

# Modification to the Recreational Red Snapper Annual Catch Target Buffers



## A.C.T.

### Framework Action to the Fishery Management Plan for Reef Fish Resources of the Gulf of Mexico

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## ABBREVIATIONS USED IN THIS DOCUMENT

ABC	acceptable biological catch
ACL	annual catch limit
ACT	annual catch target
Council	Gulf of Mexico Fishery Management Council
GMFMC	Gulf of Mexico Fishery Management Council
Gulf	Gulf of Mexico
Magnuson-Stevens Act	Magnuson-Stevens Fishery Conservation and Management Act
MRIP	Marine Recreational Information Program
NMFS	National Marine Fisheries Service
OFL	overfishing limit
SEDAR	Southeast Data, Assessment, and Review process
SEFSC	Southeast Fisheries Science Center
SERO	NMFS Southeast Regional Office
SRHS	Southeast region headboat survey
SSC	Scientific and Statistical Committee
TAC	total allowable catch
TPWD	Texas Parks and Wildlife Department

# TABLE OF CONTENTS

Abbreviations Used in this Document .....	iii
Table of Contents .....	iv
List of Tables .....	v
List of Figures .....	vi
Chapter 1. Introduction .....	1
1.1 Background .....	1
1.2 Purpose and Need .....	7
1.3 History of Management .....	7
Chapter 2. Management Alternatives .....	10
2.1 Action 1 – Modify Red Snapper Recreational Annual Catch Target (ACT) Buffers.....	10
Chapter 3. References .....	16
Appendix A: ACL/ACT Control Rule Worksheets .....	17

## LIST OF TABLES

<b>Table 1.1.1.</b> Recreational red snapper federal season lengths, quotas, and landings.....	2
<b>Table 1.1.2.</b> 2015 and preliminary 2016 landings of recreationally harvested red snapper in the Gulf of Mexico.....	3
<b>Table 1.1.3.</b> Recreational red snapper federal season lengths, quotas, and landings.....	5
<b>Table 1.1.4.</b> Adjusted 2017 recreational red snapper quota and annual catch target.....	5
<b>Table 2.1.1.</b> Red snapper ABC projections from the September 2015 Gulf SSC meeting (GMFMC 2015c).....	12
<b>Table 2.1.2.</b> Recreational component-specific risks of exceeding a component’s ACL by year for 2014-2017 at a 20% ACT buffer.....	14

## LIST OF FIGURES

<b>Figure 1.1.1.</b> Recreational red snapper quotas and landings.....	3
<b>Figure 1.1.2.</b> Analysis of probability of recreational red snapper quota being exceeded in 2014 at various ACT buffer levels.....	6

# CHAPTER 1. INTRODUCTION

## 1.1 Background

Quota based management of recreational red snapper was implemented in 1997 (GMFMC 1997a) in response to a provision in the Sustainable Fisheries Act of 1996 requiring the Council to establish quotas for the recreational sector and specifically red snapper. The Sustainable Fisheries Act added a provision to the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson Act) requiring that both the commercial and recreational red snapper harvests in the Gulf of Mexico (Gulf) be managed under a quota (Section 407(d)). Consequently, catch quotas for the recreational red snapper sector were implemented under a regulatory amendment in 1997 (GMFMC 1997a). From 1997 through 2013, the recreational quota was set at the recreational allocation of the total allowable catch (TAC), i.e., 49% of the TAC. In 2011, the Generic ACL/Accountability Measures (AMs) Amendment (GMFMC 2011) implemented ACLs and ACTs for all managed species. In 2015, under Amendment 40 (GMFMC 2014a), the recreational TAC was codified as the ACL as 49% of the stock ACL, and the private angler and for-hire components of the recreational sector were established with allocations of 57.7% and 42.3% of the recreational ACL, respectively. Amendment 28 (GMFMC 2015a) changed the recreational allocation to 51.5% of the stock ACL. Litigation led a federal judge to overturn the sector allocation change in Amendment 28 in March of 2017, which reduced the recreational ACL back to 49% of the stock ACL.

