rev. 8/31/2011

FINAL REGULATORY AMENDMENT TO SET 2011-2015 TOTAL ALLOWABLE CATCH AND ADJUST BAG LIMIT FOR RED GROUPER

August 2011

(INCLUDING ENVIRONMENTAL ASSESSMENT, REGULATORY IMPACT REVIEW, AND REGULATORY FLEXIBILITY ACT ANALYSIS)

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This is a publication of the Gulf of Mexico Fishery Management Council Pursuant to National Oceanic and Atmospheric Administration Award No. NA10NMF4410011.

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Table of Contents

ENVIRONMENTAL ASSESSMENT COVER SHEET III

EXECUTIVE SUMMARY IV

1 INTRODUCTION 2

1.1 PURPOSE AND NEED 2
1.2 BACKGROUND 2
1.3 HISTORY OF MANAGEMENT 3

2 MANAGEMENT ALTERNATIVES 6

2.1 ACTION 1. RED GROUPER TOTAL ALLOWABLE CATCH 6
2.2 ACTION 2. RED GROUPER RECREATIONAL BAG LIMIT 9

3 AFFECTED ENVIRONMENT 13

3.1 PHYSICAL ENVIRONMENT 13
3.2 BIOLOGICAL ENVIRONMENT 14
3.2.1 Red Grouper and Reef Fish 14
3.2.2 Invasive Species 16
3.3 ECONOMIC ENVIRONMENT 16
3.4 SOCIAL ENVIRONMENT 16
3.5 ENVIRONMENTAL JUSTICE CONSIDERATIONS 17
3.6 ADMINISTRATIVE ENVIRONMENT 17

4 ENVIRONMENTAL CONSEQUENCES 18

4.1 ACTION 1. RED GROUPER TOTAL ALLOWABLE CATCH 18
4.1.1 Physical Environment 18
4.1.2 Biological Environment 19
4.1.3 Economic Environment 20
4.1.4 Social Environment 22
4.1.5 Administrative Environment 23
4.2 ACTION 2. RED GROUPER RECREATIONAL BAG LIMIT 24
4.2.1 Physical Environment 24
4.2.2 Biological Environment 24
4.2.3 Economic Environment 25
4.2.4 Social Environment 26
4.2.5 Administrative Environment 27
4.3 CUMULATIVE EFFECTS ANALYSIS 28

5 REGULATORY IMPACT REVIEW 30

6 REGULATORY FLEXIBILITY ACT ANALYSIS 33

6.1 INTRODUCTION 33
6.2 STATEMENT OF THE NEED FOR, OBJECTIVES OF, AND LEGAL BASIS FOR THE RULE 33
6.7 DESCRIPTION OF SIGNIFICANT ALTERNATIVES TO THE PROPOSED ACTION AND DISCUSSION OF HOW THE ALTERNATIVES ATTEMPT TO MINIMIZE ECONOMIC IMPACTS ON SMALL ENTITIES 36

7 OTHER APPLICABLE LAW 37

8 LIST OF PREPARERS (INTERDISCIPLINARY PLANNING TEAM) 42
9 LIST OF AGENCIES AND PERSONS CONSULTED 43
10 REFERENCES 44

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Name of Action

REGULATORY AMENDMENT TO SET 2011-2015 TOTAL ALLOWABLE CATCH AND ADJUST BAG LIMIT FOR RED GROUPER

TYPE OF ACTION

(X) Administrative	( ) Legislative
( ) Draft	(X) Final

ABSTRACT

The 2009 update stock assessment of the red grouper stock indicated that, although the stock continues to be neither overfished or undergoing overfishing, the stock had declined since 2005. This decline was attributed to a 2005 episodic mortality event resulting in a little over 20% of the red grouper stock being killed, in addition to normal natural and fishing mortalities. Therefore, there was a need to improve the stock condition to a level where, at equilibrium, the stock could be harvested at optimum yield. A 2010 framework action set the 2011 total allowable catch consistent with the findings of the assessment. A rerun of the assessment was subsequently conducted in 2011 that included landings data through 2010, but only in the projection period (2009 onward). All landings after 2010 were based solely upon projections and not on survey data or catch rates. Because of lower than predicted landings in 2010, the rerun of the assessment supported increasing the 2011 total allowable catch from 5.68 to 6.88 million pounds. Note that this increase in total allowable catch is based solely upon projections that incorporate underages in 2009 and 2010 catches and not upon survey data or catch rates for these years. The first action of this framework action is to consider increasing the 2011 total allowable catch and setting the total allowable catch for 2012-2015 consistent with the results of the update assessment and 2011 rerun. This increase would provide more fish for harvest in 2011 and could provide enough additional commercial quota to allow fishermen's individual fishing quotas to last through the year. Without the increase, the some individual fishing quota shareholders may fish their entire allocation before the end of the calendar year. However, the subsequent increase in 2012 would be lower than it would have been had the 2011 increase not been implemented. A second action is to consider increasing the red grouper bag limit for the recreational sector so it can harvest its increased allocation of the total allowable catch. Alternatives considered in this framework action are consistent with the goals and objectives of the Gulf of Mexico Fishery Management Council's reef fish management strategy and achieve the mandates of the Magnuson-Stevens Fishery Conservation and Management Act.

Executive Summary

Red grouper is the most abundant grouper species in the Gulf of Mexico. It accounts for the bulk of the commercial grouper landings, and is the second most recreationally commonly caught grouper species. The interim allocation, set in Amendment 30B, is 24% recreational and 76% commercial.

The last red grouper benchmark assessment was SEDAR 12 in 2006. In 2009 an update assessment was conducted. The update assessment indicated that although the stock continues to be neither overfished or undergoing overfishing, the stock has declined since 2005. This decline was attributed to a 2005 episodic mortality event resulting in a little more than 20% of the red grouper stock being killed, in addition to normal natural and fishing mortalities.

In response to the update assessment, a 2010 regulatory amendment was developed by the Council (GMFMC 2010) that reduced the 2011 total allowable catch and commercial quota to allow the stock to recover from the episodic mortality event. It did not implement any new recreational measures because harvests under current management measures were not exceeding catch targets. However, the total allowable catch projections for red grouper used in the 2010 regulatory amendment were based on estimated 2010 landings which overestimated the actual 2010 red grouper catch. When the reduced 2010 landings were incorporated into a revised set of projections, the revised projections indicated that the red grouper total allowable catch could either be increased in 2012 (with subsequent increases in future year), or it could be increased in 2011 rather than wait until 2012, with lesser increases in 2012 and subsequent years. In response to concerns from the commercial fishing industry that some commercial red grouper fishermen would use up their individual fishing quota (IFQ) allocations before the end of the year, the Council chose to develop this regulatory amendment to increase the red grouper total allowable catch in 2011 with subsequent increases in 2012-2015.

The recreational sector has not caught its allocation of red grouper in recent years, and is unlikely to catch its allocation under the increased total allowable catch with the current recreational fishing regulations. Therefore, the Council also chose to increase the red grouper bag limit from two to four fish.

The Scientific and Statistical Committee, in projecting an acceptable biological catch yield stream out to 2015, cautioned that uncertainty increases as the projection moves further away from the terminal year of the 2009 update assessment. However, a SEDAR standard assessment is scheduled for red grouper in 2013. Therefore, the projected yields for 2014 and 2015 will likely be updated with revised projections from the new assessment.

The purpose of this action is to develop red grouper management measures that will allow the optimum yield of red grouper to continue to be caught as the stock recovers from the 2005 episodic mortality event. Actions addressing these purposes would be consistent with the goals and objectives of the Council's plan to manage red grouper to achieve the mandates of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act).

A total of two actions and six alternatives are evaluated in this regulatory amendment.. A short summary of each action follows.

Action 1. Red Grouper Total Allowable Catch

This action evaluates three alternatives including a no action alternative (**Alternative 1**; maintain total

allowable catch at 5.68 million pounds gutted weight) no rebuilding plan) and two alternative to implement a yield stream of increasing total allowable catch. **Alternative 2** begins the increase in 2012 through 2015, while **Preferred Alternative 3** begins the increase in 2011 through 2015. In both alternatives, the annual increases are contingent upon the total allowable catch not being exceeded in previous years. If the total allowable catch is increased in any year, then any further increase is cancelled, an the total allowable catch remains at its current level until the effects of the overage are evaluated by the Scientific and Statistical Committee. The Council selected **Alternative 3** as preferred because it increases the total allowable catch in 2011 and addresses the issue of commercial fishermen running out of IFQ shares before the end of the year.

Action 2. Red Grouper Recreational Bag Limit

Red grouper are not considered overfished and undergoing overfishing. Recent recreational landings have not exceeded current catch targets, therefore Action 2 evaluates changes in bag limits to allow the recreational sector to harvest its allocation. This action evaluates three alternatives ranging from not changing the current bag limit of two fish within the four fish grouper aggregate bag limit (**Alternative 1**; no action) to increasing the bag limit to four red grouper within the four fish grouper aggregate bag limit (**Preferred Alternative 3**). **Alternative 2** would set the red grouper bag limit at three fish within the four fish grouper aggregate bag limit. The Council selected **Alternative 3** as preferred in order to allow the recreational sector the best opportunity to catch its allocation of red grouper. Because there is no recent history of fishing under a four red grouper bag limit, and because the amount of effort shifting from gag is not known, the amount of additional red grouper that will be caught under this action is not known. For 2011, this measure will be in effect for only about two months at the most, and will therefore have only a limited effect on increasing red groper harvest. For 2012 and beyond, Amendment 32 contains actions that are expected to add an accountability measure where if, as a result of increasing the bag limit, the annual catch limit for a year is exceeded, the bag limit will be reduced in the subsequent year, from four to 3 fish initially, and then from three to two fish if overages continue. Accountability measures are not included in this regulatory amendment because the framework procedure for setting total allowable catch that is in effect at the time this amendment is submitted does not allow accountability measures to be implemented under a regulatory amendment.

For the physical and biological/ecological environments, **Preferred Alternative 3** would likely have the greatest adverse effects because of potential increased effort. However, this impact to the physical environment should be minimal because of the fishing gear used as well as to the biological/ecological environment because it minimizes discards and has an adaptive management component should the annual catch limit be exceeded. For the economic and social environments, **Preferred Alternative 3** had the greatest benefit to the recreational sector because it allows those fishermen catching red grouper to retain more fish. This action should not have any adverse effect effects on the administrative environment because bag limits are standard fishery management measures.

Cumulative effects

The cumulative effects of increasing the red grouper total allowable catch and increasing the red grouper bag limit on the biophysical and socioeconomic environments are positive because they will ultimately maintain the stocks at a level that will allow the maximum benefits in yield and recreational fishing opportunities to be achieved. However, short-term negative impacts on the biological environment may occur if the increase in total allowable catch is greater than it should be due to the increasing uncertainty

as yield projections get further away from the terminal year of the 2009 update assessment, or if the recreational sector exceeds its allocation as a result of the increased bag limit. A SEDAR standard assessment is scheduled for 2013 which will reduce the uncertainty and adjust the total allowable catch if appropriate. In addition, accountability measures are expected to be implemented in 2012 under Amendment 32 that will reduce the recreational bag limit if it is higher than needed for the recreational sector to catch its allocation of red grouper. 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. A full discussion of the cumulative effects is contained in Section 4.3 of the environmental consequences.

