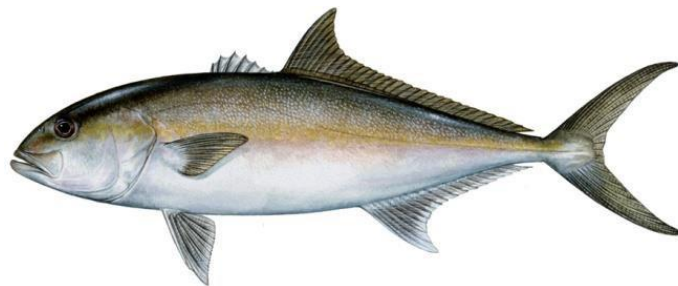


Greater Amberjack Recreational Bag Limits, Recreational Seasonal Quotas, and Commercial Trip Limits



RP

Options Paper for a Framework Action to the Fishery Management Plan for the Reef Fish Resources of the Gulf of Mexico

April 2018



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ENVIRONMENTAL ASSESSMENT COVER SHEET

Name of Action

Greater Amberjack Recreational Bag Limits, Recreational Seasonal Quotas, and Commercial Trip Limits

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Type of Action

<input type="checkbox"/> Administrative	<input type="checkbox"/> Legislative
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ABBREVIATIONS USED IN THIS DOCUMENT

ABC	acceptable biological catch
ACL	annual catch limit
ACT	annual catch target
AM	accountability measure
Council	Gulf of Mexico Fishery Management Council
EIS	environmental impact statement
EA	environmental assessment
FL	fork length
FMP	Fishery Management Plan
Gulf	Gulf of Mexico
gw	gutted weight
MFMT	maximum fishing mortality
MSST	minimum stock size threshold
MSY	maximum sustainable yield
NMFS	National Marine Fisheries Service
OY	optimum yield
RA	Regional Administrator
Reef Fish FMP	Reef Fish Fishery Management Plan
SEDAR	Southeast Data, Assessment and Review
SEFSC	Southeast Fisheries Science Center
SPR	spawning potential ratio
SSC	Scientific and Statistical Committee
TAC	total allowable catch
ww	whole weight

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CHAPTER 1. INTRODUCTION

1.1 Background

In 2016, the greater amberjack stock assessment update to Southeast Data Assessment and Review (SEDAR) 33 (2016) was completed and reviewed by the Gulf of Mexico Fishery Management Council’s (Council) Scientific and Statistical Committee (SSC) at its March 2017 meeting. The SSC accepted the greater amberjack update assessment (SEDAR 33 2016) as the best scientific information available and concluded that greater amberjack was still overfished and undergoing overfishing and the stock would not be rebuilt by 2019 as previously projected. To address this result, the Council recently completed a framework action (GMFMC 2017a) to modify the acceptable biological catch (ABC), sector specific annual catch limits (ACL), and annual catch targets (ACT) for greater amberjack (Table 1.1.1.). For greater amberjack, the respective sector ACTs are equal to the quota. This framework action also modified the recreational closed season from June through July to January through June. The Council intended this closed season to be a short-term measure to reduce harvest and protect the stock during peak spawning months while the Council considered options for establishing two separate fishing seasons: one in the spring and one in the fall. The final rule implementing these changes was published on December 28, 2017 and effective January 27, 2018.

Table 1.1.1. Acceptable biological catch, sector ACLs, and sector ACTs that were established in 2017 (GMFMC 2017a) based on the greater amberjack update stock assessment that indicated the stock was overfished and experiencing overfishing. The recreational fishing year is defined as August 1 – July 31 and the commercial fishing year is January 1 – December 31.

Recreational Fishing Year	ABC (lbs ww)	Recreational		Commercial		
		ACL (lbs ww)	ACT (quota) (lbs ww)	Commercial Fishing Year	ACL (lbs ww)	ACT (quota) (lbs ww)
2017/2018	1,182,000	862,860	716,173	2018	319,140	277,651
2018/2019	1,489,000	1,086,970	902,185	2019	402,030	349,766
2019/2020+	1,794,000	1,309,620	1,086,985	2020+	484,380	421,411

Source: GMFMC 2017a

In 2017, the Council completed a second greater amberjack framework action (GMFMC 2017b) to modify the recreational fishing year to begin August 1 each year and modify the recreational closed season to create two separate open seasons: August 1 – October 31 and May 1 – May 30. The final rule implementing these changes was published on March 29, 2018 and will be effective April 30, 2018. Greater amberjack is an important recreational species, especially to anglers in the Florida panhandle (i.e., the 10 counties in Florida west of the Apalachicola River) going out on for-hire vessels in the springtime, but other regions of the Gulf of Mexico (Gulf) primarily harvest greater amberjack in the fall when weather conditions are more amenable and

other prized species may be prohibited from harvest. In the recreational sector, the fishery is closed for the remainder of the fishing year when the quota is met, or projected to be met. To achieve a split season and equitable regional access, there must be enough of the quota remaining after the fall season to allow for harvest during the spring. The National Marine Fisheries Service (NMFS) developed a decision support tool to predict harvest rates. Results indicate that harvest during the 3-month fall season is expected to be approximately 60% of the recreational quota. However, estimates of recreational harvest rates are difficult to predict (Farmer and Froeschke 2015) and this is exacerbated when seasons are short and management changes occur frequently. The Council is considering an action that would establish recreational seasonal quotas that allow a pre-determined proportion of the harvest to occur in the fall and spring fishing seasons. The Council is also considering an action that would reduce the recreational bag limit. If the Council selects a bag limit below the current 1 fish per person per day, a portion of the recreational quota may go unharvested based on the length of the recreational fishing season. Achieving the recreational quota under a reduced bag limit scenario may require additional modification of the recreational season to account for the reduced harvest rate. While this could extend the season, this would require a third modification of the recreational season within a short period of time, which could increase the uncertainty in projected harvest.