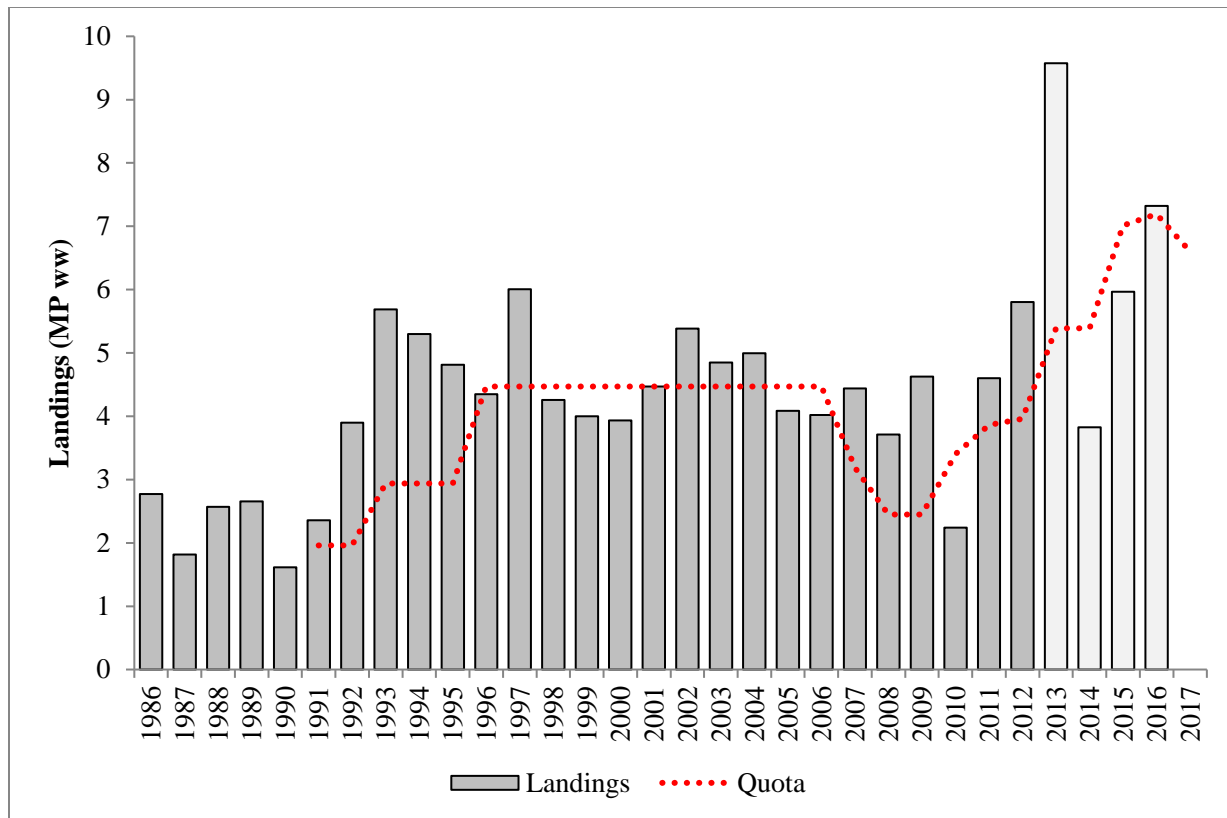
The commercial harvest of red snapper has been below the commercial quota each year since implementation of the red snapper individual fishing quota system in 2007. From 1997 - 2016, the recreational sector has only been constrained to the allowable catch limit (TAC, ACL, etc) four times, resulting in exceeding its allowable catch limit 16 times (Table 1.1.1). Only recently has the recreational sector been constrained within the allowable catch limit: in 2006 (the final year before a reduction in the annual catch limit (ACL)); 2010 (*Deepwater Horizon* oil spill); 2014 (when a 20% annual catch target (ACT) buffer was applied to the recreational sector); and 2015 (Amendment 40 divided the recreational sector into the private angler and for-hire components; the private recreational component exceeded its ACT, but not its ACL) (Table 1.1.1 and Figure 1.1.1). Preliminary landings estimates project that the 2016 combined recreational landings exceeded both the ACT and ACL (Table 1.1.2).

**Table 1.1.1.** Recreational red snapper federal season lengths, quotas, and landings. Quotas (allowable catch limit) and landings are in millions of pounds (mp) whole weight. Landings are based on the source data used to generate the quota to allow meaningful comparisons.

Year	Federal Season	Days Open	Quota	Landings	%Quota	Source
1986	January 1 – December 21	365	-	2.77	-	MRFSS
1987	January 1 – December 22	365	-	1.81	-	MRFSS
1988	January 1 – December 23	365	-	2.57	-	MRFSS
1989	January 1 – December 24	365	-	2.66	-	MRFSS
1990	January 1 – December 25	365	-	1.61	-	MRFSS
1991	January 1 – December 26	365	1.96	2.36	120%	MRFSS
1992	January 1 – December 27	365	1.96	3.90	199%	MRFSS
1993	January 1 – December 28	365	2.94	5.69	193%	MRFSS
1994	January 1 – December 29	365	2.94	5.30	180%	MRFSS
1995	January 1 – December 30	365	2.94	4.81	164%	MRFSS
1996	January 1 – December 31	365	4.47	4.35	97%	MRFSS
1997	January 1 – November 27	330	4.47	6.01	134%	MRFSS
1998	January 1 – September 30	272	4.47	4.26	95%	MRFSS
1999	January 1 – August 29	240	4.47	4.00	89%	MRFSS
2000	April 21 – October 31	194	4.47	3.93	88%	MRFSS
2001	April 21 – October 31	194	4.47	4.47	100%	MRFSS
2002	April 21 – October 31	194	4.47	5.38	120%	MRFSS
2003	April 21 – October 31	194	4.47	4.85	108%	MRFSS
2004	April 21 – October 31	194	4.47	5.00	112%	MRFSS
2005	April 21 – October 31	194	4.47	4.08	91%	MRFSS
2006	April 21 – October 31	194	4.47	4.02	90%	MRFSS
2007	April 21 – October 31	194	3.19	4.44	139%	MRFSS
2008	June 1 – August 4	65	2.45	3.71	151%	MRFSS
2009	June 1 – August 14	75	2.45	4.62	189%	MRFSS
2010	June 1 – July 23; Oct 1 – Nov. 21 (Fri, Sat., & Sun.)	77	3.40	2.24	66%	MRFSS
2011	June 1 – July 18	48	3.87	4.60	119%	MRFSS
2012	June 1 – July 16	46	3.96	5.80	147%	MRFSS
2013	June 1 – June 28; Oct 1 – Oct 14	42	5.39	9.58	178%	MRIP
2014	June 1 – June 9	9	5.39	3.83	71%	MRIP
2015	June 1 – June 10 (private angling); June 1 – July 14 (federal for-hire)	10; 44	7.01	5.97	85%	MRIP
2016	June 1 – June 11 (private angling); June 1 – July 16 (federal for-hire)	11; 46	7.19	7.32	102%	MRIP
2017	June 1 – June 3 (private angling) + 3-day weekends (June 16 – Sept 4); June 1 – July 19 (federal for-hire)	42; 49	6.60			MRIP

Source: Southeast Fisheries Science Center (SEFSC) annual catch limit dataset, including calibrated landings from the Marine Recreational Fisheries Statistics Survey (MRFSS), Marine Recreational Information Program (MRIP), LA Creel Survey, Texas Parks and Wildlife Department (TPWD), and the Southeast Region Headboat Survey (SRHS) (April 2017).