ABBREVIATIONS USED IN THIS DOCUMENT

APA	Administrative Procedure Act
CZMA	Coastal Zone Management Act
DQA	Data Quality Act
EA	Environmental assessment
EFH	Essential fish habitat
EIS	Environmental impact statement
ESA	Endangered Species Act
F	Fishing mortality rate
FEIS	Final environmental impact statement
FMP	Fishery management plan
GMFMC	Gulf of Mexico Fishery Management Council
GW	Gutted weight
IRFA	Initial regulatory flexibility analysis
LOF	List of fisheries that may interact with mammals under the MMPA
MMPA	Marine Mammal Protection Act
MSFCMA	Magnuson-Stevens Fishery Conservation and Management Act
MSY	Maximum sustainable yield
NMFS	NOAA's National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
OY	Optimum yield
PRA	Paperwork Reduction Act
RIR	Regulatory impact review
SEDAR	Southeast Data, Assessment, and Review
SEFSC	Southeast Fisheries Science Center
SERO	Southeast Regional Office
SPR	Spawning potential ratio
SSC	Scientific and Statistical Committee
TAC	Total allowable catch

1 INTRODUCTION

1.1 Purpose and Need

The purpose of this action is to manage the red grouper stock at its optimum yield. The Magnuson-Stevens Act requires NMFS and regional fishery management councils to prevent overfishing, and achieve, on a continuing basis, the optimum yield from federally managed fish stocks. These mandates are intended to ensure fishery resources are managed for the greatest overall benefit to the nation, particularly with respect to providing food production and recreational opportunities, and protecting marine ecosystems. To further this goal, the Magnuson-Stevens Act requires fishery managers to specify through rebuilding plans their strategy for rebuilding overfished stocks to a sustainable level within a certain time frame, provide accountability measures to minimize the risk of overharvest, to minimize bycatch and bycatch mortality to the extent practicable, and to ensure that management decision are based on the best available scientific information.

A 2009 update stock assessment of the red grouper stock (SEDAR 2009) showed the stock has declined since 2005, but is not considered overfished and undergoing overfishing. A rerun of the update assessment in 2011 indicated the total allowable catch could be increased from the level set in a 2010 framework action for the 2011 fishing year, and that the total allowable catch could be increased in subsequent years. Therefore, there is a need to increase the red grouper harvest to a level that optimizes availability of red grouper to the commercial and recreational sectors while allowing the stock to recover to a level where, at equilibrium, the stock can be harvested at its optimum yield. To allow the recreational sector, which has not been catching its allocation of total allowable catch and therefore not achieving optimum yield, to harvest its full allocation of total allowable catch, there is a need to reduce restrictions on recreational harvest. This would help ensure red grouper resources are managed for the greatest overall benefit to the nation.

1.2 Background

Based on the results of the 2009 update assessment and a rerun of the projections conducted in March 2010 in order to incorporate 2009 landings, the Council set the 2011 total allowable catch at 5.68 million pounds gutted weight (GMFMC 2010a). However, in April 2010 the Deepwater Horizon MC252 oil rig exploded and sank in the Gulf off the coast of Louisiana, resulting in an uncontrolled oil spill that affected 88,522 square statute miles at its peak. For safety reasons, NMFS issued an emergency rule to temporarily close portions of the Gulf affected by the spill to all fishing. Although most of the affected area was west of the predominant fishing areas for red grouper, tourism was reduced throughout the Gulf as a result of the publicity. In addition, Reef Fish Amendment 31 (GMFMC 2009), which was implemented May 26, 2010, placed additional restrictions on bottom longline gear in the eastern Gulf of Mexico to reduce bycatch of endangered sea turtles, as discussed under History of Management. Furthermore, 2010 was the first year of the individual fishing quota (IFQ) system for groupers, a system that many

fishermen were unfamiliar with. As a result of these factors, red grouper harvest in 2010 was below expected levels[1].

At the request of the Council, a new projection was run by NMFS in 2011 that incorporated the revised 2010 landings (Walter 2011, NMFS 2011a). The results of this rerun showed that the total allowable catch could be increased from current levels. Reef Fish Amendment 32, which is currently under development, proposes to increase the red grouper total allowable catch to 7.22 million pounds in 2012. However, after a low catch season in 2010 for the commercial fishery due to the reasons discussed above, catch rates increased in 2011. At the current rate of harvest, many commercial red grouper fishermen will catch their individual fishing quotas before the end of the year. In order to help alleviate the market disruptions that would result, the Council proposes the adoption of the yield stream that allows an increase in the red grouper total allowable catch in 2011 rather than wait for 2012. The yield stream proposed in this regulatory amendment would be implemented in place of the Amendment 32 yield stream.

Under the current two fish bag limit for red grouper, the recreational sector has failed to catch its allocation of red grouper in recent years. With the proposed increase in total allowable catch, it is even more unlikely that the recreational sector will harvest its allocation. An increase in the bag limit would allow the recreational sector a greater opportunity to catch red grouper as well as provide some relief from the harvest restrictions placed on gag due to the gag rebuilding plan. Amendment 32 also proposes an increase in the red grouper bag limit, but it will not take effect until 2012. This regulatory amendment would implement the increase in 2011.

1.3 History of Management

A brief history of management is provided below as it pertains to this action. A more complete summary of red grouper management can be found in Amendment 30B (GMFMC 2008a) and the 2010 red grouper regulatory amendment (GMFMC 2010a). Information on management of the reef fish fishery as a whole can be obtained by contacting the Council.

The Reef Fish Fishery Management Plan (FMP)/Environmental Impact Statement (EIS) was implemented in November 1984 (GMFMC 1981). The regulations, designed to rebuild declining reef fish stocks, included prohibitions on the use of fish traps, roller trawls, and powerhead-equipped spear guns within an inshore stressed area and directed NMFS to develop data reporting requirements in the reef fish fishery.

Management targets were first set in **Amendment 1** (environmental assessment (EA)/regulatory impact review (RIR)/initial regulatory flexibility analysis (IRFA)), implemented in 1990 (GMFMC 1989). **Amendment 1** set an objective to stabilize long-term population levels of all reef fish species by establishing a survival rate of biomass into the stock of spawning age fish to achieve at least 20% spawning stock biomass per recruit by January 1, 2000. **Generic Sustainable Fisheries Act Amendment** (EA/RIR/IRFA;), partially approved and implemented in November 1999, set the maximum fishing mortality threshold for most reef fish stocks at the fishing mortality rate associated with 30% spawning potential ratio ($F_{30\%\ SPR}$) (GMFMC 1999).

[1] Testimony from commercial fishermen at the June 2011 Council meeting indicated that the combination of the Deepwater Horizon oil spill, the Amendment 31 longline restrictions, and the initiation of the grouper IFQ system all contributed to reduced grouper catches in 2010.

This was revised in **Secretarial Amendment 1** (EIS/RIR/IRFA; implemented July 2004) where this value was changed to F_{MSY} and the optimum yield was the yield associated with fishing at 75% of F_{MSY} (NMFS and GMFMC 2004a). **Amendment 30B** (EIS/RIR/IRFA; implemented May 2009), set the annual stock catch limit equal to the acceptable biological catch and the annual catch target equal to the optimum yield (GMFMC 2008a). Sector annual catch limits and targets are based on 76:24% commercial:recreational allocation set in **Amendment 30B**.

The commercial harvest has been controlled primarily by quotas. **Amendment 1** set a shallow-water grouper quota that included red grouper at 9.2 million pounds. **Secretarial Amendment 1** set the first red grouper quota at 5.1 million pounds in response to red grouper being determined as overfished. This quota was included within the aggregate shallow-water grouper quota. **Amendment 30B** increased the red grouper quota for 2009 to 5.75 million pounds and it stayed at this level until a 2010 regulatory amendment (EA/RIR/IRFA; implemented in December 2010) (GMFMC 2010a) decreased the quota to 4.32 million pounds for 2011. The commercial harvest has also been managed with trip limits, size limits, closed seasons, and closed areas. These are described in detail in Amendment 30B and the 2010 red grouper regulatory amendment (GMFMC 2010a), and incorporated here by reference. Trip limits and season closures were phased out with the implementation of an individual fishing quota program in 2010 through **Amendment 29** (EA/RIR/IRFA; implemented January 1, 2010) (GMFMC 2008b).

The recreational harvest has been regulated through size limits, bag limits, seasonal closures, and area closures. The current minimum size limit is 20-inches total length and was implemented in **Amendment 1**. Red grouper were counted in the first grouper aggregate daily bag limit of five-fish which was also implemented through **Amendment 1**. With the determination that red grouper were overfished and undergoing overfishing in 2001, the bag limit for red grouper was set at two fish within the five-fish aggregate bag limit in **Secretarial Amendment 1**. A 2005 interim rule reduced this bag limit to one fish, and this measure was continued through a 2006 regulatory amendment (EA/RIR/IRFA; implemented July 2006). The regulatory amendment also prohibited the retention of a bag limit by the captain and crew of for-hire vessels and this measure continues to the present. With a determination the red grouper stock condition had improved based on SEDAR 12 (2007), the red grouper bag limit was increased to two fish in **Amendment 30B**, although the aggregate bag limit was reduced from five to four fish.

The recreational sector for red grouper has also been constrained by the use of closed seasons. A 2005 interim rule closed the recreational sector for November and December in response to the recreational sector exceeding its allocation defined under **Secretarial Amendment 1**. A subsequent 2006 regulatory amendment set the closed season for gag, red grouper, and black grouper in line with a commercial season closure for the same species from February 15-March 15. In trying to balance needed decreases in gag harvest with allowable increases for red grouper, a closed season of February 1 – March 31 mixed with other management measures identified above was implemented through **Amendment 30B**.

Amendment 31 (FEIS/RIR/IRFA), implemented May 26, 2010 (GMFMC 2009), established additional restrictions on the use of bottom longline gear in the eastern Gulf of Mexico in order to reduce bycatch of endangered sea turtles, particularly loggerhead sea turtles. The amendment (1) prohibits the use of bottom longline gear shoreward of a line approximating the 35-fathom contour from June through August; (2) reduces the number of longline vessels operating in the

fishery through an endorsement provided only to vessel permits with a demonstrated history of landings, on average, of at least 40,000 pounds of reef fish annually with fish traps or longline gear during 1999-2007; and (3) restricts the total number of hooks that may be possessed onboard each reef fish bottom longline vessel to 1,000, only 750 of which may be rigged for fishing. The boundary line was initially moved from 20 to 50 fathoms by emergency rule effective May 18, 2009. That rule was replaced on October 16, 2009 by a rule under the Endangered Species Act moving the boundary to 35 fathoms and implementing the maximum hook provisions.

2 MANAGEMENT ALTERNATIVES

2.1 Action 1. Red Grouper Total Allowable Catch

Alternative 1: No Action - Maintain total allowable catch (TAC) as defined in the September 2010 regulatory amendment. Total allowable catch will continue to be 5.68 million pounds (MP) gutted weight. Based on the 76%:24% commercial and recreational allocation of red grouper, the commercial quota will remain at 4.32 MP GW and the recreational allocation will remain at 1.36 MP GW for 2011. The total allowable catch and commercial quota will remain at the 2011 levels until modified by a subsequent amendment or framework procedure.

Year	TAC	Comm. quota (76% of TAC)	Rec. allocation (24% of TAC)
2011+	5.68 mp gw	4.32 mp gw	1.36 mp gw

Alternative 2: Maintain the 2011 total allowable catch at 5.68 mp and allow the total allowable catch to increase from 2012 to 2015 using the F_{OY} yield stream as follows. The increases in TAC are contingent upon the TAC not being exceeded in previous years. If TAC is exceeded in a given year, it will remain at that year's level until the effects of the overage are evaluated by the Scientific and Statistical Committee.

Year	TAC	Comm. quota (76% of TAC)	Rec. allocation (24% of TAC)
2011	5.68 mp gw	4.32 mp gw	1.36 mp gw
2012	7.22 mp gw	5.49 mp gw	1.73 mp gw
2013	7.39 mp gw	5.62 mp gw	1.77 mp gw
2014	7.46 mp gw	5.67 mp gw	1.79 mp gw
2015+	7.53 mp gw	5.72 mp gw	1.81 mp gw

Preferred Alternative 3: Increase the 2011 total allowable catch to 6.88 mp and allow the total allowable catch to increase from 2012 to 2015 using the F_{OY} yield stream as follows. The increases in TAC are contingent upon the TAC not being exceeded in previous years. If TAC is exceeded in a given year, it will remain at that year's level until the effects of the overage are evaluated by the Scientific and Statistical Committee.

