**. If **Alternative 5**

were not selected as preferred, then the two components would continue indefinitely.

Indirect effects of creating the new components under **Preferred Alternative 2** and **Alternatives 3-4** compared to **Alternative 1** would require monitoring of the recreational harvest by the two components, enforcement of the harvesting rules, and setting management measures to minimize the risk of harvests by the components of exceeding the recreational quota. However, regardless of which alternative is selected, these activities need to continue. Therefore, the indirect effects from each alternative would likely be similar. **Preferred Alternative 5**, would control how long these indirect effects would continue with **Option a** (2 years) limiting the effects least, and **Option c** (5 years) the most. Not selecting **Alternative 5** as preferred would allow the indirect effects to continue indefinitely.

4.2 Action 2 – Allocation of the Recreational Red Snapper Quota between the Components of the Recreational Sector

Action 2 considers the allocation between the federal for-hire and private angling components. No action (Alternative 1) would not set an allocation. Eight other allocation alternatives are considered that base the allocation of the quota and ACT on different time series. Allocations range from 54.0% and 46.0% for federal for-hire and private angling components, respectively (**Alternative 9**), to 23.4% and 76.6%, respectively (**Alternative 8**). The preferred alternative is **Alternative 7** which would allocate the recreational red snapper quota and ACT based on 50% of the average percentages landed by each component between 1986 and 2013 (2010 excluded) and 50% of the average percentages landed by each component between 2006 and 2013 (2010 excluded). The resulting federal for-hire and private angling allocations would be 42.3% and 57.7%, respectively.

4.2.1 Direct and Indirect Effects on the Physical Environment

Section 4.1.1 describes the effects from fishing on the physical environment and are not repeated here. This action, setting an allocation between the two recreational components (federal for-hire and private angling), would have no direct effect on the physical environment. This action could indirectly affect the physical environment if setting the allocation results in an increase or decrease in the amount of fishing gear used to harvest red snapper. **Alternative 1**, no action, would not change the current fishing conditions. Thus no change in fishing effort is expected to occur in the short term because no new fishing regulations would be implemented; therefore, habitat-gear interactions would remain unchanged. However, should no action be taken, then the trend of an increasing private angling share of the harvest may continue in the long term. The private angling component seems to be less efficient in harvesting red snapper based on bag limit analyses reported in SERO (2012). The analysis indicated that charter vessels tend to catch slightly more red snapper on average than private vessels or headboats. Therefore, any increase in the private angler allocation would be expected to require more effort to catch fish compared to the for-hire component. In addition, this increase in effort would occur in state waters unless state and federal regulations become more compatible (Table 2.3). Thus **Alternatives 1 and 8** (76.6% private angler and based on current conditions), particularly for state waters, likely would have the greatest adverse effects, followed by **Alternative 6** (64.3%), **Alternative 5** (59.5%),

Preferred Alternative 7 (57.7%), **Alternative 4** (55.3%), **Alternative 3** (53.1%), **Alternative 2** (51.1%), and **Alternative 9** (46.0%).

4.2.2 Direct and Indirect Effects on the Biological/Ecological Environment

Section 4.1.2 describes the effects from fishing on the biological/ecological environment and are not repeated here. This action, setting an allocation between the two recreational components (federal for-hire and private angling), would have no direct effect and few indirect effects on the biological/ecological environment. This action could indirectly change the number of discards from the recreational sector. As mentioned in Section 4.1.2, discards relative to landings are greater in the private angling component compared to the charterboat component. Therefore, the greater the allocation favors the private angling component, the greater number of fish are likely to be dead discards. These fish would be added to the number of fish killed by the recreational sector (landings and dead discards) and have an adverse effect on the stock, although this effect might be mitigated if most private angler effort occurs in state waters which are shallower and fish would be less susceptible to the effects of decompression. **Alternative 1**, no action, would not change the current fishing conditions. Thus no change in fishing effort is expected to occur over the short term because no new fishing regulations would be implemented; therefore, the number of dead discards would remain unchanged. However, should no action be taken, then the trend of an increasing private angling share of the harvest may continue in the long term and could create additional dead discards. Thus, **Alternatives 1 and 8** (based on current conditions) have the greatest percentage of fish allocated to the private angling component (76.6%) and, therefore, likely would have the greatest adverse effect. This would be followed by **Alternative 6** (64.3%), **Alternative 5** (59.5%), **Preferred Alternative 7** (57.7%), **Alternative 4** (55.3%), **Alternative 3** (53.1%), **Alternative 2** (51.1%), and **Alternative 9** (46.0%).

4.2.3 Direct and Indirect Effects on the Social Environment

This action concerns how much of the recreational red snapper quota would be allocated to each of the components established in Action 1. The decision to allocate a scarce resource among user groups is controversial as participants of each component contend for the greatest allocation for their component. Social effects would be reduced by establishing an allocation that most closely reflects actual participation and fishing effort. Assuming that participation and fishing effort remain constant, no discernible effects would be expected to result from establishing separate quotas, as the proportion of landings represented by each group should remain the same.

However, many factors affect change in effort and participation. For example, participation by federal for-hire vessels is limited, but open entry remains in place for private vessels, which also have access to the additional fishing opportunities afforded by some states in state waters. The increasing average size of a recreationally caught red snapper means each person's daily bag limit weighs more on average, each year, filling the quota more quickly. Yet, landings are to be constrained to a specific quantity (5.39 mp in 2013) that is less than the demand for this highly popular fish (9.64 mp landed in 2013). It should be expected that participation by private anglers under open entry access would continue to increase, resulting in an increasing proportion of total recreational landings, as the proportion landed from for-hire vessels would be expected to continue decreasing. Furthermore, states could continue to adopt more generous regulations in

state waters, providing additional fishing opportunities to anglers fishing from private vessels and from state-licensed for-hire vessels, further increasing the proportion of landings coming from this component.

Although no additional effects would be expected from **Alternative 1** as the recreational red snapper sector would continue to be managed as a single sector, the issues of differential access to fishing opportunities would continue. This is also an issue of subtractability, where additional fishing by anglers in states with more generous regulations than federal regulations reduces the amount of fish available to be harvested by other anglers in the sector. This is primarily a problem for the shortening duration of the red snapper recreational season which must be closed to both components when the recreational quota is reached (Section 407(d) of the Magnuson-Stevens Act). Under **Alternative 1**, anglers fishing from private vessels in states that provide additional fishing opportunities beyond the federal regulations would continue to enjoy the greatest amount of fishing opportunities, compared to all other Gulf recreational anglers (Table 4.2.3.1), and thus, benefit the most from status quo.

The allocations proposed in **Alternatives 2-9** are based on historical landings of different time series. The magnitude of any social effects would relate to the extent by which each component's average landings for an alternative's time series is greater or lesser than that component's current landings. The components' average landings correspond inversely with each other, such that the larger the proportion allocated to one component, the smaller the proportion that is, in turn, the allocation for the other component (Table 4.2.3.1). The magnitude of the effects would in part reflect changes in effort subsequent to the implementation of an allocation, but changes in effort are not likely attributable to this action. Under **Alternatives 2-9**, allocations based on longer time series (i.e., include earlier years) are more advantageous to the federal for-hire component than shorter time series that include the most recent years; shorter, more recent time series would be more advantageous to the private angling component.

Evaluating potential effects is further complicated because this action considers only the proportions of a quota, and the quota is likely to change. Effects would be expected from changes in access to fishing opportunities resulting from quota changes. Red snapper is under a rebuilding plan, and an update assessment is expected in 2015. Thus, a larger quota may be possible, mitigating some potential negative effects arising from the difference realized between the allocation and any changes, such as in participation, since the allocation was established.

estimated percentage of the quota typically harvested by the federal for-hire component and accordingly decrease the percentage available for harvest to the private angling component because the percentages of the red snapper recreational quota harvested by the private angling component have increased in recent years. For **Alternatives 2-9**, allocations based on longer time series (including more of the earlier years of the dataset) would be more favorable to the federal for-hire component.

The economic effects expected to result from alternative allocations between components are typically evaluated based on consumer and producer surplus changes relative to a baseline allocation. The allocation of greater percentages of the recreational quota to the federal for-hire component would be expected to result in greater increases in for-hire trips and associated increases in consumer and producer surplus. However, the magnitude of the increase in for-hire trips that would be expected to result from a given allocation, which is determined by several factors including the demand for for-hire trips, is not known. It also follows that the allocation of greater proportions of the recreational quota to the private angling component would be expected to result in increases in private angler trips and in corresponding increases in consumer surplus. Inferences about changes in economic efficiency are not made here because it cannot be assumed that the resource allocation within each component is efficient. As suggested by Holzer and McConnell (2014) and in a recent report (OECD 2014), changes in net benefit estimates based on the generally accepted application of the equimarginal principle and associated inferences about economic efficiency are erroneous when each component's quota is not efficiently allocated within the component. Furthermore, policy prescriptions based on these inferences are invalid, and therefore, not useful. Overall, greater percentages allocated to the federal for-hire component would correspond to increasing economic benefits to the federal for-hire component and decreasing benefits to the private angling component. It is not possible to rank these alternatives based on the expected net economic outcome, i.e., the sum of the change in economic benefits to each component. As previously discussed, estimates of angler consumer surplus by component are not available, nor are demand and supply curves to examine potential changes in consumer and producer surplus. As a result, all that can be concluded is that the economic benefits accruing to each component would be expected to increase the more allocation that component receives.

4.2.5 Direct and Indirect Effects on the Administrative Environment

The setting of allocations for the two recreational components (federal for-hire and private angling), is an administrative action and it will have effects on the administrative environment through additional rulemaking (direct effect) and monitoring (indirect effect). Because **Alternative 1**, the no-action alternative, would not require rulemaking, it would have no effect on the administrative environment. The act of allocating between the two components would affect the administrative environment by requiring rulemaking to set the allocations and monitoring of landings to ensure the different components do not exceed their respective quotas. Because each alternative would require the same administrative actions to set up the component quotas, the effects of **Alternatives 2-9** (including **Preferred Alternative 7**) would likely be similar. Although **Alternatives 2-9** would increase the administrative burden, the effects are likely to be minimal. Setting the allocations would be a onetime event unless NMFS and the Council decide to change those allocations at a later date. Monitoring of the recreational harvest

by the two components already occurs through the Marine Recreational Information Program, Texas Parks and Wildlife Department, and the Southeast Headboat Survey.

4.3 Action 3 – Recreational Season Closure Provisions

Action 3 considers how the recreational season closure provision would be implemented given the two components. No action (Alternative 1) would maintain the current recreational red snapper season closure provisions where the recreational red snapper ACT would be used to determine the recreational red snapper season length. Preferred Alternative 2 would establish separate red snapper season closure provisions for the federal for-hire and private angling components. The component red snapper ACTs would be used to determine the respective components federal red snapper season length.

4.3.1 Direct and Indirect Effects on the Physical Environment

Section 4.1.1 describes the effects from fishing on the physical environment and are not repeated here. Adjusting the red snapper closure provisions would have no direct effects on the physical environment regardless of whether **Alternative 1** or **Preferred Alternative 2** is selected. This is because this action just codifies how the closure is set, not the quota or projected season length. These latter two actions would be set in a separate framework action or plan amendment and analyzed accordingly with regard to how fishing practices are affected. However, if incompatible regulations for state and federal waters continue, the shift in private angling effort would continue in state waters. This would be exacerbated under **Preferred Alternative 2** should the season length in federal waters for the private angling component be further reduced.

4.3.2 Direct and Indirect Effects on the Biological/Ecological Environment

Section 4.1.2 describes the effects from fishing on the biological/ecological environment and are not repeated here. Adjusting the red snapper closure provisions would have no direct effects on the biological/ecological environment regardless of whether **Alternative 1** or **Preferred Alternative 2** is selected. This is because this action just codifies how the closure is set, not the quota or projected season length. These latter two actions would be set in a separate framework action or plan amendment and be analyzed accordingly with regard to how fishing practices are affected. These types of effects are described in Section 4.4. However, if incompatible regulations for state and federal waters continue, the shift in private angling effort would continue in state waters and adversely affect the inshore portion of the red snapper stock while the offshore portion of the stock would benefit. This would be accentuated under **Preferred Alternative 2** should the season length in federal waters for the private angling component be further reduced. As discussed in Sections 2.3 and 4.1.2, the creation of the two components could have indirect beneficial effects to the stock by reducing the chances of overfishing. Because of the limited number of federally permitted vessels and the fact that headboats regularly report landings, it is currently easier to both monitor and project landings of this component. In addition, federally electronic logbooks are currently required for permitted headboat operators and should improve information collection for this portion of the for-hire component. Information collection may be further improved if efforts are successful to extend

this type of reporting to federally permitted charter vessels. Under **Preferred Alternative 2**, these effects would be greater than under **Alternative 1**.

4.3.3 Direct and Indirect Effects on the Social Environment

Additional effects are not expected from **Alternative 1**, as the recreational harvest of red snapper must be prohibited once the quota is reached or projected to be reached. This mandate (Section 407(d) of the Magnuson-Stevens Act) applies to the recreational sector as a whole, regardless if sub-quotas are established and distributed among components of the recreational sector. Even if separate components are established (Action 1) and fishing opportunities apportioned among the components (Action 2), the participants in both components are prohibited from further retaining red snapper once the quota is reached or projected to be reached.

Preferred Alternative 2 would establish separate season closures for the components of the recreational sector. This could be expected to result in positive effects for both components, as neither would lose fishing opportunities as a result of a quota overage by the other component. However, should the recreational quota be met, recreational fishing for red snapper would need to be closed, as mandated by the Magnuson-Stevens Act, Section 407(d). Thus, if separate quotas and closures are established for each component, it is possible that one component with remaining quota could be shut down, should it be determined that the Gulf-wide recreational quota was met.

4.3.4 Direct and Indirect Effects on the Economic Environment

Alternative 1 would continue to close the recreational red snapper season when the recreational red snapper ACT is projected to be caught. The closure provision applies to all components of the recreational sector. If the Council decides to restructure the recreational sector and establish distinct components, the federal for-hire and private angling components would have to be closed at the same time. Although **Alternative 1** is compatible with the establishment of separate components within the recreational sector, it would significantly restrict the range of management measures that could be considered by the Council, resulting in potentially significant reductions in the potential economic effects that could be expected from the implementation of sector separation. **Alternative 1** would allow for differing bag and size limits between the components but would preclude the consideration of any management measure that could be associated with closure dates specific to each component, including incentive-based measures that would allow for flexible fishing seasons (or offer the possibility for year round fishing opportunities).

Preferred Alternative 2 would depart from the status quo closure provision and establish separate closure provisions for the federal for-hire and private angling components. Each component would be closed when its allocation is projected to be met. Compared to **Alternative 1**, **Preferred Alternative 2** would therefore be expected to result in increased economic benefits because it would increase the management flexibility to implement component-specific measures designed to increase the economic benefits accruing to each component. Distinct federal for-hire and private angling components are expected to provide opportunities to design and implement flexible management approaches tailored to the specificities of each component, thereby

potentially resulting in increases in economic value. It is noted that the implementation of distinct components within the recreational sector (**Action 1**) and the establishment of separate closure provisions for the federal for-hire and private components (**Preferred Alternative 2**) do not exempt the components from the requirements of Section 407(d) of the Magnuson-Stevens Act which requires that red snapper recreational fishing be halted once the recreational quota is caught. Therefore, potential economic benefits expected to result from sector separation with specific closure provisions for each component may be limited by this provision in the Act.

4.3.5 Direct and Indirect Effects on the Administrative Environment

Closing a fishing season based on a quota is administrative action. Because **Alternative 1**, the no-action alternative, would not require additional rulemaking, it would not change the effects of such an action on the administrative environment. The act of closing two components rather than one sector under **Preferred Alternative 2** could require two season notices rather than one notice, thus adding some administrative burden. However, closing fishing seasons is a routine administrative action, so any additional effects should be minimal.

4.4 Cumulative Effects Analysis (CEA)

As directed by NEPA, federal agencies are mandated to assess not only the indirect and direct impacts, but cumulative impacts of actions as well. NEPA defines a cumulative impact as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time” (40 C.F.R. 1508.7). Cumulative effects can either be additive or synergistic. A synergistic effect is when the combined effects are greater than the sum of the individual effects.

This section uses an approach for assessing cumulative effects that was initially used in Amendment 26 to the Reef Fish FMP and is based upon guidance offered in CEQ (1997). The report outlines 11 items for consideration in drafting a CEA for a proposed action.

1. Identify the significant cumulative effects issues associated with the proposed action and define the assessment goals.
2. Establish the geographic scope of the analysis.
3. Establish the timeframe for the analysis.
4. Identify the other actions affecting the resources, ecosystems, and human communities of concern.
5. Characterize the resources, ecosystems, and human communities identified in scoping in terms of their response to change and capacity to withstand stress.
6. Characterize the stresses affecting these resources, ecosystems, and human communities and their relation to regulatory thresholds.
7. Define a baseline condition for the resources, ecosystems, and human communities.
8. Identify the important cause-and-effect relationships between human activities and resources, ecosystems, and human communities.
9. Determine the magnitude and significance of cumulative effects.
10. Modify or add alternatives to avoid, minimize, or mitigate significant cumulative effects.
11. Monitor the cumulative effects of the selected alternative and adapt management.

Cumulative effects on the biophysical environment, socio-economic environment, and administrative environments are analyzed below.

1. Identify the significant cumulative effects issues associated with the proposed actions and define the assessment goals.

The CEQ cumulative effects guidance states this step is accomplished through three activities as follows:

- I. The direct and indirect effects of the proposed actions (Section 4.1-4.3);
- II. Which resources, ecosystems, and human communities are affected (Section 3 and Appendix C); and
- III. Which effects are important from a cumulative effects perspective (information revealed in this CEA).

2. Establish the geographic scope of the analysis.

The primary effects of the actions in this amendment would affect the social, economic, and administrative environments of the Gulf. The physical and biological/ecological environments would be less affected as described in Sections 4.1-4.3.

The geographic scope affected by these actions is described in detail in Reef Fish Amendments 22 and 27 (GMFMC 2004b and 2007) and pertains directly to the Gulf. Red snapper are one of the most sought after species in the reef fish fishery. This species occurs on the continental shelves of the Gulf and the U. S. Atlantic coast to Cape Hatteras, N. C. (Moran 1988). Eggs and larvae are pelagic and juveniles are found associated with bottom features or bare bottom. In the Gulf, adults are found in submarine gullies and depressions; natural vertical relief structures such as coral reefs, rock outcroppings, and gravel bottoms; and artificial structures such as oilrigs and artificial reefs (GMFMC 2004a).

Commercial reef fish vessels and dealers are primarily found in Gulf States (GMFMC 2008b, 2013b). Based on mailing addresses or home ports given to the Southeast Regional Office (SERO) as of January 6, 2014¹¹, 100% of historical charter captain reef fish, 97% of for-hire reef fish, 98.5% of commercial reef fish permitted vessels, and 100% of vessels with reef fish longline endorsements are found in Gulf States. For permitted reef fish dealers, 94.5% are found in Gulf States. All dealers who are able to process IFQ transactions are located in Gulf States (Section 3.5.1.3). With respect to eligible red snapper individual fishing quota shareholders actually holding red snapper shares, 98% have mailing addresses in Gulf States (GMFMC 2013b). According to NMFS (2013b), approximately 35% of trips and 42% of the catch in 2012 for U. S. marine recreational fishing trips occurred in the Gulf by approximately 3.1 million anglers catching 161 million fish.

3. Establish the timeframe for the analysis

The timeframe for this analysis is 1984 to 2017. Red snapper have been managed in the Gulf since the implementation of the Reef Fish Fishery Management Plan in **1984** which put in place a 13-inch minimum size limit total length (TL). The red snapper stock has been periodically assessed since 1988. The 2013 SEDAR 31 red snapper stock assessment was the last benchmark assessment. The assessment included reconstructed data for analysis for the commercial sector from 1872 through 1962 (Porch et al. 2004), data from 1963-2011 for commercial landings, and data from 1981-2011 for recreational landings (SEDAR 31 2013). In addition, catch effort for the Gulf shrimp fishery (SEDAR 31 2013), including reconstructed data from 1948-1972 (Porch and Turner 2004), was used to estimate juvenile red snapper discards from this fishery.

The following is a list of reasonably foreseeable future management actions. These are described in more detail in Step 4. Note that the next red snapper assessment is scheduled to be completed in 2015 followed by a benchmark assessment that will not be complete until 2016. Should new regulations be needed for the management of this stock, they will likely not be implemented until **2017** at the earliest, or the end of the timeframe discussed in this analysis.

¹¹http://sero.nmfs.noaa.gov/operations_management_information_services/constituency_services_branch/freedom_of_information_act/common_foia/index.html

- The next assessment for red snapper through SEDAR is an update scheduled to occur in 2014 and a benchmark assessment is scheduled for 2015 (completed in 2016). Other reef fish species scheduled for assessments include: gag, greater amberjack, hogfish, and mutton snapper in 2014; red grouper, vermilion snapper, gray triggerfish, scamp, and black grouper in 2015; and gag, greater amberjack, yellowedge grouper, gray snapper, and yellowtail snapper in 2016.
- The Council is currently developing several actions that will affect the reef fish fishery. Actions affecting red snapper include: Amendment 28 (red snapper allocation), Amendment 36 (IFQ program revision), Amendment 39 (red snapper regional management), and a generic status determination criteria amendment (update ACL language). In addition, the Council is working on reef fish actions that update ACLs with new MRIP numbers, look at gag regional management, and require electronic reporting for charter boats. These actions are described in more detail in Step 4 of this CEA.

4. Identify the other actions affecting the resources, ecosystems, and human communities of concern.

a. Past actions affecting red snapper fishing are summarized in Sections 1.4 and 3.1. The following list identifies more recent actions (Note actions taken prior to Amendment 32, the last EIS done for the Reef Fish FMP are described in detail in that amendment (GMFMC 2011a) and are incorporated here by reference).

The following are past actions specific to red snapper:

- In January 2011, the Council submitted a framework action (GMFMC 2011c) to NMFS to increase the red snapper total allowable catch to 7.185 mp, with a 3.521 mp recreational quota and a 3.664 mp commercial quota. The final rule from this action established a 48-day recreational red snapper season was June 1 through July 18.
- On August 12, 2011, NMFS published an emergency rule that, in part, increased the recreational red snapper quota by 345,000 pounds for the 2011 fishing year and provided the agency with the authority to reopen the recreational red snapper season later in the year, if the recreational quota had not been filled by the July 19 closing date. However, in August of that year, based on headboat data plus charter boat and private recreational landings through June, NMFS calculated that 80% of the recreational quota had been caught. With the addition of July landings data plus Texas survey data, NMFS estimated that 4.4 to 4.8 mp were caught, well above the 3.865 mp quota. Thus, no unused quota was available to reopen the recreational fishing season.
- On May 30, 2012, NMFS published a final rule to implement a framework action submitted by the Council to increase the commercial and recreational quotas and establish the 2012 recreational red snapper fishing season (GMFMC 2012a). The recreational season opened on June 1 through July 11. However, the north-central Gulf experienced extended severe weather during the first 26 days of the 2012 recreational red snapper fishing season, including Tropical Storm Debby. Because of the severe tropical weather, the season was extended by six days and closed on July 17.
- On May 29, 2013, NMFS published a final rule to implement a framework action submitted by the Council to increase the commercial and recreational quotas (GMFMC

2013c). The combined quotas were raised from 8.080 million pounds whole weight to 8.460 lbs whole weight. The recreational fishing season was set differently for waters off different states because of non-compatible regulations. However, a federal court ruled against different seasons, so the season for federal waters was from June 1 through July 5. Later in 2013, NMFS approved a framework action (GMFMC 2013a) to increase the combined quotas from 8.46 mp to 11 mp. This allowed an additional recreational fishing season from October 1 through October 15.

- An exempted fishing permit was given to the Gulf of Mexico Headboat Collaborative Pilot program that began on January 1, 2014. NMFS authorized the 2-year pilot program to assess the viability of an allocation-based management strategy for achieving conservation and economic goals more effectively than current management. The Headboat Collaborative was allocated a portion of the red snapper and gag recreational quotas based on historical landings data and participating headboats are able to use the allotted quota to harvest red snapper and gag outside the normal recreational fishing seasons.
- In response to a decision by the U.S. District Court for the District of Columbia (Court) in *Guindon v. Pritzker*, 2014 WL 1274076 (D.D.C. Mar. 26, 2014), NMFS took emergency action May 15, 2014 (79 FR 27768) to address recent recreational red snapper quota overages. At their April 2014 meeting, the Council requested an emergency rule to implement an in-season accountability measure for the recreational harvest of red snapper in the Gulf that would apply to the 2014 season that opened on June 1, 2014. The action set an ACT equal to 80% of the 5.390 mp quota (ACT = 4.312 mp). The resultant 9-day season was based on the ACT and has only a 15% probability of exceeding the quota.
- A framework action was submitted by the Council to establish a recreational red snapper ACT and overage adjustment as accountability measures for the recreational sector. A proposed rule was published on November 21, 2014.

b. The following are recent reef fish actions not summarized in Section 1.4 or 3.1 but are important to the reef fish fishery in general (Note actions taken prior to Amendment 32 are described in detail in that amendment (GMFMC 2011a) and incorporated here by reference).

- A rule effective April 2, 2012, that adjusted the 2012 commercial quota for greater amberjack, based on final 2011 landings data. For 2011, the commercial quota was exceeded by 265,562 pounds. Therefore, NMFS adjust the 2012 commercial quota to account for the overage resulting in a quota of 237,438 pounds.
- A temporary rule effective May 14, 2012, reduced the gray triggerfish annual catch limits and commercial and recreational annual catch targets. The temporary rule was put in place to reduce overfishing while the Council worked on long-term measures to end overfishing and rebuild the stock in Amendment 37.
- A framework action effective on November 19, 2012, eliminated the earned income qualification requirement for the renewal of Gulf commercial reef fish permits and increased the maximum number of crew members for dual-permitted (commercial and charter) vessels. The Council determined the existing earned income requirement in the reef fish fishery is no longer necessary and relaxing the number of crew on dual-

permitted vessels increased the safety on commercial trips, particularly for commercial spear fishermen.

- Amendment 38 (GMFMC 2012b), effective March 1, 2013, allows NMFS to shorten the season for gag and red grouper if landings exceeded the catch limit in the previous year. The amendment also changed the trigger method for recreational accountability measures to an annual comparison of landings to the catch limit rather than using a three-year moving average. Finally, the amendment allows the establishment or modification of accountability measures through the faster framework procedure rather than through slower plan amendments.
- Amendment 37 (GMFMC 2012c), rulemaking effective June 10, 2013, was developed to end overfishing of gray triggerfish and rebuild the gray triggerfish stock. The amendment adjusted the commercial and recreational gray triggerfish annual catch limits and annual catch targets, established a 12-fish commercial gray triggerfish trip limit and a 2-fish recreational daily bag limit, established an annual fishing season closure from June 1 through July 31 for the commercial and recreational sectors, and established an overage adjustment for the recreational sector.
- A framework action effective July 5, 2013, adjusted the recreational gag season to July 1 through December 3, 2013, the time projected to harvest the recreational annual catch target of 1.287 mp. The framework action also restricted the geographical extent of the fixed February 1 through March 31 shallow-water grouper closed season to apply only to waters seaward of the 20-fathom boundary. This allows grouper fishing to occur year-round while providing some protection to species that spawn during February and March.
- A framework action effective September 3, 2013, set a 10-vermilion snapper bag limit within the 20-fish aggregate reef fish bag limit as a precautionary measure to reduce the chance of overfishing for this species. The action also increased the Gulf yellowtail snapper annual catch limit from 725,000 pounds to 901,125 pounds based on a recent stock assessment. Finally, the action eliminated the requirement to use venting tools when fishing for reef fish as 1) some scientific studies have questioned the usefulness of venting tools in preventing barotrauma in fish and 2) the action would give more flexibility to fishermen on when to vent or to use some other device like fish descenders.
- A framework action effective March 5, 2014, requiring headboats to report their logbooks electronically in the Gulf reef fish and coastal migratory pelagic fisheries.
- Accountability measures for red grouper and gray triggerfish were implemented. For red grouper recreational fishing, the bag limit was reduced from four to three fish on May 5, 2014, and a season closure was projected for September 16, 2014. For gray triggerfish, the recreational season was closed on May 1, 2014.

c. The following are reasonably foreseeable future actions (RFFA) important to red snapper and the reef fish fishery in general¹².

- The Council is currently developing the following actions for red snapper.
 - Amendment 28 would revise the current 51% commercial:49% recreational allocation.

¹² Information on these developing actions can be found on the Council's website at www.gulfcouncil.org.

- Amendment 36 would revise the IFQ program based on recommendations from the red snapper IFQ program. These recommendations would be based on a review of the program completed in 2013 (GMFMC 2013b).
- Amendment 39 would allow regional management of red snapper for the recreational sector. This regional management could be set at the state level or be based on broader regions (e.g., eastern and western Gulf).
- A generic status determination criteria amendment proposes to update the current red snapper quota-based language for setting commercial and recreational allocations with ACL-based language in accordance with the Magnuson-Stevens Act.
- An amendment to allow for inter-sector trading of red snapper allocation has been proposed by the Council. The amendment will evaluate the buying of commercial red snapper allocation by components of the recreational sector for recreational harvest.
- Amendment 41 was proposed by the Council to examine a charter/for-hire IFQ program for red snapper in the Gulf of Mexico.
- The Council is working on other reef fish actions. These are as follows:
 - A framework action to update ACLs with new MRIP numbers for grouper and tilefish stocks managed under IFQ programs. The action proposes to update ACLs developed in the Generic ACL/AM Amendment that used MRFSS landings data with the new MRIP landing estimates.
 - An amendment for regional management for the recreational harvest of gag to provide greater flexibility in regionally managing this species.
 - An amendment to require electronic reporting for charter boats to improve the quality and timeliness of landings data for this sector.
 - A framework action to reduce the red grouper bag limit has been submitted by the Council.
- Congress has proposed HR 3099 and S 1161 which directs the Gulf States Marine Fisheries Commission to: (1) prepare and adopt a data collection strategy for the Gulf red snapper fishery, including interstate collaboration measures and a plan for annual stock assessments; and (2) prepare, adopt, and submit to the Secretary of Commerce a fishery management plan providing for the conservation and management of Gulf red snapper and describing the standards of compliance for Gulf coastal states to use in developing fishery management measures.

d. The following are non-FMP actions which can influence the reef fish fishery.

Amendment 30B (GMFMC 2008b) describes in detail non-FMP actions relating liquefied natural gas terminals, hurricanes, fuel prices, and imports and were reiterated in Amendment 32. To summarize:

- Some liquefied natural gas terminals use sea water to heat the gas back to its gaseous phase. For open systems, high volumes of sea water are required and are likely to result in large mortalities of marine organism eggs and larvae.
- For hurricanes, direct losses to the fishing industry and businesses supporting fishing activities occur ranging from loss of vessels to destruction of fishery infrastructure (Walker et al. 2006). However, although these effects may be temporary, those fishing-

related businesses whose profitability is marginal may be put out of business should a hurricane strike.

- Rising fuel costs have negative impacts on communities by increasing business costs and lowering profits.
- Most seafood consumed in the United States is imported and the quantity of imports has been steadily increasing. The effects of imports on domestic fisheries can cause fishermen to lose markets through commercial sector closures as dealers and processors use imports to meet demand, and limit the price fishermen can receive for their products through competitive pricing of imports.

In addition, Amendment 32 (GMFMC 2011a) discussed in detail a 2005 red tide event on the west-Florida shelf and the resultant oil spill from the explosion on the Deepwater Horizon MC252 oil rig. The red tide event may have affected reef fish, including red snapper populations. It has only been in the last 10 years that mortalities of higher vertebrates have been indisputably demonstrated to be due to acute red tide blooms and their brevetoxins (Landsberg et al. 2009). The extent of this event and possible effects of fish community structure has been described in Gannon et al. (2009).

Millions of barrels of oil were released into the Gulf from the Deepwater Horizon MC252 event (see <http://response.restoration.noaa.gov/deepwaterhorizon>). The effects on the environment on reef fish and the reef fish fisheries may not be known for several years when affected year classes of larval and juvenile fish enter the adult spawning population or fishery. For red snapper, this occurs at approximately 3 years of age, so a year class failure in 2010 may not be detected in the spawning populations or by harvesters of red snapper until 2013 at the earliest. The results of the studies detecting these impacts on recruitment should be available soon and will be taken into consideration in the next SEDAR assessment. In addition to impacts on recruitment, adult reef fish may also have been negatively affected by the oil spill. For example, Weisberg et al. (2014) suggested the hydrocarbons associated with Deepwater Horizon MC252 oil spill did transit onto the Florida shelf and may be associated with the occurrences of reef fish (including red snapper) with lesions and other deformities. The overall impact of the oil spill may not be realized for quite some time and study results are just now becoming available.

There is a large and growing body of literature on past, present, and future impacts of global climate change induced by human activities (Kennedy et al. 2002). Some of the likely effects commonly mentioned in relation to marine resources are sea level rise, ocean acidification, coral bleaching, increased frequency of severe weather events, and change in air and water temperatures (Kennedy et al. 2002; Osgood 2008). The Environmental Protection Agency's climate change Web page provides basic background information on these and other measured or anticipated effects. In addition, the Intergovernmental Panel on Climate Change has numerous reports addressing its assessments of climate change (http://www.ipcc.ch/publications_and_data/publications_and_data.shtml). Additional reports are provided on the Global Climate Change website <http://climate.nasa.gov/scientific-consensus>.

Global climate changes could affect Gulf fisheries; however, the extent of these effects is not known at this time. Possible impacts include temperature changes in coastal and marine ecosystems that can influence organism metabolism and alter ecological processes such as

productivity and species interactions; changes in precipitation patterns and 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 influencing the productivity of critical coastal ecosystems such as wetlands, estuaries, and coral reefs (Kennedy et al. 2002; Osgood 2008). An area of low oxygen, known as the dead zone, forms in the northern Gulf each summer, and has been increasing in recent years (see Section 3.3). Climate change may contribute to this increase by increasing rainfall that in turn increases nutrient input from rivers. This increased nutrient load causes algal blooms that, when decomposing, reduce oxygen in the water (Needham et al. 2012; Kennedy et al. 2002). It is unclear how climate change would affect reef fishes and likely would affect species differently. Climate change can affect factors such as migration, range, larval and juvenile survival, prey availability, and susceptibility to predators. Burton (2008) speculated climate change could cause shifts in spawning seasons, changes in migration patterns, and changes to basic life history parameters such as growth rates. In addition, the distribution of native and exotic species may change with increased water temperature, as may the prevalence of disease in keystone animals such as corals and the occurrence and intensity of toxic algae blooms. Hollowed et al. (2013) provided a review of projected effects of climate change on the marine fisheries and dependent communities. Integrating the potential effects of climate change into the fisheries assessment is currently difficult due to the time scale differences (Hollowed et al. 2013). The fisheries stock assessments rarely project through a time span that would include detectable climate change effects. Climate change may significantly affect Gulf reef fish species in the future, but the level and time frame of these effects cannot be quantified at this time. Actions from this amendment are not expected to significantly contribute to climate change through the increase or decrease in the carbon footprint from fishing.

5. Characterize the resources, ecosystems, and human communities identified in scoping in terms of their response to change and capacity to withstand stress.

This step should identify the trends, existing conditions, and the ability to withstand stresses of the environmental components. According to the CEQ guidance describing stress factors, there are two types of information needed. The first are the socioeconomic driving variables identifying the types, distribution, and intensity of key social and economic activities within the region. The second are the indicators of stress on specific resources, ecosystems, and communities.

Reef Fish Fishery

Data used to monitor commercial reef fish effort includes the number of vessels with landings, the number of trips taken, and trip duration. Declines in effort may be a signal of stress within the fishery. For the red snapper component of the commercial sector, the number of vessels and trips did decline after the red snapper IFQ program was first implemented. However, the number of vessels and trips with red snapper landings have increased from 2007 to 2012 (GMFMC 2013b). These trends are described in Sections 3.1, 5.0, 6.0 and in GMFMC (2013b). The commercial IFQ program recently underwent a 5-year review (GMFMC 2013b). The stated goals of this program, implemented through Amendment 26 (GMFMC 2006) were to reduce overcapacity and eliminate problems associated with overcapacity. The review found the program was moderately to highly successful in meeting the program goals; however, further improvements were identified regarding overcapacity, discard mortality price reporting, and

social and community impacts. Therefore, the red snapper component of the commercial sector does not seem to be stressed.

Within the commercial reef fish sector as a whole, the number of commercial vessels has been declining as evidenced by the number of permits (Table 4.4.1). The number of permits has declined from 1,099 in 2008 to 917 in 2012 and the number landing at least one pound of reef fish has declined from 681 to 557 over the same time period. Although this could be an indicator of stress in the fishery, the commercial sector has undergone several changes in the past few years with the IFQ programs for red snapper, grouper, and tilefish. Given that a primary goal of these programs is to reduce overcapacity, the reduction in permits may just reflect this expected change.

Table 4.4.1. Number of Gulf of Mexico reef fish commercial (landing at least one pound of reef fish), for-hire, and historical captain permits by year.

Sector	Year				
	2008	2009	2010	2011	2012
Commercial	1099 (681)	998 (696)	969 (580)	952 (561)	917 (557)
For-hire	1458	1417	1385	1353	1336
Historical captain	61	56	47	43	42

Source: Southeast Regional Office, Limited Access Permit Program Branch.

Table 4.4.2. Number of Gulf of Mexico reef fish commercial trips catching at least one pound of reef fish and the number of offshore angler trips for the charter and private angling components of the reef fish recreational sector for the years 2008-2012.

Sector	Year				
	2008	2009	2010	2011	2012
Commercial	8,079	8,177	5,991	6,541	6,629
Charter	326,868	319,768	229,679	300,668	355,413
Private angler	1,434,875	1,011,948	767,080	782,989	1,017,007

Sources: Commercial trip data from the Southeast Regional Office, Limited Access Permit Program Branch and recreational angler trip data from NOAA Office of Science and Technology's Recreational Fisheries Statistics web page at <https://www.st.nmfs.noaa.gov/recreational-fisheries/index>.

Social and economic characteristics of recreational anglers are collected periodically as an add-on survey to MRIP. Data used to monitor recreational reef fish effort in the sector primarily comes from MRIP and includes the number of trips and number of catch trips. Declines in effort may be a signal of stress within the sector. Private and charter fishing modes accounted for most of red snapper target trips, with the private angler mode the most common mode (Table 3.5.2.1.1). By state, Florida accounts for the greater percentage of landings (Table 3.1.1) and effort (Table 3.5.2.1.1). For red snapper, changes in angler trips between 2008 and 2012 do not appear to show this segment of the fishery is stressed. Both targeted angler trips and trips that caught red snapper by the sector were highest in 2008 and lowest in 2010 (Table 4.4.2). The low

harvest in 2010 was likely due to the Deepwater Horizon MC252 oil spill when large areas of the northern Gulf were closed to fishing. Although the number of annual angler trips for 2011 and 2012 has not reached the high of 2009 since the spill, the annual number of trips for these years is closer to the 2009 level than the 2010 level. This trend is also apparent in the number of private/rental angler and for-hire trips (Table 4.4.2). Tables 3.5.2.1.1 and 3.5.2.1.2 also show that the number of trips in 2013 for all modes is greater than in 2011 and 2012.

For the reef fish recreational sector, the number of angler trips in offshore waters (Table 4.4.2) are used as a proxy for recreational reef fish fishing and show a decline in 2010 from 2008 and 2009 values followed by an increase in trips in 2011 and 2012. This suggests the sector is recovering from the 2010 Deepwater Horizon MC252 oil spill. Within the for-hire component, the number of for-hire and historical captain permitted vessels has declined from 2008 to 2012 (Table 4.4.1; 1458 to 1336 permits and 61 to 42 permits, respectively) and could be viewed as an indicator of stress. However, the number of offshore trips by the charter component has increased above 2008 and 2009 values suggesting economic conditions for this component were improving. However, as pointed out in Chapter 1, pounds landed and trips taken by for-hire vessels relative to private anglers were lower in 2013, likely as a consequence of state waters during extend state seasons being closed to federally permitted for-hire vessels when the federal red snapper recreational season was closed.

At this time, climate change does not appear to be a stressor on the reef fish fishery. However, it could be in the future. The National Ocean Service (2011) indicated that 59% of the Gulf coast shoreline is vulnerable to sea level rise. This means coastal communities that support this fishery could be impacted in the future from higher storm surges and other factors associated with sea level rise. These communities do appear to be somewhat resilient given their ability to recover after the 2004 and 2005 hurricane seasons as well as from the Deepwater Horizon MC252 oil spill (see step 4).

Red Snapper

Major stresses to the red snapper stock have primarily come from overfishing, which has been occurring at least since the first stock assessment in 1988 and overfishing only recently ended. It is likely that quota overruns by both commercial and recreational sectors have slowed the recovery of the stock. Trends in landings and the status of red snapper stock are based on NMFS and SEDAR stock assessments (summarized in Sections 3.1 and 3.3) and incorporated here by reference. The most recent stock assessment indicates the stock is continuing to rebuild. It is likely the red snapper stock was adversely affected by the Deepwater Horizon MC252 oil spill in 2010; however, these effects are only just being realized (see step 4d). A recommendation in the 2013 stock assessment (SEDAR 31 2013) is that future assessments of Gulf red snapper should be conducted with the explicit goal of attempting to model any enduring oil spill effects and their effect on the stock. At this point, it is unclear if and how climate change is affecting red snapper stocks. Burton (2008) speculated climate change could cause shifts in spawning seasons, changes in migration patterns, and changes to basic life history parameters such as growth rates in Gulf fish stocks, but changes to such patterns have not been observed for red snapper.

Ecosystem

With respect to stresses to the ecosystem from actions in this amendment, changes in the red snapper allocation are not likely to create additional stress. Handline gear, the primary gear used by the fishery, and longlines can damage habitat through snagging or entanglement; however, as described in Section 4.1.1, these impacts are minimal. Changes in the population size structure as a result of shifting red snapper fishing selectivities and increases in stock abundance could lead to changes in the abundance of other reef fish species that compete with red snapper for shelter and food. Predators of red snapper could increase if red snapper abundance is increased, while species competing for similar resources as red snapper could potentially decrease in abundance if food and/or shelter are less available. Efforts to model these interactions are still ongoing [e.g., Ecopath (Walters et al. 2006) and Atlantis¹³], and so predicting possible stresses on the ecosystem in a meaningful way is not possible at this time. As described in Part 4d of this cumulative effects analysis, the Deepwater Horizon MC252 incident has affected more than one-third of the Gulf area from western Louisiana east to the panhandle of Florida and south to the Campeche Bank in Mexico. The impacts of the oil spill on the physical and biological environments are expected to be significant and may be long-term. Stressors to the ecosystem could include such factors as year-class failures and damage to reef fish EFH. Climate change may also be a stressor to the ecosystem, but is poorly understood. Hollowed et al. (2013) outlined the difficulties in understanding the effects of climate change and developed a conceptual pathway of direct and indirect effects of climate change and other anthropogenic factors on marine ecosystems. They suggest integrated interdisciplinary research teams be used better understand the effects.

Administrative Environment

The stresses to the administrative environment from these actions would likely focus on the setting of annual quotas, ACTs, as well as monitoring landings to determine if AMs have been triggered. However, these stresses are not expected to significantly differ from the current stresses. In 2013, several states established recreational red snapper regulations that were inconsistent with federal regulations. This caused additional stress on the administrative environment requiring additional regulations, analysis, presence of law enforcement, and increased confusion among the fishing public. The actions in this amendment would allow regions to adjust regulations to meet their regional needs while maintaining consistency with the FMP and likely reduce stress in this environment. It is unknown whether the regions would be able to constrain harvest to the quota. However, with the current federal management, the recreational sector has exceeded the allocation in 14 of 22 years in which an allocation was specified. The stock could likely withstand some overages without jeopardizing the rebuilding plan; however, continuous overages could result in a change of the stock status. However, the regions have indicated they intend to establish new monitoring procedures, which could improve the estimations for landings, but the SEFSC would need to review the sampling designs and data to insure compatibility with the current methods.

¹³ NOAA's Integrated Ecosystem Assessment Program (<https://www.st.nmfs.noaa.gov/iea/gulfmexico.html>)

6. Characterize the stresses affecting these resources, ecosystems, and human communities and their relation to regulatory thresholds.

This section examines whether resources, ecosystems, and human communities are approaching conditions where additional stresses could have an important cumulative effect beyond any current plan, regulatory, or sustainability threshold (CEQ 1997). Sustainability thresholds can be identified for some resources, which are levels of impact beyond which the resources cannot be sustained in a stable state. Other thresholds are established through numerical standards, qualitative standards, or management goals. The CEA should address whether thresholds could be exceeded because of the contribution of the proposed actions to other cumulative activities affecting resources.

Reef Fish Fishery

As indicated above, both commercial and for-hire fisheries are subject to stress as a result of increases in fishing costs, increases in harvesting efficiency, more restrictive regulations (particularly for red snapper), and changes in the stock status of certain species (effort shifting). Reductions in dollars generated by these entities would likely be felt in the fishery infrastructure. For the reef fish fishery, an indicator of stress would be a decline in the number of permitted vessels. For the commercial sector, the number of vessels and trips landing red snapper initially declined after the IFQ program went into effect in 2007 (419 vessels and 4,714 trips in 2006 compared to 319 vessels and 2,578 trips in 2007; GMFMC 2013b). However, the number of vessels and trips landing red snapper has increased in recent years (368 vessels and 3,389 trips in 2011) demonstrating that conditions in commercial red snapper sector are improving. GMFMC (2013b) also cites other factors such as pricing, fleet and effort consolidation, and market conditions that also support an improved socioeconomic environment. As mentioned in Step 5 of this CEA, the number of vessels in the commercial sector has declined (Table 4.4.1); however, with the shift towards IFQ management, it is difficult to determine if this reflects stress in the sector or is a result of overcapacity reduction - an expected result of IFQ management. Five-year reviews similar to the one conducted for red snapper are planned for the grouper and tilefish IFQ programs after the 2014 fishing year (year 5 of the) is complete.

Analyses conducted on the effects of a limited access program for for-hire vessels indicated operations were generally profitable (GMFMC 2005a). However, testimony from for-hire operators in light of recent red snapper regulations have suggested some for-hire operators may go out of business, particularly in the northeastern Gulf. This may be reflected in the declines in the numbers of permitted vessels shown in Table 1.1.2, Table 4.4.1, and Figure 1.1.1. Creating a for-hire component through Amendment 40 could help design red snapper regulations that could help this part of the fishery. Other reasonably foreseeable actions listed in Step 4c of this analysis are not expected to adversely affect the for-hire component and so should not place additional stress to the recreational sector. Non-FMP actions (see Step 4d) may place added stress on the for-hire component of the recreational sector (e.g., hurricanes and higher fuel costs). However, timing and magnitude of the potential negative cumulative the effects from these events are difficult to predict.

Little information is available on the stresses on the private angler sector. Because private angling is an optional activity, likely factors that affect a person's involvement are likely

economic. Therefore, costs such as fuel, marina fees, and boat upkeep are likely to affect a person's decision to go red snapper fishing or not, particularly within the current short recreational red snapper season. As a result, more red snapper trips could be taken if there are gains in pounds for this component. Other reasonably foreseeable actions listed in Step 4c of this analysis are not expected to adversely affect the private angling component and so should not place additional stress to the recreational sector as a whole. Non-FMP actions (see Step 4d) may place added stress on the private angling component (e.g., hurricanes, higher fuel costs, and climate change). However, timing and magnitude of the potential negative cumulative the effects from these events are difficult to predict (see steps 4 and 6).

Red Snapper

Amendment 1 to the Reef Fish FMP (GMFMC 1989), implemented in 1990 before the Sustainable Fisheries Act (SFA) was passed, established the minimum spawning stock biomass at 20 percent SPR for all reef fish species. A 1991 regulatory amendment (GMFMC 1991) established a commercial quota and a 1997 regulatory amendment established a recreational quota. The quotas were set based on the 51:49 commercial:recreational allocation being applied to the total allowable catch. The Generic Sustainable Fisheries Act (SFA) Amendment (GMFMC 1999) proposed SFA definitions for optimum yield, minimum stock size threshold and maximum fishing mortality threshold for three reef fish species and generic definitions for all other reef fish. The definition of maximum fishing mortality threshold for red snapper, $F_{26\%SPR}$, was approved and implemented. Definitions for optimum yield and minimum stock size threshold were disapproved because they were not biomass-based. ACLs were not implemented for red snapper as the commercial and recreational quotas were considered functional equivalents; however, ACLs are currently being defined by the Council in a Generic Status Determination Criteria Amendment (see 4c of this CEA).

A benchmark assessment was conducted for red snapper in 2013 under the SEDAR stock assessment process (see Section 3.3 for a summary of the assessment). Based on the parameter estimates through 2011, the red snapper stock was found to be overfished, but that overfishing had ended. A brief description of the stock and its status can be found in Section 3.3 and step 5 of this CEA. Measures proposed in this amendment are not likely to adversely affect the red snapper stock status as long as landings do not exceed the OFL. This is because the actions would affect the allocation of red snapper between components and not how many red snapper can be caught. At this time, it is unclear how climate change may affect these regulatory thresholds (see steps 4 and 5).

Ecosystem

The stresses associated with the proposed actions in relation to regulatory thresholds are not likely to cause beneficial or adverse effects on the ecosystem. The actions would not change the way the reef fish fishery as a whole is prosecuted. Actions in the amendment would affect red snapper recreational fishing and not fishing for the other 30 reef fish species. Thus, significant effects on the ecosystem are not expected. The overall Gulf-wide fishing effort would remain constrained by the recreational quotas and annual catch limits. Climate change is likely to affect the Gulf ecosystem; however, as described in steps 4 and 5, these effects are poorly understood.

Administrative Environment

The stresses associated with the proposed actions in relation to regulatory thresholds are not likely to cause beneficial or adverse effects on the administrative environments. Activities such as monitoring landings, setting quotas, and enforcing fisheries regulations will continue as before. If the creating two components of the recreational sector result in more satisfying management measures for each component, this should reduce stresses on managers to respond complaints by stakeholders on red snapper management.

7. Define a baseline condition for the resources, ecosystems, and human communities.

The purpose of defining a baseline condition for the resource and ecosystems in the area of the proposed actions is to establish a point of reference for evaluating the extent and significance of expected cumulative effects.

Reef Fish Fishery

As noted in Section 3.1, a description of the fishery and affected environment relative to red snapper was last fully discussed in joint Reef Fish Amendment 27/Shrimp Amendment 14 (GMFMC 2007). Red snapper landings for the recreational sector are not available at the community level, making it difficult to identify communities as dependent on recreational fishing for red snapper. Data reflecting commercial landings of red snapper may or may not reflect areas of importance for recreational fishing of red snapper. It cannot be assumed that the proportion of commercial red snapper landings among other species in a community would be similar to its proportion among recreational landings within the same community because of sector differences in fishing practices and preferences. Thus, in addition to communities with the greatest commercial red snapper landings, the referenced analysis identifies communities with the greatest recreational fishing engagement, based on numbers of: 1) federal for-hire permits, 2) vessels designated recreational by owner address, and 3) vessels designated recreational by homeport, plus availability of recreational fishing infrastructure. The Gulf communities to score highest for recreational fishing engagement based on the described analysis Section 3.4.1.

Information is lacking on the social environment of these fisheries, although some economic data are available, although primarily for the commercial sector. Fishery-wide ex-vessel revenues are available dating to the early 1960s, and individual vessel ex-vessel revenues are available from 1993 when the logbook program was implemented for all commercial vessels.

Red Snapper

The first stock assessment of red snapper was conducted in 1986 and has been assessed periodically since then (see Section 3.1). The most recent assessment (see Section 3.3 for a summary) occurred in 2013 through the SEDAR process and included data through 2011. The assessment shows trends in biomass, fishing mortality, fish weight, and fish length dating to the earliest periods of data collection. For this assessment, reliable commercial landings data were estimated back to 1963 and projected landings were estimated back to 1872 (Porch et al. 2004). Recreational data were available since 1981. Beginning with the 1988 assessment (Goodyear 1988), red snapper have been considered overfished and undergoing overfishing. However, the most recent assessment (SEDAR 31 2013) showed that overfishing had ended and that the stock condition, although still overfished, was improving. An update assessment is scheduled to be

completed in December 2014 and presented to the Council's SSC in January 2015. At this time, it is unknown what affects non-FMP actions (beneficial or adverse) such as the Deepwater Horizon MC252 oil spill or climate change may have on the health of red snapper stocks. Long-term monitoring of reef fish stocks relative to the Deepwater Horizon MC252 oil spill are ongoing.

Ecosystem

A baseline for analysis of the physical environment, as discussed in Section 3.2, was conducted in the EIS for the Generic EFH Amendment (GMFMC 2004a). Detailed information pertaining to the closures and preserves is provided in the February 2010 Regulatory Amendment (GMFMC 2010). In the Gulf, fish habitat for adult red snapper consists of submarine gullies and depressions; natural vertical relief structures such as coral reefs, rock outcroppings, and gravel bottoms; and artificial structures such as oilrigs and artificial reefs (GMFMC 2004a). Many of these vertical relief areas are identified as protected areas.

