

Modification of Midwater Snapper Complex Composition and Catch Limits

Draft Options for Amendment 61 to the Fishery Management Plan for the Reef Fish Resources of the Gulf of Mexico

January 2024



This is a publication of the Gulf of Mexico Fishery Management Council Pursuant to National Oceanic and Atmospheric Administration Award No. NA20NMF4410007.

This page intentionally blank

ENVIRONMENTAL ASSESSMENT COVER SHEET

Modification of Midwater Snapper Complex Composition and Catch Limits: Draft Amendment
61 to the Fishery Management Plan for Reef Fish Resources in the Gulf of Mexico.

Responsible Agencies and Contact Persons

Gulf of Mexico Fishery Management Council (Council)
4107 W. Spruce Street, Suite 200
Tampa, Florida 33607
Carly Somerset (carly.somerset@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
Rich Malinowski (rich.malinowski@noaa.gov)

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

Type of Action

☐ Administrative

☐ Legislative

☒ Draft

☐ Final

This [EIS/EA] applies CEQ's NEPA regulations currently in effect. See 40 C.F.R. § 1506.13.

ABBREVIATIONS USED IN THIS DOCUMENT

ABC	acceptable biological catch
ACL	annual catch limit
ACT	annual catch target
AM	accountability measure
B	biomass
Council	Gulf of Mexico Fishery Management Council
EA	Environmental Assessment
EEZ	Exclusive Economic Zone
EIS	environmental impact statement
FES	Fishing Effort Survey
FMP	Fishery Management Plan
GMFMC	Gulf of Mexico Fishery Management Council
MRFSS	Marine Recreational Fisheries and Statistics Survey
MRIP	Marine Recreational Information Program
MSA	Magnuson-Stevens Fishery Conservation and Management Act
NMFS	National Marine Fisheries Service
OFL	Overfishing Limit
RFA	Regulatory Flexibility Analysis
RIR	Regulatory Impact Review
SEDAR	Southeast Data Assessment and Review
SD	Standard deviation
SRD	Southeast Regional Director
SSC	Scientific and Statistical Committee

TABLE OF CONTENTS

Abbreviations Used in this Document	ii
Table of Contents	iii
List of Tables	iv
List of Figures	v
Chapter 1. Introduction	6
1.1 Background	6
1.2 Purpose and Need	18
1.3 History of Management	18
Chapter 2. Proposed Management alternatives.....	19
2.1 Action 1 – Reconsider Inclusion of Wenchman in the Fishery Management Plan for Reef Fish Resources in the Gulf of Mexico.....	19
2.2 Action 2 – Modify Catch Limits for the Mid-water Snapper Complex.....	22
Chapter 3. References	25
Appendix A. Preliminary Midwater Snapper Complex Catch Limit Analysis	26
Appendix B. Other Applicable Law	35

LIST OF TABLES

Table 1.1.1. Species in midwater snapper complex and the catch limit specifications for the stock complex	10
Table 1.1.2. Recreational and commercial landings, with recreational landings in both MRFSS and MRIP-FES, and combined landings for all four species within the midwater snapper complex from 1986 – 2022	10
Table 1.1.3. Current recreational and commercial regulations for each species in the midwater snapper complex	12
Table 1.1.4. Percentage of landings for each species by fishing gear from 2018-2022.....	12
Table 1.1.5. Proportion of species landed in the midwater snapper complex based on total landings	16
Table 1.1.6. SSC catch level recommendations for the midwater snapper complex, excluding wenchman	17

LIST OF FIGURES

Figure 1.1.1. Combined annual commercial and recreational landings (lb ww) of blackfin snapper, queen snapper, silk snapper and wenchman in the Gulf of Mexico from 1986 through 2022.....	7
Figure 1.1.2 Combined annual commercial and recreational landings (lb ww) of blackfin snapper, queen snapper, silk snapper and wenchman in the Gulf of Mexico from 1986 through 2022.....	8
Figure 1.1.2. Fraction of total annual midwater snapper catch, by species, from 2013 through 2022.....	14
Figure 1.1.3. Fraction of total annual midwater snapper catch, by species, from 2013 through 2022.....	15
Figure 2.2.1. Cumulative mid-water snapper (blackfin, queen, and silk snapper) landings for each projection method used.....	24

CHAPTER 1. INTRODUCTION

1.1 Background

History of Midwater Snapper Complex

The midwater snapper complex consists of four snapper species: silk, queen, blackfin and wenchman, each of which is discussed in more detail below. This complex is managed under the Fishery Management Plan (FMP) for the Reef Fish Resources of the Gulf of Mexico (Reef Fish FMP). This amendment considers removing wenchman snapper from the Reef Fish FMP and modifying the overfishing limit (OFL), acceptable biological catch (ABC), and annual catch limit (ACL) for the remaining species in the midwater snapper complex, consistent with recommendations from the Gulf of Mexico Fishery Management Council's (Council) Scientific and Statistical Committee (SSC¹).

Blackfin snapper: live in tropical waters of the western Atlantic from North Carolina and Bermuda, including the Gulf of Mexico, south to Trinidad and Northeastern Brazil (Burton et al. 2016). Although they occur throughout the Gulf, they are more common in the Caribbean. The fish is a deep red color at the top and a pale reddish to silver on the sides. Its most prominent feature is a black blotch at the base of the pectoral fin and its eyes are yellow to orange. Adults prefer deeper waters 197 – 295 feet (60 – 90 meters) over sandy or rocky bottoms near ledges; juveniles prefer rocky areas near reefs in shallower waters 115– 164 feet (35 – 50 meters) (Lieske, E. and R. Myers, 1994). Little is known about its spawning behavior or early life history. However, it is thought that adults spawn most of the year, with a peak in April and September.

Silk snapper: inhabit waters from North Carolina south to Florida, including the Gulf of Mexico, east to Bermuda, and further south to Brazil (SEDAR 26 2011). This fish is a rosy pink to red color on its sides and back, fading to a pinkish silvery color below. Its sides have faint wavy yellow lines. The fins are a pink to yellowish color; the tail fin has a dark reddish, black margin along the edge. At first glance, this fish may be mistaken for a red snapper but the silk snapper has a bright yellow eye and the anal fin is pointed. Silk snapper is common in tropical areas offshore in deep water 209 – 984 feet (64 – 300 meters) over sandy, rocky and coral bottoms (SEDAR 26 2011). Younger fish are more common in shallower waters. Silk snapper spawn throughout the year with seasonal peaks occurring in the spring and summer months depending on the location (SEDAR 26 2011).

Queen snapper: distributed in continental shelf waters throughout the western Atlantic as far east as Bermuda, and from North Carolina south through eastern Brazil (Bryan et al. 2011). It is a dark red to pinkish red above its midline with a long, slender body. The dorsal fin is spiny with a deep notch in the middle. The tail fin is deeply forked. Queen snapper are found deeper than

¹ <https://gulfcouncil.org/wp-content/uploads/Gulf-Standing-RF-Socio-Eco-SSC-Summary-May-2023-05172023.pdf>

other snapper species in the western Atlantic and Gulf of Mexico. They appear to inhabit depths between 328 – 1,640 feet (100 – 500 meters) based on angler observation². Little scientific information exists on the life history characteristics of queen snapper compared to other snappers. It reproduces throughout the year but, peak spawning is in October and November (SEDAR 26 2011).

Wenchman snapper: found from North Carolina to Florida, including the Gulf of Mexico, extending down to the Caribbean Sea and Brazil. This fish is a reddish to pinkish color on the top and sides and a pinkish to silvery color below. The fins are mostly semi-transparent with a light pink color, except for the yellow outer edges of the dorsal and tail fin. Wenchman have large eyes compared to body size. Within their range, wenchman prefer to reside in deeper water over hard bottom habitats, including reefs (McEachran, and Fechhelm 2005). Little is known about the life history characteristics of this species.

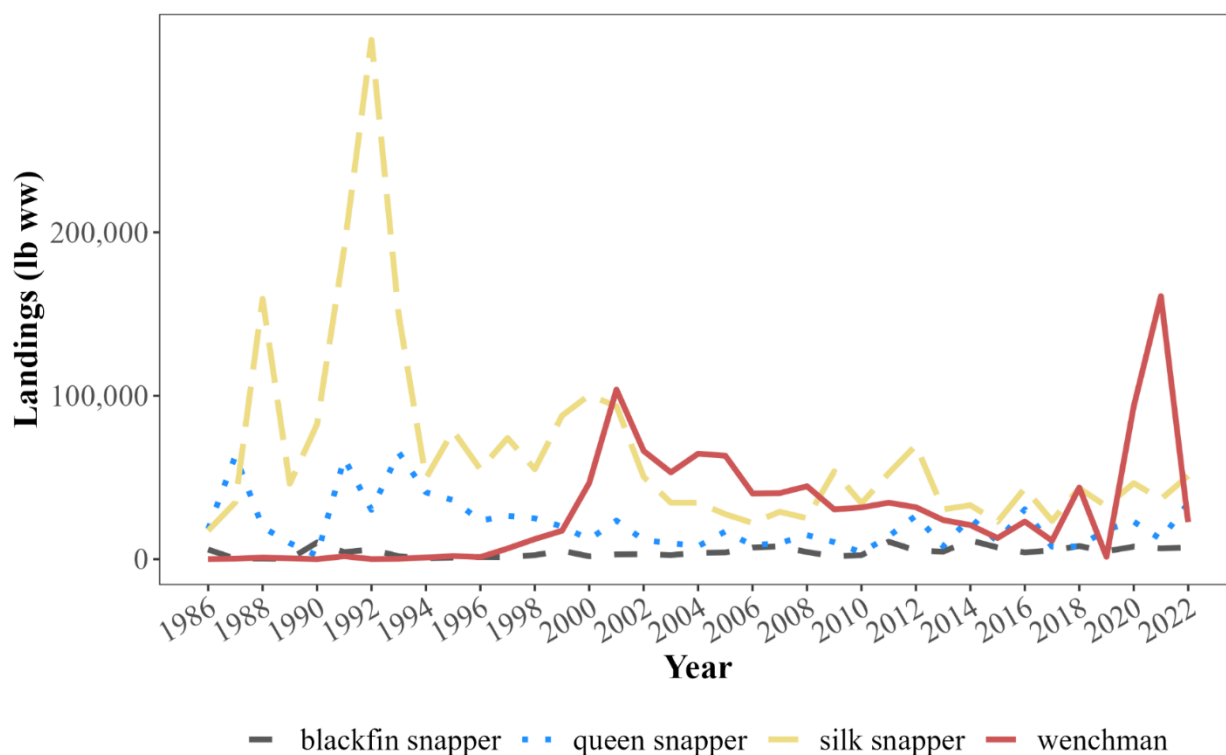


Figure 1.1.1. Combined annual commercial and recreational landings (lb ww) of blackfin snapper, queen snapper, silk snapper and wenchman in the Gulf of Mexico from 1986 through 2022. Recreational landings are derived from MRFSS. Data Sources: Commercial –SEFSC Commercial ACL Monitoring data – September 2023; SEFSC MRFSS ACL Monitoring data – December 2023; SEFSC FES ACL Monitoring data – December 2023.