Year	TAC	Comm. quota (76% of TAC)	Rec. allocation (24% of TAC)
2011	6.88 mp gw	5.23 mp gw	1.65 mp gw
2012	7.07 mp gw	5.37 mp gw	1.70 mp gw
2013	7.27 mp gw	5.53 mp gw	1.74 mp gw
2014	7.41 mp gw	5.63 mp gw	1.78 mp gw
2015+	7.52 mp gw	5.72 mp gw	1.80 mp gw

Note: The following are fixed values in this regulatory amendment.

Overfishing limit = equilibrium maximum sustainable yield = 8.10 mp gw, as set by the SSC in March 2011.
Acceptable biological catch = equilibrium optimum yield = 7.93 mp gw, as set by the SSC in March 2011.
Commercial annual catch limit = 5.87 mp gw. as established in Amendment 30B.
Recreational annual catch limit = 1.85 mp gw, as established in Amendment 30B.

Annual catch limits and annual catch targets were established in Amendment 30B. These values cannot be changed under a regulatory amendment until the new framework procedure in the Generic Annual Catch Limit/Accountability Measures Amendment is implemented. Commercial quota cannot exceed the commercial sector annual catch limit, and the recreational allocation cannot exceed the recreational sector annual catch limit.

Note: Total allowable catch is equivalent to a stock annual catch target.

Under each of the above alternatives, the commercial shallow-water grouper quota will be adjusted accordingly, as the sum of red grouper quota + gag quota + other shallow-water grouper allowance.

Discussion:

Red grouper is managed under an optimum yield strategy, following the protocol established in Amendment 30B. That amendment set the annual catch limit equal to the acceptable biological catch, and the annual catch target equal to optimum yield, where optimum yield is equal to the yield when fishing at 75 percent of the maximum sustainable yield fishing mortality rate. Under equilibrium conditions, this strategy is expected to produce a yield that is between 94% and 98% of the yield when fishing at maximum sustainable yield (Restrepo et al. 1998).

The total allowable catch for red grouper in 2011 is currently 5.68 million pounds gutted weight, based on the 2009 red grouper update assessment and projection re-runs from January 2011. Two future yield streams are possible depending on whether the total allowable catch is increased in 2011 or 2012 (Table 2.1.1). Although the yield streams run through 2015, a new red grouper stock assessment is scheduled in 2013. Based on the results of that stock assessment, a new yield stream would likely result and would be implemented in either 2014 or 2015. Based on the interim allocation adopted in Amendment 30B (GMFMC 2008a), the total allowable catch is allocated 76% commercial and 24% recreational.

Table 2.1.1. Red grouper total allowable catch yield streams under Alternatives 2 and 3. All yields are in million pounds gutted weight.

	2009 Update Assessment with January 2011 Projection Rerun	
Year	Alternative 2	Alternative 3
2011	5.68 mp	6.88 mp
2012	7.22 mp	7.07 mp
2013	7.39 mp	7.27 mp
2014	7.46 mp	7.41 mp
2015	7.53 mp	7.52 mp

Regardless of which alternative is selected, it should be noted that any increase in total allowable catch is based solely upon projection from the 2009 SEDAR update assessment. The catch-per-unit-effort indices of abundance have not been updated since 2008, which is the terminal year of the assessment. The projected yield streams are simple extrapolations of historic conditions, and have increased uncertainty the further away they are from the terminal year of the assessment.

This regulatory amendment changes the total allowable catch under Alternatives 2 and 3, but not the annual catch limit. The current framework procedure does not allow changes to annual catch limits to be made through regulatory amendments. A new, updated framework procedure that will allow changes to annual catch limits is expected to be implemented under the Generic Annual Catch Limits/Accountability Measures Amendment (currently under development), but is not yet in effect. The current red grouper annual catch limit was set in Amendment 30B at 7.72 million pounds (GMFMC 2008a). The total allowable catch can be set at or below the annual catch limit, but the closer it gets to the annual catch limit, the greater the likelihood of exceeding the annual catch limit and triggering accountability measures.

Alternative 1 is the no action alternative. Under this alternative, there would be no change to the red grouper total allowable catch implemented through this regulatory amendment, and no change implemented at all in 2011. Amendment 32 (currently under development) contains a provision for 2012 to raise the annual catch limit from 7.72 to 7.93 million pounds, and to raise the annual catch target (functionally equivalent to total allowable catch) from 5.68 to 7.22 million pounds. These catch levels would then remain until changed in a subsequent amendment or framework action. If no action is taken in this regulatory amendment, then the 2012 increase in Amendment 32 would take place, assuming that amendment is approved.

Alternative 2 retains the 2011 total allowable catch at its current 5.68 million pounds, and increases it to 7.22 million pounds in 2012. It then implements a yield stream of annual increases through 2015. From a practical standpoint, the catch levels in 2014 and 2015 will likely be replaced by a new yield stream developed from a red grouper stock assessment scheduled for 2013. By waiting until 2012 to implement increases, the total allowable catch 2012 – 2015 would be higher each year than under **Preferred Alternative 3** (Table 2.2.1). However, as of August 25, 2011, the commercial sector has harvested 2.92 million pounds, or

about 68% of its 4.32 million pound quota[2]. At this rate, many red grouper individual fishing quota shareholders are likely to use up their available allocation before the end of the year. If **Alternative 2** is implemented, the yield stream in this alternative would supercede the Amendment 32 yield stream.

Preferred Alternative 3 increases the 2011 total allowable catch from 5.68 to 6.88 million pounds. It then implements a yield stream of annual increases through 2015. From a practical standpoint, the catch levels in 2014 and 2015 will likely be replaced by a new yield stream developed from a red grouper stock assessment scheduled for 2013. Although the total allowable catch would be higher in 2011 than under **Alternative 2**, the total allowable catch 2012 – 2015 would be lower each year than under **Alternative 2** (Table 2.2.1). As stated above, as of July 22, 2011 the commercial sector has harvested 2.92 million pounds, or about 68% of its current 4.32 million pound quota. If **Alternative 3** is implemented, the 2011 commercial quota would increase to 5.23 million pounds. Raising the quota under this alternative would provide more allocation to red grouper individual fishing quota shareholders. This would benefit shareholders whose allocation has either run out or who have little allocation left. The recreational sector is less likely to benefit from a short term increase in the catch level. The recreational sector has not caught its allocation of red grouper in recent years. Furthermore, if an increase in total allowable catch is implemented for 2011, it would most likely not take effect until late October or November at the earliest, and would primarily impact only the last two months of the calendar year. The peak recreational fishing for red grouper occurs during Wave 4 (July-August) During 2006-2008, Wave 4 accounted for 35% of recreational harvest by weight and 31% of recreational harvest by number of fish caught (Table 2.2.2). In comparison, Wave 6 (November and December) accounted for 10% of the recreational red grouper harvest by weight and 12% by number. If **Alternative 3** is implemented, the yield stream in this alternative would supercede the Amendment 32 yield stream.

2.2 Action 2. Red Grouper Recreational Bag Limit

The recreational red grouper allocation has not been met in recent years. With the proposed increase in red grouper total allowable catch, the recreational allocation would be increased, creating a larger difference between the allocation and the actual catch. An increase in the bag limit would allow the recreational sector to more fully harvest its allocation and achieve optimum yield.

Alternative 1. No action. The red grouper bag limit remains at 2 fish per person.

Alternative 2. Increase the red grouper bag limit to 3 fish per person.

Preferred Alternative 3. Increase the red grouper bag limit to 4 fish per person.

Note: a zero bag limit for captain and crew of charter and headboats while under charter is part of the current regulation, and will remain in place.

[2] Source: NMFS individual fishing quota online system for Gulf reef fish: https://ifq.sero.nmfs.noaa.gov/ifqgt/main.html#

Discussion:

This regulatory amendment contains alternatives to increase the red grouper bag limit, but it does not include any new accountability measures. Amendment 32 (under development) contains similar bag limit alternatives, but it includes accountability measures that would reduce the bag limit back to its original level if the recreational sector exceeds its annual catch limit in any subsequent year. The current framework procedure does not allow changes to accountability measures to be made through regulatory amendments. A new, updated framework procedure that will allow changes to accountability measures will be implemented under the Generic Annual Catch Limits/Accountability Measures Amendment (currently under development). If a bag limit change is implemented through this regulatory amendment, then the Amendment 32 actions will add the accountability measures in 2012.

The current (2011) recreational sector annual catch target for red grouper, which is also the recreational allocation of total allowable catch, is 1.36 million pounds gutted weight. Under Action 1 of this regulatory amendment, the recreation allocation could increase to 1.65 million pounds gutted weight in 2011. It could increase further in 2012 to either 1.70 or 1.73 million pounds gutted weight, with further annual increases until 2015.

Recreational landings of red grouper have been well below these targets, 0.82 million pounds in 2008 and 0.98 million pounds on 2009. Since 2000, recreational red grouper landings have been above the 1.73 million pound target only twice, in 2000 and 2004 (Table 2.2.1).

Table 2.2.1. Recreational red grouper landings in pounds gutted weight. (Source: Walter 2011)

Year	Recreational Red Grouper Landings (pounds)
2000	2,171,627
2001	1,380,664
2002	1,687,802
2003	1,335,259
2004	3,152,707
2005	1,440,810
2006	960,889
2007	1,016,655
2008	892,925
2009	978,325

Red grouper is neither overfished nor undergoing overfishing. The recreational sector has not caught its allocation of red grouper in recent years, and with an increase in allocation in 2011 or 2012, it is unlikely to catch its limit. Therefore, a relaxation of the recreational red grouper regulations is warranted to allow the sector to catch more of its allocation. Because of a lack of recent catch data at increased bag limits, an accurate estimate of catch levels at increased bag limits cannot be made. However, if an increase in total allowable catch is implemented for 2011, it would most likely not take effect until late October or November at the earliest, and would primarily impact only the last two months of the calendar year. The peak recreational fishing for red grouper occurs during Wave 4 (July-August). During 2006-2008, Wave 4 accounted for

35% of recreational harvest by weight and 31% of recreational harvest by number of fish caught. In comparison, Wave 6 (November and December) accounted for 10% of the recreational red grouper harvest by weight and 12% by number (Table 2.2.2). Thus, any impact on recreational harvest in 2011 will be relatively small.

Table 2.2.2. Recreational red grouper landings by wave in weight (pounds) and in numbers. Small differences in numbers compared to Table 2.2.1 are likely due to rounding errors. (Source: NOAA Fisheries Recreational Fisheries Statistics Queries website)

	Pounds whole weight				
Wave	2008	2009	2010	Total	%
1	155,715	21,369	12,934	190,018	8%
2	96,127	53,245	36,363	185,735	8%
3	198,460	307,916	207,175	713,551	29%
4	297,460	411,885	145,356	854,701	35%
5	68,041	43,748	150,563	262,352	11%
6	80,475	87,946	86,484	254,905	10%
Total	896,278	926,109	638,875	2,461,262	

	Numbers				
Wave	2008	2009	2010	Total	%
1	23,163	5,079	2,052	30,294	8%
2	14,491	7,380	4,741	26,612	7%
3	28,382	39,025	36,535	103,942	29%
4	46,497	43,167	22,923	112,587	31%
5	10,457	7,913	25,214	43,584	12%
6	14,929	13,627	16,530	45,086	12%
Total	137,919	116,191	107,995	362,105	

Alternative 1 would leave the recreational red grouper bag limit at 2 fish. Given that the recreational sector is landing less than its allocation, this would likely to result in continued landings below the recreational allocation.