Other species in the ecosystem are discussed in Section 3.3. The Reef Fish FMP currently encompasses 31 species (Table 3.3.2). Eleven other species were removed from the FMP in 2012 through the Generic ACL/AM Amendment (GMFMC 2011b). Stock assessments and stock assessment reviews have been conducted for 13 species and can be found on the Council (www.gulfcouncil.org) and SEDAR (www.sefsc.noaa.gov/sedar) websites.

Administrative Environment

The administrative environment is described in Section 3.6. Responsibility for federal fishery management is shared by the Secretary of Commerce (Secretary) and the Council for the federal waters of the Gulf. These waters extend to 200 nautical miles offshore from the nine-mile seaward boundary of the states of Florida and Texas, and the three-mile seaward boundary of the states of Alabama, Mississippi, and Louisiana. The state governments of Texas, Louisiana, Mississippi, Alabama, and Florida have the authority to manage their respective state fisheries. Each of the five Gulf states exercise legislative and regulatory authority over their respective state's 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.

Regulations contained within FMPs are enforced through actions of NOAA's Office of Law Enforcement, the United States Coast Guard, and various state authorities. To better coordinate enforcement activities, federal and state enforcement agencies have developed cooperative agreements to enforce the Magnuson-Stevens Act. These activities are being coordinated by the Council's Law Enforcement Advisory Panel and the Gulf States Marine Fisheries Commission's Law Enforcement Committee, which have developed a 5-year "Gulf of Mexico Cooperative Law Enforcement Strategic Plan – 2008-2012."

The ability of the regions to constrain harvest causes uncertainty surrounding the effects of implementing regional management. The federal management has experienced overages of the quota or allocation in 14 of the last 22 years. However, the methods for estimating landings and projecting the season have improved consistently over time. The question remains if regions could constrain the harvest within the regional quotas; however, the regions have indicated they

intend to improve monitoring for their specific regions under this plan, which should ameliorate any concerns about overages being worse. Nevertheless, NMFS would need to continue analyzing the catch rates and landings to determine whether the regional management measures constrain the harvest. If the quota is exceeded for Gulf recreational red snapper harvest, then NMFS would be required to prohibit harvest in the EEZ regardless of the regional management plans.

8. Identify the important cause-and-effect relationships between human activities and resources, ecosystems, and human communities.

Cause-and-effect relationships are presented in Tables 4.4.3.

Table 4.4.3. The cause and effect relationship of fishing and regulatory actions for red snapper within the time period of the CEA.

Time periods	Cause	Observed and/or expected effects
1800-2016	Climate change	Changes ocean acidity and temperature modifies fish and prey distributions and productivity; threaten fishing communities through sea level rise and changing weather patterns
1962-1983	Growth and recruitment overfishing	Declines in mean size and weight
1984	13-inch minimum size limit for the recreational and commercial fisheries	Slowed rate of overfishing
1990	3.1 mp quota for commercial fishery and 7 fish bag limit	Further slow rate of overfishing
1991-1992	2.04 mp commercial quota	Continue to slow rate of overfishing
1992	Establish red snapper Class 1 and 2 endorsements and respective trip limits	Begin derby fishery
1993-1998	3.06 mp commercial quota	Continue to slow rate of overfishing
1994	Increase minimum size to 14 inches in the commercial and recreational fisheries	Increase yield per recruit, increase the chance for spawning, and slow rate of overfishing
1995-1997	Increase minimum size to 15 inches in the commercial and recreational fisheries and reduce the bag limit to 5 fish	Increase yield per recruit, increase the chance for spawning, and slow rate of overfishing
1997-2005	Reduce recreational season length	Constrain harvest in recreational fishery
1998	Shrimp trawls in the EEZ required to use NMFS-certified BRDs west of Cape San Blas	Reduce fishing mortality rate on age 0 and age 1 red snapper
1998-2005	Reduce bag limit to 4 fish	Reduce fishing mortality rate in recreational fishery
1999-2005	Raise total quota to 9.12 mp	Reduce rebuilding rate for fishery
2000-2014	Raise recreational minimum size limit to 16 inches	Increase yield per recruit, increase the chance for spawning, slow rate of overfishing
2004	Shrimp trawls in the EEZ required to use NMFS-certified BRDs east of Cape San Blas	Further reduce fishing mortality rate on age 0 and age 1 red snapper
2004	Implement red snapper rebuilding plan	Provide mechanism to monitor harvest for rebuilding
2007-2016	Commercial- Established Individual Fishing Quota Program (IFQ)	Constrain commercial harvests within the limits set by the rebuilding plan; IFQ to further control commercial sector to prevent overages; increase in administrative work to manage the IFQ.
2007-2014	Recreational - Reduction of bag limit to 2 fish and adjustment of season length	Constrain recreational harvest to the quota. Progressively shorter seasons as average size of landed fish increases.
2013-2016	Overfishing has ended, but the stock remains overfished.	Continue stock rebuilding

9. Determine the magnitude and significance of cumulative effects.

The primary objectives of this amendment and associated EIS is to reallocate red snapper resources between the commercial and recreational sectors with the intent to increase the net benefits from red snapper fishing as well as increase the stability of the red snapper component. The short- and long-term direct and indirect effects of each these actions are provided in Section 4.1.

To examine the magnitude and significance of the cumulative effects, important valued environmental components (VECs) were identified for the overall actions to be taken with this amendment. VECs are “any part of the environment that is considered important by the proponent, public, scientists and government involved in the assessment process. Importance may be determined on the basis of cultural values or scientific concern” (EIP 1998). For purposes of this analysis, an initial 22 VECs were identified, and the consequences of each alternative proposed in this amendment on each VEC were evaluated. Some of these VECs were combined into a revised VEC because many of the past, current, and reasonably foreseeable future actions (RFFA) were similar. Based on this analysis, six VECs were determined to be the most important for further consideration. Note that because 163 vessels have both commercial and for-hire reef fish permits, commercial vessels were included in the analysis of vessel owner, captain, and crew. The six VECs are shown in Table 4.4.4.

VECs not included for further analysis were sharks, protected resources, and Wholesale/retail. Many longline vessels that target reef fish also target sharks. However, sharks were not considered as an important VEC because, as shark stocks have declined, the shark fishery has become more and more regulated, limiting the effects of this fishery and the stock on reef fish stocks. There may be some effort shifting from the shark fishery to the reef fish fishery due to increased restrictions, however, this effect will likely be minor because only a minority of vessels have dual federal reef fish and shark permits. Protected resources were also eliminated from further analyses in this section. As described in Section 3.3, biological opinions have concluded the primary reef fish gear (longline and hook-and-line) were not likely to jeopardize sea turtles or small tooth sawfish. Because actions considered in this amendment are not expected to change how reef fish fishing gear is used in the prosecution of the reef fish fishery, any take associated with reef fish fishing should not exceed that considered in biological opinions. All other Endangered Species Act (ESA)-listed species have been found not likely to be adversely affected or not affected by the reef fish fishery. For marine mammals, gear used in the reef fish fishery were classified in the as Category III fisheries (see Section 3.3). This means this fishery has minimal impacts on marine mammals. Dealers and consumers (wholesale/retail) were eliminated because this action affects the recreational sector of the reef fish fishery. The actions in this amendment will not change the IFQ programs and commercial quotas the wholesale/retail business relies on. Thus, pounds needed to support dealers and the consumers who rely on obtaining their seafood from dealers should not be affected.

Table 4.4.4. VECs considered, consolidated, or not included for further evaluation.

VECs considered for further evaluation	VECs consolidated for further evaluation	VECs not included for further evaluation
Habitat	Hard bottom EFH	
Managed resources - red snapper - other reef fish species	Red snapper Other reef fish Prey species Competitors Predators	Sharks Protected species
Vessel owner, captain and crew - Commercial - For-hire	Vessel owner Captain Crew	
		Wholesale/retail Dealers and consumers
Anglers		
Infrastructure	Fishing Communities Fishing support businesses (ice and gear suppliers, marinas, fuel docks)	
Administration	Federal Rulemaking Federal Permitting Federal Education State Rulemaking/Framework State Education	

The following discussion refers to the effects of past, present, and RFFAs on the various VECs.

Habitat

Essential fish habitat, as defined in the GMFMC (2004a), for the Reef Fish FMP consists of all Gulf estuaries; Gulf waters and substrates extending from the US/Mexico border to the boundary between the areas covered by the Gulf of Mexico and the South Atlantic fishery management councils from estuarine waters out to depths of 100 fathoms. Section 3.2 and GMFMC (2004a) describe the physical environment inhabited by red snapper as well as reef fish in general. Red snapper is a carnivorous bottom dweller, generally associated (as adults) with hard-bottom substrates, submarine gullies and depressions, and oilrigs and other artificial structures (GMFMC 2004a). Eggs and larvae are pelagic while juveniles are found associated with bottom features or over barren bottom.

From fishing, the most sensitive gear/habitat combinations include EFH for reef fish species. These include fish otter trawls, shrimp otter trawls, roller frame trawls, and pair trawls over coral reefs; crab scrapes over coral reefs; oyster dredges over submerged aquatic vegetation (SAV), oyster reefs, or coral reefs; rakes over coral reefs; and patent tongs over SAV, oyster reefs, or coral reefs (GMFMC 2004a). Some of these gear/habitat interactions are unlikely to occur in actual practice (e.g., shrimp trawls towed through hard bottom areas can destroy shrimp nets and so are avoided). In general, gears that are actively fished by towing have the highest potential to alter habitats. However, some habitats, such as coral reefs and hard bottoms are sensitive to interactions with passive gears (e.g. traps) as well. Most directed reef fish fishing activities, as

described in Section 4.1.1, use longlines and handlines, although a few fish are taken by spearfishing gear. These have low levels of impacts compared to other gears.

In the past, some fishing practices have had detrimental effects on the physical environment. Gears such as roller trawls and fish traps damaged habitats while harvesting fish species. As a result of these effects, the Council developed stressed areas to reduce these impacts. Further protections have been developed, primarily by either prohibiting fishing or limiting fishing activities that can occur within certain areas. Detailed information on the closures and preserves is provided in the February 2010 Regulatory Amendment (GMFMC 2010). In addition, regulatory changes through Generic EFH Amendment 3 (GMFMC 2005b; implemented in 2006) prohibited bottom anchoring and the use of trawling gear, bottom longlines, buoy gear, and all traps/pots to protect coral reefs in several HAPCs, and required a weak link in the tickler chain of bottom trawls on all habitats throughout the Gulf EEZ to minimize damage done to habitats should the chain get hung up on natural bottom structures.

Current allowable gear types can adversely affect hard bottom areas; however, these impacts are not considered great (See Section 4.1.1). Handline gear and longlines used in the reef fish fishery can damage habitat through snagging or entanglement. Longlines can also damage hard bottom structures during retrieval as the line sweeps across the seafloor. Additionally, anchoring over hard-bottom areas can also affect benthic habitat by breaking or destroying hard bottom structures. However, these gears are not believed to have much negative impact on bottom structures and are considerably less destructive than other commercial gears, such as traps and trawls, which are not allowed for reef fish fishing.

Damage caused from reef fish fishing, although minor, is associated with the level of fishing effort (see Section 4.1.1). Therefore, actions reducing levels of effort would result in greater benefits to the physical environment because fishing related interactions with habitat would be reduced. Thus, actions described in steps 3 and 4 of this CEA which have reduced fishing effort for some species, and possibly the fishery on the whole, have had a positive effect on hard bottom habitats. RFFAs, such as Amendments 28 and 39, should also benefit these habitats as they would also reduce or limit fishing effort. As described in Sections 4.1.1, 4.2.1, and 4.3.1, effects on the physical environment from the proposed actions would likely be minimal because prosecution of the fishery should not be changed.

Reef fish EFH, particularly coral reefs and SAVs, are particularly susceptible to non-fishing activities (GMFMC 2004a). The greatest threat comes from dredge-and-fill activities (ship channels, waterways, canals, and coastal development). Oil and gas activities as well as changes in freshwater inflows can also adversely affect these habitats. As described in Step 4d of this cumulative effects analysis, the potential harm to reef fish habitat was highlighted by the Deepwater Horizon MC252 incident (<http://response.restoration.noaa.gov/deepwaterhorizon>). Essential fish habitat and HAPC designations cited in Section 3.2, GMFMC (2005b), and GMFMC (2010) and are intended to promote careful review of proposed activities that may affect these important habitats to assure that the minimum practicable adverse impacts occur on EFH. However, NMFS has no direct control over final decisions on such projects. The cumulative effects of these alternatives depend on decisions made by agencies other than NMFS, as NMFS and the Gulf Council have only a consultative role in non-fishing activities. Decisions

made by other agencies that permit destruction of EFH in a manner that does not allow recovery, such as bulkheads on former mangrove or marine vegetated habitats, would constitute irreversible commitments. However, irreversible commitments should occur less frequently as a result of EFH and HAPC designations. Accidental or inadvertent activities such as ship groundings on coral reefs or propeller scars on seagrass could also cause irreversible loss.

At this time, it is unclear what effects climate change will have on red snapper EFH. Factors associated with climate change such as ocean acidification could negatively affect important biotic components of red snapper EFH such as corals (IPCC 2014). Hollowed et al. (2013) has identified important ecosystem paths that deserve future study to determine climate change cause and effects.

Managed Resources

There are 31 species of reef fish managed in the Gulf EEZ, and of the species where the stock status is known, four of the eleven species are considered overfished (gag, greater amberjack, gray triggerfish, and red snapper; see Section 3.3). Recent actions for these overfished stocks have ended overfishing and set or continued rebuilding plans (e.g., Amendments 27, 32, 35, and 37).

In the past, the lack of management of reef fish allowed many stocks to undergo both growth and recruitment overfishing. This has allowed some stocks to decline as indicated in numerous stock assessments (Section 3.3). Red snapper have been considered overfished since the first stock assessment in 1986. For red snapper, management measures including a minimum size limit, commercial quota, and aggregate bag limit were put in place as part of the initial Reef Fish FMP or Amendment 1 (Section 3.1). None of these measures halted increases in landings (Table 3.1.2). However, over time, management measures have become more restrictive and held landings more closely to the quotas.

The present harvest levels are based on a rebuilding plan put in place by Amendment 27 which shifted the plan from a constant catch to a constant fishing mortality plan. The current plan, after an initial reduction in the total allowable catch from 9.12 mp to 5 mp, has allowed harvests to increase as the stock rebuilds. These measures have also limited the red snapper harvest sufficiently to end overfishing on the stock. In addition, the red snapper IFQ program has successfully held landings by the commercial sector below its quota. However, these measures, along with other IFQ programs for grouper and tilefish (Amendment 29) may have, at least for the commercial sector, redirected effort towards other non-IFQ managed reef fish species such as gray triggerfish and greater amberjack by fishermen without IFQ shares or allocation. Landings of these non-IFQ managed species are closely managed to prevent them from exceeding their ACLs and protects them from overharvest. In fact, measures for gray triggerfish and greater amberjack allow the fishery to be closed if the harvest is projected to meet their respective commercial and recreational quotas.

Fishery management RFFAs are expected to benefit managed species. These actions are expected to manage the stocks at OY per National Standard 1 and are described in steps 3 and 4 of this CEA. Although this amendment and Amendments 28, 36, and 39 do not specifically address overfishing of red snapper, they are intended to improve the management of the

commercial and recreational sectors in ways that are likely to better keep harvests within the quotas. Other RFFAs described in steps 3 and 4 similarly do not specifically address overfishing but are intended to improve the management of reef fish stocks either through revising ACLs, improving data reporting, or allowing more flexibility in management.

Non-fishing activities are likely to adversely affect reef fish stocks as listed in Step 4d. For example, LNG facilities are being proposed in the western and northern Gulf. As described in Step 4d, these facilities can have a negative effect on species with pelagic larvae, like most reef fish species. To mitigate the effects of these facilities, closed- rather than open-loop systems are being called for. At this time, the effect of LNG facilities is unknown and is likely to be less for reef fish species than other more coastal species such as red drum. Other factors such as climate change, hurricanes, and oil and gas extraction could have detrimental effects on reef fish species, but these effects are poorly understood.

Vessel Owner, Captain, and Crew (Commercial and For Hire)

Adverse or beneficial effects of actions on vessel owners, captains, and crew are tied to the ability of a vessel to make money. In commercial fisheries, these benefits are usually derived from shares awarded after fishing expenses are accounted for. The greater the difference between expenses and payment (revenue) for harvested fish, the more profit is generated by the fishing vessel. For-hire businesses generate revenue by selling either at the vessel level (charter businesses) or passenger level (headboats)

The commercial fishery has benefited from past actions in the reef fish fishery relative to this action. Prior to 1990, entry into the reef fish fishery was unhindered by regulation. To constrain harvest in order to prevent overexploitation of reef fish in general and red snapper specifically, the Council implemented size limits, quotas, seasonal closures, and a permit moratorium. These measures have produced limited success. For red snapper, the commercial quota was overrun 10 times until the IFQ program established in 2007 (Table 3.1.2).

Current management measures have had an overall positive, short-term impact on the red snapper component of the commercial sector. Landing restrictions were needed to keep the commercial red snapper harvest within its quota and primarily took the form of short mini-seasons (Hood et al. 2007). The mini-seasons kept many commercial vessels from taking more fishing trips during these years limiting fishing effort. With the advent of the IFQ program, fishermen with red snapper allocation were able to have flexibility in when and where they could fish. It also stopped the commercial quota from being exceeded. However, this program adversely affected fishermen who did not qualify for the initial distribution of IFQ shares. These fishermen have been required to purchase IFQ shares or allocation if they wished to harvest red snapper.

For other overfished reef fish stocks other than red snapper, rebuilding measures required to end this condition and rebuild stocks have constrained the harvest for these species over the short-term and likely increased competition within the commercial sector to harvest other stocks. However, by using constant fishing mortality rebuilding plans, harvests have been allowed to increase as the stocks recover.

Non-FMP factors have adversely affected the reef fish commercial and for-hire fleets. Imports can cause fishermen to lose markets when fishery closures occur as dealers and processors use imports to meet consumer demand. Consumer comfort with imports can then limit the price fishermen receive when harvest is allowed. Other factors that have had an adverse effect on the commercial fishery include hurricanes and increases in fishing costs, such as fuel, which may have pushed marginal fishing operations out of business (see step 4d). Hurricanes are unpredictable and localized in their effects. Increases in fishing costs, unless accompanied by an increase in prices or harvest quantity, decrease the profitability of fishing.

The for-hire component has benefited from past actions in the reef fish fishery relative to this action. This increase has been fueled by increased interest by the public to go fishing (i.e., more trips sold) as evidenced by an almost three-fold increase in recreational fishing effort since 1986 (SEDAR 12 2007). To constrain harvest in order to prevent overexploitation of reef fish in general and red snapper specifically, NMFS, through the Council, implemented minimum size and bag limits for most species prior to 2000. In addition, a recreational red snapper quota was implemented in 1997 and a permit moratorium to constrain the recreational effort from the for-hire industry in 2003. These measures have met with limited success toward ending overfishing.

Current management measures may have had a negative, short-term impact on the for-hire component of the reef fish fishery. Landing restrictions have been needed to keep the recreational red snapper harvest within its quota. These restrictions include a reduced bag limit and seasonal closures. These measures may have reduced interest by the public to take for-hire fishing trips and possibly resulted in a reduction in the number of trips taken, as shown in Table 4.4.2 (although the Deepwater Horizon MC252 oil spill may also be partly responsible for the decrease in trips). In addition, the restriction requiring a person aboard a federally-permitted Gulf for-hire reef fish vessel to comply with federal regulations for reef fish species regardless of where the fish are harvested (GMFMC 2008b), may have reduced the ability of federally permitted for-hire operators to sell trips because of longer non-compliant state fishing seasons. However, as discussed in Sections 4.1.3 and 4.1.4, the creation of the two recreational components may allow for more federal fishing days for the federal for-hire component. Other factors that have had an adverse effect on the for-hire component of the reef fish fishery include increases in fishing costs, such as fuel, and hurricanes which may have pushed marginal fishing operations out of business (see step 4d). However, these factors may be less important than may seem apparent. For the red snapper for-hire component, reductions in charter fishing from more restrictive regulations, increased costs, and effects from hurricanes were claimed by the industry (GMFMC 2007). But red snapper data for 2007 found only lingering effects of the 2005 hurricanes; annual average effort for 2004 through 2005 were only slightly greater than in 2007. Although the available data cannot address claims of severe economic losses by individual entities, this data does not support contentions of widespread industry harm. However, for red snapper, effort may have shifted to other species or other charter businesses.

As mentioned in Section 2 and the economic and social effects analyses in Section 4, Magnuson-Stevens Act §407(d)(1) requires recreational or commercial red snapper fishing to end when a sector catches its quota. The recreational sector includes both the federal for-hire and private angling components. Thus, if the private angling component exceeds its allocation of the recreational quota to such an extent that the overall recreational quota is projected to be met, the

federal for-hire component would also be prohibited from retaining red snapper regardless of whether there is remaining quota available for that component. Reduced season lengths in the following year for the federal for-hire components could be further exacerbated by overage adjustments from exceeding the quota and non-compatible state fishing seasons. However, the likelihood of overages is reduced because each component's season will be based on the lower recreational ACT rather than the recreational quota.

Many RFFAs are likely to have a short-term negative impact on the for-hire component. Red snapper, gray triggerfish, greater amberjack, and gag have experienced overfishing, are considered overfished, and are being managed under stock rebuilding plans. Measures required to end overfishing and rebuild these stocks have constrained the harvest for these species. If these measures result in less interest by the fishing public to take fishing trips on for-hire vessels, then this will adversely affect this sector. However, as mentioned above, this effect has not been apparent for red snapper because the for-hire component has the ability to shift to other species. The ability to shift to other species would be expected to continue in response to subsequent RFFAs, though the flexibility would be reduced the more species that become subject to increased restrictions. Some short-term beneficial actions include an increase in TAC and relaxation of management measures for red grouper and vermilion snapper, as these stocks have recovered from overfishing and harvest restrictions have been relaxed.

Because many management RFFAs are designed to manage stocks at OY, these actions should be beneficial to the for-hire component. Stocks would be harvested at a sustainable level, and at higher levels for those stocks being rebuilt. If allocation between components, as proposed in this amendment, favors the for-hire component, this could provide additional red snapper fishing days and allow for more trips for this component. Specific to red snapper fishing, Amendments 28 and 39 evaluate changing the commercial and recreational red snapper allocation and implementing some type of regional management of the recreational sector, respectively. In Amendment 28, the alternatives for shifting the allocation would decrease the commercial percentage and increase the recreational percentage of the stock ACL. Depending how these shifts are put in place, they could adversely affect the commercial sector if the commercial quota is reduced. The recreational sector, including the federal for-hire component, would benefit from increased quotas. Regional management would affect the recreational sector only in Amendment 39. Depending on how the recreational quota is allocated among states and the management measures implemented by the states, the effects on the federal for-hire component could be beneficial or adverse depending on where a vessel operator fishes.

Non-management-related RFFAs that could affect the for-hire component include hurricanes, oil and gas extraction, and increases in fishing costs. Hurricanes are unpredictable and localized in their effects. Oil spills, which are also unpredictable, can have extensive adverse impacts over large areas as evidenced by the Deepwater Horizon MC252 spill. Increases in fishing costs, unless accompanied by an increase in the price charged per trip or the number of trips, decrease the profitability of fishing.

Anglers

It is estimated that 3.1 million residents of Gulf States participated in marine recreational fishing (NMFS 2013a). Red drum and spotted sea trout are the species most commonly reported as

target species by these anglers, with approximately 35% and 33% of interviewed anglers reporting targeting these species, respectively. The most commonly caught non-bait species across all waters of the Gulf were spotted seatrout, red drum, sand seatrout, Atlantic croaker, and gray snapper. In federal waters, the most commonly harvested species are white grunt, red grouper, red snapper, gag, and yellowtail snapper. As summarized in Holiman (2000), the typical angler in the Gulf is 44 years old, male (80%), white (90%), and employed full-time (92%). They have a mean income of \$42,700, and have fished in the state for an average of 16 years. The average number of trips taken in the 12 months preceding the interview was about 38 and these were mostly (75%) one-day trips with average expenditure of less than \$50. Seventy-five percent of interviewed anglers reported that they held salt-water licenses, and 59 percent owned boats used for recreational saltwater fishing. More recent comparable statistics are not available.

The effects of various past, present, and RFFAs on anglers are measured through levels of participation in the fishery. Measures that reduce participation are negative and measures that increase participation are positive. However, it is difficult to assess what affects past and present management measures have had on anglers because available data indicates the amount of effort by the private sector has increased. This increase has been from approximately 6.8 million trips in 1981 to over 14 million trips from in 2003 to 2009 (Rios 2013). The number of angler trips declined from 14,356,523 angler trips in 2009, to 13,548,899 in 2010, and 13,874,314 in 2011. The decline in 2010 and 2011 is likely due to the Deepwater Horizon MC252 oil spill. The effects of various management measures on the participation by anglers is likely similar to the effects on the for-hire industry discussed above with the exception that private anglers are not subject to permit restrictions on where they can fish that federally permitted for-hire vessel operators are (see above section). However, as discussed in Sections 4.1.3 and 4.1.4, the creation of the two recreational components may further restrict the number of federal fishing days for the private angling component due to non-compatible state season lengths. Factors unrelated to management, such as hurricanes and increasing fuel and other costs, likely affect private anglers similar to for-hire fishermen. It should be noted that a possible effect of the proposed action could be constraining most of the private angling to state waters if state non-compatible seasons continue. If the private angling allocation is too low, then a greater proportion of private angling fish would be caught in state waters, reducing the days available to fish in federal waters.

As mentioned above in the discussion of the vessel owner, captain, and crew above as well as in Section 2 and the economic and social effects analyses in Section 4, Magnuson-Stevens Act §407(d)(1) requires recreational or commercial red snapper fishing to end when a sector catches its quota. The recreational sector includes both the federal for-hire and private angling components. Thus, if the federal for-hire component exceeds its allocation of the recreational quota to such an extent that the overall recreational quota is projected to be met, the private angling component would also be prohibited from retaining red snapper regardless of whether there is remaining quota available for that component. Reduced federal season lengths for the private angling component in the following year could be further exacerbated by overage adjustments if the quota is exceeded and non-compatible state fishing seasons. However, the likelihood of this occurring is reduced because each component's season will be based on the lower recreational ACT rather than the recreational quota.

Two RFFAs specific to red snapper fishing, Amendments 28 and 39 evaluate changing the commercial and recreational red snapper allocation and implementing some type of regional management of the recreational sector, respectively. In Amendment 28, the alternatives for shifting the allocation would decrease the commercial percentage and increase the recreational percentage of the stock ACL. The recreational sector, including the private angling component, would benefit from increased quotas. Regional management would affect the recreational sector only in Amendment 39. Depending on how the recreational quota is allocated among states and the management measures implemented by the states, the effects on the private angling component could be beneficial or adverse depending on where anglers fish.

Non-management-related RFFAs that could affect anglers include hurricanes, oil and gas extraction, and increases in fishing costs. Hurricanes are unpredictable and localized in their effects. Oil spills, which are also unpredictable, can have extensive adverse impacts over large areas as evidenced by the Deepwater Horizon MC252 spill. Increases in fishing costs as well as lost fishing opportunities would likely reduce the amount of angler effort.

Infrastructure

Infrastructure refers to fishing-related businesses and includes marinas, rentals, snorkel and dive shops, boat dockage and repair facilities, tackle and bait shops, fish houses, and lodgings related to recreational fisheries industry. This infrastructure is tied to the commercial and recreational fisheries and can be affected by adverse and beneficial economic conditions in those fisheries. Therefore, the effects of past, present, and RFFAs should reflect responses by the fisheries to these actions. Past actions allowing the recreational and commercial fisheries to expand have had a beneficial effect providing business opportunities to service the need of these industries. Present actions which have constrained the commercial fisheries likely have had an adverse effect because lower revenues generated from the fishery would be available to support the infrastructure. However, as conditions improve for the fishery as described above through RFFAs, similar benefits should be accrued by the businesses comprising the infrastructure. For the recreational sector, as stated above, it is difficult to assess the impact of present and RFFAs since angler participation has increased until recently. Actions enhancing this participation should also be beneficial to the infrastructure. However, it should be noted the Council has been receiving public testimony that participation may be declining as fuel prices increase and may be reflected in the decline in the number of angler trips. It should be noted that non-FMP factors such as the Deepwater Horizon MC252 oil spill (IAI 2012) and climate change (http://www.nefsc.noaa.gov/ecosys/climate_change/implications.html) may adversely affect fishing communities, particularly those communities considered more vulnerable.

Administration

Administration of fisheries is conducted through federal (including the Council) and state agencies which develop and enforce regulations, collect data on various fishing entities, and assess the health of various stocks. As more regulations are required to constrain stock exploitation to sustainable levels, greater administration of the resource is needed. The NMFS Office of Law Enforcement, in cooperation with state agencies, would continue to monitor regulatory compliance with existing regulations and NMFS would continue to monitor both recreational and commercial landings to determine if landings are meeting or exceeding specified quota levels. Further, stock status needs to be periodically assessed to ensure stocks are being

maintained at proper levels. Some present actions have assisted the administration of fisheries in the Gulf. In 2007, an IFQ program was implemented for the commercial red snapper fishery, requiring NMFS to monitor the sale of red snapper IFQ shares. Recordkeeping requirements for IFQ shares have improved commercial quota monitoring and prevent or limit overages from occurring. A vessel monitoring system was also implemented for all commercial reef fish vessels in 2007 and is helping enforcement identify vessels violating various fishing closures. The recent implementation of ACLs and AMs for most federally managed species has required close monitoring of landings. For some species, harvest is closed if landings are projected to exceed the ACL within the season. For others, quotas or ACLs need to be adjusted during the following season to account for any ACL overages that occur in the preceding year.

10. Modify or add alternatives to avoid, minimize, or mitigate significant cumulative effects.

The cumulative effects of allocating recreational red snapper between the for-hire and private angling components on the biophysical environment is likely neutral because it should not have much effect on overall fishing effort. For the socioeconomic environment, depending on the component, some effects would likely be positive and some negative depending on who the allocation favors. However, short-term negative impacts on the fisheries' socioeconomic environment may occur due to the need to limit directed harvest and reduce bycatch mortality. These negative impacts can be minimized within the recreational sector by using combinations of bag limits, size limits, and closed seasons. Note that by the actions considered in this amendment, impacts of future recreational management measures may be further minimized by directly addressing issues specific for the federal for-hire and private angling components. Also note the commercial sector is managed through individual fishing quota programs, size limits, and season-area closures would not likely be effected by the proposed action.

11. Monitor the cumulative effects of the selected alternative and modify management as necessary.

The effects of the proposed actions are, and will continue to be, monitored through collection of landings data by NMFS, 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 is collected through MRIP, NMFS' Headboat Survey, and the Texas Marine Recreational Fishing Survey. MRIP replaced the previous MRFSS program. Commercial data is collected through trip ticket programs, port samplers, and logbook programs. Currently, SEDAR assessments of Gulf red snapper are scheduled for 2014 and 2015 (see step 3).

4.5 Other Effects

4.5.1 Unavoidable Adverse Effects

Unavoidable adverse effects are described in detail in the cumulative effects analysis of Amendment 30B (GMFMC 2008b) and 32 (GMFMC 2011a) and is incorporated here by reference. Catch quotas, minimum size limits, bag limits, and seasonal closures, are generally

effective in limiting total fishing mortality, the type of fish targeted, the number of targeted fishing trips, and/or the time spent pursuing a species. However, these management tools have the unavoidable adverse effect of creating regulatory discards. Discard mortality must be accounted for in a stock assessment as part of the allowable biological catch, and thus restricts total allowable catches.

Many of the current participants in the reef fish fishery may never recuperate losses incurred from the more restrictive management actions imposed in the short-term to end overfishing of red snapper. Because red snapper is but one of the reef fish species managed in the Reef Fish FMP, short-term losses are not expected to be significant, and other species may be substituted to make up for losses to the fishery. With the anticipated recovery of the stock, future participants in the reef fish fishery will benefit. Overall, short-term impacts of actions would be offset with much higher allowable catch levels as the stock recovers and is rebuilt.

The actions considered in this amendment should not have an adverse effect on public health or safety because these measures should not alter actual fishing practices, just which recreational component can harvest what percentage of the overall recreational quota. Unique characteristics of the geographic area are highlighted in Section 3. Adverse effects of fishing activities on the physical environment are described in detail in Section 4.1.1. This section concludes the impact on the physical environment should be minor from actions proposed in this document. Uncertainty and risk associated with the measures are described in detail in the same sections as well as assumptions underlying the analyses.

4.5.2 Relationship Between Short-term Uses and Long-term Productivity

The primary objective of this amendment and associated EIS is to define distinct private angling and federal for-hire components of the recreational red snapper fishery and allocate red snapper resources between these recreational components. The relationship between short-term economic uses and long-term economic productivity are discussed in the preceding section. However, because red snapper is but one species in the reef fish complex, these effects may be mitigated through effort shifting to other species and may not be significant.

No alternatives are being considered that would avoid these short-term negative effects because they are a necessary cost associated with rebuilding and protecting the red snapper stock. The range of alternatives has varying degrees of economic costs and administrative burdens. Some alternatives have relatively small short-term economic costs and administrative burdens, but would also provide smaller and more delayed long-term benefits. Other alternatives have greater short-term costs, but provide larger and more immediate long-term benefits.

4.5.3 Mitigation, Monitoring, and Enforcement Measures

Mitigation, monitoring and enforcement measures are described in detail in the cumulative effects analysis of Amendment 30B (GMFMC 2008b) and is incorporated here by reference. The process of reallocating the red snapper resource between components is expected to have a negative short-term effect on the social and economic environment for the for-hire component,

and will create a burden on the administrative environment. Given the negative effects described in Sections 4.1 - 4.4, it is difficult to mitigate these measures and managers must balance the costs and benefits when choosing management alternatives for the reef fish fishery. However, these measures are expected to have long-term benefits by helping the red snapper stock recover more quickly.

To ensure the red snapper stock recovers to a level that supports harvests at the optimum yield, periodic reviews of stock status are needed. These reviews are designed to incorporate new information and to address unanticipated developments in the respective fisheries and would be used to make appropriate adjustments in the reef fish regulations should harvest not achieve optimum yield objectives. The details for how assessments are developed, reviewed, and applied are described in Amendment 30B, as are the rule-making options the Council and NMFS have for taking corrective actions (GMFMC 2007).

Current reef fish regulations are labor intensive for law enforcement officials. NMFS law enforcement officials work cooperatively with other federal and state agencies to keep illegal activity to a minimum. Violators are penalized, and for reef fish commercial and reef fish for-hire operators, permits required to operate in their respective fisheries can be sanctioned.

Reef fish management measures include a number of area-specific regulations where reef fish fishing is restricted or prohibited in order to protect habitat or spawning aggregations of fish, or to reduce fishing pressure in areas that are heavily fished. To improve enforceability of these areas, the Council has established a vessel monitoring system program for the commercial reef fish sector to improve enforcement. Vessel monitoring systems allows NMFS enforcement personnel to monitor compliance with these area-specific regulations, and track and prosecute violations.

4.5.4 Irreversible and Irretrievable Commitments of Resources

There are no irreversible or irretrievable commitments of agency resources proposed herein. The actions to change the red snapper allocation and accountability measures are readily changeable by the Council in the future. There may be some loss of immediate income (irretrievable in the context of an individual not being able to benefit from compounded value over time) to some sectors from the restricted fishing seasons.

4.6 Any Other Disclosures

CEQ guidance on environmental consequences (40 CFR §1502.16) indicates the following elements should be considered for the scientific and analytic basis for comparisons of alternatives. These are:

- a) Direct effects and their significance.
- b) Indirect effects and their significance.

- c) Possible conflicts between the proposed actions and the objectives of federal, regional, state, and local (and in the case of a reservation, Indian tribe) land use plans, policies and controls for the area concerned.
- d) The environmental effects of alternatives including the proposed action.
- e) Energy requirements and conservation potential of various alternatives and mitigation measures.
- f) Natural or depletable resource requirements and conservation potential of various alternatives and mitigation measures.
- g) Urban quality, historic and cultural resources, and the design of the built environment, including the reuse and conservation potential of various alternatives and mitigation measures.
- h) Means to mitigate adverse environmental impacts.

Items a, b, d, e, f, and h are addressed in Sections 2, 3, 4, and 5. Items a, b, and d are directly discussed in Sections 2 and 4. Item e is discussed in economic analyses (Sections 4.1.4, 4.2.4, and 4.3.4). Alternatives that encourage fewer fishing trips would result in energy conservation. Item f is discussed throughout the document as fish stocks are a natural and depletable resource. A goal of this amendment is to make this stock a sustainable resource for the nation. Mitigation measures are discussed in Section 4.4. Item h is discussed in Section 4, with particular mention in Section 4.4.

The other elements are not applicable to the actions taken in this document. Because this amendment concerns the management of a marine fish stock, it is not in conflict with the objectives of federal, regional, state, or local land use plans, policies, and controls (Item c). Urban quality, historic and cultural resources, and the design of the built environment, including the reuse and conservation potential of various alternatives and mitigation measures (Item g) is not a factor in this amendment. The actions taken in this amendment will affect a marine stock and its fishery, and should not affect land-based, urban environments. The exception would be the *U.S.S. Hatteras*, located in federal waters off Texas, which is listed in the National Register of Historic Places. The proposed actions are not likely to increase fishing activity and so no additional impacts to the *U.S.S. Hatteras* would be expected.

With regards to the Endangered Species Act (ESA), the most recent biological opinion for the Reef Fish Fishery Management Plan, completed on September 30, 2011, concluded authorization of the Gulf reef fish fishery managed under this management plan is not likely to jeopardize the continued existence of sea turtles (loggerhead, Kemp's ridley, green, hawksbill, and leatherback) or smalltooth sawfish (See Section 3.2 for more information on ESA species). An incidental take statement was issued specifying the amount of anticipated take, along with reasonable and prudent measures and associated terms and conditions deemed necessary and appropriate to minimize the impact of these takes. Other listed species and designated critical habitat in the Gulf were determined not likely to be adversely affected. NMFS also determined that the reef fish fishery was not likely to adversely affect *Acropora* because of where the fishery operates, the types of gear used in the fishery, and that other regulations protect *Acropora* where they are most likely to occur.

With regards to the Marine Mammal Protection Act, fishing activities under the Reef Fish Fishery Management Plan should have no adverse impact on marine mammals (See Section 3.2). The proposed actions are not expected to substantially change the way the fishery is currently prosecuted (e.g., types of methods, gear used, etc.). Gear used by the reef fish fishery was still classified in the 2014 List of Fisheries as a Category III fishery (79 FR 14418, April 14, 2014) because it is prosecuted primarily with longline and hook-and-line gear. This classification indicates the annual mortality and serious injury of a marine mammal stock resulting from any fishery is less than or equal to one 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.

CHAPTER 5. REGULATORY IMPACT REVIEW

5.1 Introduction

The National Marine Fisheries Service (NMFS) requires a Regulatory Impact Review (RIR) for all regulatory actions that are of public interest. The RIR does three things: 1) it provides a comprehensive review of the level and incidence of impacts associated with a proposed or final regulatory action; 2) it provides a review of the problems and policy objectives prompting the regulatory proposals and an evaluation of the major alternatives that could be used to solve the problem; and, 3) it ensures that the regulatory agency systematically and comprehensively considers all available alternatives so that the public welfare can be enhanced in the most efficient and cost-effective way. The RIR also serves as the basis for determining whether the regulations are a “significant regulatory action” under the criteria provided in Executive Order (E.O.) 12866. This RIR analyzes the impacts this action would be expected to have on the red snapper component of the Gulf of Mexico reef fish fishery.

5.2 Problems and Objectives

The problems and objectives addressed by this action are discussed in Section 1.2.

5.3 Description of Fisheries

A description of the red snapper component of the Gulf reef fish fishery is provided in Sections 3.1 and 3.5.

5.4 Impacts of Management Measures

5.4.1 Action 1: Establishment of Private Angling and Federal For-hire Components

A detailed analysis of the economic effects expected to result from this action is provided in Section 4.1.4. The following discussion summarizes the key points of this analysis.

Alternative 1 would not affect the current recreational harvest or other customary uses of recreational red snapper. Therefore, **Alternative 1** would not be expected to result in direct economic effects on recreational fishermen, for-hire operations, or associated shore-side businesses. If the current management approach of treating the two groups of anglers as a single unit impedes the ability to establish different management, then **Alternative 1** would be expected to result in adverse indirect economic effects due to forgone opportunities to improve the management of red snapper in the recreational sector. These potential indirect economic effects cannot be quantified at this time because they would be determined by the nature and

efficacy of any subsequent management measures implemented by the Council following the establishment of separate components within the recreational sector.

Preferred Alternative 2 would establish distinct federal for-hire and private angling components for recreational red snapper management. In and of itself, sector separation would only be a prerequisite to the future design and implementation of management measures that could be tailored to account for the specific needs of each component, thereby possibly generating additional economic benefits. A quantitative evaluation of potential economic benefits that could result from recreational sector separation would require detailed information on the allocation of the recreational red snapper quota between the two components and on the management measures to be implemented once the new components are created.

The separation of the recreational sector into two components would allow the federal for-hire component to harvest a predetermined and non-decreasing portion of the recreational red snapper quota. This could potentially result in a more predictable season length, better business planning, and improvements to the economic performance of for-hire businesses. Conversely, the establishment of separate components and allocations to each component would limit the private angling component to harvesting the proportion of the recreational red snapper quota allocated to them. Because private angler effort is not limited and these anglers can continue to fish in state waters when red snapper harvest is prohibited in the Exclusive Economic Zone, additional management measures would need to be considered by the Council to manage the growth in the proportion of the recreational red snapper quota harvested by the private angling component.

The economic evaluation of recreational management measures, such as the establishment of separate components, would typically include estimates of the expected changes in economic value, as measured by changes in consumer surplus to recreational anglers and producer surplus to for-hire operators. Estimates of consumer surplus specific to each angler type (private and for-hire) are not available. Although it can be stated that curtailing the growth of fishing effort in the private angling component may redistribute effort (fishing trips) to the federal for-hire component in subsequent years, the resulting effort levels that may develop in the two components are unknown. In addition to generating consumer surplus, fishing activity by the federal for-hire component generates producer surplus to the for-hire vessels. If consumer surplus per angler trip is constant across both components, increasing the share of the quota harvested by the federal for-hire component would likely result in an increase in economic value because of the associated increase in producer surplus. The size of any potential increases, however, would be determined by several factors, including the demand for for-hire trips, the ability of the industry to respond to this demand, and how these factors change.

The establishment of separate federal for-hire and private angling components is expected to provide opportunities to design and implement for each component flexible management approaches tailored to the specific needs and preferences of each component, thereby potentially resulting in increases in economic value. For each component, the magnitude of potential increased economic benefits that could result from this action would primarily depend on the type and quality of the management instruments implemented post-sector separation. The property rights structure associated with the access to fishing privileges established to manage

each component would constitute a key determinant of the magnitude of expected potential economic benefits.

Alternatives 3 and 4 would provide federally-permitted for-hire operators the opportunity to join or opt out of the federal for-hire component once, at the implementation of the program (**Option a**), every year (**Option b**), every 3 years (**Option c**), or every 5 years (**Option d**). To distinguish members of the federal for-hire component from federally-permitted for-hire operators that opt out of the component, under **Alternative 3**, a fully transferable permit endorsement would be issued to the operators who elect to join the federal for-hire component. In contrast, the endorsement that would be issued under **Alternative 4** would be non-transferable. The endorsements (transferable or not) in **Alternatives 3 and 4** are only considered as an enforcement mechanism.

The economic effects expected to result from **Alternatives 3 and 4** would be comparable to the effects expected from **Preferred Alternative 2** but would be reduced if some federal for-hire operators do not participate in the federal for-hire component. This reduction in economic benefits, if it occurs, would originate from the resultant reduction in the allocation of red snapper quota to the federal for-hire component, and the fact that management measures tailored to the specific needs of this sector as a whole would encompass fewer vessels. The larger the number of federally-permitted operators who elect to opt out, the greater the expected reduction in potential economic benefits that may occur. In addition, there are limited economic incentives for federally permitted operators to opt out of the federal for-hire component and join the private angling component because current regulations prohibit federally permitted for-hire vessels from harvesting red snapper when the federal season is closed. However, compared to **Preferred Alternative 2**, **Alternatives 3 and 4** would grant added flexibility to individual for-hire operators to determine their participation and/or switch their membership from one component to the other. This added flexibility could potentially result in increased positive economic effects at the individual vessel level because operators would be able to select and adjust, as needed, their participation in the component deemed to be most beneficial to their business. From this perspective, **Alternative 3** would be expected to result in potentially more economic benefits than **Alternative 4** because it would allow the endorsement to be fully transferable. However, the implementation of a voluntary federal for-hire component may adversely affect the Council's management strategies for recreational red snapper, thereby potentially resulting in negative economic effects, as well as increase the administrative costs of management. For example, under **Alternatives 3 or 4 (Options b-d)**, if wide fluctuations in the membership of each component are observed (due to a sizeable number of for-hire operators switching their membership), variations in the portions of the recreation quota allotted to each component would increase the challenges to estimating season length, and render the implementation of management measures, such as the distribution of fish tags or other methods of access to fishing privileges, that the Council may consider less effective. The greater the flexibility to opt in or out, or transfer the endorsement, the greater the potential adverse economic effects associated with these management and administrative complications. As such, the management and administrative challenges, and associated adverse economic effects, stemming from potential membership fluctuations would be heightened under **Alternative 3**, compared to **Alternative 4** and **Preferred Alternative 2**, because of the fully transferable endorsement it would grant to members of the federal for-hire component. A transferable endorsement would, for example,

allow endorsements to be moved during a given fishing season from operators who typically do not harvest much red snapper to operators who do, rendering estimated season and harvest targets unreliable. With respect to the options considered under **Alternatives 3 and 4**, the more flexible the participation decision option, the better it may be for the vessel operator. Thus, the ranking (best to worst) of the options from the vessel operators' perspective would be as ordered: **Option a-Option b-Option c-Option d**. As may be obvious from the discussion in the previous paragraph, from the management perspective, the ranking order of these options would be reversed.

Overall, because of the uncertainty associated with of the future management measures that may be tailored for each component, it is not possible to rank these alternatives based on quantitative or qualitative estimates of the resultant expected economic effects. Increased management flexibility, as would occur under the establishment of separate components under **Preferred Alternative 2, Alternative 3, and Alternative 4**, should allow the development of tailored management more closely attuned to component needs and, therefore, result in increased economic benefits compared to **Alternative 1**. Determining whether the potential adverse economic effects accruing to more complicated management and administration that would be associated with the increased participant flexibility enabled by **Alternatives 3 and 4** negate the potential increased economic benefits accruing to participants, however, is not possible with available data and associated uncertainties.

Preferred Alternative 5 would add a sunset clause to the establishment of separate federal for-hire and private angling components. **Option a, Preferred Option b and Option c** would sunset sector separation after 2, 3, and 5 years, respectively. The addition of a sunset provision could be expected to limit potential economic benefits expected from sector separation because the Council may not have the opportunity to implement potentially beneficial management measures requiring an extended time frame to be developed. Furthermore, even if management measures tailored to the specific needs of each component were implemented, a sunset clause could reduce potential economic benefits expected to result from sector separation because these measures may not be in place long enough to fully yield the economic benefits anticipated. Based on the preceding discussion, when comparing the sunset options proposed in **Preferred Alternative 5**, the greatest potential economic benefits would be expect to result from **Option c**, followed by **Preferred Option b**, and **Option a**. By providing a date certain to revert to a recreational red snapper sector without components unless the Council takes specific action to extend sector separation, the addition of a sunset provision may contribute to a timelier cancellation of the federal for-hire and private angling components if unintended adverse economic effects arise or if the positive economic effects anticipated to occur fail to materialize. Under this scenario, the ordinal ranking of the options provided in this section could be reversed.

5.4.2 Action 2: Allocation of the Recreational Red Snapper Quota between the Components of the Recreational Sector

A detailed analysis of the economic effects expected to result from this action is provided in Section 4.2.4. The following discussion summarizes the key points of this analysis.

Alternative 1 would not be compatible with the establishment of separate federal for-hire and private angling components (Action 1) and would impede the consideration of management measures tailored to the specific needs of each component. Relative to the percentage of the recreational red snapper quota harvested by the federal for-hire component in 2013, the remaining alternatives (**Preferred Alternative 7** included) would increase the estimated percentage of the quota allocated to the federal for-hire component and accordingly decrease the percentage allocated to the private angling component. For **Alternatives 2-9**, allocations based on longer time series (including more of the earlier years of the dataset) would be more favorable to the federal for-hire component.

The economic effects expected to result from alternative allocations between components are typically evaluated based on consumer and producer surplus changes relative to a baseline or status quo allocation. Because these components have not previously existed, there is no previously established baseline allocation between the federal for-hire and private angling components. The allocation of greater percentages of the recreational quota to the federal for-hire component would be expected to result in greater increases in for-hire trips and associated increases in consumer and producer surplus. However, the magnitude of the increase in for-hire trips that would be expected to result from a given allocation, which is determined by several factors including the demand for for-hire trips, is not known. Similarly, allocating greater proportions of the recreational quota to the private angling component would be expected to result in increases in private angler trips and in corresponding increases in consumer surplus. Inferences about changes in economic value are not provided because it cannot be assumed that the resource allocation within each component is efficient. As suggested by Holzer and McConnell (2014) and in a recent report (OECD 2014), changes in net benefit estimates based on the generally accepted application of the equimarginal principle and associated inferences about economic efficiency are erroneous when each component's quota is not efficiently allocated within the component. Furthermore, policy prescriptions based on these inferences are invalid, and therefore, not useful. Based on the preceding discussion, all that can be concluded is that potential economic benefits accruing to each component would be expected to increase the more allocation each component receives.

5.4.3 Action 3: Recreational Season Closure Provisions

A detailed analysis of the economic effects expected to result from this action is provided in Section 4.3.4. The following discussion summarizes the key points of this analysis.

Alternative 1 would continue to close the recreational red snapper season when the recreational red snapper ACT is projected to be caught. If the Council decides to restructure the recreational sector and establish distinct components, the federal for-hire and private angling components would have to be closed at the same time. Although **Alternative 1** is compatible with the establishment of separate components within the recreational sector, it would restrict the range of management measures that could be considered by the Council, resulting in potential reductions in the economic effects that could be expected from the implementation of sector separation. **Preferred Alternative 2** would establish separate closure provisions for the federal for-hire and private angling components. Compared to **Alternative 1**, **Preferred Alternative 2** would

therefore be expected to result in increased economic benefits because it would increase the management flexibility to implement component-specific measures designed to increase the economic benefits accruing to each component. Distinct components within the recreational sector (**Action 1**) and the establishment of separate closure provisions (**Action 3 Preferred Alternative 2**) do not exempt the components from the requirements of Section 407(d) of the Magnuson-Stevens Act which requires that red snapper recreational fishing be halted once the recreational quota is caught. Therefore, potential economic benefits expected to result from sector separation with specific closure provisions for each component may be limited by this provision in the Act.

5.5 Public and Private Costs of Regulations

The preparation, implementation, enforcement, and monitoring of this or any federal action involves the expenditure of public and private resources which can be expressed as costs associated with the regulations. Costs associated with this action include:

Council costs of document preparation, meetings, public hearings, and information dissemination.....	\$250,000
NMFS administrative costs of document preparation, meetings and review	\$100,000
TOTAL	\$350,000

The estimate provided above does not include any law enforcement costs. Any enforcement duties associated with this action would be expected to be covered under routine enforcement costs rather than an expenditure of new funds. It is noted that it will be more difficult and, therefore, more costly, to monitor closure periods that vary by fishing mode.

5.6 Determination of Significant Regulatory Action

Pursuant to E.O. 12866, a regulation is considered a “significant regulatory action” if it is likely to result in: 1) an annual effect of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities; 2) create a serious inconsistency or otherwise interfere with an action taken or planned by another agency; 3) materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights or obligations of recipients thereof; or 4) raise novel legal or policy issues arising out of legal mandates, the President’s priorities, or the principles set forth in this executive order. Based on the information provided above, this action has been determined to not be economically significant for the purposes of E.O. 12866.

CHAPTER 6. REGULATORY FLEXIBILITY ACT ANALYSIS

6.1 Introduction

The purpose of the Regulatory Flexibility Act (RFA) is to establish a principle of regulatory issuance that agencies shall endeavor, consistent with the objectives of the rule and of applicable statutes, to fit regulatory and informational requirements to the scale of businesses, organizations, and governmental jurisdictions subject to regulation. To achieve this principle, agencies are required to solicit and consider flexible regulatory proposals and to explain the rationale for their actions to assure such proposals are given serious consideration. The RFA does not contain any decision criteria; instead the purpose of the RFA is to inform the agency, as well as the public, of the expected economic impacts of various alternatives contained in the fishery management plan or amendment (including framework management measures and other regulatory actions) and to ensure the agency considers alternatives that minimize the expected impacts while meeting the goals and objectives of the FMP and applicable statutes.

