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

Revise Fall Recreational Fixed Closed Season and Set 2012 and 2013 Quotas For Red Snapper

March 2012

(Including Environmental Assessment, Regulatory Impact Review, And Regulatory Flexibility Act Analysis)

Gulf of Mexico Fishery Management Council
2203 North Lois Avenue, Suite 1100
Tampa, Florida 33607
813-348-1630
813-348-1711 (fax)
888-833-1844 Toll Free
gulfcouncil@gulfcouncil.org
http://www.gulfcouncil.org

National Oceanic & Atmospheric Administration
National Marine Fisheries Service
Southeast Regional Office
263 13th Avenue South
St. Petersburg, Florida 33701
727-824-5305
727-824-5308 (fax)
http://sero.nmfs.noaa.gov

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ABBREVIATIONS USED IN THIS DOCUMENT

ABC	Acceptable biological catch
ACL	Annual catch limit
ACT	Annual catch target
ALS	Accumulated landings system
B	Biomass
CFR	Code of Federal Regulations
CZMA	Coastal Zone Management Act
CPUE	Catch per unit effort
EFH	Essential fish habitat
EIS	Environmental Impact Statement
ELMR	Estuarine Living Marine Resources
EO	Executive Order
ESA	Endangered Species Act
F	Fishing mortality
FTE	Full time equivalent
FMP	Fishery management plan
GMFMC	Gulf of Mexico Fishery Management Council
GW	Gutted weight
HAPC	Habitat area of particular concern
IFQ	Individual fishing quota
LAPP	Limited access privilege program
MMPA	Marine Mammal Protection Act
MRFSS	Marine Recreational Fisheries Statistics Survey
MRIP	Marine Recreational Information Program
NAICS	North American industry classification system
NMFS	NOAA's National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NOS	National Ocean Survey
OFL	Overfishing limit
PDF	Probability Distribution Function
RFA	Regulatory flexibility analysis
RFAA	Regulatory flexibility act analysis
RIR	Regulatory impact review
SEAMAP	Southeast Area Monitoring and Assessment Program
SEDAR	Southeast Data, Assessment, and Review
SEFSC	Southeast Fisheries Science Center
SERO	Southeast Regional Office
SSC	Scientific and Statistical Committee
TAC	Total allowable catch

ENVIRONMENTAL ASSESSMENT COVER SHEET

Responsible Agencies and Contact Persons

Gulf of Mexico Fishery Management Council (Council)
2203 North Lois Avenue, Suite 1100
Tampa, Florida 33607
Steven Atran (Steven.Atran@gulfcouncil.org)

813-348-1630
813-348-1711 (fax)
gulfcouncil@gulfcouncil.org
http://www.gulfcouncil.org

National Marine Fisheries Service (Lead Agency)
Southeast Regional Office
263 13th Avenue South
St. Petersburg, Florida 33701
Cynthia Meyer (Cynthia.Meyer@noaa.gov)

727-824-5305
727-824-5308 (fax)
http://sero.nmfs.noaa.gov

Name of Action

Regulatory Amendment to Revise Fall Recreational Fixed Closed Season and Set 2012 and 2013 Quotas for Red Snapper

Type of Action

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

ABSTRACT

The proposed actions in this amendment would eliminate the fixed recreational red snapper closed season of October 1 – December 31, and set the 2012 and 2013 quotas for commercial and recreational harvest of red snapper in the Gulf of Mexico. The current regulations potentially limit the ability of the recreational sector to harvest its quota due to restrictive season timing and fixed closure dates. The proposed regulation would give the National Marine Fisheries Service and the Gulf of Mexico Fishery Management Council (Council) more flexibility to manage the red snapper recreational fishing season. Providing management mechanisms with more flexibility would increase the likelihood of achieving optimum yield and; in turn, benefit the social and economic environments while reducing the burden on the administrative environment. Results from the red snapper update assessment in 2009, and projection updates in 2011 and 2012, indicate the red snapper stock is no longer undergoing overfishing and that the quotas can be increased. Management measures considered in this regulatory amendment would adjust the red snapper acceptable biological catch (ABC) from 7.185 million pounds (mp) whole weight to 8.080 mp whole weight for 2012 and to 8.690 mp whole weight for 2013. The increase in 2013 would be contingent on the ABC in 2012 not being exceeded. The commercial and recreational sector quotas are based on the current 51% commercial and 49% recreational allocation of red snapper and would become the quotas for the respective sectors. This makes the resulting recreational and commercial quotas consistent with goals and objectives of the Council's red snapper rebuilding plan. The increase adjusts the commercial quota to 4.121 mp whole weight in 2012 and 4.432 mp whole weight in 2013 and the recreational quota to 3.959 mp whole weight in 2012 and 4.258 mp whole weight in 2013.

1. INTRODUCTION

1.1 Purpose and Need

The purpose of this action is to revise the red snapper closed season, and to set the 2012 and 2013 quotas for commercial and recreational harvest of red snapper in the Gulf of Mexico to achieve optimal yield in accordance with the Red Snapper Rebuilding Plan developed by the Gulf of Mexico Fishery Management Council (Council). The underlying need for this action is driven by Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) requires National Marine Fisheries Service (NMFS) and the regional fishery management councils to prevent overfishing, to achieve, on a continuing basis, the optimum yield from federally managed fish stocks, and to rebuild stocks that have been determined to be overfished.

1.2 Background

Under the current regulations the recreational red snapper fishing season opens on June 1 of each year and closes on the date when the recreational quota is projected to be reached, but no later than October 1. The period October 1 through December 31 is a fixed closed season (50 CFR 622.34(m)), and normally the recreational season cannot be open during this period. In most years, the season closes well before October 1. However, in 2010, as a result of the Deepwater Horizon MC252 oil spill, a large closed area was created for safety reasons that covered nearly 37 percent of the Gulf of Mexico and lasted throughout the summer. Because of the area closure and negative publicity, fishing effort was much less than projected. By the July 24 closure of the season, an estimated 2.3 million pounds (mp) of the 3.4-mp recreational quota remained unharvested (NMFS 2010a). Because of the fixed October 1 through December 31 closed season, the recreational red snapper season could not be reopened though normal rulemaking before the end of the year. Consequently, the Council requested an emergency rule to provide the Regional Administrator with the authority to reopen the recreational red snapper season during the fixed closed season. After considering various reopening scenarios, the Council requested that the season be reopened for eight consecutive weekends (Friday, Saturday and Sunday) From October 1 through November 21, 2010 (24 fishing days). This was the first time that an extension of the recreational red snapper season had been impacted by the fixed closed season and required an emergency action to be implemented. The current regulations potentially limit the ability of the recreational sector to harvest its quota due to restrictive season timing and fixed closure dates. The proposed regulation would give the NMFS and the Council more flexibility to manage the red snapper recreational fishing season. Providing management mechanisms with more flexibility would increase the likelihood of achieving optimum yield and, in turn, benefit the social and economic environments while reducing the burden on the administrative environment.

The 2006 reauthorization of the Magnuson-Stevens Act established new requirements to end and prevent overfishing through the use of annual catch limits (ACLs) and accountability measures (AMs) were to be implemented for the 2010 fishing year. For red snapper, NMFS determined the existing quotas are functionally equivalent to sector ACLs, and the sum of the quotas is functionally equivalent to the stock ACL for red snapper.

The recreational sector exceeded its quota by 1.26 mp in 2008 and by 2.17 mp in 2009. In 2010, even with the emergency reopening, the recreational sector in 2010 underharvested its quota by 1.16 mp. Preliminary estimates for 2011 indicate the recreational quota was exceeded by at least 630,000 lbs. The commercial sector, under an individual fishing quota (IFQ), has underharvested its quota in each of the last 4 years by 66,000 to 280,000 lbs (Linton 2011). Because of this pattern of overharvest and underharvest, the determination of quotas for 2012 and 2013 was delayed until the Scientific and Statistical Committee could review new projections that incorporated landings through 2011. This review took place January 10-13, 2012, resulting in revised acceptable biological catch (ABCs) levels for 2012 and 2013.

1.3 History of Management

This history of management only covers events pertinent to recreational red snapper fishing season closures. A complete history of management was detailed in the February 2010 Regulatory Amendment (GMFMC 2010) and is incorporated herein by reference.

Prior to 1997 the recreational red snapper season was open year round. Catch levels were controlled through minimum size limits and bag limits. The Sustainable Fisheries Act of 1996 required the establishment of quotas for recreational red snapper fishing (which, for the purposes of this subsection shall include charter fishing) and commercial fishing that, when reached, result in a prohibition on the retention of fish caught during recreational fishing and commercial fishing, respectively, for the remainder of the fishing year. However, the Marine Recreational Information Program (MRIP) operates in two month waves, and reports the estimated landings one to two months after the end of a wave. Up to four months can pass before landings are reported, making real-time monitoring of the recreational catches impossible. From 1997 through 1999, NMFS implemented the recreational quota requirement through an in-season monitoring process by establishing a quota monitoring team that, through a combination of monitoring landings data that were available, plus projecting landings based on past landings patterns, projected closing dates a few weeks in advance.

In 1997, the recreational season for red snapper was closed on November 27.

In 1998, the recreational season for red snapper was closed on October 1.

In 1999, the recreational season for red snapper was closed on August 29. An emergency rule temporarily raised the recreational red snapper minimum size limit from 15 to 18 inches total length during June 4 to August 29 to slow down the retained harvest rate. Without this emergency rule, the season would have closed on August 5. However, the rule created a large increase in dead discards, and the size limit was allowed to revert back to 15 inches the following year.

A February 2000 regulatory amendment (GMFMC 2000) replaced the system of in-season monitoring and closure projections a few weeks in advance with a fixed season based on a pre-season projection of when the recreational quota would be reached. The season for 2000 and beyond was initially set at April 15 through October 31, with a 16 inch minimum size limit, a 4-fish bag limit, and a zero bag limit of red snapper by the captain and crew of for-hire vessels. Shortly before the regulatory amendment was submitted to NMFS, the Council, at the request of representatives of the for-hire industry, withdrew the zero bag limit proposal for captain and crew. NMFS recalculated the season length under the revised proposal, and as a result, the

regulatory amendment was implemented with a recreational fishing season of April 21 through October 31. This recreational fishing season remained in effect through 2007.

In 2008, Amendment 27 (GMFMC 2007) took effect and revised the rebuilding plan. For the recreational sector, it implemented a June 1 through September 30 fishing season in conjunction with a 2.45 mp recreational quota, 16 inch minimum size limit, 2-fish bag limit, and zero bag limit for captain and crew or for-hire vessels. The implementing regulations for this amendment created the June 1 through September 30 season by establishing fixed closed seasons of January 1 through May 31 and October 1 through December 31.

The Sustainable Fisheries Act requires that the Regional Administrator close the recreational red snapper season when the quota is projected to be met (Section 407(d) Magnuson-Steven Act). When Amendment 27 was submitted to NMFS, the Council requested that the five Gulf of Mexico states adopt compatible regulations in state waters. Florida adopted a compatible 2-fish bag limit, but it maintained its state red snapper fishing season of April 15 through October 31, 78 days longer than the federal fishing season. Texas also maintained its 4-fish bag limit and year round fishing season in its state waters. Prior to the start of the 2008 season, NMFS recalculated its projections for recreational red snapper catches in light of the state regulations, and projected that there would be a 75 percent probability that the recreational quota would not be exceeded if the season closed on August 5. As a result, NMFS took action to set the 2008 season to be June 1 to August 5.

In 2009, NMFS again recalculated its projections for the season length prior to the start of the recreational season, and announced that the recreational season would be June 1 to August 15.

A February 2010 Regulatory Amendment (GMFMC 2010) increased the total allowable catch from 5.0 mp to 6.945 mp, which increased the recreational quota from 2.45 mp to 3.403 mp. However, NMFS estimated that in 2009, the recreational sector overharvested its quota by approximately 75 percent. In recalculating the number of days needed to fill the recreational quota, even with the quota increase, NMFS projected that the 2010 season would need to be shortened to June 1 to July 24, and published notice of those dates prior to the start of the recreational fishing season.

In April 2010, the Deepwater Horizon MC252 deep-sea drilling rig exploded and sank off the coast of Louisiana. Because of the resulting oil spill, approximately one-third of the Gulf of Mexico was closed to fishing for much of the summer months. The direct loss of fishing opportunities due to the closure, plus the reduction in tourism throughout the coastal Gulf of Mexico, resulted in a much lower catch than had been projected. After the recreational season closed on July 24, NMFS estimated that 2.3 mp of the 3.4-mp recreational quota remained unharvested (NMFS 2010a). However, due to the fixed October 1 to December 31 closed season, NMFS could not reopen the recreational season without an emergency rule to suspend the closure. Consequently, the Council requested an emergency rule to provide the Regional Administrator with the authority to reopen the recreational red snapper season. After considering various reopening scenarios, the Council requested that the season be reopened for eight consecutive weekends (Friday, Saturday and Sunday) From October 1 through November 21 (24 fishing days).

In January 2011, the Council submitted a regulatory amendment (GMFMC 2011a) to NMFS to increase the red snapper total allowable catch to 7.185 mp, with a 3.521 mp recreational quota

and a 3.664 mp commercial quota. A final rule to implement the increase was published in the *Federal Register* on April 29, 2011, and a 48-day recreational red snapper season was announced, running June 1 to 12:01 am on July 19.

On August 12, 2011, NMFS published an emergency rule in the *Federal Register* (FR 76 50143) that increased the recreational red snapper quota by 345,000 pounds for the 2011 fishing year and provided the agency with the authority to reopen the recreational red snapper season later in the year, if the recreational quota had not been filled by the July 19 closing date. However, in August of that year, based on headboat data plus charterboat and private recreational landings through June, NMFS calculated that 80 percent of the recreational quota had been caught. With the addition of July landings data plus Texas survey data, NMFS estimated that 4.4 to 4.8 mp will have been caught, well above the 3.865 mp quota. Thus, no unused quota was available to reopen the recreational fishing season.

2. MANAGEMENT ALTERNATIVES

2.1 Action 1. Revise Recreational Red Snapper Season

Alternative 1: No Action – The recreational red snapper season will begin on June 1 and will end when the recreational quota is met or projected to be met, but no later than October 1 (i.e., the last possible day of fishing is September 30).

Alternative 2: The recreational red snapper season will begin on June 1 and will end when the recreational quota is met or projected to be met, but no later than December 1 (i.e., the last possible day of fishing is November 30).

Preferred Alternative 3: The recreational red snapper season will begin on June 1 and will end when the recreational quota is met or projected to be met, but no later than January 1 (i.e., the last possible day of fishing is December 31).

Discussion:

There are currently two fixed closed seasons in the regulations for recreational harvest of red snapper: January 1 through May 31 and October 1 through December 31 (50 CFR 622.34(m)). These closed seasons were put in place in 2008 through Amendment 27 to implement a June 1 through September 30 fishing season in conjunction with a 2.45-million pounds recreational quota (GMFMC 2007). As a result, the recreational red snapper season opens on June 1 and closes no later than October 1. The season can end earlier if the recreational quota is met or projected to be met at an earlier date. The NMFS Regional Administrator can and has closed the recreational fishing season early each year since 2008 in order to prevent the recreational quota from being exceeded. The Regional Administrator also has the authority to reopen a season that has been prematurely closed to allow unused quota to be harvested. However the season cannot be opened without additional authority during a fixed closed season. When it became necessary to reopen the recreational season in 2010, an emergency rule was required to suspend the October 1 through December 31 closed season.