Alternative 2 increases the bag limit to 3-fish per person. There are no recent catch data with which to project how much this would increase harvest. However, Amendment 30B (GMFMC 2008b) contained an analyses of increasing the red grouper bag limit from the one fish limit in effect at that time (Table 2.2.3). That analysis suggested that going from a 2 fish to a 3 fish bag limit would result in an 8.8% increase in harvest. This increase is unlikely to result in a harvest overage, particularly since the increase in the recreational allocation under Action 1 would be between 17% and 21% for 2012. The stock is neither overfished nor undergoing overfishing. Even if there is an overage in 2012, the possibility of a onetime overage is unlikely to harm the stock, but this alternative would allow data collection on the impact of a 3-fish bag limit. For 2011, this alternative is unlikely to have more than a minor impact on recreational harvest levels since it would not be implemented until late in the year, and well past the peak fishing season.

Table 2.2.3. Percent increases in red grouper harvest relative to a one fish bag limit for various bag limits.[3]
Source: GMFMC 2008b

Bag Limit	% increase red
5	45.5
4	43.8
3	39.4
2	30.6
1	0.0

[3] Red grouper bag limit analyses based on catch rates during 2003-2004. 2005 data was not used because the red grouper bag limit was reduced to one fish that year.

Alternative 3 increases the bag limit to 4 fish per person. This is the maximum possible under a 4 fish aggregate grouper bag limit. As with **Alternative 2**, there is no recent catch data with which to project how much this would increase harvest. However, from the bag limit analyses done in Amendment 30B (Table 2.2.3), it appears that an increase from a 2-fish to a 4-fish bag limit could increase harvest by 13.2%. As with **Alternative 2**, this increase is unlikely to result in a harvest overage, particularly since the increase in the recreational allocation under Action 1 would be between 17% and 21% for 2012. The stock is neither overfished nor undergoing overfishing. Even if there is an overage in 2012, the possibility of a onetime overage is unlikely to harm the stock, but this alternative would allow data collection on the impact of a 4-fish bag limit. For 2011, this alternative is unlikely to have more than a minor impact on recreational harvest levels since it would not be implemented until late in the year, and well past the peak fishing season.

3 AFFECTED ENVIRONMENT

The actions considered in this environmental assessment (EA) would affect fishing in the Gulf of Mexico (Gulf) region. Descriptions of the physical, biological, economic, social, and administrative environments were completed in the recent environmental assessment for the 2010 red grouper regulatory amendment (GMFMC 2010a). That information is being incorporated herein by reference and the reader is directed to the regulatory amendment to obtain the information (GMFMC 2010a). In cases of new information, this information is provided below.

3.1 Physical Environment

The physical environment for reef fish, including gag, has been described in detail in the environmental impact statement (EIS) for the Generic Essential Fish Habitat Amendment (GMFMC 2004a). This includes ecologically critical areas in the Gulf, areas such as the Flower Gardens and the Tortugas Marine Sanctuaries. That information is being incorporated herein by reference. The Generic Essential Fish Habitat Amendment can be viewed at http://www.gulfcouncil.org/fishery_management_plans/essential_fish_habitat.php. There is one site located on the National Register of Historic Places in the Gulf. This is the wreck of the *U.S.S. Hatteras*, located in federal waters off Texas. Groupers are bottom dwellers, generally associated (as adults) with hard-bottomed substrates, and rocky reefs. The primary habitat for red grouper as described in GMFMC (2010a) is located on the west central Florida shelf of the Gulf of Mexico. Eggs and larvae for all species are pelagic. For red grouper, juveniles are found in nearshore waters until they reach approximately 16 inches and move offshore (GMFMC 2004a). Adults are associated with rocky outcrops, wrecks, reefs, ledges, crevices, caverns, as well as “live bottom” areas, in depths of 3 to 190 m. Red grouper are most abundant in state and federal waters off the west Florida shelf.

In April 2010, the Deepwater Horizon MC252 deep-sea drilling rig exploded and sank off the coast of Louisiana. In response to an uncontrolled oil spill resulting from the explosion on April 20, 2010 and subsequent sinking of the Deepwater Horizon MC252 oil rig approximately 36 nautical miles (41 statute miles) off the Louisiana coast, NMFS issued an emergency rule to temporarily close a portion of the Gulf of Mexico EEZ to all fishing [75 FR 24822]. The initial closed area extended from approximately the mouth of the Mississippi River to south of Pensacola, Florida and covered an area of 6,817 square statute miles. The coordinates of the closed area were subsequently modified periodically in response to changes in the size and location of the area affected by the spill. At its largest size on June 1, 2010, the closed area covered 88,522 square statute miles, or approximately 37 percent of the Gulf of Mexico EEZ. This closure was implemented for public safety. Most of the area encompassed by the closure was west of the red grouper habitat, although there was some inclusion of the western portion of the habitat. Studies are ongoing to determine the full extent of the affected area, both on the surface and on the bottom, and to determine what effect the spill and subsequent use of dispersant may have had on the physical and biological environments.

3.2 Biological Environment

The biological environment of the Gulf, including the species addressed in this regulatory amendment, is described in detail in the final EIS for the Generic Essential Fish Habitat amendment and is incorporated here by reference (GMFMC 2004a). Summaries of this information can be found in GMFMC (2010a) and Amendment 30B (GMFMC 2008a). Information for this section has been presented in GMFMC (2010a) except for updated material resulting from the rerun of the red grouper assessment using updated landings data. Therefore, information on gag life history, reef fish, protected resources, and possible effects of the Deepwater Horizon MC252 oil spill are being incorporated herein by reference. This regulatory amendment GMFMC (2010a) can also be viewed at http://sero.nmfs.noaa.gov/sf/pdfs/2010_Red_Grouper_Regulatory_Amendment_91710_final.pdf. Information on red grouper life history and the status of the stock are summarized and updated.

In 2005, a red tide event on the west-Florida shelf may have impacted red grouper populations (as described in Section 2.2.1). 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).

3.2.1 Red Grouper and Reef Fish

Red Grouper Life History and Biology

See GMFMC (2010a). This regulatory amendment can also be viewed at http://sero.nmfs.noaa.gov/sf/pdfs/2010_Red_Grouper_Regulatory_Amendment_91710_final.pdf.

Status of the Red Grouper Stock and Scientific and Statistical Committee (SSC) Recommendations

A summary of the red grouper benchmark stock assessment (SEDAR 12 2007) and 2009 update stock assessment (SEDAR 2009) can be found in GMFMC (2010a) and is incorporated here by reference. These assessments showed that red grouper were neither overfished nor undergoing overfishing. The 2009 update stock assessment did suggest the stock has declined since 2005, much of which was attributed to an episodic mortality event in 2005 (most likely associated with red tide). The update assessment was rerun in late 2010 to incorporate new information on red grouper harvest. Specifically, the assessment used revised estimates of historical discards in the commercial sector based on newly available observer estimates from the years 2006-2008 and updated projections taking into account the reduction in the commercial size limit from 20 inches to 18 inches (Walter 2011). Given these changes, the assessment rerun resulted in a slightly improved estimate of the stock status for the last year of the assessment (2008) and indicated the total allowable catch in the near term could be substantially increased. After reviewing the rerun of the assessment update, the SSC recommended that the overfishing limit for red grouper be set at 8.10 million pounds (the equilibrium yield at the fishing mortality rate associated harvesting the equilibrium maximum sustainable yield) and the acceptable biological catch be set at 7.93 million pounds (the equilibrium yield at the fishing mortality rate associated harvesting the equilibrium optimum sustainable yield).

General Information on Reef Fish Species

See GMFMC (2010a). This regulatory amendment can also be viewed at http://sero.nmfs.noaa.gov/sf/pdfs/2010_Red_Grouper_Regulatory_Amendment_91710_final.pdf.

Status of Reef Fish Stocks

See GMFMC (2010a). This regulatory amendment can also be viewed at http://sero.nmfs.noaa.gov/sf/pdfs/2010_Red_Grouper_Regulatory_Amendment_91710_final.pdf.

Protected Species

See GMFMC (2010a) for information on protected resources. This regulatory amendment can also be viewed at http://sero.nmfs.noaa.gov/sf/pdfs/2010_Red_Grouper_Regulatory_Amendment_91710_final.pdf.

The most recent biological opinion for the reef fish fishery was completed on October 13, 2009. It concluded that this fishery in the Gulf of Mexico is not likely to jeopardize the continued existence of sea turtles, smalltooth sawfish, other listed species, or their designated critical habitat. The incidental take specified in that opinion has not been exceeded; however, as a result of litigation, a court (July 5, 2011) ruled that the Deepwater Horizon MC252 oil spill event constituted new information, and thus consultation must be reinitiated pursuant to Endangered Species Act Section 7(a)(2). As a result of the court's order, a July 29, 2011, memorandum from the Sustainable Fisheries Division to the Protected Resources Division formally requested reinitiation of the consultation.

On August 5, 2011, the Protected Resources Division responded that consultation has been reinitiated for that purpose. On August 10, 2011, NMFS determined that allowing the proposed action to continue during the reinitiation period would not violate section 7(a)(2) or 7(d). There are no additional reasons warranting reinitiation of consultation. To the extent that the proposed rule will result in changes to the prosecution of the fishery, those changes can reasonably be anticipated to have little impact to listed species and critical habitat. Therefore, implementing this action would not affect the conclusions in the August 10, 2011, memo relative to compliance with the Endangered Species Act. A subsequent errata memorandum dated August 30, 2011, updating the number of takes by the commercial longline sector in the August 10, 2011, memorandum did not change this determination. An August 31, 2011, memo to the file supports these findings.

Note the 2010 regulatory amendment used the 2010 Marine Mammal Protection Act List of Fisheries as Category III fishery as a basis for determining the effect of the reef fish fishery on marine mammals. The 2011 list was published on November 8, 2010 (75 FR 68468), and the classification for the reef fish fishery remains as Category III. This indicates the annual mortality and serious injury of a marine mammal stock resulting from the fishery is less than or equal to 1% of the potential biological removal.

3.2.2 Invasive Species

Lionfish (*Pterois miles* and *P. volitans*), an invasive species from the Indo-Pacific, have been found in the Gulf of Mexico (Schofield 2010). These species, first reported off North Carolina in 2002, have been expanding their range from the South Atlantic into the Gulf of Mexico and Caribbean. Scientists have expressed concern about these species and their effects on hard bottom fish and crustacean communities, either through predation or competition for resources. Albins and Hixon (2008) have found that lionfish can adversely affect recruitment by native fishes to patch reefs in the Bahamas.

3.3 Economic Environment

See the Regulatory amendment to the reef fish fishery management plan to set 2011 total allowable catch for red grouper and establish marking requirements for buoy gear (GMFMC 2010a) for a description of the economic environment. This regulatory amendment can also be viewed at:
http://sero.nmfs.noaa.gov/sf/pdfs/2010_Red_Grouper_Regulatory_Amendment_91710_final.pdf.

3.4 Social Environment

The 2010 Regulatory Amendment to the Reef Fish Fishery Management Plan (GMFMC 2010a) contains a description of the social environment and is included by reference here:
http://sero.nmfs.noaa.gov/sf/pdfs/2010_Red_Grouper_Regulatory_Amendment_91710_final.pdf

The description focuses on available geographic and demographic data to identify communities with a strong relationship to the red grouper fishery. A strong relationship is defined by having significant landings and revenue for red grouper. Thus, positive or negative impacts from regulatory change are expected to occur in places with greater grouper landings. These communities are located primarily in the state of Florida.