² <https://www.fisheries.noaa.gov/feature-story/queen-snapper-fish-live-45-years-and-use-deep-sea-corals-habitat>

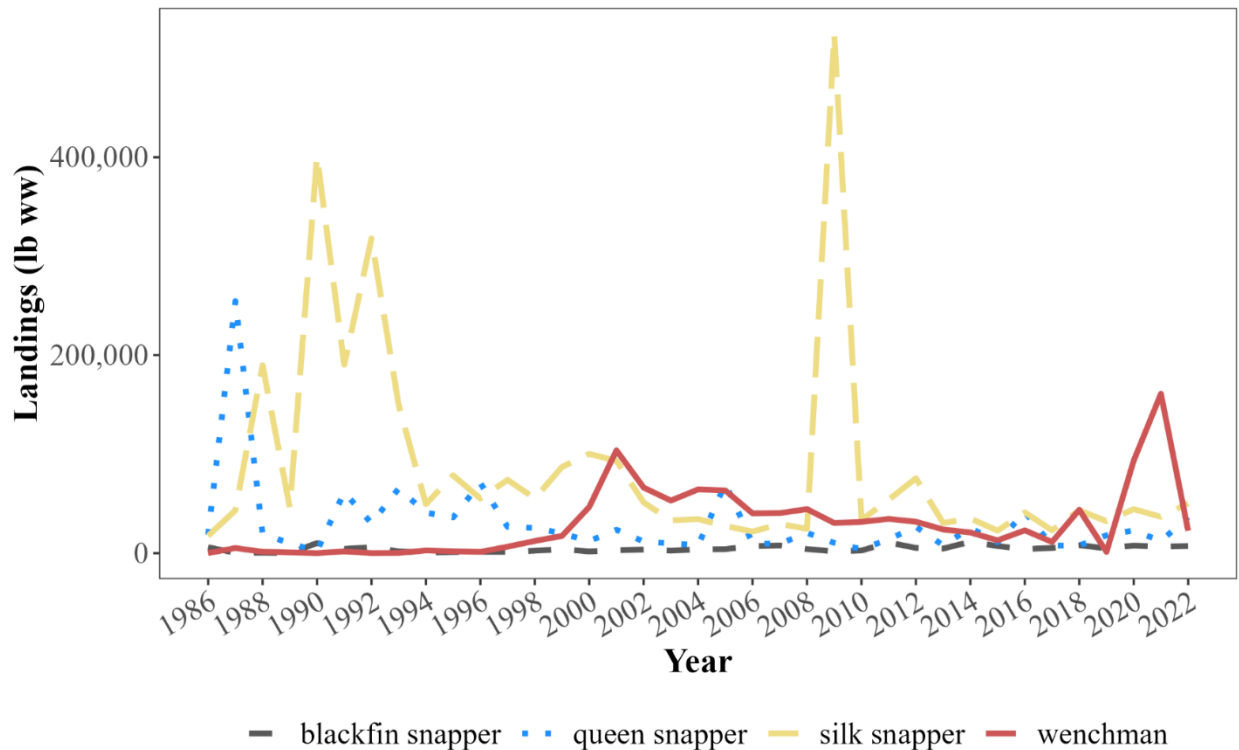


Figure 1.1.2 Combined annual commercial and recreational landings (lb ww) of blackfin snapper, queen snapper, silk snapper and wenchman in the Gulf of Mexico from 1986 through 2022. Recreational landings are derived from MRIP-FES. Data Sources: Commercial –SEFSC Commercial ACL Monitoring data – September 2023; SEFSC MRFSS ACL Monitoring data – December 2023; SEFSC FES ACL Monitoring data – December 2023.

With few exceptions, the 2007 amendments to the Magnuson-Stevens Fishery Conservation and Management Act (MSA) required FMPs to include ACLs and AMs to prevent overfishing of managed stocks. The Generic Comprehensive Annual Catch Limits / Accountability Measures (ACL/AM) Amendment implemented in 2011 established ACLs and AMs for all stocks managed under the Reef Fish FMP that did not have existing ACLs and AMs. At the time, only 13 species managed by the Reef Fish FMP had assessments that were appropriate for management advice. Therefore, other approaches for developing ACLs and AMs for certain species were explored (Farmer et. al 2010), including grouping unassessed species into complexes that could be managed as units. The amended National Standard 1 Guidelines define a stock complex “a group of stocks that are sufficiently similar in geographic distribution, life history, and vulnerabilities to the fishery such that the impact of management actions on the stocks is similar.”³ The Guidelines advise that stocks may be grouped into complexes for various reasons: if stocks in a multispecies fishery cannot be targeted independent of one another; if it is a data-poor stock to the point where there is insufficient data to measure that stock's status relative to Status Determination Criteria; or when fishermen cannot practicably distinguish individual stocks among their catch.⁴ For the purpose of evaluating whether to establish stock complexes, Farmer et. al (2010) provided analyses that examined criteria such as species

³ 50 CFR 600.310

⁴ 50 CFR 600.310(d)(8)

assemblages, geographic distributions, life history, depth occurrences, and abundance for various Gulf stocks. The analyses concluded that wenchman, silk snapper, and blackfin snapper occurred in mid-to-deep water, and queen snapper and wenchman often clustered with deep-water grouper and tilefish species. The makeup of the midwater snapper complex was a result of a preferred alternative from the ACL/AM Amendment but the amendment also evaluated whether various stocks should be removed from the Reef Fish FMP, including wenchman, silk snapper, blackfin snapper, and queen snapper. All four-snapper species remained in the FMP and a combined OFL, ABC, ACL, and ACT was set for the complex. The OFL and ABC were based on landings from 2000 to 2008 under Tier 3A of the Acceptable Biological Catch control rule because no assessment was available but landings data existed and the probability of exceeding the OFL in a given year could be approximated from the variance about the mean of recent landings. The ACL was set equal to the ABC for the complex. The ACT was calculated using a version of the ACL/ACT control rule based on a point system and a series of components representing various aspects of management uncertainty to derive the percent buffer that was deemed adequate. The ACT was set at 18% below the ACL (GMFMC 2011). The recreational landings estimates used to establish the current catch limits were generated by the Marine Recreational Fisheries Statistics Survey (MRFSS). The Marine Recreational Information Program (MRIP) replaced MRFSS in 2008. Therefore, to compare current landings to the catch limits, the National Marine Fisheries Service (NMFS) Southeast Fisheries Science Center converts recreational estimates generated using MRIP to MRFSS units.⁵

Revisions were made to some of the National Standard Guidelines, including new language added to the 2016 guidelines that further identified criteria for Council consideration when deciding whether additional stocks require conservation and management. This list of factors is based on the definition of conservation and management, as defined in the Magnuson-Stevens Act (MSA), along with other relevant provisions. The MSA requires Councils to prepare FMPs for those fisheries it deems in need of conservation and management, specifically, stocks that are predominantly caught in federal waters, are overfished or experiencing overfishing, or have a probability to be overfished or experience overfishing. However, for stocks that may not be predominantly caught in federal waters or are not overfished or likely to experience overfishing, Councils may determine whether these additional stocks require FMPs based on the below factors:

- (i) The stock is an important component of the marine environment.
- (ii) The stock is caught by the fishery.
- (iii) Whether an FMP can improve or maintain the condition of the stock.
- (iv) The stock is a target of a fishery.
- (v) The stock is important to commercial, recreational, or subsistence users.
- (vi) The fishery is important to the Nation or to the regional economy.
- (vii) The need to resolve competing interests and conflicts among user groups and whether an FMP can further that resolution.
- (viii) The economic condition of a fishery and whether an FMP can produce more efficient utilization.

⁵ Although both MRFSS and MRIP generate estimates measured in pounds of fish, these estimates are not directly comparable. To signify that the estimates use different scales, this document uses the terms “MRFSS units” and “MRIP units” to describe the recreational catch limits.

- (ix) The needs of a developing fishery, and whether an FMP can foster orderly growth.
- (x) The extent to which the fishery is already adequately managed by states, by state/Federal programs, or by Federal regulations pursuant to other FMPs or international commissions, or by industry self-regulation, consistent with the requirements of the Magnuson-Stevens Act and other applicable law.⁶

Additionally, the National Standard Guidelines offer pertinent information when reviewing whether stocks should remain in an FMP, or when considering removing a stock from an FMP. The guidelines state that the Council should analyze the ten factors above along with any other relevant factors, and that the first three factors (i, ii, iii) should take precedent in consideration as they address maintaining the resource and the marine environment. Analysis of a stock removal from an FMP should also include how significant the amount and type of catch is that occurs in federal waters, and how much that contributes to the stock's status. The Council should also reflect on whether the stock can be adequately managed by the states or a combination of state and federal programs, which would lend weight to consideration of removal of the stock from an FMP.

Table 1.1.1. Species in midwater snapper complex and the catch limit specifications for the stock complex. Catch limits were derived in part using recreational landings estimates generated by the Marine Recreational Fisheries Statistics Survey (MRFSS) and commercial landings. Catch limits are presented below in million pounds whole weight (mp ww).

Midwater Snapper Complex	OFL	ABC	ACL	ACT
Silk snapper Queen snapper Wenchman Blackfin snapper	209,000 lb ww	166,000 lb ww	166,000 lb ww	136,000 lb ww

Currently, only one of the four species in the complex, has been attempted to be assessed. Wenchman was assessed in 2016 through Southeast Data Assessment and Review (SEDAR) 49. Unfortunately, the assessment did not result in useable management advice. Therefore, updates to the catch levels must be made using a data poor method, such as landings history, similar to how it was originally determined in the ACL Amendment. Although landings data are limited for this complex, it appears that the dominant landings source is from the commercial sector (Table 1.1.2). Recreational landings are shown in MRFSS and MRIP-FES units. A large portion of the landings data must be shown in aggregate, instead of individual species, or averaged across years to avoid confidentiality issues, such as the number of dealers purchasing product and/or vessels harvesting a specific species does not meet the minimum threshold.

Table 1.1.2. Recreational and commercial landings, with recreational landings in both MRFSS and MRIP-FES, and combined landings for all four species within the midwater snapper complex from 1986 – 2022. Landings are in lb ww. Data Sources: Commercial –SEFSC

⁶ <https://media.fisheries.noaa.gov/dam-migration/ns1-redline-final-rule.pdf>

Commercial ACL Monitoring data – September 2023; SEFSC MRFSS ACL Monitoring data – December 2023; SEFSC FES ACL Monitoring data – December 2023.

Year	Commercial	Recreational (MRFSS)	Total (w/MRFSS)	Recreational (FES)	Total (w/FES)
1986	39,940	1,804	41,744	2,061	42,001
1987	72,778	25,633	98,411	230,686	303,464
1988	112,993	67,262	180,255	98,206	211,199
1989	55,925	159	56,084	159	56,084
1990	71,971	22,966	94,937	341,423	413,394
1991	257,658	459	258,117	459	258,117
1992	352,897	991	353,888	1,006	353,903
1993	216,496	409	216,905	409	216,905
1994	90,749	1,238	91,987	2,902	93,651
1995	117,300	226	117,526	226	117,526
1996	36,570	44,592	81,162	92,068	128,638
1997	108,108	330	108,438	185	108,293
1998	94,117	662	94,779	1,509	95,626
1999	126,230	4,030	130,260	2,062	128,292
2000	159,532	1,420	160,952	1,263	160,795
2001	217,805	6,070	223,875	5,842	223,647
2002	128,546	2,725	131,271	4,172	132,718
2003	97,879	2,106	99,985	680	98,559
2004	109,985	866	110,851	490	110,475
2005	107,284	4,577	111,861	57,926	165,210
2006	75,337	2,580	77,917	3,565	78,902
2007	83,499	3,508	87,007	3,655	87,154
2008	84,742	3,952	88,694	9,005	93,747
2009	62,776	33,514	96,290	504,436	567,212
2010	70,614	1,728	72,342	1,256	71,870
2011	110,231	1,543	111,774	2,895	113,126
2012	122,233	11,144	133,377	17,111	139,344
2013	65,613	1,291	66,904	1,291	66,904
2014	85,863	4,828	90,692	6,876	92,739
2015	51,921	1,881	53,802	1,810	53,730
2016	78,649	22,314	100,962	31,212	109,860
2017	40,925	6,930	47,855	6,342	47,267
2018	101,078	1,882	102,960	1,810	102,888
2019	54,418	2,245	56,663	2,087	56,505
2020	153,828	16,698	170,527	14,558	168,386
2021	214,090	2,362	216,452	2,238	216,327
2022	78,963	36,135	115,098	37,635	116,598

Current Regulations and Landings for the Midwater Snapper Complex

The midwater snapper complex is managed under a stock ACL and there are no sector allocations. The stock ACL is 166,000 pounds whole weight in MRFSS units. The four snapper species in this complex are open year-round for both the recreational and commercial sectors unless the accountability measure (AM) requires an in-season closure. There is not a recreational or commercial minimum size limit for the species in the complex. There is a 10-fish recreational bag limit for each species per person within the 10-fish snapper aggregate bag limit (Table 1.1.3). Recreationally, all four species are caught by hook-and-line. Commercial fishermen harvest wenchman by deepwater trawl often as bycatch, when the trawls are set and retrieved to target butterfish and scad (Table 1.1.4). The butterfish and scad fisheries have been developing since the 1980s primarily for Asian markets. The Gulf butterfish fishery is small, with only a handful of vessels supplying fish to a small number of dealers. Butterfish and scad are caught in deepwater trawls; the fish are stored in the vessel then sorted upon return to the dock. Although butterfish are not state or federally regulated, the landings are recorded on state trip tickets.