Because the authority exists to both close a fishing season and reopen a fishing season that has been prematurely closed to allow a quota to be harvested, the fixed three-month closed season is unnecessary. Currently, the recreational season is still being closed early (e.g., a June 1 to July 19 season for 2011) in part because the average size of a red snapper caught by the recreational sector is increasing at a faster rate than the increase in total allowable catch. The rate of size increase will likely slow down in the future while the total allowable catch continues to increase, eventually allowing a lengthening of the season. In addition, reduced catch rates due to natural or man-made disasters, poor economic conditions, or management actions could result in a need to reopen or extend the recreational red snapper season into the current closed season. Thus, rationale exists to reduce or eliminate the existing closed season.

Alternative 1 is the no action alternative. This leaves the June 1 through September 30 open season and three month October 1 through December 31 fixed fall closed season in place. If the recreational sector is projected to fill its quota on or before September 30, then this alternative would have no impact. However, if there is unused quota on October

1, there would not be an opportunity for the recreational sector to catch the remaining quota. An emergency action, justified by unforeseen circumstances (the Deepwater Horizon MC252 spill), was used to suspend the closed season in 2010, but the criteria to justify an emergency action may not exist in the future. Except for the unique events of 2010, the recreational sector has filled its quota prior to September 30 in recent years. In fact, even with an increasing total allowable catch, the recreational season been shortened in recent years as the rate at which the recreational quota is filled has also increased. However, continued increases in the total allowable catch are expected to eventually result in a lengthening of the season. Furthermore, if the season is closed prematurely and uncaught quota remains, the analyses determining the amount of quota available and length of a reopening may not be available until after September 30.

Alternative 2 extends the recreational open season through November 30, and shortens the fixed fall closed season to the last month of the year, December 1 through December 31. Because of the longer open season, the fixed closed season is less likely to constrain a reopening or extension of the recreational season than **Alternative 1**. However, if there is unused quota on December 1, there would be little opportunity for the recreational sector to catch the remaining quota. One advantage of extending the open season only through November 30 is that it may allow NMFS an extra month to compile catch information from the current season to use in calculating the season length in the next season, particularly if the Marine Recreational Information System (MRIP) moves from 2-month to 1-month waves for collection of recreational landings statistics.

Preferred Alternative 3 eliminates the fixed recreational fall closed season altogether. This allows the fall closing date of the recreational red snapper season to be determined entirely by the projections of when the recreational quota will be reached.

The above alternatives, other than the no action alternative, provide more flexibility in setting the recreational red snapper closing date or reopening the season to increase the likelihood of allowing the entire recreational quota to be caught. Fixed seasons could also be considered in the middle of the year if the Council wanted to create a split season, but are not considered within the scope of this action. For example, having a September-October closed season (corresponding to MRIP Wave 5) would increase the likelihood of having a Fall/Winter recreational season during the November and December, provided there is unused quota remaining.

2.2 Action 2. 2012 and 2013 Red Snapper Acceptable Biological Catches (ABCs) and Quotas

Alternative 1: No Action - Maintain the quotas as defined in the January 2011 Regulatory Amendment. The ABC would continue to be 7.185 million pounds (mp) whole weight. Based on the 51%:49% commercial and recreational allocations of red snapper, the commercial and recreational sector quotas would be 3.664 and 3.521 mp, respectively.

Year	Stock ABC	Comm quota (51% of ABC)	Rec quota (49% of ABC)
2012	7.185 mp	**3.664 mp**	**3.521 mp**

Preferred Alternative 2: Set the stock ABC in 2012 and 2013 at 8.080 mp and 8.690 mp respectively, and do not use annual catch targets. Based on the 51%:49% commercial and recreational allocation of red snapper, the commercial and recreational sector quotas would be 4.121 and 3.959 mp respectively in 2012, and 4.432 mp and 4.258 mp respectively in 2013.

The increase in the ABC 2013 is contingent upon the ABC not being exceeded in 2012. If the ABC is exceed in 2012, the ABC and sector quotas would remain at the 2012 levels unless the best scientific information available determines maintaining the quotas from the previous year is unnecessary.

Year	Stock ABC	Comm quota (51% of ABC)	Rec quota (49% of ABC)
2012	8.080 mp	**4.121 mp**	**3.959 mp**
2013	8.690 mp	**4.432 mp**	**4.258 mp**

Alternative 3: Set the ABC in 2012 and 2013 at 8.080 mp and 8.690 mp respectively. Set the sector quotas based on buffers calculated by the ACL/ACT control rule. For 2012 and 2013, this is a 0% buffer for the commercial sector, and a 17% buffer for the recreational sector. The resulting commercial and recreational sector quotas would be 4.121 and 3.286 mp respectively in 2012, and 4.432 mp and 3.534 mp respectively in 2013.

The increase in the ABC 2013 is contingent upon the stock ABC not being exceeded in 2012. If the stock ABC is exceed in 2012, the stock ABC and sector quotas would remain at the 2012 levels unless the best scientific information available determines maintaining the quotas from the previous year is unnecessary.

Year	Stock ABC	Comm ABC (51% of ABC)	Rec ABC (49% of ABC)	Comm quota (0% buffer)	Rec quota (17% buffer)
2012	8.080 mp	4.121 mp	3.959 mp	**4.121 mp**	**3.286 mp**
2013	8.690 mp	4.432 mp	4.258 mp	**4.432 mp**	**3.534 mp**

Discussion:

Alternative 1, no action, would maintain the current ABC at 7.185 mp as defined in the January 2011 Regulatory Amendment (GMFMC 2011a). The commercial and recreational quotas would

remain at 3.664 and 3.521 mp, respectively. These quotas do not include the 345,000 lb additional allocation that was provided to the recreational sector in September 2011. The additional allocation was provided under an emergency rule, which was in effect for the 2011 season only. This alternative would set the ABC at 7.185 mp which is less than the 2012 optimum yield of 8.09 mp as defined in the May 2011 red snapper update assessment rerun. However, the analysis for this optimum yield level was made before preliminary estimates that the recreational sector overharvested its 2011 quota by at least 630 thousand pounds (Linton 2011). In addition, the long-term impacts of the Deepwater Horizon MC252 oil spill and the impact of a recently discovered bacterial infection in several fish species have not yet been determined. The commercial sector is under an individual fishing quota system and thus far has maintained landings at approximately 97% of their quota since the individual fishing quota (IFQ) program was implemented in 2007. The recreational sector exceeded its quota by 89% in 2009 under a 75-day season, but harvested only about one-third of its quota during the 53-day June 1 – July 23 season in 2010 because of reduced effort from the Deepwater Horizon MC252 oil spill fishery closures. Even with an emergency reopening of the recreational sector during weekends only (Friday, Saturday and Sunday) from October 1 through November 21, the total recreational harvest in 2010 was estimated to be 2.24 mp, an underharvest of 34% from the 3.403 mp recreational quota (Linton 2011). For this alternative, quotas in 2012 and 2013 would remain the same as in 2011. Because of the overharvest in 2011, the length of the 2012 and 2013 seasons will likely be shorter than in 2011. The actual length of the recreational season will be determined by the NMFS Southeast Regional Office and announced prior to the June 1 opening.

Preferred Alternative 2 would establish the ABC at the level recommended by the Scientific and Statistical Committee for 2012 and 2013. This would be allocated into commercial and recreational sector quotas based on the allocation established in Amendment 1 of 51% commercial and 49% recreational. The increase in the stock ABC and quotas for 2013 would be contingent upon the 2012 stock ABC not being exceeded. If the stock ABC is exceeded, the stock ABC and quotas would remain at the 2012 level unless the best scientific information available determines that maintaining the ABCs and quotas from the previous year is unnecessary.

This alternative would result in an increase in quota, relative to 2011, of 12.5% in 2012 and 21.0% in 2013. The recreational quotas would be 3.959 mp in 2012 and 4.258 mp in 2013. However, as of January 10, 2012, the preliminary estimate of the 2011 recreational harvest is 4.15 mp (Linton 2011). Because the 2011 harvest, with a 48 day season, exceeded the 2012 quota, the length of the 2012 season will likely be shorter than in 2011. The actual length of the recreational season will be determined by the NMFS Southeast Regional Office and announced prior to the June 1 opening. The 2013 season length will be determined prior to the start of the 2013 season.

Alternative 3 would use a buffer between the quota and the ABC. This corresponds to the preferred method of applying ABCs and catch targets or quotas in the Generic ACL/AM Amendment (GMFMC 2011b). The amount of the buffer, in percent reduction, is determined by the ACL/ACT control rule adopted under the Generic ACL/AM Amendment. The purpose of the buffer is to reduce the likelihood of the ABC being exceeded in the event that landings exceed the quota. The commercial sector has not exceeded its quota since the inception of the IFQ system, and therefore there is no buffer. The commercial quota is equal to the commercial ABC. However, the recreational sector has exceeded its ABC in 3 of the last 4 years, by 52% in 2008, 89% in 2009, and, based on preliminary estimates, 18% in 2011 (or by 7% if the 345,000

lb supplemental allocation is included). The ACL/ACT control rule resulted in a buffer of 17% for the recreational sector (Figure 2.2.1). When applied to the recreational sector quota, this resulted in a quota of 3.286 mp in 2012 and 3.534 mp in 2013. Because the 2011 harvest exceeded both the 2012 and 2013 quotas, the length of the 2012 and 2013 seasons will likely be shorter than in 2011. The actual length of the recreational season will be determined by the NMFS Southeast Regional Office and announced prior to the June 1 opening.

As with **Preferred Alternative 2**, the increase in the stock ABC and quotas for 2013 would be contingent upon the 2012 stock ABC not being exceeded. If the stock ABC is exceeded, the stock ABC, sector ABCs, sector quotas will remain at the 2012 level unless the best scientific information available determines maintaining the ABCs and quotas from the previous year is unnecessary.

Figure 2.2.1. ACL/ACT control rule spreadsheet for recreational red snapper ACT buffer in 2012.

ACL/ACT Buffer Spreadsheet			version 4.1 - April 2011	**Red Snapper**	
sum of points	6.5			**Recreational**	
max points	9.5		Buffer between ACLand ACT (or ABC and ACL)	Unweighted	13
Min. Buffer	**0**	**min. buffer**	User adjustable	Weighted	**17**
Max Unw.Buff	19	max unwt. Buff			
Max Wtd Buff	**25**	**max wtd. buffer**	User adjustable		

Component	Element score	Element	Selection	Element result
Stock assemblage	0	This ACL/ACT is for a single stock.	x	0
	1	This ACL/ACT is for a stock assemblage, or an indicator species for a stock assemblage		
Ability to Constrain Catch	0	Catch limit has been exceeded 0 or 1 times in last 4 years		5.5
	1	Catch limit has been exceeded 2 or more times in last 4 years	x	
		For the year with max. overage, add 0.5 pts. For every 10 percentage points (rounded up) above ACL	4.5	
		Not applicable (there is no catch limit)		
		Apply this component to recreational fisheries, not commercial or IFQ fisheries		
Precision of Landings Data Recreational	0	Method of absolute counting		1
	1	MRIP proportional standard error (PSE) <= 20	x	
	2	MRIP proportional standard error (PSE) > 20		
		Not applicable (will not be included in buffer calculation)		
		Apply this component to commercial fisheries or any fishery under an IFQ program		
Precision of Landings Data Commercial	0	Landings from IFQ program		not applicable
	1	Landings based on dealer reporting		
	2	Landings based on other		
		Not applicable (will not be included in buffer calculation)	x	
Timeliness	0	In-season accountability measures used or fishery is under an IFQ	x	0
	1	In-season accountability measures not used		
			Sum	6.5

Weighting factor				
	Element weight	Element	Selection	Weighting
Overfished status	0	1. Stock biomass is at or above B_{OY} (or proxy).		0.3
	0.1	2. Stock biomass is below B_{OY} (or proxy) but at or above B_{MSY} (or proxy).		
	0.2	3. Stock biomass is below B_{MSY} (or proxy) but at or above minimum stock size threshold (MSST).		
	0.3	4. Stock is overfished, below MSST.	x	
	0.3	5. Status criterion is unknown.		

3. AFFECTED ENVIRONMENT

The physical, biological, economic, social, and administrative environments affected by actions in this rulemaking have been described in the February 2010 Regulatory Amendment (GMFMC 2010) and are incorporated here by reference. Additional impacts to the affected environment from the Deepwater Horizon MC252 oil spill were described in the September 2010 (NMFS 2010b) Environmental Assessment and the January 2011 Regulatory Amendment (GMFMC 2011a), and are incorporated here by reference.

3.1 Physical Environment

The physical environment affected by actions in this regulatory amendment has been described in the February 2010 Regulatory Amendment (GMFMC 2010) and is incorporated here by reference.

On April 20, 2010, the Deepwater Horizon MC252 oil rig explosion and oil spill created impacts on the environment beyond those described in the referenced materials. A discussion of the additional impacts to the physical, biological, economic, social, and administrative environments affected by the oil spill is contained in the January 2011 Regulatory Amendment (GMFMC 2011a) and is incorporated here by reference.

3.2 Biological Environment

The biological environment of the Gulf of Mexico, including the species addressed in this amendment, is described in detail in the final environmental impact statement (EIS) for the Generic Essential Fish Habitat Amendment and is incorporated here by reference (GMFMC 2004b, GMFMC 2011a).

3.2.1 Red Snapper and Reef Fish

Red Snapper Life History and Biology

Red snapper demonstrate the typical reef fish life history pattern (GMFMC 2004b). Eggs and larvae are pelagic while juveniles are demersal. Juveniles are found associated with bottom features or over barren bottom. Spawning occurs over firm sand bottom with little relief during the summer and fall. Adult females mature as early as 2 years and most are mature by 4 years (Schirripa and Legault 1999). Red snapper have been aged up to 57 years, but most caught by the directed harvest of the red snapper component of the reef fish fishery are 2- to 4-years old (Wilson and Nieland 2001). A more complete description of red snapper life history can be found in the Council's Generic Essential Fish Habitat Amendment (GMFMC 2004b).

Updated Red Snapper Projections and Scientific and Statistical Committee (SSC) Recommendations for an Overfishing Limit (OFL) and Acceptable Biological Catch (ABC)

The most recent red snapper benchmark stock assessment was completed in 2005 (SEDAR 7 2005). A Southeast Data, Assessment, and Review (SEDAR) update assessment was completed in December 2009 (SEDAR 7 update 2009). For a detailed description of the update assessment go to: http://www.sefsc.noaa.gov/sedar/Sedar_Workshops.jsp?WorkshopNum=00.