To summarize the referenced document, communities were examined according to available landings and permit data for red grouper, across the commercial and recreational sectors. At the county level, Pinellas County clearly has the strongest relationship to the fishery of any county in the Gulf of Mexico region. At the community level, the individual communities of Panama City, Madeira Beach, and Apalachicola have the strongest relationship with the fishery, though St. Petersburg, Clearwater, Tarpon Springs, and Redington Shores also have relatively strong ties to the fishery. Steinhatchee, Crystal River, Tampa, and Panacea also have somewhat strong relationships with the red grouper fishery.

It is highly likely that, other factors being equal, these communities would be the most affected, in absolute terms, by management actions directed toward red grouper. The magnitude of these effects will vary according to the exact nature of those actions, particularly with respect to their relative effects on the recreational and commercial sectors. The two actions in this amendment propose increases to the total allowable catch and an increase in the recreational bag limit. Thus, positive social impacts are expected to occur (or to mitigate previous negative social impacts), and are expected to be felt the greatest in those communities identified as having the strongest relationship to the fishery.

3.5 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. This executive order is generally referred to as environmental justice.

This regulatory amendment is expected to result in a net benefit for the commercial and recreational sectors by providing for an increase in total allowable catch. The increase in total allowable catch is expected to mitigate the adverse social and economic consequences previously experienced by fishermen in the red grouper fleet and associated industries and communities due to the reduction of expenditures and revenues associated with a preceding change in fishing behavior and harvest levels. The recreational sector is also expected to accrue benefits as a result of an increase in the bag limit. Thus, no environmental justice issues have been identified or are expected to arise.

3.6 Administrative Environment

A description of both the federal and state fishery management processes can be found in Amendment 22 (GMFMC 2004b), Amendment 30B (GMFMC 2008a), and GMFMC (2010a) and is incorporated here by reference. 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 decision-making for the Gulf of Mexico is divided between the Secretary of Commerce (Secretary) and the Council. The Council is 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 Section 7. In most cases, the Secretary has delegated this authority to National Marine Fisheries Service. Regulations contained within fishery management plans are enforced through actions of the NOAA's Office for Law Enforcement, the United States Coast Guard, and various state authorities.

States are represented 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 states' natural resources through discrete administrative units. Although each agency is the primary administrative body with respect to the states natural resources, all states cooperate with numerous state and federal regulatory agencies when managing marine resources.

4 ENVIRONMENTAL CONSEQUENCES

4.1 Action 1. Red Grouper Total Allowable Catch

4.1.1 Physical Environment

The physical environment and habitat use by groupers, particularly for red grouper, is described in detail in the Generic EFH Amendment (GMFMC 2004a) and the 2010 red grouper regulatory amendment (GMFMC 2010a) and are incorporated by reference. Fishing mostly affects the physical environment through interactions with fishing gear. This is described in detail in GMFMC (2010a) and incorporated by reference. In the commercial sector, most red grouper are caught with longlines. Based on the description of the fishery in GMFMC (2010a), over the 1993 to 2008 time frame, longline gear accounted for 60% of the commercial red grouper landings, vertical line gear for 26%, and traps for 14%. Other gears such as spearfishing accounted for the remainder of landings (< 1%). Traps became illegal for harvest of reef fish after February 7, 2007. Nearly all of the recreational red grouper landings were caught with vertical line gear.

Current gear types minimally impact the physical environment compared to more intrusive gear types such as trawls (Barnette 2001). Longline gear is deployed over hard bottom habitats using weights to keep the gear in direct contact with the bottom. Its potential for adverse impact is dependent on the type of habitat it is set on, the presence or absence of currents, and the behavior of fish after being hooked. In addition, this gear upon retrieval can abrade, snag, and dislodge smaller rocks, corals, and sessile invertebrates (Bohnsack in Hamilton, 2000; Barnette 2001). Vertical line gear has a reduced impact. A weighted line is lowered to the bottom is in direct contact with the bottom for only a short period of time (GMFMC 2010a). Sometimes the line can be entangled on coral or rock outcroppings. In addition, some anchor damage is associated with this gear type, particularly by the recreational sector that might return repeatedly to well marked locations.

Alternative 1 (no action) would maintain the 5.68 million pound total allowable catch, and result in no changes to the commercial quota or recreational allocation. Therefore, this alternative should have no additional effects on the physical environment. **Alternative 2** also maintains the total allowable catch for 2011 at 5.68 million pounds and so for this year would not have any additional effects like **Alternative 1**. However, the total allowable catch for 2012 and subsequent years would increase until 2015 (Section 2, Table 2.1.1). This increased allowable harvest could adversely affect the physical environment if it results in increased fishing effort. The amount fishing effort increases is difficult to predict, particularly if the increased availability of red grouper causes commercial or recreational fishermen to shift their effort from other reef fish species to red grouper. This is particularly true for commercial fishermen who would receive increased individual fishing quota allocation. Rather than targeting non-individual fishing quota managed species on some trips, they might substitute a red grouper trip. As mentioned above, any adverse effects of increased fishing on the physical environment as a result of **Alternative 2** should be minimal given the gear types used by the commercial and recreational sectors.

Similar to **Alternative 2**, **Preferred Alternative 3** would also have the total allowable catch increase until 2015 (Section 2, Table 1), however, this increase would occur immediately and increase the 2011 total allowable catch from 5.68 to 6.88 million pounds. Therefore, any adverse effects from the increasing the total allowable catch would come sooner rather than later when **Preferred Alternative 3** is compared to **Alternative 2**. As with **Alternative 2**, any adverse effects of increased fishing on the physical environment as a result of the higher total allowable catch should be minimal given the gear types used by the commercial and recreational sectors. In addition, effort shifting from other targeted reef fish species to red grouper could reduce the degree overall effort increases in the fishery as a whole.

4.1.2 Biological Environment

The red grouper stock is neither overfished nor undergoing overfishing. However, the stock did experience a decline during the 2005 red tide event. This resulted in a reduction in the total allowable catch from 7.57 to 5.68 million pounds gutted weight in 2011 in order to maintain the catch level at optimum yield (GMFMC 2010a). As the stock recovers, the yield associated with optimum yield will also increase. In addition, lower than projected harvests in 2010 allow for higher than originally projected catch levels in 2011 and beyond.

Alternative 1 is the no action alternative. This would leave the total allowable catch at 5.68 million pounds until changed in a subsequent amendment. Based on the January 2011 rerun of the red grouper projection yields, the yield associated with optimum yield in 2011 is 6.88 million pounds gutted weight. The current total allowable catch is 17% lower and thus allows a very substantial margin of safety for the red grouper stock. Furthermore, red grouper serve as ecosystem engineers. They modify habitat in a way that can benefit other species. Recent studies have shown that red grouper will expose rocky habitat by excavating with their mouths and fanning with their fins. This creates microhabitat areas that provide a clean rocky substrate for the attachment of sessile invertebrates. Increased biodiversity and abundance has been demonstrated in areas associated with habitat structured by red grouper (Coleman et al. 2010). Therefore, **Alternative 1** will likely provide direct and indirect benefits to both the biological and ecological environments.

Alternative 2 leaves the total allowable catch at 5.68 million pounds for 2011, and increases the total allowable catch each year for the period 2012 through 2015. These increases correspond to optimum yield, which the Council has defined as the yield associated with fishing at 75% of the fishing mortality rate associated with maximum sustainable yield. Under equilibrium conditions, this harvest level is expected to produce a yield that is between 94% and 98% of the yield when fishing at maximum sustainable yield while producing a stock size that is between 125% and 131% of the maximum sustainable yield stock size (Restrepo et al. 1998). An increase in the red grouper total allowable catch could result in an increase in bycatch of gag. However, this issue is addressed in Action 3 of Amendment 32, which adjusts the gag quota downward to account for additional gag dead discards due to the discrepancy between red grouper and gag quotas. While less precautionary than **Alternative 1**, this alternative still maintains the stock at a healthy level that will provide direct and indirect benefits to both the biological and ecological environments.

Preferred Alternative 3 raises the total allowable catch in 2011 from 5.68 to 6.88 million pounds gutted weight, and then continues to raise the total allowable catch each year for the

period 2012 through 2015, although at a slower rate of increase than **Alternative 2**. The effect of **Preferred Alternative 3** to **Alternative 1** will be similar to **Alternative 2**, i.e., slightly less precautionary, but still maintaining the stock at a healthy level that will provide direct and indirect benefits to both the biological and ecological environments. The differences in the yield streams between **Alternative 2** and **Preferred Alternative 3** gradually narrow over time as the stock approaches its equilibrium optimum yield level. **Alternative 2** may be considered more conservative than **Preferred Alternative 3** since it "front loads" the stock rebuilding by delaying increases until 2012, but over time, the benefits to the biological and ecological environments will be about the same from both alternatives since both will rebuild the stock to the optimum yield level. As with **Alternative** 2, an increase in the red grouper total allowable catch could result in an increase in bycatch of gag. However, this issue is addressed in Action 3 of Amendment 32, which adjusts the gag quota downward to account for additional gag dead discards due to the discrepancy between red grouper and gag quotas.

4.1.3 Economic Environment

4.1.3.1 Effects on the Commercial Sector

Increases in the commercial red grouper quota considered under this management action are expected to result in direct positive economic effects which can be approximated by the associated increases in economic value. The evaluation of yearly changes in aggregate lease value, i.e., the changes in the value of annual red grouper allocations, constitutes the appropriate approach to measure changes in economic value that are anticipated to result from this action. It is assumed that individual fishing quota shares and annual allocations, which are assets that can be freely exchanged, are traded in well-functioning markets. Average red grouper individual fishing quota allocation prices are currently estimated at approximately $0.50 per pound gutted weight (Andy Strelcheck-NMFS, personal communication). Increases in commercial red grouper quota relative to the status quo, which would maintain a 4.32 MP quota, and present values of potential economic gains are provided in Table 4.1.3.1. Present values of benefits are computed based on 3% and 7% discount rates and assume that this amendment will be implemented during the 2011calendar year. Greater increases in red grouper commercial quota would logically be expected to result in greater increases in economic value. While it is assumed that this regulatory action would be implemented this year, the amount of time that would be available to IFQ participants to harvest their allocation is not known at this time. It is possible that, should this action be implemented later in the year, some fishermen would not be able to harvest the totality of their allocation. Therefore, the potential gains in economic value presented in this section can be considered as upper bounds for the economic effects expected to result from this action.

Table 4.1.3.1. Increases in red grouper commercial quota (gutted weight) and discounted gains in economic value based on 3% and 7% discount rates.

Year	Alternative 2			Preferred Alternative 3		
	Pounds (gw)	Present Value (3%)	Present Value (7%)	Pounds (gw)	Present Value (3%)	Present Value (7%)
2011	0	0	0	910,000	$455,000	$455,000
2012	1,170,000	$567,961	$546,729	1,050,000	$509,709	$490,654
2013	1,300,000	$612,687	$567,735	1,210,000	$570,271	$528,430
2014	1,350,000	$617,721	$551,001	1,310,000	$599,418	$534,675
2015	1,400,000	$621,941	$534,027	1,400,000	$621,941	$534,027
Total	5,220,000	$2,420,310	$2,199,492	5,880,000	$2,756,338	$2,542,786

Alternative 1, no action, would maintain a 4.32 mp (gutted weight) commercial red grouper quota and thus is not expected to result in any economic benefits. **Alternative 2** would maintain the 4.32 mp (gutted weight) quota in 2011 and increase the commercial quota between 2012 and 2015. Under **Alternative 2**, based on a 3% discount rate, expected changes in economic value range from $567,961 in 2012 to $621,941 in 2015. With a 3% discount rate, the present value of increases in economic value anticipated to result from commercial quota adjustments under **Alternative 2** would total $2,420,310.