The Council established an accountability measure (AM) for the midwater snapper complex as a whole in the Generic ACL Amendment (GMFMC 2011). “If the sum of the commercial and recreational landings, as estimated by the Southeast Regional Director (SRD), exceeds the stock complex ACL, then during the following fishing year, if the sum of commercial and recreational landings reaches or is projected to reach the stock complex ACL, the Assistant Administrator for NOAA Fisheries will file a notification with the Office of the Federal Register to close the commercial and recreational sectors for the remainder of that fishing year.”⁷

Table 1.1.3. Current recreational and commercial regulations for each species in the midwater snapper complex.

	Recreational				Commercial	
	Size limit	Bag limit	Aggregate	Season	Size limit	Season
Blackfin Snapper	None	10	10	Year-round	None	Year-round
Queen Snapper	None	10	10	Year-round	None	Year-round
Silk Snapper	None	10	10	Year-round	None	Year-round
Wenchman	None	10	10	Year-round	None	Year-round

Table 1.1.4. Percentage of landings for each species by fishing gear from 2018-2022.

⁷ CFR 622.41(i)

Species	Nets	Vertical Lines	Other
blackfin snapper	0.1	99.9	0.0
queen snapper	0.0	99.8	0.2
silk snapper	0.0	99.6	0.4
wenchman	98.2	1.8	0.0

Compared to other federally managed reef fish species, the species in this complex are considered more rare-event species and are often harvested incidentally. Recently, spikes in landings led to the midwater snapper complex ACL being exceeded and the season was closed early in 2021. Because few fishermen land wenchman, examination and presentation of these landings in an informative manner has been difficult due to annual confidentiality issues with the landings data and decreased reliability of the recreational landings because these are rare-event species captured on MRIP surveys. From 2012 to 2021, there were no in-season closures of the midwater snapper complex; total landings were often well below the stock ACL. A noticeable increase in landings occurred in 2020 and 2021. In 2020, 100.5% of the stock ACL was landed, although the season did not close early. However, in 2021, landings exceeded the stock ACL by 31% and the season closed early on September 18, 2021 (Table 1.1.2). These increased landings and subsequent early closure of the midwater snapper season in 2021 led to discussions at SSC and Council meetings as to why landings would suddenly increase drastically, and if one, or more, species in the complex was being targeted or harvested more often. Examination of the stock landings indicated that high landings of wenchman in 2020 and 2021 led to the midwater snapper complex ACL being exceeded in those two years (Figure 1.1.2; Figure 1.1.3), however, more data are needed to better understand if this is a trend or recent anomaly.

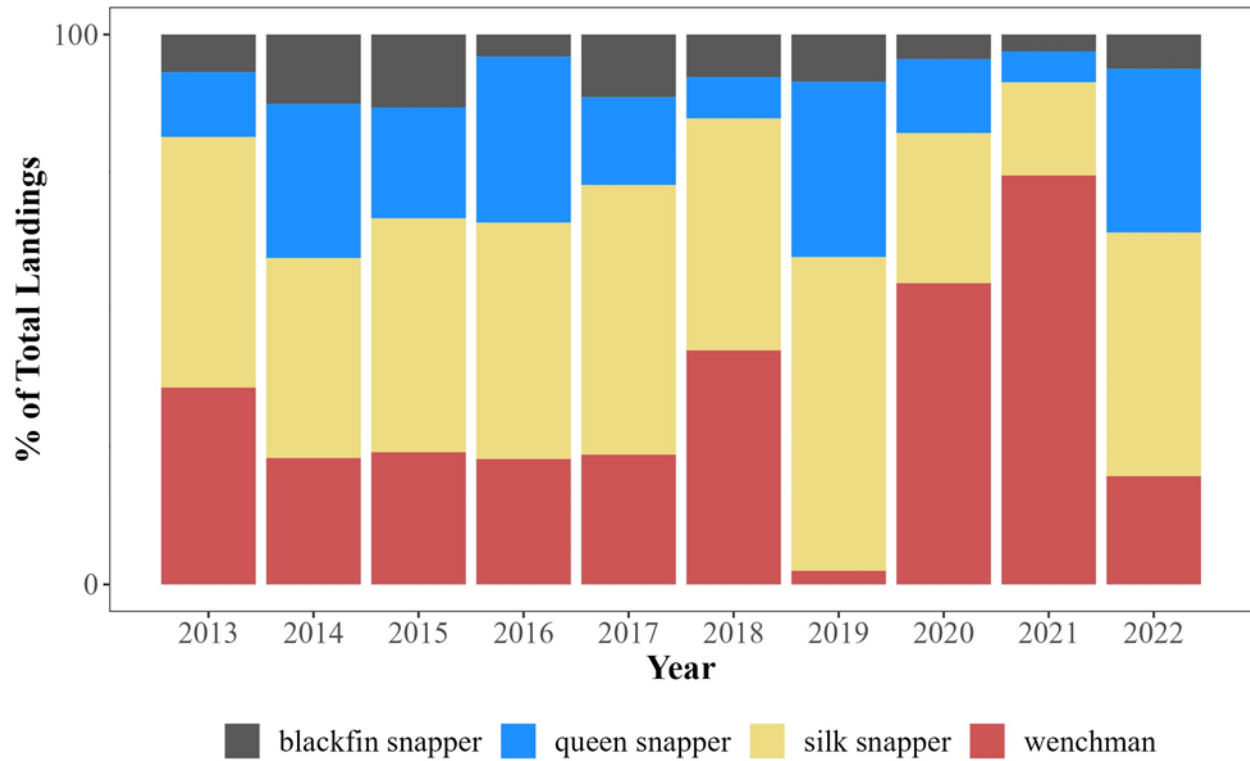


Figure 1.1.2. Fraction of total annual midwater snapper catch, by species, from 2013 through 2022. Recreational landings are in MRFSS and both recreational and commercial landings are combined per year. Data Sources: Commercial –SEFSC Commercial ACL Monitoring data – September 2023; SEFSC FES ACL Monitoring data – December 2023

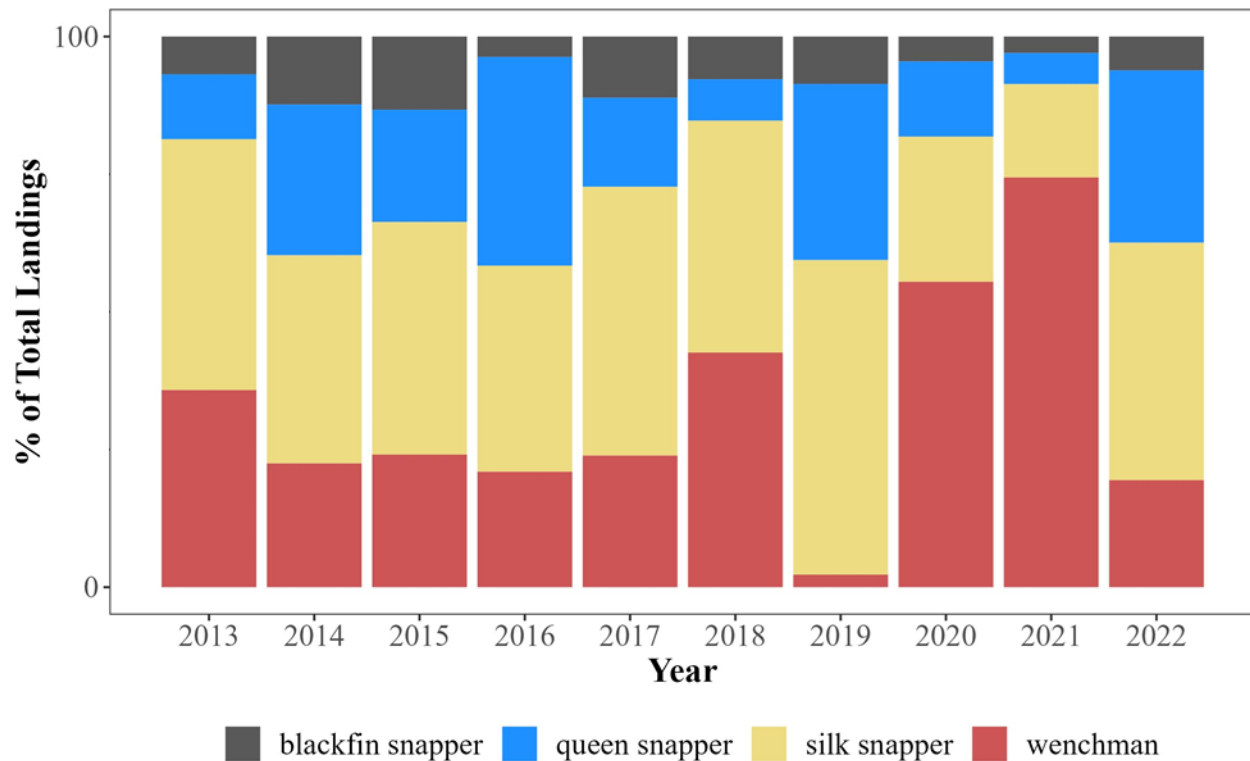


Figure 1.1.3. Fraction of total annual midwater snapper catch, by species, from 2013 through 2022. Recreational landings are in MRIP-FES and both recreational and commercial landings are combined per year. Data Sources: Commercial –SEFSC Commercial ACL Monitoring data – September 2023; SEFSC FES ACL Monitoring data – December 2023

An analysis of midwater snapper landings by species indicate that the proportion of landings attributed to each species annually, from 2013 through 2022, were somewhat mixed until 2020 and 2021 when the proportion of wenchman landings increased. Other than those two years, within this 10-year time period, the highest proportion of landings from the mid-water complex were attributed to silk snapper (Figure 1.1.2; 1.1.3; Table 1.1.5). Wenchman become the largest component of the midwater snapper complex to be harvested when averaged over that same ten-year period because of the higher landings in 2020 and 2021 (Table 1.1.5). Further investigation of wenchman landings revealed that commercial landings mostly come from trawls (93-99% of the total between 2014 and 2020), and recreational landings are much less (less than 0.2% of the total removals on average from 2012 to 2020)⁸.