In January 2012, the SSC reviewed updated projections for red snapper. Landings data were updated to include 2009-2011 (preliminary), and abundance indicators and age composition data were updated. Some of the 2011 catch data was not yet available. Commercial individual fishing quota (IFQ) data were only available for January 1 – December 5. Recreational data for 2011 only included Marine Recreational Fishery Statistics Survey (MRFSS) waves 1-4 and the Texas Parks and Wildlife "low" season. The MRFSS and Texas landings for waves 5 and 6 were assumed to be 0. The IFQ and headboat landings for the missing dates were estimated using methods based on landings from previous years. The resulting landings in pounds whole weight for the three years were as follows:

Year	**Recreational**	**Commercial**	**Total**
2009	4,624,577	2,483,507	7,108,083
2010	2,238,908	3,392,289	5,631,197
2011	4,151,147	3,597,145	7,748,292

Updated projection runs were made for each of the four model runs and two shrimp effort scenarios used in the SEDAR 7 2009 update assessment. Projections were run for fishing mortality (F) rates to achieve a spawning potential ratio of 26% ($F_{SPR26\%}$) and 75% of $F_{SPR26\%}$ (optimum yield). $F_{SPR26\%}$ is the proxy for the F at maximum sustainable yield (F_{MSY}). All of the projections at $F_{SPR26\%}$ showed the stock rebuilding to the rebuild target by or earlier than 2032. At 75% of $F_{SPR26\%}$ the projections showed the stock rebuilding by between 2021 and 2029. Under the model scenario selected by the SSC at the SEDAR 7 2009 update assessment (AS3 model with shrimp effort rebuild), the projected yields over the near-term were slightly higher than when the last reruns were done in May 2011.

Projection runs at $F_{SPR26\%}$ (million pounds). These are also the OFL projections. Values are millions of pounds whole weight.

Year	**May 2011**	**Current result**
2012	10.27	10.60
2013	10.79	11.06

A comparison of projected vs. observed indices of abundance for the recent years (2008-2011) indicated the observed indices increase faster than projected for the video west and video east surveys; slower than projected for the bottom longline surveys and the recreational catch per unit effort (CPUE) east; and at the projected rate for the recreational CPUE west. These differences in projections may be because of small sample sizes, and mechanical problems with the bottom longline in the western Gulf of Mexico.

This was not a complete update assessment. Updated analyses were missing information on discard mortality and shrimp trawl bycatch. However, overall the results showed that the AS3 model is providing a good fit to the indices of abundance.

Probability distribution functions (PDFs) that could be used with the ABC control rule were provided by the Southeast Fisheries Science Center (SEFSC) for each model run, as well as a PDF that averaged the results from all of the runs. However, the SSC felt that it was not appropriate to use the control rule because the analyses presented were not a new assessment, but rather a rerun of an older assessment with updated data. It was noted that there were two trends that cannot be separated given the existing data and analyses: 1) The red snapper stock seems to

be rebuilding; and 2) There are also indications of a few strong year-classes moving through the stock's age structure. Without significant effort to distinguish the relative contributions of those trends, the SSC determined that it could not confidently provide advice on the stock trajectory beyond what has been provided in the past. In addition, the projections were based on a 3-year old update assessment.

Because of the increased uncertainty that these issues created, and for consistency with prior ABC recommendations, the SSC felt that their ABC recommendation(s) should be based on the same method previously used for red snapper, i.e., a 25% buffer from OFL. However, the previous method of setting ABC at a constant 75% of OFL was an incorrect interpretation of NMFS guidance. Instead, the SSC recommended that the ABC should be set at the yield corresponding to 75% of $F_{SPR26\%}$. A new benchmark assessment is scheduled to be completed in 2013. Therefore the SSC only provided ABCs for 2012 and 2013. Based on the projections provided by the SEFSC (Linton 2011), the SSC recommended the following updated OFL and ABC values.

SSC OFL and ABC recommendations for red snapper

Year	OFL	ABC
2012	10.60 mp	8.08 mp
2013	11.06 mp	8.69 mp

These ABC values are slightly higher than the previous SSC recommendations as follows:

Comparison of previous vs. current red snapper ABC recommendations.

Year	May 2011	Current ABC	Difference
2012	7.703 mp	8.08 mp	+ 0.377 mp
2013	8.093 mp	8.69mp	+ 0.597 mp

Status of the Red Snapper Stock

The Status of Stocks Report to Congress currently lists the red snapper stock as overfished and undergoing overfishing. However, under the definition of overfishing contained in the Generic ACL/AM Amendment (GMFMC 2011b), overfishing in a given year is defined for years when there was no stock assessment as exceeding the OFL for that year. In 2011, OFL was 10.04 mp and ABC was 7.530 mp. As of January 10, 2012, the preliminary 2011 landings reported by the SEFSC were 7.748 mp. Although the landings exceeded the ABC, they were below the OFL. Therefore, under the definition designed by the Generic ACL/AM Amendment, the SSC determined that overfishing did not occur in 2011, although the stock remains overfished.

General Information on Reef Fish Species

The following is summarized from the January 2011 Regulatory Amendment (GMFMC 2011a).

The National Ocean Service of NOAA (NOS) collaborated with NMFS and the Council to develop distributions of reef fish (and other species) in the Gulf (SEA 1998). The NOS obtained fishery-independent data sets for the Gulf of Mexico, including the Southeast Area Monitoring and Assessment Program (SEAMAP), and state trawl surveys. Data from the Estuarine Living

Marine Resources (ELMR) Program contain information on the relative abundance of specific species (highly abundant, abundant, common, rare, not found, and no data) for a series of estuaries, by five life stages (adult, spawning, egg, larvae, and juvenile) and month for five seasonal salinity zones (0-0.5, 0.5-5, 5-15, 15-25, and >25 parts per thousand). The NOS staff analyzed the data to determine relative abundance of the mapped species by estuary, salinity zone, and month. For some species not in the ELMR database, distribution was classified as only observed or not observed for adult, juvenile, and spawning stages.

Habitat types and life history stages can be found in more detail in GMFMC (2004b). In general, reef fish are widely distributed in the Gulf of Mexico, occupying both pelagic and benthic habitats during their life cycle. In general, both eggs and larval stages are planktonic. Larvae feed on zooplankton and phytoplankton. Exceptions to these generalizations include the gray triggerfish that lay their eggs in depressions in the sandy bottom, and gray snapper whose larvae are found around submerged aquatic vegetation. Juvenile and adult reef fish are typically demersal, and are usually associated with bottom topographies on the continental shelf (<100 m) which have high relief, i.e., coral reefs, artificial reefs, rocky hard-bottom substrates, ledges and caves, sloping soft-bottom areas, and limestone outcroppings. However, several species are found over sand and soft-bottom substrates. Juvenile red snapper are common on mud bottoms in the northern Gulf of Mexico, particularly off Texas through Alabama. Also, some juvenile snappers (e.g. mutton, gray, red, dog, lane, and yellowtail snappers) and groupers (e.g. goliath grouper, red, gag, and yellowfin groupers) have been documented in inshore seagrass beds, mangrove estuaries, lagoons, and larger bay systems (GMFMC 1981). More detail on hard bottom substrate and coral can be found in the Fishery Management Plan (FMP) for Corals and Coral Reefs (GMFMC and SAFMC 1982).

Status of Reef Fish Stocks

The following is summarized from the January 2011 Regulatory Amendment (GMFMC 2011a).

The Reef Fish FMP currently encompasses 31 species (Table 3.2.2). Eleven other species were removed from the FMP in 2012 by the Council in their Generic ACL/AM Amendment. Stock assessments and stock assessment reviews can be found on the Council (www.gulfcouncil.org) and SEDAR (www.sefsc.noaa.gov/sedar) websites and have been conducted for 13 species:

- red snapper (SEDAR 7 2005; SEDAR 7 Update 2009)
- vermilion snapper (Porch and Cass-Calay 2001; SEDAR 9 2006a; SEDAR 9 Update 2011b)
- yellowtail snapper (Muller et al. 2003; SEDAR 3 2003)
- mutton snapper (SEDAR 15A 2008)
- gray triggerfish (Valle et al. 2001; SEDAR 9 2006b; SEDAR 9 Update 2011c)
- greater amberjack (Turner et al. 2000; SEDAR 9 2006c; SEDAR 9 Update 2010)
- hogfish (Ault et al. 2003; SEDAR 6 2004a)
- red grouper (NMFS 2002; SEDAR 12 2007; SEDAR 12 Update 2009)
- gag grouper (Turner et al. 2001; SEDAR 10 2006; SEDAR 10 Update 2009)
- black grouper (SEDAR 19 2010)
- yellowedge grouper (Cass-Calay and Bahnick 2002; SEDAR 22 2011a)
- tilefish (golden) (SEDAR 22 2011b)
- goliath grouper (Porch et al. 2003; SEDAR 6 2004b; SEDAR 23 2011)

Utilizing the most current stock assessment information, the Gulf of Mexico fourth quarter report of the 2011 Status of U.S. Fisheries

(http://www.nmfs.noaa.gov/sfa/statusoffisheries/2011/fourth/Q4%202011%20FSSI%20and%20nonFSSI%20StockStatus.pdf) classifies the 13 species as follows:

Overfished and Experiencing Overfishing:

- gag grouper
- greater amberjack
- gray triggerfish
- red snapper – most current stock assessment (SEDAR 7 Update 2009) = overfished, not overfishing

Not Overfished or Experiencing Overfishing:

- yellowtail snapper
- yellowedge grouper
- vermilion snapper
- black grouper
- red grouper
- mutton snapper– not reflected in the 2011 Status of the Stocks

Unknown:

- hogfish – may be experiencing growth overfishing
- goliath grouper – benchmarks do not reflect appropriate stock dynamics
- tilefish (golden) – insufficient data

3.2.2 Protected Species

The following is summarized from the January 2011 Regulatory Amendment (GMFMC 2011a), with additional discussion regarding the Deepwater Horizon MC 252 oil spill.

There are 28 different species of marine mammals that may occur in the Gulf. All 28 species are protected under the Marine Mammals Protection Act and six are also listed as endangered under the Endangered Species Act (ESA) (i.e., sperm, sei, fin, blue, humpback, and North Atlantic right whales). Other species protected under the ESA occurring in the Gulf include five sea turtle species (Kemp's Ridley, loggerhead, green, leatherback, and hawksbill); two fish species (Gulf sturgeon and smalltooth sawfish), and two *Acropora* coral species (elkhorn [*Acropora palmata*] and staghorn [*A. cervicornis*]). Information on the distribution, biology, and abundance of these protected species in the Gulf is included in final environmental impact statement to the Council's Generic Essential Fish Habitat amendment (GMFMC 2004b) and the October 2009 and September 2011 ESA biological opinions on the reef fish fishery (NMFS 2009, 2011c). Marine Mammal Stock Assessment Reports and additional information are also available on the National Marine Fisheries Service Office of Protected Species website: http://www.nmfs.noaa.gov/pr/species/.

The Gulf reef fish fishery is classified in the 2011 Marine Mammal Protection Act List of Fisheries as Category III fishery (74 FR 58859). This classification 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[1]. Dolphins are the only species documented as

[1]The potential biological removal is the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population.

interacting with this fishery. Bottlenose dolphins may predate and depredate on the bait, catch, and/or released discards of the reef fish fishery.

All five species of sea turtles may be adversely affected by the Gulf reef fish fishery via incidental capture in hook-and-line gear (NMFS 2009). Incidental captures of sea turtle species occur in all commercial and recreational hook-and-line components of the reef fishery, but recent observer data indicate they are most frequent in the bottom longline component of the reef fish fishery. On an individual set basis, incidental captures may be relatively infrequent, but collectively, these captures sum to a high level of bycatch. Observer data indicate loggerhead sea turtles are the species most affected by the bottom longline component of the reef fish fishery and that is why a more detailed description of this species is included below. Mortality of sea turtles caught is particularly problematic in this fishery component, because many are dead or in poor condition upon retrieval of the gear as a result of forced submergence (i.e., drowning). Rulemaking from Amendment 31 constrained the bottom longline component of the fishery to limit sea turtle take. All sea turtles caught on hook-and-line and released alive may later succumb to injuries sustained at the time of capture or from exacerbated trauma from fishing hooks or lines that were ingested, entangling, or otherwise still attached when they were released. Sea turtle release gear and handling protocols are required to reduce the amount of gear on released animals and minimize post-release mortality.

Smalltooth sawfish are also affected by the Gulf of Mexico reef fish fishery, but to a much lesser extent than hardshell sea turtles. Smalltooth sawfish primarily occur in the Gulf of Mexico off peninsular Florida. Although the long, toothed rostrum of the smalltooth sawfish causes this species to be particularly vulnerable to entanglement in fishing gear, incidental captures in the commercial and recreational hook-and-line components of the reef fish fishery are rare events. Only eight smalltooth sawfish are estimated to be incidentally caught annually, and none are expected to result in mortality (NMFS 2009). Fishermen in this fishery are required to follow smalltooth sawfish safe handling guidelines.

On April 20, 2010, the semi-submersible drilling rig Deepwater Horizon experienced an explosion and fire. The rig subsequently sank and oil and natural gas began leaking into the Gulf of Mexico. Oil flowed for 86 days, until finally being capped on July 15, 2010. Official estimates are that just less than 5 million barrels of oil were released into the Gulf of Mexico, with some experts estimating even higher volumes. Additionally, approximately 1.84 million gallons of chemical dispersant was applied both subsurface and on the surface to attempt to break down the oil. As a result of this spill and subsequent release of dispersants, a consultation pursuant to Endangered Species Act Section 7(a)(2) was reinitiated.

On September 30, 2011, the Protected Resources Division released a biological opinion, which after analyzing best available data, the current status of the species, environmental baseline (including the impacts of the recent Deepwater Horizon MC 252 oil release event in the northern Gulf of Mexico), effects of the proposed action, and cumulative effects, concluded that the continued operation of the Gulf of Mexico reef fish fishery is also not likely to jeopardize the continued existence of green, hawksbill, Kemp's ridley, leatherback, or loggerhead sea turtles, nor the continued existence of smalltooth sawfish (NMFS 2011c).

3.3 Economic Environment

3.3.1 Commercial Sector

3.3.1.1 Vessel Activity

A description of the economic environment for the commercial sector is contained in the February 2010 Regulatory Amendment (GMFMC 2010) A description of the 2010 red snapper IFQ program is contained in NMFS (2011a) and is available at:
http://sero.nmfs.noaa.gov/sf/pdfs/2010_RS_AnnualReport_Final%2010-28-11.pdf.
These descriptions are incorporated herein by reference.

Tables 3.3.1.1.1 and 3.3.1.1.2 contain summary vessel and trip counts, landings, and revenue information from vessels landing at least one pound of red snapper from 2007 through 2010. The period of analysis only covers four years, rather than the more common five years because of the limited duration, to date, of the red snapper individual fishing quota (IFQ) program. The fifth year of the program was complete at the end of 2011, but data were not available at the time this assessment was conducted. Data from years prior to the implementation of the IFQ program are not representative of current conditions.

The tables contain vessel counts from the NMFS Southeast Fisheries Science Center (SEFSC) logbook (logbook) data (vessel count, trips, and landings) and the NMFS Southeast Regional Office Limited Access Privilege Program (LAPP) data (vessel count). Dockside values were generated using landings information from logbook data and price information from the NMFS SEFSC Accumulated Landings System (ALS) data. The logbook and LAPPs data programs serve different purposes and use different collection methods. Consequently, comparative analysis of data from these programs may produce different results, as evidenced by the vessel counts in Table 3.3.1.1.1. However, for sectors under an IFQ program such as red snapper, the logbook program is the official source for landings information.