The RFA requires agencies to conduct a Regulatory Flexibility Act Analysis (RFAA) for each proposed rule. The RFAA is designed to assess the impacts various regulatory alternatives would have on small entities, including small businesses, and to determine ways to minimize those impacts. An RFAA is conducted to primarily determine whether the proposed action would have a “significant economic impact on a substantial number of small entities.” The RFAA provides: 1) A description of the reasons why action by the agency is being considered; 2) a succinct statement of the objectives of, and legal basis for, the proposed rule; 3) a description and, where feasible, an estimate of the number of small entities to which the proposed rule will apply; 4) a description of the projected reporting, record-keeping, and other compliance requirements of the proposed rule, including an estimate of the classes of small entities which will be subject to the requirements of the report or record; 5) an identification, to the extent practicable, of all relevant federal rules, which may duplicate, overlap, or conflict with the proposed rule; 6) a description and estimate of the expected economic impacts on small entities; and 7) an explanation of the criteria used to evaluate whether the rule would impose “significant economic impacts”.

6.2 Statement of the need for, objective of, and legal basis for the proposed action

The need for and objective of this proposed action are provided in Chapter 1. In summary, more flexible management approaches are needed to prevent of red snapper overfishing and rebuild the red snapper stock, while achieving the optimum yield, particularly with respect to recreational opportunities. The purpose of this proposed action is to define distinct private angling and federal for-hire components of the recreational sector that harvests red snapper and allocate the allowable portion of the red snapper resource between these two components in order to facilitate the development of management approaches tailored to each component. The

Magnuson-Stevens Fishery Conservation and Management Act provides the statutory basis for this proposed action.

6.3 Description and estimate of the number of small entities to which the proposed action would apply

This proposed action would directly affect all vessels with a Gulf of Mexico (Gulf) federal charter vessel/headboat permit (hereafter referred to as a for-hire permit). Headboats, which charge a fee per passenger, and charter vessels, which charge a fee on a whole vessel basis, are types of vessel operations that participate in the for-hire fishing sector. A federal for-hire permit is required for for-hire vessels to harvest reef fish species, including red snapper, in the Gulf Exclusive Economic Zone (EEZ). On May 29, 2014, there were 1,336 valid (non-expired) or renewable Gulf Charter/Headboat Reef Fish permits. A renewable permit is an expired permit that may not be actively fished, but is renewable for up to one year after expiration. 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 in both capacities. However, only federally permitted headboats are required to submit harvest and effort information to the 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. Sixty-seven vessels were registered in the SHRS as of April 8, 2014 (K. Brennen, NMFS SEFSC, pers. comm.). As a result, the estimated 1,336 vessels expected to be directly affected by this proposed action are expected to consist of 1,269 charter vessels and 67 headboats. The average charter vessel is estimated to receive approximately \$83,000 (2013 dollars) in annual revenue. The average headboat is estimated to receive approximately \$251,000 (2013 dollars) in annual revenue.

NMFS has not identified any other small entities that might be directly affected by this proposed action.

The Small Business Administration has established size criteria for all major industry sectors in the U.S., including fish harvesters. A business involved in the for-hire fishing industry is classified as a small business if it is independently owned and operated, is not dominant in its field of operation (including its affiliates), and has combined annual receipts not in excess of \$7.5 million (NAICS code 487210, for-hire businesses) for all its affiliated operations worldwide. All for-hire businesses expected to be directly affected by this proposed rule are believed to be small business entities.

6.4 Description of the projected reporting, record-keeping and other compliance requirements of the proposed action, including an estimate of the classes of small entities which will be subject to the requirement and the type of professional skills necessary for the preparation of the report or records

This proposed action would not establish any new reporting, record-keeping, or other compliance requirements.

6.5 Identification of all relevant federal rules, which may duplicate, overlap or conflict with the proposed action

No duplicative, overlapping, or conflicting federal rules have been identified.

6.6 Significance of economic impacts on a substantial number of small entities

Substantial number criterion

This proposed action would be expected to directly affect an estimated 1,269 charter vessels and 67 headboats, or all of the vessels permitted to harvest red snapper in the Gulf EEZ. All of the businesses these vessels are believed to be small business entities. As a result, this proposed action, if implemented, would be expected to affect a substantial number of small entities.

Significant economic impacts

The outcome of “significant economic impact” can be ascertained by examining two factors: disproportionality and profitability.

Disproportionality: Do the regulations place a substantial number of small entities at a significant competitive disadvantage to large entities?

All entities expected to be directly affected by the measures in this proposed action are believed to be small business entities, so the issue of disproportionality does not arise in the present case.

Profitability: Do the regulations significantly reduce profits for a substantial number of small entities?

This proposed amendment contains three actions that would establish separate for-hire and private angler components for the recreational harvest of red snapper in the Gulf, specify the red snapper allocation for each component, and set separate red snapper season closure provisions, based on the annual catch target, for each component. These proposed management changes would sunset after three years. Collectively, these actions would be expected to result in increased economic benefits to for-hire small business entities because they would increase the management flexibility to implement component-specific measures designed to increase the economic benefits accruing to each component. The immediate direct economic benefits of this proposed amendment primarily, if not exclusively, would be expected to result from the specification of a for-hire allocation. Establishing the for-hire component would establish the platform on which to specify an allocation. Otherwise, no other immediate direct effects would accrue to this action. Establishing separate components, however, would enable future management changes that may be expected to result in increased economic benefits to small

entities. These effects would be a direct effect of these future changes and not of this proposed action. Separate seasonal closure provisions would both aid the development of future component-specific management measures designed to increase economic benefits, and help ensure any benefits accruing to separate allocations are realized.

The proposed for-hire allocation, 42.3%, is larger than the portion of the allowable red snapper harvest taken by for-hire anglers in 2013 (18%) and the average annual harvest of 2011-2013 (23%). As a result, the proposed allocation would be expected to result in an increase in the red snapper harvest by for-hire anglers, an increase in the number for-hire anglers that harvest red snapper and, in turn, an increase in revenue and profits to affected for-hire vessels. Meaningful estimation of the total increase in revenue and profits across the entire industry or per vessel is not possible with available data, however, because of uncertainty on the potential price effects on for-hire services and the proportion of fish harvested on trips taken only because of the increase in allowable red snapper harvest by for-hire fishermen. Increasing the amount of red snapper that can be harvested by anglers fishing from for-hire vessels would be expected to increase the number of days red snapper may be harvested by for-hire anglers. Because this would augment the “harvest opportunity” provided by a for-hire vessel during the extended season, some for-hire vessels may be able to charge a higher price if angler demand is sufficient. Perhaps more importantly, only a portion of the increased allowable harvest by for-hire anglers would be expected to be taken by new trips, with the rest of the fish harvested on trips that would occur even if the red snapper season were closed, but could now keep red snapper as a result of the extended season. Revenue would only increase if higher fees are charged on regularly expected trips, or new trips occur. Because competition would be expected to reduce the opportunity to increase for-hire prices, increases in revenue, and associated profits, are more likely to come from new trips. The proposed sunset provision would be expected to limit the duration of these effects, but not the amount or direction (increase) of these effects.

Because of the uncertainty associated with these factors, as previously stated, meaningful estimates of the expected change in revenue or profits are unavailable. Nevertheless, the net effect of the proposed changes is expected to be an increase in profit per affected small entity.

6.7 Description of the significant alternatives to the proposed action and discussion of how the alternatives attempt to minimize economic impacts on small entities

This proposed action, if implemented, would not be expected to have a significant adverse economic impact on a substantial number of small entities. As a result, the issue of significant alternatives is not relevant.

CHAPTER 7. LIST OF PREPARERS

PREPARERS

Name	Expertise	Responsibility	Agency
Assane Diagne	Economist	Co-Team Lead – Amendment development, economic analyses	GMFMC
Peter Hood	Fishery biologist	Co-Team Lead – Amendment development, biological analyses, cumulative effects analysis	SERO
Ava Lasseter	Anthropologist	Social analyses	GMFMC
Stephen Holiman	Economist	Economic analyses	SERO
Christina Package-Ward	Anthropologist	Social analyses	SERO
Andy Strelcheck	Fishery biologist	Data analyses	SERO

REVIEWERS (Preparers also serve as reviewers)

Name	Expertise	Responsibility	Agency
Noah Silverman	Natural resource management specialist	National Environmental Policy Act review	SERO
Mara Levy	Attorney	Legal review	NOAA GC
Steve Branstetter	Biologist	Review	SERO
Tony Lamberte	Economist	Review	SERO
Morgan Kilgour	Biologist	Review	GMFMC
Anik Clemens	Technical writer and editor	Regulatory writer	SERO
Adam Brame	Biologist	Protected Resources review	SERO
David Dale	Biologist	Essential Fish Habitat review	SERO
Carrie Simmons	Biologist	Review	GMFMC
Juan Agar	Economist	Review	SEFSC
David Carter	Economist	Review	SEFSC

GMFMC = Gulf of Mexico Fishery Management Council; 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 8. LIST OF AGENCIES, ORGANIZATIONS, AND PERSONS TO WHOM A COPY OF THE EIS WAS SENT

National Marine Fisheries Service

- Southeast Fisheries Science Center
- Southeast Regional Office
- Office for Law Enforcement

NOAA General Counsel

Environmental Protection Agency

United States Coast Guard

United States Fish and Wildlife Services

United States Department of Interior

United States Department of State

Marine Mammal Commission

United States Coast Guard

Texas Parks and Wildlife Department

Alabama Department of Conservation and Natural Resources/Marine Resources Division

Louisiana Department of Wildlife and Fisheries

Mississippi Department of Marine Resources

Florida Fish and Wildlife Conservation Commission

CHAPTER 9. REFERENCES

- Adams, W.F., and C. Wilson. 1995. The status of the smalltooth sawfish, *Pristis pectinata* Latham 1794 (Pristiformes: Pristidae) in the United States. *Chondros* 6(4):1-5.
- Agar, J. S., A. Strelcheck, and A. Diagne. 2014. The Gulf of Mexico Red Snapper IFQ Program: The First Five Years. *Marine Resource Economics*. 29(2): 177-198.
- American Fisheries Society. 2013. Common and Scientific Names of Fishes from the United States, Canada, and Mexico. Seventh Edition. Special Publication 34. Bethesda, MD.
- Anderes Alvarez, B. L., and I. Uchida. 1994. Study of hawksbill turtle (*Eretmochelys imbricata*) stomach content in Cuban waters. Pages 27-40 in *Study of the Hawksbill Turtle in Cuba (I)*. Ministry of Fishing Industry, CUBA. Ministry of Fishing Industry, Cuba.
- Ault, J. S., S. G. Smith, G. A. Diaz, and E. Franklin. 2003. Florida hogfish fishery stock assessment. University of Miami, Rosenstiel School of Marine Science. Contract No. 7701 617573 for Florida Marine Research Institute, St. Petersburg, Florida.
- Barnette, M. C. 2001. A review of the fishing gear utilized within the Southeast Region and their potential impacts on essential fish habitat. NOAA Technical Memorandum. NMFS-SEFSC-449. National Marine Fisheries Service. St. Petersburg, Florida.
- Baustian, M. M. and N. N. Rabalais. 2009. Seasonal composition of benthic macroinfauna exposed to hypoxia in the northern Gulf of Mexico. *Estuaries and Coasts*, 32:975–983.
- Bigelow, H.B., and W.C. Schroeder. 1953. Sawfishes, guitarfishes, skates and rays, pp. 1-514. *In*: Tee-Van, J., C.M Breder, A.E. Parr, W.C. Schroeder and L.P. Schultz (eds). *Fishes of the Western North Atlantic, Part Two*. Mem. Sears Found. Mar. Res. I.
- Bjorndal, K. A. 1997. Foraging ecology and nutrition of sea turtles. P. L. Lutz, and J. A. Musick, editors. *The Biology of Sea Turtles*. CRC Press, Boca Raton.
- Bjorndal, K. A. 1980. Nutrition and grazing behavior of the green turtle, *Chelonia mydas*. *Marine Biology* 56:147-154.
- Bohnsack, J. 2000. Report on Impacts of Recreational Fishing on Essential Fish Habitat. In: Hamilton, A. N., Jr., ed. *Gear impacts on essential fish habitat in the Southeastern Region*. National Marine Fisheries Service, Southeast Fisheries Science Center. Pascagoula, Mississippi.
- Bolten, A. B., and G. H. Balazs. 1995. Biology of the early pelagic stage - the 'lost year'. Pages 579-581 in K. A. Bjorndal, editor. *Biology and Conservation of Sea Turtles*. Smithsonian Institution Press, Washington, DC.

- Brongersma, L. D. 1972. European Atlantic turtles. *Zoologische Verhandelingen* (121):1-318.
- Burke, V. J., S. J. Morreale, and A. G. J. Rhodin. 1993. *Lepidochelys kempii* (Kemp's ridley sea turtle) and *Caretta caretta* (loggerhead sea turtle): diet. *Herpetological Review* 24(1):31-32.
- Burton, M. 2008. Southeast U.S. Continental Shelf, Gulf of Mexico, and U.S. Caribbean. In: Osgood, K. E., ed. *Climate Impacts on U.S. Living Marine Resources: National Marine Fisheries Service Concerns, Activities and Needs*. U.S. Dep. Commerce, NOAA Tech. Memo. NMFSF/SPO-89, 118 p.
- Byles, R. 1988. Satellite Telemetry of Kemp's Ridley Sea Turtle, *Lepidochelys kempii*, in the Gulf of Mexico. Report to the National Fish and Wildlife Foundation:40 pp.
- Carr, A. F. 1986. RIPS, FADS, and little loggerheads. *BioScience* 36(2):92-100.
- Carr, A. 1987. New perspectives on the pelagic stage of sea turtle development. *Conservation Biology* 1(2):103-121.
- Carter, D.W. and C. Liese. 2012. "The Economic Value of Catching and Keeping or Releasing Saltwater Sportfish in the Southeast USA." *North American Journal of Fishery Management* 23: 613-625.
- Cass-Calay, S. L., and M. Bahnick. 2002. Status of the yellowedge grouper fishery in the Gulf of Mexico. Contribution SFD 02/03 – 172. National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Southeast Fisheries Science Center. Miami, Florida.
- CEQ. 1997. Considering cumulative effects under the National Environmental Policy Act. Council on Environmental Policy, Executive Office of the President. 64 pp. + appendices. Available at <http://ceq.eh.doe.gov/nepa/ccenepa/ccenepa.htm>.
- Chester, W. 2001. Full box! One hundred years of fishing and boat building in Bay County. Fire in the Water Publishing Company, South port, Florida. 314 p.
- Courtney, J. M., A. C. Courtney, and M. W. Courtney. 2013. Nutrient loading increases red snapper production in the Gulf of Mexico. *Hypotheses in the Life Sciences*, 3:7-14.
- Craig, J. K. 2012. Aggregation on the edge: effects of hypoxia avoidance on the spatial distribution of brown shrimp and demersal fishes in the Northern Gulf of Mexico. *Mar. Ecol. Prog. Ser.*, 445: 75–95.
- Doerpinghaus, J., K. Hentrich, A. Stavrinaky, and M. Troup. 2013. The Snapper Saga: An Assessment of Sector Separation on the Gulf of Mexico Recreational Red Snapper Fishery. Master of Environmental Science and Management submitted to the Bren School of Environmental Science & Management

- Doerpinghaus, J., K. Hentrich, A. Stavrinaky, and M. Troup. 2014. "An Assessment of Sector Separation on the Gulf of Mexico Recreational Red Snapper Fishery." *Marine Policy* 50:309-317.
- Eckert, S. A., K. L. Eckert, P. Ponganis, and G. L. Kooyman. 1989. Diving and foraging behavior of leatherback sea turtles (*Dermochelys coriacea*). *Canadian Journal of Zoology* 67(11):2834-2840.
- Eckert, S. A., D. W. Nellis, K. L. Eckert, and G. L. Kooyman. 1986. Diving patterns of two leatherback sea turtles (*Dermochelys coriacea*) during interesting intervals at Sandy Point, St. Croix, U.S. Virgin Islands. *Herpetologica* 42(3):381-388.
- Environmental Information Partnership (EIP). 1998. Cumulative Effects Assessment in the Moose River Basin - Background Literature Review. Ministry of Natural Resources, Northeast Region. Ontario. http://www.mnr.gov.on.ca/en/index.html?CSB_ic-name=topMenu&CSB_ic-info=home_Eng
- EPA. 1999. EPA Region 4: Interim Policy to Identify and Address Potential Environmental Justice Areas. EPA-904-R-99-004.
- Feeny, David, Fikret Berkes, Bonnie J. McCay, and James M. Acheson. 1990. The Tragedy of the Commons: Twenty-Two Years Later, *Human Ecology* 18:1-19.
- Fischer, A. J., M. S. Baker, Jr., and C. A. Wilson. 2004. Red snapper (*Lutjanus campechanus*) demographic structure in the northern Gulf of Mexico based on spatial patterns in growth rates and morphometrics. *Fishery Bulletin* 102:593-603.
- Frick, J. 1976. Orientation and behavior of hatchling green turtles *Chelonia mydas* in the sea. *Animal Behavior* 24(4):849-857.
- Gannon, D. P., E. J. Berens McCabe, S. A. Camilleri, J. G., Gannon, M. K. Brueggen, A. A. Barleycorn, V. I. Palubok, G. J. Kirkpatrick, and R. S. Wells. 2009. Effects of *Karenia brevis* harmful algal blooms on nearshore fish communities in southwest Florida. *Mar. Ecol. Prog. Ser.* 378:171-186.
- GMFMC. 1981. Environmental impact statement and fishery management plan for the reef fish resources of the Gulf of Mexico and environmental impact statement. Gulf of Mexico Fishery Management Council, Tampa, Florida. <http://www.gulfcouncil.org/Beta/GMFMCWeb/downloads/RF%20FMP%20and%20EIS%201981-08.pdf>
- GMFMC. 1989. Amendment 1 to the reef fish fishery management plan including environmental assessment, regulatory impact review, and regulatory flexibility analysis. Gulf of Mexico Fishery Management Council. Tampa, Florida. <http://www.gulfcouncil.org/Beta/GMFMCWeb/downloads/RF%20Amend-01%20Final%201989-08-rescan.pdf>

GMFMC. 1991. Regulatory amendment to the reef fish fishery management plan for setting the 1991 red snapper total allowable catch. Gulf of Mexico Fishery Management Council, Tampa, Florida. 46 p.

<http://www.gulfcouncil.org/Beta/GMFMCWeb/downloads/Reef%20Fish%20Reg%20Amend%20-%201991-03.pdf>

GMFMC. 1995. Regulatory amendment to the reef fish fishery management plan to set 1996 red snapper total allowable catch. Gulf of Mexico Fishery Management Council, Tampa, Florida. 49 p.

<http://www.gulfcouncil.org/Beta/GMFMCWeb/downloads/RF%20RegAmend%20-%201995-12.pdf>

GMFMC. 1999. Generic Sustainable Fisheries Act Amendment to the following Fishery Management Plans for: Gulf coral and coral reef resources, coastal migratory pelagics, red drum, reef fish, shrimp, spiny lobster, and stone crab, includes environmental assessment, regulatory impact review, and initial regulatory flexibility analysis. Gulf of Mexico Fishery Management Council. Tampa, Florida. 318 p.

<http://www.gulfcouncil.org/Beta/GMFMCWeb/downloads/Generic%20SFA%20amendment%201999.pdf>

GMFMC. 2003. Corrected amendment for a charter/vessel headboat permit moratorium amending the fishery management plans for: reef fish (Amendment 20) and coastal migratory pelagics (Amendment 14) including environmental assessment, regulatory impact review, and initial regulatory flexibility act. Gulf of Mexico Fishery Management Council. Tampa, Florida.

<http://www.gulfcouncil.org/Beta/GMFMCWeb/downloads/CBAmentFINAL-corrected.pdf>

GMFMC. 2004a. Final environmental impact statement for the generic essential fish habitat amendment to the following fishery management plans of the Gulf of Mexico: shrimp fishery of the Gulf of Mexico, red drum fishery of the Gulf of Mexico, reef fish fishery of the Gulf of Mexico, stone crab fishery of the Gulf of Mexico, coral and coral reef fishery of the Gulf of Mexico, spiny lobster fishery of the Gulf of Mexico and South Atlantic, coastal migratory pelagic resources of the Gulf of Mexico and South Atlantic. Gulf of Mexico Fishery Management Council. Tampa, Florida.

<http://www.gulfcouncil.org/Beta/GMFMCWeb/downloads/Final%20EFH%20EIS.pdf>

GMFMC. 2004b. Amendment 22 to the fishery management plan for the reef fish fishery of the Gulf of Mexico, U.S. waters, with supplemental environmental impact statement, regulatory impact review, initial regulatory flexibility analysis, and social impact assessment. Gulf of Mexico Fishery Management Council. Tampa, Florida.

<http://www.gulfcouncil.org/Beta/GMFMCWeb/downloads/Amend%2022%20Final%2070204.pdf>

GMFMC. 2005a. Final amendment 18A to the fishery management plan for the reef fish resources of the Gulf of Mexico, including environmental assessment, regulatory impact review,

and initial regulatory flexibility analyses. Gulf of Mexico Fishery Management Council. Tampa, Florida. http://www.gulfcouncil.org/Beta/GMFMCWeb/downloads/Amendment_18A_Final.pdf

GMFMC. 2005b. Generic Amendment Number 3 for Addressing Essential Fish Habitat Requirements, Habitat Areas of Particular Concern, and Adverse Effects of Fishing in the following Fishery Management Plans of the Gulf of Mexico: Shrimp Fishery of the Gulf of Mexico, United States Waters, Red Drum Fishery of the Gulf of Mexico, Reef Fish Fishery of the Gulf of Mexico, Coastal Migratory Pelagic Resources (Mackerels) in the Gulf of Mexico, and South Atlantic, Stone Crab Fishery of the Gulf of Mexico, Spiny Lobster in the Gulf of Mexico and South Atlantic, and Coral and Coral Reefs of the Gulf of Mexico.

GMFMC. 2006. Final amendment 26 to the Gulf of Mexico reef fish fishery management plan to establish a red snapper individual fishing quota program, including supplemental environmental impact statement, initial regulatory flexibility analysis, and regulatory impact review. Gulf of Mexico Fishery Management Council. Tampa, Florida.

<http://www.gulfcouncil.org/Beta/GMFMCWeb/downloads/Amend26031606FINAL.pdf>

GMFMC. 2007. Final amendment 27 to the reef fish fishery management plan and amendment 14 to the shrimp fishery management plan including supplemental environmental impact statement, regulatory impact review, and regulatory flexibility act analysis. Gulf of Mexico Fishery Management Council. Tampa, Florida. 490 pp with appendices.

<http://www.gulfcouncil.org/Beta/GMFMCWeb/downloads/Final%20RF%20Amend%2027-%20Shrimp%20Amend%2014.pdf>

GMFMC. 2008a. Final reef fish amendment 30A: greater amberjack – revised rebuilding plan, accountability measures; gray triggerfish – establish rebuilding plan, end overfishing, accountability measures, regional management, management thresholds and benchmarks including supplemental environmental impact statement, regulatory impact review, and regulatory flexibility act analysis. Gulf of Mexico Fishery Management Council. Tampa, Florida.

<http://www.gulfcouncil.org/docs/amendments/Amend-30A-Final%20208.pdf>

GMFMC. 2008b. Final Amendment 30B: gag – end overfishing and set management thresholds and targets. Red grouper – set optimum yield, TAC, and management measures, time/area closures, and federal regulatory compliance including environmental impact statement, regulatory impact review, and regulatory flexibility act analysis. Gulf of Mexico Fishery Management Council. Tampa, Florida.

http://www.gulfcouncil.org/Beta/GMFMCWeb/downloads/Final%20Amendment%2030B%2010_10_08.pdf

GMFMC. 2009. Final amendment 31 to the fishery management plan for reef fish resources in the Gulf of Mexico addresses bycatch of sea turtles in the bottom longline component of the Gulf of Mexico reef fish fishery, includes draft environmental impact statement and regulatory impact review. Gulf of Mexico Fishery Management Council. Tampa, Florida. 261 pp with appendices.

<http://www.gulfcouncil.org/Beta/GMFMCWeb/downloads/Final%20Draft%20RF%20Amend%2031%206-11-09.pdf>

GMFMC. 2010. Final regulatory amendment the reef fish fishery management plan to set total allowable catch for red snapper including revised environmental assessment, regulatory impact review, and regulatory flexibility analysis. Gulf of Mexico Fishery Management Council. Tampa, Florida.

http://www.gulfcouncil.org/docs/amendments/Final%20Red%20Snapper%20Regulatory%20Amendment%203_26_10.pdf

GMFMC. 2011a. Final reef fish amendment 32 – gag grouper – rebuilding plan, annual catch limits, management measures, red grouper – annual catch limits, management measures, and grouper accountability measures. Gulf of Mexico Fishery Management Council. Tampa, Florida.

[http://www.gulfcouncil.org/docs/amendments/Final%20RF32_EIS_October_21_2011\[2\].pdf](http://www.gulfcouncil.org/docs/amendments/Final%20RF32_EIS_October_21_2011[2].pdf)

GMFMC. 2011b. Final generic annual catch limits/accountability measures amendment for the Gulf of Mexico fishery management council’s red drum, reef fish, shrimp, coral and coral reefs fishery management plans, including environmental impact statement, regulatory impact review, regulatory flexibility analysis, and fishery impact statement. Gulf of Mexico Fishery Management Council. Tampa, Florida.

http://www.gulfcouncil.org/docs/amendments/Final%20Generic%20ACL_AM_Amendment-September%209%202011%20v.pdf

GMFMC. 2011c. Regulatory amendment to the reef fish fishery management plan to set 2011 total allowable catch for red snapper. Gulf of Mexico Fishery Management Council. Tampa, Florida.

<http://www.gulfcouncil.org/docs/amendments/Red%20Snapper%202011%20Regulatory%20Amendment%20-%20201-11.pdf>

GMFMC. 2012a. Final regulatory amendment to the fishery management plan for the reef fish resources of the Gulf of Mexico, revise fall recreational fixed closed season and set 2012 and 2013 quotas for red snapper. Gulf of Mexico Fishery Management Council. Tampa, Florida.

<http://www.gulfcouncil.org/Beta/GMFMCWeb/downloads/Final%20Red%20Snapper%20Fall%20Season%20and%20Quota%20RegAmend%20-%202003-20-2012.pdf>

GMFMC. 2012b. Final amendment 38 to the reef fish fishery management plan for the reef fish resources of the Gulf of Mexico – modifications to the shallow-water grouper accountability measures, including an environmental assessment, fishery impact statement, regulatory impact review, and regulatory flexibility act analysis. Gulf of Mexico Fishery Management Council. Tampa, Florida.

<http://www.gulfcouncil.org/docs/amendments/Final%20Amendment%2038%2009-12-2012.pdf>

GMFMC. 2012c. Final amendment 37 to the reef fish fishery management plan for the reef fish resources of the Gulf of Mexico – Modifications to the gray triggerfish rebuilding plan including adjustments to the annual catch limits and annual catch targets for the commercial and recreational sectors. Gulf of Mexico Fishery Management Council. Tampa, Florida.

[http://www.gulfcouncil.org/docs/amendments/Final_Reef_Fish_Amend_37_Gray_Triggerfish_12_06_12\[1\].pdf](http://www.gulfcouncil.org/docs/amendments/Final_Reef_Fish_Amend_37_Gray_Triggerfish_12_06_12[1].pdf)

GMFMC. 2013a. Red snapper 2013 quota increase and supplemental recreational season, including environmental assessment, regulatory impact review, and regulatory flexibility act analysis. Framework action to the fishery management plan for the reef fish resources of the Gulf of Mexico. Gulf of Mexico Fishery Management Council. Tampa, Florida.

<http://www.gulfcouncil.org/docs/amendments/Final%20Red%20Snapper%20Framework%20Action%20Set%202013%20Quotas%2008-01-13.pdf>

GMFMC. 2013b. Red snapper individual fishing quota program 5-year review. Jointly prepared by Gulf of Mexico Fishery Management Council and NMFS Southeast Regional Office. Tampa and St. Petersburg, FL. <http://www.gulfcouncil.org/docs/amendments/Red%20Snapper%205-year%20Review%20FINAL.pdf>

GMFMC. 2013c. Framework action to set the 2013 red snapper commercial and recreational quotas and modify the recreational bag limit, including environmental assessment, regulatory impact review, and regulatory flexibility act analysis. Gulf of Mexico Fishery Management Council. Tampa, Florida.

<http://gulfcouncil.org/docs/amendments/Red%20Snapper%20Framework%20Action%20to%20Set%202013%20Quotas.pdf>

GMFMC and SAFMC. 1982. Fishery management plan final environmental impact statement for coral and coral reefs. Gulf of Mexico Fishery Management Council. Tampa, Florida; and South Atlantic Fishery Management Council. Charleston, South Carolina.

<http://www.gulfcouncil.org/Beta/GMFMCWeb/downloads/Coral%20FMP.pdf>

Goodyear, C. P. 1988. The Gulf of Mexico fishery for reef fish species, a descriptive profile. Unpublished report. National Marine Fisheries Service, Southeast Fisheries Center, Miami Laboratory, CRD 87/88-19.

https://grunt.sefsc.noaa.gov/P_QryLDS/DisplayDocuments.jsp?min_series_code=CR&min_reco rd_id=935&direction=next&total_rows=2955&description=SEFSC%20Technical%20Memoran dum#

Gore, R. H. 1992. The Gulf of Mexico: A treasury of resources in the American Mediterranean. Pineapple Press. Sarasota, Florida.

Holiman, Stephen. 2000. Summary report of methods and descriptive statistics for the 1997-1998 southeast region marine recreational economics survey. NMFS Southeast Regional Office. SERI-ECON-00-11.

Holland, S. M., A. J. Fedler, and J. W. Milon. 1999. The operations and economics of the charter and head boat fleets of the eastern Gulf of Mexico and South Atlantic Coasts. University of Florida 178 pp.

Hollowed, A. B., Barange, M., Beamish, R., Brander, K., Cochrane, K., Drinkwater, K., Foreman, M., Hare, J., Holt, J., Ito, S-I., Kim, S., King, J., Loeng, H., MacKenzie, B., Mueter, F., Okey, T., Peck, M. A., Radchenko, V., Rice, J., Schirripa, M., Yatsu, A., and Yamanaka, Y.

2013. Projected impacts of climate change on marine fish and fisheries. *ICES Journal of Marine Science* 70: 1023–1037.

Hood, P. B., A. J. Strelcheck, and P. Steele. 2007. A history of red snapper management in the Gulf of Mexico. Pages 267-284. in W. F. Patterson, III, J. H. Cowan, G. R. Fitzhugh, and D. L.

Holzer, J. and K. McConnell. 2014. Harvest Allocation without Property Rights. *Journal of the Association of Environmental and Resource Economics* 1(1):209-232

Hughes, G. R. 1974. Is a sea turtle no more than an armored stomach? *Bulletin of the South African Association for Marine Biological Research* 11:12-14.

Impact Assessment, Inc. 2005. Identifying Communities Associated with the Fishing Industry Along the Florida Gulf Coast. Impact Assessment, Inc. La Jolla, CA. Volumes 1-3 646 p.

Impact Assessment, Inc. 2006. Identifying Communities Associated with the Fishing Industry in Alabama and Mississippi -Final Report. Prepared under Contract WC133F-03-SE-0603. http://sero.nmfs.noaa.gov/sf/socialsci/pdfs/AlaMiss_PublicReleaseVersion_pdf_Feb06.pdf

Impact Assessment, Inc. 2012. Small Business Impacts Associated with the 2010 Oil Spill and Drilling Moratorium in the Gulf of Mexico - Final Technical Report. Prepared for the U.S. Small Business Administration, Office of Advocacy. La Jolla, CA. 134 p.

IPCC. 2014. Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Panel on Climate Change [Stocker, T.F., D. Qin, G.-K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA.

Kennedy, V. S., R. R. Twilley, J. A. Kleypas, J. H. Cowan, Jr., S. R. Hare. 2002. Coastal and Marine Ecosystems and Global Climate Change: Potential Effects on U.S. Resources. Pew Center on Global Climate Change.

Keinath, J. A., and J. A. Musick. 1993. Movements and diving behavior of leatherback turtle. *Copeia* 1993(4):1010-1017.

Kennedy, V. S., R.R. Twilley, J. A. Kleypas, J. H. Cowan, Jr., S. R. Hare. 2002. Coastal and marine ecosystems and global climate change. Pew Center on Global Climate Change, Arlington, VA. 52 p.

Landsberg, J.H., L.J. Flewelling, and J. Naar. 2009. *Karenia brevis* red tides, brevetoxins in the food web, and impacts on natural resources: Decadal advancements. *Harmful Algae* 8:598–607.

Lanyon, J.M., C.J. Limpus, and H., Marsh. 1989. Dugongs and turtles: grazers in the seagrass system. *In*: Larkum, A.W.D, A.J., McComb and S.A., Shepard (eds.) *Biology of Seagrasses*. Elsevier, Amsterdam, 610.

- Limpus, C.J., and N., Nichols. 1988. The southern oscillation regulates the annual numbers of green turtles (*Chelonia mydas*) breeding around northern Australia. *Australian Journal of Wildlife Research* 15:157.
- Limpus, C.J., and N., Nichols. 1994. Progress report on the study of the interaction of El Niño Southern Oscillation on annual *Chelonia mydas* numbers at the southern Great Barrier Reef rookeries. *In: Proceedings of the Australian Marine Turtle Conservation Workshop, Queensland Australia.*
- Lutz, P. L., and J. A. Musick, editors. 1997. *The biology of sea turtles.* CRC Press, Boca Raton, Florida.
- Lutz, P. L., J. A. Musick, and J. Wyneken. 2003. *The Biology of Sea Turtles. Volume II.* CRC Press, Inc., Washington, D.C.
- Márquez M, R. 1994. Synopsis of biological data on the Kemp's ridley turtle, *Lepidochelys kempii* (Garman 1880). U. S. Dept. of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Southeast Fisheries Science Center, Miami, Florida.
- McCay, Bonnie J., and James M. Acheson. 1987. Human Ecology of the Commons In *The Question of the Commons: The Culture and Ecology of Communal Resources.* B.J. McCay and J.M. Acheson, eds. Pp. 1-34. Tucson: The University of Arizona Press.
- McEachran, J.D. and J.D. Fechhelm. 2005. *Fishes of the Gulf of Mexico, Vol. 2.* University of Texas Press. Austin, Texas.
- Mendonca, M. T., and P. C. H. Pritchard. 1986. Offshore movements of post-nesting Kemp's ridley sea turtles (*Lepidochelys kempii*). *Herpetologica* 42:373-380.
- Meylan, A. 1984. Feeding ecology of the hawksbill turtle (*Eretmochelys imbricata*) spongivory as a feeding niche in the coral reef community. University of Florida.
- Meylan, A. 1988. Spongivory in hawksbill turtles: a diet of glass. *Science* 239:393-395.
- Meylan, A. B., and M. Donnelly. 1999. Status justification for listing the hawksbill turtle (*Eretmochelys imbricata*) as critically endangered on the 1996 IUCN Red List of Threatened Animals. *Chelonian Conservation and Biology* 3(2):200-204.
- Methot, R. D. 2010. User manual for stock synthesis, model version 3.10b. Seattle, Washington The most recent version of this manual and software is available at <http://nft.nefsc.noaa.gov/Download.html>
- Moran, D. 1988. Species Profiles: Life Histories and Environmental Requirements of Coastal Fishes and Invertebrates (Gulf of Mexico) -- Red Snapper. *Species Profiles: Life Histories and*

Environmental Requirements of Coastal Fishes and Invertebrates (Gulf of Mexico), U.S. Army Corps of Engineers. U.S. Fish and Wildlife Service Biological Report 82(11.83): 19.

Mortimer, J. A. 1981. The feeding ecology of the west Caribbean green turtle (*Chelonia mydas*) in Nicaragua. *Biotropica* 13(1):49-58.

Mortimer, J. A. 1982. Feeding ecology of sea turtles. Pages 103-109 in K. A. Bjorndal, editor. *Biology and Conservation of Sea Turtles*. Smithsonian Institution Press, Washington D.C.

Muller, R. G., M. D. Murphy, J. de Silva, and L. R. Barbieri. 2003. Final report submitted to the national marine fisheries service, the Gulf of Mexico fishery management council, and the South Atlantic fishery management council as part of the southeast data, assessment, and review (SEDAR) iii. Florida Fish and Wildlife Conservation Commission, FWC-FMRI Report: IHR 2003-10. Florida Fish and Wildlife Research Institute. St. Petersburg, Florida.

Murawski, S, A., W. T. Hogarth, E. B. Peebles, and L. Barbeiri. 2014. Prevalence of External Skin Lesions and Polycyclic Aromatic Hydrocarbon Concentrations in Gulf of Mexico Fishes, Post-Deepwater Horizon, *Trans. Amer. Fish. Soc.*, 143(4):1084-1097.

National Commission. 2010. The use of surface and subsea dispersants during the BP Deepwater Horizon oil spill. National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling (National Commission). Staff Working Paper No. 4.

<http://www.oilspillcommission.gov/sites/default/files/documents/Updated%20Dispersants%20Working%20Paper.pdf>

National Ocean Service, NOAA. 2011. *The Gulf of Mexico at a Glance: A Second Glance*. Washington, DC: U.S. Department of Commerce.

Needham, H., D. Brown, L. Carter. 2012. Impacts and adaptation options in the Gulf coast. Center for Climate and Energy Solutions, Arlington, VA. 38 p.

Nieland, D. L., C. A. Wilson III, and A. J. Fischer. 2007. Declining size-at-age among red snapper in the Northern Gulf of Mexico off Louisiana, USA: recovery or collapse? Pages 329-336 in W. F. Patterson, III, J. H. Cowan, Jr., G. R. Fitzhugh and D. L. Nieland, editors. *Red snapper ecology and fisheries in the U.S. Gulf of Mexico*. American Fisheries Society, Symposium 60, Bethesda, Maryland.

NMFS. 2002. Status of red grouper in United States waters of the Gulf of Mexico during 1986-2001, revised. Contribution No. SFD-01/02-175rev. National Marine Fisheries Service, Southeast Fisheries Science Center. Miami, Florida.

NMFS. 2005. Endangered Species Act – Section 7 consultation on the continued authorization of reef fish fishing under the Gulf of Mexico reef fish fishery management plan and proposed amendment 23. February 15, 2005. National Marine Fisheries Service. St. Petersburg, Florida.

- NMFS. 2011a. Biological opinion on the continued authorization of Reef Fish fishing under the Gulf of Mexico Reef Fish Fishery Management Plan. September 30, 2011. Available at: <http://sero.nmfs.noaa.gov/pr/esa/Fishery%20Biops/03584%20GOM%20Reef%20Fish%20BiOp%202011%20final.pdf>
- NMFS. 2011b. Fisheries Economics of the United States, 2009. U.S. Department of Commerce, NOAA Technical Memorandum. National Marine Fisheries Service-F/SPO-118. Available at: http://www.st.nmfs.noaa.gov/st5/publication/fisheries_economics_2009.html
- NMFS. 2012a. Gulf of Mexico 2011 red snapper individual fishing quota annual report. SERO-LAPP-2012-04. Southeast Regional Office, National Marine Fisheries Service, 263 13th Avenue South, St. Petersburg, FL 33701. 42 pp. http://sero.nmfs.noaa.gov/sf/ifq/2011_RS_AnnualReport_Final.pdf.
- NMFS. 2013a. Fisheries of the United States 2012. National Marine Fisheries Service, Silver Spring, MD. 124 pp.
- NMFS. 2013b. 2012 Gulf of Mexico Red Snapper Individual fishing quota annual report. SERO-LAPP-2013-6. Southeast Regional Office, National Marine Fisheries Service, 263 13th Avenue South, St. Petersburg, FL 33701. http://sero.nmfs.noaa.gov/sustainable_fisheries/lapp_dm/documents/pdfs/2013/2012_rs_annualreport.pdf
- NMFS. 2014. Emergency action to set red snapper accountability measures for the recreational sector of the Gulf of Mexico reef fish fishery. Southeast Regional Office, National Marine Fisheries Service, 263 13th Avenue South, St. Petersburg, FL 33701.
- NOAA. 2010. Deepwater Horizon Oil: Characteristics and Concerns. NOAA Office of Response and Restoration, Emergency Response Division. 2 pp. http://www.noaa.gov/deepwaterhorizon/publications_factsheets/documents/OilCharacteristics.pdf
- Norman, J. R., and F. C. Fraser. 1938. Giant Fishes, Whales and Dolphins. W. W. Norton and Company, Inc, New York, NY. 361 pp.
- NRC (National Research Council). 2006. *Review of Recreational Fisheries Survey Methods* Washington, D.C.: The National Academies Press.
- OECD. 2014. Integrating Recreational Fisheries into Fisheries Management: Challenges and Opportunities – Report prepared for the Organization for Economic Cooperation and Development by Joshua Abbott. TAD/FI(2014)5. 39 pp.
- Ogren, L. H. 1989. Distribution of juvenile and subadult Kemp's ridley sea turtles: preliminary results from 1984-1987 surveys. Pages 116-123 in C. W. Caillouet Jr., and J. A.M. Landry, editors. Proceedings of the First International Symposium on Kemp's Ridley Sea Turtle Biology, Conservation, and Management. Texas A&M University Sea Grant College, Galveston, Texas.

O'Hop, J., M. Murphy, and D. Chagaris. 2012. The 2012 stock assessment report for yellowtail snapper in the south Atlantic and Gulf of Mexico. Florida Fish and Wildlife Conservation Commission, Fish and Wildlife Research Institute. St. Petersburg, Florida.

Osgood, K. E. (editor). 2008. Climate Impacts on U.S. Living Marine Resources: National Marine Fisheries Service Concerns, Activities and Needs. U.S. Dep. Commerce, NOAA Tech. Memo. NMFSF/SPO-89, 118 pp.

Paredes, R.P. 1969. Introduccion al Estudio Biologico de *Chelonia mydas agassizi* en el Perfil de Pisco, Master's thesis, Universidad Nacional Federico Villareal, Lima, Peru.

Parrack, N.C. and D.B. McClellan. 1986. Trends in Gulf of Mexico red snapper population dynamics, 1979-85. National Marine Fisheries Service, Southeast Fisheries Center, Miami, Florida. Coastal Resources Division Contribution No. CRD-86/87-4. 116 pp.

Porch, C. E., and S. L. Cass-Calay. 2001. Status of the vermilion snapper fishery in the Gulf of Mexico – assessment 5.0. Sustainable Fisheries Division Contribution No. SFD-01/01-129. National Marine Fisheries Service, Southeast Fisheries Science Center. Miami, Florida.

Porch, C. E., A. M. Eklund, and G. P. Scott. 2003. An assessment of rebuilding times for goliath grouper. Contribution: SFD 2003-0018. National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Southeast Fisheries Science Center. Miami, Florida.

Porch, C. E. and S. C. Turner. 2004. Reconstructed time series of shrimp trawl effort in the Gulf of Mexico and the associated bycatch of red snapper from 1948 to 1972. Southeast Fisheries Science Center, Miami, FL. SFD-2004-055. 13 pp.

Porch, C. E., S. C. Turner and M. J. Schirripa. 2004. The commercial landings of red snapper in the Gulf of Mexico from 1872 to 1962. Southeast Fisheries Science Center, Miami, FL. SFD-2004-054. 12 pp.

Rico-Martínez, R., T.W. Snell, and T.L. Shearer. 2013. Synergistic toxicity of Macondo crude oil and dispersant Corexit 9500A[®] to the *Brachionus plicatilis* species complex (Rotifera). Environmental Pollution 173:5-10.

Rios, A. 2013. Estimating historical recreational angler effort in the Gulf of Mexico for the private, charter, and headboat fishing modes. SEDAR31-AW11. SEDAR, North Charleston, SC. 11 pp.

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/pdfs/Gulf-RFH-Survey-Final-Report-2012.pdf>

SEA (Strategic Environmental Assessment Division, NOS). 1998. Product overview: Products and services for the identification of essential fish habitat in the Gulf of Mexico. NOS, Page 7-62 DEIS for EFH for the Gulf of Mexico FMPs July 2003 Silver Spring MD; National Marine Fisheries Service, Galveston, Texas; and Gulf of Mexico Fishery Management Council. Tampa, Florida.

SEDAR 3. 2003. Complete stock assessment report of yellowtail snapper in the southeastern United States – SEDAR 3, Assessment report 1. Southeast Data, Assessment, and Review. North Charleston, South Carolina. <http://www.sefsc.noaa.gov/sedar/>.

SEDAR 6. 2004a. SEDAR report 1 the goliath grouper in southern Florida: Assessment review and advisory report. Southeast Data, Assessment, and Review. North Charleston, South Carolina. <http://www.sefsc.noaa.gov/sedar/>.

SEDAR 6. 2004b. SEDAR report 2 the hogfish in Florida: Assessment review and advisory report. Southeast Data, Assessment, and Review. North Charleston, South Carolina. <http://www.sefsc.noaa.gov/sedar/>.

SEDAR 7. 2005. Stock assessment report of SEDAR 7 Gulf of Mexico red snapper. Southeast Data, Assessment, and Review. North Charleston, South Carolina. <http://www.sefsc.noaa.gov/sedar/>.

SEDAR 7 Update. 2009. Update stock assessment report of SEDAR 7 Gulf of Mexico red snapper. Southeast Data, Assessment, and Review. North Charleston, South Carolina. <http://www.sefsc.noaa.gov/sedar/>.

SEDAR 9. 2006a. Stock assessment report 1 of SEDAR 9: Gulf of Mexico gray triggerfish. Southeast Data, Assessment, and Review. North Charleston, South Carolina. <http://www.sefsc.noaa.gov/sedar/>.

SEDAR 9. 2006b. Stock assessment report 2 of SEDAR 9: Gulf of Mexico greater amberjack. Southeast Data, Assessment, and Review. North Charleston, South Carolina. <http://www.sefsc.noaa.gov/sedar/>.

SEDAR 9. 2006c. Stock assessment report 3 of SEDAR 9: Gulf of Mexico vermilion snapper assessment report 3. Southeast Data, Assessment, and Review. North Charleston, South Carolina. <http://www.sefsc.noaa.gov/sedar/>.

SEDAR 9 Update. 2010. SEDAR 9 stock assessment update report, Gulf of Mexico greater amberjack. Southeast Data, Assessment, and Review. North Charleston, South Carolina. <http://www.sefsc.noaa.gov/sedar/>.

SEDAR 9 Update. 2011a. SEDAR update stock assessment of vermilion snapper in the Gulf of Mexico. Southeast Data, Assessment, and Review. North Charleston, South Carolina. <http://www.sefsc.noaa.gov/sedar/>.

SEDAR 9 Update. 2011b. SEDAR update stock assessment of gray triggerfish in the Gulf of Mexico. Southeast Data, Assessment, and Review. North Charleston, South Carolina. <http://www.sefsc.noaa.gov/sedar/>.

SEDAR 10. 2006. Gulf of Mexico Gag Grouper Stock Assessment Report 2. Southeast Data, Assessment, and Review. North Charleston, South Carolina. <http://www.sefsc.noaa.gov/sedar/>.

SEDAR 10 Update. 2009. Stock assessment of gag in the Gulf of Mexico. – SEDAR update assessment. Southeast Data, Assessment, and Review. North Charleston, South Carolina. <http://www.sefsc.noaa.gov/sedar/>.

SEDAR 12. 2007. SEDAR12-Complete Stock Assessment Report 1: Gulf of Mexico Red Grouper. Southeast Data, Assessment, and Review. North Charleston, South Carolina. <http://www.sefsc.noaa.gov/sedar/>.

SEDAR 12 Update. 2009. Stock assessment of red grouper in the Gulf of Mexico – SEDAR update assessment. Southeast Data, Assessment, and Review. North Charleston, South Carolina. <http://www.sefsc.noaa.gov/sedar/>.

SEDAR 15A. 2008. Stock assessment report 3 (SAR 3) South Atlantic and Gulf of Mexico mutton snapper. Southeast Data, Assessment, and Review. North Charleston, South Carolina. <http://www.sefsc.noaa.gov/sedar/>.

SEDAR 19. 2010. Stock assessment report Gulf of Mexico and South Atlantic black grouper. Southeast Data, Assessment, and Review. North Charleston, South Carolina. <http://www.sefsc.noaa.gov/sedar/>.

SEDAR 22. 2011a. Stock assessment report Gulf of Mexico tilefish. Southeast Data, Assessment, and Review. North Charleston, South Carolina. <http://www.sefsc.noaa.gov/sedar/>.

SEDAR 22. 2011b. Stock assessment report Gulf of Mexico yellowedge grouper. Southeast Data, Assessment, and Review. North Charleston, South Carolina. <http://www.sefsc.noaa.gov/sedar/>.

SEDAR 23. 2011. Stock assessment report South Atlantic and Gulf of Mexico goliath grouper. Southeast Data, Assessment, and Review. North Charleston, South Carolina. <http://www.sefsc.noaa.gov/sedar/>.

SEDAR 31. 2013. Stock assessment report Gulf of Mexico red snapper. Southeast Data, Assessment, and Review. North Charleston, South Carolina. <http://www.sefsc.noaa.gov/sedar/>.

SERO. 2011. An evaluation of Gulf of Mexico red snapper landings by sector and days fished with and without sector separation. SERO-LAPP-2011-02. National Marine Fisheries Service, St. Petersburg, FL.

- SERO. 2012. Estimated Reduction in Gulf of Mexico Recreational Red Snapper Harvest Associated with Various Bag Limits. NOAA Fisheries, Southeast Regional Office, St. Petersburg, FL. SERO-LAPP-2012-11 6 pp.
- SERO. 2014. Draft NOAA Fisheries Southeast Region Electronic Monitoring and Reporting Regional Implementation Plan. Southeast Regional Office, National Marine Fisheries Service, St. Petersburg, FL 28 p.
- Shaver, D. J. 1991. Feeding Ecology of Wild and Head-Started Kemp's Ridley Sea Turtles in South Texas Waters. *Journal of Herpetology* 25(3):327-334.
- Shipp, R.L. 2001. The snapper fishery in the Gulf of Mexico, an historical perspective, and management implications. PowerPoint presentation to the Gulf of Mexico Fishery Management Council, January 2001.
- Shipp, R. L. and S. A. Bortone. 2009. A prospective of the importance of artificial habitat on the management of red snapper in the Gulf of Mexico. *Reviews in Fisheries Science* 17: 41-47.
- Simpfendorfer, CA. 2001. Essential habitat of the smalltooth sawfish, *Pristis pectinata*. Report to the National Fisheries Service's Protected Resources Division. Mote Marine Laboratory, Technical Report (786) 21pp.
- Simpfendorfer, C.A., and T.R., Wiley. 2004. Determination of the distribution of Florida's remnant sawfish population, and identification of areas critical to their conservation. Mote Marine Laboratory, Technical Report July 2, 2004, 37 pp.
- Soma, M. 1985. Radio biotelemetry system applied to migratory study of turtle. *Journal of the Faculty of Marine Science and Technology, Tokai University, Japan*, 21:47.
- Standora, E. A., J. R. Spotila, J. A. Keinath, and C. R. Shoop. 1984. Body temperatures, diving cycles, and movement of a subadult leatherback turtle, *Dermochelys coriacea*. *Herpetologica* 40:169-176.
- Sutinen, J. G. and R. J. Johnston. 2003. Angling management organizations: integrating the recreational sector into fishery management. *Marine Policy* 27(6):471-487.
- Sutton, S. G., R. B. Ditton, J. R. Stoll, and J. W. Milon. 1999. A cross-sectional study and longitudinal perspective on the social and economic characteristics of the charter and party boat fishing industry of Alabama, Mississippi, Louisiana, and Texas. Report by the Human Dimensions of Recreational Fisheries Research Laboratory, Texas A&M University, MARFIN program grant number NA77FF0551.
- Szedlmayer, S. T. and R. L. Shipp. 1994. Movement and growth of red snapper, *Lutjanus campechanus*, from an artificial reef area in the northeastern Gulf of Mexico. *Bulletin of Marine Science* 55: 887-896.

- Szedlmayer, S. T. and J. C. Howe. 1997. Substrate preference in age-0 red snapper, *Lutjanus campechanus*. *Environmental biology of fishes* 50: 203-207.
- Szedlmayer, S. T. and J. Conti. 1998. Nursery habitat, growth rates, and seasonality of age-0 red snapper, *Lutjanus campechanus*, in the northeast Gulf of Mexico. *Fishery Bulletin*. 97:626-635.
- Thayer, G.W., K.A., Bjorndal, J.C., Ogden, S.L., Williams, and J.C., Zieman. 1984. Role of large herbivores in seagrass communities. *Estuaries* 7:351.
- Topping, D.T. and S.T. Szedlmayer. 2011. Home range and movement patterns of red snapper (*Lutjanus campechanus*) on artificial reefs. *Fisheries Research*. 112: 77-84.
- Turner, S. C., N. J. Cummings, and C. P. Porch. 2000. Stock assessment of Gulf of Mexico greater amberjack using data through 1998. SFD-99/00-100. National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Southeast Fisheries Science Center. Miami, Florida.
- Turner, S. C., C. E. Porch, D. Heinemann, G. P. Scott, and M. Ortiz. 2001. Status of the gag stocks of the Gulf of Mexico: assessment 3.0. August 2001. Contribution: SFD-01/02-134. National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Southeast Fisheries Science Center. Miami, Florida.
- Valle, M., C. Legault, and M. Ortiz. 2001. A stock assessment for gray triggerfish, *Balistes capriscus*, in the Gulf of Mexico. Contribution: SFD-01/02-124. National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Southeast Fisheries Science Center. Miami, Florida.
- van Dam, R. P., and C. E. Díez. 1998. Home range of immature hawksbill turtles (*Eretmochelys imbricata* (Linnaeus)) at two Caribbean islands. *Journal of Experimental Marine Biology and Ecology* 220(1):15-24.
- Walker, B. M., R. F. Zales II, and B. W. Rockstall. 2006. Charter fleet in peril: losses to the Gulf of Mexico charter fleet from hurricane storms during 2005. National Association of Charterboat Operators. 208 pp.
- Walker, T. 1994. Post-hatchling dispersal of sea turtles. *Proceedings of the Australian Marine Turtle Conservation Workshop* 1994:79-94.
- Walters, C., S. J. D. Martell, and B. Mahmoudi. 2006. An Ecosim model for exploring ecosystem management options for the Gulf of Mexico: implications of including multistanza life history models for policy predictions. *Mote Symp.* #6.
- Weisberg, R.H., Zheng, L., Liu, Y., Murawski, S., Hu, C., and Paul, J. 2014. Did Deepwater Horizon Hydrocarbons Transit to the West Florida Continental Shelf?, *Deep Sea Research Part II: Topical Studies in Oceanography*, Available online 17 February 2014, ISSN 0967-0645, <http://dx.doi.org/10.1016/j.dsr2.2014.02.002>.