The commercial sector harvest of greater amberjack is also managed to an ACT (quota) and the fishery is closed each year when the quota is met or projected to be met for the remainder of the fishing year. The commercial season opens January 1 each year, is closed from March 1 through May 30 and re-opens on June 1 if the quota has not been met. As with the recreational sector, once the commercial quota has been harvested, the fishery is closed for the remainder of the fishing year. Greater amberjack are rarely a target species by the commercial sector, with the majority of trips harvesting 500 lbs or less. Greater amberjack are typically caught while targeting other reef fish species. Commercial fishermen prefer to have as long of a season as possible as these incidentally caught fish must be discarded if the season is closed. To address this problem, NMFS previously implemented a commercial trips limit of 1,923 lbs gutted weight (gw) in 2013 (GMFMC 2012), and further reduced the trip limit to 1,500 lbs gw in 2016 (GMFMC 2015). Despite these changes, the fishery routinely meets or exceeds the commercial quota before year end requiring an in-season closure and payback of any overage if the commercial ACL is exceeded. The Council is considering further reductions in the commercial trip limit in an effort to reduce the harvest rate and increase the length of the commercial season without exceeding the quota, which triggers the in-season closure.

Landings Data

Total annual landings of greater amberjack have ranged from 1.248 mp ww in 1999 to 4.873 mp ww in 1992 (Table 1.1.2). From 2006 through 2016, landings have averaged 1.840 mp ww without trend over this time period (Figure 1.1.1). A summary of landings relative to management targets and season closure dates is in Table 1.1.3 (commercial) and Table 1.1.4 (recreational). The accountability measures (AM) implemented in Amendment 30A (GMFMC 2008) required that any annual harvest exceeding either the recreational or commercial ACL be deducted from the applicable sector ACL and ACT(quota) in the subsequent calendar year. Also, these overage adjustments are made on preliminary landings as final landings are not

completed by the beginning of the subsequent calendar year. This may result in minor deviations from the final overage (if any) and the overage deduction.

Table 1.1.2. Commercial and recreational landings of greater amberjack (lbs ww) from 1992 through 2016.

Year	Charter	Headboat	Private	Rec Total	Commercial	Total
1992	1,728,416	312,152	1,941,970	3,982,538	890,553	4,873,091
1993	1,431,707	225,868	766,990	2,424,565	1,042,369	3,466,934
1994	1,160,886	213,119	427,551	1,801,556	851,160	2,652,716
1995	149,963	143,994	458,692	752,649	709,513	1,462,162
1996	643,207	139,588	577,927	1,360,722	830,136	2,190,858
1997	603,131	125,349	354,634	1,083,114	742,136	1,825,250
1998	303,981	88,595	505,851	898,427	496,962	1,395,389
1999	407,926	73,508	360,189	841,623	406,714	1,248,337
2000	570,974	100,732	385,410	1,057,116	785,679	1,842,795
2001	512,556	89,436	791,315	1,393,307	605,285	1,998,592
2002	1,114,754	160,636	857,969	2,133,359	703,303	2,836,662
2003	1,072,018	199,347	1,630,455	2,901,820	857,125	3,758,945
2004	1,068,814	108,769	1,214,647	2,392,230	870,953	3,263,183
2005	365,893	61,281	1,089,981	1,517,155	662,285	2,179,440
2006	1,030,943	79,892	589,351	1,700,186	566,384	2,266,570
2007	516,253	59,436	291,797	867,486	589,235	1,456,721
2008	478,614	54,544	785,504	1,318,662	440,936	1,759,598
2009	653,160	103,191	723,964	1,480,315	601,446	2,081,761
2010	460,740	53,203	711,282	1,225,225	534,095	1,759,320
2011	583,813	62,835	303,351	949,999	508,871	1,458,870
2012	546,086	99,680	592,952	1,238,718	308,334	1,547,052
2013	605,860	73,246	941,655	1,620,761	457,879	2,078,640
2014	333,485	46,435	710,128	1,090,048	486,679	1,576,727
2015	757,327	58,513	591,711	1,407,551	458,693	1,866,244
2016	531,898	20,210	1,410,452	1,962,560	432,573	2,395,133

Source: Southeast Fisheries Science Center recreational (6/7/2017) and commercial (5/2/2017) ACL datasets. Recreational landings exclude Monroe County, Florida.