⁸ https://gulfcouncil.org/wp-content/uploads/10ab.-Setting-OFL-and-ABC-for-Wenchman_NON-CONFIDENTIAL-1.pdf

Table 1.1.5. Proportion of species landed in the midwater snapper complex based on total landings (recreational and commercial) over a 10-year period from 2013 through 2022. Recreational landings are in MRFSS and MRIP-FES.

Species	Landings (w/MRFSS) - 2013-2022		Landings (w/FES) - 2013-2022	
	<i>lb ww</i>	%	<i>lb ww</i>	%
blackfin snapper	66,983	6.6	66,625	6.5
queen snapper	177,478	17.4	190,935	18.5
silk snapper	363,114	35.5	359,455	34.9
wenchman	414,340	40.5	414,190	40.2

The recent increase in midwater snapper complex landings and subsequent early closure of the midwater snapper complex season in 2021 triggered Council and SSC discussions resulting in recommendations to remove wenchman from the midwater snapper complex and to set a new OFL and ABC for the complex, excluding wenchman. Shortly after the season closure, a butterfish fisherman attended the 2021 October Council stating that he had recently encountered more wenchman when using deepwater trawls to harvest butterfish and scad. He was trawling 50, 60 and then 120 fathoms but could not escape the wenchman even though he wasn't targeting them⁹. Following the public testimony at the October 2021 Council meeting, other commercial butterfish fishermen provided written and verbal testimony, including records of species caught, at the July 2022 SSC meeting. They stated that only wenchman are frequently encountered due to the depths at which they trawl and that they are scattered ubiquitously throughout that depth range. Because wenchman can be marketed for human consumption, they are not discarded when caught; however, butterfish and scad are the directed species in that fishery. The butterfish fishermen also remarked that, even though wenchman have been part of the butterfish fishery for some time, they have observed a marked increase in wenchman occurrence recently. Closure of the midwater snapper complex season and/or a marked increase in midwater snapper landings results in high discard mortality of wenchman due to prohibition of retention and could potentially close the butterfish fishery. Recreationally, the deep-drop fishery has expanded for other species in the complex and smaller wenchman are encountered more often; closure of the midwater snapper complex would result in increased discards because it can be difficult to avoid these species when fishing for other deep-water species.

The SSC was provided a presentation on wenchman data evaluation and consideration of stock-specific catch limits prior to the fishermen's testimony. After reviewing catches and historical records of wenchman and consideration of the limited overlap in spatial distribution and vulnerability to fishing gear amongst species in the complex, the SSC made a motion to recommend removal of wenchman from the midwater snapper complex. The Committee also considered setting separate catch advice for wenchman but struggled to identify any substantial time period with consistent landings. They also concluded that a paucity of basic life history information further confounded setting catch advice for wenchman. This led to another motion

⁹ <https://gulfcouncil.org/wp-content/uploads/GMFMC-Full-Council-October-2021.pdf>

to recommend the Council ask the Gulf States Marine Fisheries Commission to work with the five Gulf states to compile historical landings for butterfish, wenchman, scad, and any other associated species from the midwater trawl fishery for further SSC evaluation.

The SSC reviewed historical wenchman trawl landings at its March 2023 meeting to determine the magnitude of the trawl landings to inform a new OFL. Wenchman have been incidentally landed in the butterfish fishery since the 1980's, predominantly in the northern Gulf, but landings have been inconsistent and confidentiality issues remain due to the small number of fishermen and seafood dealers catching and buying wenchman. However, the vast majority of wenchman appear are caught as bycatch in the butterfish fishery, and infrequently otherwise, so the ACL being exceeded was likely caused by the incidental catch in butterfish trawls. Additionally, the SSC was provided with available spatial distribution, abundance, length, and age composition data along with the commercial harvest data but wenchman continue to be a smaller portion of both the fishery-independent and dependent catch, and the paucity of these data required commercial trawl landings to be provided by averaging five-year periods. Regarding establishing catch limits for wenchman, SSC members agreed that the available data are overall unreliable due in part to inconsistent trawl landings, and large standard deviations associated with the average pounds landed; the Committee reiterated its previous motion to the Council that wenchman be removed from the mid-water snapper complex. Due to the commercial catch data confidentiality limits, the inability to examine annual landings by sector, and the near absence of recreational landings available, they could not recommend catch advice for wenchman as a single stock.

In May of 2023, the SSC reviewed midwater snapper complex landings again for catch limit considerations. SSC members still agreed that wenchman should be removed from the midwater snapper complex due to the aforementioned concerns and that landings, excluding wenchman, could be examined to determine catch limits for the other species in the complex. Landings from 2012 through 2021 were deemed to be most consistent, a time-period which excluded an anomalous spike in 2009 with a very high proportional standard error. The SSC recommended using Tier 3a for setting the OFL (mean of landings + 2*SD) and option A for the ABC (mean of landings + 1.5*SD) for the midwater snapper complex, excluding wenchman. All landings are in MRIP-FES units (Table 1.1.5).

Table 1.1.6. SSC catch level recommendations for the midwater snapper complex, excluding wenchman. The reference period used for landings is recommended to be 2012-2021. These catch limits are in MRIP-FES units.

Catch Level	Pounds whole weight
OFL	107,904
ABC	96,689

At its June 2023 meeting, the Council discussed the midwater snapper complex and made a motion to consider removal of wenchman from the Reef Fish FMP, and to set ACLs and AMs for the remaining species in the midwater snapper complex. The Council recognized that it needs to consider whether wenchman is in need of conservation and management, and intends to

review the non-exhaustive list of factors in the National Standard Guidelines¹⁰ at its January 2024 meeting.

1.2 Purpose and Need

The purpose of this action is to determine if wenchman is still in need of federal management, and if not, remove it from the Reef Fish FMP and subsequently modify the catch limits for the remaining species in the midwater snapper complex.

The need is to update existing midwater snapper complex composition and catch limits based on the best scientific information available and to achieve optimum yield while preventing overfishing, consistent with the requirements of the Magnuson-Stevens Fishery Conservation and Management Act.

1.3 History of Management

Amendment 1, including environmental assessment (EA), regulatory impact review (RIR), and regulatory flexibility analyses (RFA), to the Reef Fish Fishery Management Plan (FMP) (GMFMC 1989), implemented in 1990, identified wenchman as a species within the FMP.

The **Generic Annual Catch Limits/Accountability Measures Amendment** (ACL/AM Amendment), with its associated EIS, RIR, and RFA, implemented in January 2012, established the OFL, ABC, ACL and ACT for the midwater snapper complex: wenchman, blackfin snapper, silk snapper and queen snapper. The OFL and ABC were based on landings from 2000 to 2008 under Tier 3A of the Acceptable Biological Catch control rule.

¹⁰ 50 C.F.R. § 600.305©.

CHAPTER 2. PROPOSED MANAGEMENT ALTERNATIVES

2.1 Action 1 – Reconsider Inclusion of Wenchman in the Fishery Management Plan for Reef Fish Resources in the Gulf of Mexico

Alternative 1: No Action – Retain wenchman in the Fishery Management Plan for Reef Fish Resources (Reef Fish FMP) in the Gulf of Mexico (Gulf).

Alternative 2: Remove wenchman from the Reef Fish FMP. This would modify the composition of the midwater snapper complex to include only queen snapper, blackfin snapper, and silk snapper.

Discussion:

Wenchman is managed as a component of the midwater snapper complex within the Reef Fish FMP, which also includes queen snapper, blackfin snapper, and silk snapper. The midwater snapper complex and its associated catch limits were created in 2012 under the Generic Comprehensive Annual Catch Limits / Accountability Measures (ACL/AM) Amendment (GMFMC 2011). The species included in the midwater snapper complex were thought to be caught in similar regions and depths, in that they were generally reef-associated but usually found in the water column above that reef structure. During the creation of the Generic ACL/AM Amendment, there was discussion about the inclusion/exclusion of several species within the FMPs managed by the Gulf of Mexico Fishery Management Council (Council); ultimately, the Council decided to remove anchor tilefish, blackline tilefish, misty grouper, schoolmaster, dog snapper, mahogany snapper, red hind, rock hind, and dwarf sandperch from the Reef Fish FMP. The Council reviewed the considerations contained within the Magnuson-Stevens Fishery Conservation and Management Act as reauthorized in 2007 (MSA), which includes provisions for consideration before deciding whether a species needs federal conservation and management (specifically, Section 302(h)(1)). The provisions for consideration outlined in Section 302(h)(1) of the MSA are:

- (i) The stock is an important component of the marine environment.
- (ii) The stock is caught by the fishery.
- (iii) Whether an FMP can improve or maintain the condition of the stock.
- (iv) The stock is a target of a fishery.
- (v) The stock is important to commercial, recreational, or subsistence users.
- (vi) The fishery is important to the Nation or to the regional economy.
- (vii) The need to resolve competing interests and conflicts among user groups and whether an FMP can further that resolution.
- (viii) The economic condition of a fishery and whether an FMP can produce more efficient utilization.
- (ix) The needs of a developing fishery, and whether an FMP can foster orderly growth.

(x) The extent to which the fishery is already adequately managed by states, by state/Federal programs, or by Federal regulations pursuant to other FMPs or international commissions, or by industry self-regulation, consistent with the requirements of the Magnuson-Stevens Act and other applicable law.¹¹

Between 2021 and 2023, the Council heard public testimony and reviewed fishery data regarding wenchman in the Gulf. During this time, and specifically in 2020 and 2021, wenchman landings were higher than in previous years, leading to a quota closure in the midwater snapper fishery (100.5% of the midwater snapper stock ACL landed in 2020, and 130.5% in 2021). Wenchman landings have come primarily from the butterfish trawl fishery, per public testimony from butterfish fishermen, landings reports, and fishery data curated by the Gulf States Marine Fishery Commission. Further, these data are subject to confidentiality preclusions, as often, fewer than three fishermen caught, and/or fewer than three seafood dealers bought, those wenchman landings annually. As such, the data necessary to evaluate wenchman harvest individually and on an annual basis compared to a stock ACL are not able to be publicly disseminated at this time. Also of note, the Council does not manage butterfish. Because wenchman is primarily caught as bycatch in the butterfish trawl fishery, it serves as a choke species for that fishery; wenchman is found in the water column in similar places as butterfish; generally, because wenchman and butterfish are found throughout the water column where butterfish fishermen trawl, they are often caught together. Mortality of trawl-caught fish is expected to be high.

The Southeast Data, Assessment, and Review (SEDAR) process is the stock assessment process used in the southeastern U.S. to evaluate fishery stock status, such as whether a stock is overfished and/or experiencing overfishing. SEDAR attempted to assess wenchman along with several other species as part of SEDAR 49 (2016), which determined that there were insufficient data to complete a data-limited assessment for the species. Since 2016, there have been no measurable improvements to the precision of wenchman landings, nor have there been sufficient advances in science about the species to allow for the development of representative age and/or length composition information to better parameterize another stock assessment. Such advances are not expected in the near-term, as wenchman is not a primary target species by Gulf recreational or commercial fishermen.

Under **Alternative 1**, wenchman would continue to be managed as part of the midwater snapper complex within the Reef Fish FMP. Under the current management paradigm, wenchman would continue to be a component of the midwater snapper complex with queen snapper, blackfin snapper, and silk snapper, and those four species would be managed together under a single stock ACL. **Alternative 1** would continue to provide federal conservation and management for wenchman at the level at which such conservation and management is currently provided. This determination has not been revisited since its establishment in the ACL/AM Amendment, and **Alternative 1** would retain wenchman in the Reef Fish FMP based on the rationale used in that amendment.