Wilson, C.A. and D.L. Nieland. 2001. Age and growth of red snapper, *Lutjanus campechanus*, from the northern Gulf of Mexico off Louisiana. Fishery Bulletin 99:653-664.
<http://fishbull.noaa.gov/994/wil.pdf>

Witzell, W. N. 2002. Immature Atlantic loggerhead turtles (*Caretta caretta*): suggested changes to the life history model. Herpetological Review 33(4):266-269.

Woods, M. K. 2003. Demographic differences in reproductive biology of female red snapper (*Lutjanus campechanus*) in the northern Gulf of Mexico. Master's thesis. University of South Alabama, Mobile, Alabama.

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APPENDIX A. 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 fishery management in federal waters of the exclusive economic zone. However, fishery 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 are summarized below.

Administrative Procedures Act

All federal rulemaking is governed under the provisions of the Administrative Procedure Act (APA) (5 U.S.C. Subchapter II), which establishes a “notice and comment” procedure to enable public participation in the rulemaking process. 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 waiting period from the time a final rule is published until it takes effect.

Coastal Zone Management Act

Section 307(c)(1) of the federal Coastal Zone Management Act of 1972 (CZMA), as amended, requires federal activities that affect any land or water use or natural resource of a state’s coastal zone be conducted in a manner consistent, to the maximum extent practicable, with approved state coastal management programs. The requirements for such a consistency determination are set forth in NMFS regulations at 15 C.F.R. part 930, subpart C. According to these regulations and CZMA Section 307(c)(1), when taking an action that affects any land or water use or natural resource of a state’s coastal zone, NMFS is required to provide a consistency determination to the relevant state agency at least 90 days before taking final action.

Upon submission to the Secretary, NMFS will determine if this plan amendment is consistent with the Coastal Zone Management programs of the states of Alabama, Florida, Louisiana, Mississippi, and Texas to the maximum extent possible. Their determination will then be submitted to the responsible state agencies under Section 307 of the CZMA administering approved Coastal Zone Management programs for these states.

Data Quality Act

The Data Quality Act (DQA) (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 DQA directs the Office of Management and Budget 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 Office of Management and Budget on the number and nature of complaints received.

Scientific information and data are key components of fishery management plans (FMPs) and amendments and the use of best available information is the second national standard under the Magnuson-Stevens Act. To be consistent with the Act, FMPs and amendments must be based on the best 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.

Endangered Species Act

The Endangered Species Act (ESA) of 1973, as amended, (16 U.S.C. Section 1531 et seq.) requires federal agencies use their authorities to conserve endangered and threatened species. The ESA requires NMFS, when proposing a fishery action that “may affect” critical habitat or endangered or threatened species, to consult with the appropriate administrative agency (itself for most marine species, the U.S. Fish and Wildlife Service for all remaining species) to determine the potential impacts of the proposed action. Consultations are concluded informally when proposed actions may affect but are “not likely to adversely affect” endangered or threatened species or designated critical habitat. Formal consultations, including a biological opinion, are required when proposed actions may affect and are “likely to adversely affect” endangered or threatened species or adversely modify designated critical habitat. If jeopardy or adverse modification is found, the consulting agency is required to suggest reasonable and prudent alternatives.

On September 30, 2011, the Protected Resources Division released a biological opinion which, after analyzing best available data, the current status of the species, environmental baseline (including the impacts of the recent Deepwater Horizon MC 252 oil release event in the northern Gulf of Mexico), effects of the proposed action, and cumulative effects, concluded that the continued operation of the Gulf of Mexico reef fish fishery is also not likely to jeopardize the continued existence of green, hawksbill, Kemp’s ridley, leatherback, or loggerhead sea turtles, nor the continued existence of smalltooth sawfish (NMFS 2011a). On December 7, 2012, NMFS published a proposed rule to list 66 coral species under the ESA and reclassify *Acropora* from threatened to endangered (77 FR 73220). In a memorandum dated February 13, 2013, NMFS determined the reef fish fishery was not likely to adversely affect *Acropora* because of where the fishery operates, the types of gear used in the fishery, and that other regulations protect *Acropora* where they are most likely to occur. In a consultation memorandum dated October 7, 2014,

NMFS assessed the continued operation of the Gulf reef fish fishery's potential impact on the four newly-listed coral species occurring in the Gulf and concluded the fishery is not likely to adversely affect any of the protected coral species. Similarly, in a consultation memorandum dated September 16, 2014, NMFS assessed the continued authorization of South Atlantic and Gulf of Mexico fisheries' potential impacts on loggerhead critical habitat and concluded the Gulf reef fish fishery is not likely to adversely affect the newly designated critical habitat.

Marine Mammal Protection Act

The Marine Mammal Protection Act (MMPA) established a moratorium, with certain exceptions, on the taking of marine mammals in U.S. waters and by U.S. citizens on the high seas, and on the importing of marine mammals and marine mammal products into the United States. Under the MMPA, the Secretary of Commerce (authority delegated to NMFS) is responsible for the conservation and management of cetaceans and pinnipeds (other than walruses). The Secretary of the Interior is responsible for walruses, sea and marine otters, polar bears, manatees, and dugongs.

Part of the responsibility that NMFS has under the MMPA involves monitoring populations of marine mammals to make sure that they stay at optimum levels. If a population falls below its optimum level, it is designated as "depleted," and a conservation plan is developed to guide research and management actions to restore the population to healthy levels.

In 1994, Congress amended the MMPA, to govern the taking of marine mammals incidental to commercial fishing operations. This amendment required the preparation of stock assessments for all marine mammal stocks in waters under U.S. jurisdiction, development and implementation of take-reduction plans for stocks that may be reduced or are being maintained below their optimum sustainable population levels due to interactions with commercial fisheries, and studies of pinniped-fishery interactions.

Under Section 118 of the MMPA, NMFS must publish, at least annually, a List of Fisheries that places all U.S. commercial fisheries into one of three categories based on the level of incidental serious injury and mortality of marine mammals that occurs in each fishery. The categorization of a fishery in the List of Fisheries determines whether participants in that fishery may be required to comply with certain provisions of the MMPA, such as registration, observer coverage, and take reduction plan requirements. The primary gears used in the Gulf of Mexico reef fish fishery are still classified in the proposed 2014 MMPA List of Fisheries as Category III fishery (December 6, 2013; 78 FR 73477). The conclusions of the most recent List of Fisheries for gear used by the reef fish fishery can be found in Section 3.3.

Paperwork Reduction Act

The Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3501 et seq.) regulates the collection of public information by federal agencies to ensure the public is not overburdened with information requests, the federal government's information collection procedures are efficient, and federal agencies adhere to appropriate rules governing the confidentiality of such information. The PRA requires NMFS to obtain approval from the Office of Management and Budget before requesting

most types of fishery information from the public. Setting red snapper allocation would likely not have PRA consequences.

Executive Orders

E.O. 12630: Takings

The Executive Order on Government Actions and Interference with Constitutionally Protected Property Rights that became effective March 18, 1988, requires each federal agency prepare a Takings Implication Assessment for any of its administrative, regulatory, and legislative policies and actions that affect, or may affect, the use of any real or personal property. Clearance of a regulatory action must include a takings statement and, if appropriate, a Takings Implication Assessment. The National Oceanic and Atmospheric Administration Office of General Counsel will determine whether a Taking Implication Assessment is necessary for this amendment.

E.O. 12866: Regulatory Planning and Review

Executive Order 12866: Regulatory Planning and Review, signed in 1993, requires federal agencies to assess the costs and benefits of their proposed regulations, including distributional impacts, and to select alternatives that maximize net benefits to society. To comply with E.O. 12866, NMFS prepares a Regulatory Impact Review (RIR) for all fishery regulatory actions that either implement a new fishery management plan or significantly amend an existing plan (See Chapter 5). RIRs provide a comprehensive analysis of the costs and benefits to society of proposed regulatory actions, the problems and policy objectives prompting the regulatory proposals, and the major alternatives that could be used to solve the problems. The reviews also serve as the basis for the agency's determinations as to whether proposed regulations are a "significant regulatory action" under the criteria provided in E.O. 12866 and whether proposed regulations will have a significant economic impact on a substantial number of small entities in compliance with the Regulatory Flexibility Analysis. A regulation is significant if it a) has an annual effect on the economy of \$100 million or more or adversely affects in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments and communities; b) creates a serious inconsistency or otherwise interferes with an action taken or planned by another agency; c) materially alters the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or d) raises novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in this Executive Order.

E.O. 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations

This Executive Order mandates that each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories and possessions. The Executive Order is described in more detail relative to fisheries actions in Section 3.5.1.

E.O. 12962: Recreational Fisheries

This Executive Order 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 including, but not limited to, developing joint partnerships; promoting the restoration of recreational fishing areas that are limited by water quality and habitat degradation; fostering sound aquatic conservation and restoration endeavors; and evaluating the effects of federally-funded, permitted, or authorized actions on aquatic systems and recreational fisheries, and documenting those effects. Additionally, it establishes a seven-member National Recreational Fisheries Coordination Council (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 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.

E.O. 13132: Federalism

The Executive Order on Federalism requires agencies in formulating and implementing policies, to be guided by the fundamental Federalism principles. The Order serves to guarantee the division of governmental responsibilities between the national government and the states that was intended by the framers of the Constitution. Federalism is rooted in the belief that issues not national in scope or significance are most appropriately addressed by the level of government closest to the people. This Order is relevant to FMPs and amendments given the overlapping authorities of NMFS, the states, and local authorities in managing coastal resources, including fisheries, and the need for a clear definition of responsibilities. It is important to recognize those components of the ecosystem over which fishery managers have no direct control and to develop strategies to address them in conjunction with appropriate state, tribes, and local entities (international, too).

E.O. 13158: Marine Protected Areas

This Executive Order requires federal agencies to consider whether their proposed action(s) will affect 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 or cultural resource within the protected area. There are several marine protected areas, habitat areas of particular concern, and gear-restricted areas in the eastern and northwestern Gulf of Mexico.

Essential Fish Habitat

The amended Magnuson-Stevens Act included a new habitat conservation provision known as essential fish habitat (EFH) that requires each existing and any new FMPs to describe and identify EFH for each federally managed species, minimize to the extent practicable impacts from fishing activities on EFH that are more than minimal and not temporary in nature, and identify other actions to encourage the conservation and enhancement of that EFH. To address these requirements the Council has, under separate action, approved an Environmental Impact Statement (GMFMC 2004) to address the new EFH requirements contained within the Magnuson-Stevens Act. Section 305(b)(2) requires federal agencies to obtain a consultation for any action that may adversely affect EFH. An EFH consultation will be conducted for this action.

References

GMFMC. 2004. Final environmental impact statement for the generic essential fish habitat amendment to the following fishery management plans of the Gulf of Mexico: shrimp fishery of the Gulf of Mexico, red drum fishery of the Gulf of Mexico, reef fish fishery of the Gulf of Mexico, stone crab fishery of the Gulf of Mexico, coral and coral reef fishery of the Gulf of Mexico, spiny lobster fishery of the Gulf of Mexico and South Atlantic, coastal migratory pelagic resources of the Gulf of Mexico and South Atlantic. Gulf of Mexico Fishery Management Council. Tampa, Florida.

<http://www.gulfcouncil.org/Beta/GMFMCWeb/downloads/Final%20EFH%20EIS.pdf>

NMFS. 2011. Biological opinion on the continued authorization of Reef Fish fishing under the Gulf of Mexico Reef Fish Fishery Management Plan. September 30, 2011. Available at:

<http://sero.nmfs.noaa.gov/pr/esa/Fishery%20Biops/03584%20GOM%20Reef%20Fish%20BiOp%202011%20final.pdf>

APPENDIX B. BYCATCH PRACTICABILITY ANALYSIS

Introduction

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, and excludes fish released alive under a recreational catch-and-release fishery management program. 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.

Agency guidance provided at 50 CFR 600.350(d)(3) identifies 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; and
10. Social effects.

The Regional Fishery Management Councils are encouraged to adhere to the precautionary approach outlined in Article 6.5 of the Food and Agriculture Organization of the United Nations Code of Conduct for Responsible Fisheries when uncertain about these factors.

Bycatch practicability analyses of the reef fish fishery have been provided in several reef fish amendments and focused to some degree on the component of the fishery affected by the actions covered in the amendment. For red snapper, bycatch practicability analyses were completed for Amendments 22 and 27 to the Fishery Management Plan (FMP) for the Reef Fish Resources of the Gulf of Mexico (GMFMC 2004a and 2007). Other bycatch practicability analyses were conducted in the following amendments (component of the fishery affected by the actions): Amendment 23 (vermillion snapper; GMFMC 2004b), Amendment 30A (greater amberjack and gray triggerfish; GMFMC 2008a), Amendment 30B (gag, red grouper, and other shallow-water grouper; GMFMC 2008b), Amendment 31 (longline sector; GMFMC 2009), Amendment 32 (gag and red grouper; GMFMC 2011a), Amendment 35 (greater amberjack; GMFMC 2012a); Amendment 37 (gray triggerfish; GMFMC 2012b), and Amendment 38 (shallow-water grouper; GMFMC 2012c). In addition, a bycatch practicability analysis was conducted for the Generic

Annual Catch Limits/Accountability Measures Amendment (GMFMC 2011b) that covered the Reef Fish, Coastal Migratory Pelagics, Red Drum, and Coral FMPs. In general, these analyses found that reducing bycatch provides biological benefits to managed species as well as benefits to the fishery through less waste, higher yields, and less forgone yield. However, in some cases, actions are approved that can increase bycatch through regulatory discards such as increased minimum sizes and closed seasons. In these cases, there is some biological benefit to the managed species that outweighs any increases in discards.

Red Snapper Bycatch

The Gulf of Mexico (Gulf) reef fish fishery directed at red snapper has been regulated to limit harvest in order for the stock to recover from an overfished condition. Regulations for the recreational sector include catch quotas, minimum size limits, bag limits, and seasonal closures. These are used to limit the harvest to levels allowed under the rebuilding plan. For the commercial sector, regulations previously included quotas, minimum size limits, seasonal closures, and trip limits. Now the sector is managed under an individual fishing quota (IFQ) program that was established in 2007. The program eliminates the need for seasonal closures and trip limits. Red snapper regulations have been generally effective in limiting fishing mortality, the size of fish targeted, the number of targeted fishing trips, and/or the time fishermen spend pursuing a species. However, these management tools have the unavoidable adverse effect of creating regulatory discards, which makes reducing bycatch challenging, particularly in the recreational sector.

An important aspect to red snapper bycatch is the penaeid shrimp fishery as previously described in Amendment 27/14 (GMFMC 2007). The shrimp fishery catches primarily 0-2 year old red snapper. To reduce red snapper bycatch, the Gulf of Mexico Fishery Management Council (Council) implemented regulations requiring the use of bycatch reduction devices (GMFMC 2002) and setting bycatch reduction targets (currently a 67% reduction from the baseline years 2001-2003; GMFMC 2007). Between the use of bycatch reduction devices and reductions in shrimp effort due to economic factors (Figure 1), the target reductions have been met.

Although red snapper bycatch in the shrimp fishery is an important source of mortality for this stock, this bycatch practicability analysis will focus on the directed reef fish fishery managed under the FMP for Reef Fish Resources of the Gulf of Mexico. Bycatch from the shrimp fishery has been and will be analyzed in the FMP for the Shrimp Fishery of the Gulf of Mexico, U.S. Waters.

Figures 2 and 3 show the relative number of discards for the recreational and commercial sectors as estimated by SEDAR 31 (2013). For the recreational sector, open season discards estimated through the Marine Recreational Information Program (MRIP) (charter and private angler) declined around 2007 as the recreational season got shorter due lower quotas. This trend is also apparent in the headboat data for the western Gulf. However, with shorter seasons of the past few years, the number of discards during the longer closed seasons increased (Figure 2). For the commercial sector, discards in the eastern handline and longline sectors have increased since the implementation of the IFQ program relative to the western Gulf (Figure 3). This may reflect a shift in fishing effort that has resulted in the program. Note that for the commercial sector,

closed season discards after the IFQ program was implemented refers to vessels with little or no red snapper allocation (see SEDAR 31 2013).

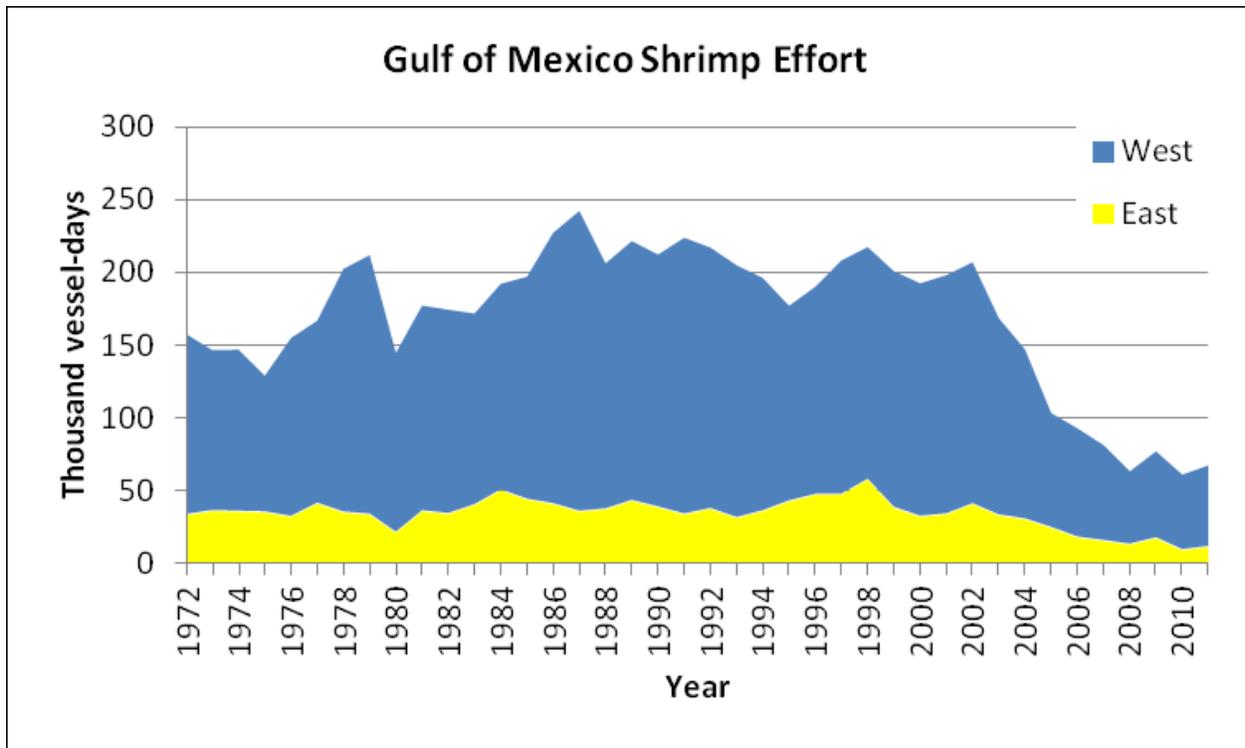


Figure 1. Gulf shrimp fishery effort (thousand vessel-days) provided by the National Marine Fisheries Service Galveston Lab. The reported effort does not include the average effort values used to fill empty cells. Source: Linton 2012.

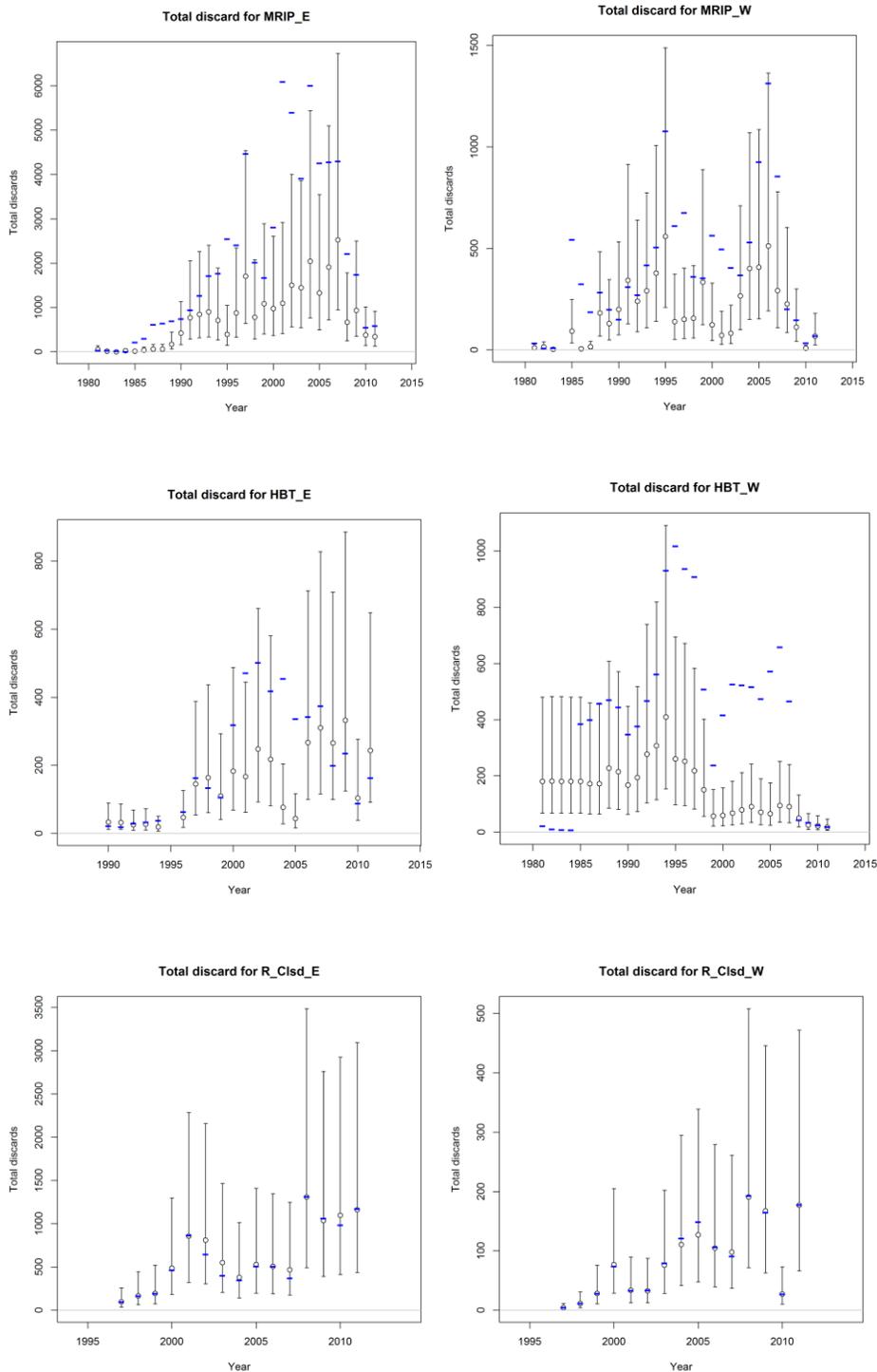


Figure 2. Observed (open circles) and predicted total discards (blue dashes) of red snapper from the private angler open season (top), headboat open season (middle), and recreational closed season in the eastern (left) and western (right) Gulf, 1997-2011. Source: SEDAR 31 2013.

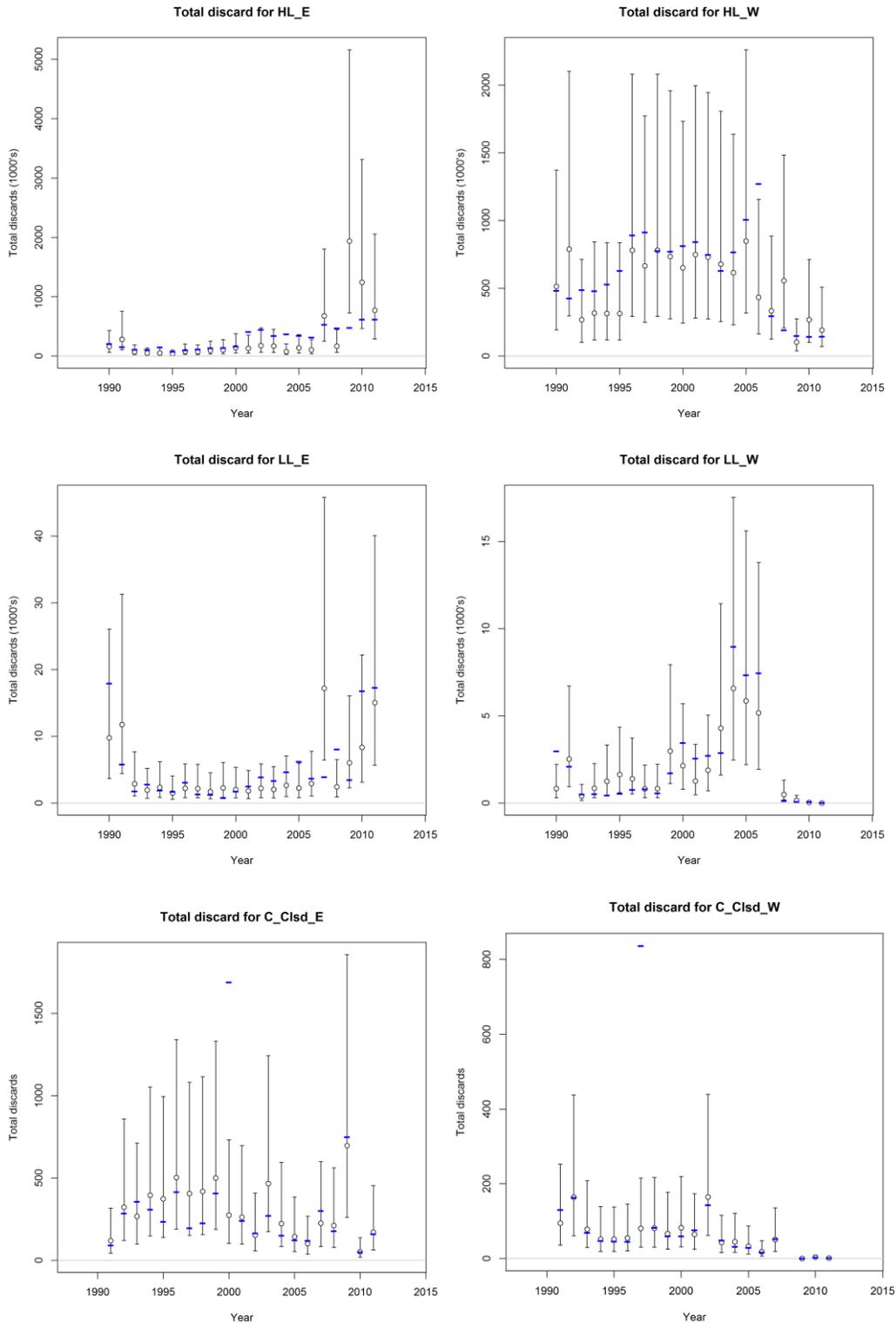


Figure 3. Observed (open circles) and predicted total discards (blue dashes) of red snapper from the commercial handline open season (top), longline open season (middle), and commercial closed season in the eastern (left) and western (right) Gulf, 1997-2011. Source: SEDAR 31 2013.

Campbell et al. (2012) identified several causes of red snapper discard mortality in their review of discard mortality in the directed reef fish fishery. These included hooking injuries, thermal stress, and barotrauma. Campbell et al. (2012) reviewed 11 studies that listed discard (release) mortality rates ranging from 0 to 79%. They reported that mortality tended to increase with capture depth, increasing water temperature, or from some compounding effect of these two factors. Burns et al. (2004) and Burns and Froeschke (2012) examined the feeding behavior of red snapper and found red snapper quickly chew and swallow their prey. As a result, there is less time to set a hook while fishing, resulting in greater probability of hooking related injuries. Burns et al. (2004) concluded hook-related trauma accounted for a greater portion of discard mortality than depth, despite catching red snapper at depths ranging from 90 to 140 feet.

Although Campbell et al. (2012) did not specifically address surface interval and predation, these factors were identified in GMFMC (2007) as contributing to discard mortality. Burns et al. (2002) found survival of red snapper increased the faster red snapper were returned to the water, thus they considered any reductions in surface interval/handling time an important way to reduce discard mortality. Several studies have documented predation on released red snapper. Dolphins and pelicans are the two most commonly observed predators and are known to pursue released fish, as well as fish before they are landed (SEDAR 7 2005). Several studies, which assessed discard mortality through surface observations, accounted for predation when estimating discard mortality (Patterson et al. 2001; Burns et al. 2004; Wilson et al. 2004).

A variety of discard mortality rates have been used in different stock assessment. The 1999 red snapper stock assessment (Schirripa and Legault 1999) assumed discard mortality rates of 33 percent for the commercial fishery and 20 percent for the recreational fishery. These discard mortality rates were derived from the literature and were determined by the Council's Reef Fish Stock Assessment Panel to be the best available estimates at the time (RFSAP 1999). During development of the 2005 red snapper stock assessment, the SEDAR 7 data workshop panel (SEDAR 7 2005) reviewed available information on depth of fishing and discard mortality by depth to produce fishery specific discard mortality rates by region (eastern and western Gulf), season (open and closed), and by sector (commercial and recreational). Applied estimates of discard mortality rates ranged 15% for recreationally caught and released red snapper in the eastern Gulf to 88% for commercially caught and released red snapper in the western Gulf caught during a season closure (Table 1).

Table 1. Mean/median depth of fishing and corresponding discard mortality rates for red snapper by fishery, region, and season.

Fishery	Region	Season	Depth of Capture	Release Mortality
Commercial	East	Open	180 ft (55 m)	71%
	East	Closed	180 ft (55 m)	71%
	West	Open	190 ft (58 m)	82%
	West	Closed	272 ft (83 m)	88%
Recreational	East	Open	65-131 ft (20-40 m)	15%
	East	Closed	65-131 ft (20-40 m)	15%
	West	Open	131 ft (40 m)	40%
	West	Closed	131 ft (40 m)	40%

Source: SEDAR 7 2005.

In the most recent benchmark stock assessment (SEDAR 31, 2013), a meta-analysis was used to estimate red snapper discard mortality using the 11 studies reviewed by Campbell et al. (2012). A venting/no venting component was added to account for the requirement to vent reef fish put in place through Amendment 27 (GMFMC 2007) as well as a gear component. For the commercial sector, average depths at which discards occurred for each gear (handline or long line), region (eastern or western Gulf), and season (open or closed) were calculated using commercial observer program data. Consistent with how commercial discards have been treated in other parts of the assessment, discards from trips with IFQ allocation were considered open season discards, while discards from trips with no IFQ allocation were considered closed season discards. For the recreational sector, average depths at which discards occurred for each region (eastern or western Gulf) and season (open or closed) were calculated using self-reported data from the iSnapper program. Estimated discard mortality rates ranged from 10 to 95% with commercial discard mortality rates greater than recreational discard mortality rates (Tables 2 and 3).

SEDAR 31 (2013) estimated the total number of fish killed (landed and discarded dead) by the commercial and recreational sectors from 1983 to 2011 (Table 4). For the recreational sector, the percentage of dead discards to total fish killed has declined since a peak in 2001. However, it was not until 2007 that the number of dead discards was consistently less than the number of landed fish. For the commercial sector, the percentage of dead discards peaked in 2000, but it was not until 2010 that the number of dead discards declined to less than 40% of the total fish killed.

Since 1996, more red snapper have been landed in the eastern Gulf than the western Gulf by the recreational sector (Table 5). A drop in the percentage of dead discards relative to the total number of fish killed occurred in both regions in 2008. The percentage of dead discards fell from 49.4% to 36.7% between 2007 and 2008 for the eastern Gulf and from 50.0% to 20.3% between 2007 and 2008 in the western Gulf. For the commercial sector, in the eastern Gulf the number of dead discards has generally been above 50% indicating that there are more discards were killed than landed (Table 5). In contrast, in the western Gulf there has been a falling off in the percentage of dead discards relative to the total number of killed fish since 2006 to well below 50%.

Table 2. Average depths and associated discard mortality rates for commercial discards of red snapper in the Gulf.

Gear	Handline				Longline			
Region	East		West		East		West	
Season	Closed	Open	Closed	Open	Closed	Open	Closed	Open
Average Depth (m)	24	45	84	53	66	62	132	104
Disc Mort - no venting	0.74	0.75	0.87	0.78	0.82	0.81	0.95	0.91
Disc Mort - venting	0.55	0.56	0.74	0.60	0.66	0.64	0.88	0.81

Source: SEDAR 31 2013.

Table 3. Average depths and associated discard mortality rates for recreational discards of red snapper in the Gulf.

Gear	Recreational			
Region	East		West	
Season	Open	Closed	Open	Closed
Average Depth (m)	33	34	36	35
Disc Mort - no venting	0.21	0.21	0.22	0.22
Disc Mort - venting	0.10	0.10	0.11	0.10

Source: SEDAR 31 2013.

Table 4. Estimates of the total number of red snapper landed, the number of dead discards, and percent dead discards for all killed fish for the recreational and commercial sectors by year in the Gulf.

Year	Recreational			Commercial		
	Landed	Dead Discards	Percent dead discards	Landed	Dead Discard	Percent dead discards
1983	3,314,185	8,599	0.3%	4,559,794	80,758	1.7%
1984	1,232,024	2,699	0.2%	2,775,042	33,579	1.2%
1985	1,427,026	255,716	15.2%	1,234,986	351,105	22.1%
1986	1,265,955	223,079	15.0%	875,494	304,026	25.8%
1987	1,022,844	271,426	21.0%	661,469	277,787	29.6%
1988	1,241,859	302,800	19.6%	950,904	366,876	27.8%
1989	1,060,456	289,201	21.4%	742,388	296,024	28.5%
1990	625,933	270,824	30.2%	703,020	549,250	43.9%
1991	1,060,610	353,327	25.0%	691,943	635,961	47.9%
1992	1,609,040	434,448	21.3%	995,013	817,581	45.1%
1993	2,202,931	581,455	20.9%	1,011,914	781,941	43.6%
1994	1,615,241	695,102	30.1%	869,075	796,390	47.8%
1995	1,384,049	1,008,873	42.2%	698,404	767,187	52.3%
1996	1,180,361	859,431	42.1%	1,011,328	1,120,205	52.6%
1997	1,547,317	1,342,121	46.4%	1,122,447	1,674,115	59.9%
1998	1,235,683	679,689	35.5%	1,167,877	949,481	44.8%
1999	1,031,284	549,708	34.8%	1,190,580	1,063,684	47.2%
2000	1,002,899	985,281	49.6%	1,088,667	2,065,579	65.5%
2001	1,075,115	1,792,155	62.5%	1,030,580	1,214,566	54.1%
2002	1,372,415	1,586,095	53.6%	1,145,169	1,171,069	50.6%
2003	1,224,547	1,204,754	49.6%	1,080,662	996,171	48.0%
2004	1,365,946	1,677,071	55.1%	1,036,860	1,027,510	49.8%
2005	1,024,641	1,433,508	58.3%	973,109	1,170,293	54.6%
2006	1,196,183	1,533,800	56.2%	1,193,134	1,343,644	53.0%
2007	1,397,237	1,370,519	49.5%	851,537	903,242	51.5%
2008	821,804	417,509	33.7%	671,979	481,599	41.7%
2009	979,945	339,988	25.8%	656,148	772,463	54.1%
2010	447,991	170,959	27.6%	833,253	472,930	36.2%
2011	670,910	220,515	24.7%	808,582	533,198	39.7%

Source: Recreational data is from MRIP; headboat and commercial data is from the logbook and SEDAR 31 2013; Jacob Tetzlaff, pers. comm. Southeast Fisheries Science Center, Miami, Florida.

Table 5. Estimates of the total number of red snapper landed the number of dead discards, and percent dead discards for all killed fish for the recreational and commercial sectors by year and region of the Gulf.

Year	Recreational						Commercial					
	East			West			East			West		
	Landed	Dead Discard	Percent dead discards	Landed	Dead Discard	Percent dead discards	Landed	Dead Discard	Percent dead discards	Landed	Dead Discard	Percent dead discards
1983	1,055,691	4,455	0.4%	2,258,494	4,144	0.2%	1,851,965	23,983	1.3%	2,707,829	56,775	2.1%
1984	192,098	332	0.2%	1,039,926	2,367	0.2%	1,077,487	5,872	0.5%	1,697,555	27,707	1.6%
1985	482,587	51,497	9.6%	944,439	204,219	17.8%	575,540	109,179	15.9%	659,446	241,926	26.8%
1986	574,495	63,839	10.0%	691,460	159,240	18.7%	237,499	31,193	11.6%	637,996	272,833	30.0%
1987	548,813	129,871	19.1%	474,031	141,555	23.0%	179,088	35,679	16.6%	482,381	242,108	33.4%
1988	524,591	137,182	20.7%	717,268	165,618	18.8%	197,784	72,004	26.7%	753,120	294,872	28.1%
1989	474,670	147,657	23.7%	585,786	141,544	19.5%	166,355	59,518	26.4%	576,033	236,506	29.1%
1990	314,036	161,286	33.9%	311,897	109,538	26.0%	208,799	169,101	44.7%	494,221	380,150	43.5%
1991	548,912	202,238	26.9%	511,698	151,089	22.8%	156,339	187,293	54.5%	535,604	448,669	45.6%
1992	886,594	272,181	23.5%	722,446	162,267	18.3%	155,044	294,315	65.5%	839,969	523,266	38.4%
1993	1,336,961	366,226	21.5%	865,970	215,229	19.9%	160,428	346,349	68.3%	851,486	435,592	33.8%
1994	819,900	379,092	31.6%	795,341	316,010	28.4%	161,842	341,927	67.9%	707,233	454,464	39.1%
1995	664,786	547,997	45.2%	719,263	460,876	39.1%	47,994	234,693	83.0%	650,411	532,493	45.0%
1996	608,817	519,005	46.0%	571,544	340,426	37.3%	66,458	384,466	85.3%	944,870	735,739	43.8%
1997	966,914	992,702	50.7%	580,403	349,419	37.6%	52,616	231,911	81.5%	1,069,832	1,442,204	57.4%
1998	814,811	485,790	37.4%	420,872	193,899	31.5%	112,125	271,377	70.8%	1,055,751	678,104	39.1%
1999	788,097	413,395	34.4%	243,187	136,313	35.9%	148,788	407,417	73.2%	1,041,792	656,267	38.6%
2000	741,378	753,560	50.4%	261,521	231,721	47.0%	169,886	1,375,667	89.0%	918,781	689,912	42.9%
2001	858,210	1,559,948	64.5%	216,905	232,208	51.7%	209,036	487,449	70.0%	821,544	727,118	47.0%
2002	1,137,262	1,374,869	54.7%	235,153	211,226	47.3%	300,706	459,631	60.5%	844,463	711,438	45.7%
2003	956,693	992,640	50.9%	267,854	212,113	44.2%	281,921	459,040	62.0%	798,741	537,130	40.2%
2004	1,128,710	1,429,531	55.9%	237,236	247,540	51.1%	251,425	392,841	61.0%	785,435	634,669	44.7%
2005	759,036	1,071,240	58.5%	265,605	362,268	57.7%	220,412	352,853	61.6%	752,697	817,440	52.1%

2006	839,855	1,076,677	56.2%	356,328	457,123	56.2%	212,766	329,879	60.8%	980,368	1,013,764	50.8%
2007	1,087,060	1,059,975	49.4%	310,177	310,544	50.0%	311,729	626,004	66.8%	539,808	277,238	33.9%
2008	642,570	371,930	36.7%	179,233	45,579	20.3%	284,937	366,341	56.2%	387,042	115,258	22.9%
2009	773,394	303,722	28.2%	206,551	36,266	14.9%	302,568	682,585	69.3%	353,579	89,878	20.3%
2010	360,404	162,119	31.0%	87,587	8,840	9.2%	413,808	384,519	48.2%	419,445	88,411	17.4%
2011	552,878	192,184	25.8%	118,032	28,331	19.4%	423,809	445,771	51.3%	384,773	87,427	18.5%

Source: Recreational data is from MRIP; headboat and commercial data is from the logbook and SEDAR 31 2013; Jacob Tetzlaff, pers. comm. Southeast Fisheries Science Center, Miami, Florida.

Other Bycatch

Species incidentally encountered by the directed red snapper fishery include sea turtles, sea birds, and reef fishes. The primary gears of the Gulf reef fish fishery (longline and handline) are classified in the proposed List of Fisheries for 2015 (79 FR 50589, August 25, 2014) as Category III gear and is unchanged from the 2014 list. This classification indicates the annual mortality and serious injury of a marine mammal stock resulting from any fishery is less than or equal to one 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.

NMFS has conducted specific analyses (“Section 7 consultations”) to evaluate potential effects from the Gulf reef fish fishery on species and critical habitats protected under the ESA. On September 30, 2011, the Protected Resources Division released a biological opinion (Opinion), which concluded that the continued operation of the Gulf reef fish fishery is not likely to jeopardize the continued existence of sea turtles (loggerhead, Kemp’s ridley, green, hawksbill, and leatherback) or smalltooth sawfish (NMFS 2011). The Opinion also concluded that other ESA-listed species are not likely to be adversely affected by the FMP. An incidental take statement was issued specifying the amount and extent of anticipated take, along with reasonable and prudent measures and associated terms and conditions deemed necessary and appropriate to minimize the impact of these takes. The Council addressed further measures to reduce take in the reef fish fishery’s longline component in Amendment 31 (GMFMC 2009).

Subsequent to the completion of the biological opinion, NMFS published final rules listing 20 new coral species (September 10, 2014), and designating critical habitat for the Northwest Atlantic Ocean distinct population segment of loggerhead sea turtles (July 10, 2014). NMFS addressed these changes in a series of consultation memoranda. In a consultation memorandum dated October 7, 2014, NMFS assessed the continued operation of the Gulf reef fish fishery’s potential impact on the newly-listed coral species occurring in the Gulf and concluded the fishery is not likely to adversely affect any of the protected coral species. Similarly, in a consultation memorandum dated September 16, 2014, NMFS assessed the continued authorization of South Atlantic and Gulf of Mexico fisheries’ potential impacts on loggerhead critical habitat and concluded the Gulf reef fish fishery is not likely to adversely affect the newly designated critical habitat.

Three primary orders of seabirds are represented in the Gulf, 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) and several species, including: piping plover, least tern, 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 red snapper fishery is adversely affecting seabirds. However, interactions,

especially with brown pelicans consuming red snapper discards and fish before they are landed, are known to occur (SEDAR 7 2005).

Other species of reef fish are also incidentally caught when targeting red snapper. In the western Gulf, vermilion snapper and some deep-water groupers are incidentally caught as bycatch when harvesting red snapper. In the eastern Gulf, various species of shallow-water grouper and vermilion snapper are the primary species caught as bycatch when targeting red snapper. Vermilion snapper are not overfished or undergoing overfishing (SEDAR 9 Update 2011) and bycatch is not expected to jeopardize the status of this stock. Deep-water groupers are caught both in the eastern and western Gulf primarily with longline gear (> 80 percent). The deep-water grouper fishery was managed with a 1.207 million pound annual catch limit. From 2004 until the implementation of the grouper/tilefish IFQ program in 2010 (SERO 2012a), the fishery met their quota and closed no later than July 15 each year. Deep-water grouper closures during this time period may have resulted in some additional discards of grouper by longliners targeting red snapper. Since the IFQ program was implemented, deep-water grouper species are landed year-round by holders of IFQ allocation and the quota has not been exceeded. Longliners account for approximately 5% of the annual commercial red snapper landings since 2000 (SEDAR 31 2013). It is unknown how increases in closed season discards might have affected the status of deep-water grouper stocks or the change to an IFQ managed sector. An updated assessment for yellowedge grouper found the stock was not overfished or undergoing overfishing (SEDAR 22 2011).

Red grouper and gag are the two most abundant shallow-water grouper species in the Gulf and primarily occur on the west Florida shelf. Gag was recently assessed (SEDAR 10 Update 2009) and determined to be overfished and undergoing overfishing. A rebuilding plan that takes into account gag dead discards was implemented through Amendment 32 (GMFMC 2011a). Red grouper were found not to be in an overfished condition and not undergoing overfishing (SEDAR 12 Update 2009). However, in 2013, the recreational sector did exceed its annual catch limit triggering accountability measures for 2014 including a bag limit reduction and season closure. Within the reef fish fishery, discards represent a large and significant portion of mortality for gag and red grouper. In the past, these species were managed under a shallow-water grouper quota which was met prior to the end of the 2004 and 2005 fishing years. For the recreational sector, shallow-water grouper including gag and red grouper are managed with size limits, bag limits, and season and area closures. The recreational gag season begins July 1 and extends until the catch target is projected to be caught. Since 2010, the commercial harvest of gag, red grouper, and other shallow-water grouper are managed under an IFQ program and the commercial sector has not exceeded its quota under the program. Prior to the IFQ program, quota closures at the end of the year have likely resulted in some additional commercial discards when the red snapper fishery is open. However, most commercial landings of red snapper occur in the western Gulf where gag and red grouper are less abundant or infrequently caught.

Practicability of current management measures in the directed red snapper fishery relative to their impact on bycatch and bycatch mortality.

The bycatch practicability analysis in Amendment 27 (GMFMC 2007) indicated directed fishery bycatch was believed to have a greater effect on red snapper stock recovery than the shrimp fishery. Although shrimp bycatch still accounts for a majority of bycatch, bycatch from the directed fishery is now known to have a greater effect on stock recovery. A quota, 16-inch total length (TL) minimum size limit, 2-fish bag limit, closed season, and gear restrictions are presently used to manage the recreational fishery. The commercial fishery is managed with an IFQ program, a quota, a 13-inch TL minimum size limit, and gear restrictions. Prior to 2007 when the red snapper IFQ program was implemented, the commercial fishery was also managed with closed seasons and trip limits. The following discusses current and historic management measures with respect to their relative impacts on bycatch.

Closed Seasons

Prior to 1997, the recreational sector was able to fish for red snapper year round. To prevent the recreational quota from being exceeded, recreational fishing for red snapper was closed on November 27, 1997, September 30, 1998, and August 29, 1999. In 2000, an April 21 through October 31 red snapper season was established. This was modified to a June 1 through October 31 season in 2008 by Amendment 27 (GMFMC 2007). Currently, the recreational directed red snapper fishery is closed in the exclusive economic zone from January 1 through May 31 each year through a 2012 framework action. However, since 2008, the sector has been closed early when the quota is projected to be caught. In addition, since 2008, the length of time red snapper fishing has been open has become increasingly shorter such that for 2011, 2012, and 2013, the season length has shrunk to 48, 46, and 42 days, respectively. With these shorter seasons, the number of released fish has decreased during the open season, but the number of releases during the closed season has increased (Figure 2; SEDAR 31 2013). Reflected in this trend is that although the estimated number of dead discards has decreased during the fishing season, the number of dead discards has increased during the longer closed periods (Figure 4). For 2014, the season length was decreased to 9 days. This was in response to a decision by the U.S. District Court for the District of Columbia (Court) in *Guindon v. Pritzker*, 2014 WL 1274076 (D.D.C. Mar. 26, 2014). NMFS, at the request of the Council, took emergency action to implement an in-season accountability measure for the recreational harvest of red snapper in the Gulf. The action set an annual catch target (ACT) equal to 80% of the 5,390 mp quota (ACT = 4,312 mp). The resultant 9-day season was based on the ACT and has only a 15% probability of exceeding the quota.

With the implementation of the IFQ program, there is no closed season for the commercial sector. However, commercial vessels with little or no red snapper allocation cannot land red snapper on most or all their trips. Thus, they effectively operate under closed season conditions. GMFMC (2013) indicated most discards were likely due to insufficient allocation, rather than the minimum size limit, especially in the longline fleet. Most of these discards were recorded as released alive.

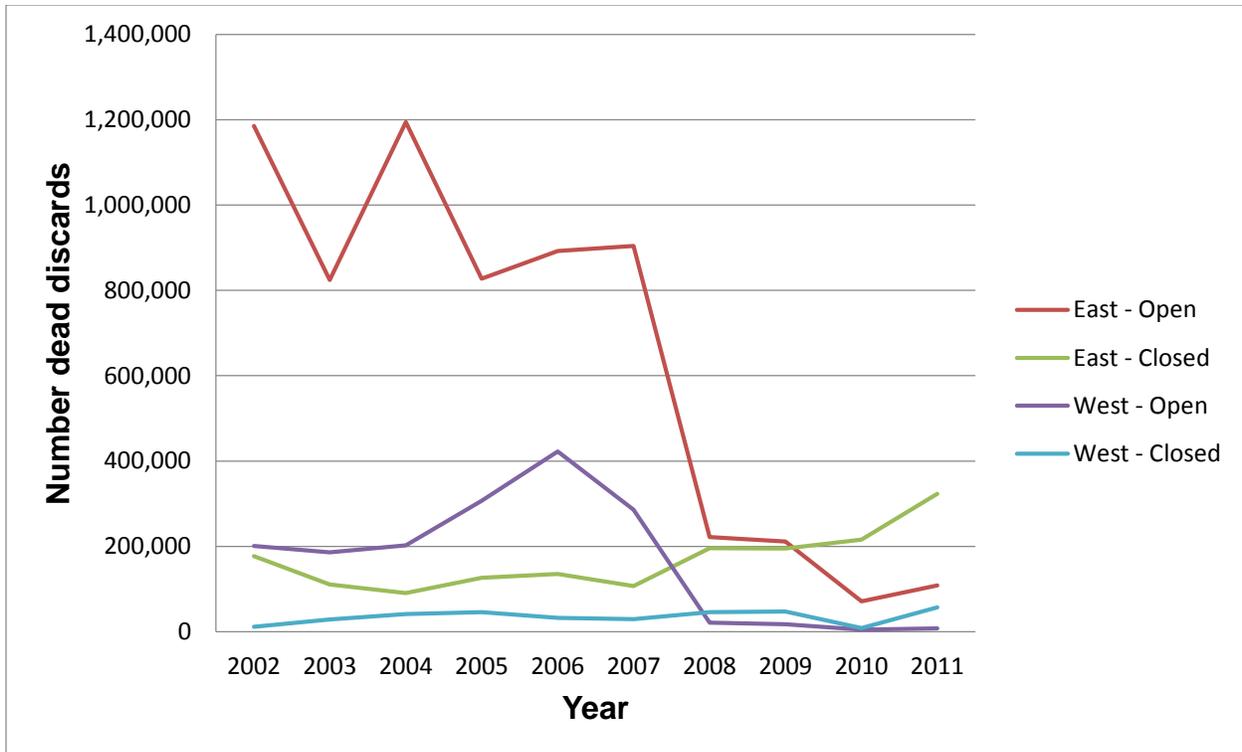


Figure 4. The number of Gulf red snapper dead discards from the recreational sector by year and by area. Source: Jakob Tetzlaff., pers. comm. Southeast Fisheries Science Center, Miami, Florida.

Bag Limits

The recreational fishery is regulated by a 2-red snapper daily bag limit per person. Red snapper discards while harvesting the daily bag limit are a result of incidental capture of undersized fish prior to reaching the bag limit and targeting of other reef fish residing in similar habitat as red snapper after bag limits have been reached. SERO (2012b) reported for-hire anglers, on average, landed 1.23 red snapper per trip and private anglers landed 1.58 red snapper per trip when the season is open. Based on average catch rates, the current two red snapper bag limit is not a limiting factor for some trips, but likely occurs on others. Therefore, the release of undersized fish while harvesting the bag limit is still an important factor contributing to discards in addition to the release of legal-sized red snapper after the bag limit is reached.

Size limits

The 16-inch recreational and 13-inch commercial TL minimum size limits are important factors when considering bycatch in the directed fishery. Size limits are intended to protect immature fish and reduce fishing mortality. The recreational minimum size limit is above the size at 50% maturity and the commercial size limit is near the size at 50% maturity. Size-at-maturity varies by region, with 75% of eastern Gulf female red snapper mature by 12-inches TL and 50% of western Gulf red snapper mature by 13-14-inches TL (Fitzhugh et al. 2004).