On average, 323 vessels per year landed red snapper (Table 3.3.1.1.1). These vessels averaged 2,530 trips per year on which red snapper was landed and 2,195 trips without red snapper (Table 3.3.1.1.1). The average annual total dockside revenue (2010 dollars) was approximately $9.06 million from red snapper, approximately $9.85 million from other species co-harvested with red snapper (on the same trip), and approximately $9.50 million from other species harvested on trips on which no red snapper were harvested (Table 3.3.1.1.2). Total average annual revenues were approximately $28.41 million, or approximately $88,000 per vessel (Table 3.3.1.1.2).

Table 3.3.1.1.1. Summary of vessel counts, trips, and landings (pounds gutted weight (lbs GW)) for vessels landing at least one pound of red snapper, 2007-2010.

Year	Number of Vessels, Logbook Data	Number of Vessels, LAPPs Data	Number of Trips that Caught Red Snapper, Logbook Data	Red Snapper Landings (lbs GW)*	'Other Species' Landings Jointly Caught with Red Snapper (lbs GW)*	Number of Trips that Only Landed Other Species*	'Other Species' Landings on Trips without Red Snapper (lbs GW)*
2007	319	309	2,580	2,766,632	3,477,432	2,138	3,420,440
2008	308	300	2,285	2,178,423	3,773,342	2,560	4,095,296
2009	296	294	2,331	2,165,684	3,758,619	2,427	3,968,120
2010	369	384	2,923	2,893,224	3,887,606	1,654	2,753,993
Average	323	322	2,530	2,500,991	3,724,250	2,195	3,559,462

Source: *NMFS SEFSC Logbook and NMFS SERO LAPPs data.

Table 3.3.1.1.2. Summary of vessel counts and revenue (2010 dollars) for vessels landing at least one pound of red snapper, 2007-2010).

Year	Number of Vessels, Logbook Data	Dockside Revenue from Red Snapper (2010 $)	Dockside Revenue from 'Other Species' Jointly Caught with Red Snapper (2010 $)	Dockside Revenue from 'Other Species' Caught on Trips without Red Snapper (2010 $)	Total Dockside Revenue (2010 $)	Average Total Dockside Revenue per Vessel (2010 $)
2007	319	$10,305,663	$9,152,044	$9,802,249	$29,259,956	$91,724
2008	308	$8,194,485	$10,214,878	$10,958,836	$29,368,198	$95,351
2009	296	$7,797,380	$9,334,423	$9,936,983	$27,068,787	$91,449
2010	369	$9,946,511	$10,696,682	$7,300,668	$27,943,861	$75,729
Average	323	$9,061,010	$9,849,507	$9,499,684	$28,410,200	$87,957

Source: NMFS SEFSC Logbook and ALS data.

It is noted that commercial fishing for red snapper in 2010 appeared to be unaffected, from a landings and revenue perspective, by conditions associated with the Deepwater Horizon MC252 oil spill. As a result, 2010 data were included in the information provided in Tables 3.3.1.1.1 and 3.3.1.1.2. As discussed below, this was not the case for the recreational sector.

3.3.1.2 Business Activity

Estimates of the business activity (economic impacts) in the U.S. associated with the Gulf of Mexico commercial red snapper harvests were derived using the model developed for and applied in NMFS (2011b) and are provided in Table 3.3.1.2.1. Business activity for the commercial sector is characterized in the form of full-time equivalent jobs, income impacts (wages, salaries, and self-employed income), and output (sales) impacts (gross business sales). Income impacts should not be added to output (sales) impacts because this would result in double counting. The estimates of economic activity include the direct effects (effects in the sector where an expenditure is actually made), indirect effects (effects in sectors providing goods and services to directly affected sectors), and induced effects (effects induced by the personal consumption expenditures of employees in the direct and indirectly affected sectors).

Table 3.3.1.2.1. Average annual business activity associated with the harvests of vessels that harvest red snapper.

Species	Average Dockside Revenue[1] (millions)	Total Jobs	Harvester Jobs	Output (Sales) Impacts (millions)	Income Impacts (millions)
Red Snapper	$9.06	1,686	220	$121.10	$51.61
All Species[2]	$28.41	5,287	690	$379.69	$161.82

[1]2010 dollars.
[2]Includes dockside revenues and economic activity associated with the average annual harvests of all species harvested by vessels that harvested red snapper.

In addition to red snapper harvests, as discussed above, vessels that harvested red snapper also harvested other species on trips where red snapper were harvested, as well as on other trips where no red snapper were harvested. All revenues from all species on all these trips contributed towards making these vessels economically viable and contribute to the economic activity associated with these vessels. The average annual total ex-vessel revenues from all species (including red snapper) harvested during this period (2007-2010) by vessels that harvested red snapper was approximately $28.41 million (2010 dollars). The economic activity associated with these revenues is estimated to support 5,287 full time equivalent (FTE) jobs (690 in the harvesting sector) and generate approximately $379.69 million in output (sales) impacts and approximately $161.82 million in income impacts. Caution should be used in interpretation of the estimates of harvester jobs, however, as these revenues were generated by the same vessels, likely using mostly the same crew. The estimate of jobs in the harvest sector are based roughly on the estimate that approximately $40,000 in ex-vessel revenues in the commercial reef fish fishery supports, on average, one FTE harvester job. As a result of this methodology, increasing the amount of revenues uniformly increases the number of jobs supported and does not factor in the higher earnings potential of these vessels.

3.3.1.3 Dealers

Commercial vessels landing reef fish, including red snapper, can only sell their catch to federally permitted fish dealers. On November 30, 2011, there were 208 reef fish dealer permits, of which 135 possessed the required IFQ dealer endorsement necessary to purchase red snapper. Most of

the IFQ-permitted dealers had addresses listed in Florida (103), with 14 listed in Texas, 8 in Louisiana, 6 in Alabama, 2 in Mississippi, and 1 each in New York and North Carolina. Because there is no income or sales requirements to acquire a federal dealer permit, the total number of dealers can vary over the course of the year and from year to year. It is noted that the IFQ dealer endorsement is also required to purchase grouper and tilefish. As a result, it should not be presumed that all dealers with an IFQ endorsement purchase red snapper, particularly in Florida.

3.3.1.4 Imports

Information on the imports of all snapper and grouper species, either fresh or frozen, are available at: http://www.st.nmfs.noaa.gov/st1/trade/cumulative_data/TradeDataProduct.html. Information on the imports of individual snapper or grouper species is not available. In 2010, imports of all snapper and grouper species (fresh and frozen) were approximately 44.75 million pounds valued at approximately $112.98 million (2010 dollars). These amounts are contrasted with the domestic harvest of all snapper and grouper in the U.S. in 2010 of approximately 13.35 million pounds valued at approximately $37.38 million (data available at: http://www.st.nmfs.noaa.gov/st1/commercial/landings/annual_landings.html). Although the levels of domestic production and imports are not totally comparable for a several reasons, including considerations of different product form, such as fresh versus frozen, and possible product mislabeling, the difference in the magnitude of imports relative to amount of domestic harvest is indicative of the dominance of imports in the domestic market.

3.3.2 Recreational Sector

A description of the economic environment for the recreational sector is contained in the February 2010 Regulatory Amendment (GMFMC 2010). This description is incorporated herein by reference. Select updated statistics are provided in the following sections.

3.3.2.1 Angler Effort

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

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

Other measures of effort are possible, such as the number of harvest trips (the number of individual angler trips that harvest a particular species regardless of target intent), and directed trips (the number of individual angler trips that either targeted or caught a particular species), among other measures, but the three measures of effort listed above are used in this assessment. Estimates of the average annual red snapper effort in the Gulf of Mexico for the period 2005-2009 are provided in Table 3.3.2.1.1. Although available, data for 2010 were not included in the assessment because 2010 was not a typical year for recreational fishing due to the extensive

closures and general decline in fishing as a result of the Deepwater Horizon MC252 oil spill. For information on the Deepwater Horizon MC252 oil spill and associated closures, see: http://sero.nmfs.noaa.gov/deepwater_horizon_oil_spill.htm.
Final recreational data for 2011 were not available at the time of this assessment.

Table 3.3.2.1.1. 2005-2009 average annual red snapper recreational effort.

	Alabama	West Florida	Louisiana	Mississippi	Texas	Total
	Shore Mode					
Target Trips	420	1,433	0	0	*	1,853
Catch Trips	1,331	1,546	0	0	*	2,877
	Private/Rental Mode					
Target Trips	77,364	138,524	39,756	4,215	*	259,859
Catch Trips	100,153	264,535	58,685	10,412	*	433,785
	Charter Mode					
Target Trips	21,751	47,129	19,356	33	*	88,269
Catch Trips	50,222	223,946	39,065	166	*	313,399
	All Modes					
Target Trips	99,535	187,086	59,112	4,248	*	349,981
Catch Trips	151,706	490,027	97,750	10,578	*	750,061

*Unavailable.
Source: SERO using MRFSS data.

Headboat data do not support the estimation of target or catch effort because target intent is not collected and the harvest data (the data reflect only harvest information and not total catch) is collected on a vessel basis and not by individual angler. Table 3.3.2.1.2 contains estimates of the number of headboat angler days for all Gulf states for 2005-2009.

Table 3.3.2.1.2. Headboat angler days.

	WFlorida/Alabama	Louisiana	Texas	Total
2005	130,233	*	59,857	190,090
2006	124,049	5,005	70,789	199,843
2007	136,880	2,522	63,764	203,166
2008	130,176	2,945	41,188	174,309
2009	142,438	3,268	50,737	196,443
Average	132,755	3,435	57,267	192,770

*Unavailable. Headboat data not collected in Louisiana in 2005.
Source: NMFS Headboat Survey.

3.3.2.3 Permits

The for-hire sector is comprised of charter vessels and headboats (party boats). Although charter vessels tend to be smaller, on average, than headboats, the key distinction between the two types of operations is how the fee is determined. On a charterboat trip, the fee charged is for the entire

vessel, regardless of how many passengers are carried, whereas the fee charged for a headboat trip is paid per individual angler.

A federal for-hire vessel permit has been required for reef fish since 1996 and the sector currently operates under a limited access system (GMFMC 2005b). On December 1, 2011, there were 1,377 valid (non-expired) or renewable Gulf reef fish for-hire permits. A renewable permit includes an expired permit that may not be actively fished, but is renewable for as much as one year after expiration. Although the permit does not distinguish between headboats and charterboats, an estimated 79 headboats operate in the Gulf of Mexico.

Information on Gulf of Mexico headboat and charterboat operating characteristics, including average fees and net operating revenues, are included in GMFMC (2007) and is incorporated herein by reference.

3.3.2.4 Business Activity

Estimates of the business activity (economic impacts) associated with recreational angling for red snapper were derived using average impact coefficients for recreational angling for all species, as derived from an add-on survey to the MRFSS to collect economic expenditure information, and described and utilized in NMFS (2011b). Estimates of these coefficients for target or catch behavior for individual species are not available. Estimates of the average expenditures by recreational anglers are also provided in NMFS (2011b) and are incorporated herein by reference.

Business activity for the recreational sector is characterized in the form of FTE jobs, output (sales) impacts (gross business sales), and value-added impacts (difference between the value of goods and the cost of materials or supplies). Job and output (sales) impacts are equivalent metrics across both the commercial and recreational sectors. Income impacts (commercial sector) and value-added impacts (recreational sector) are not equivalent, though similarity in the magnitude of multipliers generated and used for the two metrics may result in roughly equivalent values. Similar to income impacts, value-added impacts should not be added to output (sales) impacts because this would result in double counting.

Estimates of the average red snapper effort (2005-2009) and associated business activity (2010 dollars) are provided in Table 3.3.2.1.1. Red snapper target effort (trips) was selected as the measure of red snapper effort. More individual angler trips catch red snapper than target red snapper, however, as shown in Table 3.3.2.1.2. Estimates of the economic activity associated with red snapper catch trips can be calculated using the ratio of catch trips to target trips because the available average impacts per trip are not differentiated by trip intent. For example, if the estimated number of catch trips is three times the number of target trips for a particular state and mode, the estimate of the economic activity associated with these catch trips would equal three times the estimated impacts of target trips.

Unlike the estimates of business activity associated with commercial red snapper harvests provided in Section 3.3.1.2, which represented business activity in the U.S. as a whole, the estimates of the business activity associated with red snapper recreational trips are only available at the state level (Table 3.3.2.4.1). Addition of the state-level estimates to produce either a regional or national total will underestimate the actual total amount of business activity because summing the state estimates will not capture business activity that leaks outside the individual

states. A state estimate only reflects activities that occur within that state and not related activity that occurs in another state. For example, if a good is produced in Alabama but sold in Florida, the measure of business activity in Florida associated with the its sale in Florida does not include the production process in Alabama. Assessment of business activity at the national (or regional) level would capture activity in both states and include all activity except that which leaks into other nations.

Table 3.3.2.4.1. Summary of red snapper target trips (2005-2009 average) and associated business activity (2010 dollars). Output and value added impacts are not additive.

	Alabama	West Florida	Louisiana	Mississippi	Texas
	Shore Mode				
Target Trips	420	1,433	0	0	*
Output Impact	$31,119	$98,355	$0	$0	*
Value Added Impact	$16,740	$57,141	$0	$0	*
Jobs	0	1	0	0	*
	Private/Rental Mode				
Target Trips	77,364	138,524	39,756	4,215	*
Output Impact	$4,558,701	$6,369,595	$3,283,501	$121,742	*
Value Added Impact	$2,495,785	$3,787,600	$1,614,940	$58,347	*
Jobs	47	63	30	1	*
	Charter Mode				
Target Trips	21,751	47,129	19,356	33	*
Output Impact	$11,469,491	$14,988,046	$9,332,281	$10,384	*
Value Added Impact	$6,313,571	$8,886,368	$5,298,852	$5,852	*
Jobs	151	152	97	0	*
	All Modes				
Target Trips	99,535	187,086	59,112	4,248	*
Output Impact	$16,059,312	$21,455,997	$12,615,781	$132,126	*
Value Added Impact	$8,826,097	$12,731,110	$6,913,792	$64,199	*
Jobs	199	216	127	1	*

*Because target information unavailable, associated business activity cannot be calculated.
Source: effort data from the MRFSS, economic impact results calculated by NMFS SERO using the model developed for NMFS (2011b).

Estimates of the economic activity (impacts) associated with headboat red snapper effort are not available. The head boat sector in the Southeast is not covered in the MRFSS, so estimation of the appropriate economic impact coefficients for the headboat sector was not conducted in the development of NMFS (2011b). While appropriate economic impact coefficients are available for the charterboat sector, potential differences in certain factors, such as the for-hire fee, rates of tourist versus local participation rates, and expenditure patterns, may result in significant differences in the economic impacts of the head boat sector relative to the charterboat sector.