Alternative 2 would remove wenchman from the Reef Fish FMP and modify the composition of the midwater snapper complex. If wenchman is removed from the Reef Fish FMP, then the midwater snapper complex would be modified to include only queen snapper, blackfin snapper,

¹¹ <https://media.fisheries.noaa.gov/dam-migration/ns1-redline-final-rule.pdf>

and silk snapper. These three remaining species can all be caught via hook-and-line fishing gear, and may be targeted along with other deeper-water reef-associated species like those in the deep-water grouper complex (i.e., snowy grouper, warsaw grouper, speckled hind, yellowedge grouper). Contemporary knowledge of fishery dynamics indicates that wenchman is not a target species by Gulf fishermen, but rather is more of a bycatch species of a fishery not under federal management (the butterfly trawl fishery). On the contrary, there are regions in the Gulf that directly target at least queen and silk snapper in the midwater snapper complex, such as in waters deeper than 100 meters (330 feet) off Galveston, Texas, and Key West, Florida. Considerate of all of this information, and the aforementioned points about the data-limited nature of the wenchman landings and its status as a non-target species, the Council's Scientific and Statistical Committee in May 2023 recommended a revised midwater snapper complex overfishing limit (OFL) and acceptable biological catch (ABC) not inclusive of wenchman. Subsequently, the Council made a motion in June 2023 to consider removal of wenchman from the Reef Fish FMP. Doing so allows the Council to reconsider the inclusion/exclusion of wenchman in the Reef Fish FMP, and to revise the midwater snapper catch limits, should the Council choose to do so.

Prior to removing wenchman from the Reef Fish FMP, the Council will need to reconsider whether wenchman still requires federal conservation and management pursuant to the provisions in Section 302(h)(1) of the MSA (listed above). The Council will need to work through these provisions and provide rationale for its decision. These provisions are not exhaustive; however, these guidelines also state that the principle implicit in National Standard 7 of the MSA is that not every fishery requires federal conservation and management. The MSA further states that Councils should prepare fishery management plans “only for overfished fisheries and for other fisheries where regulation would serve some useful purpose and where the present or future benefits of regulation would justify the costs.”¹²

Potential management efficiencies could be achieved by choosing **Alternative 2**, without compromising federal conservation and management objectives if deemed by the Council that there is merit for removal of wenchman based on the consideration of the ten factors outlined above. Although wenchman and other midwater snapper species can inhabit a similar broad depth range at times, the prosecution of the wenchman fishery compared to the other species is decidedly different (trawl versus hook-and-line). Removal of wenchman from the Reef Fish FMP (**Alternative 2**) may allow the midwater snapper complex to remain open for longer periods of time than if the complex catch limit was subject to the highly variable nature of wenchman landings, and would mitigate commercial discard mortality within the butterfly fishery. To this latter point, it is expected that any wenchman discarded from the butterfly trawl fishery would be dead discards. It is also unlikely that removal of wenchman from the Reef Fish FMP would result in a change in prosecution of the commercial butterfly fishery, as wenchman is a bycatch species therein. However, if wenchman is retained within the Reef Fish FMP (**Alternative 1**), it would be expected to continue to serve as a choke species for the commercial butterfly fishery, potentially be subject to considerable discard mortality, and the Council would continue to be tasked with its management despite lacking the data necessary to do so with appreciable confidence.

¹² 50 C.F.R. §600.340

2.2 Action 2 – Modify Catch Limits for the Mid-water Snapper Complex

Alternative 1: No Action – The midwater snapper OFL, ABC, and ACL will remain the same as implemented in 2012 by the Generic ACL/AM Amendment. These data are expressed inclusive of Marine Recreational Fisheries Statistics Survey (MRFSS) data for the recreational portion of the landings. Catch limits below are in millions of pounds (mp) whole weight (ww):

Midwater Snapper Complex	OFL	ABC	ACL	ACT
Silk snapper Queen snapper Wenchman Blackfin snapper	209,000 lb ww	166,000 lb ww	166,000 lb ww	136,000 lb ww

Alternative 2: Update midwater snapper catch levels based on the SSC's OFL and ABC recommendation for a modified midwater snapper complex that includes only queen snapper, blackfin snapper, and silk snapper. The ABC equals the ACL. These data are expressed inclusive of Marine Recreational Information Program (MRIP) survey data, using the Fishing Effort Survey (FES) for the recreational portion of the landings:

Catch Level	Pounds whole weight
OFL	107,904
ABC	96,689

Discussion:

Action 2 is dependent on the preferred alternative chosen in Action 1. If Alternative 1 in Action 1 is chosen as the preferred alternative, then **Alternative 2** in Action 2 is not viable. If Alternative 2 in Action 1 is chosen as the preferred alternative, then **Alternative 1** in Action 2 is not viable. The determination to include wenchman in the catch level calculations for the midwater snapper complex (Action 2) is entirely predicated on whether wenchman is included in the midwater snapper complex, or the Reef Fish FMP (Action 1).

The catch levels expressed in **Alternative 1** and **Alternative 2** of Action 2 are not directly comparable for two reasons. First, the data in **Alternative 1** use MRFSS data for the recreational fisheries, compared to MRIP-FES in **Alternative 2**. Second, the data in **Alternative 1** include wenchman in the catch level calculation, and do not in **Alternative 2**.

Alternative 1 (No Action) would retain the catch limits for the current composition of the MWS as determined in the Generic ACL/AM Amendment (GMFMC 2011). These catch limits were developed using the average landings of the four midwater snapper species (wenchman, queen snapper, blackfin snapper, and silk snapper) from 2000 – 2008. None of these species have consistent landings greater than 100,000 lb ww during this time period. **Alternative 1** is only

viable if Alternative 1 in Action 1 is selected as preferred. Under the catch limits set forth in **Alternative 1**, the midwater snapper ACL has been exceeded twice, in 2020 (100.5% of the ACL landed) and 2021 (130.5% of the ACL landed, quota closure issued on September 19, 2021). Landings data from 2022 are included in the preliminary landings analyses and are less than the harvest levels in 2020 and 2021; however, additional years of data would likely be beneficial to determine if the increased landings in 2020 and 2021 are an increasing trend.

Alternative 2 would modify the midwater snapper complex catch levels based on the SSC's recommendations, which excluded wenchman from the catch level calculations. These catch levels were recommended based on the SSC's review of midwater snapper aggregate landings from 2012 – 2021. The SSC recognized that the high midwater snapper landings in 2020 and 2021 were likely due to wenchman harvest within the commercial butterfish trawl fishery. The SSC also identified an anomalous spike in silk snapper landings in 2009 that seemed dubious. This spike was more than an order of magnitude greater than the silk snapper landings in the surrounding years. Ultimately, the SSC recommended using landings data from 2012 – 2021, which appeared consistent. The SSC also noted that midwater snapper complex appears to be rare event species for MRIP due to their historical nature as species caught incidentally while fishing for other species. However, the SSC also acknowledged a growing desire by for-hire and private recreational fishermen to target some midwater snapper species, and in particular, silk snapper and queen snapper. The SSC used Tier 3a of its ABC Control Rule to set the OFL and ABC for the remaining midwater snapper species in the complex; this tier is reserved for species for which a stock assessment is unavailable or for which the data are highly uncertain. Further, the SSC acknowledged that management intervention was unlikely unless there is a drastic change in fishery dynamics and performance for queen snapper, blackfin snapper, and silk snapper. Based on a preliminary catch limit analysis (Appendix A), if Action 1 **Alternative 2** is chosen as preferred, and subsequently Action 2 **Alternative 2** is chosen as preferred, the proposed updated ACL for the midwater snapper complex, excluding wenchman, is only projected to be met in a scenario when using the maximum landings for each month or wave (**Table 2.2.1** and **Figure 2.2.1**). While the max landings scenario would likely result in a closure for the proposed complex, stock landings for the proposed complex, excluding wenchman, have not exceeded the proposed ACL in the last 10 years (**Figure 2.2.1**).

Table 2.2.1. Predicted closure dates for three projection scenarios: 3-year average, 5-year average and max landings for an updated ACL of 96,689 lb ww.

Projected Landings Used	Years	ACL Met	Season
3-year Average	2018-2022	-	365
5-year Average	2020-2022	-	365
Maximum Landings by Month / Wave	2018-2022	16-Sep	259

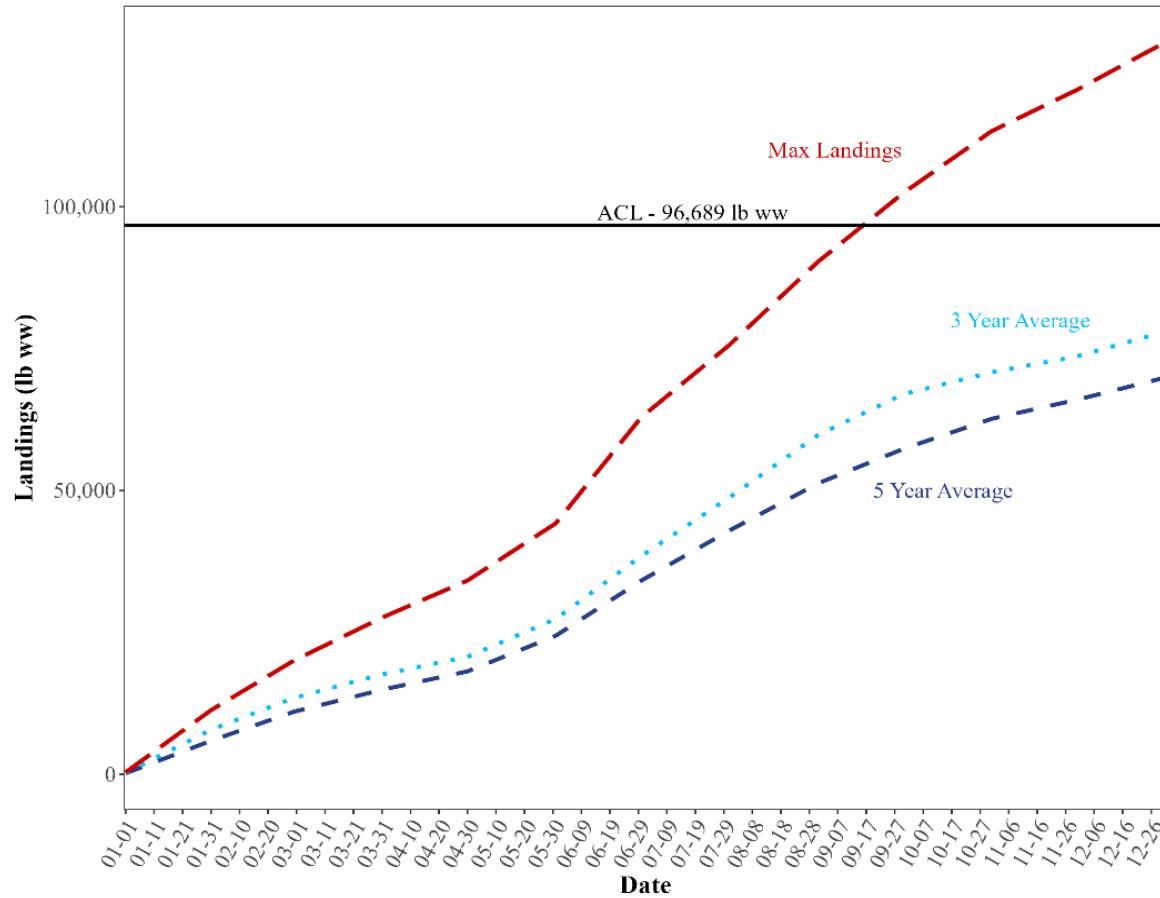


Figure 2.2.1. Cumulative mid-water snapper (blackfin, queen, and silk snapper) landings for each projection method used: 3-year average (light blue dotted line), 5-year average (dark blue dashed line), and max landings (red long dash line)