Several yield-per-recruit (YPR) analyses have previously been conducted to identify the size that balances the benefits of harvesting fish at larger sizes against losses due to natural mortality. Goodyear (1995) concluded YPR was maximized in the red snapper fishery between 18 and 21-inches TL, assuming 20 and 33% discard mortality in the recreational and commercial red snapper fisheries, respectively. A subsequent YPR analysis by Schirripa and Legault (1997) indicated increasing the minimum size limit above 15-inches TL would result in no gains in yield. Analyses of minimum size limits conducted for Amendment 27 (GMFMC 2007) indicated red snapper projected recovery rates are slightly faster if the commercial minimum size limit is reduced or eliminated, but increasingly slowed by smaller recreational minimum size limits (Porch 2005). Decreasing the recreational and commercial minimum size limits was projected to increase stock recovery slightly over the short term, but stock recovery would be increasingly slowed if the recreational size limit were lowered over the long term (Porch 2005). However, as discussed in Amendment 27, changes in spawning potential and the rate of stock recovery were found to be negligible for recreational size limits ranging from 13 to 15-inches TL. An YPR analysis conducted by SERO (2006), using current fishery selectivities and discard mortality rates from SEDAR 7 (2005) supported Porch's (2005) findings. SERO (2006) examined four commercial minimum size limits (12-, 13-, 14-, and 15-inches TL) and five recreational minimum size limits (6-, 13-, 14-, 15-, and 16-inches TL). Based on the range of size limits analyzed, YPR was maximized at 16-inches TL in both the eastern and western Gulf recreational fisheries, 12-inches TL in the western Gulf commercial fishery, and 15-inches TL in the eastern Gulf commercial fishery. However, there was virtually no difference in maximum YPR (< 0.3 percent) for any of the eastern Gulf commercial size limits analyzed. In a study by Wilson et al. (2004) aboard commercial vessels using bandit rigs, 61% of red snapper released were greater than 13 inches and 86% were greater than 12 inches.

For Amendment 39 (still under development; GMFMC 2014a), an YPR analysis was applied to the recreational sector (SERO 2013). This analysis indicates the Gulf-wide YPR is maximized at a recreational size limit of 15-inches TL. However, there was not much of a change in YPR between lengths of 13- and 18-inches TL. Thus, if the minimum size limit were changed from 16- to 15-inches TL, any gain in YPR would be minimal. SERO (2013) also showed that any increase in the minimum size limit would reduce the number of fish landed. This would probably result in more regulatory discards and an increase in the number of dead discards.

Given the above discussion, a larger recreational minimum size limit is considered to be more effective than a similar sized commercial minimum size limit because of lower discard mortality rates in the recreational fishery (Tables 2 and 3). High discard mortality rates in the commercial fishery provide little, if any, protection to the stock because the released fish mostly die rather than contribute to filling the quota. In contrast, the current 16-inch TL minimum recreational size limit was found to afford some protection to the stock, because a greater percentage of discarded fish will survive to spawn and later contribute to the quota as larger animals.

Area closures

Although the Council has not developed area closures specifically for red snapper, the Council has created areas to protect other species. For example, two restricted fishing areas were developed to specifically protect spawning aggregations of gag in 2000 (GMFMC 1999). The

Madison-Swanson and Steamboat Lumps marine restricted fishing areas are located in the northeastern Gulf at a depth of 40 to 60 fathoms. Both areas prohibit bottom fishing. Bottom fishing is also prohibited in the Tortugas North and South marine reserves in the southern Gulf near the Dry Tortugas. Marine reserves and time/area closures benefit fish residing within reserve boundaries by prohibiting their capture during part or all of the year. Within marine reserves, fish that are undersized potentially have an opportunity to grow to legal size and are no longer caught as bycatch. If these fish emigrate from the marine reserve (i.e., spillover effect), then they may be caught as legal fish outside the reserve, thereby reducing bycatch. However, anglers and commercial fishermen may redistribute their effort to areas surrounding the area closure. If fishing pressure in these areas is increased, then any benefits of reduced bycatch of fish in the marine reserve will likely be offset by increases in bycatch of fish residing outside the marine reserve. Within restricted fishing areas or time/area closures, fishing is allowed under restrictions that are intended to protect certain components of the populations within the area (e.g., prohibitions on bottom fishing gear), or to protect populations during a critical phase of their life history, such as during spawning.

The Council did develop a season area closure to reduce bycatch of sea turtles for the longline component of the commercial sector. The use of longlines had been prohibited from waters less than 20 fathoms east of Cape San Blas, Florida, and 50 fathoms west of Cape San Blas; however, due to higher estimates of sea turtles caught in longline gear, measures were put in place through Amendment 31 (GMFMC 2009) to reduce this bycatch. One of these measures was the prohibition of the use of bottom longline gear in the Gulf reef fish fishery, shoreward of a line approximating the 35-fathom contour east of Cape San Blas, Florida from June through August. Most sea turtle takes by longline occur during the summer months.

Allowable gear

Vertical hook-and-line gear (bandit rigs, manual handlines) is the primary gear used in the commercial fishery (> 96% of annual landings). Longlines, spears, and fish traps account for a small portion of the commercial harvest (< 5%). Longlines account for only a small fraction of red snapper dead discards as most of the landings come from handline-caught fish (Table 6). In addition, longlines are fished in deeper water, particularly in the west, and select for larger, legal-sized red snapper. Longline vessels east of Cape San Blas, Florida are also restricted to carrying 1,000 hooks onboard (only 750 rigged for fishing at any given time) as part of a suite of measures put in place through Amendment 31 (GMFMC 2009) to reduce sea turtle bycatch.

Rod-and-reel is the primary gear used in the recreational fishery. Recreational anglers also use spears to capture red snapper. Spearfishing does not affect discard mortality since all fish caught are killed. Only undersized red snapper mistakenly killed while spearfishing would contribute to discard mortality. During the red snapper recreational fishing season, discards are primarily due to the recreational size limit; however, allowable gears can affect discard mortality rates.

Fishermen in both the commercial and recreational sectors are required to use non-stainless steel circle hooks, if using natural baits, to reduce discard mortality. The size of circle hooks used in the fishery varies by manufacturer, gear type, and species targeted (i.e., if targeting vermilion snapper, smaller circle hooks may be used). Although circle hooks may not work as well to

reduce red snapper discard mortality, they are effective in reducing mortality in other species such as red grouper (Burns and Froeschke 2012).

In addition to the circle hook requirement, Amendment 27 (GMFMC 2007) also put in place requirements for both commercial and recreational fishermen in the reef fish fishery to carry onboard dehooking devices. These gears are all intended to reduce bycatch and discard mortality. A dehooking device is a tool intended to remove a hook embedded in a fish. It reduces the handling time releasing a fish from a hook and allows a fish to be released with minimum damage.

Amendment 27 put in place a requirement for fishermen to use venting tools to release gases from the abdomen from fish brought up from depth. However, this requirement was removed in 2013 through a framework action. Some scientific studies had questioned the usefulness of venting tools in preventing barotrauma in fish, particularly those caught in deep waters. In addition, some fish caught in shallow waters may not need to be vented, and attempts at venting may cause damage to fish by improper venting and increased handling times. Finally, the requirement interfered with using other devices such as fish descenders that may improve a fish's survival from barotrauma. Because of these factors, the Council recommended the venting tool requirement be rescinded.

IFQ program

The commercial sector was previously regulated by 2,000-lb and 200-lb trip limits. With the establishment of the red snapper IFQ program, red snapper discards after a trip limit was reached are no longer a factor. However, reef fish observer data since the IFQ program was implemented indicate a large proportion of legal-sized red snapper continue to be discarded by both the handline and longline fleets (2013). Discard rates do vary by gear. In 2011, 3.5 red snapper were landed for every fish released in the vertical line fleet compared to a 0.5 red snapper landed for each fish released in the longline fleet (SERO 2012b). Discard rates greatly varied by region. In 2011, 87% of observed red snapper caught in the Florida Panhandle were landed, compared to 79% off Louisiana and Texas, and 47% off the Florida Peninsula. There was also a noticeable difference in the size of red snapper caught, with red snapper along the Florida Peninsula (mostly 19-24-inches TL) generally larger than fish caught in other areas of the Gulf (mostly 15-21-inches TL). Most discards were estimated to be released alive, regardless of gear type used. Discards were likely due to insufficient allocation, rather than the minimum size limit, especially in the longline fleet. In a study by Wilson et al. (2004) aboard commercial vessels using bandit rigs, 61% of red snapper released were greater than 13-inches TL, the minimum size limit.

Table 6. Commercial red snapper landings and dead discards in the Gulf by year and area.

Year	Eastern Gulf				Western Gulf			
	Landings		Dead discards		Landings		Dead discards	
	Handline	Longline	Handline	Longline	Handline	Longline	Handline	Longline
1983	1,646,550	205,415	1,587	1,237	2,698,740	9,089	56,690	85
1984	949,341	128,146	309	388	1,625,800	71,755	27,160	547
1985	550,063	25,477	79,906	2,239	608,624	50,822	233,753	8,173
1986	222,738	14,761	21,314	646	564,277	73,719	261,093	11,740
1987	168,788	10,300	20,091	743	412,668	69,713	229,400	12,708
1988	186,924	10,860	51,433	738	686,680	66,440	285,429	9,443
1989	156,071	10,284	32,961	1,714	531,066	44,967	230,318	6,188
1990	198,778	10,021	94,242	4,552	482,224	11,997	377,444	2,706
1991	152,971	3,368	79,800	1,647	527,667	7,937	332,927	1,905
1992	153,940	1,104	54,930	484	837,699	2,270	380,571	460
1993	157,367	3,061	57,447	843	849,065	2,421	375,085	471
1994	160,369	1,473	87,448	568	705,354	1,879	412,546	407
1995	46,528	1,466	54,453	658	648,399	2,012	491,941	501
1996	65,129	1,329	62,736	925	941,768	3,102	695,812	699
1997	51,767	849	79,005	515	1,066,360	3,472	713,290	729
1998	111,068	1,057	99,004	494	1,052,750	3,001	605,570	522
1999	147,499	1,289	102,825	340	1,032,070	9,722	602,380	1,564
2000	168,301	1,585	107,368	556	899,899	18,882	634,841	3,146
2001	207,257	1,779	278,236	894	809,218	12,326	658,252	2,334
2002	297,471	3,235	319,910	1,555	830,146	14,317	584,024	2,481
2003	279,295	2,626	235,502	1,190	782,006	16,735	492,094	2,618
2004	247,833	3,592	251,909	1,633	741,737	43,698	598,933	8,157
2005	216,596	3,816	230,654	2,081	725,819	26,878	785,721	6,686
2006	209,704	3,062	221,631	1,394	955,637	24,731	992,193	6,781
2007	308,237	3,492	949,770	14,520	521,931	17,877	231,164	443
2008	277,716	7,221	660,738	24,096	381,349	5,693	115,150	108
2009	299,480	3,088	748,261	10,548	347,913	5,666	89,641	68
2010	398,806	15,002	1,111,727	53,620	415,081	4,364	85,851	56
2011	408,346	15,463	1,274,735	60,252	382,630	2,143	86,460	18

Source: SEDAR 31 2013; Jacob Tetzlaff, pers. comm. Southeast Fisheries Science Center, Miami, Florida)

Alternatives being considered and bycatch minimization

The proposed establishment of private and federal for-hire components, allocation between components, and quota closures for the recreational red snapper sector are discussed in Amendment 40 (GMFMC 2014b) can indirectly affect bycatch in the Gulf reef fish fishery. These actions are primarily administrative. They would establish the components, set up an allocation and adjustments of the allocation based on fisher participation as well as provide separate seasonal closure provisions for the components. Depending on which alternatives are selected for each action, they could either reduce or increase bycatch in the reef fish fishery.

Practicability Analysis

Criterion 1: Population effects for the bycatch species

This action would establish a federal for-hire and private angling component to the red snapper recreational sector fishing for red snapper as well as create an allocation of the red snapper recreational quota between the two components. As discussed in Section 4.1.2 of Amendment 40 (GMFMC 2014b), the number of dead discards is estimated to be lower if the allocation (Action 2; allocation between components) favors the federal for-hire component because discards relative to landings are less than those found in the private angling component. Therefore, the greater the allocation favors the private angling component, the greater number of fish are likely to be dead discards. These fish would be added to the number of fish killed by the recreational sector (landings and dead discards) and would have an adverse effect on the stock (Action 2, Alternatives 3-8). Action 1 (establish the components) would allow Action 2 to occur and the sunset provision in Action 1 would limit how long the Action 2 allocation would last. Action 3 (Component closures) do not affect how the recreational sector is prosecuted and so should have no effects on discards. These actions do not affect the commercial sector and so should have not effects on commercial discards.

As described earlier in this bycatch practicability analysis, the Council and NMFS have developed a variety of management measures to reduce red snapper bycatch and these measures are thought to benefit the status of the stock. These include bycatch reduction devices and effort targets in the shrimp fishery, size limit reductions and the IFQ program for the commercial sector, and gear requirements, such as dehooking devices and the use of circle hooks by the reef fish fishery. In addition, any increases in bycatch resulting from proposed management actions are accounted for when reducing directed fishing mortality. Any reductions in bycatch not achieved must be accounted for when setting the annual catch limits/quotas; the less bycatch is reduced, the more the annual catch limits must be reduced.

Criterion 2: Ecological effects due to changes in the bycatch of red snapper (effects on other species in the ecosystem)

The relationships among species in marine ecosystems are complex and poorly understood, making the nature and magnitude of ecological effects difficult to predict with any accuracy. The most recent red snapper stock assessment (SEDAR 31 2013) indicated the stock is rebuilding. Consequently, it is possible that forage species and competitor species could

decrease in abundance in response to an increase in red snapper abundance. Changes in the bycatch of red snapper are not expected to directly affect other species in the ecosystem. Although birds, dolphins, and other predators may feed on red snapper discards, there is no evidence that any of these species rely on red snapper discards for food.

Criterion 3: Changes in the bycatch of other species of fish and invertebrates and the resulting population and ecosystem effects

Population and ecosystem effects resulting from changes in the bycatch of other species of fish and invertebrates are difficult to predict. As discussed in Amendment 27 (GMFMC 2007), groupers, snappers, greater amberjack, gray triggerfish and other reef fishes are commonly caught in association with red snapper. Many of these species are in rebuilding plans (gag, gray triggerfish, and greater amberjack) with the stocks improving. Regulatory discards significantly contribute to fishing mortality for all of these reef fish species, with the exceptions of gray triggerfish and vermilion snapper.

No measures are proposed in this amendment to directly reduce the bycatch of other reef fish species. Bycatch minimization measures implemented through Amendment 18A (GMFMC 2005), Amendment 27 (GMFMC 2007), and Amendment 31 (GMFMC 2009) are expected to benefit reef fish stocks, sea turtles, and smalltooth sawfish. As mentioned, Amendment 40 (GMFMC 2014b) would establish a federal for-hire and private angling component to the red snapper recreational as well as create an allocation of the red snapper recreational quota between the two components. For species with quotas (greater amberjack, gray triggerfish, and recreational red snapper), this could lead to a shift in fishing effort during recreational red snapper season closures and negatively impact reef fish stocks not currently constrained by annual quotas or IFQ programs. The magnitude of this impact would depend on the size of the resultant quotas, the length of the red snapper closure, and the amount of effort shifting that occurs. Annual catch limits and accountability measures are now in effect for species not considered undergoing overfishing or overfished, thus potential for effort shifting and changes in bycatch may be lessened for these species.

Criterion 4: Effects on marine mammals and birds

The effects of current management measures on marine mammals and birds are described above. Bycatch minimization measures evaluated in this amendment are not expected to significantly affect marine mammals and birds. There is no information to indicate marine mammals and birds rely on red snapper for food, and the measure in this amendment is not anticipated to alter the existing prosecution of the fishery, and thus interactions with marine mammals or birds.

Criterion 5: Changes in fishing, processing, disposal, and marketing costs

Establishing a private angling and federal for-hire component to the recreational sector should not affect fishing, processing, disposal, and marketing costs in the commercial sector. This action also would not be expected to result in any changes in fishing, processing, disposal, or marketing costs of recreationally harvested red snapper because these fish may not be sold.

Criterion 6: Changes in fishing practices and behavior of fishermen

This action should not change fishing practices or behavior of recreational fishermen. As described in Criterion 1, the only action that would cause a shift between how the two components fish is Action 2 that allocates the recreational red snapper quota between the two components. If the allocation provides more fish to the private angling component rather than towards the federal for-hire component, then it is likely the number of discards could go up. This is because discards relative to the harvest is greater for the private angling component (see Section 4.2.2 in GMFMC 2014b). However, this action would only affect how many fish are available to each component and should not change fishing practices or behavior of recreational fishermen in general. Because the commercial sector is not affected by this action, there should be no change in commercial fishing practices or behavior as a result of this action.

Criterion 7: Changes in research, administration, and enforcement costs and management effectiveness

The proposed management measures are not expected to significantly impact administrative costs. Quotas based on stock allocation measures are currently used to regulate the commercial and recreational sectors harvesting red snapper. None of the resultant recreational subquotas from this action are expected to diminish regulatory effectiveness. All of these measures will require additional research to determine the magnitude and extent of impacts to bycatch and bycatch mortality. Administrative activities such as quota monitoring and enforcement should not be affected by the proposed management measures.

Criterion 8: Changes in the economic, social, or cultural value of fishing activities and non-consumptive uses of fishery resources

The proposed creation of two recreational components and allocation of the red snapper recreational quota between the two components are unlikely to cause much change in the economic, social, or cultural value of fishing activities. However, this action is the first step towards future actions that could affect activities and resources through separate management of each component. The length of time the components are in place is limited through the Action 1 sunset provision and it would take further action by the Council to continue the component allocation. At this time, it is unknown what these changes might be, but they will be evaluated in a future bycatch practicability analysis as those actions are developed. Because the commercial sector is not affected by this action, there should be no change in the economic, social, or cultural value of fishing activities. No effects would be expected on the non-consumptive uses of fishery resources as a result of this action.

Criterion 9: Changes in the distribution of benefits and costs

The net effects of the proposed management measures in this amendment on bycatch are unknown because the resultant allocation between components is unknown at this time. As explained in Criterion 1, only Acton 2 would have any effect on bycatch – allocations favoring the private angling component would be expected to result in more discards. The proposed management measures would not be expected to affect the amount of red snapper catch normally

harvested by anglers in the Gulf as the recreational sector would still be managed under the recreational quota. However, the ability in the future to manage each component of the recreational sector under a regime tailored to each component would be expected to increase the benefits, and possibly decrease the costs, associated with the recreational harvest of red snapper. Because the commercial sector is not affected by this action, there should be no change in the distribution of benefits and costs to this sector.

Criterion 10: Social effects

Bycatch is considered wasteful by fishermen and it reduces overall yield obtained from the fishery. Minimizing bycatch to the extent practicable will increase efficiency, reduce waste, and benefit stock recovery, thereby resulting in net social benefits.

Conclusion

Analysis of the ten bycatch practicability factors indicates there would be positive biological impacts associated with further reducing bycatch and bycatch mortality in the reef fish fishery. The main benefits of reducing red snapper bycatch are: 1) less waste and 2) increased yield in the directed fishery. Reducing discards and discard mortality rates would result in less forgone yield.

When determining reductions associated with various management measures, release mortality is factored into the analyses in order to adjust the estimated reductions for losses due to dead discards. The increases in discards associated with each of these management measures varies and is contingent on assumptions about how fisherman's behavior and fishing practices will change. In this action, establishing a federal for-hire and private angling component to the red snapper recreational sector as well as create an allocation of the red snapper recreational quota between the two components would indirectly affect discards and bycatch. Discards and bycatch would be affected depending on the application of allocation allowed under Action 2 of Amendment 40 (GMFMC 2014b).

The Council needed to consider the practicability of implementing the bycatch minimization measures discussed above with respect to the overall objectives of the Reef Fish Fishery Management Plan and Magnuson-Stevens Act. Therefore, given actions in this amendment combined with previous actions, management measures, to the extent practicable, minimize bycatch and to the extent bycatch cannot be avoided, minimize the mortality of that bycatch.

References

- Burns, K. M., C. C. Koenig, and F. C. Coleman. 2002. Evaluation of multiple factors involved in release mortality of undersized red grouper, gag, red snapper, and vermilion snapper. Mote Marine Laboratory Technical Report No. 814. (MARFIN grant #NA87FF0421). 53 pp.
- Burns, K. M., N. F. Parnell, R. R. Wilson. 2004. Partitioning release mortality in the undersized red snapper bycatch: Comparison of depth vs. hooking effects. Final Report MARFIN Grant No. NA97FF0349 36 pp.
- Burns, K. M., and J. T. Froeschke. 2012. Survival of red grouper (*Epinephalus morio*) and red snapper (*Lutjanus campechanus*) caught on J-hooks and circle hooks in the Florida recreational and recreational-for-hire fisheries. Bull. Mar. Sci. 88(3):633-646.
- Campbell, M.D., W.B. Driggers, and B. Sauls. 2012. Release mortality in the red snapper fishery: a synopsis of three decades of research. SEDAR31-DW22. SEDAR, North Charleston, SC. 25 pp.
- Clapp, R. B., R. C. Banks, D. Morgan-Jacobs, and W. A. Hoffman. 1982. Marine birds of the southeastern United States and Gulf of Mexico. U.S. Dept. of Interior, Fish and Wildlife Service, Office of Biological Services, Washington D.C. FWS/OBS-82/01. 3 vols.
- Fitzhugh, G. R., M. S. Duncan, L. A. Collins, W. T. Walling, and D. W. Oliver. 2004. Characterization of red snapper (*Lutjanus campechanus*) reproduction: for the 2004 Gulf of Mexico SEDAR. NOAA, NMFS, SEFSC, 3500 Delwood Beach Road, Panama City, Florida 32409. Contribution 04-01. 29 pp + addendum.
- GMFMC. 1999. Regulatory amendment to the reef fish fishery management plan to set 1999 gag/black grouper management measures (revised), includes environmental assessment, regulatory impact review, and initial regulatory flexibility analysis. Gulf of Mexico Fishery Management Council, Tampa, Florida.
<http://www.gulfcouncil.org/Beta/GMFMCWeb/downloads/RF%20RegAmend%20-%201999-08.pdf>
- GMFMC. 2002. Amendment number 10 to the fishery management plan for the shrimp fishery of the Gulf of Mexico, U.S. Waters with environmental assessment, regulatory impact review, initial regulatory flexibility analysis, and social impact assessment. Gulf of Mexico Fishery Management Council. Tampa, Florida.
<http://www.gulfcouncil.org/Beta/GMFMCWeb/downloads/SHRIMP%20Amend-10%20Final%202002-07.pdf>

GMFMC. 2004a. Amendment 22 to the fishery management plan for the reef fish fishery of the Gulf of Mexico, U.S. waters, with supplemental environmental impact statement, regulatory impact review, initial regulatory flexibility analysis, and social impact assessment. Gulf of Mexico Fishery Management Council. Tampa, Florida.
<http://www.gulfcouncil.org/Beta/GMFMCWeb/downloads/Amend%2022%20Final%2070204.pdf>

GMFMC. 2004b. Final amendment 23 to the reef fish fishery management plan to set vermilion snapper sustainable fisheries act targets and thresholds and to establish a plan to end overfishing and rebuild the stock, including a final supplemental environmental impact statement and regulatory impact review. Gulf of Mexico Fishery Management Council. Tampa, Florida.
<http://www.gulfcouncil.org/Beta/GMFMCWeb/downloads/VS%2023%20Oct%20Final%2010-21-04%20with%20Appendix%20E.pdf>

GMFMC. 2005. Final amendment 18A to the fishery management plan for the reef fish resources of the Gulf of Mexico, including environmental assessment, regulatory impact review, and initial regulatory flexibility analyses. Gulf of Mexico Fishery Management Council. Tampa, Florida.
http://www.gulfcouncil.org/Beta/GMFMCWeb/downloads/Amendment_18A_Final.pdf

GMFMC. 2007. Final amendment 27 to the reef fish fishery management plan and amendment 14 to the shrimp fishery management plan including supplemental environmental impact statement, regulatory impact review, and regulatory flexibility act analysis. Gulf of Mexico Fishery Management Council. Tampa, Florida. 490 pp with appendices.
<http://www.gulfcouncil.org/Beta/GMFMCWeb/downloads/Final%20RF%20Amend%2027-%20Shrimp%20Amend%2014.pdf>

GMFMC. 2008a. Final reef fish amendment 30A: greater amberjack – revised rebuilding plan, accountability measures; gray triggerfish – establish rebuilding plan, end overfishing, accountability measures, regional management, management thresholds and benchmarks including supplemental environmental impact statement, regulatory impact review, and regulatory flexibility act analysis. Gulf of Mexico Fishery Management Council. Tampa, Florida. <http://www.gulfcouncil.org/docs/amendments/Amend-30A-Final%20208.pdf>

GMFMC. 2008b. Final reef fish amendment 30B: gag – end overfishing and set management thresholds and targets. Red grouper – set optimum yield, TAC, and management measures, time/area closures, and federal regulatory compliance. Gulf of Mexico Fishery Management Council, 2203 North Lois Avenue, Suite 1100, Tampa, FL.
http://www.gulfcouncil.org/Beta/GMFMCWeb/downloads/Final%20Amendment%2030B%2010_10_08.pdf

GMFMC. 2009. Final amendment 31 to the fishery management plan for reef fish resources in the Gulf of Mexico addresses bycatch of sea turtles in the bottom longline component of the Gulf of Mexico reef fish fishery, includes draft environmental impact statement and regulatory impact review. Gulf of Mexico Fishery Management Council. Tampa, Florida. 261 pp with appendices.
<http://www.gulfcouncil.org/Beta/GMFMCWeb/downloads/Final%20Draft%20RF%20Amend%2031%206-11-09.pdf>

GMFMC. 2011a. Final reef fish amendment 32 – gag grouper – rebuilding plan, annual catch limits, management measures, red grouper – annual catch limits, management measures, and grouper accountability measures. Gulf of Mexico Fishery Management Council. Tampa, Florida.

[http://www.gulfcouncil.org/docs/amendments/Final%20RF32_EIS_October_21_2011\[2\].pdf](http://www.gulfcouncil.org/docs/amendments/Final%20RF32_EIS_October_21_2011[2].pdf)

GMFMC. 2011b. Final generic annual catch limits/accountability measures amendment for the Gulf of Mexico fishery management council's red drum, reef fish, shrimp, coral and coral reefs fishery management plans, including environmental impact statement, regulatory impact review, regulatory flexibility analysis, and fishery impact statement. Gulf of Mexico Fishery Management Council. Tampa, Florida.

http://www.gulfcouncil.org/docs/amendments/Final%20Generic%20ACL_AM_Amendment-September%209%202011%20v.pdf

GMFMC. 2012a. Final amendment 35 to the reef fish fishery management plan for the reef fish resources of the Gulf of Mexico – modifications to the greater amberjack rebuilding plan and adjustments to the recreational and commercial management measures, including an environmental assessment, fishery impact statement, regulatory impact review, and regulatory flexibility act analysis. Gulf of Mexico Fishery Management Council. Tampa, Florida.

http://www.gulfcouncil.org/Beta/GMFMCWeb/downloads/Final_Amendment_35_Greater_Amberjack_Rebuilding_8_May_2012.pdf

GMFMC. 2012b. Final amendment 37 to the reef fish fishery management plan for the reef fish resources of the Gulf of Mexico – Modifications to the gray triggerfish rebuilding plan including adjustments to the annual catch limits and annual catch targets for the commercial and recreational sectors. Gulf of Mexico Fishery Management Council. Tampa, Florida.

[http://www.gulfcouncil.org/docs/amendments/Final_Reef_Fish_Amend_37_Gray_Triggerfish_12_06_12\[1\].pdf](http://www.gulfcouncil.org/docs/amendments/Final_Reef_Fish_Amend_37_Gray_Triggerfish_12_06_12[1].pdf)

GMFMC. 2012c. Final amendment 38 to the reef fish fishery management plan for the reef fish resources of the Gulf of Mexico – modifications to the shallow-water grouper accountability measures, including an environmental assessment, fishery impact statement, regulatory impact review, and regulatory flexibility act analysis.

<http://www.gulfcouncil.org/docs/amendments/Final%20Amendment%2038%2009-12-2012.pdf>

GMFMC. 2013. Red snapper individual fishing quota program 5-year review. Gulf of Mexico Fishery Management Council. Tampa, Florida. 94 p.

GMFMC. 2014a. Regional Management of Recreational Red Snapper Amendment 39 to the Fishery Management Plan for the Reef Fish Resources of the Gulf of Mexico, including a Draft Environmental Impact Statement. Gulf of Mexico Fishery Management Council. Tampa, Florida.

GMFMC. 2014b. Red Snapper Allocation Amendment 28 to the Fishery Management Plan for the Reef Fish Resources of the Gulf of Mexico, including a Draft Environmental Impact Statement. Gulf of Mexico Fishery Management Council. Tampa, Florida.

Goodyear, C. P. 1995. Red snapper in U.S. waters of the Gulf of Mexico. NOAA, NMFS, SEFSC, 75 Virginia Beach Drive, Miami, Florida 33149. Contribution: MIA 95/96-05. 171 pp.

Harrison, P. 1983. Seabirds: an identification guide. Houghton Mifflin Company, Boston, MA. Field Notes 48: 976-978.

Linton, B. 2012. Shrimp fishery bycatch estimates for Gulf of Mexico red snapper, 1972-2011. SEDAR31-DW30. SEDAR, North Charleston, SC. 11 pp.

NMFS. 2011. Biological opinion on the continued authorization of Reef Fish fishing under the Gulf of Mexico Reef Fish Fishery Management Plan. September 30, 2011. Available at: <http://sero.nmfs.noaa.gov/pr/esa/Fishery%20Biops/03584%20GOM%20Reef%20Fish%20BiOp%202011%20final.pdf>

Patterson, W. F. III, J. C. Watterson, R. L. Shipp, and J. H. Cowan, Jr. 2001. Movement of tagged red snapper in the northern Gulf of Mexico. Transactions of the American Fisheries Society 130: 533-545.

Porch, C. E. 2005. Projected effects of changes in minimum size regulations on the future status of the red snapper (*Lutjanus campechanus*) fishery in the U. S. Gulf of Mexico. NOAA, NMFS, SEFSC, 75 Virginia Beach Drive, Miami, Florida 33149. Contribution: SFD-2005-009. 7 pp.

RFSAP. 1999. September 1999 Report of the Reef Fish Stock Assessment Panel. Gulf of Mexico Fishery Management Council. Tampa, FL.

Schirripa, M. J. and C. M. Legault. 1997. Status of the red snapper in U.S. waters of the Gulf of Mexico: Executive summary updated through 1996. MIA-97/98-05. National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Southeast Fisheries Science Center. Miami, Florida. 37 pp.

Schirripa, M. J., and C. M. Legault. 1999. Status of the red snapper fishery in the Gulf of Mexico: Updated through 1998. SFD-99/00-75. National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Southeast Fisheries Science Center. Miami, Florida. 44pp. with appendices

SEDAR 7. 2005. Stock assessment report of SEDAR 7 Gulf of Mexico red snapper. Southeast Data, Assessment, and Review. North Charleston, South Carolina. <http://www.sefsc.noaa.gov/sedar/>.

SEDAR 9 Update. 2011. SEDAR update stock assessment of vermilion snapper in the Gulf of Mexico. Southeast Data, Assessment, and Review. North Charleston, South Carolina. <http://www.sefsc.noaa.gov/sedar/>.

SEDAR 10 Update. 2009. Stock assessment of gag in the Gulf of Mexico. – SEDAR update assessment. Southeast Data, Assessment, and Review. North Charleston, South Carolina. <http://www.sefsc.noaa.gov/sedar/>

SEDAR 12 Update. 2009. Stock assessment of red grouper in the Gulf of Mexico – SEDAR update assessment. Southeast Data, Assessment, and Review. North Charleston, South Carolina. <http://www.sefsc.noaa.gov/sedar/>.

SEDAR 22. 2011. Stock assessment report Gulf of Mexico yellowedge grouper. Southeast Data, Assessment, and Review. North Charleston, South Carolina. <http://www.sefsc.noaa.gov/sedar/>.

SEDAR 31. 2013. Stock assessment report Gulf of Mexico red snapper. Southeast Data, Assessment, and Review. North Charleston, South Carolina. <http://www.sefsc.noaa.gov/sedar/>.

SERO. 2006. Red snapper yield-per-recruit analyses. NOAA, NMFS, SERO, 263 13th Ave. South, St. Petersburg, Florida 33701. 13 pp.

SERO. 2012a. 2011 Gulf of Mexico grouper-tilefish individual fishing quota annual report. SERO-LAPP-2012-09. Southeast Regional Office. St. Petersburg, Florida. 49 p.

SERO. 2012b. Southeast Regional Office National Marine Fisheries Service. Estimated reduction in Gulf of Mexico recreational red snapper harvest associated with various bag limits. Southeast Regional Office, St. Petersburg, Florida.

SERO 2013. Red snapper individual fishing quota program 5-year review. Southeast Regional Office. St. Petersburg, Florida. 94 p.

Wilson, C. A., D. L. Nieland, A. J. Fischer, and M. S. Baker, Jr. 2004. Red snapper *Lutjanus campechanus* in the northern Gulf of Mexico: Age and size composition of the commercial harvest and mortality of regulatory discards. NOAA, NMFS, SERO, 263 13th Ave. South, St. Petersburg, Florida 33701. MARFIN grant #NA17FF2007. 55 pp.

APPENDIX C. SUMMARY OF HABITAT UTILIZATION BY LIFE HISTORY STAGE FOR SPECIES IN THE REEF FISH FMP.

Common name	Eggs	Larvae	Early Juveniles	Late juveniles	Adults	Spawning adults
Red Snapper	Pelagic	Pelagic	Hard bottoms, Sand/ shell bottoms, Soft bottoms	Hard bottoms, Sand/ shell bottoms, Soft bottoms	Hard bottoms, Reefs	Sand/ shell bottoms
Queen Snapper	Pelagic	Pelagic	Unknown	Unknown	Hard bottoms	
Mutton Snapper	Reefs	Reefs	Mangroves, Reefs, SAV, Emergent marshes	Mangroves, Reefs, SAV, Emergent marshes	Reefs, SAV	Shoals/ Banks, Shelf edge/slope
Blackfin Snapper	Pelagic		Hard bottoms	Hard bottoms	Hard bottoms, Shelf edge/slope	Hard bottoms, Shelf edge/slope
Cubera Snapper	Pelagic		Mangroves, Emergent marshes, SAV	Mangroves, Emergent marshes, SAV	Mangroves, Reefs	Reefs
Gray Snapper	Pelagic, Reefs	Pelagic, Reefs	Mangroves, Emergent marshes, Seagrasses	Mangroves, Emergent marshes, SAV	Emergent marshes, Hard bottoms, Reefs, Sand/ shell bottoms, Soft bottoms	
Lane Snapper	Pelagic		Mangroves, Reefs, Sand/ shell bottoms, SAV, Soft bottoms	Mangroves, Reefs, Sand/ shell bottoms, SAV, Soft bottoms	Reefs, Sand/ shell bottoms, Shoals/ Banks	Shelf edge/slope
Silk Snapper	Unknown	Unknown	Unknown	Unknown	Shelf edge	
Yellowtail Snapper	Pelagic		Mangroves, SAV, Soft bottoms	Reefs	Hard bottoms, Reefs, Shoals/ Banks	

Common name	Eggs	Larvae	Early Juveniles	Late juveniles	Adults	Spawning adults
Wenchman	Pelagic	Pelagic			Hard bottoms, Shelf edge/slope	Shelf edge/slope
Vermilion Snapper	Pelagic		Hard bottoms, Reefs	Hard bottoms, Reefs	Hard bottoms, Reefs	
Gray Triggerfish	Reefs	Drift algae, <i>Sargassum</i>	Drift algae, <i>Sargassum</i>	Drift algae, Reefs, <i>Sargassum</i>	Reefs, Sand/ shell bottoms	Reefs, Sand/ shell bottoms
Greater Amberjack	Pelagic	Pelagic	Drift algae	Drift algae	Pelagic, Reefs	Pelagic
Lesser Amberjack			Drift algae	Drift algae	Hard bottoms	Hard bottoms
Almaco Jack	Pelagic		Drift algae	Drift algae	Pelagic	Pelagic
Banded Rudderfish		Pelagic	Drift algae	Drift algae	Pelagic	Pelagic
Hogfish			SAV	SAV	Hard bottoms, Reefs	Reefs
Blueline Tilefish	Pelagic	Pelagic			Hard bottoms, Sand/ shell bottoms, Shelf edge/slope, Soft bottoms	
Tilefish (golden)	Pelagic, Shelf edge/ Slope	Pelagic	Hard bottoms, Shelf edge/slope, Soft bottoms	Hard bottoms, Shelf edge/slope, Soft bottoms	Hard bottoms, Shelf edge/slope, Soft bottoms	
Goldface Tilefish	Unknown					
Speckled Hind	Pelagic	Pelagic			Hard bottoms, Reefs	Shelf edge/slope
Yellowedge Grouper	Pelagic	Pelagic		Hard bottoms	Hard bottoms	

Common name	Eggs	Larvae	Early Juveniles	Late juveniles	Adults	Spawning adults
Atlantic Goliath Grouper	Pelagic	Pelagic	Mangroves, Reefs, SAV	Hard bottoms, Mangroves, Reefs, SAV	Hard bottoms, Shoals/ Banks, Reefs	Reefs, Hard bottoms
Red Grouper	Pelagic	Pelagic	Hard bottoms, Reefs, SAV	Hard bottoms, Reefs	Hard bottoms, Reefs	
Warsaw Grouper	Pelagic	Pelagic		Reefs	Hard bottoms, Shelf edge/slope	
Snowy Grouper	Pelagic	Pelagic	Reefs	Reefs	Hard bottoms, Reefs, Shelf edge/slope	
Black Grouper	Pelagic	Pelagic	SAV	Hard bottoms, Reefs	Hard bottoms, Mangroves, Reefs	
Yellowmouth Grouper	Pelagic	Pelagic	Mangroves	Mangroves, Reefs	Hard bottoms, Reefs	
Gag	Pelagic	Pelagic	SAV	Hard bottoms, Reefs, SAV	Hard bottoms, Reefs	
Scamp	Pelagic	Pelagic	Hard bottoms, Mangroves, Reefs	Hard bottoms, Mangroves, Reefs	Hard bottoms, Reefs	Reefs, Shelf edge/slope
Yellowfin Grouper			SAV	Hard bottoms, SAV	Hard bottoms, Reefs	Hard bottoms

Source: Adapted from Table 3.2.7 in the final draft of the EIS from the Generic EFH Amendment (GMFMC 2004a) and consolidated in this document.

APPENDIX D. ALTERNATIVES CONSIDERED BUT REJECTED

Action 1 – Establishment of Private Angling and Federal For-hire Components 2.2.2

When Amendment 40 was initially taken out to scoping, the Council looked at three alternatives for this action. One was a no action alternative to not split the recreational sector, a second was a two-way partition of the recreational sector that would result in a private angling component and a for-hire component, and the third was a three-way split that would further divide the for hire component into a separate charterboat and headboat component (GMFMC 2013). The Council also looked at two options for inclusion in the for-hire component – just federally permitted for-hire vessels or both federally permitted and state permitted for-hire vessels.

In their discussion of the amendment, the Council determined to limit the scope of the action to just two components of the recreational sector – private angling and for-hire. This determination was made in part because of difficulties separating what is a headboat and what is a charter vessel because the same for-hire permit applies to both types of vessels. Also, the Council determined this would give them more flexibility in addressing for-hire management issues in future actions as they could develop options to apply to both charter vessels and headboats or each type individually. The Council also determined that adding state-permitted vessels to the for-hire component would be unmanageable because of difficulties in enforcing federal regulations on vessels that are limited to state waters when for-hire fishing for reef fish. Thus, the Council limited the scope of the for-hire component to just federally permitted for-hire vessels.

Action 2.2 – Headboat allocation adjustment to the baseline allocation under a voluntary federal for-hire component.

As mentioned in Section 2.2, Action 1, Alternative 2 was selected as preferred, which establishes a mandatory sector separation where all federal for-hire vessels would be in the federal for-hire component. As a result, there is no need to adjust the baseline allocation determined in Action 2 for vessel operators who decide to opt out of the for-hire component. Thus, on August 28, 2014, the Council removed Action 2.2 from consideration and put it in the considered but rejected section because this action would only apply if one of the Action 1 voluntary sector separation alternatives (Alternatives 3 and 4) were selected as preferred. The following are the alternatives considered in this action and a discussion of the alternatives.

Note: Headboats are defined as for-hire vessels that currently participate in the Southeast Region Headboat Survey administered by the Southeast Fishery Science Center. As of April 2014, 67 vessels met this definition (K. Brennan, Southeast Fisheries Science Center (SEFSC), pers. comm.).

Alternative 1. No Action. Do not adjust the baseline allocation for the federal for-hire component if headboats opt not to join.

Alternative 2. Adjust the baseline allocation by redistributing pounds from the federal for-hire component to the private angler component to account for headboats not opting to join the federal for-hire component. The number of pounds to be redistributed would be based on the number of headboats not opting to join the federal for-hire component multiplied by the average landings per headboat. These pounds would be subtracted from the baseline federal for-hire quota and added to the private-angler quota. Average landings per headboat would be based on the **proportion of the recreational quota harvested by all headboats divided by the total number of headboats** based on:

- Option a.** the most recent year that headboat logbook landings data are available.
- Option b.** the two most recent years that headboat logbook landings data are available.
- Option c.** the three most recent years that headboat logbook data landings are available

Alternative 3. Adjust the baseline allocation by redistributing pounds from the federal for-hire component to the private angler component to account for headboats not opting to join the federal for-hire component. These pounds would be subtracted from the baseline federal for-hire quota and added to the private-angler quota. For **each** non-participating headboat, the number of pounds to be redistributed would be determined by **the average proportion of the recreational quota harvested by that vessel during:**

- Option a.** the most recent year that headboat logbook landings data are available.
- Option b.** the two most recent years that headboat logbook landings data are available.
- Option c.** the three most recent years that headboat logbook data landings are available

Discussion

Baseline allocations of the recreational red snapper quota between the federal for-hire and private angling components considered in Action 2.1 assume that all federally permitted for-hire operators would join the federal for-hire component. However, Action 1, which would partition the recreational sector into two distinct components, includes voluntary options to allow for-hire operators to join or decide to be excluded from the federal for-hire component. Should some federally permitted for-hire operators elect to remain in the private angling component, allocation adjustments would be necessary. To account for the federally permitted for-hire operators who did not join the federal for-hire component, adjustments would redistribute a portion of the for-hire quota to the private angling component. Action 2.2 addresses allocation adjustments to account for headboat operators who are not part of the federal for-hire component. Adjustments to the baseline allocations to account for charter operators who are not included in the federal for-hire component are addressed in Action 2.3. Catch histories for headboats are available because headboat landings are recorded electronically and submitted on a weekly basis through the Southeast Region Headboat Survey. However, catch histories for individual charter vessels are not available.

Alternative 1 would not adjust the baseline allocation selected in Action 2.1 even if some headboat operators decide to remain in the private angling component. As a result, if a number of headboat operators are excluded from the federal for-hire component, **Alternative 1** would

consistently overestimate the proportion of the recreational red snapper quota allocated to the federal for-hire component (and underestimate the percentage allocated to the private angling component).

Alternative 2 would adjust the baseline allocation between the components to account for headboat operators who decide to remain in the private angling component. For each headboat that does not join the federal for-hire component, **Alternative 2** would redistribute the average landings per headboat from the federal for-hire component to the private angling component.

Options a-c provide alternative time intervals that could be used to determine the average landings per headboat, e.g., the three most recent years that headboat logbook data landings are available (**Option c**). For a given time interval, average landings per headboat are estimated by dividing the average amount of red snapper harvests attributed to headboats by the number of headboats. The average amount of red snapper attributed to headboats would be a function of the baseline federal for-hire allocation and of the percentage of for-hire landings assigned to headboats. Percentages of for-hire landings between 1986 and 2012 for federal for-hire charter boats and headboats are provided in Figure 2.2.2.1; averages over different time periods are provided in Table 2.2.2.1.

Table 2.2.2.1. Average annual percentages of for-hire landings attributed to federally permitted headboats and charter vessels for different time intervals. All time intervals exclude landings from 2010.

Time Intervals	Charter Vessels	Headboats
1986-2013	65%	35%
1991-2013	66%	34%
1996-2013	69%	31%
2001-2013	71%	29%
2006-2013	70%	30%
2011-2013	67%	33%
2012	64%	36%
2013	77%	23%

Source: NMFS SERO.

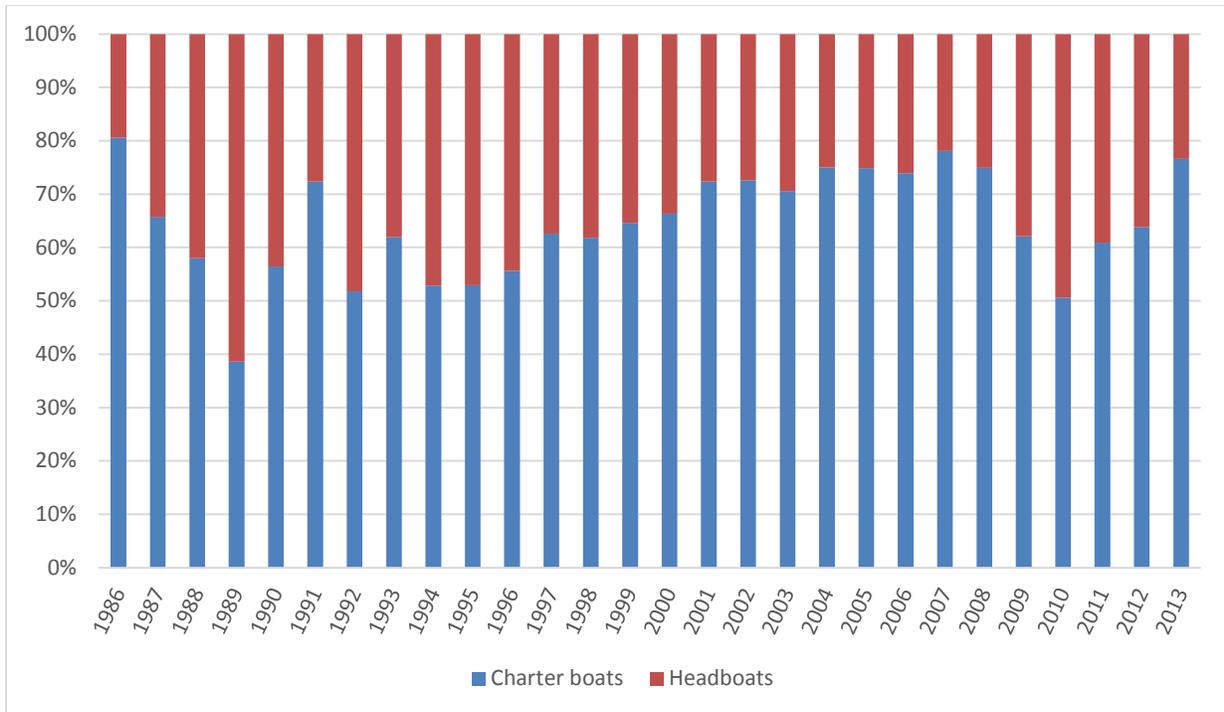


Figure 2.2.2.1. Percentages of for-hire landings attributed to federally permitted headboats and charter boats (1986-2013). Source: NMFS SERO.

Alternative 3 would also adjust the baseline allocation between the components to account for headboats who do not join the federal for-hire component. **Alternative 3** would adjust the baseline allocation by calculating the sum of the landings from the non-participating headboats, and redistributing this quota from the federal for-hire component to the private angling component. Headboat catch histories, which are collected by NMFS through the Southeast Headboat Survey, would be used to determine the harvest for each headboat. **Options a-c** consider different time periods for the determination of headboat landings to use. To determine landings for a given headboat, **Option a** would only consider the most recent year that logbook data are available for that headboat. **Options b** and **c** would use the two most recent years and the three most recent years that logbook data are available for that headboat, respectively.

2.2.3 Action 2.3 – Charter vessel allocation adjustment to the baseline allocation under a voluntary for-hire component.

As mentioned in Section 2.2, Action 1, Alternative 2 was selected as preferred, which establishes a mandatory sector separation where all federal for-hire vessels would be in the federal for-hire component. As a result, there is no need to adjust the baseline allocation determined in Action 2.1 for vessel operators who decide to opt out of the for-hire component. Thus, on August 28, 2014, the Council removed Action 2.3 from consideration and put it in the considered but rejected section because this action would only apply if one of the Action 1 voluntary sector separation alternatives (Alternatives 3 and 4) were selected as preferred. The following are the alternatives considered in this action and a discussion of the alternatives.

Alternative 1. No Action. Do not adjust the baseline allocation for charter vessels not opting to join the federal for-hire component.

Alternative 2. Adjust the baseline allocation by redistributing pounds from the federal for-hire component to the private angler component to account for federally-permitted reef fish charter vessels not opting to join the federal for-hire component. The number of pounds to be redistributed would be based on the number of charter vessels not opting to join the federal for-hire component multiplied by the average landings per charter vessel. These pounds would be subtracted from the baseline federal for-hire quota and added to the private-angler quota. Average landings per charter vessel would be based on the **proportion of the recreational quota harvested by all charter vessels divided by the total number of charter vessels** using:

- Option a.** the most recent year that charter landings data are available.
- Option b.** the two most recent years that charter landings data are available.
- Option c.** the three most recent years that charter landings data are available.

Alternative 3. Adjust the baseline allocation by redistributing pounds from the federal for-hire component to the private angler component to account for federally-permitted reef fish charter vessels not opting to join the federal for-hire component. These pounds would be subtracted from the baseline federal for-hire quota and added to the private-angler quota. For **each** non-participating charter vessel, the number of pounds to be redistributed would be determined by **the average proportion of the recreational quota harvested by a charter vessel, weighted by the baseline passenger capacity listed on that vessel's federal for-hire reef fish permit**. The average charter vessel harvest would be based on:

- Option a.** the most recent year that charter landings data are available.
- Option b.** the two most recent years that charter landings data are available.
- Option c.** the three most recent years that charter landings data are available.

Alternative 4. Adjust the baseline allocation by redistributing pounds from the federal for-hire component to the private angler component to account for federally-permitted reef fish charter vessels not opting to join the federal for-hire component. These pounds would be subtracted from the baseline federal for-hire quota and added to the private-angler quota. For **each** non-

participating charter vessel, the number of pounds to be redistributed would be determined by **the average proportion of the recreational quota harvested by a charter vessel in that vessel's homeport region**. The average charter vessel harvest would be based on:

- Option a.** the most recent year that charter landings data are available.
- Option b.** the two most recent years that charter landings data are available.
- Option c.** the three most recent years that charter landings data are available.

Alternative 5. Adjust the baseline allocation by redistributing pounds from the federal for-hire component to the private angler component to account for federally-permitted reef fish charter vessels not opting to join the federal for-hire component. These pounds would be subtracted from the baseline federal for-hire quota and added to the private-angler quota. For **each** non-participating charter vessel, the number of pounds to be redistributed would be determined by **the average proportion of the recreational quota harvested by a charter vessel in that vessel's homeport region, weighted by the baseline passenger capacity listed on that vessel's federal for-hire reef fish permit**. The average charter vessel harvest would be based on:

- Option a.** the most recent year that charter landings data are available.
- Option b.** the two most recent years that charter landings data are available.
- Option c.** the three most recent years that charter landings data are available.

Discussion

Alternative 1 would not adjust the baseline allocation selected in Action 2.1 even if some charter operators decide to remain in the private angling component. As a result, if a number of charter vessels are excluded from the federal for-hire component, **Alternative 1** would consistently overestimate the proportion of the recreational red snapper quota allocated to the federal for-hire component (and underestimate the percentage allocated to the private angling component).

Alternative 2 would adjust the baseline allocation between the private angling and federal for-hire components to account for charter vessels excluded from the federal for-hire component. Adjustments would redistribute the average harvest per federally permitted reef fish charter vessel multiplied by the number of charter vessels not opting to join the federal for-hire component from the federal for-hire component to the private angling component. **Alternative 2** considers different time periods for the determination of the average harvest per federally permitted reef fish charter vessel. To estimate average landings per charter vessel, **Option a** would use the most recent year that charter landings data are available. **Options b** and **c** would use the two most recent years and the three most recent years that charter landings data are available, respectively.

Alternative 3 would adjust the baseline allocation between the private angling and federal for-hire components to account for charter vessels who did not join the federal for-hire component but would also consider variations in average harvest rates of charter vessels based on passenger

capacity. **Alternative 3** would redistribute the average harvest per charter vessel multiplied by the number of charter vessels not included in the federal for-hire component from the federal for-hire component to the private angling component. The harvest for each charter vessel would be weighted by the baseline passenger capacity listed on the vessel’s federal for-hire reef fish permit. Vessels with higher passenger capacities would be weighted higher than vessels with lower passenger capacities. The distribution of charter vessels by passenger capacity is provided in Table 2.2.3.1.

Table 2.2.3.1. Federally permitted reef fish charter boats (excluding headboats) by passenger capacity, as of March 2014.