**Figure 1.1.1.** Recreational red snapper quotas and landings. Quotas and landings are in millions of pounds (mp) whole weight. Landings are based on the source data (i.e., MRFSS 1986-2012, MRIP 2013-2016) used to generate the quota to allow meaningful comparisons.

**Table 1.1.2.** 2015 and preliminary 2016 landings of recreationally harvested red snapper in the Gulf of Mexico. Landings are in pounds whole weight.

2015 Recreational Landings (lbs) by Two-month Wave												
Species Complex	Open Season	Jan-Feb	Mar-Apr	May-Jun	Jul-Aug	Sep-Oct	Nov-Dec	Total Reported	ACT	ACL	ACT %	ACL %
Red snapper For-Hire	Jun 1 - Jul 15	40,069	67,267	1,375,395	553,761	19,145	16,096	2,071,733	2,371,000	2,964,000	87	70
Red snapper Private	Jun 1 - Jun 11	20,732	302,300	2,593,888	496,166	429,434	51,889	3,894,409	3,234,000	4,043,000	120	96
2016 Preliminary Recreational Landings (lbs) by Two-month Wave												
Species Complex	Open Season	Jan-Feb	Mar-Apr	May-Jun	Jul-Aug	Sep-Oct	Nov-Dec	Total Reported	ACT	ACL	ACT %	ACL %
Red snapper For-Hire	Jun 1 - Jul 16	48,510	18,872	1,401,828	654,174	1,929	8,692	2,134,005	2,434,000	3,042,000	88	70
Red snapper Private	Jun 1 - Jun 12	185,877	95,737	3,485,444	810,659	420,925	189,259	5,187,901	3,320,000	4,150,000	156	125

Source: [SERO ACL Monitoring webpage](#); accessed May 16, 2016.

## *History of Recreational Catch Quotas and ACT Buffers*

Until 2010, the red snapper TAC was set at the acceptable biological catch (ABC) level, which was equivalent to what is now called the overfishing limit (OFL). Beginning in 2010, ABC became the OFL as reduced to account for scientific uncertainty based on an ABC control rule. In 2009, the Gulf Fishery Management Council's (Council) Scientific and Statistical Committee (SSC) reviewed a red snapper update assessment (SEDAR 7 Update 2009). The Council's ABC control rule had not yet been developed. In the absence of a control rule, the SSC in 2010 set the ABC at 75% of the OFL (GMFMC 2009a). The ABC continued to be set at either 75% of OFL or the yield corresponding to 75% of the fishing mortality level at 25% of the spawning potential ratio ( $F_{26\% SPR}$ ) through 2012.

Prior to 2014, the recreational red snapper season length was based on the projected time needed to reach the ACL. Beginning in 2014, in response to a ruling issued by a federal judge, the season length was based on when the ACT was projected to be reached rather than the quota in order to reduce the likelihood of an overharvest exceeding the ACL. In the three years since the ACT was used to project season length, the actual recreational landings have been below the ACL twice (2014 and 2015), and over the ACL once (2016). The overage in 2016 was attributable to several Gulf states extending their state water seasons following the federal fishing season announcement.

Amendment 40 divided the recreational sector into two components: the private angler and for-hire components. The private angler component was apportioned 57.7% of the recreational ACL, and the for-hire component 42.3% (GMFMC 2014). The 20% buffer between the ACL and the ACT was applied to both components individually, meaning that the ACT for each recreational component was 20% lower than that component's allocation of the recreational ACL. Amendment 40 also established a sunset provision, which would end sector separation in three years. Amendment 45 (GMFMC 2016) extended the original sunset date for Amendment 40 from 2017 to 2022. In the two years since Amendment 40 has been in effect, the private angler component has exceeded its ACL once (in 2016), while the for-hire component has not exceeded its ACL or ACT (Table 1.1.3). The AMs in place under Amendment 40 stipulate that if a recreational component exceeds its allocation of the recreational ACL, and the total recreational ACL is also exceeded, then in the following fishing year, the amount of the overage from the previous fishing year will be deducted from that component's allocation of the recreational ACL. Based on NMFS staff analysis and SSC review and deliberations, two years of recreational landings data do not appear to be a long enough time series to assess how successful each of the components is to staying within their respective component ACLs. Further, using the Council's ACL/ACT Control Rule with recreational component-specific landings data from 2015 and 2016 to determine the appropriate buffer between the ACL and the ACT does not yield meaningful or informative results for modifying future component-specific buffers (see Appendix A).

Amendment 28 (GMFMC 2015a) increased in the recreational allocation from 49% of the stock ACL to 51.5%, and went into effect for the 2016 fishing season. However, in response to a legal challenge, the sector allocation change in Amendment 28 was overturned in U.S. District Court,

reverting the sector allocations back to the previous levels of 49% recreational, 51% commercial for the 2017 fishing season.

The most stock assessment (SEDAR 31 Update 2015) for red snapper indicated that the stock was overfished, but was not experiencing overfishing. For 2017, the ABC (which is also the stock ACL) is 13.74 mp whole weight (ww). The recreational allocation (49% of the stock ACL) is 6.733 mp ww, which would normally be allocated 2.848 mp to the for-hire component and 3.885 mp to the private angler component. However, in 2016 the private angler component exceeded its allocation, resulting in the stock ACL being exceeded by 129,906 pounds ww. Under the accountability measures (AMs) of the red snapper rebuilding plan, the private angler allocation for 2017 has been reduced by the 129,906 lb ww overharvest, resulting in an adjusted private angling component ACL of 3,755,094. The for-hire component, which did not exceed its ACL, received its full allocation (Tables 1.1.3 and 1.1.4).