CHAPTER 3. REFERENCES

- Bryan, M.D., del Mar Lopez, M., and Tokotch, B. (2011), A review of the life history characteristics of silk snapper, queen snapper, and redbtail parrotfish. SEDAR26-DW-01
- Burton, M.L., Potts, J.C., and Carr, D.R. (2016), Age, Growth, and Natural Mortality of Blackfin Snapper, *Lutjanus buccanella*, from the Southeastern United States and U.S. Caribbean. Gulf and Caribbean Research, 27: 66-73. doi: [18785/gcr.2701.10](https://doi.org/10.18785/gcr.2701.10)
- Farmer, N.A. and R.P. Malinowski. 2010. Species groupings for management of the Gulf of Mexico reef fish fishery. SERO-LAPP-2010-03. NOAA Fisheries Service, Southeast Regional Office, St. Petersburg, Florida. 47 pp. <https://repository.library.noaa.gov/view/noaa/18703>
- GMFMC. 1989. Amendment number 1 to the reef fish fishery management plan, includes environmental assessment, regulatory impact review, and regulatory flexibility analysis. Gulf of Mexico Fishery Management Council, Tampa, Florida. 357 pp. <https://gulfcouncil.org/wp-content/uploads/FISHERY%20MANAGEMENT/REEF%20FISH/RF%20Amend-01%20Final%201989-08-rescan.pdf>
- GMFMC. 2011. Final generic annual catch limits/accountability measures amendment for the Gulf of Mexico Fishery Management Council's red drum, reef fish, shrimp, coral and coral reefs fishery management plans, including environmental impact statement, regulatory impact review, regulatory flexibility analysis, and fishery impact statement. Gulf of Mexico Fishery Management Council, Tampa, Florida. 378 pp. http://www.gulfcouncil.org/docs/amendments/Final%20Generic%20ACL_AM_Amendment-September%209%202011%20v.pdf
- McEachran, J.D. and J.D. Fechhelm. 2005. Fishes of the Gulf of Mexico, Vol. 2. *Scorpaeniformes* to *Tetraodontiformes*. University of Texas Press, Austin, Texas.
- SEDAR 49. 2016. Stock assessment report on Gulf of Mexico data-limited species. Southeast Data, Assessment, and Review, North Charleston, South Carolina. 618 pp. <http://sedarweb.org/sedar-49-final-stock-assessment-report-gulf-mexico-data-limited-species>.

Appendix A. PRELIMINARY MIDWATER SNAPPER COMPLEX CATCH LIMIT ANALYSIS

Preliminary Mid-Water Snapper Landings Summaries and Catch Limit Analysis
LAPP/DM Branch
NOAA Fisheries Service
Southeast Regional Office
January 2024

The Gulf of Mexico mid-water snapper complex is comprised of four snapper species: silk, queen, blackfin, and wenchman. These species are managed as a stock in federal waters under the Reef Fish Resources Fishery Management Plan (Reef Fish FMP). In May of 2023, the Gulf of Mexico Scientific and Statistical Committee (SSC) reviewed aggregated landings from the mid-water snapper complex to determine the appropriate reference period for updating the catch limits associated with the complex. The final recommendation from the SSC was to provide updated catch limits for the mid-water snapper complex, excluding wenchman. This report will provide landings summaries that describe the Gulf of Mexico mid-water snapper complex and a catch limit analysis that incorporates the proposed changes to the complex structure and catch limit values.

Data Sources

The Southeast Fisheries Science Center (SEFSC) generates monitoring datasets that are used to track landings for all federally managed species in the commercial and recreational sector. Commercial landings are aggregated from dealer reports and are considered a census of landings for all commercial vessels.

Landings for the recreational sector are estimated from a combination of state and federal surveys. The two state surveys that generate recreation landings estimates come from Texas and Louisiana. The Texas Parks and Wildlife Department Sport-boat Angling Survey uses dockside interviews at recreational boat access sites to generate catch and effort estimates for finfish species caught by private boat and charter operators off the Texas coast. Louisiana Department of Wildlife & Fisheries uses the combination of a dockside intercept survey and phone/email survey to estimate recreational saltwater harvests from shore, private boat and charter trips in their state (LA Creel).

Federally administered surveys generate landings estimates for all headboat vessels and landings from shore, private boat and charter vessels not covered by the Texas or Louisiana state surveys. The Southeast Regional Headboat survey produces landings estimates for species caught by headboats operating in the southeastern United States by combining dockside intercept and logbook data. Federal estimates of shore, private boat and charter anglers were initially generated by the Marine Recreational Fisheries Statistics Survey (MRFSS), which used a combination of dockside intercept survey and phone effort survey data to estimate landings. This survey was replaced by the Marine Recreational Information Program (MRIP) in 2008 to improve precision, accuracy and timeliness of recreational catch estimates. MRIP uses the Access Point Angler Intercept Survey (APAIS) to collect dockside catch data from anglers fishing from shore, private boats and charter vessels. Fishing effort data for the shore and private boat fishing modes was collected by the Coastal Household Telephone Survey (CHTS) and charter effort was estimated

from data collected by the For-Hire Survey (FHS). In 2018, the CHTS was replaced by a mail survey, the Fishing Effort Survey (FES). The changes to the federal survey over time has led to recreational landings being estimated in three different currencies associated with the major changes to the surveys. MRFSS units represent the earliest iteration of the federal survey, MRIP (CHTS) incorporates updates to the dockside APAIS and implementation of the improved CHTS phone survey, and MRIP (FES) incorporates the change from a phone to mail effort survey. The SEFSC creates three separate final recreational landings data sets that combine TPWD, LA Creel and SRHS landings estimates with either the MRFSS, MRIP (CHTS), or MRIP (FES) survey estimates. Catch limits for federally managed species are monitored with the recreational currency associated with the last stock assessment for each species.

The Gulf mid-water snapper complex was last assessed with MRFSS recreational units, but the proposed changes to the catch limits for the complex will shift management of the species to use MRIP (FES) units for the recreational sector. This report will present aggregated landings summaries from either the MRFSS or MRIP (FES) with commercial monitoring datasets to describe the mid-water snapper complex.

Landings History

A time series of landings for the Gulf mid-water snapper complex was generated for the commercial and recreational sectors. Landings data from both sectors were aggregated annually from 1986 to 2022, with two separate landings summaries to represent recreational data that includes MRFSS or MRIP (FES) units (**Figures 1 & 2**). The commercial sector landings were higher than recreational landings for almost every year of the time series, regardless of the recreational units summarized. The magnitude of recreational landings using MRFSS and MRIP (FES) units were similar, with the exception of three high magnitude landings estimates in 1987, 1990, and 2009 (**Table 1**). The proposed change to the mid-water snapper complex catch limits would require landings to be monitored in recreational fishing units that incorporate MRIP (FES) units instead of MRFSS units. The difference between the landings are minimal, especially when considering more recent years of data. For the remainder of this report data aggregations will only show recreational landings data that incorporate MRIP (FES) units.

A summary of landings by species was created to show the relative proportion of annual landings attributed to each species for the ten most recent years of data (2013-2022). Commercial and recreational landings were summed for each species before calculating the proportion of landings associated with each species (**Figure 3**). In the last ten years, the highest proportion of landings from the mid-water complex were attributed to silk snapper, with the exception of higher wenchman landings in 2020 and 2021.

Table 1. Annual Gulf mid-water snapper complex landings by sector from 1986-2022, all species combined (Data Sources: Commercial –SEFSC Commercial ACL Monitoring data – September 2023; SEFSC MRFSS ACL Monitoring data – December 2023; SEFSC FES ACL Monitoring data – December 2023).

Year	Commercial	Recreational (MRFSS)	Total (w/MRFSS)	Recreational (FES)	Total (w/FES)
1986	39,940	1,804	41,744	2,061	42,001
1987	72,778	25,633	98,411	230,686	303,464
1988	112,993	67,262	180,255	98,206	211,199
1989	55,925	159	56,084	159	56,084
1990	71,971	22,966	94,937	341,423	413,394
1991	257,658	459	258,117	459	258,117
1992	352,897	991	353,888	1,006	353,903
1993	216,496	409	216,905	409	216,905
1994	90,749	1,238	91,987	2,902	93,651
1995	117,300	226	117,526	226	117,526
1996	36,570	44,592	81,162	92,068	128,638
1997	108,108	330	108,438	185	108,293
1998	94,117	662	94,779	1,509	95,626
1999	126,230	4,030	130,260	2,062	128,292
2000	159,532	1,420	160,952	1,263	160,795
2001	217,805	6,070	223,875	5,842	223,647
2002	128,546	2,725	131,271	4,172	132,718
2003	97,879	2,106	99,985	680	98,559
2004	109,985	866	110,851	490	110,475
2005	107,284	4,577	111,861	57,926	165,210
2006	75,337	2,580	77,917	3,565	78,902
2007	83,499	3,508	87,007	3,655	87,154
2008	84,742	3,952	88,694	9,005	93,747
2009	62,776	33,514	96,290	504,436	567,212
2010	70,614	1,728	72,342	1,256	71,870
2011	110,231	1,543	111,774	2,895	113,126
2012	122,233	11,144	133,377	17,111	139,344
2013	65,613	1,291	66,904	1,291	66,904
2014	85,863	4,828	90,692	6,876	92,739
2015	51,921	1,881	53,802	1,810	53,730
2016	78,649	22,314	100,962	31,212	109,860
2017	40,925	6,930	47,855	6,342	47,267
2018	101,078	1,882	102,960	1,810	102,888
2019	54,418	2,245	56,663	2,087	56,505
2020	153,828	16,698	170,527	14,558	168,386
2021	214,090	2,362	216,452	2,238	216,327
2022	78,963	36,135	115,098	37,635	116,598

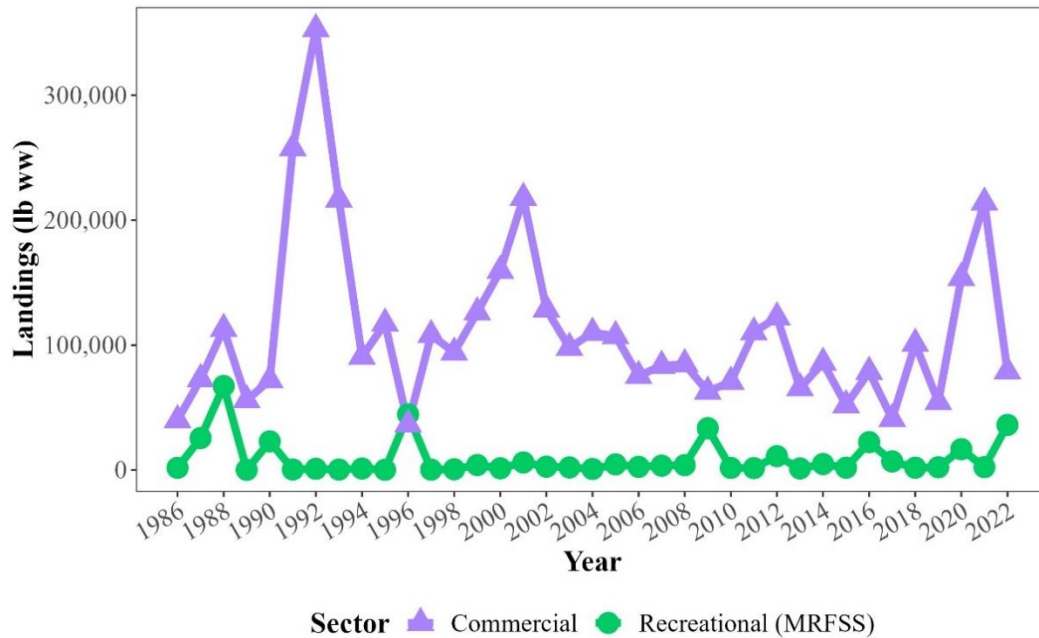


Figure 1. Annual Gulf mid-water snapper complex landings for the commercial and recreational (MRFSS units) fishing sector between 1986 and 2022 (Data Sources: Commercial –SEFSC Commercial ACL Monitoring data – September 2023; SEFSC MRFSS ACL Monitoring data – December 2023)