Passenger Capacity	Charter Boats	
	Number	Percent
6	1,087	85.5
7 to 20	63	5.0
21 to 40	76	6.0
41 to 60	27	2.1
61 to 100	9	0.7
100+	9	0.7
Total	1,271	100

Source: NMFS-SERO.

Alternative 3 considers different time periods for the determination of the average harvest per federally permitted reef fish charter vessel. To estimate average landings per charter vessel, **Option a** would use the most recent year that charter landings data are available. **Options b** and **c** would use the two most recent years and the three most recent years that charter landings data are available, respectively.

Alternative 4 would adjust the baseline allocation between the private angling and federal for-hire components to account for charter vessels who did not join the federal for-hire component but would also consider regional variations in average harvest rates of charter vessels.

Alternative 4 would redistribute the average harvest per charter vessel multiplied by the number of charter vessels not included in the federal for-hire component from the federal for-hire component to the private angling component. The harvest for each charter vessel would be weighted by landings from the region of the vessel’s homeport. Vessels from regions with higher landings would be weighted higher than vessels from regions with lower landings.

Alternative 4 considers different time periods for the determination of the average harvest per federally permitted reef fish charter boat. The number of charter boats by region and average proportions of the federal charter boats’ harvests attributed to each region are provided in Table 2.2.3.2. To estimate average landings per charter boat, **Option a** would use the most recent year that charter landings data are available. **Options b** and **c** would use the two most recent years and the three most recent years that charter landings data are available, respectively.

Table 2.2.3.2. Average landings of red snapper attributed to each region for 2004-2012 (Percent Landings) and number of charter boats by region, as of March 2014. Headboats have been excluded.

Region	Percent Landings	Charter Boats
Alabama	27.0	151
W Florida - Keys	0.2	101
W Florida - Panhandle	54.3	276
W Florida - Peninsula	2.4	362
Louisiana	12.5	116
Mississippi	0.3	42
Texas	3.4	199
Out of Gulf	0.0	24
Total	100	1,271

Source: NMFS-SERO.

Alternative 5 would adjust the baseline allocation between the federal for-hire and private angling components to account for charter vessels who did not join the federal for-hire component but would consider the passenger capacity and regional variations in average harvest rates of charter vessels. Vessels with higher passenger capacities and from regions with higher landings would be weighted higher than vessels with low passenger capacities and from regions with lower landings. To estimate average landings per charter vessel, **Option a** would use the most recent year that charter landings data are available. **Options b** and **c** would use the two most recent years and the three most recent years that charter landings data are available, respectively.

GMFMC. 2013. Reef Fish Amendment 40 Sector Separation Guide.

http://sero.nmfs.noaa.gov/sustainable_fisheries/gulf_fisheries/reef_fish/2013/am40/documents/pdfs/am40_sector_separation_guide.pdf

APPENDIX E. SUMMARIES OF COMMENTS RECEIVED

This section provides summaries of the comments received pertaining to Reef Fish Amendment 40: Recreational Red Snapper Sector Separation.

- I. Summary of written comments received from the public by the Council from October 2013 until the February 2014 Council meeting. This summary was presented to Council members at the February 2014 meeting.
- II. Summary of scoping comments received by NOAA Fisheries on the Notice of Intent to prepare an environmental impact statement (EIS).
- III. Two summaries of written public comments received by the Council. **IIIa** includes comments received between the February and June 2014 Council meetings; **IIIb** summarizes comments received between the June and August 2014 Council meetings.
- IV. Summary of public hearings, conducted during August 2014.
- V. Comment letter on the draft environmental impact statement (DEIS) from the Environmental Protection Agency (EPA).
- VI. Response to comments from the EPA on the DEIS for Amendment 40.
- VII. Response to comments from the public on the DEIS for Amendment 40.

Comments received prior to the October 2013 Council meeting can be read online at the following two links:

http://www.gulfcouncil.org/fishery_management_plans/Public%20Comment/Sector_Separation/Comments.pdf

http://www.gulfcouncil.org/fishery_management_plans/Public%20Comment/Sector_Separation/Sector%20Allocation/Sector%20Allocation/Amendment%2028%20-%20Sector%20Allocation/Comments.pdf

I. Summary of written comments received by the Council since the October 2013 Council meeting, through January 27, 2014.

- Action 1 – Favors a definition of the recreational component that would put the non-federally permitted for-hire boats into the same category as private recreational anglers.
- Action 2 – Favors an allocation of the recreational quota based on the historical percentage distribution when the moratorium on new permits was issued in 2004 when 55% of the recreational quota was caught by federally permitted for-hire vessels.
- Action 2 – Allocation should be based on historical landings of each set of user groups – 1986 – 2011.
- Action 3 – If you hold a valid federal reef permit, you should be counted as part of the reef fish fishery.
- Action 4 -there should be separate accountability measures for each component of the recreational sector.

- Recreational anglers are recreational anglers regardless of how they access the fishery.
- Sector separation will create smaller groups and further divide anglers creating adverse social impacts within the angling community.
- Sector separation would be unfair to the recreational fisherman.
- Would unfairly distribute red snapper quotas away from private recreational anglers.
- Sector separation would take away half the recreational red snapper catch opportunity.
- Sector separation will grant one sector access at the expense of another.
- Sector separation would result in the growth of the CFH allocation and the demise of the private recreational angler.
- Public resource should not be allocated to a select few for profit.
- CFH are more efficient at catching red snapper, and therefore have a greater impact on the fishery, and they don't contribute as much to the economy.
- Sector separation will force small businesses to close, as what happened in the Alaska crab fishery.
- Tourism is a huge part of the economy and allowing sector separation will preserve the right for tourists to fish and help all tourism based businesses survive.
- For-hire boats will have such a high percentage of the quota that the private anglers' window to fish could be further diminished.
- There is no analysis that sector separation will provide more days to the for-hire fleet or that it will benefit the resource.
- The CFH industry as a whole will suffer while a handful of individuals will greatly benefit.
- Without massive consolidation in the for-hire component, there will not be enough allocation to benefit anyone.
- Without a new FMP for each sector, there will be no improvement in data collection.
- CFH and private recreational anglers are different and should be managed as such.
- Sector separation would allow for flexible management plans, resulting in greater opportunities for the general public to access the fishery.
- Require CFH to use a strict reporting system, which would provide better data and allow them to remain within their quota.
- Will allow for 100% accountability in the CFH sector.
- Action 4 would implement the biggest for-hire red snapper derby fishing season ever seen in the Gulf.
- Sector separation should not be initiated into the Council process unless and until existing allocations are reexamined and alternatives to sector separation are fully evaluated.
- Move forward to at least work out the details to see how it will affect the fishery.
- Favors a more flexible harvest period for all anglers – even if it means a reduced limit.
- Set the quotas based on location instead of separating the sectors.
- Each person should have a size limit and quota regardless of whether fishing from a CFH or a private boat.

II. Summary of Scoping Comments received by NOAA Fisheries on the Reef Fish Amendment 40 Notice of Intent to prepare an Environmental Impact Statement (EIS)

The comment period was open from December 24, 2013, through January 23, 2014, and nine comments were received. These comments may be viewed at <http://www.regulations.gov/#!documentDetail;D=NOAA-NMFS-2013-0178-0001>

There were four comments in support of sector separation and five that were against it. Comments in support of sector separation cited different management needs between the for-hire and private angling components of the recreational sector as well as providing a route to achieving better accountability in for-hire landings as reasons to support the amendment. Comments against sector separation cited taking fishing days away from the private angling component, the action amounted to a grab for fish by the for-hire component, and that most participants in the recreational sector are against sector separation.

IIIa. Summary of written comments received by the Council from the February 2013, until the June 2014 Council meeting (2/7/14 – 6/20/14).

Comments in support of Amendment 40:

- Supports annual voluntary participation.
- The charter industry creates jobs and educates the public.
- It will ensure fishing rights for all.
- The general public depends on the charter industry to access the resource.
- The charter industry wants to be accountable.
- It will provide a long-term solution.
- It is unfair for the for-hire component, which is comprised of more accountable vessels with less management uncertainty, to be covered by the same buffers and payback provisions as private anglers.
- Would promote safety at sea.
- Would conserve our natural resource by controlling harvest and improving discard mortality.
- Would allow flexibility in the charter industry.
- Would stop derby fishing.
- Would increase levels of accountability using real-time data.
- Would help industry by providing some stability.
- Amendment 30B has already separated the sectors by prohibiting charter vessels from fishing for red snapper in state waters when the federal season is closed.

Comments in opposition to Amendment 40:

- It will result in transferrable ITQs. ITQs should be “on loan” and returned when no longer being used so other participants and/or new entrants may use them.

- A recreational angler is a recreational angler whether fishing from a private boat or a charter vessel.
- Would hurt tourism.

Other comments include:

- CFH in the eastern Gulf is different than CFH in western Gulf so the resource should be managed under regional management instead.
- Economics – recreational fishing brings more jobs and money to a hurting population.
- Incorporate Accountability Measures into Amendment 40.
- Make red snapper a game fish.
- The Headboat Pilot Program is unfair and unethical.
- Put more limits on the commercial sector.
- Increase artificial reefs and other structures.

IIIb. Summary of written comments received by the Council between the June and August 2014 Council meetings (6/21/14 – 8/14/14).

Comments in opposition to Amendment 40:

- Support Action 1 – Alternative 1 – No Action
- Support Action 3 – Alternative 1 – No Action
- Sector Separation will cause further division among recreational fishermen.
- Sector Separation is not in line with National Standard 4.
- There is no biological advantage to Sector Separation.
- Sector Separation will lead to a greater decrease in the recreational quota.
- A recreational angler is a recreational angler regardless of how they access the fishery.
- Sector Separation will not help rebuild the stock nor will it resolve any management issues.
- Sector Separation will result in a 12-month season for Charter-for-hire and the recreational season will continue to get shorter and shorter.
- Sector Separation will result in the eventual end of access to a public resource by private anglers.
- Charter-for-hire vessels belong in the commercial sector – take some of the commercial allocation to create a charter-for-hire component.
- Sector Separation is discriminatory.
- Sector Separation will have a negative effect on recreational anglers, marinas, restaurants, hotels, and tourism.
- Sector Separation would amount to privatization of a public resource.
- Sector Separation would result in 75% of the Gulf of Mexico reef fish fishery being privately held by a few individuals.
- Sector Separation would set a bad precedent that could be extended to other species.
- Sector Separation will effectively eliminate a federal recreational red snapper season.
- Sector Separation is punitive to the recreational angler.

Comments in support of Amendment 40:

- Support for Action 1 – Alternative 3.
- Support Action 1 – Alternative 2.
- Support Action 3 – Alternative 2.
- Sector Separation will allow the Charter-for-hire industry to be more accountable and sustainable.
- Support for Sector Separation and VMS on Charter-for-hire vessels.
- Sector Separation will provide the foundation for improving management within the recreational fishery.
- Sector Separation will allow the development of management strategies that meet the needs of the different groups.

Other Comments:

- Include a discussion in Action 3 noting that annual catch targets will be calculated and payback provisions will be applied for each sector using the same methodology proposed in the Red Snapper Accountability Measures Framework Action.
- Implement a tag system.
- Manage by numbers of fish instead of pounds of fish.
- Move to state control of the red snapper resource
- Implement an 18” – 24” slot limit, 4-fish bag limit, and a 2-month season.

IV. Summary of Public Hearings held in August 2014

Hilton Galveston Island Hotel
5400 Seawall Blvd.
Galveston Island, TX 77551

Renaissance Mobile Riverview Plaza
64 S. Water Street
Mobile, AL 36602

Sirata Beach Hotel
5300 Gulf Blvd.
St. Petersburg, FL 33706

Holiday Inn Select
2001 MLK Blvd.
Panama City, FL 32405

Plantation Suites & Conference Center
1909 State Highway 361
Port Aransas, TX 78373

Hyatt Place Baton Rouge
6080 Bluebonnet Blvd.
Baton Rouge, LA 70808

Fairfield Inn & Suites
3111 Loop Road
Orange Beach, AL 36561

Courtyard by Marriott
1600 E. Beach Blvd.
Gulfport, MS 39501

Port Aransas, Texas August 5, 2014

Council/Staff

Lance Robinson
Morgan Kilgour
Emily Muehlstein

53 people attended.

Norman Oates – CCA, recreational angler

Opposes sector separation. Supports Action 1, Alternative 1. Sector separation is the first step to privately held fisheries, and there is no economic information to back up the decision. Only a fraction of the for-hire operators are in favor, and many will find themselves tied to the dock along with the private anglers if this program is instated. Accountability is not the main purpose of this amendment. The federal system has failed the recreational fishing public. States have managed their inshore species very well. The recreational sector should stay united.

Personally, he believes that no one deserves a personal share of a public resource. June is a bad time to fish. He follows the rules and is a conservationist. Allocation and quotas are outdated; there are plenty of snapper and there is no reason for a 9-day season.

Troy Williamson – recreational angler

Opposes sector separation and recommends to approve Action 1, Alternative 1. He doesn't support status quo. The Council should consider some type of harvest-based management rather than what we have today. We can't manage the recreational sector by pounds like we do the commercial sector. He opposes the privatization of a public resource. The commercial sector

has been given more than half the fish, which is a public resource, but are not required to pay resource rent like with the oil and timber industry; the public doesn't get anything back for it.

Butch Long – recreational angler

Opposes sector separation. Fishing for 40 years, he remembers when there were no rules and no snapper. But now there are all kinds of red snapper and all kinds of regulations. The system is broken and sector separation will not fix it, but it will take fish from the public and give them to a select group of charter captains. He would like the Council to make a new management system and allow the States to manage red snapper.

Monte Graham – recreational angler

Opposes sector separation. Supports Action 1, Alternative 1. He can't get out every day to fish, especially in June. The state has done a good job managing its local fish and waters and should be allowed to manage federal species as well.

Tammy Graham – recreational angler

Opposes sector separation. Supports no action on Amendment 40.

Justin Rockley – recreational angler

Opposes sector separation. Supports no action on Amendment 40. He supports recreational angling and hopes for the long-term survival of the recreational fishery.

Hughes Andry – tackle salesman and recreational angler

Opposes sector separation. Supports Action 1, Alternative 1.

Maryann Heiman – charter for-hire

Opposes sector separation. Supports Action 1, Alternative 1.

John Honeycutt – charter for-hire

Opposes sector separation. Supports Action 1, Alternative 1- no action. He does not believe that recreational and for-hire fishermen are different. Everyone has nine days to catch his fish. This year, it was rough and they didn't make many trips.

Mike Nugent – charter for-hire and Port Aransas Boatman Association

Opposes sector separation. Supports Action 1, Alternative 1- no action. The Association has been opposed to sector separation since the beginning and he doesn't see that changing. For-hire operators are commercial entities and they make money. If you pay money to fish, you need to keep in mind that the proponents of sector separation take private recreational anglers fishing. This is a cash grab because according to 407d of the Magnuson-Stevens Act, the entire sector is closed when the quota is met. Sector separation is a preamble to catch shares. The fishermen in favor of sector separation haven't even tried to remove 407d.

John Maddock – recreational angler

He can't stop anyone from opening a business in his town. It's not fair that the commercial fishermen have been given a private share of the public resource and sector separation will do the same.

Cliff Strain – charter for-hire

Opposes sector separation. Supports Action 1, Alternative 1 - no action. He is opposed even though he believes that fishermen will be punished with short seasons if they don't support sector separation. There are inherent problems with management: it is not regionally specific; it doesn't account for the weather or habitat loss; and, it doesn't reflect the health of the fish stocks. The Council is supposed to make rules that are equitable for all Americans whether they are private, charter, headboat, or seafood consumers. The Council can't seem to figure what the size of the pie is, so coming up with allocation alternatives doesn't seem right. Discounting 2010 catch data in Action 2 shows how out of touch the Council is; the eastern Gulf was affected but it didn't mess with Texas. He believes that Texas data plays little to no role in the fishery.

Glen Martin – marina owner

Opposes sector separation. Supports no action because sector separation is a ploy to divide and conquer. The Council has put the recreational fishermen at odds with shrimpers, with the commercial industry, and now the Council is trying to put the largest sector at odds with each other. Sector separation is one step short of catch shares and privatization of the resource.

**Galveston, Texas
August 4, 2014**

Council/Staff

Lance Robinson
Morgan Kilgour
Emily Muehlstein

99 people attended.

Bruce Danieki – recreational angler

Opposes sector separation. Supports Action 1, Alternative 1, because it increases economic benefits. Amendment 40 indicates a decrease in charter for-hire participation and an increase in recreational saltwater licenses. Private recreational anglers land twice as many fish as the charter for-hire industry. The private anglers can take more people to enjoy the resource, are less efficient so they catch less per capita, and are better for the stock and the economy. Amendment 28 is where attention is needed, not sector separation. It's the 2.8 million private anglers, not the 1,400 charter operators that pay the lion's share into the management of our fisheries. Anyone that has wet a line would agree that red snapper are the most abundant species on the Texas coast with the shortest season. So, either the science is incorrect or it is interpreted wrong.

Todd Hanslik – recreational angler

Opposes sector separation. Supports Action 1, Alternative 1. Sector separation is a proven failure in Alaska. He is also in favor of Action 3, Alternative 1. The Council should continue to open and close the recreational fishery together. The Council should provide equitable access to the fishery and should follow the action of the ad hoc panel that recommended no action. Sector separation could lead to privatization of our fishery which only leads to conflict. The Council

should focus on getting better data on fishing effort and the viability of fishing stocks. There is no shortage of fish and everyone should have equal access to the fishery.

Bill Cochran – charter for-hire

Supports sector separation, and Action 1, Preferred Alternative 2 because he cannot make a living with these short seasons. Once the commercial fishery became accountable, its management got better. Sector separation will pave the way for good data from the few charter boats. The recreational fishery needs more days, and in order to get good data it needs to separate the different components of the fishery and get the data from each group when it can, and how it can. Accountability in the recreational sector is one of the major benefits of sector separation. The private anglers are doing what they are told by following the seasons and rules but continue to overharvest. Once the for-hire component is separated, the private anglers can be given the system they need to get what they need, such as iSnapper or a tag program.

Randy King – charter for-hire and recreational angler

Opposes sector separation. Supports Action 1, Alternative 1. Sector separation should give him a better opportunity as a charter captain but he doesn't believe the science. If the science is flawed then the results will be flawed. The science is illogical; they fish all year on the charter boats and have to work through the snapper. There are plenty of fish, and it makes no sense that recreational fishermen are limited to nine days. There are lots of competing interests, and, in this industry, everyone wants to take care of the fishery. Recreational fishermen all support the fish as members of organizations like the Bill Fish Foundation, Recreational Fishing Alliance, and Coastal Conservation Association. The process of management is ill informed, and he is hesitant to support a program that could make it worse.

Bubba Cochran – commercial and charter for-hire

Supports sector separation, Action 1, Preferred Alternative 2, and Action 2, Preferred Alternative 4. He opposes a voluntary program because he doesn't agree with the composition of the sector changing every year. Sector separation has become a solution because of the recreational sector overages. The Council is tasked with stopping overages and this amendment will allow for that. The charter boats will have to report, and if they have overruns, there will have to be paybacks. The Council hasn't been given any other options to improve the fishery. He wants to hear better ideas on how to manage the overages, but he hasn't heard solutions from the private anglers.

Robert Braglia – recreational angler

Opposes sector separation. Supports Action 1, Alternative 1, and urges the Council to support Action 3, Alternative 1. Every year the recreational season decreases. He tows his boat 230 miles to fish and has never made a dollar doing it. He has seen the fish populations increase, but he's worried that there won't be a season when his children are old enough to fish.

Chuck Richey – recreational angler

Opposes sector separation. Supports Action 1, Alternative 1 and urges the Council to continue with status quo. He believes that fishermen with business plans are not recreational fishermen. Once money gets involved, things become an issue.

Joel McDaniel – recreational angler

Opposes sector separation. Supports Action 1, Alternative 1, and Action 3, Alternative 1. He has a very small boat and very easy to catch many big fish. Charter boats are making money, so should be considered commercial fishermen.

James Henderson – recreational angler and hotel owner

Supports sector separation, and Action 1, Preferred Alternative 2. More data are needed, and sector separation will allow for it. In his tourism business, people come from all over the world to fish for red snapper and sector separation would allow his guests to fish more days.

Dan Alford – recreational angler

Opposes sector separation. Supports Action 1, Alternative 1; and Action 3, Alternative 1. He would like these meetings to be publicized earlier and better, because he missed the meetings to change vermilion rules and disagrees with what was done.

Steve Cunningham – charter for-hire

Supports sector separation. Supports Action 1, Preferred Alternative 2; although, he would support Alternative 3 if it wasn't for the complication of opting in and out of the program. For Action 2.1 he prefers Alternative 3, but supports Preferred Alternative 4. Sector separation would lead to approximately half of the recreational landings having accurate data. Then, NMFS won't be allowed to apply the huge correction factor to the annual catch and adjust it away from the next year's season.

Scott Hickman – charter for-hire and commercial

Supports sector separation. The sectors are already separated. The Gulf States have year round seasons but the federally permitted charters can't fish the state seasons. The majority of the public in this country do not have the discretionary income to buy a private boat. The charter boats brought sector separation to the Council six years ago as a solution. He never hears solutions from the private anglers, and he wants the charter industry to be able to harvest the portion of the catch that they have been harvesting historically. It is not only the right thing to do for the charter industry, but for the majority of Americans that want to fish.

Brian Anderson – recreational angler

Opposes sector separation. Supports Action 1, Alternative 1, and Action 3, Alternative 1. He is a small boat owner, and he likes to catch red snapper rather than buy it. He fishes with his kids and enjoys it. When he started fishing, the limit was 4 fish with a 9-month season. Constantly limiting the catch and the days has made it so he cannot go out. Now people can't catch anything but snapper, and he thinks the short season may be the reason. Everyone should all be together as one sector. It's good to have out-of-state tourists come in, but they don't buy the fuel and the boats. Per fish, recreational fishing creates more jobs, money, and benefits to the community. He wants to stay together so if something is done to one, it's done to all. He doesn't understand how it's possible to bust the annual catch limit each year with so many fish out there. The data must be wrong.

Thomas Archer – recreational angler

Opposes sector separation. Supports Action 1, Alternative 1, and Action 3, Alternative 1. He understands both sides, but has a hard time dealing with the numbers that say that there are only 1,300 federal for-hire boats and there are hundreds of thousands of private anglers with an almost 50/50 split of the allocation. It would really hurt the economy to take away offshore fishing opportunity. He is afraid his youngest son will never be allowed to catch a snapper because by the time he is old enough, someone will already own all the red snapper.

Scott Alford – recreational angler

Opposes sector separation. Supports Action 1, Alternative 1, and Action 3, Alternative 1 because they will allow his children the opportunity to catch and keep snapper. Fishing offshore in your own boat builds individual spirit and self-reliance that is greatly diminishing among children these days. Why would you gift the rights to fish for profit? He acknowledges that this amendment wouldn't create catch shares, but it would allow for it in the long run. The economy would be better off without sector separation. There were 1,300 charter and 2.8 million private anglers. If only 1% of licensed anglers were offshore fishermen, and they fished 4 per boat, that would equal 7,000 recreational boats vs. 1,300 charter boats. The fuel, other expenses, and economic benefits are much greater from the private recreational anglers.

Jesse Zapada – charter for-hire

Supports sector separation because the private anglers already have a 365-day season, and the amendment would allow for better data collection. He has seen red snapper fishing coming back to a level that is better than it has ever been, and he thinks in the next couple of years the Council will recognize that and be able to open the fishery back up.

Mike Ross – recreational angler

Supports sector separation, and Action 1, Preferred Alternative 2. He used to own a boat. Now, he fishes off of charter boats and it makes his life easy. Red snapper are incredible fish and this amendment will help the data. He trusts the Council, but he doesn't like the data. Separating the recreational sector will allow for better data which will lead to better fishing regulations.

Kristen McConnell – Environmental Defense Fund

Supports Amendment 40 and sector separation because everyone needs flexibility and predictable management to increase fishing opportunity. A nine-day season stinks for everyone, and it punishes everyone for management that is broken. The Council is forced into buffers and paybacks, and this is a proactive approach to solving the problem. The best kinds of management are designed and customized for the user. We want local regulations that meet our needs. It's clear that the different fisheries have different needs. Move forward with sector separation and then quickly move forward with new management schemes to improve the fishery.

Dan Green – charter for-hire

Supports sector separation and the rest of the Council's preferred alternatives.

Mike Jennings – charter for-hire and President of the Charter Fishing Association
Supports sector separation and the Council’s preferred alternatives. The Council is looking at sector separation because a group of charter fishermen asked for this as an alternative to current management, allowing each sector to pursue a management plan that would most benefit the individual component. As an example, the Council has looked at changing the season structure to solve the issue of shortened seasons. The private anglers would like weekend seasons, and charter operators would prefer weekday fishing opportunities.

Jim Morrison – Chairman of Artificial Reef AP for Texas
Texas has built and created lots of habitat for red snapper. The recreational sector for the fishery has contributed \$3.6 million to habitat protection since 2009 and additional funds have established hatcheries. The commercial sector makes money off the resource but doesn’t contribute to research, hatcheries, or habitat enhancement. The commercial fishermen give nothing back. There is nothing in the amendment that is positive for the fishery and he urges the Council to go back to the drawing board. This argument has gone on for years.

Michael Short – charter for-hire
Supports sector separation and all the preferred alternatives in the document. The recreational sector gets 365 days of snapper season in state waters and he gets 9 days offshore.

Serena Etie – charter for-hire, commercial, and recreational angler
It’s hard for her decide whether she is for or against the idea because she doesn’t know how it will benefit or hurt her. She feels as though the Council is pitting the private and for-hire operators against each other. Everyone wants the same things and she can’t give a strong opinion either way. She thinks there are plenty of fish and people need more opportunity to catch them.

David Woodworth – charter for-hire
Supports sector separation.

Dennis Peterson – recreational angler
Opposes sector separation. Supports Action 1, Alternative 1 and Action 3, Alternative 1. He hates the loss of habitat because it will destroy the fish. He eats the most expensive snapper in Texas because he owns his own boat but, he will continue to do so because he wants to show his grandson the thrill of catching snapper on his own boat. His only economic motive is to find enough money for gas because he wants to fish. Everyone is in this together and needs to find a common ground that benefits everyone.

Brian Hoogendam – recreational angler
Opposes sector separation. Red snapper costs him about \$150 a pound. He does not fish 365 days a year and the government should not calculate his allowable catch using that number of days. It’s wrong that he can buy a red snapper for \$7 a pound every day, but he can’t catch his own. Why are we using bad data as the basis to collect new data? He has been fishing for years, and not one person has ever asked him what he is catching. He also knows a number of charter captains that have never been asked and hates the idea of using a new bad data system.

Jason Wood – charter for-hire
Supports sector separation.

Bill Platt – charter for-hire and owner of marine electronics business
Supports sector separation, followed by the creation of a better management system. He can't make it as a charter captain with a 9-day season. The Gulf is full of snapper and people need to be able to catch them. There needs to be a better management system. If there is a better system, there will be better data, they will be able to fish more, sell more boats, and more electronics.

Jeff Young – recreational angler
Opposes sector separation. Supports Action 1, Alternative 1 and Action 3, Alternative 1. He wants the Council to maintain a single recreational closure. He suggests the Council follow the advice of the Ad Hoc Red Snapper AP and select no action. The Council should continue to gather better data. There are plenty of fish to share.

Jillian Williams – charter for-hire (headboat)
Supports sector separation. She understands that everyone is frustrated with a 9-day season. Because she is in the headboat pilot program she will be able to fish next year; she may not have survived the 9-day season otherwise. The party boats really need red snapper because it is not practical for her to catch 83 amberjack on a headboat. She doesn't want to steal anyone's fish, and she just wants to be able to explore more options for her company and for the private anglers as well.

Johnny Williams – charter for-hire (headboat)
Supports sector separation. He also agrees with those who oppose sector separation and say that earning a living from the resource excludes charter for-hire boats from being a recreational fishermen. He is not a recreational angler and he fishes for a living, so he should be in a separate category. The last few years' seasons have been really short because the states have been opening year round seasons. He keeps hearing that everything should be fair and equal, but private anglers aren't required to have federal permits, don't have a moratorium on access, restrictions on crew keeping fish, and they are not limited from the state seasons. The sectors are not equal and should not be treated that way. The private anglers are putting the for-hire industry out of business, and it's not fair. The for-hire operators are not asking for fish that don't belong to them. They used to be a bigger component, and they are dwindling. This is the only thing that will allow them to maintain a business.

Larry Gardar – recreational angler
Opposes sector separation. He believes we are here because of money. The Council is using a divide-and-conquer strategy. He watched eastern European and Japanese trawlers come and tear up the bottom, and Panama City boats unload large snapper here at the docks. Party boat fishermen say that recreational fishermen are not keeping data, but he has watched guide after guide be inconsistent with regulations. Government has never done anything right.

Josh Johnson – recreational angler

Opposes sector separation. Supports Action 1, Alternative 1, and Action 3, Alternative 1. He has noticed a significant increase in the number and size of red snapper. Anyone making money should be classified as commercial although the anglers on the charter boats are recreational.

Arron Grace – charter for-hire

Supports sector separation, Action 1, Preferred Alternative 2, and Action 2, Preferred Alternative 4, because the two components are already separate. It is obvious that there are enough fish.

Gary Hough – recreational angler

Opposes sector separation. Supports Action 1, Alternative 1. It sounds like someone is driving a wedge between both of the groups. The charter and headboats are unhappy because they're not able to fish despite the amount of fish. The for-hire guys can't fish because of the government, not because of the private anglers. Texas Parks and Wildlife had a great survey this year, and the sectors need to stay together not be divided. The pie is big and there are plenty of fish for everyone. He understands the problems facing the charter industry, but is against sector separation because the sectors need to work together not apart.

James Nantz – recreational angler and commercial

Supports sector separation. You can fish for snapper all year round even if you can't keep them. There are nine other species of snapper to target.

Warren Clark – recreational angler

Opposes sector separation. Supports Action 1, Alternative 1 and Action 3, Alternative 1. The States have successfully managed the fishery for a century and the federal government needs to get out of the fishing business.

Jason Delgado – recreational angler

Opposes sector separation. This is an artificial crisis. The division amongst charter and private anglers is sad because he has learned a lot from for-hire captains. Red snapper are plentiful in 45 feet, 650 feet, and even trolling; they're everywhere. Anglers have to avoid the snapper to catch other species. The problem is the data; bad catch data and bad estimations on biomass. People need to let their representatives know and vote. Everyone is arguing with the wrong people at the public hearing; the real action comes in voting.

Shannon Williams – charter for-hire (headboat)

Supports sector separation, Action 1, Preferred Alternative 2, and Action 2.1, Preferred Alternative 4. She talks to people every day about their first opportunity to fish and they are excited to get to catch red snapper.

Nick Gotierrez – commercial fish house

He doesn't fish, but he can say that if the Council doesn't figure something out, if they maintain the current management, then nothing will get better. The commercial fishing system is accountable and do not overharvest. Sector separation is a step towards a system like the commercial program that would give the fishermen a better system. With sector separation, there would be better data and a better season than a 9-day season.

Greg Ball – charter for-hire

Supports sector separation and all the Council’s preferred alternatives.

Greg Verm – charter for-hire

Supports sector separation. The sectors are already separated because for-hire fishermen can’t fish state waters. Private anglers get 365 days and the charter industry gets 9 days. He wants a system like the commercial IFQ program and the private anglers need something like a tag system.

Buddy Guindon – commercial

Supports sector separation and Action 1, Preferred Alternative 2. Charter captains can take people from other places fishing. Let them do it when they want. There is a shift in allocation. The fish are going to the east. Texas has the most fish and the most fishing occurs in Florida and Alabama. The resource is already privatized with permits. The IFQ program allows him to supply the entire state of Texas with fish. If everyone wants Texas to lose, then keep doing nothing. Private anglers should be able to fish when they want with a tag system. The Council is forced to do this because there needs to be a different method of recreational angling. He doesn’t want the federal government to dictate how people run their business.

David Myers – recreational angler

Opposes sector separation and supports Action 1, Alternative 1.

Tommy Nolan – yacht sales

Opposes sector separation, supports Action 1, Alternative 1, and Action 3, Alternative 1. The data is incorrect and it scares him to talk about separating something that is wrong.

Tom Hilton – recreational angler

Opposes sector separation and supports Action 1, no action. The red snapper advisory panel recommends that for Action 1, the Council take no action. He recommends that the Council take a detailed economic analysis before decisions are made for sector separation. Moving forward with this data will not lead to anything better than we have now and the economic impacts of this will be terrible. Sector separation did not work well for the charter guys in Alaska. The captains he has spoken to in Alaska do not support sector separation. Recreational fisherman do not need sector separation to improve data collection. Alabama has a data collection program that shows great accountability and the Council does not need to separate to get the data. Get good data first, then talk about sector separation. Alabama is doing its own assessment of the red snapper population. The preliminary results are showing that there are 20 times more snapper in the Alabama reefing zone than what NMFS recognizes in the entire Gulf.

Shane Cantrell – charter for-hire

Supports sector separation and all the current preferred alternatives in Amendment 40. He hears that this amendment is driving a wedge between the private anglers and the charter boats, but that is wrong. The commercial industry supports Amendment 40. The private angling organizations including Coastal Conservation Association are the problem, and they are driving the wedge. The 365-day state season is their fault and leaves him only 9 days as a federally permitted boat. Status quo has gotten the recreational sector the 9 days and there are two

options: stick with what we have, which everyone hates or, build a system that works for everyone. He doesn't want what private anglers want, like weekend seasons and regional management. The fish are easy to catch so it makes sense that fishermen get their limit quick. Let the private recreational anglers solve their problems. He doesn't want to tell them how to go fishing, and he doesn't want to be stuck with a 9-day season.

Ricky McGaffe – charter for-hire

Supports sector separation because it will be good for everyone. He knows everyone here wants the same thing. The Council is not to blame. They need the data. He has watched the commercial fishermen get increase after increase, year after year, because they provide the data needed that can improve the fishery. He wants to take people fishing and he wants to keep fishing. Management is great except for the fact that people cannot fish. Sector separation will work in the long run for everyone.

**Baton Rouge, Louisiana
August 18, 2014**

Council/Staff

Camp Matens
Emily Muehlstein
Charlotte Schiaffo

163 people attended.

Rudy Valenciano – recreational angler

Opposes sector separation. He has fished south Florida extensively and has never caught a red snapper but states the fishery is different in Louisiana. Louisiana is the place for red snapper; they're so thick he can't even catch mangrove snapper.

Matt Marchand – recreational angler

Opposes sector separation. He believes that there is no recreational data. He wants to know the motivation for this amendment. If there is an issue with the snapper population, he wonders if there is science on the bycatch killed in shrimp trawls, destruction of oil rigs, and commercial bycatch.

Mark Matthews – recreational angler and tackle salesman

Opposes sector separation. The Council is not helping his business rather, the Council is the biggest threat to his business.

Kell McInnis – recreational angler

Opposes sector separation. He fishes on private and charter boats. He doesn't understand the basis for this amendment. Separating the two groups and taking their fish out of one pot will only limit opportunity for both sectors. If there is a nine-day season now, he can only imagine how short the season will be if the sectors are separated.

Craig Matherne – recreational angler and boat dealer

Opposes sector separation. The fishery used to be loaded with mangrove snapper, but now he has to weed through the red snapper to get to them. The red snapper population in Louisiana is displacing other species. Louisiana has a lot of red snapper, and if they're in such danger that the recreational sector can only fish nine days, then the Council should shut down commercial fishing as well. The population is healthier than the Council believes, and he doesn't want more control from a government agency.

Ric Kearny – recreational angler

Opposes sector separation. If the number of for-hire boats is divided by their proposed allocation and then divide the number of recreational boats by their proposed allocation, this amendment is unfair. Sector separation will create a monopoly, which is something the government has worked against forever. Dividing the recreational allocation leaves the private recreational anglers with crumbs, especially when how much private recreational anglers would be able to catch per boat is considered. Sector separation will leave private recreational anglers with no season.

Tim Godso – recreational angler

Opposes sector separation.

Michael Barrett – recreational angler

Opposes sector separation. He wants to fish for red snapper, but he can't because the season is too short. He would love to put red snapper in his freezer and have the right to catch them. The commercial fishermen seem to be the only people that can actually catch them and keep them. Red snapper should be taken out of federal control.

Margaret Burke – recreational angler

Opposes sector separation. She thinks the Council doesn't know anything. If the Council was actually out on the water, it would know that red snapper are a nuisance. Twenty years ago red snapper weren't swarming the boat, but now in Louisiana they are. She wants true scientific data commissioned by a non-biased agency, not the Environmental Defense Fund, to be used in management.

Gary Veillon – recreational angler

Opposes sector separation. He believes that fishing keeps kids off the street, and he doesn't understand why everyone can't go out and fish. Some people can't afford boats and some can. Likewise, some can't afford charters and some can. People should be able to fish whenever they want. The Council is pitting each group against one another, someone is going to lose. He wonders why the Council would considering giving people the rights to own fish.

Nick Rauber – recreational angler and proprietor of a fishing rodeo

Opposes sector separation. This past year there were over 600 people in the tournament, and the tournament raised hundreds of thousands of dollars for charity. If the Council decides to divide and conquer, then everyone loses: anglers and benefactors of charity alike. He has never seen so much opposition from any one group about the regulations. This tournament raises money for many causes including muscular dystrophy, and he wants to continue being able to do it.

Jeff Lee – recreational angler

Opposes sector separation. He stated it is a way to divide and conquer the fishery. The data are terribly skewed; he has only been surveyed once in his entire lifetime of fishing. Sector separation is about control and about squashing the different fisheries.

Kenny Acosta – recreational angler

Opposes sector separation. He has worked for 45 years in a chemical plant and understands that everyone needs to work for a living, so he is not against the commercial fishermen. He can't understand why there is only a nine-day season with a two fish per person bag limit while commercial boats can fill up with red snapper all year round. He also believes that commercial fishermen have too much opportunity to not report.

Terry Douglas – recreational angler

Opposes sector separation.

Joseph Catino Jr. – recreational angler

Opposes sector separation.

Bran Bourg– recreational angler

Opposes sector separation. His family only got to fish once this year because the weather and tides limited fishing in the short season. Red snapper should be a resource owned by the public, by everyone in the country. Privatizing it is unjust. Sector separation is a divide-and-conquer technique. The commercial/recreational allocation is much more important, and this amendment is just a distraction from that.

George Huye – recreational angler and Red Snapper AP member

Opposes sector separation. It is startling what the Council is dealing with. The red snapper stock is fully recovered, but the recreational sector will only get a one-day season if the Council subtracts the overage from this year. Sector separation is just another way to reallocate the resource. A year ago anglers thought they were on the brink of picking up the overage, but the Council tabled that and sector separation returned. Sector separation is no more than a subsidy for commercial boats that will take fish from the private recreational and gift it to a commercial entity, a for-hire operator. This is the only public resource he knows of that is just given to public entities. Ranchers, timber men, and oil companies all have to pay a resource rent. However, commercial fishermen don't pay anything for the administration of their program or for their shares of IFQ. The Council's Preferred Alternative 2 (Action 1) will put recreational anglers down and the for-hire operators don't know if they will get an IFQ if they opt into this program. The Magnuson-Stevens Act requires an economic impact study be performed before amendments are enacted and that has not been done for this amendment. The Council doesn't want real data; they don't even know how many private recreational boats are in the Gulf.

Steve Tomeny – charter for-hire (headboat)

Supports sector separation. No one is happy with what is happening in the Gulf right now. He is in favor of sector separation because those who make their living in the Gulf believe that this is the only way they will survive. He takes about 3,000 people fishing each year and very few of them will come speak in their own defense. He has participated historically in this fishery. The

spike in landings of 2013 occurred in state waters; the private recreational anglers were allowed to catch more fish, but the for-hire boats couldn't. He wants to be managed differently. The biggest thing that sector separation will do is add accountability to the fishery. The commercial fishermen have a VMS, they hail in and out, and it is the most highly regulated fishery in the country. There is also a 3% tax on sales that pays for the administration of the program. If the Council is going to be in business, it needs to count every fish coming out of the water. He fills out a report on every trip and has for 25 years. Sector separation will count every fish caught on a charter boat, so a big chunk of fish harvested will get better data. There is a numbers problem; if a million recreational fishermen took one daily limit of red snapper with an 8-pound average, the total would be 16 million pounds of fish which is way over the 11 million pound quota.

Patrick Hardy – recreational angler

Opposes sector separation. An easy solution to the red snapper problem is to increase the quota. Adding habitat and discontinuing the destruction of rigs will help.

William Barnett – charter for-hire

Opposes sector separation. He has watched the red snapper population and the rules fluctuate his entire lifetime. He was a charter captain, but business was bad. He eventually got out it and a number of his peers decided to become commercial captains. As commercial fishermen, they fished under the derby and then got their IFQ. Now, they're millionaires and don't even have to fish. He's a recreational angler now and can't catch any other fish because the red snapper are so thick and overpopulated. There are no snapper in state waters west of Port O'Connor, Texas. They still have to rely on the federal fish.

Susan Boggs – charter for-hire (headboats)

Supports sector separation. She owns three boats with federal for-hire permits and a marina. In Amendment 40, she supports Action 1, Preferred Alternative 2; Action 2.1, either Alternative 2 or Preferred Alternative 4; Action 2.3, Alternative 4; Action 3, Preferred Alternative 2. After attending the public hearing in Orange Beach, she realized sector separation had already occurred, because the state seasons excluded for-hire vessels. Recreational anglers are taking fish from other private recreational anglers. Her boats have taken approximately 9,000 anglers fishing, and she wants to provide those anglers with access to the resource.

Joe Macaluso – Reporter for the Advocate

Supports sector separation with some reservations. He stated it was going to surprise a lot of people that he was in support of the preferred alternative (Action 1, Alternative 2). After being involved in the fishery and watching his fishermen friends for years, he has come to the conclusion that he wants fishermen to be able to run their businesses. Charter boats should be allowed to fish when they have customers scheduled. He does not agree with the Preferred Alternative 4 for Action 2 because the data are not good enough. The proponents of this amendment want the recreational components to fight amongst themselves. Fish can't be counted like cows are counted. The federal government has disappointed people over and over regarding how stocks are assessed. Charter fishermen have the right to be there just like private recreational anglers do; they have the right to do business. If people think the Council is giving for-hire operators fish, then the solution is to choose any of the current alternatives in Action 2.

Instead, the Council should consider charter operators a commercial venture and take part of the allocation from the commercial side and part from the recreational side.

Charles Carpenter – recreational angler

Opposed to sector separation. There is a saying amongst chemists “bad data is worse than no data.” There is confusion regarding the explanation of the snapper population. Off the Louisiana coast, the enormous population of red snapper is unusual and it’s not difficult to catch the limit of red snapper. Just like an overcrowded city, red snapper is overpopulated and anglers are catching them where they used to catch speckled trout. Something is wrong. Calling red snapper a pelagic species is wrong. He suggests the Council throw out the data point showing the spike in private recreational landings.

Richard Hanson – recreational angler

Opposed to sector separation. Supports Action 1, Alternative 1. NMFS needs to figure out how to count every snapper out there. They need to count them on the rigs and the artificial reefs, and until NMFS fixes the science, Amendment 40 should not be addressed.

Gunner Waldmann – recreational angler

Opposed to sector separation. Twenty-five years ago, Florida boats would come to the oil platforms to fish. The methodology used to assess the stocks is old and it needs to change. The methodology can be corrected by having the states do their own stock assessments. The destruction of rigs and dredging the sea floor affect the snapper population and need to be addressed. The Idol Iron Policy needs to slow down tremendously. He is opposed to Amendment 40 because red snapper belongs to everyone.

Randy Boggs – charter for-hire (headboats)

Supports sector separation. He is responsible for about 10,000 anglers a year and about half of them are from Louisiana. MRIP is the best data available and the Council must use it to manage our fishery. Next will be an amendment that will add payback provisions on the red snapper fishery. When that happens, even with a zero take in the federal fishery, if the quota is exceeded the sectors will have to pay it back. If the recreational sector goes into a negative fishery, then National Standard 1 of the Magnuson-Stevens Act will be triggered and the fishery will be closed. The South Atlantic got two days to fish red snapper in seven years because of its payback provision, and everything over there is closed. He supports sector separation because it puts accountability measures where they belong, on the sector that deserves it. If the sectors are separated, at least the charter boats will be able to fish.

David Cresson – Executive Director CCA

Opposed to sector separation. Payback provisions are evidence of a broken system. The rebound of the red snapper population in the 1990’s equated to the beginning of limits on red snapper. However, shrimp bycatch reduction is why the stock rebounded, not angler regulations. CCA has 20,000 members statewide who are vehemently opposed to sector separation. This is very much a recreational angler issue. Dividing the sector before considering allocation as a whole essentially blocks out the recreational fishery which is very important economically. This amendment will lead to catch shares which is a system designed to reduce fleet size. If this happens, the same thing that happened to the commercial fishery will happen to the charter fleet

across the Gulf. Moving forward with Amendment 40 would ignore the best science, economic data, public opinion, and the Gulf Council's own Advisory Panel. The Council should consider reallocation before moving forward.

Rad Trasher – recreational angler

Opposes sector separation. It's time for the Gulf Council to listen to the masses that obviously oppose the amendment. This will only divide the fishery. Recreational anglers are passionate about fishing and don't make any money from fishing.

Chris Macaluso – recreational angler

Opposes sector separation. Red snapper is a public resource, and anglers should be able to take family and friends fishing without having to pay for it. If this passes, the fishermen that contributed to the overages this year won't have to pay them back. If the for-hire fishermen get their own sector, they will get IFQ's. Band-aiding these problems is not helping. The Council needs to go to Congress and have them enact regulations and laws that reflect the ways that anglers fish. Numerous recreational fishing organizations are working for this reality and this will help the for-hire operators as well. The people who fish on for-hire boats are recreational fishermen and separating out a select group from the rest of the fishermen is wrong. Deer, ducks, and bass aren't managed this way and the solution to the problem is not to exclude more recreational fishermen.

Garret Graves – recreational angler

Opposes sector separation. People are fighting over the fishery and are forgetting that they are losing huge areas of habitat. NOAA was authorized to restore the coastal fisheries and has taken no action. Coastal Louisiana is different than anywhere else in the nation and only has three miles of state waters. Let's grow the pie rather than fight about the allocation. We need the ability to manage our own fisheries regionally based on accurate data.

Larry Hooper – charter for-hire

Opposes sector separation. The fact that fisherman are losing the rigs is a problem; the habitat is disappearing. He fished a rock pile in 32 feet of water and it took him an hour of weeding through small red snapper to get four keeper red snapper. There needs to be land restoration and rigs kept in place. The provisions in Amendment 30b restricts the charter fishermen and it was rescinded two years in a row by the Council. But, because the state waters were open the Council took it back. He believes the Council will act despite public comment against sector separation. He wants the allocation to be split more fairly and for the Council to take a better look at the split. It doesn't have to be in thirds but it needs to be fairer. The headboats in the pilot program can already fish the federal waters, and they will have their season cut when they reach their allotment of red snapper. He would like to see no action on this amendment until the Council has actual numbers and an economic study that will show how businesses will fare if sector separation goes into place. The recreational anglers put more money into the economy, but they will be shut out. He wants the charter folks to have a fair share, but right now we shouldn't do anything.

Fritz Englade – recreational angler

Opposes sector separation. The economic impact of passing sector separation would be a huge loss. He travels to the coast to fish snapper, and he was only able to fish snapper one weekend this year. He can't imagine the negative economic impact of the short snapper fishing season and said an economic study needed to be done. In Louisiana, there are only a few places where charter boats land. However, in Alabama and Florida there are towns every few miles that run charters. Boats in the eastern Gulf are taking too many fish.

Jim McDowell – recreational angler

Opposes sector separation. The Council needs to learn how to count snapper and allocation needs to be reconsidered. He supports the charter boat operators, but their business is for profit. Therefore, their quota should come from the commercial allocation.

Douglas Frey – recreational angler (spearfisher)

Opposes sector separation. He suggests that the Council go to regional management instead. The habitat and the population of red snapper in Louisiana is much different than it is in Florida. The Magnuson-Stevens Act doesn't work and needs to be repealed. The NOAA enforcement office listed 41 cases; twenty-one were given a warning and 20 were given a fine. Most of the infractions that got warnings were commercially related, including shark finning, foreign fishing, and more. Of the fines that were given, many were for recreational fishermen in possession of red snapper outside of the state waters. This clearly shows NOAA's intentions.

Public comment cards from people who did not wish to speak:

Opposed to sector separation:

Stephan Babcock
Mark Barker
Stephen Bennett
Miles Dixon
Bridget Forbes
Roy Forbes
Brad Fourrier
Carter Fourrier
Ed Francis
Mike Frenzez
Paul Frischhertz
Noah Hasslock
Reg Jones
Jay Leto

Harold Lehman
Matt Madese
Ray Marchand
Ann Marie Marmaolle
Garrett Matthews
Michael Matthews
Robert Matthews
Jeff Rabb
Jeff Smith
Perry Smith
Shanon Smith
Jerry Westmoreland
Troy Williams
David Yarbro

Support sector separation:

Jason Carny

Gulfport, Mississippi
August 19th, 2014

Council/Staff

Leanne Bosarge
Emily Muehlstein
Charlotte Schiaffo

62 people attended.

Tom Steber – President, Alabama Charter Fishing Association

Supports sector separation. The Alabama charter boats are 100% in favor of sector separation and accountability using VMS. The Council has to start somewhere so that recreational anglers can be accountable and grow the fishery again. He supports Action 1, Preferred Alternative 2.

Gary Bryant – charter for-hire, Alabama

Supports sector separation. The charter industry provides access to the private angler. He wants his share of the fish to provide access to the non-boating owning public. He supports Alternative 2 for Actions 1, 2, and 3.

Tom Ard – charter for-hire, Alabama

Supports sector separation. He is here to speak for the anglers that come from Mississippi to fish on his boat. About 15% of his business comes from Mississippi residents. He supports sector separation because it will put the charter industry back into the fishery and give more access to the non-boat owning public that fish on his boat.

Randy Boggs – charter for-hire (headboat), Alabama

Supports sector separation. Thirty percent of his business comes from Mississippi. The charter boats were put under a moratorium to weed people out of the fishery, and the fleet has been reduced. Those that have been strong enough to stay in business are still here, and he wants them to have a chance to continue with sector separation. He wants the tools to manage his fish differently than the private recreational anglers.

Gordon Burdette – charter for-hire, Alabama

Supports sector separation, and Action 2.1, Alternative 2. He takes many people from Louisiana and Mississippi fishing and wants to protect their rights to fish on his boat.

Billy Neff – charter for-hire, Alabama

Supports sector separation; Action 1, Preferred Alternative 2; and Action 2.1, Alternative 3.

Steve Tomeny – charter for-hire (headboat). Louisiana

Supports sector separation. He has advocated for sector separation for a long time because his industry is trying to restore its historical access to the fish. The for-hire industry has traditionally caught nearly 50% of the fish and they are being devastated by noncompliant state seasons. The noncompliance is an intentional way to go against federal management and it's killing the for-hire industry because they can't participate in the state seasons. He would like allocation to be

based on a timeframe before the moratorium and before the states opened their own state water seasons.

Albert Curry – recreational angler, Mississippi

Opposes sector separation. The idea that fewer and fewer individuals will have control of a public resource is appalling.

Dan Burnham – charter for-hire, Alabama

Supports sector separation and the Council's preferred alternatives. Charter boats give access to people that otherwise don't have access to the Gulf. If people were more educated on some of the payback provisions, the states might change their minds regarding non-compliant regulations.

Hale Dees – recreational angler, Mississippi

Opposes sector separation. He wants equal access to the fishery. He supports the no action alternatives. He does support improvement in the data system that is currently used. He has a long history in conservation work and believes that all the actions being considered tonight are worthless because the data aren't good. He believes that charter boats should be able to make a living and take fishermen fishing, but he is against the government taking more control just so someone can get a piece of the pie. Neither sub-sector should be given preference because red snapper is a public resource. He recommends the Council looks for a better data collection system. He would like a system like the duck data collection program to be used. An app should be developed to collect recreational data. Sector separation provides more control to the government to create more moratoriums and less fishing days in the future for everyone.

Skipper Thierry – charter for-hire (headboat), Alabama

Supports sector separation. All sectors must be accountable, and the charter for-hire industry wants to be. The Council is not taking fish from the private anglers; the reverse is true. State water seasons take away fishing opportunities from the for-hire sector. He takes several thousand fishermen from Mississippi fishing, and without sector separation, their access will be taken away. Separating sectors will simply guarantee access to the fishery to the American public.

Owen Johnson – recreational angler and CCA member, Mississippi

Opposes sector separation. He says there is not enough good reliable data to make any decision at this time.

F.J. Eicke – recreational angler, Mississippi

Opposes sector separation. The data the Council bases its conclusions on, particularly in regard to private recreational anglers, does not meet standards of validity. He was a member of the Red Snapper AP that voted to take no action on Amendment 40. The Council needs to know the ultimate consequences of an action before it takes it, or the Council will regret it in the end. The vote against the amendment by the AP, which included people from all sectors of the fishery, may be representative of the fishery as a whole. The AP proceeded to recommend that the Council should include a study on the potential economic and social consequences of the actions of this amendment through a referendum of recreational anglers. The Council should adopt the advice of the Red Snapper AP and take no action.