**Table 1.1.3.** Recreational red snapper federal season lengths, quotas, and landings.

Year	Component	Federal Season Dates	# Days Open	ACL (quota)	ACT	Landings	% ACL
2013	Combined	June 1 – June 28; Oct 1 – 14	42	5,390,000	NA	9,575,022	177.6%
2014	Combined	June 1 – June 9	9	5,390,000	4,312,000	3,825,536	71.0%
2015	Private Angler	June 1 – June 10	10	4,043,000	3,234,000	3,894,409	96.3%
	For-Hire	June 1 – July 14	44	2,964,000	2,371,000	2,071,733	69.9%
2016*	Private Angler	June 1 – June 10	10	4,150,000	3,320,000	5,187,901	125.0%
	For-Hire	June 1 – July 17	47	3,042,000	2,434,000	2,134,005	70.2%
2017*	Private Angler	June 1 – June 4	3	3,755,094	3,004,075	-	-
	For-Hire	June 1 – July 20	49	2,848,000	2,278,000	-	-

2016 preliminary landings are projections reported to the Council in October 2016 and are subject to revision.

\*Amendment 28 (GMFMC 2015a) changed the recreational allocation of red snapper from 49% to 51.5% of the stock ACL. In March 2017, a federal judge overturned Amendment 28, reverting the sector allocations back to their pre-Amendment 28 levels. The 2017 private angling component ACL was further adjusted to account for a 129,906 pound stock ACL overage in 2016.

**Table 1.1.4.** Adjusted 2017 recreational red snapper quota and annual catch target.

Sector or Component	2017 Quota (pounds whole weight)	2017 Annual Catch Target (pounds whole weight)
All Recreational	6,603,094*	n/a
Federal For-hire	2,848,000	2,278,000
Private angling	3,755,094*	3,004,075**

\* Adjusted by 129,906 lbs ww to account for 2016 overage. \*\*805 of the adjusted quota

Source: NMFS Southeast Regional Office

On March 26, 2014, in response to a legal challenge from commercial fishermen, the U.S. District Court for the District of Columbia ruled that the National Marine Fisheries Service (NMFS) failed to require adequate accountability measures for the recreational sector, failed to prohibit the retention of fish after the recreational ACL had been harvested, and failed to use the

best scientific information available when determining whether there should be a 2013 fall fishing season. In response to the Court’s decision and to reduce the probability of the recreational sector exceeding its ACL, the Council reviewed an analysis of buffer levels presented at the April 2014 Council meeting (Figure 1.1.2). A 20% buffer was expected to result in a 15% probability of overfishing (i.e., exceeding the ABC), and the Council requested, through an emergency rule, that NMFS implement an ACT that was 20% less than the 2014 recreational ACL and would be used to set the season length (Figure 1.1.2). An October 2014 framework action (GMFMC 2014b) subsequently established a recreational red snapper ACT that is 20% less than the recreational ACL. The framework action also established a recreational accountability measure (AM) as long as red snapper is overfished. If the recreational red snapper ACL is exceeded, the overage would be deducted from the recreational red snapper ACL in the following season unless the best scientific information available determines that a greater, lesser, or no overage adjustment is necessary.

## 2014 Red Snapper Season Lengths



Recreational Quota = 5.39 mp ww

Buffer (%)	Rec ACT (lbs ww)	Federal Season (days)	Prob. of Exceeding Quota
0%	5.39	17	50%
20%	4.312	11	15%
30%	3.773	8	5%
40%	3.234	5	<1%
60%	1.889	0	<1%



**Figure 1.1.2.** Analysis of probability of recreational red snapper quota being exceeded in 2014 at various ACT buffer levels.

Source: NMFS/SERO

The 20% ACT buffer for 2014 resulted in a recreational ACT of 4.312 million pounds (mp) whole weight (ww) reduced from an ACL of 5.39 mp ww. After taking into consideration inconsistent state regulations, a 9-day federal recreational red snapper season was announced for 2014, opening at 12:01 a.m., June 1, and closing at 12:01 a.m., on June 10. The ACTs for 2015

through 2017 were also adopted based on a 20% buffer under a 2015 framework action (GMFMC 2015d). The subsequent federal private recreational fishing seasons in 2015, 2016, and 2017 were 10 days, 11 days, and three days, respectively.

With the 20% ACT buffer in place, the total recreational harvest (private angler and for-hire vessels combined) was 28% below its ACL in 2014, 13% below its ACL in 2015, and is projected to be 2% over its ACL in 2016. In 2015, sector separation (Amendment 40; GMFMC 2014a) went into effect, dividing the private angler and for-hire components of the recreational sector, with respective allocations of 57.7% and 42.3% of the recreational ACL. The 20% ACT buffer was applied to each component. In 2015, the private angler and for-hire components landed 96% and 70% of their respective ACLs. In 2016, the private angler and for-hire components landed 125% and 70% of their respective ACLs. This suggests that the 20% ACT buffer is constraining harvest below the ACL for the for-hire component, but not for the private angler component.

## 1.2 Purpose and Need

The purpose is to adjust the ACT buffer for the red snapper recreational sector or sector components to a level that will allow a greater harvest without exceeding the component ACLs.

The need is to allow the recreational sector components to harvest red snapper at a level consistent with achieving optimum yield while preventing overfishing and to achieve more accurate and fair implementation of annual catch targets, and to address social and economic impacts of keeping the respective recreational red snapper fishing seasons open longer while allowing rebuilding targets to be achieved.