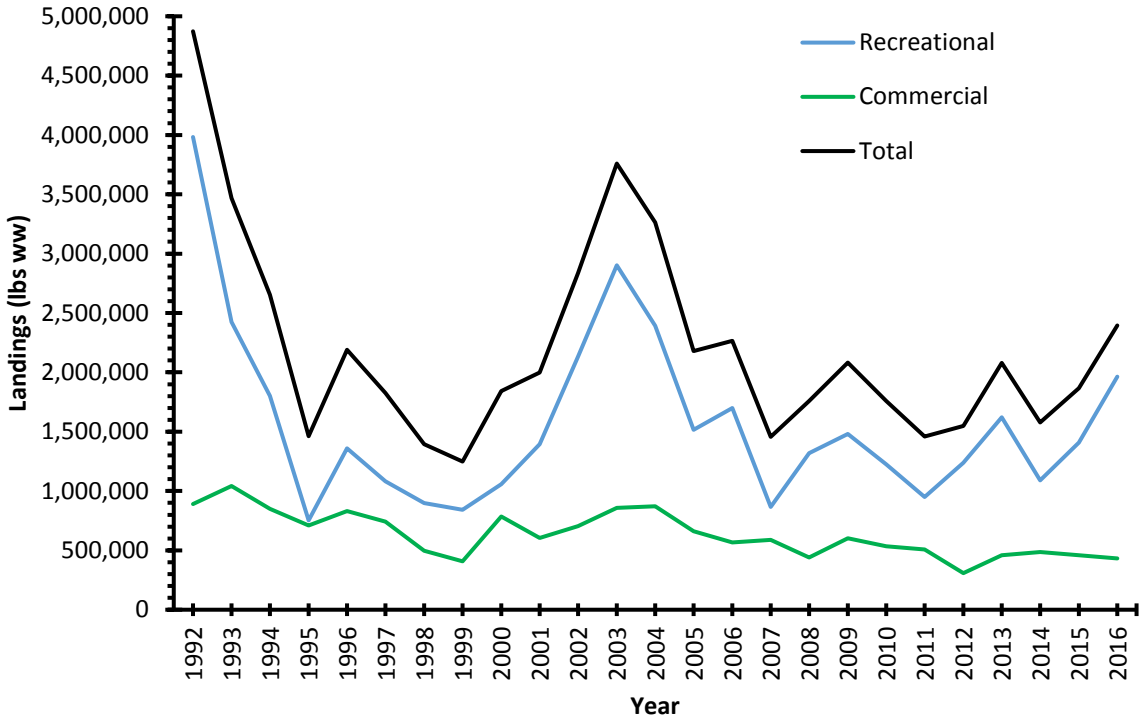


Figure 1.1.1. Recreational, commercial, and total landings (lbs ww) of greater amberjack from 2002 through 2016. Recreational landings were estimates from the Marine Recreational Information Program, Texas Parks and Wildlife Department, LA Creel, and Southeast Region Headboat Surveys.

Source: SEFSC recreational (6/7/2017) and commercial (5/2/2017) ACL datasets.

Table 1.1.3. Summary of recent annual commercial landings relative to management targets (lbs ww).

Commercial								
Year	Landings	ACT (quota)	Adjusted ACT	ACT %	ACL	Adjusted ACL	ACL %	Closure Date
2008	440,936	503,000		87.7			NA	
2009	601,446	503,000		119.6			NA	11/7/2009
2010	534,095	503,000	373,072	143.2			NA	10/28/2010
2011	508,871	503,000	342,091	148.8			NA	6/18/2011
2012	308,334	409,000	237,438	129.9	481,000	237,438	129.9	3/1/2012
2013	457,879	409,000	338,157	135.4	481,000	410,157	111.6	7/1/2013
2014	486,679	409,000		119.0	481,000		101.2	8/25/2014
2015	458,693	409,000		112.4	481,000		95.6	7/19/2015
2016	432,573	394,740		110.8	464,400		94.2	7/17/2016

Source: Southeast Fisheries Science Center recreational (6/7/2017) and commercial (5/2/2017) ACL datasets. Recreational landings exclude Monroe County, Florida.

Table 1.1.4. Summary of recent annual recreational landings relative to management targets (lbs ww).

Recreational								
Year	Landings	ACT (quota)	Adjusted ACT	ACT %	ACL	Adjusted ACL	ACL %	Closure Date
2008	1,318,662			NA	1,368,000		96.4	
2009	1,480,315			NA	1,368,000		108.2	10/24/2009
2010	1,225,225			NA	1,368,000	1,243,184	105.9	
2011	949,999			NA	1,368,000	1,315,224	78.5	
2012	1,238,718	1,130,000		NA	1,299,000		96.7	
2013	1,620,761	1,130,000		NA	1,299,000		118.1	
2014	1,090,048	1,130,000	895,438	102.0	1,299,000	1,063,538	85.8	8/25/2014
2015	1,407,551	1,130,000		119.7	1,299,000		104.2	9/28/2015
2016	1,962,560	1,092,372	933,731	189.7	1,255,600	1,101,959	163.9	6/1/2016

Source: Southeast Fisheries Science Center recreational (6/7/2017) and commercial (5/2/2017) ACL datasets. Recreational landings exclude Monroe County, Florida

1.2 Purpose and Need

The purpose of this framework action is to modify the greater amberjack recreational bag limit, establish a seasonal quota for the recreational sector, and modify the commercial trip limit.

The need for this amendment is to extend the greater amberjack recreational and commercial fishing seasons while constraining harvest to the management targets so that overfishing does not occur and the stock is rebuilt in the Gulf.

1.3 History of Management

The Reef Fish Fishery Management Plan (Reef Fish FMP) (with environmental impact statement [EIS]) was implemented in November 1984. The original list of species included in the management unit consisted of snappers, groupers, and sea basses. Gray triggerfish and *Seriola* species, including greater amberjack, were in a second list of species included in the fishery, but not in the management unit. The species in this list were not considered to be target species because they were generally taken incidentally to the directed fishery for species in the management unit. Their inclusion in the Reef Fish FMP was for purposes of data collection, and their take was not regulated.

Amendment 1 (with environmental assessment [EA]), implemented in 1990, added greater amberjack and lesser amberjack to the list of species in the management unit. It set a greater amberjack recreational minimum size limit of 28 inches fork length (FL), a 3-fish recreational bag limit, and a commercial minimum size limit of 36 inches FL. This amendment's objective was to stabilize the long-term population levels of all reef fish species. A framework procedure for specification of total allowable catch (TAC) was created to allow for annual management changes. This amendment also established a commercial vessel reef fish permit as a requirement for harvest in excess of the bag limit and for the sale of reef fish.

Amendment 4 (with EA), implemented in 1992, added banded rudderfish and almaco jack to the management unit and established a moratorium on the issuance of new commercial reef fish vessel permits for a maximum period of 3 years.

Amendment 5 (with supplemental EIS), implemented in 1994, required that all finfish, except for oceanic migratory species, be landed with head and fins attached and closed the region of Riley's Hump (near Dry Tortugas, Florida) to all fishing during May and June to protect mutton snapper spawning aggregations.

Amendment 12 (with EA), submitted in 1995 and implemented in 1997, reduced the greater amberjack bag limit from three fish to one fish per person and created an aggregate bag limit of 20 reef fish for all reef fish species not having a bag limit (including lesser amberjack, banded rudderfish, almaco jack, and gray triggerfish). NMFS disapproved proposed provisions to include lesser amberjack and banded rudderfish along with greater amberjack in an aggregate one-fish bag limit and to establish a 28-inch FL minimum size limit for those species.

