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Modify Number of Unrigged Hooks Carried Onboard Bottom Longline Vessels in the Gulf of Mexico

Including Regulatory Impact Review and Regulatory Flexibility Act Analysis

Abbreviated Framework Action to the Fishery Management Plan for the Reef Fish Fishery of the Gulf of Mexico, United States Waters

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FRAMEWORK ACTION TO MODIFY NUMBER OF UNRIGGED HOOKS CARRIED ONBOARD BOTTOM LONGLINE VESSELS IN THE GULF OF MEXICO

Including Regulatory Impact Review and Regulatory Flexibility Act Analysis

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ABBREVIATIONS USED IN THIS DOCUMENT

BiOp	biological opinion
Council	Gulf of Mexico Fishery Management Council
EEZ	exclusive economic zone
ESA	Endangered Species Act
E.O.	Executive Order
FMP	Fishery Management Plan
Gulf	Gulf of Mexico
NMFS	National Marine Fisheries Service
RFA	Regulatory Flexibility Act
RIR	Regulatory Impact Review

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CHAPTER 1. INTRODUCTION

1.1 Purpose and Need

The purpose of this action is to modify the number of hooks that commercial reef fish vessels with a bottom longline endorsement in the Gulf of Mexico (Gulf) are allowed to carry onboard when using bottom longline gear to fish for reef fish in the Gulf exclusive economic zone (EEZ) east of 85°30' west longitude (Cape San Blas, Florida). The need is to reduce the regulatory and potential economic burden on fishermen.

1.2 Background

National standard 9 of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Steven Act) requires that the National Marine Fisheries Service (NMFS) minimize bycatch and bycatch mortality to the extent practicable. Additionally, the Endangered Species Act (ESA) requires that the federal government protect and conserve species and populations that are endangered or threatened with extinction, and conserve the ecosystems on which these species depend. A 2008 observer report by the Southeast Fisheries Science Center estimated sea turtle takes by the commercial bottom longline component of the Gulf of Mexico reef fish fishery exceeded the three-year anticipated take levels in the 2005 Biological Opinion on the fishery (NMFS 2009a). Therefore, the Gulf of Mexico Fishery Management Council (Council) and NMFS developed management measures in Amendment 31 to reduce sea turtle takes by the bottom longline component of the Gulf reef fish fishery.

Any vessels that want to use bottom longline gear to fish for reef fish in the Gulf EEZ east of 85°30' west longitude (Cape San Blas, Florida) must also have an Eastern Gulf reef fish longline endorsement on board. Since 2010, there have been 62 vessels with bottom longline endorsements, with the exception of 2 years, in which there were 61. During the years with 61, the additional endorsement was still renewable/transferrable. Currently, all but one of the permit holders with the bottom longline endorsement are located in Florida (98%). In the western Gulf, bottom longline gear is prohibited shoreward of 50 fathoms (300 ft).

Reef Fish Amendment 31 (GMFMC 2010) was implemented May 26, 2010 (75 FR 21512), and included three regulations to reduce the likelihood of sea turtle interactions in the bottom longline component of the fishery. The regulations are specified in Appendix A and are summarized as follows:

Longline Endorsements to Fish East of Cape San Blas, Florida

The qualification for a bottom longline endorsement was based on historical logbook landings during 1997-2007 from vessels that used fish traps and longline gear, and caught at least a minimum annual average reef fish landings of 40,000 pounds gutted weight (lbs gw). The transfer of the longline endorsement is unrestricted between commercial Gulf reef fish permit holders. This endorsement allowed for a reduction in the number of vessels that used bottom longline in the reef fish fishery and in effective effort (18-37%), allowing for a reduction in the

interactions between sea turtles and bottom longline gear. Effective effort is the number of hooks, as reduced by scalar reduction in sea turtle bycatch rate, following redistribution of effort from 20-35 fathoms to deeper water during seasonal closures (NMFS 2009b). To account for effort shift, calculations of percent reductions in effective effort (relative to the 2007-2008) were used in Amendment 31 as an estimate of potential sea turtle bycatch reduction.