## 1.3 History of Management

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

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

*Red snapper allocation and quotas:* The final rule for **Amendment 1** (GMFMC 1989) to the Reef Fish FMP (with its associated Environmental Assessment (EA), Regulatory Impact Review (RIR, and Initial Regulatory Flexibility Analysis [IRFA]) was effective in February 1990. The amendment specified a framework procedure for specifying the total allowable catch (TAC) to allow for annual management changes. A part of that specification was to establish a species allocation. This was based on the percentage of total landings during the base period of 1979-1987. For red snapper, the commercial sector landed 51% and the recreational sector landed 49% of red snapper over the base period. **Amendment 1** also established a commercial quota of 3.1 million pounds. The recreational quota was established through a 1997 regulatory amendment (with its associated EA and RIR) (GMFMC 1995) with a final rule effective in October 1997. Prior to 1997, the recreational sector had exceeded its allocation of the red snapper TAC, though the overages were declining through more restrictive recreational management measures (see Section 3, Table 3.1.2). With the establishment of a recreational quota, the Regional Administrator was authorized to close the recreational season when the quota is reached as required by the Magnuson-Stevens Act. Commercial and recreational quotas, recreational allocations, and commercial and recreational landings are provided in Table 3.1.2. NMFS has recently changed the commercial and recreational allocation through **Amendment 28** (GMFMC 2015a). Amendment 28 reallocates the Gulf red snapper stock ACL between the commercial and recreational sectors from a 51 to 49% split to a 48.5 to 51.5% split, respectively.

At its April 2014 meeting, the Council requested an emergency rule to revise the recreational accountability measures for red snapper by applying a 20% buffer to the recreational quota, which resulted in a recreational ACT of 4.312 million pounds whole weight (NMFS 2014). The Council's decision to request an emergency rule was made following the decision of the U.S. District Court for the District of Columbia in *Guindon v. Pritzker* (March 26, 2014). A 2014 framework action created an ACT and a quota overage adjustment to apply to the 2015 fishing year and beyond (GMFMC 2014b). The action adopted an ACT based on a 20% buffer to the recreational quota. The Council also selected as preferred an overage adjustment such that the amount by which the recreational quota is exceeded in a fishing season is deducted from the following year's quota.

The Council established a federal for-hire and a private angling component within the Gulf recreational sector fishing for red snapper through **Amendment 40** (with its associated EIS, RIR, and Regulatory Flexibility Act analysis) which was implemented by NMFS on May 22, 2015 (GMFMC 2014a). The federal for-hire component is comprised of all for-hire operators with a valid or renewable federal charter vessel/headboat permit for reef fish and the private angling component is comprised of other for-hire operators and private recreational anglers. Amendment 40 allocated the red snapper recreational quota and ACT among the federal for-hire (42.3%) and private angling (57.7%) components.

*For-hire permit requirements:* The requirement to have a permit to operate for-hire vessels in the Gulf exclusive economic zone for reef fish fishing was implemented through **Amendment 11** (with its associated EA, RIR, and IRFA) on April 1, 1996 (GMFMC 1995). The initial purpose of the permits was to address potential abuses in the two-day bag limit allowance. It was thought that by having a permit to which sanctions could be applied would improve compliance with the two-day bag limit. In addition, the permit requirement was seen as a way to

enhance monitoring of for-hire vessels in the recreational sector. **Amendment 20** (with its associated EA and RIR; GMFMC 2003), implemented on June 16, 2003, established a three-year moratorium on the issuance of new charter and headboat Gulf reef fish permits to limit further expansion in the for-hire fisheries, an industry concern, while the Council considered the need for more comprehensive effort management systems. The moratorium was extended indefinitely in **Amendment 25** (with its Supplemental EIS, RIR, and IRFA, implemented June 15, 2006 [GMFMC 2006]).



## CHAPTER 2. MANAGEMENT ALTERNATIVES

### 2.1 Action 1 – Modify Red Snapper Recreational Annual Catch Target (ACT) Buffers

**Alternative 1:** No Action. The red snapper ACTs for the recreational components will remain at 20% below the recreational component annual catch limits (ACLs).

**Alternative 2:** Modify the respective component ACT buffers based on the performance of the existing buffers for recreational red snapper.

If the *ACL is exceeded* by the average landings of a component during the most recent three fishing years, then the buffer between that component's ACT and ACL in the following fishing year will equal 20% plus the percentage by which the ACL was exceeded by the average landings for those previous three fishing years.

Likewise, if the ACL is *not exceeded* by the average landings of a component during the most recent three fishing years, then the buffer between that component's ACT and ACL in the following year will equal 20% minus the percentage by which the ACL was not exceeded by the average for the previous fishing years; however, the buffer may not be less than some percentage (*Options 2a-2c*).

Minimum buffer specification:

**Option 2a:** 2% buffer between the ACT and ACL

**Option 2b:** 5% buffer between the ACT and ACL

**Option 2c:** 10% buffer between the ACT and ACL

**Alternative 3:** Modify the respective component ACT buffers based on the performance of the existing buffers for recreational red snapper.

If the landings for a component do *not exceed* that component's ACL, on average, during the three previous fishing years, then the buffer between that component's ACT and ACL will be reduced in the following fishing year (*Options 3a-3c*), but may not be less than a specified percentage of the component ACL (*Options 3d-3f*).

Likewise, if the landings for a component *exceed* that component's ACL in *any* fishing year, then the buffer between that component's ACT and ACL will be reset to or retained at 20%.