John B. Hollingshead – charter for-hire, Alabama

Supports sector separation. This amendment will give the charter for-hire industry flexibility to manage the fishery. He supports Action 1, Alternative 2; Action 2.1, Alternative 2, or Preferred Alternative 4. He believes Action 2.2 should be decided by the headboats, and for Action 3 he supports Preferred Alternative 2.

Johnny Marquez – Executive Director for CCA Mississippi

Opposes sector separation. The management of red snapper is a mess with an improving stock and reduced access to the fishery. He understands why the charter for-hire industry would be tempted to support this amendment because they had a tough season. Sector separation is a false promise that pushes towards privatization of the fishery, which will decrease access to the fishery through consolidation and decreased access to the fishery. He is from Mississippi and he fishes out of Mississippi; he doesn't want to have to drive to Alabama to fish. He does not believe that sector separation is the best thing for the resource.

Ralph Humphrey – President of Mississippi Gulf Fishing Banks

Opposes Sector Separation. He does not want the Council to make a public resource into a private resource by separating it into sectors. He worked for 35 years for the federal government, and he knows that it is ineffective. He thinks that making more rules will not fix things and the states should take control of management.

Kristen McConnell – EDF

Supports sector separation. A 9-day season stinks for everyone and it punishes fishermen for bad management. This isn't working, and it keeps getting worse each year because the Council manages reactively. With sector separation, the Council is trying to manage proactively rather than reactively. Sector separation will provide the opportunity to explore different management for different fisheries. Keeping the sectors tied together is bringing everyone down. In general, blanket regulations don't work so the Council is trying to tailor regulations to the different needs of the different fishermen. That is why private anglers want state management, which could be explored under sector separation. She urged the Council to move forward and separate the recreational sector into different components.

Gary Jarvis – charter for-hire, commercial, and President of Destin Charter Association

Supports sector separation. The permits held by for-hire anglers were established to preserve access to the non-boat owning public. His captain and crew don't catch and keep their fish. The idea that his boat only serves recreational fishermen gets lost in this. The economic issues are directly related to the management of red snapper. The Council's SESSC recommended that the Council fix recreational management rather than focus on allocation. With their own sector, private anglers could pursue their desire for state management and the for-hire anglers could pursue a plan best tailored to them. This is his second meeting and he keeps hearing about better data. Right now, with status quo management comes status quo data. If recreational anglers want new data, they need new management. Under sector separation, private anglers can have tags or electronic logs and the for-hire industry can have VMS. Recreational anglers can't afford to keep management the way it is.

Jerry Munro –

Opposes sector separation. The snapper are everywhere. The Council is pitting fishermen against each other. The private anglers are going to get the scraps of the 49%. He is a former commissioner for Mississippi Wildlife and Fisheries, and the idea of commercial fishing makes him mad. Imagine if there were commercial deer. Those are public deer, not private deer, or his deer. The first thing the Council should do is protect the resource and second, do science. This is a scientific wild guess, and the Council doesn't know how many fish there are. Don't treat the private anglers like kids and tell them how this is going to be. Management changes the deer take each year and changes the crappie take each year because it has good data. The Council is shooting in the dark and this is an ongoing saga. The Council is going to push recreational anglers out of the fishery and it's wrong.

Larry Strohm – Mississippi CCA member

Opposes sector separation. Supports the no action alternative because the Council needs to ensure that the resource is for everyone.

Bobby Kelly – charter for-hire, Alabama

Supports sector separation. At least 300 Mississippi residents have fished with him this year. He wants to make it so that 75% of the red snapper fishery is accountable in the Gulf. He supports Action 1, Preferred Alternative 2; and Action 3, Preferred Alternative 2.

Sonny Schindler – charter for-hire, Mississippi

Supports sector separation. He owns the largest charter company in Mississippi and last year he ran over 800 trips. He is not a reef permit holder nor does he own a boat that can fish red snapper. He supports sector separation because his customers call wanting to fish for red snapper. The big misconception is that boatloads of charter captains go fishing for snapper, but the fishermen on his boat are private anglers. No one wants to protect the resource more than someone that makes a living off of it. The data should come from the for-hire captains and putting data collection power into their hands is the best bet, because it's better to use the guys who know where the fish are.

Susan Boggs – charter for-hire (headboat), Alabama

Supports sector separation; Action 2.1, Alternative 2 (the longest time series) or Preferred Alternative 4; Action 2.2 should be decided by the headboats; and she supports Action 3, Preferred Alternative 2. Sector separation has already taken place. When the states opened their seasons, it limited the opportunity for federally permitted for-hire vessels. The for-hire industry is not taking away fish from private anglers, they take the non-boat owning public fishing.

Tom Becker – charter for-hire, Mississippi

Opposes sector separation, personally. He has had emails from other parts of the country where sector separation took place and they advised him against it.

Mike Thierry – charter for-hire, Alabama

Supports sector separation, because it will give the Council the data it desperately needs. A Federal judge ruled that the Council needs to keep the recreational harvest within the allocation and sector separation will give them the opportunity to do so. It will also give the recreational

sector equity among the different types of fishermen in the fishery. He can't keep fish on his boat and he must comply by the most restrictive of the regulations. Last year, he took 1,056 anglers fishing from all over the U.S., including kids, grandparents, and people from Mississippi. He supports Action 1, Preferred Alternative 2; Action 2.1 Alternative 2; and Action 3, Preferred Alternative 2. If the sectors separate, then both sectors will gain from more flexibility in management. What works for one component doesn't work for everyone. We would like to set our own seasons and bag limits. Allocation for each sector will be based on what each sector has caught historically.

Dale Woodruff – charter for-hire, Alabama

Supports sector separation; Action 1, Preferred Alternative 2; and Action 2, Alternative 3. The biggest reason the Council is looking at a lack of a federal season next year is the non-compliant state regulations. Those regulations are because of the CCA in Texas and Florida. Recreational anglers would have had a 44-50 day recreational season this year if the states had used compliant regulations. CCA was a major driving force behind the state water seasons. There needs to be some kind of reporting system. He's heard about duck season reporting and how people have to buy stamps for it. Right now there is such uncertainty in who fishes each year. Sector separation gives the for-hire sector an opportunity to beat the system with accountability and let charter boats have electronic logbooks. Charter boats are the only access many Americans have to fish the Gulf. The Council should let each component have their own system. Recreational anglers are looking at no federal season at all next year and we need to do something.

Stephen Brettel – recreational angler, Mississippi

Opposes sector separation. He knows charter businessmen are passionate about their businesses, and he is curious as to why charter fishermen would support sector separation. Going down the path of privatization is not a long term solution because once the government takes over, they will continue to take more action. In the first couple of years the for-hire industry may benefit, but eventually the government will close it down. For example, there didn't use to be fishing licenses, but the government told the states to create them. Now, everyone sits here talking about privatizing a fishery. That data point for 2013 private recreational landings is an outlier and should be discarded. He understands the Council can't act without data, but it should be using real data. Using sector separation to get better data is like selling one's soul to the devil to get information for the Council to use against the recreational sector.

Tristen Armer – recreational angler, Mississippi

Opposes sector separation and wants no action. He likes to fish in his free time, but he can't. The Gulf Council gave him a 9-day season this year with its management and proposals. The decisions made by the Council are probably paid for by people who want total government control. Sector separation does nothing to improve the snapper stock. There is already a division of commercial and recreational sectors, and the Council should stop touching management. He registered all his catch this year, and that data collection program coincided with the Council's initiation of sector separation. What's the hurry to make a decision? When the Council finally gets good data it'll have egg on its face. It's no wonder the charter industry is in decline with the moratorium and these restrictive regulations. Under sector separation, the fishery will end up with six large companies harvesting fish.

Scott DeLano – State Representative for Mississippi District 117.

Opposes sector separation. The one issue he hears about the most from his constituents is the management of red snapper and the lack of access to it. The Council is driving a wedge and dividing citizens who all want to do what they can to manage the resource for the future. This has turned into an argument about turning the resource into a commodity. His constituents are overwhelmingly against the amendment. He wants the Council to focus on managing the stocks, and he supports the States' efforts in management of red snapper. He is afraid that if this moves forward, it will not stop with red snapper.

Gary Smith – recreational angler and AP Member, Mississippi

Opposes sector separation because of the bad data. The Council is guessing and private recreational anglers have been asking for better data. What happened to the idea of an offshore permit? How is adding a buffer going to help? The Council members need to represent their states. He volunteers his time; he's not paid like the Council members who don't ask what their people want. The Council refuses to address the problem of bad data. If Council members are not going to do their job, then what can recreational anglers do? The law gives the states the right to manage their waters as they see fit. Until the data is addressed, the Council is wasting the recreational sector's time.

Jonny Hoggatt – recreational angler, Mississippi

Opposes sector separation. He wants to figure out how red snapper fishing can be improved for everyone. He only got to fish one day this year. He keeps hearing that the data is inconclusive, and there is no way to collect information from all anglers that fish for red snapper. The Council can't make decisions until it gets the proper data. After hearing all the input, he believes that there needs to be a system to collect better data. The Council is pitting private anglers against charter fishermen.

Steve Mullins – recreational angler, Mississippi

Opposes sector separation. Twenty years ago he saw this coming and was concerned that this is the path management was going to take. No one believes that red snapper is in trouble, and the Council has no data to support the proposed amendment. The fishery in each state is different. He would rather the states be managed separately. The shrimp fishery is responsible for most of the red snapper mortality. Council members convinced Texas headboats to support this scheme. The Council can't split a 0-day season. The litigation history has shown that the Council has not done its job. The best available science is garbage. Anglers need to see what science is used. The recreational sector is not going to have a season next year, so the for-hire fleet should join private anglers in lawsuits to change management.

Mobile, AL
August 7, 2014

Council/Staff

Kevin Anson
Dale Diaz
Johnny Greene
Assane Diagne
Ava Lasseter

45 people attended.

Robert W. Young – recreational angler

It used to be easier for everyone to fish. Now with new regulations, it is not feasible; there are seven of them fishing from the same boat now. They go fish on charter boats now, but putting in the numbers you have, the charter people will be able to fish more days than what the recreational people can. He is in favor of leaving it as is because the data isn't correct; the preferred can be changed. He wants his grandson to be able to fish, it's important to keep the younger generation interested in the saltwater industry.

Skipper Thierry – charter for-hire (headboat)

Supports sector separation. The Headboat Collaborative EFP has been a huge success and other boats want to join. A federal judge mandated that all sectors be accountable. The main argument he hears from private anglers is that the charters are trying to take their fish. This isn't true; the science center told him it won't shorten the season one bit. In fact, because of state non-compliance, there might not be a federal season next year. Without sector separation, access is taken away from those who want to fish in federal waters. He supports Action 2.1, Preferred Alternative 4; and Action 3, Preferred Alternative 2.

Marcus Kennedy – recreational angler and boat owner

There have always been enough red snapper in the Gulf and we haven't needed these regulations. Sure, localized depletions have occurred in heavily fished areas but this isn't true everywhere. The data is bad and you're considering giving a handful of fishers the public's access. NMFS is an inefficient, incapable organization. You blame the Magnuson-Stevens Act for unpopular regulations, but ignore the parts of the Act that say to maximize fishing opportunities. The sector separation plan is to use data when there were three times more charter boats than there are today, which will result in an unfair situation. Once you figure in state water seasons, there will be no federal season for private anglers. Wants NMFS to get off their backs.

Mike Thierry – charter for-hire

He has been forced into supporting sector separation. They had a 9-day season this year and will probably have no season next year because of state non-compliance. Some good things will come out of sector separation, we will get some good timely data. A federal judge ruled that we must stay in our allocations and the seasons can't get any shorter. This would make it more equitable among user groups, so fair among everybody. He took over 1,000 people fishing last year who can't go fishing any other way. He can't even keep red snapper himself. Positive

things about this is that we could set own season; maybe private angler group could use their quota for weekends only, but that doesn't work for the charter industry. He could get by with a one-fish bag limit, but private anglers may want to keep two fish. The allocations that each sector gets will be based on historical data. He supports Action 1, Preferred Alternative 2; Action 2.1, Alternative 2; and Action 3, Preferred Alternative 2.

Avery Bates – vice president of the Organized Seafood Association

He must sell his red snapper and buy it back. Texas is not giving you the proper information, and that is crucial. We need the data to know what each part is taking and that there is no physical waste of our resource.

Tyler Kennedy – recreational angler

Opposes sector separation. He references a part of an earlier document version, where it states that the benefits of sector separation ultimately depend on the measures adopted once the sectors are separated. He is against this because he doesn't know what the concrete benefits would be. But if the underlying data or reason isn't valid, then we're just adding on to a shaky foundation. Right now, with the data and collection methods used, he's against it.

Denny Kearley – recreational angler

Opposes sector separation. Data is flawed, and doesn't think any Gulf fish has ever been eliminated by private fishermen.

Bobby Kelly – charter for-hire

Supports sector separation. A Federal judge has mandated they become accountable. If this passes, will get a larger part of the quota accountable. If this doesn't pass, charter operators will be taking their permits off and fishing in state waters. For Action 2.1, he supports Preferred Alternative 4.

Mike Rowell

Supports sector separation. At this point, there are people here that don't understand how the system works. Charter boats are not trying to take fish away from anybody. We've chosen this profession because we love it and there's jealousy that goes along with that. But we just want to keep enough to stay in business, and there will be zero days in the next season. We all know there is enough red snapper out there, but the state waters will be completely depleted and they won't be able to fish in federal waters. The data is bad, but this will help give you good data. The charter boats have come and asked for a way to give better data. When we go over the quotas, the quota is going to be taken away from next year's quota. The seasons will get even shorter.

Albert Stinson

Supports sector separation. He left the charter industry because of the regulations put on them. He is impressed at those who have been able to stay in business, and doesn't think some private anglers here understand that charters take people to fish who can't fish otherwise, like those who can't afford an expensive boat. The people they took would not have access otherwise. He supports sector separation because it keeps access available for those people who built this fishery and the reefs.

Bryan Reeves – charter for-hire

Supports sector separation. We have to be accountable for our fish, or the season will just get shorter and shorter. We aren't just affecting red snapper, the short seasons put pressure on other fish and we'll see declines in seasons for those fish, too. Sector separation is a step for them to be accountable for the fish we keep, not the fish they say we keep. There has to be a starting point, because we don't have real time data.

Timothy J. Smith – recreational angler

Opposes sector separation. He recalls the charter captain who said if this doesn't pass, they will fish in state waters. Everyone keeps saying it, we want accurate data. He's offered his time to improve data but his offer falls on deaf ears. There has been so much opposition to sector separation, and the AP is against this too, so why are we here? This pits the charter boats against the private boats. They all work Monday-to-Friday, but at the end of the day, they are taking recreational anglers fishing. Right now, charters are taking people fishing on the EFP headboats. He doesn't like that he has to go pay to go catch one right now, when he has his own boat and can't catch one.

Mike Ward – recreational angler

Opposes sector separation. He remembers when there were no red snapper, and if you caught a 3-5 pounder, you were happy. Now, there are too many red snapper out there and they need to be fished. They have put these reefs out there, we have grown our stock out there, and we can't access that crop anymore. We're attacking the problem wrong. We should tell the other states to put reefs out, and if everyone does that there will be plenty of fish out there. Alabama folks are punished because there are so many fish out there. He fished less than 20 minutes and caught 26 snappers, turned around and went back home. We never spend more than 20 minutes catching our limit of red snapper, and we can't catch anything else. This is pitting privates against charter, and he doesn't want them to be mad at each other. We want to go out there and catch our fish, we put the reefs out there.

Jimmy Waller – charter for-hire

Supports sector separation. Everyone agrees there are so many fish out there. He wants his own children to have a future in the charter business and this is the first step. He doesn't want to be pitted against private boat owners, but if this doesn't happen, he is done and out of business. He was a deckhand before starting his own business in 2004. It's been a slow decline, and the main factor is the regulations and what the people can catch. Supports Action 1, Preferred Alternative 2, and Action 3, Preferred Alternative 2.

Randy Boggs – charter for-hire (headboats)

Supports sector separation. He has one of the headboats in the EFP. A lot of people don't understand what is going on and how we got here with red snapper. Most people may not know that there is a payback provision being put in place this year. If we're in a zero take next year, we're going to exceed that in the undirected fishery, and that will lead to closures in other fisheries. He encourages everyone to learn about these accountability measures that are coming. He's been working for sector separation for the last 10 years. He fears we're going to see a complete fishery closure in 2016 or 2017.

He supports Action 1, Preferred Alternative 2; Action 2.1, Alternative 2 or Preferred Alternative 4; Action 3, Preferred Alternative 2.

Susan Boggs – charter for-hire (headboats)

Supports sector separation, and Action 1, Preferred Alternative 2; Action 2.1, Alternative 2 (the longest time series) or Preferred Alternative 4; Action 2.2, the headboat operators should decide this; Action 2.3, Alternative 4; and Action 3, Preferred Alternative 2.

After last night's public hearing, she realized sector separation has already taken place. Private recreational anglers were allowed to fish in all states' waters last year, where the for-hire boats can't fish. So when she hears that the charter side is trying to take away others' fish, she doesn't agree with that because the charter boats have been excluded from fishing in state waters. She wants to provide all anglers with access.

Ben Fairey – charter for-hire

Supports sector separation. They have been working on this for 7-8 years, this isn't new. Speaking of fair and equitable, the commercial sector's effort is capped, charter effort, too; but private vessels are a free for all. We don't want to take fish from private anglers, but historical data is what they have each caught in the past. Now, we're down to hardly any days. He's semi-retired because he just couldn't make it anymore. We need to think about what it means to be fair. States non-compliance means that charters can't fish, so private anglers have the advantage. We all know about the data, but we have to start to help them collect the data. If there is a 0-day season in federal waters, there's no reason to keep their for-hire permits. Watch what will happen to the fishing pressure in state waters. The charter boat guys' backs are against the wall. He hopes all three sectors can become accountable.

Thad Steward – Zeke's Marina

He has a dog in both sides of this fight, but is speaking today on behalf of the charter fleet. A lot of charters aren't going to be there next year. Professionalism: how others treat each other; we've shown up to meetings, we are trying to handle this in professional manner. Charter boats have a plan and they hope the private anglers will come up with one, too. We're not taking fish from the average citizen, we're maintaining their access. The average citizen charters a boat because they don't have \$100,000 sitting around.

Tom Steber – Zeke's Marina, charter for-hire

Supports sector separation. We all know data is bad, but our backs are against the wall. We have begged for a better system, VMS, electronic logbooks. They have 100% support from the local charter fleet for the EFP pilot program.

Ashley Walters – recreational angler

Opposes sector separation. He remembers when the only people who could catch red snapper were charters, because they had private reefs. To find them, you had to go with them. So, the reason recreational landings have gone up is because of good management with red snapper. The reason the landings have gone up is that now, anyone with a bay boat can go out and get their limit, three times a day if they wanted to. He's opposed to sector separation although he understands why the charter operators are here and he doesn't want there to be conflict between

the groups. He knows it's important to accurately report data, but no one reports accurately, and he doesn't know how to get private anglers to report. We're going to have very few days and the charter boats are going to get hundreds, at least dozens, and he thinks that is wrong.

Dale Woodruff – charter for-hire

Supports sector separation; Action 1, Preferred Alternative 2; and Action 3, Preferred Alternative 2. Without charter boats, the only way to access red snapper is by private boat and dock. There is not going to be a federal season next year. It is hard to tell customers on the phone we can catch this, but not that. He hears private anglers say that others can come fish on their boat, but there is the safety aspect to that. He would hate to put the non-boat owning public in danger by going on private boats with people they don't know. He doesn't want to fight with private anglers. The science isn't right but until the Magnuson-Stevens Act changes, nothing is going to change. States will continue to go non-compliant. Luckily we can catch other fish, but the emphasis is on red snapper. They don't want to take fish away, but if the States had consistent regulations, we all would have had 50 days to fish in state and federal waters. The recreational anglers should come together with their own plan, tags, reporting, etc. They may want a weekend season and maybe could do that all summer long. He thinks we all should be able to fish year round, but we can't because of the Magnuson-Stevens Act.

John Hollingshead – charter for-hire

Supports sector separation because it will give for-hire operators flexibility to manage the fishery. Supports Action 1, Preferred Alternative 2; Action 2.1, Alternative 2 or Preferred Alternative 4; he does not support Action 2.2, as this should be decided by the headboat operators; he supports Action 2.3, Alternative 4; and Action 3, Preferred Alternative 2.

Brian Swindle – charter for-hire and commercial

Supports sector separation. He had a 200-lb red snapper endorsement and used to fish the derby. The commercial sector has never gone over since the quota system has been in place. The recreational sector has gone over every year. He thinks the quota system works well in the commercial sector and should work well for the charter fleet.

Dan Burnham – charter for-hire

Supports sector separation. Charters provide a way for the non-boat owning public to enjoy a public resource, such as those from other states. He fishes on his private boat with his state license, but he can't catch a red snapper on his own charter boat.

Jimmy Oldson – recreational angler

Opposes sector separation. He hates we're being divided and sees both sides. He enjoys the option of taking a charter, but if he doesn't want that to go away, he doesn't want his rights to go away. He has a small boat, has friends with a big boat, and takes charters. He thinks charters do a great job reporting their data. No one should be forced into commerce, to hire a charter. There needs to be a better program to report fish and Alabama's system seems good. He wants more accurate data proven before going forward with sector separation, but he really feels for the charter guys. He suggests having the States do more on reef structure, which supports such a good red snapper population. He would like state waters to be extended to nine miles like the other States to make things fair for everybody.

Nick Knoepflein –

Supports sector separation, as it is the only answer to resolving the problem with our seasons and limits. With sector separation each sector will be accountable for the fish they catch as it will provide programs to help improve accountability.

Chris Smith –

Opposes sector separation. More information is needed about the taxpayer makeup of the different sectors. He can't believe that the commercial or charter fishing interests make up more of the fishing public than recreational fishermen like his family and friends. We need accurate data.

Todd K. Volkman –

Opposes sector separation.

**Orange Beach, Alabama
August 6, 2014**

Council/Staff

Bob Shipp

Kevin Anson

Assane Diagne

Ava Lasseter

55 people attended.

Don McPherson – charter for-hire

Supports sector separation and moving forward with Amendment 40 as it will provide accurate data.

Gary Bryant – charter for-hire

Supports sector separation. It's important because the charter for-hire fleet is the only true public access to the fishery, and part of the allocation should be put aside for the non-boat owning public. With your own boat, you have private access. The arguments for sector separation are based on logic and fairness, and those against are based on fear and selfishness.

David Jones – charter for-hire

Supports sector separation. Charter boats take the American public to catch fish. The captains and crew are not even able to keep fish themselves.

Nick King – recreational angler

He fishes on charter boats. He finds the numbers used are statistically incomplete, as they do not account for the decreasing number of charter vessels. There must be a large error coefficient. We are not ready for Amendment 40 until we finish Amendment 28. The original allocation between sectors should be addressed first.

Matt Seymore – recreational angler

Opposes sector separation. Before we do anything, we need to take up Amendment 28 and finish that. We don't have all the facts and don't have good numbers to do sector separation. We've got to fix the data problem first. To have flexible management, manage it on state-by-state basis, because each state is different. Alabama is unique for its public reef system. Why are we constrained by Gulf-wide rules when we have the best artificial reefs? If this passes, we need to use the most recent years of data we have, because the permit moratorium means there are fewer charter players. The outcome should reflect the future, not the past.

Skipper Thierry – charter for-hire (headboat)

Supports sector separation. The Headboat EFP has been a huge success; let's build off that. The fleet is dying to be accountable. The main argument he hears from private anglers is that the charter guys are trying to steal their fish. Sector separation won't make the season longer or shorter. Last year, he took 1,600 people fishing, this year he expects 2,000. With very few exceptions, the charter fleet is the public's only access to red snapper.

Dale Woodruff – charter for-hire

Supports sector separation, Action 2.1, Alternative 2; and Action 3, Preferred Alternative 2. Charter boats are the only access for the public in this country. The way it's been going, it will be private boat access only. The States that are non-compliant provide fish to anglers with private boats. That's a big part of this mess right now; state non-compliance. If nothing happens with this amendment, the charter guys are going to fish in just state waters, and the fleet will catch them up better than the private anglers. The charter boats put more spots out there and the difference is the electronics have made it easier for people to catch those fish.

James Stone – charter for-hire

Opposes sector separation because there is no way you can divide this resource fairly. If there was a fair way to do it, he would support it, but there isn't.

Ben Fairey – charter for-hire

Supports sector separation and Action 1, Preferred Alternative 2. He understands both sides, but we have got to become accountable. We're never going to get the data until we have a form of accountability. The charter boats are forced into a position of having to do something. If we don't find a way so the charter for-hire fleet can survive, we'll see effort shifting as they try to survive.

Tommy Holmes –

Opposes sector separation because we don't know what the result will be. This is a blood sport, we go take home fish. Whenever you do that, you get environmental organizations that oppose it and whoever they are behind, be concerned because they are trying to stop fishing.

Mike Thierry – charter for-hire

Supports sector separation, although he feels they have been forced into it. The charter fleet has begged for other management strategies for years. Now, this is where they're at. They are the public's access. Better data could come from sector separation. He prefers to select an earlier

time series when both sides were on a level playing field; that would be a fairer allocation. Right now, he can't make a business plan. Will there even be a federal season next year?

Mark Watson – recreational angler

Opposes sector separation. He notes that the Red Snapper AP rejected sector separation, supporting no action on Action 1. In Action 3, he also supports Alternative 1, no action. Responding to the arguments made about access to the Gulf, he notes that private boats provide access to their friends and family, too.

Steve Foust – charter for-hire

Supports sector separation, Action 1, Preferred Alternative 2; and Action 3, Preferred Alternative 2.

Bobby Kelly – charter for-hire

Supports sector separation. For Action 2.1, he supports Alternative 9. He questions how the Council could include and consider years of landings when Texas had denied access to some anglers. There's no way to guarantee fair access unless we go this way. His customers are from inland states such as Ohio and Indiana.

Tom Ard – charter for-hire

Supports sector separation. Status quo is not working. This is something they could build on. He had hoped that private recreational anglers would have brought something for themselves to the table but they haven't. He supports the use of VMS, IFQs, and tags, whatever it takes. He thinks a 50-50 split allocation is fair. Without sector separation, come January 1, he will put his for-hire permits on his bass boats and go fish in Florida state waters. The Alabama charter boats will crush the red snapper there.

Randy Boggs – charter for-hire (headboats)

Supports sector separation; Action 1, Preferred Alternative 2; Action 2, Preferred Alternative 4; and Action 3, Preferred Alternative 2. The States have given much longer seasons in their state waters, which takes away from each and every one of the charter boats. The charter for-hire fleet is just trying to survive. You're not taking fish away from those without boats, and you're guaranteeing access to people who have a boat.

Seth Wilson – charter for-hire

Supports sector separation. We've been punished last few years for trying to do the right thing, and they want to be accountable for their catches. Everyone here has a list of recreational anglers they represent. He represents his customers, topo, who are out of state.

April DePaola – CCA, recreational angler

Opposes sector separation. Management of red snapper is a mess, and bad weather can wipe out the season. Sector separation is catch shares, quietly waiting in the wings. The Council has already set up a group to design an IFQ program. Catch shares pushed commercial vessels out of the fishery. Her husband is out fishing with his clients and they feel they benefit from visitors coming to fish. This is a lose-lose situation for everyone. She and CCA support no action on Action 1.

Gordon Burdette – charter for-hire

Supports sector separation and Action 1, Preferred Alternative 2.

Tom Hilton – recreational angler

Opposes sector separation. He supports Alternative 0, which means to put sector separation in the trash. The solution is not sector separation or any other scam to take our fish. We don't need it to get accountability. The Council can't tell us how much fish were caught in the 9-day season yet. The preliminary findings of Alabama's assessment of fish on the reefs suggests there is 20 times the amount of snapper just in those areas, compared to what NMFS says is in the entire Gulf. The solution is an 'honest' stock assessment, as Dr. Shipp supports. We would see 3-4 times more fish we could catch, and we could all fish six, maybe eight months and not put a dent in the population.

Tom Steber – Zeke's Marina and charter for-hire

Supports sector separation. Every charter boat operator in Alabama is in favor of sector separation. They have asked for a management plan and for other options, but this is the best avenue available because they want to be accountable.

Mike Rowell – charter for-hire

Supports sector separation. He doesn't necessarily want sector separation, but they need a plan. Those against sector separation don't have another plan. The fisheries are going to have to become accountable now. Some people fear Big Brother is watching what you catch, but this will preserve access so everyone can catch fish. Yes, data is a hard thing, but he knows this will lead to better data. He doesn't believe the recreational sector is ready for accountability. It takes a long time to get system in place and he's not sure they want it, but the charter for-hire does.

Chris Flocken –

He is against pitting people against each other over using a public resource that is for everyone. He can respect both sides; both contribute to the economy. In his 30 years in the industry, the ripple effect of the private side, economically, is huge.

William R Neff – charter for-hire

Supports sector separation. He makes his living in 100 days, and with a 9-day season, it's almost impossible. The anglers opposed to sector separation don't make their living in 60-100 days. He has to make his year's salary in this short time. Alabama has the largest artificial reef program, and is the red snapper capital of the world. When we can't take people red snapper fishing, he can't support his family and make a living.

Maurice Fitzsimons, III – charter for-hire

Supports sector separation, as it is the only answer at this time. There is no other solution on the table. He wishes there was another way to do it, but he is looking out for his customers.

Brian Annan – charter for-hire

Supports sector separation.

Dewitt Sightler – charter for-hire

Supports sector separation. This is the only option that's going to work right now.

Susan Boggs – charter for-hire (headboats)

Supports sector separation, because it will give them flexibility. She supports Action 1, Preferred Alternative 2; Action 2.1, Alternative 2 or Preferred Alternative 4; Action 2.2, she feels the headboat operators should decide this; and she supports Action 3, Preferred Alternative 2.

Jim Mead –

He can't speak to this one side or the other. He asks if we are trying to increase red snapper and the main spawning season is May-July, why are we fishing for them when they are spawning? He understands that's when tourists are here. He suggests moving to a fall season and after a few years, you'll have so much red snapper!

Steve Ennis – recreational angler

Opposes sector separation and urges no action. This issue has really divided people. He understands businesses need to plan. He can't understand how the Council can justify spending so much time managing one fish that has largely recovered. The Reef Fish AP voted no on it. The Council seems obsessed with counting red snapper. There are means for counting red snapper; look at the state systems. He is getting called frequently. They use the iSnapper app, and that is an accountable way. The Council is happy with 51% of red snapper for a handful of commercial fishermen; they have accountability. The headboats also have accountability. We have a system that works, he doesn't understand why we aren't using it.

**Panama City
August 12, 2014**

Council/Staff

Roy Williams
Assane Diagne
Ava Lasseter

120 people attended.

Jerry Anderson – charter for-hire (headboats)

Supports sector separation for two reasons. It would provide the for-hire industry with flexibility for when they catch red snapper. It would also lead to them improving accountability. He wants the for-hire operators to get VMS and iPhones and finally get real data.

Bob Zales, II – charter for-hire, PCBA

At a recent Panama City Boatmen's Association meeting, a majority voted to be neutral on the subject of sector separation. It is not clear what the charter fleet is going to get, so they can't support it. 407d is still an obstacle. Since sector separation first came up, he has been opposed to it. Because of the regulations they put in place for their state waters, NMFS should have preempted Texas years ago and we wouldn't be here today. Then, when Florida did it, they

should have been preempted, too. NMFS has allowed this chaos to get us to where we are now and could stop it today if they wanted to. Triggerfish is open here in Florida [state waters]. He wrote to the Secretary of Commerce inquiring into the use of this authority.

Concerning the adjustment of 7% to account for state-permitted for-hire vessel landings, he noted that 7% is a Gulf-wide average. The state-by-state percentages vary and he feels that Florida will be hit the hardest by using this Gulf-wide average adjustment.

Dennis Cook – recreational angler

He has to use charter services because he doesn't own a boat. It costs him \$47.50 per fish to go out with a charter. So, he has to find a friend with a boat to fish with so it is less expensive. He feels the amendment documents are not understandable, which is what happens when the federal government is involved. He supports status quo on all actions. At every meeting he comes to, there are even more options [in the actions of the documents] and it's confusing.

Frank Bowling – recreational angler

Opposes sector separation. Rather than divide us, he says the Council should work to develop the fishery, manage fish that are out there, and set a goal of increasing the number of people who can go out to fish.

Don Whitecotton – charter for-hire

Opposes sector separation. He supports Alternative 1 (no action), because we don't know how many fish we have; they don't count what's on artificial reefs; they don't count anglers coming in to public ramps. Most people have to work five days a week, so why not give them tags and let them fish when it is safe. The Council is going to end up killing someone on a boat that went out during a nine-day season.

Bruce Solana – recreational angler

Resource needs to be reallocated; not just sectoring one piece. With sector separation, the recreational community would be left with 25% of the quota and very few days. He questioned why data from 20-25 years ago is used in the allocation alternatives. We don't have 2014 data, how are we going to make decisions? Something from 1990 has nothing to do with what happens now.

Warner Foster – recreational angler

Opposes sector separation. He suggests the charter operators look at CCA's comments on sector separation. He thinks the charter captains are going to regret supporting it. He is against any changes and supports Alternative 1 (no action). On the document figure with saltwater licenses, not all of those are fishing for red snapper. He's never been sampled and doesn't know of anyone who has been checked. Charter guys are checked, but he doesn't know where the figures in the document are coming from. Also, the Red Snapper AP just recommended no action on Amendment 40.

Tom Adams – charter for-hire

As a Red Snapper AP member, they voted to recommend no action (Alternative 1) for Action 1 until they can get reliable data, such as how many fishermen there are and how many fish. Then

they can make decisions based on that. There's no need for sector separation; 407d is an obstacle because the fishery will be closed anyway. Data has to be there first before starting new programs.

Charles E. Guilford – recreational angler

Opposes sector separation. He could fish for 12 months until NMFS started management. Now, he has only nine days. Every decision has been made on bad data. It is the natural forces of nature that affect the fish. If we start allocating fish, they are going to become a cash value item and there will be trading. These fish are for everybody. He supports Alternative 1 (no action).

Marlene Eller – charter for-hire

In talking about seasons, a nine consecutive day season is worthless because they can't go fishing when the weather is bad. It is more sensible to allow a number of days over the year, to fish when it is safe to do so.

She then read a letter from Prebble Ramswell, a Destin council woman: Destin is affected by changes in the Gulf. If sector separation is not passed, it would involve long lasting, ripple effects on the local economy. Separating the sectors makes sense for accountability and economics and is the right thing to do.

Scott Robinson – charter for-hire

Sector separation is a good idea but we need a way to count fish. A nine-day season is unacceptable. He questioned where the numbers come from and who is providing them, stating that no one asks him anything.

George Eller – charter for-hire

Supports sector separation. He has heard arguments tonight about how many fish there are and the data are bad, but for-hire vessels are an easy target for improving accountability. They want to be the ones providing real time data. He is against sector separation being voluntary. This year, private recreational anglers had 50+ fishing days in which federally permitted boats could not participate. That was the state's fault. As a private recreational fisherman, he would want no action, too. But nine days is unacceptable for the charter fleet. Anything is better, so he supports sector separation.

Chris Niquet – commercial

Supports sector separation because nine days is not a viable business model for the for-hire industry. If going to have a federally permitted sector, more days are needed for them to fish. The only way to do this is to separate them and change the regulations [407d] such that each sector [component] has to stop fishing. VMS should be mandatory for state-licensed vessels, too, to monitor that they do not venture past nine miles.

Jeanie Bowling – recreational angler

Opposes sector separation because we all should have the opportunity to go out and fish.

Ben Fairey – charter for-hire

Supports sector separation. The conflict within the fishery will occur if this is not approved, because then, the for-hire fleet will have no reason to keep their permits. If they transfer their permits and start fishing in state waters, it's not going to be pretty. If they can fish in federal waters, they won't choose to fish in state waters.

Stewart Miller – charter and commercial

Opposes sector separation. There is too much uncertainty. If you could tell him he would get a certain amount of fish, he may support it. But without that, no. It scares him that commercial fishermen want to sell their fish [under inter-sector trading].

Alicia Paul – charter for-hire

Opposes sector separation, because of the many actions that will follow it. Without the needed data, she doesn't trust it. She's very opposed to inter-sector trading, too.

Stan Philips – charter for-hire

Supports sector separation. He has never seen NMFS provide advanced notice of the seasons, so he is unsure how sector separation could tell them that. Florida is already allowing a longer season. What we are dealing with, here, is the federal season. Sector separation is the only way for the charter fleet to get there. Accountability is what is required and they are an already defined group. He wants to help the Council to help the charter fleet. He is willing to do logbooks or whatever is required to provide an accountable fishery.

Mark Kelley – charter and commercial

Responding to a prior inter-sector trading comment, yes, he has IFQ shares. The Council could very easily put to rest the inter-sector trading issue, by passing the appropriate measure or motion. He is not for or against sector separation. The Council is asking us to agree to something when we don't know what we're going to get. The quota is still based on pounds, so as long as the average size red snapper keeps increasing, the recreational sector will keep losing days. But, we can't do 9 days or even 18 days. He is only making a living because of his location. Concerning accountability, NMFS is the only one in this whole system that isn't accountable to anybody. We're hearing that greater amberjack may soon be closed by emergency action. This is creating fighting amongst themselves, when they just want to make a living. Most here have suffered for 20+ years over red snapper. But, if private recreational anglers get 52 days to fish in state waters, he wants 52 days to fish in federal waters. He and his industry sacrificed to rebuild the stock, the commercial industry did, too. Yet, they are the punching bags.

Bill Staff – charter for-hire

Supports sector separation. Because of the permit moratorium, the prohibition on a captain and crew bag limit, and the 30B permit provision, he may not be able to fish next year. The charter fleet needs a flexible management plan. All of his customers last year bought gas, stayed in local hotel rooms, and ate in restaurants, thereby fueling the local economy. But, he is tired of booking trips only to find out later that a fishery is closed. The charter for-hire fleet is the only group that can't fish in state waters. Sector separation would bring charters into an accountable

part of the fishery. After this short season and next year, he hopes private anglers don't still think the charter industry wants their fish.

Ricky McDuffie – charter for-hire (headboat)

Supports sector separation. This is the charter fleet's only hope. None of the private recreational anglers have offered any solution for their own accountability, because they have enjoyed 52 days of fishing. They can figure a way for themselves, but this is all that the charter fleet has.

Susan Boggs – charter for-hire (headboat)

Supports sector separation. She supports selecting the following alternatives as preferred: Action 1, Preferred Alternative 2; Action 2.1, Alternative 2 or Preferred Alternative 4; the decision for Action 2.2 should be made by the headboat fleet; Action 2.3, Alternative 4; and Action 3, Preferred Alternative 2.

Sector separation has already taken place, it happened when the states opened their state waters. She has a problem with the argument that charters are taking away fish from private anglers, because the private anglers have been taking away fish from the charter vessels that can't fish in state waters. For-hire operators provide the non-boat owning public with their only access to the resource.

Randy Boggs – charter for-hire (headboat)

Supports sector separation. Referencing the overage adjustment for red snapper that the Council will vote on in August, he notes that the recreational quota has been exceeded every year. With an overage adjustment, they will keep losing fish and the quota will soon be down to nothing. In the Atlantic, after seven years of no season for red snapper, they got a season of just a few days long. The charter operators are trying to save themselves. With payback provisions coming, they could be facing a zero take for several other species. He cautions everyone to look ahead because what is out there is scarier than sector separation.

Chad Haggert – charter for-hire (headboat)

Supports sector separation. They need better data for better science, and they want to provide accountability. He has two participating headboats in the EFP study, and they have 100% accountability. When his in-season average weights were higher than expected, he surrendered fish so as not to exceed his allotment. He has heard no suggestions from private anglers on how they want to improve accountability. Not only is he speaking for his family and business, but for his customers from all over the country who rely on his boats to go fishing. Something needs to be done, because the charter industry is losing access by number of boats. He has run 14 trips (through the EFP) targeting red snapper. He supports sector separation and flexibility for the charter fleet.

Jeanie Powell – recreational angler

Opposes sector separation. She supports recreational fishermen, commercial, and charter fishermen. There are enough rules and regulations, and there is a lot wrong with the current regulations. As a fisher, it's ridiculous that she can only catch two snappers and if she catches one that is just a little too small, she has to throw it back and she hates that. She is against sector

separation because now she's only allowed to keep two snapper. We've got to come up with something better.

Billy Archer – charter for-hire

Supports sector separation. It closes the state water loophole and levels the playing field. The idea that the charter fleet is stealing or reallocating fish is wrong. Captain and crew can't even keep a red snapper. The big issue is that we could be closed completely. Charter operators have had to adapt and they have shared the pain. But, they need sector separation.

TJ George – charter for-hire

Supports sector separation. This is their livelihood and they want to see a future in the fishery. They need accountability, VMS is the only way to go, and a tag system for recreational anglers to see who and how many are catching red snapper.

Trey Windes – charter for-hire

Supports sector separation. Progressively, it's become worse to do what he does. Doing nothing [no action] is the last thing we should do. Most boats already have VMS.

Mike Sullivan – charter and commercial

The nine-day season hit him in the gut. He is not supporting sector separation now, as he can't understand why the Council can't tell him what the charter fleet will get. Next year, we may not have a season. He wants better information for sector separation before he supports it.

Justin Destin – charter and commercial

Supports sector separation. They need accountability.

Henry Hunt – charter for-hire

Opposes sector separation at present, because NMFS can't give us info as to the length of the season we would get under sector separation. With the 1,300 for-hire permits, how would it be distributed from Key West to Brownsville? They need to know how much they are going to get. Until 407 goes away, it doesn't matter what they do, because if the private anglers go over, the charter component would be shut down, too. Now, there are so many red snapper, he can't understand why the fishery is in such bad shape just because one sector went over. The EFP fishermen got actual fish, not pounds, and that's what we want. This has created animosity between Destin and Panama City. Charter boats can't fish, but EFP participating headboats can and that has created tension. NMFS has been hijacked by EDF, which paid for the commercial guys to sue the recreational guys. Until we can present something that he can see will benefit his business, he doesn't support sector separation.

Scott Robson – charter for-hire

Supports sector separation, Action 1, Preferred Alternative 2; and Action 2, Alternative 2 (the longest time series, resulting in about a 50-50 split). They have been fishing derbies for a while, the weather has been bad during the short seasons. They want flexibility to explore new management tools which they could do as a separate sector. He can't understand why people wouldn't want to explore something different. They have talked about, "if we just had better

data,” for years. So, they want to create that system for themselves. He can’t see how the Council cannot pass sector separation.

Tony Davis – charter for-hire

Supports sector separation, Action 1, Preferred Alternative 2; and Action 2, Alternative 2. They didn’t really have snapper until after a hurricane, which is also when they started having set seasons. The first limit was 7-10 snappers, and that was no problem but they weren’t as big then. Any help we can get is appreciated.

Jim Green – charter for-hire

It can’t get any worse. They need to keep fishery viable and sustainable for their customers. After a 9-day season, he has gotten more support from charter operators. Sector separation is a tool for their continued access to the fishery and will help them make a sustainable fishery. Between the 30B and state inconsistency, they have lost access. People get scared when they hear “IFQs.” He’ll be on the Charter for-hire IFQ AP, and his vote will be for not granting individual ownership of shares. Concerning inter-sector trading, most for-hire operators don’t want this. It’s an allocation issue and should not be mentioned alongside Amendment 40; it’s an unnecessary distraction. It’s not about what recreational anglers have been scared with; it’s about our sector being managed within our control.

Mike Eller – charter for-hire

Supports sector separation. It would allow the charter fleet to take about half of the quota and count those fish, and do so accurately. It would allow them to go into their own management. They could have real time accountability. He supports fish tags, for charter and/or private anglers. If he received the equivalent number of tags for what he caught in a 9-day season, he could stretch that out. Give them the fish they historically catch, and the private anglers, too, and let each group fish when is best and safest for them. He hears people say they want to fish when they want, and that is not reality. He can’t keep fish, only the customers. They have been talking about this for a long time that this isn’t working. We need to improve stock assessment; get the private anglers accountable. But we have to start somewhere and this is it. We don’t know how many days we’re going to get, but can only go up. He would buy fish tags if he has to, or get VMS. With passage of sector separation, 75% of red snapper will be counted.

Donald Dineen – charter for-hire

Supports sector separation. He doesn’t want anything that the charter operators don’t already have. They have been pushing for tags or stamps for a long time. Please pass sector separation.

Gary Jarvis – charter for-hire; Destin Charterboat Association

Supports sector separation, and all preferred alternatives in Amendment 40. Without sector separation, they’ll get nine days or less next year. After this passes, the fleet will decide how to manage the fishery. This closes the state water loophole. The SESSC stated that this isn’t an allocation problem, it’s a management problem. They voted to look at things other than allocation. Charter operators and private anglers have different objectives when fishing. Private anglers with their own quota can decide what to do with that quota. All he has heard is “we need better data,” but this has to be produced, and until you count the fish and know your universe of anglers, you aren’t going to get better data by paying lip service to better data. Only with Amend

40 will you get better data. Unless they get a mandate to collect better data, it isn't going to happen. The charter operators can't allow things to stay the same as their access will continue to shrink. He represents 81 fishing businesses and anglers in Destin who support Amend 40.

Pam Anderson – charter for-hire (headboat), Anderson's Marina

Opposes sector separation, fish tags, or any other measure that restricts public access to the resource, or to pick who will get access. Catch share programs always reduce participation in a fishery. She supports Alternative 1, no action. She proposes that more of the abundant stock be allocated for harvest, because everyone knows it exists. The OFL can be increased, ask the SSC and SEDAR, and make it equal to the biomass out there. The fishery should not be constrained like it is; it's constrained by NOAA's rules, not the Magnuson-Stevens Act. Since the quota is based on the weight of the fish, which is increasing as they are growing, NOAA's numbers show twice as much harvest as they thought. This couldn't be happening if the stock had been overfished. The States have stepped up because NOAA didn't, to improve data collection. NOAA was supposed to have by 2009 the universal registry, to use those fishermen for the surveys. States are going against federal rules because it's an economic issue; there is no issue of conservation of these fish. Need to get NOAA to change the rules.

Chris Schofield – charter for-hire

Supports sector separation. He will put whatever they require on his boat to count the fish. He wants fairness. The private recreational boats had a 52-day season in state waters. He was throwing back red snapper while those boats could keep them.

Jason Hallmark – charter for-hire

Supports sector separation. He hasn't heard anyone say that they are both fishermen and salesmen. When he's asked what they can catch and keep, it's easier to sell a trip when he can answer the person. He knows it's coming; it's going to zero. Supports sector separation 100%.

Peter Egan – recreational angler

Opposes sector separation. In looking at the numbers in the documents, the math doesn't work. Taking allocation of 49% and splitting between 1,400 vessels and millions of people. He doesn't understand how managers don't know how many licensed anglers there are in the Gulf. He's willing to follow any rules: to buy stamps, tags. With the 9-day season they had this year, he could only fish one day and seas were 3-5 feet. Whether or not sector separation passes, they need a new system, whatever that is. Give him 20 tags and 3 months to fish it, but Amendment 40 is based on incomplete information.

Candy Hansard – recreational angler

She is appalled that charter boats are excluded from fishing state waters, are under the 30B permit provision, and the permit moratorium, but they are not the fault of the private anglers. The Council did those things. Separating the recreational sector will not accomplish what people say it will; there is no data component in Amendment 40. The same thing will happen as when catch shares were given to the commercial industry. There were 800 out there fishing, then it dropped down to 400. Sector separation is going to pick winners and losers. It's not fair to ask anyone to be the loser, and that's what she thinks will happen with sector separation. Biggest

concern the council should be focusing on is the invasive lionfish. Charter captains don't know how many days each sector will be able to fish. If they knew exactly, it might be different.

Aaron Smith – charter for-hire crew

Supports sector separation, so they can account for own fish. They need consistency. It's important to his customers that they be able to keep a snapper and not have to throw it back dead. As a former party boat captain, he has filled out the logbooks and now look, the headboats can show what they've been catching for many years. If the charter fleet had something like logbooks, it would help. Something needs to be done to see what private anglers are catching, too.

Curt Gwin – charter for-hire

Supports sector separation. They want to be more accountable and show what they're catching. The charter fleet can provide more access to the fishery.

Brady Bowman – charter for-hire

Supports sector separation.

Michael A. Whitley, Jr. – charter for-hire

Supports sector separation. Accountability is a big deal; he did a logbook program, he still does it every day and wants to be accountable.

Tho Bishop –

The government has created a system of haves and have-nots. Frustration with status quo has led to rushing into something that is not really thought out. The Council should wait on this now and work on repealing 30B.

Bernie LeFebvre – charter for-hire

Supports sector separation because it could help the charter fleet make a better management system. We need a common sense approach to collecting data.

Kimberly Meyers –

Supports sector separation and prefers a 50-50 allocation between sectors (components).

Greg Meyers –

Supports sector separation and prefers a 50-50 allocation between sectors (components).

Trip Aukeman – CCA Florida

Opposes sector separation. He prefers Action 1, Alternative 1 (no action). CCA and its members are against Amendment 40.

Mike Parker –

Supports sector separation.

Jason Mikel –

Supports sector separation. This is the Council's opportunity to have accountability in the recreational fishery and to do the right thing.

Joseph Eric Thrasher –

Supports sector separation. He thinks every American citizen deserves access, as they do not all own a boat to access this fish. They depend on for-hire vessels. If for-hire or recreational anglers could manage this fishery and be more accountable, there could be more opportunities for everyone.

Bill Mickler –

Opposes sector separation. Supports Action 1, Alternative 1 (no action).

Dean Cox – charter for-hire and commercial

Supports sector separation and says “yes” on Amendment 40.

**St Petersburg, Florida
August 4, 2014**

Council/Staff

Martha Bademan

Douglass Boyd

Assane Diagne

Ava Lasseter

Doug Gregory

95 people attended.

Pat Kelly – charter for-hire

Opposes sector separation. Recreational anglers fish from his boat, too. Feels this is being done to divide-and-conquer the recreational sector. The science is extrapolated from some vague amount of fish we caught, based on how many hours we were fishing. When the science gets there, maybe consider this. No fishing guide should be penalized for the license he has; they are penalizing the state guys. Gas prices are high which affects how much people fish. It’s going to be another species next.

Gary Poysick – journalist and recreational angler

Opposes sector separation, strongly. He only supports no action on Amendment 40.

Dave Markett – charter for-hire

Opposes sector separation and supports no action. The guides here are already excluded from taking reef fish, so only separating recreational anglers. He can’t participate in the fishery even though he is a licensed angler in Florida. Nowhere else in the country has sector separation worked, so why would it work here? Red snapper are abundant. The federal government is trying to put recreational fishermen out of business in state waters. We do not need this management measure that has been proven to fail elsewhere.

Vance Tice – recreational angler

Opposes sector separation. This is about pushing catch shares, not management. It's about EDF and the promise of 400% returns on investments. 97% of people said "no" to sector separation the last time. Why are you asking us to say the same thing, again?

Allan Willis – recreational angler

Opposes sector separation. He doesn't see the basis for it in the recreational sector. It's about opportunity. Some guys can afford to own a boat and others go on for-hire vessels. It's illegitimate to decide who gets the fish depending on their vessel.

Dave Neumann – recreational angler

He has a state guide license and wants there to be fish for everybody. But, you can't manage what you can't count and the science has been proven to be incorrect.

Nicholas Froelich – charter for-hire

Supports sector separation. He can't fish in state waters. States have gone non-compliant and sector separation already exists with all the extra requirements he has.

Steve Furman – Tampa CCA and recreational angler

Opposed to sector separation. CCA does not support sector separation.

Craig Berman – recreational angler

Opposes sector separation. Red snapper are more populous than they've ever been, but the federal government gave them a 9-day season because of a Washington D.C. lawsuit. This is an EDF bribe, as they are giving more quota to charter operators even though they haven't caught any in the last three years. He asked how the preferred alternatives had already been selected when the public had not been asked. He wants to talk regional management before sector separation in this region. How many for-hire boats go 50 miles out? It is corrupt to give them 46%. He feels the charter fleet is going to be given the best times to catch red snapper and the private anglers will be made to fish at the worst times. He promises that there will be lawsuits.

Roy Shute – recreational angler

Opposes sector separation and is in agreement with prior testimony.

Elaine Gregory – recreational angler

Opposes sector separation, and is in agreement with prior testimony.

William E. Keen II – recreational angler

Opposes sector separation. He doesn't believe you can have flexible management with skewed data. This sounds like catch shares, and he should be able to go out and hire any boat and be able to catch any fish that is out there. Do the science and get accurate reporting for responsible decisions.

Mike Jackson – recreational angler

Opposes sector separation. In November 2010, EDF held a sector separation workshop on behalf of the Council, which was an indoctrination attempt for sector separation. EDF used the cover of

the Council to pass for legitimacy. The Council's website is overflowing with comments from those who oppose sector separation. He feels some Council members consider public testimony as an afterthought, and asked why the drive toward catch shares keeps going on only in the Gulf, when all other Councils have stopped adopting them. He questions the justness of passing this if 96% of stakeholders are opposed.