3.4 Social Environment

The February 2010 Regulatory Amendment (GMFMC 2010) includes a description of the Social Environment. The January 2011 Regulatory Amendment (GMFMC 2011a) includes an update on the impacts of the Deepwater Horizon MC252 oil spill. These documents are included herein by reference.

The referenced description focuses on available geographic and demographic data to identify communities with a strong relationship to the harvest of red snapper. A strong relationship is defined by having significant landings and revenue for red snapper. Thus, positive or negative impacts from regulatory change are expected to occur in places with greater red snapper landings. These communities are located primarily in the northern Gulf of Mexico and increasingly, along the west coast of Florida.

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 (EJ).

No environmental justice concerns are expected to arise from the actions taken within this amendment as positive social impacts are expected to accrue to all involved. The shortening or removal of the fixed closed season is a measure that simplifies the regulatory process by modifying a potential obstruction to the harvest of any remaining recreational quota. As the red snapper stock continues to rebuild, this measure is preemptive in addressing this obstacle to a longer season. The proposed increase in the commercial and recreational quotas is expected to benefit both the commercial and recreational fishers by allowing more fish to be caught.

3.6 Administrative Environment

3.6.1 Federal Fishery Management

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

Responsibility for federal fishery management is shared by the Secretary of Commerce (Secretary) and eight regional fishery management councils that represent the expertise and

interests of constituent states. Regional councils are responsible for preparing, monitoring, and revising management plans for fisheries needing management within their jurisdiction. The Secretary is responsible for promulgating regulations to implement proposed plans and amendments after ensuring management measures are consistent with the Magnuson-Stevens Act and with other applicable laws summarized in Section 10. In most cases, the Secretary has delegated this authority to NMFS.

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

The Council consists of seventeen voting members: 11 public members appointed by the Secretary; one each from the fishery agencies of Texas, Louisiana, Mississippi, Alabama, and Florida; and one from NMFS. The public is also involved in the fishery management process through participation on advisory panels and through council meetings that, with few exceptions for discussing personnel matters, are open to the public. The regulatory process is also in accordance with the Administrative Procedures Act, in the form of "notice and comment" rulemaking, which provides extensive opportunity for public scrutiny and comment, and requires consideration of and response to those comments.

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

The red snapper stock in the Gulf of Mexico is classified as overfished and undergoing overfishing (the SSC stated in January 2012 that overfishing is no longer occurring). A rebuilding plan for red snapper was first implemented under Amendment 1 (GMFMC 1989), and has undergone several revisions. The current rebuilding plan was established in Reef Fish Amendment 27/Shrimp Amendment 14 (GMFMC 2007), and calls for rebuilding the stock to a level capable of supporting MSY on a continuing basis by 2032. Periodic adjustments to the annual catch limit and other management measures needed to effect rebuilding are implemented through regulatory amendments.

3.6.2 State Fishery Management

The purpose of state representation at the council level is to ensure state participation in federal fishery management decision-making and to promote the development of compatible regulations in state and federal waters. The state governments of Texas, Louisiana, Mississippi, Alabama, and Florida have the authority to manage their respective state fisheries. Each of the five Gulf of Mexico states exercises legislative and regulatory authority over their respective state's natural resources through discrete administrative units. Although each agency is the primary

administrative body with respect to the states natural resources, all states cooperate with numerous state and federal regulatory agencies when managing marine resources. A more detailed description of each state's primary regulatory agency for marine resources is provided in Amendment 22 (GMFMC 2004a).

4. ENVIRONMENTAL CONSEQUENCES

4.1 Action 1. Revise Recreational Red Snapper Season

4.1.1 Direct and Indirect Effects on the Physical Environment

Direct and indirect effects on the physical environment resulting from the harvest of red snapper by the reef fish fishery have been discussed in detail in Amendments 22 and 27/14 (GMFMC 2004a and 2007) and in the February 2010 Regulatory Amendment (GMFMC 2010) and are incorporated here by reference. This action affects only the recreational sector. **Alternatives 1, 2**, and **Preferred Alternative 3** differ in the maximum amount of time that a recreational red snapper season can be open, or when a season can be reopened if there is unused quota. These alternatives would not directly affect the physical environment. However, if additional fishing days result, the alternatives could indirectly affect the physical environment relative to the duration and level of recreational fishing effort over the course of the fishing season. Level and duration of effort together define the total cumulative amount of effort (i.e., gear-hours of soak time) which affects the potential for gear to impact the physical environment.

The primary gear used in the recreational sector is vertical line gear (hook-and-line), along with a small spearfishing component. Vertical line gear has the potential to snag and entangle bottom structures, while spears may impact a very small area if they miss the target and strike the bottom habitat. Each individual gear has a very small footprint and thus only a small potential for impact, but the cumulative impact of the recreational fishing sector results in a large amount of gear being placed in the water, increasing the potential for impact. The line and weights used by this gear type also can cause abrasions (Barnette 2001). Additionally, vertical line and spearfishing vessels often anchor when fishing, adding to the potential damage of the bottom at fishing locations. If lost or discarded lines are not removed, long-term indirect effects to habitat may occur if the lines become overgrown with algae or marine life becomes entangled in it (Hamilton 2000; Barnette 2001). Circle hooks are required in the reef fish fishery. Because of the design of circle hooks, this gear is less likely to snag bottom habitat than other hook types.

Alternative 1 (no action) would maintain the June 1 to October 1 recreational red snapper season. Given that the recreational season has closed earlier than October 1 in recent years and is likely to continue to do so in the near future, this alternative would have no impact on the number of fishing days in the scheduled season. However, if there is an underharvest of recreational quota, this alternative may limit the ability to reopen the season unless an emergency action can be justified to suspend the fixed closed season. A reopening would not occur until the landings data from the scheduled season has been collected and analyzed, which may not occur until after the start of the fixed closed season. In this situation, **Alternative 1** may prevent a reopening, reducing the number of fishing days and potential for gear interactions relative to the other alternatives.

Alternative 2 would allow a season reopening to occur at any time through November 30. In 2010, an emergency rule temporarily suspended the closed season, and the recreational season was reopened for weekends only from October through mid-November. This was an unusual year, with fishing activity heavily curtailed due to the Deepwater Horizon MC252 oil spill. This alternative would likely be sufficient to allow any reopening determined as appropriate, and allow for more fishing days and gear interactions, than **Alternative 1**.

Preferred Alternative 3 would eliminate any fixed closed season in the fall, allowing a season reopening to occur at any time through December 31. Similar to **Alternative 2**, this alternative would likely be sufficient to allow any reopening determined as appropriate, and allow for more fishing days and gear interactions, than **Alternative 1**. It is unlikely that the full October through December period would be needed for a reopening. The primary advantage of **Preferred Alternative 3** would be to allow the greatest flexibility in the timing of the reopening. Since the total number of fishing days would likely be the same as **Alternative 2**, the indirect impacts of **Alternative 2** and **Preferred Alternative 3** are expected to be the same.

4.1.2 Direct and Indirect Effects on the Biological /Ecological Environment

This action would allow the flexibility to extend the recreational fishing season, or reopen a season, to allow the full quota to be harvested; thus, facilitating the harvest of optimum yield. Currently, the recreational season cannot extend beyond September 30. In recent years, excluding 2010 (the year of the Deepwater Horizon MC252 oil spill), the quota was reached or exceeded earlier than this date. However, if NMFS determines the recreational quota has not been fully reached, **Alternative 1** (no action) may limit the ability to reopen the season. The unharvested stock would contribute to the spawning biomass, and could accelerate the rebuilding of the stock. **Alternative 2** would likely provide sufficient time to harvest the quota because it would allow season openings to occur through November if necessary. This would have been sufficient to allow the emergency weekends only opening in 2010. **Preferred Alternative 3** would also likely provide sufficient time to harvest the quota and more flexibility to time the reopening to optimize recreational fishing opportunities. Although **Alternative 2** and **Preferred Alternative 3** would increase the likelihood of the full recreational quota being harvested, the acceptable biological catch (ABC) and the quota have been set at a yield corresponding to a fishing mortality rate that is 25% below the fishing mortality rate corresponding to the overfishing limit (OFL). The OFL fishing mortality rate is the maximum rebuilding rate, i.e., the rate at which there is a 50% probability of achieving the rebuilding target. At lower fishing mortality rates, the probability of achieving the rebuilding target is greater than 50%. Therefore, provided that harvest stays within the quota, the alternatives would not jeopardize the rebuilding plan. A potential negative impact of **Preferred Alternative 3** is that it could allow the recreational red snapper season to extend into the gag spawning season, which begins in late December. If fishermen target red snapper in areas where gag spawning and pre-spawning aggregations occur, an incidental catch and release of gag may occur. During this closed season for gag, an increase in release mortality could occur, and, in turn, impact the gag rebuilding plan.

4.1.3 Direct and Indirect Effects on the Economic Environment

The recreational red snapper season opens on June 1 and closes when the recreational quota is harvested, or is projected to be harvested, but no later than October 1. If the recreational quota is not harvested during this period, the season may be reopened through subsequent regulatory action for an appropriate period of time to harvest the remaining quota. Although it is possible that the need for regulatory action to reopen the season is anticipated in sufficient time to allow the regulatory process to be completed and allow reopening to occur on October 1, the greater likelihood is that some delay in reopening occurs resulting in the season being open from June 1 through September 30, closed for a period on time, then reopened for sufficient time to allow the quota to be harvested. Even if it is assumed that the season is reopened October 1, charter operators can only plan and book trips to be taken after September 30 following the publication

of the length of the supplemental season. Similar considerations exist for anglers planning fishing trips that do not require for-hire services. Any interruption of business to for-hire services could result in additional costs and operational inefficiencies, producing a net reduction in profits despite a potentially unchanged number of fishing trips. From the angler's perspective, even for anglers who do not plan to use for-hire services, disruption in the ability to plan a trip may lead to reduced economic benefits if the timing of the recreational red snapper season does not match the period when they wish, or are able to, fish. All of these conditions would continue to exist under **Alternative 1.** As a result, although **Alternative 1** would not result in a change in current management, current management consists of a set of restrictions and opportunities that may not result in maximum economic benefits.

Alternative 2 and **Preferred Alternative 3** would change the current fixed seasonal closure date from October 1 to November 30 or December 31, respectively, thereby reducing the potential likelihood of an interrupted recreational red snapper season, and associated economic inefficiencies and losses. Although the elimination of the fixed October 1 closure date does not eliminate the possibility of a closure and reopening (the season could still be closed after September 30 based on projected harvest and subsequently reopened if the quota is not harvested during the initial season), the likelihood of an uninterrupted season would be increased. As a result, both **Alternative 2** and **Preferred Alternative 3** would be expected to increase the likelihood of improved operational efficiency and increased profits to small entities stemming from the flexibility to plan business activities and book trips earlier than they could from **Alternative 1** and from the opportunity to run business activities through a longer recreational season with potentially reduced interruption. Anglers may also experience increased benefits and economic value from the greater flexibility to plan their fishing trips. Because **Preferred Alternative 3** would not require any closure based on a fixed date prior to the end of the calendar year, **Preferred Alternative 3** may result in the greatest likelihood of a continuously open season and highest associated economic benefits. However, it should be clearly understood that an unnecessary closure prior to either fixed closure date would still be possible.

It should also be noted that based on the duration of the red snapper recreational season observed in recent years (the season typically ends before October 1) economic effects that would result from **Alternative 2** or **Preferred Alternative 3** are expected to be minimal relative to **Alternative 1**. However, management measures could change, including an increase in the recreational red snapper quota, or fishing pressure or performance decline (fewer trips, or fewer fish or smaller fish harvested per trip) supporting a longer recreational fishing season beyond October 1.

4.1.4 Direct and Indirect Effects on the Social Environment

Being able to fish during a longer season after the red snapper stock rebuilds will result in positive social impacts to recreational red snapper fishers. Should quota remain following a season closure, the fixed fall closed season is an administrative obstacle to reopening the season. Providing the NMFS Regional Administrator greater flexibility in opening the recreational season increases the likelihood that the entire recreational quota can be caught, thereby contributing to positive social impacts. With the no action **Alternative 1**, additional rulemaking is required to suspend or remove the October 1 closure date so the season can be reopened. This extra regulatory step, while not affecting fishermen directly, could delay the release of remaining quota. With **Alternative 2**, the fixed closed season would be shortened by two months; only the month of December would remain as a fixed closed season. Positive impacts would accrue to

recreational red snapper fishers by allowing the timely opening of the season should there be available recreational quota. On the other hand, should there be available quota at the end of November the Regional Administrator must follow the regulatory procedure outlined for **Alternative 1**. This could cause a delay in reopening the season. **Preferred Alternative 3** would eliminate the fixed fall closed season entirely enabling the Regional Administrator to more easily open the recreational season throughout the end of the year should there be remaining quota. **Preferred Alternative 3** would also facilitate implementation of a split season, should that option be pursued by the Council. If a split season should be adopted, this alternative would allow greater flexibility than **Alternative 2** in determining the dates of that season. This would facilitate the regulatory process and allow timely access for recreational participants. Ultimately, **Preferred Alternative 3** would incur the greatest benefits and is the most desirable for recreational fishermen as it removes a regulatory hurdle to a longer fishing season.

4.1.5 Direct and Indirect Effects on the Administrative Environment

All of the alternatives in this action require a notice by NMFS to close the recreational red snapper season on the date that the recreational quota is projected to be reached. In addition, if it is subsequently determined that there is unharvested quota remaining, administrative action is needed to subsequently reopen and close the recreational season. **Alternative 1** (status quo) limits the ability of NMFS to reopen the recreational red snapper season by maintaining a fixed closed season of October 1 through December 31. Since time is needed to collect and analyze the recreational catch data after the season closes, this may not allow sufficient time to complete the analyses and determine if a reopening is warranted. **Alternative 2** provides more flexibility and greater opportunity to reopen the recreational red snapper season by allowing the open season to occur as late as November 30. **Preferred Alternative 3** provides the greatest flexibility by eliminating the fixed fall closed season and allowing an open season to occur as late as December 31. In all cases, analyses of the recreational catch data would be needed, along with administrative actions to close, and reopen if necessary, the recreational season. However, **Alternatives 1 and 2** will require that the catch analyses be conducted more quickly than **Preferred Alternative 3**, which could result in less accurate, rushed analyses.

4.2 Action 2. 2012 and 2013 Red Snapper Acceptable Biological Catches (ABCs) and Quotas

4.2.1 Direct and Indirect Effects on the Physical Environment

Direct and indirect effects on the physical environment by the act of fishing for red snapper have been discussed in detail in Amendments 22 and 27/14 (GMFMC 2004a and 2007) and are incorporated here by reference. The alternatives to change the harvest limits would not directly affect the physical environment. However, specifying the quotas could indirectly affect the physical environment by the amount of gear in the water at any given time of fishing effort and the duration and level of recreational fishing effort over the course of the fishing season. The commercial sector is operating under an individual fishing quota (IFQ) system resulting in no quota closure. Thus, although the quota may affect the level of commercial fishing effort, the commercial fishing season will be open year-round regardless of the quota. Level and duration of effort together define the total cumulative amount of effort (i.e., gear-hours of soak time), which affects the potential for gear to impact the physical environment.