Rate of buffer reduction:

**Option 3a:** Reduce the buffer between the ACT and ACL by 1% for every 3% by which the landings are less than the ACL

**Option 3b:** Reduce the buffer between the ACT and ACL by 1% for every 2% by which the landings are less than the ACL

**Option 3c:** Reduce the buffer between the ACT and ACL by 1% for every 1% by which the landings are less than the ACL



Minimum buffer specification:

**Option 3d:** 2% buffer between the ACT and ACL

**Option 3e:** 5% buffer between the ACT and ACL

**Option 3f:** 10% buffer between the ACT and ACL

**Alternative 4:** Modify the respective component ACT buffers and specify the ACT corresponding to a specified risk of exceeding the component ACLs as determined through pre-season yield projections (*Options 4a-4c*).

Risk of exceeding the component ACL:

**Option 4a:** 25% risk

**Option 4b:** 20% risk

**Option 4c:** 15% risk

Discussion:

The for-hire and private recreational components are part of a single recreational sector. As a result, the overharvest payback provision is triggered only if the total recreational ACL for the for-hire and private angler components combined is exceeded. If one component exceeds its ACL while the other component harvests less than its component ACL, the combined catch may be less than the total recreational ACL, in which case there is no payback required. Even if the total recreational ACL is exceeded, the payback is only the amount by which the total recreational ACL is exceeded, not the individual component ACL. For example, in 2016, the private angler component harvested 25% above its ACL, while the for-hire component harvested 30% below its ACL. When the catches were combined, the total recreational ACL was exceeded by just 2%. Therefore, the private angler component only had a 2% payback in 2017 instead of a 25% payback. Adjusting the ACT buffer in only one component may result in larger paybacks in the other component if landings exceed the ACL.

The primary tool currently used to control recreational harvest and prevent the ACL from being exceeded in a given year is season length. The ACT buffer is used to account for uncertainty in keeping recreational catches from exceeding the ACL. At its January 5-6, 2016 meeting the Standing and Special Reef Fish SSC reviewed the methodology used by NMFS to set recreational red snapper season lengths. Numerous sources of uncertainty in projecting season length were identified, including:

- Prediction of state season lengths
- Prediction of state catch rates
- Effort compression during federal season
- Catch rates vs. rebuilding
- Fuel prices, economy, angler behavior
- Weather conditions
- States managing toward unofficial “ACLs” vs. “ACTs”
- Time-lag in receiving recreational landings estimates
- Fall re-openings uninformed by Wave 3 data
- Challenges estimating fall catch rates
- Precision issues with landings data
- Changes in recreational surveys

- Multiple sources for landings data, often with different estimates

The SSC discussed possible approaches to that could be used to evaluate a change in the ACT buffer. However, SSC members thought that, due to the numerous sources of uncertainty, there were too many moving parts to be able to establish a scientific justification for either changing or retaining the 20% buffer. In addition, with only two years of landings data under sector separation (Amendment 40), there are little data on which to base any analysis. The SSC members suggested that the buffer be re-evaluated in three to four years when more landings data under sector separation are available.

**Alternative 1** (No Action) retains the recreational ACT being set at 20% below the recreational ACL. The ABCs (and the resulting ACLs and ACTs) are projected to decline at least through 2020 (Table 2.1.1). As the ACLs and ACTs decline, it may become more difficult for NMFS to accurately project the number of fishing days needed to land the ACT, increasing the likelihood that ACT and ACL could be exceeded. Since the implementation of sector separation, the for-hire component of the recreational sector has not exceeded its ACT or ACL, while the private angler component has exceeded its ACT twice and its ACL once. This suggests that while the current 20% buffer (**Alternative 1**) appears to be properly constraining harvest for the for-hire component, the same cannot be said for the private angler component.

**Table 2.1.1.** Red snapper ABC projections from the September 2015 Gulf SSC meeting (GMFMC 2015c).

Year	ABC Projection
2015	14.30 mp
2016	13.96 mp
2017	13.74 mp
2018	13.38 mp
2019	12.84 mp
2020	12.48 mp

Note: Estimates assume discards continue at 2013 levels. The SSC only recommended ABCs for 2015-2017 because there is increasing uncertainty with the number of years projected. However, the overall trend is downward.

**Alternative 2** would modify the respective component ACT buffers based on the performance of the existing buffers for recreational red snapper. If the ACL is exceeded by the average landings of a component during the most recent three fishing years, then the buffer between that component's ACT and ACL in the following fishing year will equal 20% plus the percentage by which the ACL was exceeded by the average landings for those previous three fishing years. Likewise, if the ACL is not exceeded by the average landings of a component during the most recent three fishing years, then the buffer between that component's ACT and ACL in the following year will equal 20% minus the percentage by which the ACL was not exceeded by the average for the previous fishing years. If the buffer is not exceeded during the most recent three fishing years, and the buffer can be reduced, it still may not be less than either 2% (**Option 2a**), 5% (**Option 2b**), or 10% (**Option 2c**) below the ACL. **Alternative 2** allows for the incorporation of some interannual variability in landings and effort by using a three-year moving average, as opposed to a method which fixes the buffer over a period of time based on previous landings. Under **Alternative 2**, the buffer between the ACT and ACL for each recreational

component would be re-evaluated annually, based on that component's performance in the previous three fishing years. Invariably, the most recent year of the three-year average will consist of preliminary landings, or those landings which have not been fully qualified and vetted by NMFS. Using these landings carries some additional risk, in that the final landings may be somewhat different from those used to calculate the buffer under **Alternative 2**. It will be necessary, however, to use preliminary landings in order to adjust the buffer before the beginning of the recreational red snapper fishing season on June 1. Preliminary landings are typically available by mid-April, while finalized landings are not typically available until mid- to late-August.

For example, under **Alternative 2**, if one component's landings in the three fishing years prior to 2020 were 82% of that component's ACL, then the buffer for 2021 for that component would be 2% under **Option 2a** (20% less 18), 5% under **Option 2b**, and 10% under **Option 2c**. Conversely, if a component's landings were 12% over its component ACL for the same (hypothetical) three fishing years, then that component's buffer for 2021 would be 32% (original 20% buffer plus 12% over the ACL).