Between 2011 and 2015, **Preferred Alternative 3** would increase the commercial red grouper quota annually. With a 3% discount rate, increases in economic value expected to result from red grouper commercial quota increases considered under **Preferred Alternative 3** would range from $455,000 in 2011 to $621,941 in 2015. The present value of increases in economic value anticipated to result from commercial quota adjustments that would be implemented under **Preferred Alternative 3** would total $2,756,338 and $2,542,786 using discount rates of 3% and 7%, respectively. In addition to affording IFQ participants the opportunity to harvest more red grouper this year, **Preferred Alternative 3** would, relative to **Alternative 2**, result in a greater aggregate increase in economic value. However, should the implementation of this management action be delayed, the difference in economic benefits between **Alternative 2** and **Preferred Alternative 3** could be lessened because IFQ participants may run out of time and be unable to harvest the totality of their additional allocation for 2011.

4.1.3.2 Effects on the Recreational Sector

For **Action 1**, the recreational allocation for red grouper will remain at 1.36 million pounds gutted weight for 2011 through 2015 under **Alternative 1**. Under **Alternative 2**, the recreational allocation will also remain at 1.36 million pounds gutted weight in 2011, but increase to 1.81 million pounds gutted weight in 2015. Under **Preferred Alternative 3**, the recreational allocation will increase to 1.80 million pounds gutted weight in 2015, which is basically equivalent to the allocation in 2015 under **Alternative 2**. However, in 2011, the recreational red

grouper allocation will be 1.65 million pounds gutted weight under **Preferred Alternative 3** and thus somewhat higher relative to **Alternative 1** and **Alternative 2**. As such, a larger difference is expected between the recreational allocation and the expected recreational catch in 2011 under **Preferred Alternative 3** relative to **Alternative 1** and **Alternative 2**, even if the bag limit is increased under **Action 2** in this regulatory amendment.

The recreational allocation for red grouper has not been met in recent years. Specifically, recreational red grouper landings averaged less than 1 million pounds gutted weight between 2006 and 2009. Thus, the probability the recreational sector will exceed its red grouper allocation in 2011 is minimal at best under all alternatives, and is being further reduced under **Preferred Alternative 3**. In turn, none of the alternatives are expected to generate adverse direct or indirect economic effects on the recreational red grouper sector. A small possibility exists that this sector may experience greater economic benefits in 2011 under **Preferred Alternative 3** relative to **Alternative 1** and **Alternative 2**, though these benefits are expected to be minimal at best given the short length of time the relatively higher allocation will be in effect in 2011.

4.1.4 Social Environment

The no action **Alternative 1** would maintain the total allowable catch as defined in the 2010 regulatory amendment for both the commercial and recreational sectors. The remaining two alternatives propose increases to the total allowable catch over a series of years. The proposed increases, as such, are not expected to incur any negative social impacts to either sector. Nevertheless, the magnitude of positive impacts differs by sector and alternative.

<u>Recreational Sector</u>

The recreational sector has not harvested its allocation of red grouper in recent years and is not expected to harvest its total allowable catch under the status quo **Alternative 1**. Thus, an increase in the total allowable catch for 2011 (**Preferred Alternative 3**) would not likely be used and no positive social benefits are expected to accrue to the recreational sector from an increase in the total allowable catch for 2011 (the total allowable catch for 2011 under **Alternative 2** is equal to that in **Alternative 1**). Additionally, any increase in the total allowable catch for 2011 implemented through this regulatory amendment is only likely to be in effect the last two months of the year, which accounts for roughly 10% of the recreational harvest (Table 2.2.2).

If the increase in total allowable catch is implemented alongside an increase in the red grouper bag limit, outlined in Action 2, the recreational sector is more likely to realize positive benefits. It should be noted, however, that red grouper is not as prized among some recreational fishermen as other grouper species, notably gag. At present, it remains unknown whether recreational effort will increase in response to an increase in the total allowable catch and bag limit. If it does, the total allowable catch outlined for the subsequent years (2012 – 2015) is greater under **Alternative 2** than **Preferred Alternative 3**. Nevertheless, with the recreational sector not achieving its current allocation, the difference in the proposed increases of each alternative may remain unused.

Commercial Sector

Although the status quo **Alternative 1** should not incur further negative impacts on the commercial sector, it should be noted that the quota was previously decreased from 5.75 mp to 4.32 mp (25%) through the 2010 Regulatory Amendment. Also implemented in 2010, Reef Fish Amendment 31 (GMFMC 2009) placed further restrictions on the commercial longline fishermen. The increase in total allowable catch proposed for the remainder of 2011 (**Preferred Alternative 3**) or beginning in 2012 (**Alternative 2**) is intended to mitigate some of the recent economic hardships that have arisen from these recent regulatory actions.

As of July 22, 2011, the commercial sector has harvested 2.58 mp, or about 60% of its quota for 2011. **Alternatives 1** and **2** would not increase the total allowable catch for the current year, and do not provide immediate benefits for commercial red grouper fishermen. **Preferred Alternative 3** would provide the greatest immediate, short-term benefits by increasing the 2011 total allowable catch to 5.23 mp, an increase of .91 mp. **Alternative 2** delays accrual of positive benefits but provides a greater increase in the total allowable catch for subsequent years (2012-2015).

4.1.5 Administrative Environment

None of the **Action 1** alternatives (**Alternatives 1-3**) should result in any direct or indirect effects to the administrative environment, because the type of regulations needed to manage the fishery would remain unchanged regardless of what total allowable catch is set at. The National Marine Fisheries Service Office for Law Enforcement, in cooperation with state agencies, would continue to monitor regulatory compliance with existing regulations and National Marine Fisheries Service would continue to monitor both recreational and commercial landings to determine if landings are meeting or exceeding specified quota levels. The enforcement and administrative environments were recently enhanced with an individual fishing quota program for the commercial sector, requiring National Marine Fisheries Service to monitor the sale of red grouper individual fishing quota shares, and a vessel monitoring systems in the reef fish fishery. Recordkeeping requirements for individual fishing quota shares have improved commercial quota monitoring and prevent or limit overages from occurring. The individual fishing quota and vessel monitoring system requirements have reduced the burden of monitoring compliance with commercial fishing regulations. Recreational harvests will be tracked through a variety of monitoring programs that are already in use.

4.2 Action 2. Red Grouper Recreational Bag Limit

4.2.1 Physical Environment

A brief summary of red grouper use of the physical environment is provided in Section 3.1. A more detailed description is included in the Generic EFH Amendment (GMFMC 2004a) and the 2010 red grouper regulatory amendment (GMFMC 2010a) which are incorporated by reference. The effects of fishing gears used in the fishery on the physical environment are also briefly described Section 4.1.1 and are described in more detail in GMFMC (2010a).

Alternative 1 (no action) would maintain the recreational sector's daily bag limit at two red grouper per person within the four fish aggregate grouper bag limit. Therefore, this alternative should have no additional effects on the physical environment. **Alternative 2** and **Preferred Alternative 3** would increase the red grouper bag limit to three and four fish, respectively. These two alternatives could increase fishing effort; however, any adverse effects to the physical environment would likely not be significant for at least three reasons. The likelihood that recreational fishermen might target red grouper over other species in response to the increased red grouper bag limit could limit any overall increase in reef fish fishing effort. In addition, as described in Section 2.2 with respect to the bag limit analysis, few fishermen catch more than one red grouper on any given reef fish trip, further minimizing the likelihood of a substantial increase in red grouper fishing effort. Finally, as described in Section 4.1.1 and in GMFMC (2010a), vertical line gear minimally impacts the bottom habitat where red grouper are caught.

4.2.2 Biological Environment

Red grouper are less frequent than gag in areas closer to the coast, and are more spread out over low relief hard bottom than gag. However, recent restrictions on recreational gag harvest under the gag rebuilding plan may have caused some effort shifting toward red grouper.

Alternative 1, the no action alternative, leaves the red grouper bag limit at its current level of 2 fish. This alternative will result in no direct change to the biological environment. However, as mentioned above, restrictions on gag harvest may result in some effort shifting toward red grouper. Thus, an increase in recreational red grouper harvest could occur even with no change to the bag limit. Any increase in harvest will be small in comparison to **Alternative 2** or **Preferred Alternative 3**. The recreational sector has not caught its allocation in recent years, and is unlikely to under this alternative, particularly if the total allowable catch is increased. Thus, this alternative is not expected to have any negative impact on the biological environment.

Alternative 2 raises the bag limit to 3 fish. There is no recent data on which to do bag limit analysis, but based on bag limit analyses done in Amendment 30B (GMFMC 2008b) and shown in Table 2.2.3, raising the bag limit from 2 to 3 fish could increase recreational harvest by 8.8%.

The current (2011) recreational sector annual catch target for red grouper is 1.36 million pounds. Recreational landings of red grouper were 0.82 million pounds in 2008 and 0.98 million pounds in 2009, 40% and 30% below the allocation respectively. More red grouper will be caught than under **Alternative 1**, but less than under **Preferred Alternative 3**. However, an 8.8% percent increase in harvest is therefore not expected to result in the allocation being exceeded. Thus, this alternative is not expected to have a negative impact on the biological environment.

One possible consequence of this alternative is that it may encourage fishermen to fish longer if they feel that they have a chance to catch their bag limit. Although red grouper generally occupy a lower relief habitat than gag, there is some overlap. Longer fishing trips with increased effort could increase the possibility of an increase in gag bycatch. Gag are overfished, and are under a rebuilding plan that includes an extended closed season. However, during 2009-2010 only 5% of MRFSS intercepts where red grouper were caught had landings of more than 1 red grouper (personal communication, Andy Strelcheck, May 25, 2011). Thus, an increase in the bag limit is likely to have an impact on increased fishing effort for the 5% of angler trips where more than one red grouper is caught. Any impact on the gag stock as a result will be minor.

Preferred Alternative 3, which raises the bag limit to 4 fish, could result in a 13.2% increase in recreational harvest, based on the bag limit analyses in Amendment 30B (GMFMC 2008b) and shown in Table 2.2.3. This alternative will result in the largest increase in recreational harvest. However, as with **Alternative 2**, a 13.2% percent increase in harvest is not expected to result in the allocation being exceeded. Thus, this alternative is not expected to have a negative impact on the biological environment. As discussed under **Alternative 2**, this alternative could encourage a small number of fishermen to increase their fishing effort for red grouper, which could increase their bycatch of gag. This is unlikely to affect more than about 5% of the red grouper angler trips. Therefore, any impact on the gag stock will be minor.

4.2.3 Economic Environment

Action 2 proposes increasing the red grouper bag limit, which is currently two fish per person. However, because of a lack of recent catch data at increased bag limits, estimates of catch levels at different bag limits are not generated by the underlying, biological model. Because current landings are already below the recreational catch target and very few trips catch the bag limit, the additional economic value is likely to be limited. In order to estimate the possible economic consequences of increasing the bag limit for red grouper, an assumption must be made. Specifically, the number of trips in all modes is assumed to remain the same regardless of any change in the red grouper bag limit. Thus, no changes to producer surplus or economic impacts are expected to result from a change in the red grouper bag limit.

Based on landings and trip data averaged across 2009 and 2010, when a 2-fish red grouper bag limit was in effect, less than 1% of trips catching red grouper landed the bag limit. Only these trips, estimated at 6,338 per year on average, are candidates for keeping one or two additional red grouper under **Alternative 2** and **Preferred Alternative 3**, respectively. In Table 4.2.3.1, the additional landings per year are multiplied by $85 per grouper to generate the estimated annual increase in consumer surplus under **Alternative 2** and **Preferred Alternative 3**. The willingness to pay estimate of $85 (in 2008 dollars) per grouper is for the second fish kept on a trip targeting grouper (Carter and Liese, in review). These estimates likely overstate the actual annual increase in consumer surplus because: 1) the value of a 3rd or 4th fish on a trip is likely to be less than $85, which is an estimate of the 2nd fish's value, and 2) not all of the candidate trips will actually catch enough additional, legal-size red grouper to keep a 3rd or 4th red grouper.