Restrict the Use of Bottom Longline Gear for Reef Fish in the Eastern Gulf of Mexico (east of 85° 30' W Longitude, Near Cape San Blas, Florida)

The final rule for Amendment 31 (GMFMC 2010) established restrictions on the use of bottom longline fishing gear in the Gulf, east of 85° 30' W longitude, near Cape San Blas, Florida (Figure 1.2.1). During the months of June, July, and August, bottom longline gear is prohibited shoreward of the 35 fathom (210 ft) contour because this is the time and area where 62% of sea turtle takes were observed (GMFMC 2010). Bottom longline fishing, with an endorsement, is allowed seaward of 20 fathoms (120 ft) from January through May and September through December. Amendment 31 indicated that given a closure of eastern Gulf waters less than 35 fathoms during June through August, if all effort shifts to deeper water during the closure, effective effort would be reduced 14% (7-17%, 95% CI); if 50% of effort shifts to deeper water, effective effort would be reduced 16% (13-18%, 95% CI).

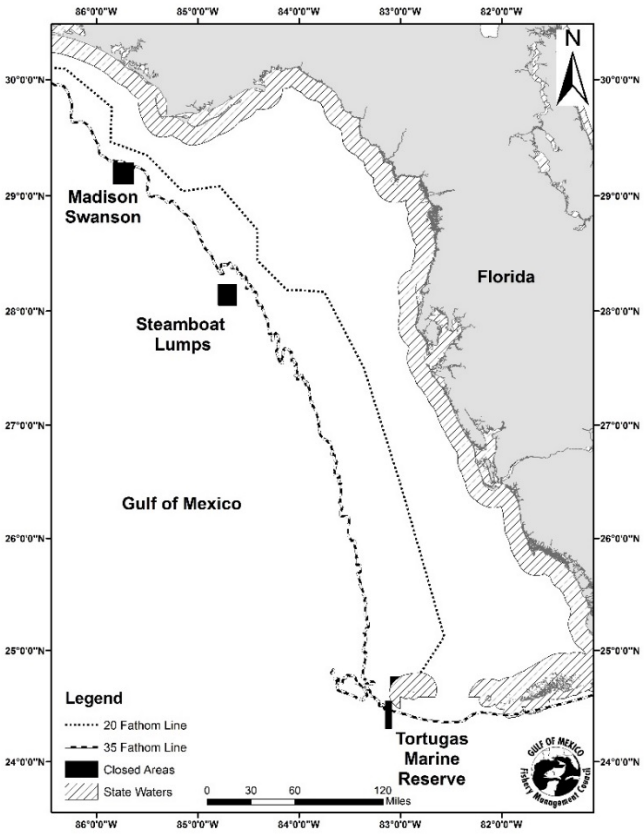

Figure 1.2.1. Restrictions on the use of bottom longline gear in the eastern Gulf enacted through Reef Fish Amendment 31 (GMFMC 2010).

Modify Fishing Practices and Gear for Vessels Using Bottom Longline Gear to Harvest Reef Fish East of Cape San Blas

The final rule for Amendment 31 established restrictions on the number of hooks per bottom longline vessel to 1,000 of which no more than 750 could be fished or rigged to fish at any one time. It was noted that limiting the number of hooks in the water could allow operations to run more quickly by reducing the time spent retrieving the mainline, dehooking catch, and dehooking bycatch. Quicker haul back of the mainline due to the limited number of hooks per vessel could also result in reduced soak time, increasing the probability of a sea turtle surviving if incidentally hooked. Observers documented the greatest number of sea turtle takes when 750 or more hooks per set were used. In addition, from the enforcement perspective, the number of hooks per vessel was considered an easier gear restriction for officials to check than hooks per mile or mainline and gangion length (GMFMC 2010). This restriction alone was thought to result in a baseline reduction in effective effort between 27-39%.

Expected Combined Effects of Amendment 31 Regulations

The overall reduction in effective effort expected from the implementation of the three management measures discussed above was 48% to 67% (the amounts are not additive because of interactions). This achieved the Council's goal of meeting recommended reductions in effort, which was assumed to reflect similar reductions in sea turtle interactions. It was acknowledged that these management measures could have long term implications, because some affected entities, including fishing vessels/businesses, infrastructure businesses, and participants in all other fisheries or gear sectors that deal with these businesses, may not be able to economically survive.

NMFS completed a BiOp in October 2009 (NMFS 2009a) and concluded with the implementation of Amendment 31 (GMFMC 2010) that the continued authorization of the Gulf reef fish fishery, including the bottom longline component, was not likely to jeopardize the continued existence of listed species (NMFS 2009b). While sea turtle interactions with the bottom longline component of the reef fish fishery have been reduced since implementation, the effect of each individual restriction is not well understood because all three restrictions were implemented simultaneously.