The primary gears used in commercial and recreational fishing for red snapper are vertical line gear (bandit and hook-and-line). Some commercial landings are from bottom longlines, but this component of the commercial sector lands only a low percent of the total commercial harvest (SEDAR 7 2005). Vertical line gear has the potential to snag and entangle bottom structures. Each individual gear has a very small footprint and thus only a small potential for impact, but the cumulative impact of the commercial and recreational fishing sector results in a large amount of gear being placed in the water, increasing the potential for impact. The line and weights used by this gear type also can cause abrasions (Barnette 2001). Additionally, vertical line vessels often anchor when fishing, adding to the potential damage of the bottom at fishing locations. Bottom longlines have the potential to break or move hard structures on the sea floor, including rocks, corals, sponges, other invertebrates, and algae, when the line sweeps the bottom (Barnette 2001). If vertical and longline gear are not removed, long-term indirect effects to habitat may occur if the line becomes overgrown with algae or marine life becomes entangled (Hamilton 2000; Barnette 2001). Circle hooks are required in the reef fish fishery. Because of the design of circle hooks, this gear is less likely to snag bottom habitat than other hook types.

Alternative 1 (no action) would continue the 2012 stock ABC of 7.185 million pounds (mp), and result in no changes to the commercial or recreational quotas. Therefore, this alternative should have no additional effects on the physical environment. Both **Preferred Alternative 2** and **Alternative 3** would increase the stock ABC to 8.080 mp for 2012 and 8.690 mp in 2013, if the 2012 ABC is not exceeded. However, **Alternative 3** would implement a buffer between the ABC and the quota, setting at a 0% buffer for the commercial sector and a 17% buffer for the recreational sector. **Alternative 3** would have the same effects as **Preferred Alternative 2** for the commercial sector. If the 17% buffer on the recreational sector reduces the overall fishing effort, **Alternative 3** may have fewer effects on the physical environment than **Preferred Alternative 2**. These alternatives would be expected to have the greater impacts on the physical environment when compared with **Alternative 1**, because they would allow for the greatest levels of fishing effort and most opportunities for gear interactions with habitat. However, any increases indirect effects on the physical environment are expected to be small because a large portion of the catch is taken from artificial structures (i.e., artificial reefs, oil and gas platforms), the primary gear used is hook-and-line, and the directed red snapper component of the reef fish fishery represents only a small portion of the overall reef fish fishery in the Gulf of Mexico (SEDAR 7 2005). Also, several habitat areas of particular concern, marine sanctuaries, and marine reserves already exist in the Gulf of Mexico where red snapper occur, providing additional protection to habitat and reducing impacts to the physical environment.

4.2.2 Direct and Indirect Effects on the Biological /Ecological Environment

Direct and indirect effects on the biological/ecological environment from the harvest of red snapper and from changes in total allowable catch have been discussed in detail in Amendments 22 and 27/14 (GMFMC 2004a and 2007) and in the February 2010 Regulatory Amendment (GMFMC 2010) and are incorporated here by reference. Potential impacts of the 2010 Deepwater Horizon MC252 oil spill on the biological/ecological environment are discussed in the January 2011 Regulatory Amendment (GMFMC 2011a) and are also incorporated here by reference. In a study conducted during the summer of 2011, University of South Florida researchers found more sick fish in the area of the 2010 oil spill compared to other areas.

Although some scientists have suggested that these incidences of sick fish may be related to the spill, others have pointed out that there is no baseline from which to judge the prevalence of sick fish, and no connection has been determined. Studies are continuing to check whether the sick fish suffer from immune system and fertility problems (Tampa Bay Times 2012).

Direct effects of all three alternatives would allow the stock to recover consistent with the rebuilding plan. Any future increases in the quotas would also need to be consistent with this plan. **Alternative 1**, because it has the lowest quotas, may allow the stock to recover more quickly than **Preferred Alternative 2** and **Alternative 3**. **Alternative 1** would also provide the greatest protection from overfishing should the stock projections be overly optimistic or should some change occur in the stock that lowers its productivity, such as an episodic mortality event, natural disturbance or a negative impact from the Deepwater Horizon MC252 spill that is as yet unrealized. **Preferred Alternative 2** would allow an increase in red snapper harvest in 2012 and 2013 at the maximum harvest level possible without exceeding the ABC. Due to overharvest by the recreational sector, the ABC has been exceeded in 3 of the last 4 years. The ABC was not exceeded in 2010, the year of the Deepwater Horizon MC252 oil spill, due to reductions in fishing effort resulting from large area closures that were in place for most of the summer. Because of the buffer between OFL and ABC, rebuilding has continued to occur. However, this was determined only after an evaluation of the impacts of the overage by the Southeast Fisheries Science Center and the Scientific and Statistical Committee (SSC). Because the effects of an overage are unknown until an evaluation is conducted. **Preferred Alternative** 2 includes a contingency that, if the stock ABC is exceeded in 2012, the 2013 catch levels will remain at the 2012 levels unless an analysis by SSC concludes that an increase is allowable. Thus, although **Preferred Alternative 2** provides the greatest potential risk to the red snapper rebuilding plan, contingencies are in place to evaluate and respond to that risk.

Alternative 3 would allow the commercial sector to harvest at the same quota as **Preferred Alternative 2**. However, through the use of a buffer between the ABC and quota, it would set the recreational quota at 17% below the sector ABC. This would result in a recreational quota that is lower than both **Alternative 1** and **Preferred Alternative 2** in 2012. In 2013 it is only slightly greater than **Alternative 1** and still less than **Preferred Alternative 2**. The combined commercial and recreational quotas would be greater than **Alternative 1** and less than **Preferred Alternative 2** for both years. The purpose of the recreational buffer is to address management uncertainty and reduce the likelihood that the recreational sector would exceed its sector ABC. A buffer for the commercial sector is not necessary because the commercial sector has not exceeded its ABC since implementation of the IFQ program. Compared to **Preferred Alternative 2**, **Alternative 3** reduces the likelihood of the stock ABC being exceeded, but the recreational sector has exceeded its quota by substantially more than 17% in two of the last 4 years, and by at least 18% in 2011 (Linton 2011). The 2013 contingency described for **Preferred Alternative 2** also exists for **Alternative 3**. Thus, the risk to the red snapper rebuilding plan is intermediate between **Alternative 1** and **Preferred Alternative 2**.

Indirect effects of these alternatives on the biological and ecological environment are not well understood. Changes in the population size structure as a result of shifting the fishing selectivities and increases in stock abundance could lead to changes in the abundance of other reef fish species that compete with red snapper for shelter and food. Predators of red snapper could increase if red snapper abundance is increased, while species competing for similar resources as red snapper could potentially decrease in abundance if less food and/or shelter are less available. Another effect of an expanding red snapper population could be a continuation

of the reestablishment of red snapper populations in historical areas of occurrence in the eastern Gulf of Mexico. As the red snapper stock rebuilds, one effect is that the average size of a red snapper caught from recreational fishing is also increasing. As a result, the recreational quota is being taken with fewer numbers of fish, resulting in shorter seasons even with quota increases. As a result, fishermen who are unable to target red snapper during the closed season may choose to target other species. Species likely to be affected by changes in red snapper abundance the most include: Vermilion snapper, gray triggerfish, and gag, which all co-occur with red snapper. These effects are explored in more detail in Amendment 27/14 (GMFMC 2007).

The proposed action relates to the harvest of an indigenous species in the Gulf of Mexico, and proposes only to increase that harvest, consistent with the most recent stock assessment for the species. Changing allowable harvest may pose the potential to shift fishing effort from other species in the Gulf of Mexico, some of which may not be indigenous. However, the activity being altered does not itself introduce non-indigenous species, and is not reasonably expected to facilitate the spread of such species through depressing the populations of native species. Additionally, it does not propose any activity, such as increased ballast water discharge from foreign vessels, which is associated with the introduction or spread on non-indigenous species.

4.2.3 Direct and Indirect Effects on the Economic Environment

The methods used and assumptions made to evaluate expected economic effects of proposed alternatives are detailed in previous red snapper regulatory amendments, (GMFMC, 2010 and 2011a) and are incorporated herein by reference. Therefore, the socio-economic sections included in this document are limited to a presentation and discussion of the expected effects.

4.2.3.1 Effects on the Commercial Sector

The commercial sector's red snapper allocation of the annual catch limit is implemented as a quota. Table 4.2.3.1.1 contains the increase in the commercial red snapper quotas that would result from the alternatives considered and estimates of the associated expected changes in ex-vessel value, gross revenue (ex-vessel value net of 3 percent cost recovery fee), share value, and allocation value. These results are based on medians of $4.00, $19.94, and $3.00 for ex-vessel, share, and allocation prices, respectively, derived from 2010 transactions. The sale of a share permanently (until re-sold, revoked, or otherwise negated by possible future management action) transfers the ownership of the share and associated allocation to the buyer, whereas the sale of allocation bestows harvest rights to the buyer for only the year in which the allocation is purchased. The average values in 2010 for the ex-vessel, share, and allocation prices were $3.48, $16.81, and $3.00, respectively. Median values, however, were used in this analysis because of the large number of zeroes reported in share and allocation transactions.

Table 4.2.3.1.1: Changes in commercial quotas, ex-vessel values, gross revenues, shares and allocation values relative to Alternative 1.

Year	Commercial quota increase (lbs gutted weight)	Increase in Ex-vessel Value (2010 dollars)	Increase in Gross Revenues (2010 dollars)	Increase in Share Value (2010 dollars)	Increase in Allocation Value (2010 dollars)
2012	411,712	$1,646,847	$1,597,441	$8,209,532	$1,235,135
2013	691,892	$2,767,568	$2,684,541	$13,796,324	$2,075,676
Total	1,103,604	$4,414,415	$4,281,982	$22,005,856	$3,310,811

Source: NMFS SERO.

Alternative 1 would maintain the current commercial red snapper quota of approximately 3.3 mp gutted weight (3.664 mp whole weight). Therefore, changes in ex-vessel value, gross revenue, and share and allocation value are not expected to result from this alternative.

Relative to **Alternative 1, Preferred Alternative 2** would increase the 2012 commercial red snapper quota by 411,712 pounds and the 2013 commercial red snapper quota by 691,892 pounds. Relative to **Alternative 1**, the expected changes in ex-vessel value and in gross revenue expected to result from the 2012 quota increase are estimated to be approximately $1.65 million and $1.60 million, respectively. For 2013, the increase in the commercial red snapper quota relative to **Alternative 1** is expected to increase the ex-vessel value and gross revenue by approximately $2.77 million and $2.68 million, respectively. The aggregate increase in ex-vessel value and gross revenue for both years is estimated to be approximately $4.41 million and $4.28 million, respectively. **Preferred Alternative 2** and **Alternative 3** would increase the commercial red snapper quota by the same amount. Thus, the economic effects expected to result from **Alternative 3** are identical to the effects estimated for **Preferred Alternative 2**.

Although IFQ shares are legally considered a privilege that can be revoked, they are assets that can be freely exchanged in markets and used as collateral for loans. Assuming that red snapper IFQ shares are traded in well-functioning markets, IFQ share prices should be a reflection of the discount rates and revenue streams that are expected to be derived from the IFQ shares. Detailed discussions on IFQ markets and on determinants of share prices in IFQ markets are provided in Newell et al. (2005a, 2005b). Therefore, an evaluation of potential economic effects based on changes in overall asset values would capture changes in economic effects in the longer term. In addition, short run effects could be approximated by the changes in the aggregate value of red snapper annual allocations. A potential commercial quota increase of approximately 411,712 pounds gutted weight in 2012 would correspond to a $8.21 million increase in IFQ share value, while annual leasing of the same quantity of additional shares would be expected to yield about $1.24 million. Similarly, a 691,892-pound increase in 2013 could add $13.80 million in IFQ share value and $2.08 million in potential lease value.

It is important to note that the red snapper ABC, and thus the commercial and recreational quotas will only be increased if the stock ABC is not exceeded during the previous fishing year. It follows that, if the red snapper ABC is exceeded in 2012, the economic effects expected to result from the 2013 commercial quota increase would not be realized.

4.2.3.2 Effects on the Recreational Sector

The economic effects of the proposed alternatives on recreational anglers were evaluated in terms of expected changes in economic benefits as measured by changes in consumer surplus; consumer surplus is the amount of money that an angler would be willing to pay for a fishing trip in excess of the cost of the trip. The comparable measure of economic benefits for for-hire vessels is producer surplus; producer surplus is the amount of money that a vessel owner earns in excess of the cost of providing the trip. Net operating revenues, which are the return used to pay all labor wages, returns to capital, and owner profits, are used as the proxy for producer surplus. A detailed discussion of the methods, assumptions and limitations of the estimates presented is included in a February 2010 Regulatory Amendment (GMFMC 2010) and is included herein by reference. The estimated changes in target trips, consumer surplus, and net operating revenues expected to result from **Preferred Alternative 2** are provided in Table 4.2.3.2.1. All consumer surplus and net operating revenues are in 2010 dollars.

Preferred Alternative 2 would increase the recreational quota and ABC in 2012 and 2013 by 438,000 pounds and 737,000 pounds, respectively. Compared to **Alternative 1**, **Preferred Alternative 2** is estimated to result in approximately 88,564 more red snapper target trips across all modes. Relative to the **Alternative 1**, **Preferred Alternative 2** would be expected to result in an increase in consumer surplus and net operating revenue of approximately $4.84 million and $2.27 million, respectively**.** As previously indicated for the commercial sector, if the stock ABC is exceeded in 2012, the 2013 stock ABC would not be increased and, thus, the associated economic effects would not be realized.

Although it would decrease the recreational quota in 2012 by 235,000 pounds, **Alternative 3** would increase the recreational quota by 13,000 pounds in 2013, resulting in a net aggregate decrease across both years of 222,000 pounds relative to **Alternative 1**. Table 4.2.3.2.1 provides annual and aggregate estimated changes in target trips, consumer surplus, and net operating revenues expected to result from **Alternative 3.** Consumer surplus and net operating revenues are in 2010 dollars.

Table 4.2.3.2.1 Preferred Alternative 2 - Estimated changes in red snapper target trips, consumer surplus and net operating revenues relative to Alternative 1. All values are in 2010 dollars.

Year	Sector	Trips	Consumer Surplus	Net Operating Revenues
2012	Private Anglers	26,439	$1,445,987	
	Charterboat	5,172	$282,838	$775,187
	Headboat	1,403	$76,710	$69,608
	Total	33,014	$1,805,536	$844,795
2013	Private Anglers	44,488	$2,433,088	
	Charterboat	8,702	$475,918	$1,304,367
	Headboat	2,360	$129,077	$117,125
	Total	55,550	$3,038,083	$1,421,492
Total	Private Anglers	70,928	$3,879,076	
	Charterboat	13,874	$758,756	$2,079,554
	Headboat	3,763	$205,787	$186,733
	Total	88,564	$4,843,619	$2,266,287

Source: NMFS SERO.

Table 4.2.3.2.2 Alternative 3 - Estimated changes in red snapper target trips, consumer surplus and net operating revenues relative to Alternative 1. All values are in 2010 dollars.