Furthermore, the estimates in Table 4.2.3.1 only apply in years 2012 through 2015. Given the limited period of time the increased bag limit is expected to be in effect during 2011, the expected increases in landings and consumer surplus are expected to be significantly less in

2011. Specifically, assuming the higher bag limit is in effect during November and December of 2011, and given that these months typically account for 12% of the recreational red grouper landings by number (Table 2.2.1), the increase in landings under **Alternative 2** and **Preferred Alternative 3** would be 761 and 1,521 fish, respectively. The increase in consumer surplus would be $64,321 and $128,641 in 2011 under **Alternative 2** and **Preferred Alternative 3**, respectively.

Table 4.2.3.1. Estimated Gain of Consumer Surplus in the Red Grouper Recreational Sector Associated with Alternative 2 and Alternative 3 Relative to Alternative 1

	Alternative 1	Alternative 2	Alternative 3
Increase in landings (number of fish)	-	6,338	12,676
Increase in Consumer Surplus ($)	-	$536,005	$1,072,009

4.2.4 Social Environment

As discussed in the previous action, the recreational sector has not met its red grouper allocation in recent years. Thus, an increase in the total allowable catch on its own would not likely be sufficient to provide beneficial effects for the recreational sector. This action proposes to increase the red grouper bag limit, which is expected to increase the likelihood that recreational fishermen achieve optimum yield and also to mitigate the impacts on the recreational community during the gag rebuilding plan (GMFMC 2011).

Recreational fishermen may not be harvesting the total allowable catch for various reasons. One, the Council has heard testimony from recreational fishermen expressing their preference for other species (principally gag) over red grouper (see Public Hearing summaries, GMFMC 2011). Fishermen's valuation of particular fish affects effort; if red grouper is not preferred as a desirable species, the increase in total allowable catch coupled with the relaxation of effort restrictions may not result in the recreational sector fully harvesting their allocation. To what extent the expressed opinions are representative of the entire recreational community is unknown. It also remains unknown how recreational fishing behavior may change in response to the proposed increase in the bag limit and whether the total allowable catch will thus be met or exceeded under the alternatives to increase the bag limit. However, the values and preferences of recreational fishermen may factor into whether the increase in bag limit realizes the goals of fully harvesting their allocation and mitigating the negative impacts incurred by the provisions of the rebuilding plan for gag (GMFMC 2011).

Alternately, the regulatory effort restrictions (e.g., bag limits, size limits, and seasonal closures) in place may be overly successful in reducing effort thus hindering fishermen from landing the total allowable catch. This action proposes to relax one effort restriction (bag limits), leaving the minimum size, area, and temporal closures in place. Implemented in 1990, Amendment 1 established a 5 fish aggregate bag limit for grouper, of which the entire bag limit could consist of red grouper, and a 20" minimum size. While the size limit has remained the same, the bag limit for red grouper is now two-fifths the bag limit in 1990. To provide relief in effort restrictions, it is obviously more favorable for fishermen to catch more fish (increase bag limit) rather than the

same number but smaller fish through a decrease in the minimum size. In Amendment 30B, a two-month recreational closed season was established for all shallow water grouper, including red grouper, to provide protection during spawning. Because fishermen generally express support for spawning closures as the purpose for protecting fish stocks during such times is widely accepted as necessary (see Scoping Meeting and Public Hearing summaries, Amendment 32 2011), there would be no social benefits to permitting fishermen to fish when they feel grouper should be protected. On the other hand, area closures not associated with spawning are generally not supported by recreational fishermen. Fishermen question the efficacy of area closures (see Scoping Meeting and Public Hearing summaries, GMFMC 2011; Christie et al. 2003; Trist 1999). Regardless, the area closures, including The Edges, Steamboat Lumps, and Madison-Swanson, are not closed year round. Furthermore, due to the distance from shore only a subset of recreational fishermen is able to target these areas. Thus, the relaxation of effort restrictions through an increase in the bag limit is likely to benefit the greatest number of recreational fishermen.

Alternative 1 would maintain the status quo of 2 red grouper per person, and is not expected to incur any social impacts, positive or negative. Under this alternative, however, the recreational sector would not be expected to benefit from the increase in total allowable catch proposed under Action 1. The remaining two alternatives increase the red grouper bag limit to 3 fish per person (**Alternative 2**) or 4 fish per person (**Preferred Alternative 3**). An analysis presented in Amendment 30B (GMFMC 2008b) predicted an 8.8% increase in harvest between a 2- and 3-fish bag limit and a 13.2% increase in harvest between a 2- and 4- fish bag limit (Table 2.2.3). Although this analysis was conducted on catch rates from 2003-2004 and the validity of the analysis under current fishing practices is unknown, the rate of harvest increase suggests that the maximum increase in bag limit (**Preferred Alternative 3**) is most likely to help the recreational sector land their allocation; yet, even with a bag limit of 4 fish, the sector is not expected to exceed the quota. Although it remains unknown how the recreational community will respond to the bag limit increase, **Preferred Alternative 3** would provide the greatest social benefits among the alternatives and allow fishermen who choose to, to increase their red grouper harvest.

4.2.5 Administrative Environment

Alternatives 1 (no action) would maintain the 2-red grouper daily bag limit within the 4-grouper aggregate daily bag limit. This action would not affect the administrative environment because no changes in rulemaking would be required. **Alternative 2** and **Preferred Alternative 3** would require subsequent rulemaking to increase the bag limit. However, these changes would require administrators to make minor adjustments to the Reef Fish FMP and codified regulations which fall within the scope and capacity of the current management system and are not expected to significantly affect the administrative environment. For all these alternatives, harvest would still be monitored through the MRIP, Texas Parks and Wildlife Department (TPWD), and the SEFSC's Headboat Survey and would capture the affects of any bag limit change to estimates of landings. Enforcing bag limits is a routine role in fishery enforcement. Because maintaining a bag limit is common to all the alternatives, there should be no added affects to law enforcement activities.

4.3 Cumulative Effects Analysis

Amendment 30B, and cumulative effects to the reef fish fishery have been analyzed in Amendments 30A, 30B, and 31, and are incorporated here by reference. The effects of increasing the 2011 total allowable catch in this regulatory amendment are most closely aligned with the effects from the revisions to setting red grouper total allowable catch in Amendment 30B (GMFMC 2008a) and the 2010 red grouper regulatory amendment GMFMC (2010a). These analyses found the effects on the biophysical and socioeconomic environments are positive since they would ultimately restore/maintain the stock at a level that allows the maximum benefits in yield and commercial and recreational fishing opportunities to be achieved. However, short-term negative impacts on the fisheries' socioeconomic environment have occurred and are likely to continue due to the need to limit directed harvest and reduce bycatch mortality. These negative impacts can be minimized by selecting measures that would provide the least disruption to the fishery while maintaining total allowable catch consistent with the rebuilding plan. For the recreational sector, this would mean using combinations of bag limits, size limits and closed seasons to minimize disruptions, and for the commercial sector by using a combination of size limits with the individual fishing quota program. This framework action would mitigate these negative impacts as the 2011 total allowable catch and the red grouper bag limit would be increased, but would not lead to harvest levels allowed under Amendment 30B and so would not be cumulatively significant.

Given reductions in harvest needed for gag (implemented through interim rules (NMFS 2010 and NMFS 2011b)), further constraints may need to be applied to red grouper regulations to minimize gag regulatory discards. In Amendment 32 the issue of increased dead discards of gag due to the discrepancy between the red grouper and gag catch levels is being dealt with in two ways. First, Amendment 32 will increase the gag annual catch limit and annual catch target on an annual basis from 2012 through 2015 (or until the next gag stock assessment) in accordance with the projected yields under the gag rebuilding plan. This will reduce the discrepancy between red grouper and gag. Second, Amendment 32 will reduce the 2012 to 2015 commercial gag quotas by 14 percent from their annual catch target levels in order to take into account the potential for additional gag dead discards. Overall, in combination with the actions taken in Amendment 32, revising the total allowable catch and bag limits should not have a significant cumulative effect on the biological environment.

There is a large and growing body of literature on past, present, and future impacts of global climate change induced by human activities. Some of the likely effects commonly mentioned are sea level rise, increased frequency of severe weather events, and change in air and water temperatures. The Environmental Protection Agency's climate change webpage (http://www.epa.gov/climatechange/) provides basic background information on these and other measured or anticipated effects. A compilation of scientific information on climate change can be found in the United Nations Intergovernmental Panel on Climate Change's Fourth Assessment Report (IPCC 2007) and incorporated here by reference, and available at http://www.ipcc.ch/publications_and_data/publications_and_data.shtml. Global climate changes could have significant effects on Gulf fisheries; however, the extent of these effects is not known at this time. Possible impacts are outlined in Amendment 31 (GMFMC 2009) and the 2010 Red Snapper Regulatory Amendment (GMFMC 2010b). In addition, oil from the Deepwater Horizon MC252 incident that occurred in April 2010 may affect red grouper populations. However, the effects of this oil on red grouper and other reef fish populations are incomplete and unavailable

(see 40 CFR § 1502.22) at this time because studies of the effects of the oil spill are still ongoing. If the oil impacts important habitat for these species or interrupt critical life history stages, the effects could reduce these species' population sizes.

Monitoring

The effects of the proposed action 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 Marine Recreational Fisheries Statistics Survey, NMFS' Head Boat Survey, and the Texas Marine Recreational Fishing Survey. Marine Recreational Fisheries Statistics Survey has been replaced by Marine Recreational Information Program, a program designed to improve the monitoring of recreational fishing. Commercial data is collected through trip ticket programs, port samplers, and logbook programs. Currently, an update SEDAR assessment of Gulf red grouper is scheduled for 2013. In response to the Deepwater Horizon MC252 incident, increased frequency of surveys of the recreational sector's catch and effort, along with additional fishery independent information regarding the status of the stock are being conducted. This will allow future determinations regarding the impacts of the Deepwater Horizon MC252 incident on various fishery stocks, including red snapper. At this time it not possible to make such determinations.

5 REGULATORY IMPACT REVIEW

5.1 Introduction

The National Marine Fisheries Service requires a Regulatory Impact Review (RIR) for all regulatory actions that are of public interest. The RIR does three things: 1) provides a comprehensive review of the level and incidence of impacts associated with a proposed or final regulatory action; 2) 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) 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 proposed regulations are a "significant regulatory action" under the criteria provided in Executive Order (E.O.) 12866 and provides some information that may be used in conducting an analysis of impacts on small business entities pursuant to the Regulatory Flexibility Act (RFA). This RIR analyzes the impacts that the proposed management alternatives in this amendment to the Reef Fish FMP would be expected to have on the reef fish fishery.

5.2 Problems and Objectives

The problems and objectives addressed by this regulatory amendment are discussed in Section 1.1 of this document and are incorporated herein by reference. In summary, management measures considered in this regulatory amendment are intended to increase the total allowable catch of red grouper and to allow a larger harvest of red grouper in 2011 consistent with achieving optimum yield.

5.3 Description of the Fishery

A description of the fishery is provided in Section 3.3 of this document and is incorporated herein by reference.

5.4 Impacts of Management Measures

5.4.1 Action 1: Set Red Grouper Total Allowable Catch

With a 3% discount rate, increases in economic value expected to result from red grouper commercial quota increases considered under **Preferred Alternative 3** would range from $455,000 in 2011 to $621,941 in 2015. The present value of increases in economic value anticipated to result from commercial quota adjustments that would be implemented under **Preferred Alternative 3** would total $2,756,338 and $2,542,786 using discount rates of 3% and 7%, respectively. In addition to allowing IFQ participants to harvest more red grouper this year, **Preferred Alternative 3** would, relative to **Alternative 2**, result in a greater aggregate increase in economic value. However, should the implementation of this management action be delayed, the difference in economic benefits between **Alternative 2** and **Preferred Alternative 3** could be lessened because IFQ participants may run out of time and be unable to harvest the totality of their additional allocation for 2011.