Representatives of the commercial industry that use bottom longline gear have asked for an increase in the number of total unrigged hooks per vessel, while still keeping in place the restriction of 750 hooks for fishing or rigged to fish at any one time. Fishermen believe allowing more hooks to be kept onboard would make their multi-day trips more economical. Currently, they are constrained to carrying 250 extra unrigged hooks onboard their vessels, and industry representatives have indicated that this is not enough on long trips due to sharks biting the hooks offs and other general hook loss. After the 250 extra hooks are used, other fishermen must supply additional hooks, the vessel must return to port, or the vessel will have to reduce the number of hooks fished. Any of these solutions will result in a negative impact on the net operating revenue. The fishermen recognize the importance of preserving the reductions in sea turtle interactions that resulted from the implementation of Amendment 31. They are not requesting additional rigged hooks. Allowing additional unrigged hooks onboard should result

in increased revenue while still maintaining the observed reduction in sea turtle interactions since implementation of Amendment 31.

Options

Option 1. Modify the total number of hooks per vessel to 1,500 of which no more than 750 hooks are fished or rigged for fishing. This option was analyzed in Amendment 31 (GMFMC 2010) as the total amount of hooks allowed to fish. The requirement of only 750 hooks rigged for fishing at any one time would remain in place for this action. Therefore, there should not be any additional concern for protected species interactions. Law enforcement can still count the number of rigged and unrigged hooks onboard, but this would increase their burden by increasing the number of unrigged hooks to 750 on board that would need to be counted for enforcement purposes.

Option 2. Modify the total number of hooks to 1,750 of which no more than 750 hooks are fished or rigged for fishing. While the option of greater than 1,500 hooks per vessel was not analyzed in Amendment 31 (GMFMC 2010), the regulation to only allow 750 hooks to be fished or rigged for fishing would remain in place. Therefore, there should not be any additional concern for protected species interactions. Law enforcement can still count the number of rigged and unrigged hooks onboard, but this would increase their burden by increasing the number of unrigged hooks to 1,000 on board that would need to be counted for enforcement purposes.

Option 3. Modify the total number of hooks to be unlimited of which no more than 750 hooks are fished or rigged for fishing. While the option of greater than 1,500 hooks per vessel was not analyzed in Amendment 31 (GMFMC 2010), the regulation to only allow 750 hooks to be fished or rigged for fishing would remain in place. Therefore, there should not be any additional concern for protected species interactions. Law enforcement would only need to check the number of rigged hooks (750) because there would be an unlimited number of unrigged hooks allowed in this option, reducing any burden on law enforcecment.

Discussion:

All options modify the number of unrigged hooks that bottom longline vessels with endorsements are allowed to carry onboard, but retain the limit of 750 rigged hooks. Industry representatives have indicated that **Option 3**, unlimited unrigged hooks is their preferred option. If this option cannot be selected, industry would like to see **Option 2** as the preferred that would allow them to carry 1,000 additional unrigged hooks. Industry representatives have indicated that while an additional 750 hooks (**Option 1**) per vessel would be more beneficial than the 250 that are allowed, they would prefer to have more unrigged hooks onboard. It was noted that there have been incidences of up to 100 hooks lost per set and up to 500 lost per trip. It was also noted that boxes of hooks can range from 100 to 1,000 depending on the type.

If additional unrigged hooks per vessel are allowed, effort is not expected to increase, as fishermen would continue to be restricted to the maximum of 750 hooks rigged for fishing. Rigged for fishing is defined as hooks attached to a line or other device capable of attaching to the mainline of the bottom longline (GMFMC 2010). Therefore, interactions with protected species are expected to remain status quo. Since the implementation of Amendment 31 in 2010,

industry representatives have stated fishermen using this gear type have generally modified their fishing behavior. For example, they are now using a shorter mainline and a shorter soak times.

Industry representatives have also observed more sharks over time and increased hook loss due to shark bite offs. Therefore, allowing additional unrigged hooks (i.e., 750, 1,000, or unlimited) to be on board the vessel would be beneficial. The allowance of multiple boxes of hooks kept on board was said to be the most beneficial in the case of a high number of hook bite offs.