Amendment 15 (with EA), implemented in 1998, closed the commercial harvest of greater amberjack in the Gulf during the months of March, April, and May.

Regulatory Amendment (with EA), implemented in 1999, closed two areas (i.e., created two marine reserves), 115 and 104 square nautical miles respectively, year-round to all fishing under the jurisdiction of the Council with a 4-year sunset clause.

Generic Sustainable Fisheries Act Amendment (with EA), partially approved and implemented in 1999, set the maximum fishing mortality threshold (MFMT) for greater amberjack at the fishing mortality necessary to achieve 30% of the unfished spawning potential ratio (SPR) $F_{30\% SPR}$. Estimates of maximum sustainable yield (MSY), minimum stock size threshold (MSST), and optimum yield (OY) were disapproved because they were based on SPR proxies rather than biomass-based estimates.

Secretarial Amendment 2 (with EIS), implemented in 2003, specified MSY for greater amberjack as the yield associated with $F_{30\% SPR}$ (proxy for F_{MSY}) when the stock is at equilibrium, OY as the yield associated with an $F_{40\% SPR}$ when the stock is at equilibrium, MFMT equal to $F_{30\% SPR}$, and MSST equal to $(1-M) \cdot B_{MSY}$ (where M = natural mortality) or 75% of B_{MSY} . It also set a rebuilding plan limiting the harvest to 2,900,000 lbs for 2003-2005, 5,200,000 lbs for 2006-2008, 7,000,000 lbs for 2009-2011, and for 7,900,000 lbs for 2012. This was expected to rebuild the stock in 7 years. Regulations implemented in 1997 and 1998 (Amendments 12 and 15 to the Reef Fish FMP) were deemed sufficient to comply with the rebuilding plan so no new regulations were implemented.

Amendment 30A (with EIS), implemented in 2008, was developed to stop overfishing of gray triggerfish and greater amberjack. The amendment established ACLs and AMs for greater amberjack and gray triggerfish. For greater amberjack, the rebuilding plan was modified, increasing the recreational minimum size limit to 30 inches FL, implementing a zero bag limit for captain and crew of for-hire vessels, and setting commercial and recreational ACTs (quotas).

Amendment 30A also established an allocation for greater amberjack harvest of 73% recreational and 27% commercial, which would be in effect until such time that the Council, through the recommendations of an Ad Hoc Allocation Committee, could implement a separate amendment that fairly and equitably allocated Reef Fish FMP resources between recreational and commercial sectors.

A Regulatory Amendment (with EA), implemented in 2011, specified the greater amberjack recreational closed season from June 1 – July 31. The intended effect of this final rule was to mitigate the social and economic impacts associated with implementing in-season closures.

Amendment 35 (with EA), implemented in 2012 in response to a 2010 update stock assessment, established a new ACL equal to the ABC at 1,780,000 lbs, which was less than the current ACL of 1,830,000 lbs. Reducing the ABC by 18% was expected to end overfishing. The rule also established a commercial trip limit of 2,000 lbs whole weight (ww) throughout the fishing year. The Council also considered bag limits and closed season management measures for the recreational sector but did not alter any recreational management measures.

2015 Framework Amendment (with EA), implemented in 2016 decreased the total ACL from 1,780,000 lbs to 1,720,000 lbs, set the commercial ACL at 464,400 lbs and the commercial ACT (quota) at 394,740 lbs, set the recreational ACL at 1,255,600 lbs and the recreational ACT (quota) at 1,092,372 lbs, reduced the commercial trip limit from 2,000 lbs to 1,500 lbs, and increased the recreational minimum size limit from 30 inches FL to 34 inches FL.

2017 Framework Amendment (with EA), was implemented in 2017. It set the recreational greater amberjack ACL at 862,860 lbs ww for 2018, 1,086,970 lbs ww for 2019, and 1,309,620 lbs ww for 2020 and subsequent fishing years. The commercial greater amberjack ACL was set at 319,140 lbs ww for 2018, 402,030 lbs ww for 2019, and 484,380 lb ww for 2020 and subsequent fishing years. The recreational greater amberjack ACT (quota) was set at 716,173 lb ww for 2018, 902,185 lbs ww for 2019, and 1,086,985 lbs ww for 2020 and subsequent fishing years and the commercial greater amberjack ACT (quota) was set at 277,651 lbs ww for 2018, 349,766 lbs ww for 2019, and 421,411 lbs ww for 2020 and subsequent fishing years. In addition, this framework modified the recreational seasonal closure to be January 1 through June 30 each year and established a new rebuilding timeframe, which ends in 2027.

2017 Framework Amendment (with EA), was implemented in 2018. It modified the recreational fishing year to be August 1 through July 31. It also modified the recreational fixed closed season to be November 1 through April 30 and June 1 through July 31 each year.

CHAPTER 2. MANAGEMENT ALTERNATIVES

2.1 Action 1– Modify the Greater Amberjack Recreational Bag Limit

Option 1: No Action – Do not modify the current 1- fish per person per day recreational bag limit.

Option 2: Reduce the recreational bag limit to 1-fish for every 2 people per day with an allowance for fewer people.

Option3: Reduce the recreational bag limit to 1-fish for every 3 people per day with an allowance for fewer people.