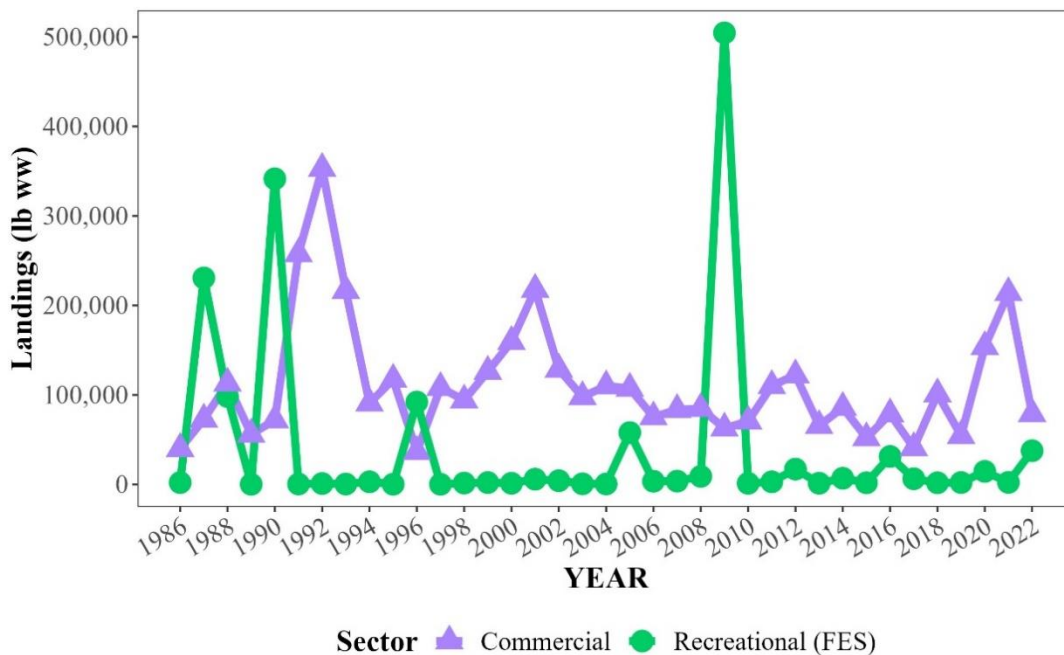


Figure 2. Annual Gulf mid-water snapper complex landings for the commercial and (FES units) fishing sector between 1986 and 2022 (Data Sources: Commercial –SEFSC Commercial ACL Monitoring data – September 2023; SEFSC FES ACL Monitoring data – December 2023).

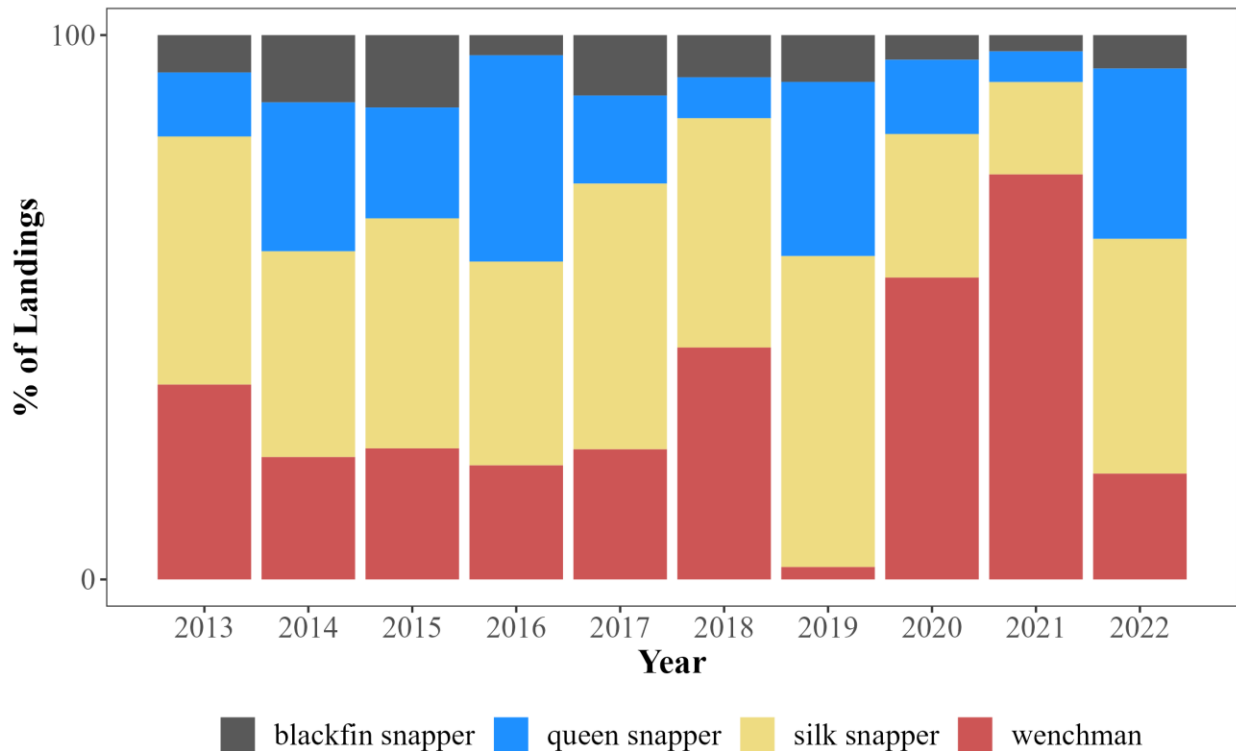


Figure 3. Proportion of annual Gulf mid-water snapper landings by species, from 2013 to 2022 (Data Sources: Commercial –SEFSC Commercial ACL Monitoring data – September 2023; SEFSC FES ACL Monitoring data – December 2023).

Fishing Area Analysis

Commercial and recreational landings data for each species were summed over a 5 year period (2018-2022) by fishing area. Fishing areas where fish were caught are self-reported in trip tickets, logbooks or dockside interviews. Landings were designated as federal waters, state waters or unknown for landings that could not be categorized. The final proportions were calculated by dividing the landings sums for each species by area, by the total landings for each species. More than 75% of landings for each species were caught in federal waters between 2018 and 2022.

Table 3. Percentage of landings for each species by fishing area from 2018-2022.

Species	Federal	State	Unknown
blackfin snapper	92.39	2.00	5.61
queen snapper	77.12	2.17	20.71
silk snapper	81.92	15.60	2.48
wenchman	92.37	7.61	0.02

Fishing Gear Analysis

Commercial and recreational landings data for each species were summed by gear types to determine the dominant gears used to harvest each of the mid-water snapper species.

Commercial landings data specified more than ten gear types used to harvest mid-water snapper species. These gears were collapsed into more general gear categories: vertical lines (hand lines, long lines, hook and lines, and troll lines), nets (various trawl and net gears), and other.

Recreational landings were all associated with vertical line gears. Blackfin, queen and silk snapper landings are generally attributed to vertical line gears, while wenchman are almost exclusively caught with net gears.

Table 4. Percentage of landings for each species by fishing gear from 2018-2022.

Species	Nets	Vertical Lines	Other
blackfin snapper	0.08	99.91	0.01
queen snapper	0.01	99.80	0.19
silk snapper	0.00	99.56	0.44
wenchman	98.21	1.79	0.00

Catch Limit Analysis

The proposed changes to the OFL, ABC, and ACL for mid-water snapper will only account for blackfin, queen and silk snapper landings. Additionally, the complex landings will be monitored with recreational units that incorporate MRIP (FES) estimates. A catch limit analysis was completed to investigate whether stock landings are projected to meet the proposed catch limits. The last five years of available landings data, 2018 to 2022, were plotted to investigate which years were most representative of the commercial and recreational landing behavior (Commercial ACL Monitoring File – September 2023, Recreational FES ACL Monitoring File – December 2023). The wave-level recreational data aggregations showed evidence of higher and more variable landing behavior in more recent years. Projected landings are generally calculated as the mean of the three most recent years of data, but the variable nature of recreational landings estimates in more recent years warrants projecting landings for a more robust set of projected landing estimates. Projections were made for a 3 year average, 5 year average and for the maximum landings by month or wave over the last 5 years. The projected landings for each scenario, within each fishing sector are plotted in **Figures 4 and 5**.

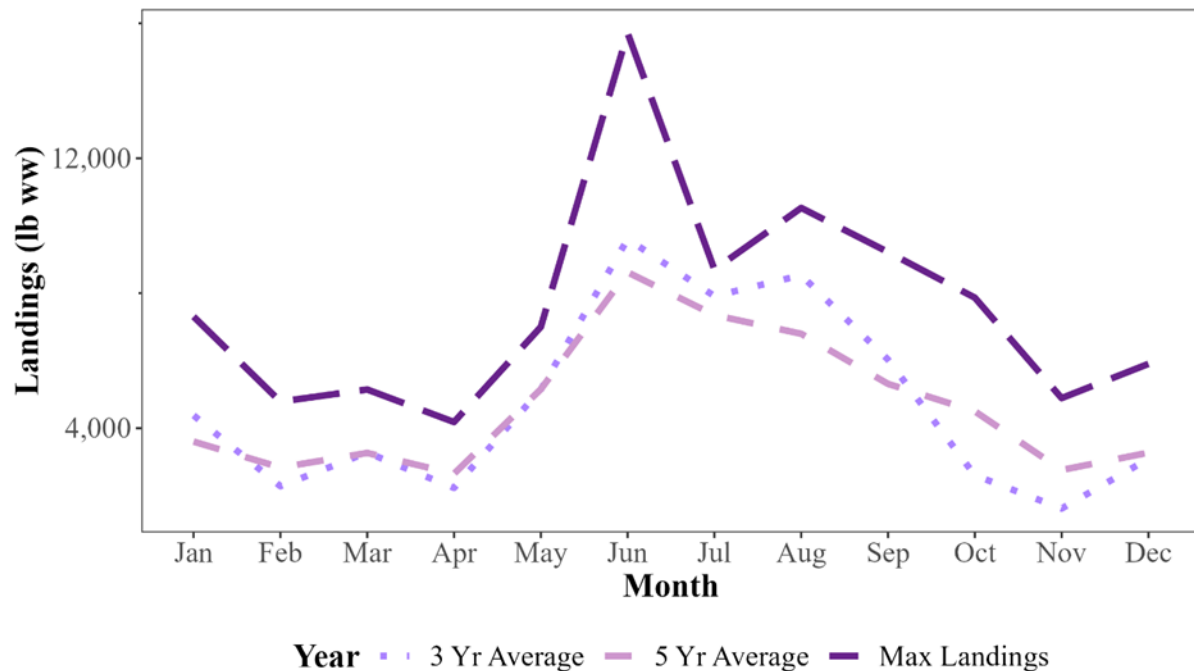


Figure 4. Projected monthly commercial landings based on the 3 projection methods: 3 year average, 5 year average, and max landings. Source: SEFSC Commercial ACL data (September 2023).