Because the difference between the recreational allocation and the expected recreational catch of red grouper is being increased under **Preferred Alternative 3**, particularly in 2011 but also in future years, it is not expected to generate adverse direct or indirect economic effects on the recreational red grouper sector. A small possibility exists that this sector may experience economic benefits in 2011 under **Preferred Alternative 3**, though these benefits are expected to be minimal at best given the short length of time the relatively higher allocation will be in effect in 2011.

5.4.2 Action 2: Red Grouper Recreational Bag Limit

Because the number of trips in all modes is assumed to remain the same regardless of any change in the red grouper bag limit, no changes to producer surplus or economic impacts are expected to result under **Preferred Alternative 3**. However, the increase in the bag limit from two fish to four fish is expected to increase annual recreational landings of red grouper by 12,676 fish, which is in turn expected to result in an annual increase in consumer surplus of approximately $1.07 million. These estimates apply to 2012 through 2015. Because the higher bag limit is only expected to be in effect during November and December in 2011, the increase in recreational red grouper landings and consumer surplus is expected to be 1,521 fish and $128,641, respectively, under **Preferred Alternative 3**.

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 that can be expressed as costs associated with the regulations. Costs associated with this specific action would include:

Council costs of document preparation,
meetings, public hearings, and information
dissemination…….…….……....$40,000

NMFS administrative costs of document
preparation, meetings, and review …….$35,000

TOTAL……...$75,000

The Council and Federal costs of document preparation are based on staff time, travel, printing, and any other relevant items where funds were expended directly for this specific action. There are no permit requirements proposed in this regulatory amendment. To the extent that there are no quota closures proposed in this regulatory amendment or other regulatory measures, no additional enforcement activity is anticipated. In addition, under a fixed budget, any additional enforcement activity due to the adoption of this regulatory amendment would mean a redirection of resources to enforce the new measures.

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 purposes of E.O. 12866.

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 FMP 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.

With certain exceptions, the RFA requires agencies to conduct an initial regulatory flexibility analysis (IRFA) for each proposed action. The IRFA 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 IRFA is conducted to primarily determine whether the proposed action would have a "significant economic impact on a substantial number of small entities." In addition to analyses conducted for the RIR, the IRFA 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; and, 5) an identification, to the extent practicable, of all relevant federal rules, which may duplicate, overlap, or conflict with the proposed rule.

6.2 Statement of the need for, objectives of, and legal basis for the rule

A discussion of the reasons why action by the agency is being considered is provided in Section 1.1 of this document. In summary, the purposes of this proposed rule are to establish the red grouper recreational bag limit and set the red grouper total allowable catch and the resulting commercial quota and recreational allocation consistent with the goals and objectives of the Council's red grouper rebuilding plan and achieving the mandates of the Magnuson-Stevens Act. The objective of this amendment is to support the rebuilding of the red grouper resource in the Gulf of Mexico and allow harvest at optimum yield. The Magnuson-Stevens Act provides the statutory basis for this proposed rule.

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

This proposed rule is expected to directly affect commercial fishing vessels whose owners possess commercial red grouper fishing quota shares. The Small Business Administration has established size criteria for all major industry sectors in the U.S. including fish harvesters. A business involved in fish harvesting 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 $4.0 million (NAICS code 114111, finfish fishing) for all its affiliated operations worldwide.

As of October 1, 2009, 970 entities owned a valid commercial Gulf of Mexico reef fish permit and thus were eligible for initial shares and allocation in the grouper/tilefish IFQ program. Of these 970 entities, 908 entities initially received shares and allocation of grouper or tilefish in 2010. More importantly with respect to the current action, 815 entities specifically received red grouper shares and an initial allocation of the commercial sector's red grouper quota in 2010.

Of these 815 entities, 191 were not commercially fishing in 2008 or 2009 and thus have no commercial fishing revenue during these years. On average, these 191 entities received an initial allocation of 6,459 pounds of red grouper in 2010. Eight of these entities also received a bottom longline endorsement in 2010. These eight entities received a much higher initial allocation of red grouper in 2010, with an average of nearly 44,000 pounds. The other 624 entities that received red grouper shares and initial allocations in 2010 were active in commercial fisheries in 2008 or 2009. These 624 entities are expected to be most affected by the proposed action to increase the red grouper commercial quota.

The maximum annual commercial fishing revenue in 2008 or 2009 by an individual vessel with a commercial Gulf reef fish permit or red grouper fishing quota shares was approximately $606,000 (2008 dollars). Based on this figure, all commercial fishing vessels expected to be directly affected by this proposed rule are determined for the purpose of this analysis to be small business entities.

Of the 624 commercial fishing vessels with commercial landings in 2008 or 2009, 126 vessels did not have any red grouper landings in 2008 or 2009. Their average annual gross revenue in these two years was approximately $55,800 (2008 dollars). The vast majority of these vessels' commercial fishing revenue is from landings of snapper, mackerel, dolphin, and wahoo. However, they did become relatively more dependent on landings of HMS species and relatively less dependent on landings of deep-water grouper species in 2009. On average, these vessels received an initial allocation of 2,524 pounds of red grouper quota in 2010. Five of these vessels also received a bottom longline endorsement in 2010.

The other 498 commercial fishing vessels did have landings of red grouper in 2008 or 2009. Their average annual gross revenue from commercial fishing was approximately $66,000 (2008 dollars) between the two years. On average, these vessels had 9,425 pounds and 6,734 pounds of red grouper landings in 2008 and 2009 respectively, or 8,053 pounds between the two years. Red grouper landings accounted for approximately 35% of these vessels' annual average gross revenue, and thus they are relatively dependent on revenue from red grouper landings. These vessels' average initial red grouper allocation in 2010 was 8,404 pounds. Therefore, on average, their recent red grouper landings are very near their 2010 red grouper allocation, though their red grouper landings differed considerably between 2008 and 2009. Forty-nine of these vessels also received a bottom longline endorsement in 2010. These particular vessels' average annual revenue was approximately $156,000 (2008 dollars) in 2008 and 2009. Revenue from red grouper landings fell from approximately $104,000 to $65,000 in 2009. Nonetheless, these vessels remain highly dependent on revenue from red grouper landings, which averaged approximately 36,000 pounds in 2008 and 23,000 pounds in 2009. Their average initial 2010

allocation of red grouper was approximately 42,000 pounds and thus they have been harvesting within that allocation in recent years, particularly in 2009.

6.4 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 requirement and the type of professional skills necessary for the preparation of the report or records

This proposed rule 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 rule

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

6.6 Significance of economic impacts on small entities

Substantial number criterion

This proposed rule, if implemented, would be expected to directly affect 815 commercial fishing entities. All affected entities have been determined, for the purpose of this analysis, to be small entities. Therefore, it is determined that the proposed rule will 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 rule are determined for the purpose of this analysis 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?

As a result of the increase in commercial red grouper harvests, this proposed action would be expected to increase commercial ex-vessel revenue by approximately $2.76 million from 2011 through 2015, or approximately $551,268 annually, relative to the status quo. Thus, the expected annual increase in each affected entity's annual ex-vessel revenue is estimated to be approximately $676. As a result, no reduction in profits for a substantial number of small entities would be expected.

6.7 Description of 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 direct adverse economic effect on the profits of a substantial number of small entities. As a result, the issue of significant alternatives is not relevant.

7 OTHER APPLICABLE LAW

The Magnuson-Steven Fishery Conservation and Management Act (MSFCMA) (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, 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. Pursuant to the APA, NMFS could find that delaying the effective date of the rule 30 days after it publishes as impracticable and contrary to the public interest. Therefore, there could be good cause to waive the 30-day delay in effectiveness of the rule.

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 NOAA 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 framework action 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 and amendments and the use of best available information is the second national standard under the MSFCMA. To be consistent with the MSFCMA, fishery management plans 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 fishery management plans 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. NMFS, as part of the Secretarial review process, will make a determination regarding the potential impacts of the proposed actions.

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 (LOF) 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 LOF 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 reef fish fishery was classified in the 2011 LOF as a Category III fishery indicating potential adverse effects on marine mammal stocks is minimal (see Section 3.2.2).

Paperwork Reduction Act

The Paperwork Reduction Act of 1995 (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 Paperwork Reduction Act requires NMFS to obtain approval from the Office of Management and Budget before requesting most types of fishery information from the public. None of the alternatives in this framework action are expected to create additional paperwork burdens.

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 NOAA Office of General Counsel will determine whether a Taking Implication Assessment is necessary for this amendment.

E.O. 12866: Regulatory Planning and Review

This executive order, 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 (Section 5) for all fishery regulatory actions that either implement a new fishery management plan or significantly amend an existing plan. Regulatory impact reviews 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. This process is outlined in Section 5.

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. Environmental justice considerations are discussed in detail in Section 3.5.

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 endeavours; and evaluating the effects of federally-funded, permitted, or authorized actions on aquatic systems and recreational fisheries, and documenting those effects. The Order also requires NMFS and the U.S. Fish and Wildlife Service to develop a joint agency policy for administering the Endangered Species Act. More information on this executive order can be found in GMFMC (2010a).

E.O. 13089: Coral Reef Protection

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

Regulations are already in place to limit or reduce habitat impacts within the Flower Garden Banks National Marine Sanctuary. Additionally, NMFS approved and implemented Generic Amendment 3 for Essential Fish Habitat, which established additional habitat areas of particular concern and gear restrictions to protect corals throughout the Gulf. There are no implications to coral reefs by the actions proposed in this amendment.

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 fishery management plans 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, local, and international entities.

No Federalism issues have been identified relative to the action proposed in this amendment. Therefore, consultation with state officials under Executive Order 12612 is not necessary.

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 (see GMFMC 2010a). The existing areas are entirely within federal waters of the Gulf of Mexico. They do not affect any areas reserved by federal, state, territorial, tribal or local jurisdictions.

Essential Fish Habitat

The amended MSFCMA included a new habitat conservation provision known as Essential Fish Habitat (EFH) that requires each existing and any new fishery management plans 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 2004b) to address the new EFH requirements contained within the MSFCMA. Section 305(b)(2) requires federal agencies to obtain a consultation for any action that may adversely affect EFH. NMFS, as part of the Secretarial review process, will conduct an EFH consultation regarding the potential impacts of the proposed actions on EFH.

8 LIST OF PREPARERS (INTERDISCIPLINARY PLANNING TEAM)

Name	Expertise	Responsibility	Agency
Steven Atran	Biologist	Co-Team Lead – Amendment development, Introduction, Purpose and need,	GMFMC
Peter Hood	Biologist	Co-Team Lead – Amendment development, Cumulative effects analysis	SERO
Assane Diagne	Economist	Economic analyses,	GMFMC
Ava Lasseter	Anthropologist	Social analyses	GMFMC
David Dale	Biologist	EFH review	SERO
Shepherd Grimes	Attorney	Legal Compliance	SERO
Michael Larkin	Biologist	Scientific analyses	SERO
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Anik Clemens	Regulations writer	Reviewer	SERO
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9 LIST OF AGENCIES AND PERSONS CONSULTED

List of Agencies:

Federal Agencies

Gulf of Mexico Fishery Management Council's
- Scientific and Statistical Committee

National Marine Fisheries Service
- Southeast Fisheries Science Center
- Southeast Regional Office

United States Coast Guard

State Agencies

- Texas Department of Wildlife and Fisheries
- Louisiana Department of Wildlife and Fisheries
- Mississippi Department of Marine Resources
- Alabama Department of Conservation and Natural Resources
- Florida Fish and Wildlife Conservation Commission

Responsible Agencies:

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