Discussion

The recreational bag limit for Gulf of Mexico (Gulf) greater amberjack is 1 fish per person per day and was implemented in 1997 (GMFMC 1995). The recreational fishing year for greater amberjack begins August 1 and extends through July 31 and was recently implemented in March 2018 (GMFMC 2017b). Greater amberjack is open to recreational harvest August 1 – October 31 and May 1 – May 31 (GMFMC 2017b). The recreational season has been modified twice within the past six months in an effort to improve regional access and keep harvest at or below the annual catch target (ACT [quota]) to prevent the accountability measures from being triggered. Accountability measures for greater amberjack were developed in Reef Fish Amendment 30A (GMFMC 2008) which requires the Regional Administrator (RA) to close each sector when the meet or are projected to meet their quota. If despite this closure, the quota for a sector is exceeded, the RA is shall reduce the quota by the following year by the amount the quota was exceeded in the previous year. The recreational season for greater amberjack has closed before the end of the fishing year each year since 2014 (Table 1.1.4).

The Gulf of Mexico Fishery Management Council (Council) is considering options to reduce the recreational bag limit below 1 fish per person per day in effort to reduce the likelihood of exceeding the quota and potentially allow for an increase in season length. Harvest projections indicate that recreational harvest is likely to remain under the 2018-2019 quota, harvest rates are difficult to predict when management changes are frequent and the current season will be prosecuted during a period with few recent data that can be used to predict harvest rates. **Option 1** would retain the current 1 fish per person per day bag limit. Harvest under **Option 1** is not expected to exceed the 2018-2019 quota, but it would not allow for a possible extension of the recreational season, because the projected season length was based the current 1 fish per person per day bag limit. **Option 2** would reduce the bag limit to 1 fish per 2 people per day and is expected to reduce the rate of harvest by 27%. This could allow for an increase in season length, but determining an actual increase would be dependent upon the time period selected as catch rates are highest in spring and summer months and lowest in the fall and winter (Figure 2.1.1). This projection would likely be improved after the 2018-2019 fishing year is complete as the

recent catch rate data from the current fishing year would be available to predict future catch rates. **Option 3** would reduce the bag limit to 1 fish per 3 people per day and would have the greatest overall estimated reduction in harvest rate (36% in comparison to **Option 1**). **Option 3** would reduce the harvest an additional 9% in comparison to **Option 2** (Table 2.1.1). Similar to **Option 2**, **Option 3** may reduce the harvest rate enough to allow for an extension of the recreational fishing season. However, this would require subsequent management action by the Council. **Options 2** and **3** would provide an allowance for fewer people such that a single greater amberjack could be harvested if there was only 1 person on the vessel under **Option 2** and one or two people on the vessel under **Option 3**. For example, **Option 3** would set the bag limit at 1 fish per 3 people per day, however, if the vessel only had 2 anglers they could only harvest a single fish. If four, five, or six anglers are onboard, they would only be allowed to harvest two fish per day, etc.

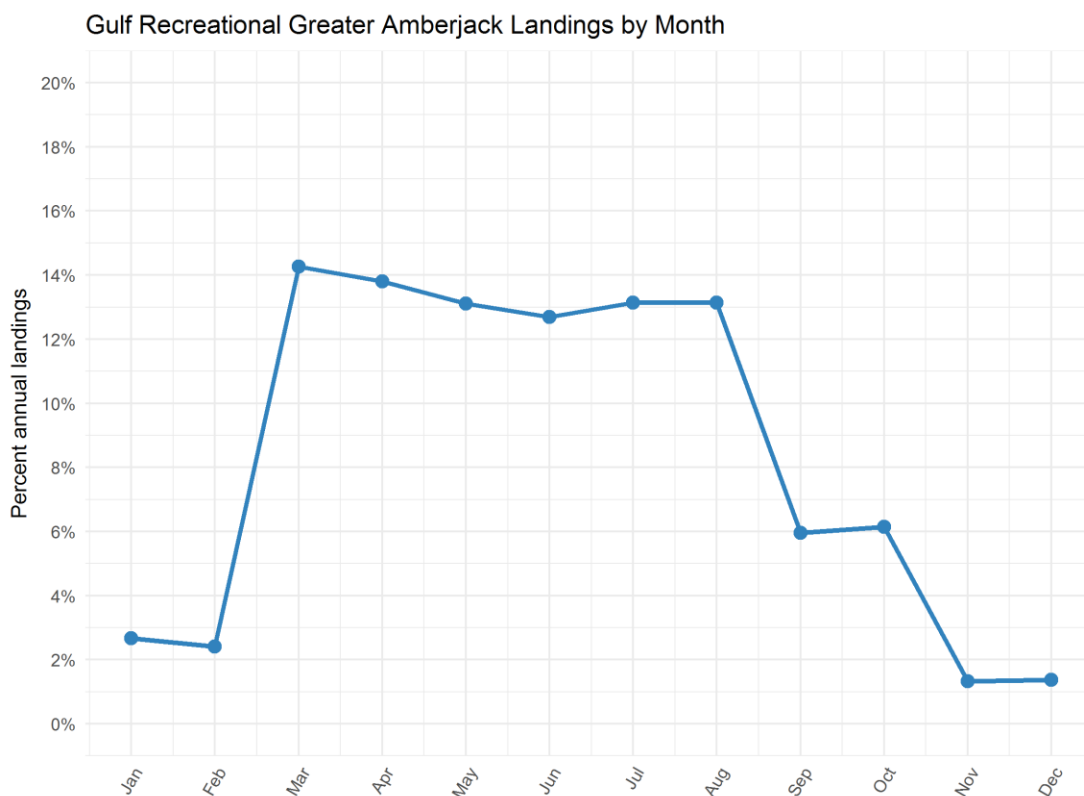


Figure 2.1.1. Percent annual landings of recreationally harvested greater amberjack by month. Landings were predicted from average landings by month from 2014-2016 for January through June then average landings from 2012, 2013, and 2015 for July-December. All of the predicted landings before 2013 were modified to account for the change in landings from the increase in size limit from 30 to 34 inches fork length in January of 2016. Additional details of the landings are described in GMFMC 2017a.

Table 2.1.1. Percent reduction in recreational landings under **Options 2 and 3** relative to **Option 1**. The percent reductions were weighted by the landings for each mode. The current bag limit is one greater amberjack per person per day. **Options 2 and 3** would provide an allowance for trips with fewer people.