Year	Sector	Trips	Consumer Surplus	Net Operating Revenues
2012	Private Anglers	-14,186	-$775,815	
	Charterboat	-2,775	-$151,751	-$415,911
	Headboat	-753	-$41,157	-$37,347
	Total	-17,713	-$968,724	-$453,257
2013	Private Anglers	785	$42,917	
	Charterboat	153	$8,395	$23,008
	Headboat	42	$2,277	$2,066
	Total	980	$53,589	$25,074
Total	Private Anglers	-13,401	-$732,898	
	Charterboat	-2,621	-$143,356	-$392,903
	Headboat	-711	-$38,881	-$35,281
	Total	-16,733	-$915,135	-$428,184

Source: NMFS SERO.

Compared to **Alternative 1**, **Alternative 3** is estimated to result in approximately 16,773 fewer red snapper target trips across all modes. Relative to the **Alternative 1**, **Alternative 3** would be expected to result in a net consumer surplus loss estimated at $915,135. For the charter and headboat sectors, combined losses in net operating revenues are estimated at $392,903 and $35,281, respectively. As noted for **Preferred Alternative 2**, the 2013 recreational quota and ABC increase is contingent upon the 2012 stock ABC not being exceeded.

4.2.3.3 Economic Activity Associated with Estimated Economic Effects

This section provides estimates of the economic activity associated with the potential changes in commercial ex-vessel revenues and recreational angler trips that may occur as a result of the proposed management measures. This economic activity is characterized in the form of full time equivalent (FTE) jobs, income impacts (wages, salaries, and self-employed income), output (sales) impacts (gross business sales), and value added impacts (difference between the value of goods and the cost of materials or supplies). Income and value-added impacts are not equivalent, though similarity in the magnitude of multipliers may result in roughly equivalent values. These estimates are provided to inform the decision process of the potential consequences of the proposed management actions. Methods used and assumptions made to estimate changes in economic activity reported in this section are detailed in the February 2010 Regulatory Amendment (GMFMC 2010) and are incorporated herein by reference.

Table 4.2.3.3.1 provides estimates of the potential change in economic activity associated with the estimated change in commercial ex-vessel revenues for **Preferred Alternative 2** relative to **Alternative 1**. Based on an estimated increase in ex-vessel revenues of approximately $4.41 million (2010 dollars), **Preferred Alternative 2** would be expected to support a total of 824 FTE jobs, approximately $24.78 million in income impacts, and approximately $58.12 million in output (sales) impacts more than **Alternative 1**. **Alternative 3** would be expected to result in similar changes in economic activity because it would increase the commercial quota by the same amount. It should be noted that the total increase in ex-value (approximately $4.41 million) is comprised of revenues associated with an increase in allowable harvest in 2012 (457,000 lbs) relative to **Alternative 1**, a repeat of that increase in 2013, and an additional increase in 2013 (311,000 lbs additional for a total increase in 2013 of 768,000 lbs relative to **Alternative 1**). As a result, the estimates of potential increased economic activity represent increases in 2012, continuation of those increases in 2013, and additional increases in 2013. The key point of this is that, if both harvest increases occur, any job created in 2012 would be expected to continue into 2013.

Table 4.2.3.3.2 provides estimates of the potential change in economic activity associated with the estimated change in recreational trips for **Preferred Alternative 2** and **Alternative 3** relative to **Alternative 1**. **Preferred Alternative 2** would be expected to support 100 FTE jobs, approximately $9.35 million in output (sales) impacts, and approximately $5.28 million in value added impacts more than **Alternative 1**. Compared to **Alternative 1**, **Alternative 3** would be expected to reduce employment, output and value added impacts by 19 FTE jobs, and approximately $1.77 million in output (sales) impacts, and approximately $1.00 million in value added impacts.

Table 4.2.3.3.1. Potential changes in economic activity associated with the estimated change in the commercial sector ex-vessel revenues. All values are in 2010 dollars.

Industry Sector	Preferred Alternative 2
Ex-vessel revenues	$4,414,415
Harvesters	
Employment impacts (FTE jobs)	107
Income Impacts	$3,640,332
Output Impacts	$9,461,578
Primary dealers/processors	
Employment impacts (FTE jobs)	64
Income Impacts	$3,060,942
Output Impacts	$9,524,599
Secondary wholesalers/distributors	
Employment impacts (FTE jobs)	54
Income Impacts	$2,995,496
Output Impacts	$7,023,548
Grocers	
Employment impacts (FTE jobs)	33
Income Impacts	$1,246,479
Output Impacts	$2,711,648
Restaurants	
Employment impacts (FTE jobs)	566
Income Impacts	$13,827,947
Output Impacts	$29,401,032
Total	
Employment impacts (FTE jobs)	824
Income Impacts	$24,771,198
Output Impacts	$58,122,404

Table 4.2.3.3.2. Potential changes in economic activity associated with the estimated change in recreational trips. All values are in 2010 dollars.

	Preferred Alternative 2	Alternative 3
Private/Rental Sector		
Trips	70,928	-13,401
Output Impact	$4,306,821	-$813,725
Value Added Impact	$2,366,766	-$447,173
Jobs	40	-8
Charter Sector		
Trips	13,874	-2,621
Output Impact	$5,043,831	-$952,853
Value Added Impact	$2,914,078	-$550,512
Jobs	60	-11
All Sectors		
Output Impact	$9,350,652	-$1,766,578
Value Added Impact	$5,280,844	-$997,685
Jobs	100	-19

4.2.4 Direct and Indirect Effects on the Social Environment

Impacts on the human environment resulting from this action will relate to (1) the amount of fish available for harvest compared with the current quota (**Alternative 1**, no action), and (2) whether harvest levels exceed the stock ABC. Should the stock ABC be determined to be exceeded, the 2013 quota and stock ABC increase (**Preferred Alternative 2** and **Alternative 3**) will not occur. Generally, positive impacts are expected if a greater amount of fish is allowed to be caught, and negative impacts result when less fish are allowed to be caught. Because of the different management measures under which each sector operates, however, impacts may accrue differently to the commercial sector (operating under an IFQ program) and the recreational sector (operating under a bag limit), both in terms of the size of the quota and impacts should the stock ABC be exceeded.

Usually, impacts do not arise from maintaining the status quo (**Alternative 1,** no action) because no change is made. However, as the average fish size increases under the rebuilding plan and the recreational bag limit stays the same, the quota (measured by weight) will be reached in a shorter period of time because two fish per angler will weigh more. This will result in a shorter recreational season if the quota remains the same (**Alternative 1**) and negative impacts are likely to accrue to the recreational sector as a result. Under the commercial sector's IFQ program, quota shares are measured in pounds and the quota is distributed to shareholders in proportion to the quota shares owned. Thus, no impacts are expected to accrue to the commercial sector by adopting the status quo (**Alternative 1,** no action).

Compared to the no action **Alternative 1**, the increases in the quota specified by **Preferred Alternative 2** and **Alternative 3** are expected to result in positive impacts for both sectors as more fish are allowed to be caught. **Preferred Alternative 2** and **Alternative 3** specify an equal stock ABC for both 2012 and 2013, which is the maximum amount of fish that may be caught. If this stock ABC is not exceeded in 2012, the stock ABC will increase the following year resulting in positive impacts for both sectors. The difference between **Preferred Alternative 2** and **Alternative 3** is that **Alternative 3** sets the recreational quota at a buffer designed to implement a timely season closure to avoid exceeding the sector ABC. Because the buffer is set according to each sector's likelihood of exceeding its quota, impacts may accrue differently to each sector.

Because of the data reporting requirements of the commercial IFQ program, the commercial sector is not likely to exceed their sector ABC, nor the stock ABC. Thus, the buffer is set at 0% for the sector ABC meaning there is no difference in the quota between **Preferred Alternative 2** and **Alternative 3** for the commercial sector. Provided that the recreational sector does not exceed its sector ABC such that the stock ABC is also exceeded, positive impacts should accrue to the commercial sector under **Preferred Alternative 2** and **Alternative 3** equally.

In contrast with the commercial sector's reporting requirements of the IFQ program, it is more likely for the recreational sector to exceed its quota. The 17% buffer assigned to the recreational sector under **Alternative 3** is a management tool intended to curb fishing effort to avoid exceeding the recreational sector ABC. Thus, although the buffer of **Alternative 3** effectively reduces the quota by 17% (less fish available for harvest results in negative impacts) compared to **Preferred Alternative 2**, the buffer would reduce the likelihood that the recreational sector will exceed the sector and stock ABCs and thus realize a quota increase the following year (more fish available for harvest results in positive impacts). If the buffer serves to prevent the recreational quota from exceeding the stock ABC, positive impacts accrue to both sectors through an increase in the following year's quota. Inversely, if the recreational sector exceeds its sector ABC such that the stock ABC is also exceeded, the quota increase is not made available to either sector and negative impacts will accrue to both sectors. By not using the buffer (**Preferred Alternative 2**), a greater quantity of fish is available for harvest resulting in positive impacts for 2012 compared to **Alternative 3**. However, if the stock ABC is exceeded, then negative impacts would result because neither sector would receive a quota increase in 2013.

4.2.5 Direct and Indirect Effects on the Administrative Environment

None of the alternatives should result in any direct or indirect effects to the administrative environment, because the type of regulations needed to manage the red snapper component of the reef fish fishery would remain unchanged regardless of what the commercial and recreational quota is set at. The NMFS law enforcement, in cooperation with state agencies, would continue to monitor regulatory compliance with existing regulations and NMFS would continue to monitor both recreational and commercial landings to determine if landings are meeting or exceeding specified quota levels. The enforcement and administrative environments were recently enhanced with an IFQ program for the commercial red snapper sector, requiring NMFS to monitor the sale of red snapper individual fishing quota shares, and a vessel monitoring system 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 IFQ and vessel monitoring system requirements have reduced the burden of monitoring compliance with commercial fishing regulations.

4.3 Cumulative Effects Analysis

The cumulative effects from the red snapper rebuilding plan have been analyzed in Amendment 22 (GMFMC 2004a) and 27/14 (GMFMC 2007), and cumulative effects to the reef fish fishery have been analyzed in Amendments 30A (GMFMC 2008a), 30B (GMFMC 2008b), and 31 (GMFMC 2009), and are incorporated here by reference. The effects of setting annual catch limit in this regulatory amendment are similar to those described in the February 2010 Regulatory Amendment (GMFMC 2010), and are most closely aligned with the effects from with the revisions to the red snapper rebuilding plan in Amendment 27/14 (GMFMC 2007). This analysis found the effects on the biophysical and socioeconomic environments are positive because 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 socioeconomic environment associated with red snapper fishing 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 red snapper component of the reef fish fishery while maintaining quotas and an annual catch limit 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 IFQ. The action to eliminate the October 1 closure date would not likely have additional effects as the closure of the recreational red snapper season is controlled by the recreational quota and annual catch limit.

The cumulative effects from the Deepwater Horizon MC252 oil spill may not be known for several years. If there has been a reduction in spawning success in 2010, the impacts may not begin to manifest themselves until several years later when the fish that would have spawned in 2010 would have become large enough to enter the adult spawning population and be caught by red snapper fishers. For red snapper, this occurs at approximately 3 years of age, so a year class failure in 2010 may not be felt by the spawning populations or by harvesters of red snapper until 2013. The impacts would result in reduced fishing success and reduced spawning potential, and would need to be taken into consideration in the next SEDAR assessment. An increase in the ABC, combined with possible short-term increase in natural mortality to the stock from the oil spill, could negatively impact the stock. While there have been informal reports of lesions on red snapper in the oil affected areas, the information is preliminary and has not been correlated with impacts from the oil spill. Nevertheless, absent any firm information regarding the impacts to the red snapper stock from the Deepwater Horizon MC252 oil spill, the proposed action to increase the quotas and ABCs would minimize socioeconomic impacts and achieve the Council's designated optimum yield.

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 web page provides basic background information on these and other measured or anticipated effects. In addition, Intergovernmental Panel on Climate Change has numerous reports addressing their assessments of climate change (http://www.ipcc.ch/publications_and_data/publications_and_data.shtml). Global climate changes could have significant effects on Gulf of Mexico fisheries; however, the extent of these effects is not known at this time. Possible impacts include temperature changes in coastal and marine ecosystems that can influence organism metabolism and alter ecological

processes such as productivity and species interactions; changes in precipitation patterns and a rise in sea level which could change the water balance of coastal ecosystems; altering patterns of wind and water circulation in the ocean environment; and influencing the productivity of critical coastal ecosystems such as wetlands, estuaries, and coral reefs (Kennedy et al. 2002). Modeling of climate change in relation to the northern Gulf of Mexico hypoxic zone may exacerbate attempts to reduce the area affected by these events (Justic et al. 2003). It is unclear how climate change would affect reef fishes, and likely would affect species differently. Climate change can affect factors such as migration, range, larval and juvenile survival, prey availability, and susceptibility to predators. In addition, the distribution of native and exotic species may change with increased water temperature, as may the prevalence of disease in keystone animals such as corals and the occurrence and intensity of toxic algae blooms. Climate change may significantly impact Gulf of Mexico reef fish species in the future, but the level of impacts cannot be quantified at this time, nor is the time frame known in which these impacts would occur. Actions from this amendment are not expected to significantly contribute to climate change through the increase or decrease the carbon footprint from fishing.

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 of Mexico are collected through MRFSS, NMFS's Head Boat Survey, and the Texas Marine Recreational Fishing Survey. MRFSS is currently being replaced by the Marine Recreational Information Program (MRIP), a program designed to improve the accuracy of monitoring of recreational fishing. Commercial data are collected through trip ticket programs, port samplers, and logbook programs, as well as dealer reporting through the individual fishing quota program. Currently, a benchmark SEDAR assessment of Gulf of Mexico red snapper is scheduled for 2012-2013.

5. REGULATORY IMPACT REVIEW

5.1 Introduction

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

5.2 Problems and Objectives

The problems and objectives addressed by this proposed regulatory amendment are discussed in Section 1.1 of this document. Management measures considered in this regulatory amendment are intended to revise the fixed recreational red snapper closed season of October 1 – December 31, and to set the 2012 and 2013 quotas for commercial and recreational harvest of red snapper in the Gulf of Mexico in order to achieve optimal yield in accordance with the Red Snapper Rebuilding Plan developed by the Gulf of Mexico Fishery Management Council (Council).

5.3 Description of Fisheries

A description of the Gulf of Mexico red snapper component of the reef fish fishery is provided in Section 3.3 of this document.

5.4 Impacts of Management Measures

5.4.1 Action 1. Revise Recreational Red Snapper Season

A detailed analysis of the expected economic impacts of all alternatives considered for this action is contained in Section 4.1.3. **Alternative 2** and **Preferred Alternative 3** would change the current fixed seasonal closure date from October 1 to November 30 and December 31, respectively, thereby reducing the potential likelihood of an interrupted recreational red snapper season, and associated economic inefficiencies and losses. **Alternative 2** and **Preferred Alternative 3** would thus be expected to increase the likelihood of improved operational efficiency and increased profits to small entities stemming from the flexibility to plan business activities and book trips earlier than they would be able to under **Alternative 1** and from the opportunity to run business activities through a longer recreational season with potentially reduced interruption. Anglers may also experience increased benefits and economic value from the greater flexibility to plan their fishing trips. Because **Preferred Alternative 3** would not

require any closure based on a fixed date prior to the end of the calendar year, **Preferred Alternative 3** may result in the greatest likelihood of a continuously open season and highest associated economic benefits.