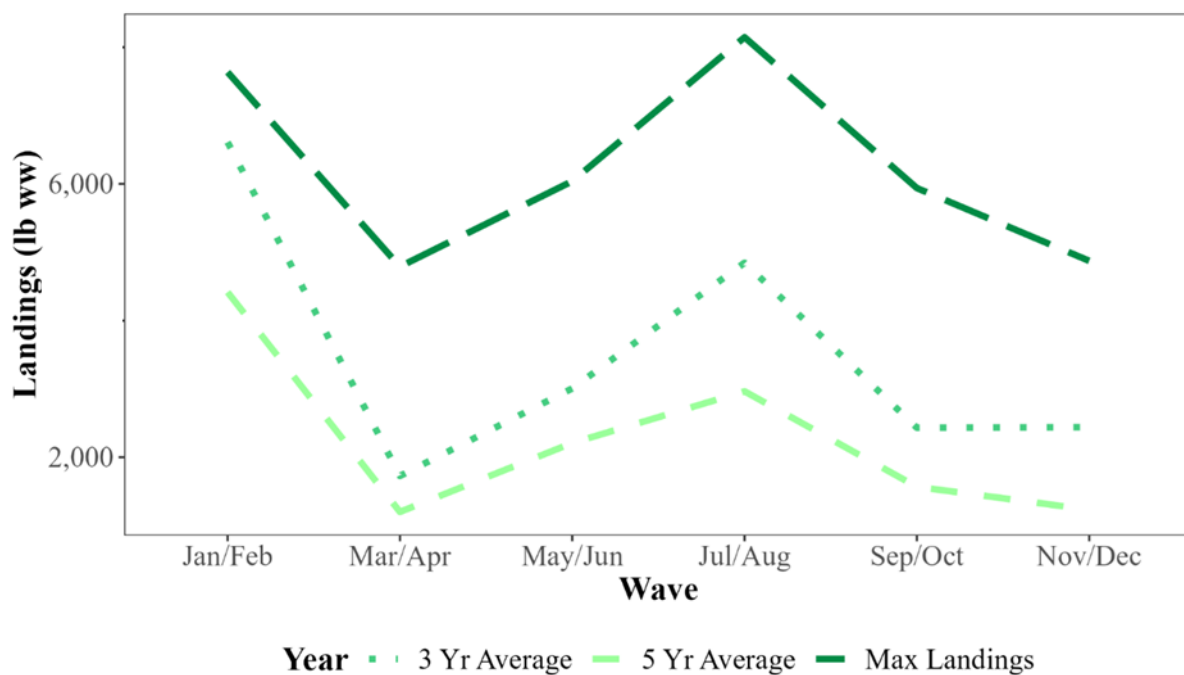


Figure 5. Projected wave-level landings based on the 3 projection methods: 3 year average, 5 year average, and max landings. Source: SEFSC FES ACL Monitoring data (December 2023).

The projected landings for each sector were used to generate daily landings estimates, by dividing the monthly or wave-level landings value by the number of days in the month or wave. The commercial and recreational daily landings were summed to create a total daily landings estimate for the proposed mid-water snapper complex (blackfin, queen, and silk snapper) for each projection method. These daily landings estimates were then summed cumulatively and compared against the updated catch limit to project potential closure dates. The updated ACL is only projected to be met in a scenario when using the maximum landings for each month or wave (**Table 5 & Figure 6**). While the max landings scenario would likely result in a closure for the proposed complex, stock landings for the proposed complex has not exceeded the proposed ACL in the last 10 years (**Figure 7**).

Table 5. The predicted closure dates for the three projection scenarios: 3 year average, 5 year average and max landings for an updated ACL of 96,689 lb ww.

Projected Landings Used	Years	ACL Met	Season
3 year Average	2018-2022	-	365
5 year Average	2020-2022	-	365
Maximum Landings by Month / Wave	2018-2022	16-Sep	259

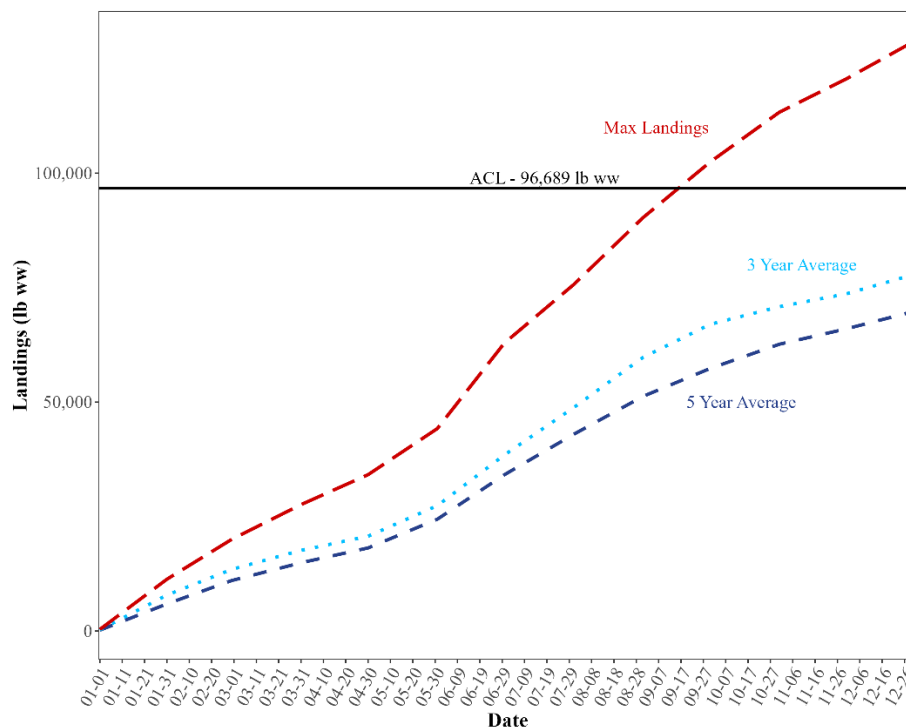


Figure 6. Cumulative mid-water snapper (blackfin, queen, and silk snapper) landings for each projection method used: 3 year average (light blue dotted line), 5 year average (dark blue dashed line), and max landings (red long dash line).

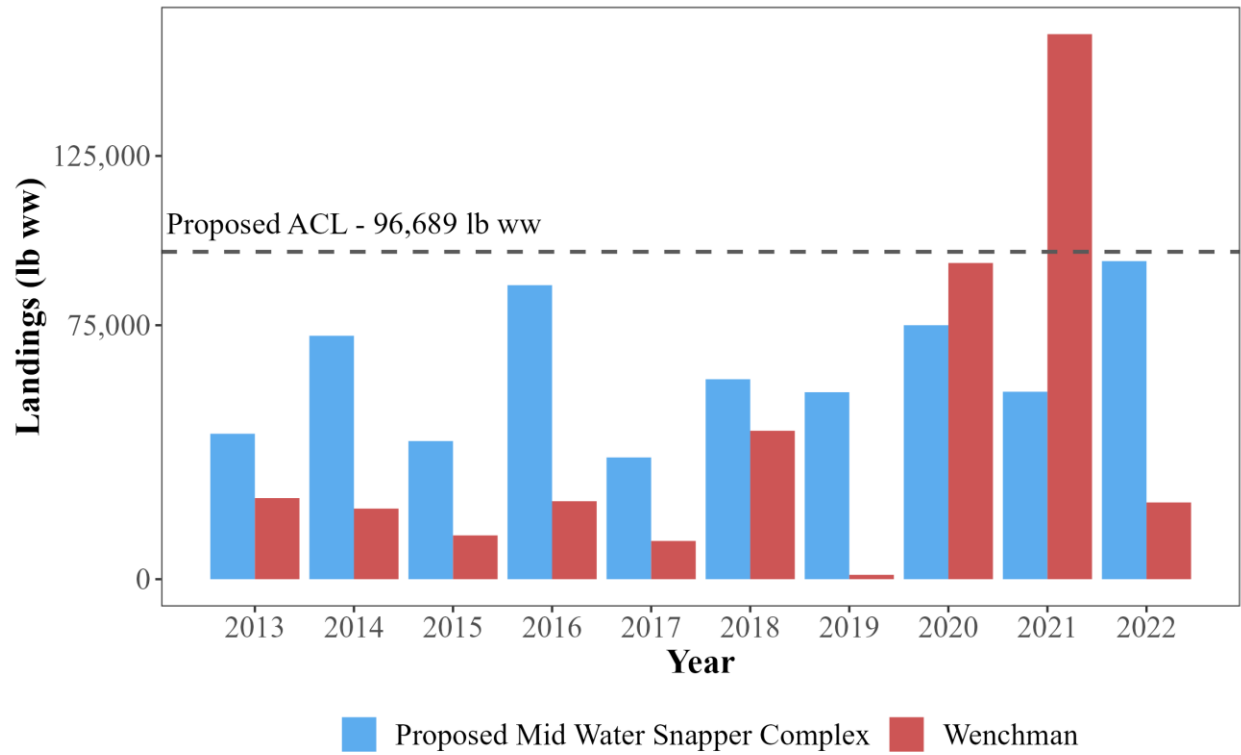


Figure 7. Observed stock landings of the proposed mid-water snapper complex (blackfin, queen, and silk snapper) versus wenchman landings from 2018-2022; commercial and recreational landings are summed for each species. The proposed ACL is represented with a horizontal dashed line.

Appendix B. OTHER APPLICABLE LAW

The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) (16 U.S.C. 1801 et seq.) provides the authority for management of stocks included in fishery management plans (FMP) in federal waters of the exclusive economic zone (EEZ). 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 include the Endangered Species Act (Section 3.3.3), E.O. 12866 (Regulatory Planning and Review, Chapter 5) and E.O. 12898 (Environmental Justice, Section 3.5). Other applicable laws are summarized below.

Administrative Procedure 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. Proposed and final rules will be published before implementing the actions in this amendment.

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 the National Oceanic and Atmospheric Administration (NOAA) regulations at 15 CFR 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 of Commerce, 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 Act. To be consistent with the Magnuson-Stevens 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.

National Historic Preservation Act

The National Historic Preservation Act (NHPA) of 1966, (Public Law 89-665; 16 U.S.C. 470 *et seq.*) is intended to preserve historical and archaeological sites in the United States of America. Section 106 of the NHPA requires federal agencies to evaluate the impact of all federally funded or permitted projects for sites on listed on, or eligible for listing on, the National Register of Historic Places and aims to minimize damage to such places.

Historical research indicates that over 2,000 ships have sunk on the Federal Outer Continental Shelf between 1625 and 1951; thousands more have sunk closer to shore in state waters during the same period. Only a handful of these have been scientifically excavated by archaeologists for the benefit of generations to come. Further information can be found at:

<http://www.boem.gov/Environmental-Stewardship/Archaeology/Shipwrecks.aspx>

The proposed action does not adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places nor is it expected to cause loss or destruction of significant scientific, cultural, or historical resources. In the Gulf of Mexico (Gulf), the *U.S.S. Hatteras*, located in federal waters off Texas, is listed in the National Register of Historic Places. Fishing activity already occurs in the vicinity of this site, but the proposed action would have no additional adverse impacts on listed historic resources, nor would they alter any regulations intended to protect them.

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. 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 E.O. requires NMFS and the United States 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 2005), which established additional habitat areas of particular concern (HAPCs) and gear restrictions to protect corals throughout the Gulf. There are no implications to coral reefs by the actions proposed in this amendment.

E.O. 13132: Federalism

The E.O. on Federalism requires agencies in formulating and implementing policies, to be guided by the fundamental Federalism principles. The E.O. 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 E.O. 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 were identified relative to the action to modify the management of the recreational harvest of greater amberjack. Therefore, consultation with state officials under Executive Order 12612 was not necessary. Consequently, consultation with state officials under Executive Order 12612 remains unnecessary.

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. They do not affect any areas reserved by federal, state, territorial, tribal or local jurisdictions.