CHAPTER 2. REGULATORY IMPACT REVIEW

2.1 Introduction

The National Marine Fisheries Service (NMFS) requires a Regulatory Impact Review (RIR) for all regulatory actions that are of public interest. The RIR does three things: 1) it provides a comprehensive review of the level and incidence of impacts associated with a proposed or final regulatory action; 2) it provides a review of the problems and policy objectives prompting the regulatory proposals and an evaluation of the major alternatives that could be used to solve the problem; and 3) it ensures that the regulatory agency systematically and comprehensively considers all available alternatives so that the public welfare can be enhanced in the most efficient and cost-effective way. The RIR also serves as the basis for determining whether the proposed regulations are a "significant regulatory action" under the criteria provided in Executive Order (E.O.) 12866. This RIR analyzes the expected economic effects of a proposed framework action to increase the allowable number of unrigged hooks that commercial reef fish vessels with a bottom longline endorsement in the Gulf of Mexico (Gulf) may carry onboard.

2.2. Problems and Objectives

The objective of this action is to modify the number of unrigged hooks commercial reef fish vessels with a bottom longline endorsement in the Gulf are allowed to carry onboard. Another objective is to reduce the regulatory and economic burden on fishermen by allowing them to carry more hooks on bottom longline fishing trips to compensate for the problem of hook loss. This action does not modify the number of fished or rigged-to-fish hooks. Therefore, the action would not be expected to directly impact effort. However, the action would be expected to indirectly increase effort and revenue, since vessels would have additional replacement unrigged hooks onboard. Otherwise, vessels either continue fishing without replacements, or incur additional costs, by returning to port to obtain replacement hooks, or having a separate vessel bring hooks to them.

2.3 Description of the Fishery

2.3.1 Introduction

The reef fish fishery is one of nine fisheries managed by the Gulf of Mexico Fishery Management Council (Council). Since longline gear is prohibited in the recreational sector of the fishery, the following description focuses exclusively on the commercial sector.

Commercial landings from the reef fish fishery account for approximately 6% of all finfish and shellfish landings in the Gulf. Dockside revenue and landings by weight increased from 2010 to 2014, but slightly decreased in 2015 (Table 2.3.1.1). During that six-year period, 531 to 577 vessels had landings from the fishery annually.

Table 2.3.1.1. Dockside revenue from all reef fish fishery landings, 2010-2015.

Year	Vessels with Reef Fish Landings	Lbs gw	Dockside Revenue
2010	577	10,337,462	$34,262,980
2011	561	13,343,057	$44,733,134
2012	554	13,983,672	$49,114,620
2013	531	13,626,126	$52,266,235
2014	574	15,438,913	$60,254,917
2015	532	14,548,652	$59,486,917
Average 2010-14	**559**	**13,345,846**	**$48,126,377**
Average 2011-15	**550**	**14,188,084**	**$53,171,165**

Source: SEFSC Online Economic Query System, April 27, 2017, and BEA for GDP implicit price deflator.

Commercial fishing vessels that harvest reef fish from the Gulf exclusive economic zone (EEZ) must have a Gulf reef fish commercial permit, which is a limited access permit. As of January 16, 2017, a total of 847 vessels have the permit (775 valid and 72 renewable/transferable). Approximately 98% of the permits have the mailing recipient in a Gulf state (Table 2.3.1.2). These vessels combine to make up the federal Gulf reef fish fleet. Only vessels with a valid Gulf reef fish permit can harvest reef fish in the Gulf EEZ, and those that use bottom longline gear in the Gulf EEZ, east of 85º 30'west longitude (Cape San Blas, Florida), must also have a valid Eastern Gulf longline endorsement. As of January 16, 2017, 62 of the permit holders have the longline endorsement (61 valid and one renewable/transferrable), and 61 (98.4%) of them have a mailing address in Florida.

Table 2.3.1.2. Number and percentage of vessels with Gulf reef fish permit by state as of January 16, 2017.

State	Gulf Reef Fish Permits	
	Number	Percent
AL	36	4.3%
FL	673	79.5%
LA	38	4.5%
MS	8	0.9%
TX	76	9.0%
Subtotal	**831**	**98.1%**
Other	16	1.9%
Total	**847**	**100.0%**

Source: NMFS SERO PIMS.