Draft Options	Percent Reduction	Allowance
Opt. 1: 1 Fish per Person	0%	N/A
Opt. 2: 1 Fish per 2 People	27%	1-2 people onboard may retain 1 fish; 3-4 people onboard may retain 2 fish, etc.
Opt. 3: 1 Fish per 3 People	36%	1-3 people onboard may retain 1 fish; 4-6 people onboard may retain 2 fish, etc.

Source: Recreational intercept data from TPWD, LA Creel, MRIP, and Headboat from 2014 to 2016.

The Council has previously considered recreational bag limits of less than 1 fish per person per day (GMFMC 2008; GMFMC 2012), also called fractional bag limits. During the development of Amendment 30A to the Reef Fish Fishery Management Plan of the Gulf (Reef Fish FMP), the Council received comments during public hearings and from the Reef Fish advisory panel that called this type of bag limit the least acceptable way to manage the recreational sector. The comments stated that bag limits less than 1 fish per angler per trip would be impossible to enforce and would disproportionately affect the for-hire component. During the development of Amendment 35 to the Reef Fish FMP, the Council also determined that there was little public interest in bag limits of less than one fish per angler per trip and moved the action to considered but rejected. However, some interest remains in this management option because of the desire to increase the season length of greater amberjack, a highly prized species in the recreational sector, and the geographic difference in season opening across the Gulf.

2.2 Establish Seasonal Quotas for the Greater Amberjack Recreational Sector

Option 1: No Action – Do not establish seasonal quotas for the recreational sector.

Option 2: Establish a fall (August 1 – October 31; 60% of recreational ACT) and spring (May 1- May -31; 40% of recreational ACT) seasonal quota.

Option 3: Establish a fall (August 1 – October 31; 70% of recreational ACT) and spring (May 1- May -31; 30% of recreational ACT) seasonal quota.

Discussion

The Council recently modified the recreational greater amberjack fishing year and closed season (GMFMC 2017b). For the remainder of the 2017 - 2018 fishing year, recreational greater amberjack will be open to harvest May 1 – May 30. For the 2018 - 2019 fishing year (which begins on August 1) and beyond, recreational greater amberjack will be open to harvest August 1 – October 31, and May 1 – May 31. The Council selected this split season to address regional preferences for recreational harvest of greater amberjack. In the Florida Panhandle, the spring season is the most desirable based on demand and seasonal availability of the resource. In the western Gulf, the fall season is preferable based on weather conditions and perhaps movement patterns of greater amberjack. The National Marine Fisheries Service (NMFS) monitors the harvest rate in-season and must close the recreational sector when the quota is met or projected to be met. The current bag limit and season is not expected to exceed the recreational 2018/2019 quota before the end of the fishing season (Table 2.2.1), however, if catch rates are higher than expected, the season would be closed early, potentially restricting access to the Florida Panhandle region that primarily accesses the fishery during the spring season, which is now at the end of the fishing year. **Option 1** would not establish seasonal quotas and the season would be open from August 1 – October 31, and May 1 – May 31 unless the quota is met or projected to be met before the end of the fishing season. **Option 2** would establish a fall quota equal to 60% of the quota and a spring quota equal to 40% of the quota. Based on anticipated harvests, an in-season quota closure would be expected right before the end of the fall season (Table 2.2.1) but the spring season would remain open throughout the month of May. **Option 3** would assign 70% of the recreational quota to the fall season and 30% of the recreational quota to the spring season. Current predictions anticipate an in-season quota closure right before the end of the spring season for the 2018-2019 fishing year (Table 2.2.1). Because greater amberjack is overfished (GMFMC 2017a), any overage of the recreational ACL must be deducted from the allowable harvest in the following fishing year. **Options 2** and **3** would require a mechanism to ensure that any overage adjustments occurred on a seasonal basis such that the season that previously had an overage is adjusted in subsequent years to reduce the seasonal harvest. For example, if **Option 2** was selected and the fall harvest exceeded 60% of the seasonal quota, any overage would be deducted from the following fall season thereby allowing the spring season to re-open in the same fishing year. However, it is uncertain if seasonal paybacks for overages could be implemented and at minimum, would require modification of the accountability measures that require any overage of the annual catch limit (ACL) be deducted from the ACL

and annual catch target (ACT) in the following year. Also, NMFS is required to close the recreational sector for the remainder of the fishing year once the recreational quota has been met. Therefore, NMFS could not re-open the recreational fishery for the spring season if the entire recreational quota was harvested in the previous fall season within the same fishing year. Unless a mechanism is developed to permit this situation, it is unknown if this action will have the intended effect. In-season monitoring occurs for greater amberjack, however, the harvest estimates for the fall season will not be known until well after the fall season has closed. It is unlikely that real-time data will be available such that the recreational fall season could be closed when/if the desired proportion of the recreational quota is harvested. However, any overage should be known before May, which would require NMFS to close the sector before the spring fishing season.

Table 2.2.1. Options to split the recreational quota between fall (August 1 – October 31) and spring (May 1 – May 30) seasons based on 2018/2019 fishing season quota. The 2018-2019 recreational quota is 902,185 lbs ww.

Option	Fall season	Estimated Close date	Spring season	Estimated Close date	Estimated Landings (% ACT)
Opt. 1: No split quota	Aug 1 – Oct 31	None	May 1 – May 30	None	838,548 (93%)
Opt. 2: 60/40 (Fall/Spring)	Aug 1 – Oct 31	Oct-28	May 1 – May 30	None	825,425 (91 %)
Opt. 3: 70/30 (Fall/Spring)	Aug 1 – Oct 31	None	May 1 – May 30	May-29	820,048 (91%)

2.3 Action 3 – Modify the Greater Amberjack Commercial Trip Limit

Option 1: No Action – Do not modify the current commercial trip limit of 1,500 lbs gutted weight (gw) (1,560 lbs whole weight [ww]).