**Alternative 3** would modify the respective component ACT buffers based on the performance of the existing buffers for recreational red snapper. If the landings for a component do not exceed the component's ACL, on average, for three fishing years, then the buffer between that component's ACT and ACL will be reduced in the following fishing year. Likewise, if the landings for a component exceed that component's ACL in any given fishing year, then the buffer between that component's ACT and ACL will be reset to or retained at 20%. For scenarios where the buffer might be reduced under **Alternative 3**, options for reducing the buffer are ordered by most to least conservative: **Option 3a** would reduce the buffer between the ACT and ACL by 1% for every 3% by which the landings are less than the ACL; **Option 3b** would reduce the buffer by 1% for every 2%; and **Option 3c** would reduce the buffer by 1% for every 1%. **Alternative 3** relies on the component's average landings over three consecutive fishing years to determine the amount by which the buffer should be changed. However, if during any fishing year a component's ACL is exceeded, the buffer will be reset to or retained at 20%.

For example, under **Alternative 3**, if the for-hire component only harvests, on average, 87% of the for-hire component ACL for the 2018 – 2020 fishing years, then the for-hire component's buffer between the ACT and ACL for 2021 would be reduced from 20% to 16% under **Option 3a** (1% buffer reduction for every 3% under the ACL); to 14% under **Option 3b** (1% for every 2%); or to 7% under **Option 3c** (1% for every 1%). However, if in 2021 the for-hire component exceeds its ACL by any amount, the for-hire component's buffer between the ACT and ACL for 2022 would be increased back to the original 20%.

**Alternative 4** would modify the respective component ACT buffers and specify the ACT corresponding to a specified risk of exceeding the component ACLs as determined through pre-season yield projections. **Option 4a** would set a buffer between the component's ACT and ACL based on a 25% risk of that component exceeding its ACL; **Option 4b** would do the same based on a 20% risk; and **Option 4c** would do the same based on a 15% risk. **Alternative 4** relies on the projected risk of exceeding a component's ACL, making the ACT dynamically responsive to the perceived management uncertainty for the upcoming season. Factors which influence this

uncertainty include the time series of catch rate and average weight data, and the uncertainty in Gulf state seasons. Under **Alternative 4**, NMFS would publish the ACT, corresponding buffer based on the acceptable level of risk (**Options 4a-4c**), and the season length through an announcement in the Federal Register prior to the beginning of the recreational red snapper fishing year (presently June 1). An example for how this process functions quantitatively can be reviewed at:

[http://sero.nmfs.noaa.gov/sustainable\\_fisheries/gulf\\_fisheries/red\\_snapper/documents/pdfs/gulf\\_red\\_snapper\\_rec\\_season\\_2017.pdf](http://sero.nmfs.noaa.gov/sustainable_fisheries/gulf_fisheries/red_snapper/documents/pdfs/gulf_red_snapper_rec_season_2017.pdf).

For example, under **Alternative 4**, if **Option 4b** was selected as preferred, then the ACT would be set at an amount which corresponds to a 20% risk of that component’s ACL being exceeded. This 20% risk would be determined by assessing the state season lengths for the fishing year in question, the available data on the average weight of red snapper being landed by that recreational component, and that component’s catch rates (e.g., weekdays and weekends). Since the data used to make this determination change annually, **Alternative 4** represents another method of accounting for changes in the fishery over time. In the past, the component-specific risk of exceeding a component ACL have varied. These values are shown in Table 2.1.2. **Alternative 4** differs from the current practice of estimating the risk of exceeding the ACL based on a 20% buffer between the ACL and the ACT, because the amount of acceptable risk is fixed as opposed to the size of the buffer. This means that the actual buffer would likely adjust annually, based on the factors which influence the risk of exceeding the ACL.

**Table 2.1.2.** Recreational component-specific risks of exceeding a component’s ACL by year for 2014-2017 at a 20% ACT buffer.

Year	Component	Risk of Exceeding ACL (median and range)
2014	Private	15% <sup>1</sup>
	For-hire	
2015	Private	* <sup>2</sup>
	For-hire	* <sup>2</sup>
2016	Private	17 (10 – 26)% <sup>3</sup>
	For-hire	15 (1 – 28)% <sup>3</sup>
2017	Private	20 (19 – 21)% <sup>4</sup>
	For-hire	4 (2 – 6)% <sup>4</sup>

<sup>1</sup> Combined risk is shown here; sector separation was not in effect until 2015

<sup>2</sup> Uncertainty of risk buffer was not evaluated in a comprehensive fashion; see

[http://sero.nmfs.noaa.gov/sustainable\\_fisheries/lapp\\_dm/archives/documents/pdfs/2015/sero\\_lapp\\_2015\\_04\\_gom\\_rs\\_rec\\_season\\_projection.pdf](http://sero.nmfs.noaa.gov/sustainable_fisheries/lapp_dm/archives/documents/pdfs/2015/sero_lapp_2015_04_gom_rs_rec_season_projection.pdf)

<sup>3</sup> Represents the mean risk of exceeding the ACL with a 20% ACT buffer; see

[http://sero.nmfs.noaa.gov/sustainable\\_fisheries/lapp\\_dm/documents/pdfs/2016/sero-lapp-2016-04\\_gom\\_red\\_snapper\\_rec\\_season\\_2016\\_20160502\\_sero\\_final.pdf](http://sero.nmfs.noaa.gov/sustainable_fisheries/lapp_dm/documents/pdfs/2016/sero-lapp-2016-04_gom_red_snapper_rec_season_2016_20160502_sero_final.pdf)

<sup>4</sup> Represents the mean risk of exceeding the ACL with a 20% ACT buffer using bootstrapped model runs; see