5.4.2 Action 2. 2012 and 2013 Red Snapper Acceptable Biological Catches (ABCs) and Quotas

A detailed analysis of the expected economic impacts of alternatives considered for this action is contained in Section 4.2.3. Relative to **Alternative 1, Preferred Alternative 2** would increase the 2012 commercial red snapper quota by 411,712 pounds and the 2013 commercial red snapper quota by 691,892 pounds. **Preferred Alternative 2** and **Alternative 3** would increase the commercial red snapper quota by the same amount. Thus, the economic effects expected to result from **Alternative 3** are identical to the effects estimated for **Preferred Alternative 2**. Short term economic effects are approximated by the changes in the aggregate value of red snapper annual allocations. A commercial quota increase of approximately 411,712 pounds gutted weight in 2012 would correspond to a $8.21 million increase in individual fishing quota (IFQ) share value, while annual leasing of the same quantity of additional shares would be expected to yield about $1.24 million. Similarly, a 691,892-pound increase in 2013 could add $13.80 million in IFQ share value and $2.08 million in potential lease value.

Preferred Alternative 2 would increase the recreational quota and ACL in 2012 and 2013 by 438,000 pounds and 737,000 pounds, respectively. Relative to the **Alternative 1**, **Preferred Alternative 2** would be expected to result in an increase in consumer surplus and net operating revenue of approximately $4.84 million and $2.27 million, respectively**.** Compared to **Alternative 1**, **Alternative 3** is estimated to result in approximately 16,773 fewer red snapper target trips across all modes. Relative to the **Alternative 1**, **Alternative 3** would be expected to result in a net consumer surplus loss estimated at $915,135. For the charter and headboat sectors, combined losses in net operating revenues are estimated at $392,903 and $35,281, respectively.

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……....$15,000

NMFS administrative costs of document
preparation, meetings, and review ……...$10,000

TOTAL…….……... $25,000

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 likely mean a redirection of resources to enforce the new measures rather than an expenditure of new funds.

5.6 Determination of Significant Regulatory Action

Pursuant to Executive Order (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 fishery management plan (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.

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

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

The problems and objective of this proposed action is provided in Section 1.1. In summary, the objective of this proposed action is to revise the fixed recreational red snapper closed season of October 1 – December 31 to provide more flexibility in managing the red snapper recreational fishing season, and to set the 2012 and 2013 acceptable biological catch (ABC) and sector quotas for the red snapper component of the reef fish fishery in the Gulf of Mexico. Both proposed actions would be expected to increase the likelihood of achieving optimal yield. The Magnuson-Stevens Fishery Conservation and Management Act provides the statutory basis for this proposed action.

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

This rule, if implemented, would be expected to directly affect all commercial vessels and for-hire vessels that harvest red snapper. In addition to needing red snapper allocation, a commercial

reef fish permit is required to harvest red snapper in excess of the bag limit and sell red snapper. An estimated 920 vessels possess a commercial reef fish permit. However, over the period 2007-2010, only an average of 323 vessels per year recorded commercial red snapper harvests. As a result, for the purpose of this assessment, the number of potentially affected commercial vessels is estimated to range from 323-920. The average commercial vessel in the Gulf of Mexico reef fish fishery is estimated to earn approximately $48,000 (2010 dollars), while the average annual revenue for a vessel with red snapper landings was approximately $88,000 during the period 2007-2010.

A federal reef fish for-hire vessel permit is required for for-hire vessels to harvest red snapper. On January 30, 2012, there were 1,377 valid (non-expired) or renewable for-hire reef fish permits. An expired permit may not be actively fished, but is renewable for one year from the date of expiration. The for-hire fleet is comprised of charterboats, which charge a fee on a vessel basis, and headboats, which charge a fee on an individual angler (head) basis. Although the for-hire permit does not distinguish between headboats and charterboats, an estimated 69 headboats operate in the Gulf of Mexico. The average charterboat is estimated to earn approximately $89,000 (2010 dollars) in annual revenue, while the average headboat is estimated to earn approximately $469,000 (2010 dollars).

No other small entities that would be expected to be directly affected by this proposed action have been identified.

The Small Business Administration has established size criteria for all major industry sectors in the U.S. including fish harvesters and recreational services. 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. The revenue threshold for a business involved in the for-hire fishing industry is $7.0 million (NAICS code 713990, recreational industries). Based on the average revenue estimates provided above, all commercial and for-hire vessels expected to be directly affected by this proposed action are determined for the purpose of this analysis to be small business entities.

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

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

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

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

6.6 Significance of economic impacts on small entities

Substantial number criterion

As previously discussed, this proposed action, if implemented, would be expected to directly affect all commercial vessels that harvest, or could harvest, red snapper, or an estimated 323-920 vessels. If only the average annual number vessels with a history of red snapper landings are considered, then 323 vessels would be expected to be directly affected, or approximately 35 percent of the vessels that could, if allocation is obtained, harvest red snapper. For the for-hire fleet, because trip data is not collected for all federally permitted for-hire vessels, it cannot be determined with available data how many for-hire vessels target or harvest red snapper. However, because all for-hire vessels that possess a federal for-hire reef fish permit could target or harvest red snapper, this assessment assumes all for-hire vessels with a for-hire reef fish permit would be affected by this proposed action. Because it is expected that the actions in this proposed action would directly affect at least 35 percent of the vessels in the commercial reef fish fleet and all vessels that possess a for-hire reef fish permit, this proposed action is determined to meet the substantial number criterion.

Significant economic impacts

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

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

All entities expected to be directly affected by the measures in this proposed action are 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?

This proposed action, if implemented, would not be expected to significantly reduce profits for a substantial number of small entities. This proposed action would eliminate the October 1 closure date of the recreational fishing season and set the commercial and recreational quotas for 2012 and 2013, provided the ABC is not exceeded in the previous fishing year. At best, this action may result in increased operational efficiency and associated increased profits for for-hire entities associated with the recreational harvest of red snapper. The recreational red snapper season currently opens on June 1 and closes when the recreational sector quota is harvested, or is projected to be harvested, but no later than October 1. If the recreational quota is not harvested during this period, reopening the season would require additional regulatory action. Although the regulatory process required to reopen the season could, in theory, be completed in time to avoid a delay in reopening, i.e., the season could reopen on October 1, because of the administrative process, it is more likely that the season would end on October 1 and reopen later in the year. If this occurs, for-hire services associated with the recreational harvest of red

snapper could not be continuously offered. Interruption of business could result in increased costs and operational inefficiencies, producing a net reduction in profits to for-hire entities despite a potentially unchanged number of total fishing trips and associated revenue. Eliminating the fixed October 1 closure date would be expected to increase the likelihood of an uninterrupted season, eliminating these operational inefficiencies, and potentially increasing profits. As a result, at best, this action may increase the likelihood of improved operational efficiency and increased profits to small entities.

It should be noted, however, that it is more likely that this action, if implemented would not have any direct economic effect on any small entities in the near term or foreseeable future. Currently the recreational red snapper season can remain open, if quota is available, through September 30 and this proposed action would change this date to December 31. The recreational red snapper season in recent years, however, with the exception of 2010 when harvest was reduced as a result of the Deepwater Horizon oil spill, has not extended beyond July. The 2011 season lasted 48 days, but the recreational quota was exceeded, and the 2012 season is season is expected to be shorter. As a result, absent a reduction in the bag limit or other extreme circumstances that changes the effort, harvest rate, or availability of fish, the likelihood of the season extending to October 1 is unknown but expected to be very low. Thus, this action is not likely to have any direct economic effect on any small entities in the foreseeable future.

This proposed action would also increase the red snapper ABC in 2012 by 895,000 pounds and increase the ABC in 2013 by an additional 610,000 pounds more than the 2012 ABC (or a total increase of 1.505 million pounds more than the 2011 ABC), if the 2012 ABC is not exceeded. These increases in the ABC would be expected to result in an increase in revenue and profits to the affected commercial and for-hire fishing businesses.

In summary, this proposed action, if implemented, would be expected to increase profits to all directly affected small entities.

6.7 Description of significant alternatives to the proposed action

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-Stevens Fishery Conservation and Management Act (16 U.S.C. 1801 et seq.) provides the authority for management of stocks included in fishery management plans in federal waters of the exclusive economic zone. However, management decision-making is also affected by a number of other federal statutes designed to protect the biological and human components of U.S. fisheries, as well as the ecosystems that support those fisheries. Major laws affecting federal fishery management decision-making are summarized below.

Administrative Procedures Act

All federal rulemaking is governed under the provisions of the Administrative Procedure Act (5 U.S.C. Subchapter II), which establishes a "notice and comment" procedure to enable public participation in the rulemaking process. Under the Act, the National Marine Fisheries Service (NMFS) is required to publish notification of proposed rules in the *Federal Register* and to solicit, consider, and respond to public comment on those rules before they are finalized. The Act also establishes a 30-day waiting period from the time a final rule is published until it takes effect.

Coastal Zone Management Act

Section 307(c)(1) of the federal Coastal Zone Management Act of 1972 (CZMA), as amended, requires federal activities that affect any land or water use or natural resource of a state's coastal zone be conducted in a manner consistent, to the maximum extent practicable, with approved state coastal management programs. The requirements for such a consistency determination are set forth in 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 plan amendment is consistent with the Coastal Zone Management programs of the states of Alabama, Florida, Louisiana, Mississippi, and Texas to the maximum extent possible. Their determination will then be submitted to the responsible state agencies under Section 307 of the CZMA administering approved Coastal Zone Management programs for these states.

Data Quality Act

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

Specifically, the Act directs the Office of Management and Budget 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 FMPs and amendments and the use of best available information is the second national standard under the Magnuson-Stevens Fishery Conservation and Management Act. To be consistent with the Act, FMPs and amendments must be based on the best information available. They should also properly reference all supporting materials and data, and be reviewed by technically competent individuals. With respect to original data generated for FMPs and amendments, it is important to ensure that the data are collected according to documented procedures or in a manner that reflects standard practices accepted by the relevant scientific and technical communities. Data will also undergo quality control prior to being used by the agency and a pre-dissemination review.

Endangered Species Act

The Endangered Species Act (ESA) of 1973, as amended, (16 U.S.C. Section 1531 et seq.) requires federal agencies use their authorities to conserve endangered and threatened species. The ESA requires NMFS, when proposing an action for managed stocks 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 fishing activities, and studies of pinniped-fishing activity interactions.

Under section 118 of the MMPA, NMFS must publish, at least annually, a List of Fisheries that places all U.S. commercial fishing activities into one of three categories based on the level of incidental serious injury and mortality of marine mammals that occurs in each fishing activity. The categorization of a fishing activity in the List of Fisheries determines whether participants in that fishing activity may be required to comply with certain provisions of the MMPA, such as registration, observer coverage, and take reduction plan requirements.

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 Act requires NMFS to obtain approval from the Office of Management and Budget before requesting most types of fishing activity information from the public. None of the alternatives in this amendment are expected to create additional paperwork burdens.

Executive Orders (E.O.)

E.O. 12630: Takings

The E.O. 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

E.O. 12866: Regulatory Planning and Review, signed in 1993, requires federal agencies to assess the costs and benefits of their proposed regulations, including distributional impacts, and to select alternatives that maximize net benefits to society. To comply with E.O. 12866, NMFS prepares a Regulatory Impact Review (RIR) for all regulatory actions that either implement a new fishery management plan or significantly amend an existing plan. RIRs provide a comprehensive analysis of the costs and benefits to society of proposed regulatory actions, the problems and policy objectives prompting the regulatory proposals, and the major alternatives that could be used to solve the problems. The reviews also serve as the basis for the agency's determinations as to whether proposed regulations are a "significant regulatory action" under the criteria provided in E.O. 12866 and whether proposed regulations will have a significant economic impact on a substantial number of small entities in compliance with the Regulatory Flexibility Analysis. A regulation is significant if it: 1) Has an annual effect on the economy of $100 million or more or adversely affects in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State,

local, or tribal governments and communities; 2) creates a serious inconsistency or otherwise interferes with an action taken or planned by another agency; 3) materially alters the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or 4) raises novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in this Executive Order.

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

This E.O 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.

E.O. 12962: Recreational Fisheries

This E.O. requires federal agencies, in cooperation with states and tribes, to improve the quantity, function, sustainable productivity, and distribution of U.S. aquatic resources for increased recreational fishing opportunities through a variety of methods including, but not limited to, developing joint partnerships; promoting the restoration of recreational fishing areas that are limited by water quality and habitat degradation; fostering sound aquatic conservation and restoration endeavors; and evaluating the effects of federally-funded, permitted, or authorized actions on aquatic systems and recreational fisheries, and documenting those effects. Additionally, it establishes a seven-member National Recreational Fisheries Coordination Council (NRFCC) responsible for, among other things, ensuring that social and economic values of healthy aquatic systems that support recreational fisheries are considered by federal agencies in the course of their actions, sharing the latest resource information and management technologies, and reducing duplicative and cost-inefficient programs among federal agencies involved in conserving or managing recreational fisheries. The NRFCC also is responsible for developing, in cooperation with federal agencies, States and Tribes, a Recreational Fishery Resource Conservation Plan - to include a five-year agenda. Finally, the Order requires NMFS and the U.S. Fish and Wildlife Service to develop a joint agency policy for administering the ESA.

E.O. 13089: Coral Reef Protection

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

Regulations are already in place to limit or reduce habitat impacts within the Flower Garden Banks National Marine Sanctuary. Additionally, NMFS approved and implemented Generic Amendment 3 for Essential Fish Habitat (GMFMC 2005a), which established additional habitat areas of particular concern (HAPCs) and gear restrictions to protect corals throughout the Gulf of Mexico. There are no implications to coral reefs by the actions proposed in this amendment.

E.O. 13132: Federalism

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

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 E.O. 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, HAPCs, and gear-restricted areas in the eastern and northwestern Gulf. 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 Magnuson-Stevens Fishery Conservation and Management Act included a new habitat conservation provision that requires each existing and any new FMPs to describe and identify essential fish habitat (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 Act. Section 305(b)(2) requires federal agencies to obtain a consultation for any action that may adversely affect EFH. An EFH consultation will be conducted for this action.

8. LIST OF PREPARERS (INTERDISCIPLINARY PLANNING TEAM)

Name	Expertise	Responsibility	Agency
Steven Atran	Biologist	Co-Team Lead – Amendment development, Introduction, Purpose and need	GMFMC
Cynthia Meyer	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
Stephen Holiman	Economist	Economic analyses	SERO
Jennifer Lee	Protected Resources	Protected species review	SERO
Shepherd Grimes	Attorney	Legal compliance	SERO
Andrew Strelcheck	Biologist	Scientific analyses	SERO
Noah Silverman	Natural Resource Management Specialist	NEPA compliance	SERO
Brian Linton	Assessment Analyst	Stock Assessment	SEFSC

9. LIST OF AGENCIES CONSULTED

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

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

NOAA General Counsel
U.S. Coast Guard
Environmental Protection Agency

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