Option 2: Reduce the commercial trip limit to 1,000-lbs gw (1,040-lbs ww).

Option 3: Reduce the commercial trip limit to 750-lbs gw (780-lbs ww).

Option 4: Reduce the commercial trip limit to 500-lbs gw (520-lbs ww).

Discussion

Commercially harvested greater amberjack are typically landed gutted rather than whole. As such, the management alternatives are stated in gutted weight with equivalent whole weight conversions noted in parentheses. The current trip limit (**Option 1**) is specified in pounds whole weight.

Action 3 includes options to reduce the commercial trip limit for greater amberjack. Prior to 2013, there was no commercial trip limit for greater amberjack. In 2013, a 2,000 lb ww (1,923 lbs gw) trip limit was implemented to slow the rate of harvest and extend the commercial fishing season (GMFMC 2012). In 2016, the trip limit was further reduced to 1,500 lbs gw (1,560 lbs ww) in an additional effort to extend the season (GMFMC 2015). Few commercial fisherman target greater amberjack and landings primarily occur while fishermen are targeting other reef fish species. Most trips land less than 500 lbs gw and the trip limit on average and the implementation of trip limits has not affected this pattern for the majority of vessels (Figure 2.3.1 and Figure 2.3.2). The trip limits have restricted the activity of a few fishermen who were likely targeting greater amberjack and harvesting large quantities per trip. While these actions have had little impact on average landings per trip, the commercial sector has consistently reached or exceeded its ACL prior to the end of the fishing season requiring in-season closures. In some cases, the ACL overages were deducted from the ACL in the subsequent fishing year. The commercial season for greater amberjack has closed before the end of the fishing year each year since 2009 (Table 1.1.3).

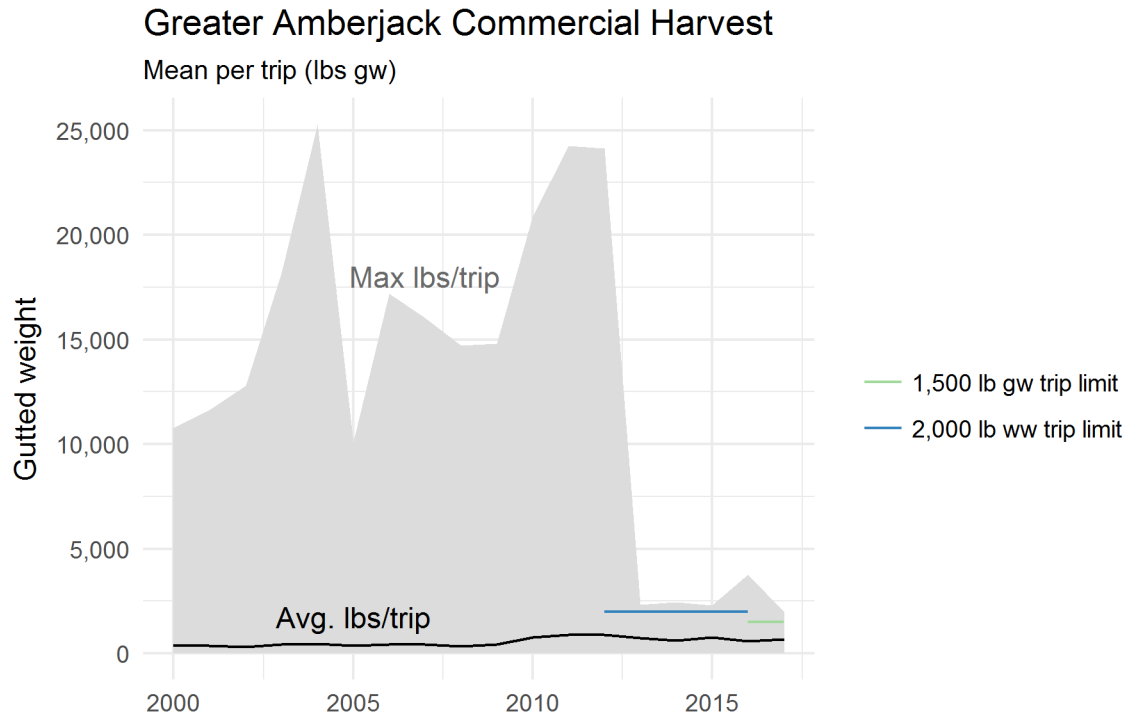


Figure 2.3.1. Mean pounds per trip (gw) of landed greater amberjack (black line) from 2000 through 2017. Gray shaded area indicates range of landings. Dark blue (2,000 lb ww) and green (1,500 lb gw) lines indicate the implementation of trip limits. The maximum pounds per trip landed declined dramatically with the implementation of trip limits.

The current trip limit (**Option 1**) is 1,500 lbs gw (1,560 lbs ww) and was implemented on January 4, 2016. Available logbook data from 2016 and 2017 were analyzed to determine the distribution of catch per trip after the 1,500 lbs gw trip limit started. The majority of trips harvesting greater amberjack land less than 500 lbs gw per trip (Figure 2.3.2). Approximately 17% of trips harvested between 1,251 and 1,500 lbs suggesting that they may have been harvesting up to the allowable trip limit. **Option 2** would reduce the trip limit to 1,000 lbs gw, **Option 3** to 750 lbs gw, and **Option 4** to 500 lbs gw. To examine the effect of reduced trip limits on the commercial season, a trip limit analysis was completed using the historical trip data. For this analysis, trips harvesting greater than 1,000 lbs gw (**Option 2**), 750 lbs gw (**Option 3**), or 500 lbs gw (**Option 4**) were converted to the specified option trip limit and the total harvest. The resulting number of days required to harvest the quota was then re-calculated. This procedure followed the same methodology used previously to consider trip limits for greater amberjack (GMFMC 2012, GMFMC 2015) but the current analyses were based on the most recent data available. **Option 2** is expected to reduce commercial landings by 17.6%, **Option 3**, by 31.3%, and **Option 4**, by 48.8% (Table 2.3.1)

Table 2.3.1. Predicted percent reductions in Gulf greater amberjack commercial landings for a range of possible trip limits. The current trip limit is 1,500 lbs gw.