[http://sero.nmfs.noaa.gov/sustainable\\_fisheries/gulf\\_fisheries/red\\_snapper/documents/pdfs/gulf\\_red\\_snapper\\_rec\\_season\\_2017.pdf](http://sero.nmfs.noaa.gov/sustainable_fisheries/gulf_fisheries/red_snapper/documents/pdfs/gulf_red_snapper_rec_season_2017.pdf)

In 2014, the Council initially specified a preference for a 15% risk of exceeding the ACL, which at the time corresponded to a 20% buffer between the ACT and the ACL. Table 2.1.2 shows that

the management uncertainty varies annually and by component, so if the Council chooses to manage the recreational red snapper components by the *risk of exceeding the ACL* as opposed to the *size of the buffer*, they will be managing the difference between the ACT and the ACL in a dynamic fashion (**Alternative 4**) compared to the present management strategy (**Alternative 1**). It is critical to note that the factors which determine the risk of exceeding the ACL will vary by year. This means that accepting a 20% risk of exceeding the ACL in one year will invariably result in a different buffer every year. However, as data collection methods improve and so long as changes in the management environment are infrequent, it is possible that the buffers associated with a given level of risk may decrease over time.

## CHAPTER 3. REFERENCES

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# APPENDIX A: ACL/ACT CONTROL RULE WORKSHEETS

## ACT/ACT Control Rule for the private angler component of the recreational sector for Gulf red snapper

As of 4/18/2017							
<b>ACL/ACT Buffer Spreadsheet</b>		version 4.1 - April 2011				<b>Red Snapper</b>	
sum of points	4.5			<b>Private Angler</b>		<b>Recreational - 2017/w 2016 preliminary landings</b>	
max points	6.5			Buffer between ACLand ACT (or ABC and ACL)		Unweighted	13
<b>Min. Buffer</b>	<b>0 min. buffer</b>	User adjustable				<b>Weighted</b>	<b>17</b>
Max Unw. Buff	19	max unwt. Buff					
<b>Max Wtd Buff</b>	<b>25 max wtd. buffer</b>	User adjustable					
<b>Element Scoring</b>							
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			2.5		
	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 Not applicable (there is no catch limit)		1.5			
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							
Timeliness	0	In-season accountability measures used or fishery is under an IFQ			1		
	1	In-season accountability measures not used		x			
				Sum	4.5		
<b>Weighting factor</b>							
	Element weight	Element		Selection	Weighting		
Overfished status	0	1. Stock biomass is at or above B <sub>ov</sub> (or proxy).			0.3		
	0.1	2. Stock biomass is below B <sub>ov</sub> (or proxy) but at or above B <sub>msy</sub> (or proxy).					
	0.2	3. Stock biomass is below B <sub>msy</sub> (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.					
<b>Historical Performance</b>							
Year	Catch	ACL	Over/Under %				
2015	3,894,409	4,043,000	-4%	No sector separation			
2016	5,187,901	4,150,000	25% <--	No sector separation			
				Charter For-hire component			
				Charter For-hire component			
No sector separation in 2013 and 2014. Landings/ACL are for total combined recreationa							
Maximum overage in years with sector separation = 25% = 1.5 points							
ACL exceeded 1 time in last 2 years							
Data Source ACL Data set SERO 18 April 2017							
Year	PSE						
2013	13.2						
2014	19.5						
2015	20.9						
2016	14.4						
Average 2011-20		17 Avg PSE < 20					

**Figure 1:** ACT/ACT Control Rule for the private angler component of the recreational sector for Gulf red snapper. 2016 landings are preliminary at the time of this analysis: 18 April 2017.



As of 4/18/2017		version 4.1 - April 2011		Red Snapper	
<b>ACL/ACT Buffer Spreadsheet</b>				<b>For-Hire Recreational - 2017/w 2016 preliminary landings</b>	
sum of points	2			Unweighted	8
max points	5.0	Buffer between ACLand ACT (or ABC and ACL)		Weighted	<b>10</b>
<b>Min. Buffer</b>	<b>0 min. buffer</b>	User adjustable			
Max Unw. Buff	19 max unwtd. Buff				
<b>Max Wtd Buff</b>	<b>25 max wtd. buffer</b>	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	x	0
	1	Catch limit has been exceeded 2 or more times in last 4 years		
		For the year with max. overage, add 0.5 pts. For every 10 percentage points (rounded up) above ACL Not applicable (there is no catch limit)	0.0	
		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		1
	1	In-season accountability measures not used	x	
			Sum	2

Weighting factor				
	Element weight	Element	Selection	Weighting
Overfished status	0	1. Stock biomass is at or above B <sub>OY</sub> (or proxy).		0.3
	0.1	2. Stock biomass is below B <sub>OY</sub> (or proxy) but at or above B <sub>MSY</sub> (or proxy).		
	0.2	3. Stock biomass is below B <sub>MSY</sub> (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.		

Year	Catch	ACL	Over/Under %	
				-- No sector separation
2015	2,071,733	2,964,000	-30%	No sector separation
2016	2,134,005	2,434,000	-12%	Charter For-hire component
				Charter For-hire component
				No sector separation in 2013 and 2014. Landings/ACL are for total combined recreationa
				No ACL overage in years with sector separation - 0 points
				ACL exceeded 0 times in last 2 years
				Data Source ACL Data set SERO 18 April 2017
Year	PSE			
2013	11.1			
2014	26.4			
2015	12.2			
2016	11.9			
Average 2011-20	15.4 Avg PSE < 20			

**Figure 2:** ACT/ACT Control Rule for the for-hire component of the recreational sector for Gulf red snapper. 2016 landings are preliminary at the time of this analysis: 18 April 2017.