Mark Hubbard – charter for-hire (headboat)

Opposes sector separation. This sets a precedent for other species to also be separated. He encourages the Council to move slowly on this to avoid negative impacts. There is no place for sector separation until the current issues concerning anglers and landings are fixed. The current proposal for Florida's reef fish stamp will give the state some real information and fix the science. He asks how NMFS can implement more measures when they don't have current measures under control.

Chad Haggert – charter for-hire (headboat)

Everyone talks about 96% of anglers who are against this, but what about the people all over the country, who only access the fishery by for-hire vessels? He has 1,000 letters from his customers, supporting this and the EFP program. For-hire vessels can't fish in state waters when open, and other factors have further decreased their access to the fishery. He thinks the science is flawed, too, but what works for private anglers doesn't work for those with a business to run. He has a headboat in the EFP program and it's working well.

Jesse Mayer –

Agrees with what everyone is saying. He doesn't know where the numbers are coming from, but he hears that they are taking the numbers from our area where you hardly find a red snapper. So the scientific data is completely wrong and not factual.

Travis Palladero – Mayor of Madeira Beach and charter for-hire

When the season was shortened from 30 to 9 days, none of his passengers cancelled trips and he can't believe they canceled with anyone else. For the recreational anglers, why would we take away fish? The impact for Pinellas County for you all to catch red snapper is huge, for the state of Florida and the entire Gulf region. If you do this, you'll be costing jobs and hurting the tax payers.

Ryan Harrington – recreational angler

Opposes sector separation and wants no action.

Mackenzie Harrington – recreational angler

Opposes sector separation and wants no action.

Mark Bryant – charter for-hire

Supports sector separation because the data is flawed. The charter fleet is willing to purchase VMS to get better data; it's something they are able to do now.

Stephen Doss – charter for-hire

Opposes sector separation because it's not a good alternative to what they need, which is more days to fish. The government should be creating habitat, not creating division among anglers. Management must be done responsibly and habitat is the key. Stop the separation of people. He wants a better system.

William D. Morris – harbormaster in Clearwater

He is giving the same statement from the City of Clearwater as two years ago. They tenuously support sector separation if better data is collected. They have an important recreational fishery in Clearwater, and while they are in support of sector separation, what they really want is better data collection before a decision is forced on everyone.

Sean Gucken – recreational angler

Opposes sector separation. With the abundance of red snapper out there, a shorter season makes no sense. The Council has already heard they are opposed, and the AP told them, too. He is upset that the Council would give his recreational fish to someone else to make money off of. The charter operators should be given commercial fish, then. We've just gotten a data collection system rolling, so what is the rush on this? He's also offended because there is no accountability for the Council members. He has decided the Council is lazy, and it's easiest to reduce the number of fishers. He thinks it is offensive to pass something then see what it will do.

Conrad Szymanski – recreational angler

Opposes sector separation. All recreational anglers are making tremendous sacrifices in rebuilding the fisheries. There are unintended consequences from this amendment. The fishery is so different across the Gulf, here we have to go so far out; in the Panhandle there is more. So, this would create regional divisions that are different than now. Years ago, it was a rare catch; now it is the dominant catch [fishing far offshore]. The regulations are not working for the local area. There is a time bias in this, there are other macroeconomic impacts, in his marina there were three charter boats that used to go out; now there are none. This would be giving quota to people who are out of business.

Ron Venter – recreational angler

Opposes sector separation; supports no action.

Brad Bandom – recreational angler

Opposes sector separation; supports no action.

Paul Kerr – recreational angler

Opposes sector separation; supports no action.

Bob Bryant – recreational angler

Opposes sector separation; supports no action. He suggests following Dr. Bob Shipp's advice and go back to a 6-month season. He was unhappy with the locations of the public hearings, noting the shortage of hearings from the Keys to Port St Joe. He noted the overwhelming opposition on this issue by recreational anglers. The reason for doing this is flawed, as the proportion of landings is reducing because the number of charter vessels is dropping and the

private vessel numbers are staying the same. The amendment is based on a pure economic reason, so is illegal and violates the Magnuson-Stevens Act. All alternatives are a violation of National Standard 4, because it creates a special class of recreational anglers. Looking at the charter fleet, it's not about how much fish they catch but their passenger capacity, so they need 27% of quota. Sector separation will lead to IFQs, and it does not improve the data.

Steve Weiss – recreational angler

Opposes sector separation. He has been stopped twice by law enforcement this year. He doesn't trust the motives behind sector separation.

Paulette Barrett – recreational angler

Opposes sector separation because from what she sees, all the data is flawed. She doesn't have the ability to vote and we are all in this together. If we continue down this path, going to just get people breaking rules and mutilating the species.

Richard Nicajevsky –

Supports sector separation.

Terry England – recreational angler

Opposes sector separation; supports no action.

David Mokotoff – recreational angler

Opposes sector separation. This is the first step to everything else. He thinks data should be collected at places like boat ramps.

Mike Colby – charter for-hire

Supports sector separation. He has heard all the conspiracy theories, about wealthy investors and flawed data, and he thinks back on Amendment 28 when the private anglers wanted to give more fish from the commercial to the recreational sector. The data was ok for that, but now those data are flawed and they don't want to allocate within the sector. The people who fish with him do not have boats nor friends with boats.

An average of 62,000 recreational anglers went fishing from his marina, those are the forgotten anglers who aren't here. Sector separation stops the bleeding from his industry, and just defines the sectors. What the council does afterward, they'll have to get more input.

Bob Clark –

Supports sector separation.

Tara Homan –charter for-hire

They were not in the area for the 9-day season due to an emergency, but they are new charter operators and would like to see a longer season.

Jack Hexter – FRA, CCA, recreational angler

Opposes sector separation. Five years ago at the workshop, he said that if sector separation came through, it meant he would have to pay a charter captain to take him out, even though he owns a

\$100,000 boat. No one has the right to take fish away from another group. They are given 25% of the fish and nine days.

Teresa Hattaway – recreational angler, dive shop owner
Opposes sector separation; wants no action.

Chris Boggs –
Opposes sector separation; wants no action. Fishing didn't used to be a rich man's game. If they go out and fish and don't catch anything, they still spent the money. It's the cost of opportunity: you don't put yourself at risk to play catch and release. It is about killing fish. Also, can't take a trip and catch a red snapper and gag at the same time. The seasons are mutually exclusive of each other. He wants to find a way to give access to the biggest portion of public at the best times of the year.

Steven Hunsucker – charter for-hire
Supports sector separation and agrees with other charter operators. He takes a lot of people fishing each year who spend a lot of money in the local economy and they have the same rights as everyone does.

Paul Zielske – recreational angler
Opposes sector separation; wants no action.

Dennis O'Hern – FRA, recreational angler
Opposes sector separation because it's about pursuing inter-sector trading. Commercial fishermen now own the fish before they are even caught, while other fishermen risk their lives for \$1-2/pound. The recreational anglers at the AP all supported no action, but Roy said that if he divides the recreational quota into two components, he still closes the season. So, he's still talking one sector. Bob Shipp also said the data is flawed. Roy said there is an incentive to misreport based on IFQs. Recreational participation continues to decline, except in the Gulf charter sector, which is up 12%. The reason they are showing higher statistics is because of effort compression, which is killing the for-hire fleet. Andy estimates that people would still fish the same amount even with the season getting shorter. NMFS won't release numbers, even to the state guys. He understands the hard times the charter guys are having and doesn't want them stuck with nine days, but he doesn't want one group given more access. NMFS has still not listened to the NRC report about the data.

Christopher Dolan – recreational angler
Opposes sector separation. He wants to be able to take his son fishing. What is going on with the regulations is insane. He's tired of being told they have to catch less because there are less, when obviously there are not less.

Chris Dailey – recreational angler
Opposes sector separation. The Feds are punishing the state of Florida for allowing people to fish the Panhandle longer than we can fish down here in Tampa Bay, so they slapped us down. He votes for option zero, no action.

Mike Hinegardner –
Supports sector separation.

Amy Verdensky –
Opposes sector separation.

Kevin Carlan –
Recreational boat registrations in Florida for 2012 totaled almost 900,000. That's the largest in the country. Those boats directly hire 83,000 people, and that's just fuel, maintenance, and tackle, not food or ice provisions. Please consider these people's jobs.

Thomas Grizzard – recreational angler
Opposes sector separation.

Mike Mahoney – recreational angler, TA Mahoney Co.
Opposes sector separation. There's all kinds of fish out there to catch and the worst we can do is fight against each other. He catches as many fish as he can. He went to Louisiana to crush red snapper for five days, because that place told their scientists to stick it. You have to have science proven first. Without proper management, we're not going to have fish. The regulations in the last 5-6 years have crushed his business. But, he's had to make changes and keep going.

Public comment cards from people who did not wish to speak:

Opposed to sector separation; want no action:

Mike Moorefield
Doug Carlan
Bob Langas
Joseph DePhillips

V. Comment Letter on the Draft Environmental Impact Statement from the Environmental Protection Agency.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

October 16, 2014

Roy E. Crabtree, Ph.D.
Regional Administrator
Southeast Regional Office
National Marine Fisheries Service
Southeast Regional Office
263 13th Avenue South
St. Petersburg, Florida 33701

Subject: EPA NEPA Review Comments on NMFS's DEIS for "Draft Amendment 40 to the Fishery Management Plan for the Reef Fish of the Gulf of Mexico"; CEQ #20140253

Dear Dr. Crabtree:

The U.S. Environmental Protection Agency (EPA) has reviewed the subject National Marine Fisheries Service (NMFS) Draft Environmental Impact Statement (DEIS) in accordance with our responsibilities under Section 102(2)(C) of the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act. EPA understands that the purpose of this action "is to define a distinct for-hire component of the recreational red snapper fishery and allocate red snapper resources between the components of the recreational sector to increase the stability for the for-hire component, provide a basis for increased flexibility in future management of the recreational sector, and minimize the chance for any recreational quota overruns which could jeopardize the rebuilding of the red snapper stock."¹

This amendment considers three actions and a total of 15 alternatives. The proposed actions include:

1. Establishment of Distinct Components with the Recreational Sector
2. Allocation of the Red Snapper Quota between the Components
3. Recreational Closure Provisions

No action and action alternatives are discussed in the DEIS. Preferred alternatives were identified by NMFS for each action.

EPA has the responsibility to review and comment on major Federal actions significantly affecting the quality of the human environment, including FMPs and FMP Amendments

¹ P. 15 of DEIS

(Amendments) as developed, approved, and implemented under the MSA where those Plans and Amendments are subject to the EIS requirement of NEPA, but it should be clear that we defer to NMFS and the Council as to the development of fishery statistics and the relative importance of the commercial and recreational fisheries for each species.

Based on our review, we offer the following comments:

Significant Increase in Recreational Activity in 2013

Several tables and figures in Chapter 1 indicate a significant increase in recreational landings and trips in 2013 as compared to previous years (for example – Figure 1.1.2 shows more than double landings from 2012-2013 for private vessels). EPA is unclear if this increase in landings and trips is due to the gradual impact of the for-hire permit moratorium (starting in 2004) or some other reason. EPA recommends that NMFS include additional discussion in the FEIS as to why landings and trip activity increased significantly in 2013.

Gulf Hypoxia Zone

EPA notes that the discussion in the Affected Environment Chapter and the Cumulative Impacts section provides minimal discussion of the Gulf hypoxic zone in the Northern Gulf of Mexico. The Louisiana Universities Marine Consortium (LUMCON) provides maps and data on the extent of the Gulf hypoxia zone which can be significantly influenced by flooding of the Mississippi River, tropical storm activity, nutrient-enhanced primary production, etc. EPA recommends additional discussion be included in the FEIS of the recent extents of the Gulf hypoxia zone and the potential impact on the Red Snapper Fishery.

Environmental Justice Analysis

EPA appreciates the NMFS including an Environmental Justice discussion in Section 3.4.2 of the DEIS. We understand that data relating to the demographics of the fishing community that may be impacted by this Federal action is limited, however the DEIS does include a discussion of the coastal counties that may be impacted by this action. As more specific demographic data for vessel owners, crew, dealers, employees, etc becomes available EPA recommends more detailed EJ analyses be included in future NEPA documents. We expect minimal impact on subsistence fishing associated with this action, but we recommend NMFS include a brief discussion in the FEIS of the proposed amendment's impact on subsistence fishing in the Gulf region.

Red Snapper Recreational Target Trips by Mode

Table 3.5.2.1.1 provides Red Snapper recreational target trips by mode for the years 2011-2013. EPA notes that Alabama is the only State that has reported trips under the Shore Mode category. No explanation is provided in the text as to why data is missing for Florida, Louisiana, and Mississippi. EPA recommends the FEIS include this additional data or an explanation as to why it is not available.

Editorial Comment

EPA's Climate Change website is referenced on page 95 but no web link is provided.

EPA recommends including the following link to the FEIS for this reference:

<http://epa.gov/climatechange/>

EPA DEIS Rating:

Although we offer some clarifying comments on this DEIS, EPA supports NMFS on Amendment 40 and gives deference to its fishery expertise. Therefore, EPA rates this DEIS as "LO" (Lack of Objections). Nevertheless, we request that NMFS respond to our comments in a dedicated section of the FEIS.

EPA appreciates the opportunity to review this DEIS. Should NMFS have questions regarding our comments on the Amendment actions, please feel free to contact Dan Holliman at 404/562-9531 or holliman.daniel@epa.gov of my staff.

Sincerely,



Heinz J. Mueller
Chief, NEPA Program Office

VI. Response to comments from the Environmental Protection Agency (EPA) on the Draft Environmental Impact Statement (DEIS) for Amendment 40

Although offering some clarifying comments, the EPA supports NMFS on Amendment 40 and gives deference to NMFS's expertise in managing fishery resources. The EPA rated this DEIS as an "LO" (Lack of Objections). This means the DEIS adequately sets forth the environmental impacts of the alternatives and no further analysis or data collection is necessary. However, an EPA reviewer may suggest the addition of clarifying language or information in the final environmental impact statement (FEIS). However, in their review, the EPA offered several comments for clarification in the DEIS. These comments and NMFS's response follow.

Comment: The EPA noted that several tables and figures in Chapter 1 indicate a significant increase in recreational landings and trips in 2013 compared to previous years. They recommend that NMFS include additional explanatory discussion in the FEIS on this increase.

Response: Some explanatory text has been added in Section 1.1 explaining that the number of private angler trips has increased in part because of more red snapper fishing opportunities in state waters due to recent extended state season lengths and in part possibly due to changes in Marine Recreational Information Program (MRIP) methods that may have influenced estimates of angler trips. MRIP calibrated recreational landings have been added and discussions of the changes in proportion of red snapper landed by the private angler compared to the for-hire modes are discussed throughout this FEIS.

Comment: The EPA noted that discussion in the Affected Environment (Chapter 3) and the Cumulative Effects Analysis (Section 4.4) provide a minimal discussion of the Gulf Hypoxic zone in the Northern Gulf of Mexico. They recommend adding additional discussion in the FEIS on the recent extent of the hypoxic zone and its potential impact on the red snapper stock.

Response: A description of the Gulf Hypoxic zone and its possible effects on the biological environment has been added to Section 3.3 and is referenced in Section 4.4 (Cumulative Effects Analysis).

Comment: The EPA appreciated NMFS' efforts in discussing environmental justice impacts in the DEIS. They did recommend that a brief discussion on subsistence fishing in the Gulf relative to Amendment 40 be included in the FEIS.

Response: A statement was added to Section 3.4.2 indicating there are no known claims for customary usage or subsistence consumption of red snapper by any population including tribes and indigenous groups.

Comment: The EPA noted that Alabama was the only Gulf state in Table 3.5.2.1.1 that has reported trips under the 'shore mode' category. They recommend the FEIS include an explanation about why the category is missing for the other Gulf states.

Response: Intercepts of Alabama recreational fishermen fishing from shore indicated they were targeting red snapper even though red snapper are not commonly caught via this mode. Because

of this, these estimates have not been included in the table; however, the table does include a note indicating “shore mode” trips in Alabama had been recorded for the three years listed in the table.

Comment: As an editorial comment, the EPA requested a link be added to the reference for the EPA’s Climate Change website on page 95 of the DEIS.

Response: The link has been added.

VII. Response to Comments from the Public on the Draft Environmental Impact Statement (DEIS) for Amendment 40

The National Marine Fisheries Service (NMFS) received a total of 124 comments from individuals and organizations including the EPA during the DEIS 45-day comment period. A total of 80 comments were not in favor of the amendment, 20 comments were in favor, two comments were uncertain, and 20 comments were not specific to the amendment. In addition to these comments, the Environmental Protection Agency (see Section V above) gave the DEIS a LO (lack of objection) and the Department of Interior indicated they did not have any comments at this time.

With regard to the different actions, several respondents against proposed actions in Amendment 40 recommended the no action alternatives

Many of the public comments were not specific to actions in Amendment 40. Some respondents indicated they supported state management of the red snapper. Some felt the recreational and commercial quotas should be reduced because the red snapper stock is stressed while others felt commercial quota should be given to the recreational sector. A few respondents indicated no action is needed because the red snapper stock is not in trouble. Finally, some respondents wished the destruction of oil rigs and killing of red snapper through demolition should stop to help the stock.

Response to general comments:

The following are comments specific to actions in Amendment 40

Comment: The amendment only addresses privatization and limited entry as ways to address recreational red snapper issues and ignores other solutions to improve the economic performance of the sector as a whole, and thus does not address the stated purpose and need.

Response: This environmental impact statement does not address privatization or limited entry actions. The actions do four things: split the recreational sector that fishes for red snapper into a private angler and a federal for-hire component; sunsets the components after three years; provides an allocation of the recreational red snapper quota to each of the components; and revises the recreational red snapper accountability measures to account for the two components. The purpose of these measures, as stated in Section 1.2 (Purpose and need), is to provide a basis for flexible management approaches tailored to each component and reduce the likelihood for recreational quota overruns which could jeopardize the rebuilding of the red snapper stock. Although subsequent management measures that lead to privatization and limited entry could result as the Council explores their options in managing red snapper, this action does not create such measures.

Comment: The economic analyses are completely deficient to properly analyze the alternatives.

Response: For the reasons summarized below and discussed in the amendment, the analysis of the expected economic effects of the actions in this proposed amendment does not include

quantitative estimates for expected economic effects. Instead, detailed qualitative analyses are provided. The separation of the recreational sector into two components and allocation of the recreational red snapper quota between the components would allow the federal for-hire component to harvest a preset portion of the recreational red snapper quota. Sector separation, in and of itself, would only provide a platform for the future management measures that could be tailored to the specific characteristics and needs of each component, thereby possibly generating increased additional economic benefits. A quantitative evaluation of potential economic benefits that could result from sector separation would require, at a minimum, detailed information on the allocation of the recreational red snapper quota between the two components and on the management measures to be implemented once the new components are created. The economic evaluation of recreational management measures, such as the establishment of separate components, would typically include quantitative estimates of the expected changes in economic value, as measured by changes in consumer surplus to recreational anglers by mode and producer surplus to for-hire operators. However, estimates of consumer surplus specific to each angler type (those fishing from private vessels and those fishing from for-hire vessels) are not available. Although it can be stated that curtailing the growth of fishing effort in the private angling component may redistribute effort (fishing trips) to the federal for-hire component in subsequent years, the resulting effort levels that may develop in the two components are also unknown. In addition to generating consumer surplus, fishing activity by the federal for-hire component generates producer surplus to the for-hire vessels. If consumer surplus per angler trip is assumed constant across both components, increasing the share of the quota harvested by the federal for-hire component would likely result in an increase in economic value because of the associated increase in producer surplus. The size of any potential increase, however, would be determined by several unknown factors, including the demand for for-hire trips, the ability of the industry to respond to this demand and how these factors change once sector separation is implemented. As previously stated, the establishment of separate components is expected to provide opportunities to design and implement management approaches adapted to the specific needs and preferences of each component, thereby potentially resulting in increases in economic value. For each component, the magnitude of potential increased economic benefits that could result from this action would primarily rest on the type and quality of the management instruments implemented post sector separation. The incentive structure associated with the access to fishing privileges established to manage each component would constitute a key determinant of the magnitude of expected potential economic benefits.

The sunset provision could limit potential economic benefits expected from sector separation because the Council may not have the opportunity to implement potentially beneficial management measures requiring an extended time frame to be developed. Furthermore, even if management measures tailored to the specific needs of each component were implemented, a sunset clause could reduce potential economic benefits because these measures may not be in place for a time period long enough to fully yield the economic benefits anticipated. Conversely, by providing a date certain to revert to a recreational red snapper sector without components unless the Council takes specific action to extend sector separation, the sunset provision may contribute to a timelier cancellation of the federal for-hire and private angling components should unintended adverse economic effects arise or should the positive economic effects anticipated fail to materialize.

Compared to the percentage of the recreational red snapper quota harvested by the federal for-hire component in 2013, the Council's preferred allocation would increase the estimated percentage of the quota typically harvested by the federal for-hire component and accordingly decrease the percentage available for harvest to the private angling component. The economic effects expected to result from alternative allocations between components are usually evaluated based on consumer and producer surplus (economic value) changes relative to a baseline or status quo allocation. Because these components have not previously existed, there is no previously established baseline allocation between the federal for-hire and private angling components. The allocation of greater percentages of the recreational quota to the federal for-hire component would be expected to result in increases in for-hire trips and associated increases in consumer and producer surplus. However, the magnitude of the increase in for-hire trips that would be expected to result from a given allocation, which is determined by several factors including the demand for for-hire trips, is not known. Similarly, allocating greater proportions of the recreational quota to the private angling component would be expected to result in increases in private angler trips and in corresponding increases in consumer surplus. Changes in economic value are not estimated because it cannot be assumed that the resource allocation within each component is efficient. As suggested by Holzer and McConnell (2014) and in a recent report (OECD 2014), changes in net benefit estimates based on the generally accepted application of the equi-marginal principle and associated inferences about economic efficiency are erroneous when each component's quota is not efficiently allocated within the component. Furthermore, policy prescriptions based on these inferences are invalid, and therefore, not useful. Based on the preceding discussion, all that can be concluded is that potential economic benefits accruing to each component would be expected to increase the more allocation that component receives.

Establishing separate closure provisions for the federal for-hire and private angling components would be expected to result in increased economic benefits because it would increase the management flexibility to implement component-specific measures designed to increase the economic benefits accruing to each component. Distinct components within the recreational sector, the allocation of the recreational quota between the components, and the establishment of separate closure provisions do not exempt the components from the requirements of Section 407(d) of the Magnuson-Stevens Act which requires that red snapper recreational fishing be halted once the recreational quota is caught. Therefore, potential economic benefits expected to result from sector separation with specific closure provisions for each component may be limited by this provision in the Act.

Comment: The cumulative analyses do not discuss Magnuson-Stevens Act 407(d) with respect to paybacks and its effect on season length.

Response: The implications of Section 407(d) of the Magnuson-Stevens Act were discussed in several places in the DEIS for Amendment 40 (e.g., Chapters 1, 2, and 4.). An additional discussion regarding Section 407(d) was added to the Cumulative Effects Analysis regarding the angler and vessel owner, captain, and crew valued environmental components.

Comment: For Action 2 (allocation of the recreational red snapper quota between the components of the recreational sector), Alternative 5 as well as setting the component allocation at 50:50 were recommended as preferred.

Response: To determine the allocation, the Council chose to consider alternatives that use landings from different time periods. For example, Alternative 6 would base the allocation on average landings from more recent years (2006-2013) while Alternative 9 would look at average landings from years prior to the moratorium on new for-hire permits (1986-2003). The Council selected Alternative 7 as preferred because it captures both the historical performance of the private angling and federal for-hire components (1986-2013) as well as the performance from more recent years (2006-2013). Average landings from both these time periods were weighted evenly to determine the component allocation.

Comment: The pounds for the federal for-hire quota should come from the commercial sector, not the recreational sector. The commercial and recreational allocations should be changed.

Response: The scope of the DEIS is limited to the recreational sector fishing for red snapper, and this comment is outside this scope. However, the Council is reviewing the red snapper allocation between the recreational and commercial sectors in Amendment 28 to the Fishery Management Plan for Reef Fish Resources in the Gulf of Mexico. Under Amendment 28, the Council could decrease the commercial quota while raising the recreational quota, thus increasing the private angling and federal for-hire annual catch limits.

Comment: Landings data for 2013 should not be included in setting allocations because of the limited federal season and prolonged state season. This has led to a reduction in the amount of red snapper landed by federally permitted for-hire operators because they cannot fish in state waters when federal waters are closed.

Response: In evaluating the allocation between the components, the Council wished to look at the full range of years where landings data are available for the components. This includes landings for 2013. As described in Section 2.2, the comment is correct that in more recent years, there has been a shift in allocation away from the federal for-hire component to the private angling component in part due to prolonged state seasons. However, because of the range of years the Action 2.2 alternatives are based on, the influence of more recent landings can be increased or decreased. Preferred alternative 7 selected by the Council for this action combines a longer time frame (1986-2013) and a more recent time frame (2006-2013) to balance the history of the recreational sector with more current conditions. This is an approach the Council has used in setting other allocations as noted in Section 2.2.

Comment: The Council should take alternative actions to allocating the recreational quota between the federal for-hire and private angling components such as regional management, different size and bag limits, fish tags or stamps, or changing the commercial and recreational allocations.

Response: Although this EIS evaluates creating private angler and federal for-hire components in the recreational sector for red snapper fishing, the Council is also working on other red snapper management actions. These include Amendment 39, which evaluates regional management for the recreational sector, Amendment 28, which evaluates changing the recreational and commercial red snapper allocation, a framework action which evaluates

reducing the red snapper bag limit for the for-hire component to extend the season, and has convened an ad hoc red snapper for-hire advisory panel that has been discussing fish tags as a possible tool for managing the recreational red snapper harvest.

Comment: Any federal action taken to manage recreational fishing for red snapper should not proceed because data used to support such actions are unreliable and inaccurate.

Response: National Standard 2 of the Magnuson-Stevens Act states “Conservation and management measures shall be based upon the best scientific information available. To meet that standard, the Federal data collection system for saltwater recreational fisheries, including red snapper in the Gulf of Mexico, has developed into one of the most advanced in the world. Data used in management decisions comes from multiple sources including surveys of private anglers and for-hire vessels, commercial fisheries reports, as well as fishery independent (scientific research sampling) sources. Working with state management partners, fishermen, and statistical experts, NMFS has implemented a series of improvements to recreational catch and effort data collection programs as per recommendations of the National Research Council. Currently, much of the data used in management decisions is collected by state wildlife agencies and the same information used to make fishery management decisions is used in scientific assessments of red snapper stock status which have allowed increases in overall catches each year since 2009. Recent improvements in recreational catch and effort data collections in the Atlantic and Gulf of Mexico have been implemented via the Marine Recreational Information Program (MRIP) and include revision of historical time-series data, an improved dock-side intercept survey, and improved dockside intercept methodology. These enhancements have improved the accuracy of recreational catch and effort data. Proposed MRIP improvements are extensively pilot tested, peer-reviewed by independent scientific experts, and fine-tuned prior to implementation.

APPENDIX F. FISHERY ALLOCATION POLICY

Gulf of Mexico Fishery Management Council Fishery Allocation Policy

This allocation policy was developed by the Gulf of Mexico Fishery Management Council to provide principles, guidelines, and suggested methods for allocation that would facilitate future allocation and reallocation of fisheries resources between or within fishery sectors.

Issues considered in this allocation policy include principles based on existing regulatory provisions, procedures to request and initiate (re)allocation, (re)allocation review frequency, tools and methods suggested for evaluating alternative (re)allocations.

1. Principles for Allocation

- a. Conservation and management measures shall not discriminate between residents of different states.
- b. Allocation shall:
 - (1) be fair and equitable to fishermen and fishing sectors;
 - (i) fairness should be considered for indirect changes in allocation
 - (ii) any harvest restrictions or recovery benefits be allocated fairly and equitably among sectors
 - (2) promote conservation
 - (i) connected to the achievement of OY
 - (ii) furtherance of a legitimate FMP objective,
 - (iii) promotes a rational, more easily managed use
 - (3) ensure that no particular individual, corporation, or other entity may acquire an excessive share.
- c. Shall consider efficient utilization of fishery resources but:
 - (1) should not just redistribute gains and burdens without an increase in efficiency
 - (2) prohibit measures that have economic allocation as its sole purpose.
- d. Shall take into account: the importance of fishery resources to fishing communities by utilizing economic and social data in order to:
 - (1) provide for the sustained participation of fishing communities
 - (2) minimize adverse economic impacts on fishing communities.

- e. Any fishery management plan, plan amendment, or regulation submitted by the Gulf Council for the red snapper fishery shall contain conservation and management measures that:
 - (1) establish separate quotas for recreational fishing (including charter fishing) and commercial fishing.
 - (2) prohibit a sector (i.e., recreational or commercial) from retaining red snapper for the remainder of the season, when it reaches its quota.
 - (3) ensure that the recreational and commercial quotas reflect allocation among sectors and do not reflect harvests in excess of allocations.

2. Guidelines for Allocation

- a. All allocations and reallocations must be consistent with the Gulf of Mexico Fishery Management Council's principles for allocation.
- b. An approved Council motion constitutes the only appropriate means for requesting the initiation of allocation or reallocation of a fishery resource. The motion should clearly specify the basis for, purpose and objectives of the request for (re)allocation.
- c. The Council should conduct a comprehensive review of allocations within the individual FMPs at intervals of no less than five years.
- d. Following an approved Council motion to initiate an allocation or reallocation, the Council will suggest methods to be used for determining the new allocation. Methods suggested must be consistent with the purpose and objectives included in the motion requesting the initiation of allocation or reallocation.
- e. Changes in allocation of a fishery resource may, to the extent practicable, account for projected future socio-economic and demographic trends that are expected to impact the fishery.
- f. Indirect changes in allocation, i.e., shifts in allocation resulting from management measures, should be avoided or minimized to the extent possible.

3. Suggested Methods for Determining (Re)Allocation

a. Market-based Allocation

- (1) Auction of quota
- (2) Quota purchases between commercial and recreational sectors
 - (i) determine prerequisites and conditions:
 - (a) quota or tags or some other mechanism required in one or both sectors
 - (b) mechanism to broker or bank the purchases and exchanges

- (c) annual, multi-year, or permanent
- (d) accountability for purchased or exchanged quota in the receiving sector

b. Catch-Based (and mortality) Allocation

- (1) historical landings data
 - (i) averages based on longest period of credible records
 - (ii) averages based on a period of recent years
 - (iii) averages based on total fisheries mortality (landings plus discard mortality) by sector
 - (iv) allocations set in a previous FMP
 - (v) accountability (a sector's ability to keep within allocation)

c. Socioeconomic-based Allocation

- (1) socio-economic analyses
 - (i) net benefits to the nation
 - (ii) economic analysis limited to direct participants
 - (iii) economic impact analysis (direct expenditures and multiplier impacts)
 - (iv) social impact analysis
 - (v) fishing communities
 - (vi) participation trends
 - (vii) "efficiency" analysis
 - (a) lowest possible cost for a particular level of catch;
 - (b) harvest OY with the minimum use of economic inputs

d. Negotiation-Based Allocation

- (1) Mechanism for sectors to agree to negotiation and select representatives
- (2) Mechanism to choose a facilitator
- (3) Negotiated agreement brought to Council for normal FMP process of adoption and implementation.

APPENDIX G. CURRENT FEDERAL REGULATIONS FOR GULF OF MEXICO RECREATIONAL RED SNAPPER MANAGEMENT

1. § 622.9 Prohibited gear and methods--general.

(e) Use of Gulf reef fish as bait prohibited. Gulf reef fish may not be used as bait in any fishery, except that, when purchased from a fish processor, the filleted carcasses and offal of Gulf reef fish may be used as bait in trap fisheries for blue crab, stone crab, deep-water crab, and spiny lobster.

2. § 622.20 Permits and endorsements

(b) Charter vessel/headboat permits. For a person aboard a vessel that is operating as a charter vessel or headboat to fish for or possess Gulf reef fish, in or from the EEZ, a valid charter vessel/headboat permit for Gulf reef fish must have been issued to the vessel and must be on board.

(1) Limited access system for charter vessel/headboat permits for Gulf reef fish. No applications for additional charter vessel/headboat permits for Gulf reef fish will be accepted. Existing permits may be renewed, are subject to the restrictions on transfer in paragraph (b)(1)(i) of this section, and are subject to the renewal requirements in paragraph (b)(1)(ii) of this section.

(i) Transfer of permits--(A) Permits without a historical captain endorsement. A charter vessel/headboat permit for Gulf coastal migratory pelagic fish or Gulf reef fish that does not have a historical captain endorsement is fully transferable, with or without sale of the permitted vessel, except that no transfer is allowed to a vessel with a greater authorized passenger capacity than that of the vessel to which the moratorium permit was originally issued, as specified on the face of the permit being transferred. An application to transfer a permit to an inspected vessel must include a copy of that vessel's current USCG Certificate of Inspection (COI). A vessel without a valid COI will be considered an uninspected vessel with an authorized passenger capacity restricted to six or fewer passengers.

(B) Permits with a historical captain endorsement. A charter vessel/headboat permit for Gulf coastal migratory pelagic fish or Gulf reef fish that has a historical captain endorsement may only be transferred to a vessel operated by the historical captain, cannot be transferred to a vessel with a greater authorized passenger capacity than that of the vessel to which the moratorium permit was originally issued, as specified on the face of the permit being transferred, and is not otherwise transferable.

(C) Procedure for permit transfer. To request that the RA transfer a charter vessel/headboat permit for Gulf reef fish, the owner of the vessel who is transferring the permit and the owner of the vessel that is to receive the transferred permit must complete the transfer information on the reverse side of the permit and return the permit and a completed application for transfer to the RA. See § 622.4(f) for additional transfer-related requirements applicable to all permits issued under this part.

(ii) Renewal. (A) Renewal of a charter vessel/headboat permit for Gulf reef fish is contingent upon the permitted vessel and/or captain, as appropriate, being included in an active

survey frame for, and, if selected to report, providing the information required in one of the approved fishing data surveys. Surveys include, but are not limited to—

(1) NMFS' Marine Recreational Fishing Vessel Directory Telephone Survey (conducted by the Gulf States Marine Fisheries Commission);

(2) NMFS' Southeast Headboat Survey (as required by § 622.26(b)(1));

(3) Texas Parks and Wildlife Marine Recreational Fishing Survey; or

(4) A data collection system that replaces one or more of the surveys in paragraph (b)(1)(ii)(A),(1),(2), or (3) of this section.

(B) A charter vessel/headboat permit for Gulf reef fish that is not renewed or that is revoked will not be reissued. A permit is considered to be not renewed when an application for renewal, as required, is not received by the RA within 1 year of the expiration date of the permit.

(iii) Requirement to display a vessel decal. Upon renewal or transfer of a charter vessel/headboat permit for Gulf reef fish, the RA will issue the owner of the permitted vessel a vessel decal for Gulf reef fish. The vessel decal must be displayed on the port side of the deckhouse or hull and must be maintained so that it is clearly visible.

(2) A charter vessel or headboat may have both a charter vessel/headboat permit and a commercial vessel permit. However, when a vessel is operating as a charter vessel or headboat, a person aboard must adhere to the bag limits. See the definitions of "Charter vessel" and "Headboat" in § 622.2 for an explanation of when vessels are considered to be operating as a charter vessel or headboat, respectively.

(3) If Federal regulations for Gulf reef fish in subparts A or B of this part are more restrictive than state regulations, a person aboard a charter vessel or headboat for which a charter vessel/headboat permit for Gulf reef fish has been issued must comply with such Federal regulations regardless of where the fish are harvested.

3. § 622.26 Recordkeeping and reporting.

(b) Charter vessel/headboat owners and operators--(1) Reporting requirement. The owner or operator of a vessel for which a charter vessel/headboat permit for Gulf reef fish has been issued, as required under § 622.20(b), or whose vessel fishes for or lands such reef fish in or from state waters adjoining the Gulf EEZ, who is selected to report by the SRD must maintain a fishing record for each trip, or a portion of such trips as specified by the SRD, on forms provided by the SRD and must submit such record as specified in paragraph (b)(2) of this section.

(2) Reporting deadlines--(i) Charter vessels. Completed fishing records required by paragraph (b)(1) of this section for charter vessels must be submitted to the SRD weekly, postmarked not later than 7 days after the end of each week (Sunday). Information to be reported is indicated on the form and its accompanying instructions.

(ii) Headboats. Completed fishing records required by paragraph (b)(1) of this section for headboats must be submitted to the SRD monthly and must either be made available to an authorized statistical reporting agent or be postmarked not later than 7 days after the end of each month. Information to be reported is indicated on the form and its accompanying instructions.

4. § 622.27 At-sea observer coverage.

(a) Required coverage. A vessel for which a Federal commercial vessel permit for Gulf reef fish or a charter vessel/headboat permit for Gulf reef fish has been issued must carry a NMFS-approved observer, if the vessel's trip is selected by the SRD for observer coverage. Vessel permit renewal is contingent upon compliance with this paragraph (a).

(b) Notification to the SRD. When observer coverage is required, an owner or operator must advise the SRD in writing not less than 5 days in advance of each trip of the following:

(1) Departure information (port, dock, date, and time).

(2) Expected landing information (port, dock, and date).

(c) Observer accommodations and access. An owner or operator of a vessel on which a NMFS-approved observer is embarked must:

(1) Provide accommodations and food that are equivalent to those provided to the crew.

(2) Allow the observer access to and use of the vessel's communications equipment and personnel upon request for the transmission and receipt of messages related to the observer's duties.

(3) Allow the observer access to and use of the vessel's navigation equipment and personnel upon request to determine the vessel's position.

(4) Allow the observer free and unobstructed access to the vessel's bridge, working decks, holding bins, weight scales, holds, and any other space used to hold, process, weigh, or store fish.

(5) Allow the observer to inspect and copy the vessel's log, communications logs, and any records associated with the catch and distribution of fish for that trip.

5. § 622.29 Conservation measures for protected resources.

(a) Gulf reef fish commercial vessels and charter vessels/headboats--(1) Sea turtle conservation measures. (i) The owner or operator of a vessel for which a commercial vessel permit for Gulf reef fish or a charter vessel/headboat permit for Gulf reef fish has been issued, as required under

§§ 622.20(a)(1) and 622.20(b), respectively, must post inside the wheelhouse, or within a waterproof case if no wheelhouse, a copy of the document provided by NMFS titled, "Careful Release Protocols for Sea Turtle Release With Minimal Injury," and must post inside the wheelhouse, or in an easily viewable area if no wheelhouse, the sea turtle handling and release guidelines provided by NMFS.

(ii) Such owner or operator must also comply with the sea turtle bycatch mitigation measures, including gear requirements and sea turtle handling requirements, specified in §§ 635.21(c)(5)(i) and (ii) of this chapter, respectively.

(iii) Those permitted vessels with a freeboard height of 4 ft (1.2 m) or less must have on board a dipnet, tire, short-handled dehooker, long-nose or needle-nose pliers, bolt cutters, monofilament line cutters, and at least two types of mouth openers/mouth gags. This equipment must meet the specifications described in §§ 635.21(c)(5)(i)(E) through (L) of this chapter with the following modifications: the dipnet handle can be of variable length, only one NMFS-approved short-handled dehooker is required (i.e., § 635.21(c)(5)(i)(G) or (H) of this chapter); and life rings, seat cushions, life jackets, and life vests or any other comparable, cushioned, elevated surface that allows boated sea turtles to be immobilized, may be used as alternatives to

tires for cushioned surfaces as specified in § 635.21(c)(5)(i)(F) of this chapter. Those permitted vessels with a freeboard height of greater than 4 ft (1.2 m) must have on board a dipnet, tire, long-handled line clipper, a short-handled and a long-handled dehooker, a long-handled device to pull an inverted "V", long-nose or needle-nose pliers, bolt cutters, monofilament line cutters, and at least two types of mouth openers/mouth gags. This equipment must meet the specifications described in § 635.21(c)(5)(i)(A) through (L) of this chapter with the following modifications: only one NMFS-approved long-handled dehooker (§ 635.21(c)(5)(i)(B) or (C)) of this chapter and one NMFS-approved short-handled dehooker (§ 635.21(c)(5)(i)(G) or (H) of this chapter) are required; and life rings, seat cushions, life jackets, and life vests, or any other comparable, cushioned, elevated surface that allows boated sea turtles to be immobilized, may be used as alternatives for cushioned surfaces as specified in § 635.21(c)(5)(i)(F) of this chapter.

(2) Smalltooth sawfish conservation measures. The owner or operator of a vessel for which a commercial vessel permit for Gulf reef fish or a charter vessel/headboat permit for Gulf reef fish has been issued, as required under §§ 622.20(a)(1) and 622.20(b), respectively, that incidentally catches a smalltooth sawfish must--

- (i) Keep the sawfish in the water at all times;
 - (ii) If it can be done safely, untangle the line if it is wrapped around the saw;
 - (iii) Cut the line as close to the hook as possible; and
 - (iv) Not handle the animal or attempt to remove any hooks on the saw, except for with a long-handled dehooker.
- (b) [Reserved]

6. § 622.30 Required fishing gear.

For a person on board a vessel to fish for Gulf reef fish in the Gulf EEZ, the vessel must possess on board and such person must use the gear as specified in paragraphs (a) through (c) of this section.

(a) Non-stainless steel circle hooks. Non-stainless steel circle hooks are required when fishing with natural baits.

(b) Dehooking device. At least one dehooking device is required and must be used to remove hooks embedded in Gulf reef fish with minimum damage. The hook removal device must be constructed to allow the hook to be secured and the barb shielded without re-engaging during the removal process. The dehooking end must be blunt, and all edges rounded. The device must be of a size appropriate to secure the range of hook sizes and styles used in the Gulf reef fish fishery.

(c) Venting tool. At least one venting tool is required and must be used to deflate the abdominal cavities of Gulf reef fish to release the fish with minimum damage. This tool must be a sharpened, hollow instrument, such as a hypodermic syringe with the plunger removed, or a 16-gauge needle fixed to a hollow wooden dowel. A tool such as a knife or an ice-pick may not be used. The venting tool must be inserted into the fish at a 45-degree angle approximately 1 to 2 inches (2.54 to 5.08 cm) from the base of the pectoral fin. The tool must be inserted just deep enough to release the gases, so that the fish may be released with minimum damage.

7. § 622.32 Prohibited gear and methods.

Also see § 622.9 for additional prohibited gear and methods that apply more broadly to multiple fisheries or in some cases all fisheries.

(a) Poisons. A poison may not be used to take Gulf reef fish in the Gulf EEZ.

(b) [Reserved]

8. § 622.33 Prohibited species.

(d) Gulf reef fish exhibiting trap rash. Possession of Gulf reef fish in or from the Gulf EEZ that exhibit trap rash is prima facie evidence of illegal trap use and is prohibited. For the purpose of this paragraph, trap rash is defined as physical damage to fish that characteristically results from contact with wire fish traps. Such damage includes, but is not limited to, broken fin spines, fin rays, or teeth; visually obvious loss of scales; and cuts or abrasions on the body of the fish, particularly on the head, snout, or mouth.

9. § 622.34 Seasonal and area closures designed to protect Gulf reef fish.

(a) Closure provisions applicable to the Madison and Swanson sites and Steamboat Lumps, and the Edges-- (1) Descriptions of Areas. (i) The Madison and Swanson sites are bounded by rhumb lines connecting, in order, the following points:

Point	North lat.	West long.
A	29°17'	85°50'
B	29°17'	85°38'
C	29°06'	85°38'
D	29°06'	85°50'
A	29°17'	85°50'

(ii) Steamboat Lumps is bounded by rhumb lines connecting, in order, the following points:

Point	North lat.	West long.
A	28°14'	84°48'
B	28°14'	84°37'
C	28°03'	84°37'
D	28°03'	84°48'
A	28°14'	84°48'

(iii) The Edges is bounded by rhumb lines connecting, in order, the following points:

Point	North lat.	West long.
A	28°51'	85°16'
B	28°51'	85°04'
C	28°14'	84°42'
D	28°14'	84°54'
A	28°51'	85°16'

(2) Within the Madison and Swanson sites and Steamboat Lumps, possession of Gulf reef fish is prohibited, except for such possession aboard a vessel in transit with fishing gear stowed as specified in paragraph (a)(4) of this section.

(3) Within the Madison and Swanson sites and Steamboat Lumps during November through April, and within the Edges during January through April, all fishing is prohibited, and possession of any fish species is prohibited, except for such possession aboard a vessel in transit with fishing gear stowed as specified in paragraph (a)(4) of this section. The provisions of this paragraph, (a)(3), do not apply to highly migratory species.

(4) For the purpose of paragraph (a) of this section, transit means non-stop progression through the area; fishing gear appropriately stowed means--

(i) A longline may be left on the drum if all gangions and hooks are disconnected and stowed below deck. Hooks cannot be baited. All buoys must be disconnected from the gear; however, buoys may remain on deck.

(ii) A trawl net may remain on deck, but trawl doors must be disconnected from the trawl gear and must be secured.

(iii) A gillnet must be left on the drum. Any additional gillnets not attached to the drum must be stowed below deck.

(iv) A rod and reel must be removed from the rod holder and stowed securely on or below deck. Terminal gear (i.e., hook, leader, sinker, flasher, or bait) must be disconnected and stowed separately from the rod and reel. Sinkers must be disconnected from the down rigger and stowed separately.

(5) Within the Madison and Swanson sites and Steamboat Lumps, during May through October, surface trolling is the only allowable fishing activity. For the purpose of this paragraph (a)(5), surface trolling is defined as fishing with lines trailing behind a vessel which is in constant motion at speeds in excess of four knots with a visible wake. Such trolling may not involve the use of down riggers, wire lines, planers, or similar devices.

(6) For the purpose of this paragraph (a), fish means finfish, mollusks, crustaceans, and all other forms of marine animal and plant life other than marine mammals and birds. Highly migratory species means tuna species, marlin (*Tetrapturus spp.* and *Makaira spp.*), oceanic sharks, sailfishes (*Istiophorus spp.*), and swordfish (*Xiphias gladius*).

10. § 622.35 Gear restricted areas.

(a) Reef fish stressed area. The stressed area is that part of the Gulf EEZ shoreward of rhumb lines connecting, in order, the points listed in Table 2 in Appendix B of this part.

(1) A powerhead may not be used in the stressed area to take Gulf reef fish. Possession of a powerhead and a mutilated Gulf reef fish in the stressed area or after having fished in the stressed area constitutes prima facie evidence that such reef fish was taken with a powerhead in the stressed area. The provisions of this paragraph do not apply to hogfish.

(2) A roller trawl may not be used in the stressed area. Roller trawl means a trawl net equipped with a series of large, solid rollers separated by several smaller spacer rollers on a separate cable or line (sweep) connected to the footrope, which makes it possible to fish the gear over rough bottom, that is, in areas unsuitable for fishing conventional shrimp trawls. Rigid framed trawls adapted for shrimping over uneven bottom, in wide use along the west coast of Florida, and shrimp trawls with hollow plastic rollers for fishing on soft bottoms, are not considered roller trawls.

(b) Seasonal prohibitions applicable to bottom longline fishing for Gulf reef fish. (1) From June through August each year, bottom longlining for Gulf reef fish is prohibited in the portion of the Gulf EEZ east of 85°30' W. long. that is shoreward of rhumb lines connecting, in order, the following points:

Point	North lat.	West long.
A	28°58.70'	85°30.00'
B	28°59.25'	85°26.70'
C	28°57.00'	85°13.80'
D	28°47.40'	85°3.90'
E	28°19.50'	84°43.00'
F	28°0.80'	84°20.00'
G	26°48.80'	83°40.00'
H	25°17.00'	83°19.00'
I	24°54.00'	83°21.00'
J	24°29.50'	83°12.30'
K	24°26.50'	83°00.00'

(2) Within the prohibited area and time period specified in paragraph (b)(1) of this section, a vessel with bottom longline gear on board may not possess Gulf reef fish unless the bottom longline gear is appropriately stowed, and a vessel that is using bottom longline gear to fish for species other than Gulf reef fish may not possess Gulf reef fish. For the purposes of paragraph (b) of this section, appropriately stowed means that a longline may be left on the drum

if all gangions and hooks are disconnected and stowed below deck; hooks cannot be baited; and all buoys must be disconnected from the gear but may remain on deck.

(3) Within the Gulf EEZ east of 85°30' W. long., a vessel for which a valid eastern Gulf reef fish bottom longline endorsement has been issued that is fishing bottom longline gear or has bottom longline gear on board cannot possess more than a total of 1000 hooks including hooks on board the vessel and hooks being fished and cannot possess more than 750 hooks rigged for fishing at any given time. For the purpose of this paragraph, “hooks rigged for fishing” means hooks attached to a line or other device capable of attaching to the mainline of the longline.

(c) Reef fish longline and buoy gear restricted area. A person aboard a vessel that uses, on any trip, longline or buoy gear in the longline and buoy gear restricted area is limited on that trip to the bag limits for Gulf reef fish specified in § 622.38(b) and, for Gulf reef fish for which no bag limit is specified in § 622.38(b), the vessel is limited to 5 percent, by weight, of all fish on board or landed. The longline and buoy gear restricted area is that part of the Gulf EEZ shoreward of rhumb lines connecting, in order, the points listed in Table 1 in Appendix B of this part.

(d) Alabama SMZ. The Alabama SMZ consists of artificial reefs and surrounding areas. In the Alabama SMZ, fishing by a vessel that is operating as a charter vessel or headboat, a vessel that does not have a commercial permit for Gulf reef fish, as required under § 622.20(a)(1), or a vessel with such a permit fishing for Gulf reef fish is limited to hook-and-line gear with three or fewer hooks per line and spearfishing gear. A person aboard a vessel that uses on any trip gear other than hook-and-line gear with three or fewer hooks per line and spearfishing gear in the Alabama SMZ is limited on that trip to the bag limits for Gulf reef fish specified in § 622.38(b) and, for Gulf reef fish for which no bag limit is specified in § 622.38(b), the vessel is limited to 5 percent, by weight, of all fish on board or landed. The Alabama SMZ is bounded by rhumb lines connecting, in order, the following points:

Point	North lat.	West long.
A	30°02.5'	88°07.7'
B	30°02.6'	87°59.3'
C	29°55.0'	87°55.5'
D	29°54.5'	88°07.5'
A	30°02.5'	88°07.7'

11. § 622.37 Size limits.

All size limits in this section are minimum size limits unless specified otherwise. A fish not in compliance with its size limit, as specified in this section, in or from the Gulf EEZ, may not be possessed, sold, or purchased. A fish not in compliance with its size limit must be released immediately with a minimum of harm. The operator of a vessel that fishes in the EEZ is responsible for ensuring that fish on board are in compliance with the size limits specified in this section. See § 622.10 regarding requirements for landing fish intact.

(a) Snapper—(1) Red snapper—16 inches (40.6 cm), TL, for a fish taken by a person subject to the bag limit specified in § 622.38 (b)(3) and 13 inches (33.0 cm), TL, for a fish taken by a person not subject to the bag limit.

12. § 622.38 Bag and possession limits.

(a) Additional applicability provisions for Gulf reef fish. (1) Section 622.11(a) provides the general applicability for bag and possession limits. However, § 622.11(a) notwithstanding, bag and possession limits also apply for Gulf reef fish in or from the EEZ to a person aboard a vessel that has on board a commercial permit for Gulf reef fish--

(i) When trawl gear or entangling net gear is on board. A vessel is considered to have trawl gear on board when trawl doors and a net are on board. Removal from the vessel of all trawl doors or all nets constitutes removal of trawl gear.

(ii) When a longline or buoy gear is on board and the vessel is fishing or has fished on a trip in the reef fish longline and buoy gear restricted area specified in § 622.35(c). A vessel is considered to have a longline on board when a power-operated longline hauler, a cable of diameter and length suitable for use in the longline fishery, and gangions are on board. Removal of any one of these three elements, in its entirety, constitutes removal of a longline.

(iii) For a species/species group when its quota has been reached and closure has been effected, provided that no commercial quantities of Gulf reef fish, i.e., Gulf reef fish in excess of applicable bag/possession limits, are on board as specified in paragraph (a)(2) of this section.

(iv) When the vessel has on board or is tending any trap other than a stone crab trap or a spiny lobster trap.

(2) A person aboard a vessel that has a Federal commercial vessel permit for Gulf reef fish and commercial quantities of Gulf reef fish, i.e., Gulf reef fish in excess of applicable bag/possession limits, may not possess Gulf reef fish caught under a bag limit.

(b) Bag limits--

(3) Red snapper--2. However, no red snapper may be retained by the captain or crew of a vessel operating as a charter vessel or headboat. The bag limit for such captain and crew is zero.

13. § 622.39 Quotas.

See § 622.8 for general provisions regarding quota applicability and closure and reopening procedures. This section, provides quotas and specific quota closure restrictions for Gulf reef fish.

(a) Gulf reef fish--

(2) Recreational quotas. The following quotas apply to persons who fish for Gulf reef fish other than under commercial vessel permits for Gulf reef fish and the applicable commercial quotas specified in paragraph (a)(1) of this section.

(i) Recreational quota for red snapper--4.145 million lb (1.880 million kg), round weight.

(c) Restrictions applicable after a recreational quota closure--

(1) After closure of the recreational quota for red snapper. The bag and possession limit for red snapper in or from the Gulf EEZ is zero.