Trip Limit (lbs gw)	Percent Reduction
Opt. 1: 1500	0
Opt. 2: 1,000	17.6
Opt. 3: 750	31.3
Opt. 4: 500	48.8

Source: Data comes from the commercial logbook dataset for 2016 through 2017, where 2017 data are not complete.

Commercial fishing for greater amberjack opens January 1 each year with a fixed closed season from March 1 through May 31. The fishery re-opens June 1 and is closed when the quota is met or projected to be met. In 2018, the commercial quota was exceeded prior to the March 1 – May 31 closure and will not re-open for the remainder of the year. **Option 1** is expected to have a 79-day fishing season and close June 21 (Table 2.3.2). **Option 2** would reduce the trip limits to 1,000 lbs gw and reduce the rate of harvest 17.6% relative to **Option 1**. This would increase the season 16 days and close on July 7. **Option 3** would reduce the trip limit to 750 lbs gw and reduce harvest rate by 31.3% relative to **Option 1**. This is projected to extend the season to 119 days (close date July 31). **Option 4** would reduce the trip limit to 500 lbs gw and provide the greatest reduction in harvest rate (48.8%) relative to **Option 1** and provide the longest season of the options under consideration (166 days, close date September 16; Table 2.3.2). However, none of the options would reduce the harvest rate sufficiently to avoid an in-season closure prior to the end of the calendar year. If the intent is to remain open all year, additional options below 500 lbs gw may warrant consideration.

Table 2.3.2. Greater amberjack commercial sector predicted closure dates for four different trip limits. Closure dates are when the quota of 349,766 lbs ww for 2019 is projected to be harvested. “Days Open” is the total number of days open for greater amberjack harvest for the fishing year.

Trip Limit (lbs gw)	Closure Date	Days Open
	2018 ACT	
Opt. 1: 1500	21-Jun	79
Opt. 2: 1,000	7-Jul	95
Opt. 3: 750	31-Jul	119
Opt. 4: 500	16-Sep	166

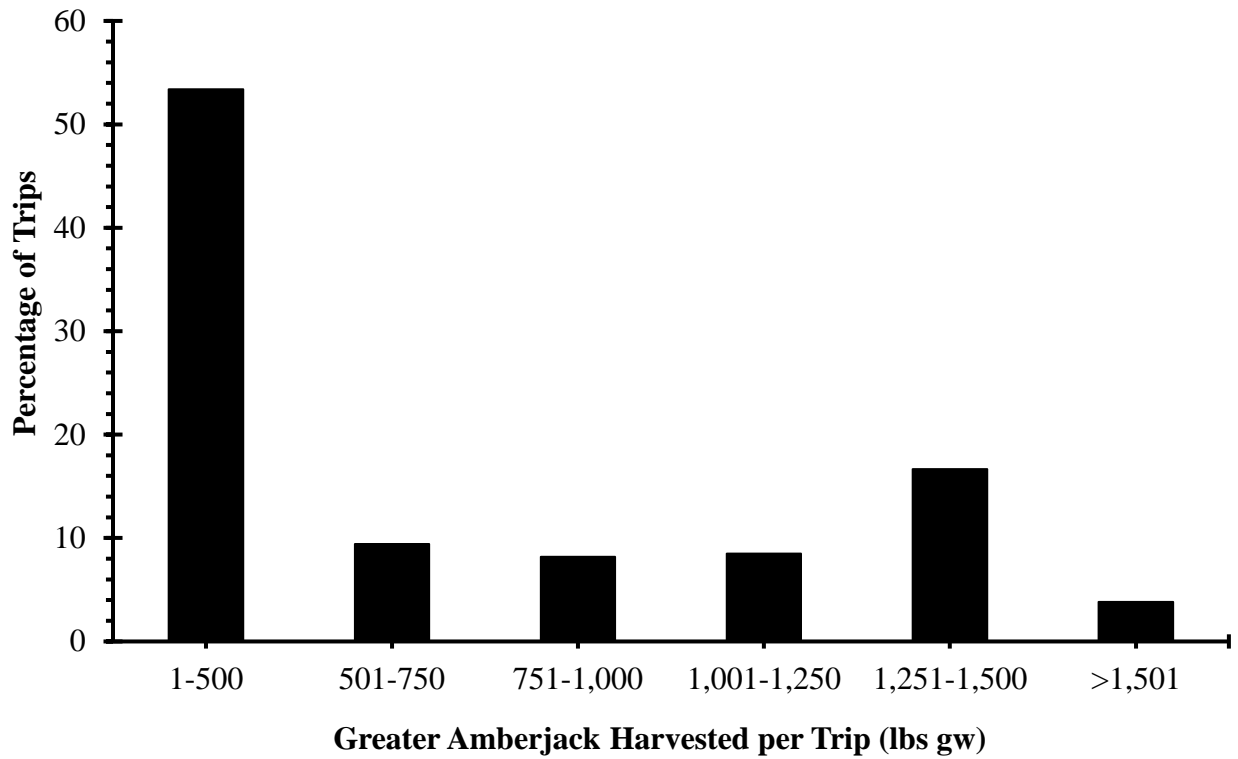


Figure 2.3.2. Pounds per trip (gw) of commercially harvested greater amberjack in 2016-2017. Source: Southeast Fisheries Science Center (SEFSC) logbook data as of November 6, 2017 (n = 1,307 trips). Logbook data for 2017 are not complete.

CHAPTER 3. REFERENCES

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