The bottom longline endorsement has been a requirement since May 26, 2010, and the number has varied from 62 to 61 (Table 3.4.3). One of the current 62 endorsements is attached to a vessel without a Gulf reef fish permit, and therefore that vessel cannot harvest any species or species groups in the fishery. All but one of the 62 endorsements has a mailing recipient with a Florida address. To qualify for an endorsement, a reef fish permit holder had to have a minimum annual average reef fish landings using longline gear of 40,000 lbs gw.

2.3.2 Longline Vessels

An average of 64 to 65 longline vessels annually land reef fish Gulf-wide. These vessels represent approximately 12% of the vessels that annually land reef fish (Table 2.3.2.1). Annual landings by these longline vessels, however, account for almost a third of annual landings of reef fish by weight and dockside revenue (Table 2.3.2.2). These vessels include longline vessels that operate outside of the eastern Gulf and may use pelagic longline gear, such that they are not required to have an endorsement.

Table 2.3.2.1. Number of vessels with landings of reef fish (all gear and all longline) and percentage of longline vessels.

Year	Vessels with Reef Fish Landings		Percent Longline
	All Gear	All Longline	
2010	577	70	12.1%
2011	561	62	11.1%
2012	554	66	11.9%
2013	531	62	11.7%
2014	574	66	11.5%
2015	532	62	11.7%
Average 2010-14	**559**	**65**	**11.7%**
Average 2011-15	**550**	**64**	**11.6%**

Source: SEFSC Online Economic Query System, April 27, 2017.

Table 2.3.2.2. Landings of and nominal dockside revenue from reef fish by all gear and all longline gear, 2010-2015.

Year	Lbs gw Landed		Percent Longline	Nominal Revenue		Percent Longline
	Gear	Longlines		Gear	Longlines	
2010	10,337,462	2,338,730	22.6%	$31,529,056	$7,315,054	23.2%
2011	13,343,057	4,257,853	31.9%	$42,013,717	$13,591,641	32.4%
2012	13,983,672	4,268,515	30.5%	$46,978,542	$14,276,881	30.4%
2013	13,626,126	4,685,516	34.4%	$50,800,378	$17,168,226	33.8%
2014	15,438,913	5,430,234	35.2%	$59,614,012	$20,776,446	34.9%
2015	14,548,652	4,495,000	30.9%	$59,486,917	$18,122,538	30.5%
Average 2010-14	**13,345,846**	**4,196,170**	**30.9%**	**$46,187,141**	**$14,625,650**	**30.9%**
Average 2011-15	**14,188,084**	**4,627,424**	**32.6%**	**$51,778,713**	**$16,787,146**	**32.4%**

Source: SEFSC Online Economic Query System, April 27, 2017, and BEA for GDP implicit price deflator.

The number of longline vessels with annual landings of reef fish declined, while the number of trips made by longline vessels increased after the bottom longline endorsement was established in 2010 (Table 2.3.2.3). Average annual landings (lbs gw) of reef fish both per longline vessel and per trip increased over the five-year periods of 2010-2014 to 2011-2015 for vessels landing reef fish. To qualify for an endorsement, a permit holder had to have a least an annual average

of 40,000 lbs gw of reef fish landings by longline gear, and approximately 21% of the longline fleet qualified for the endorsement (GMFMC 2010).

Table 2.3.2.3. Number of all longline vessels and all trips with reef fish landings, and average landings per longline vessel and trip from 2010-2015.

Year	Number with Reef Fish Landings		Total lbs gw Reef Fish	Average lbs gw Per	
	All Longline Vessels	All Longline Trips		Longline Vessel	Longline Trip
2010	70	485	2,338,730	33,410	4,822
2011	62	680	4,257,853	68,675	6,262
2012	66	653	4,268,515	64,674	6,537
2013	62	691	4,685,516	75,573	6,781
2014	66	718	5,430,234	82,276	7,563
2015	62	673	4,495,000	72,500	6,679
Average 2010-14	**65**	**645**	**4,196,170**	**64,922**	**6,393**
Average 2011-15	**64**	**683**	**4,627,424**	**72,740**	**6,764**

Source: SEFSC Online Economic Query System, April 27, 2017.

Landings from the reef fish fishery account for almost all landings of the average longline vessel. During the two five-year periods (2010 - 2014 and 2011 - 2015), dockside revenue from reef fish landings represented approximately 99% of the average longline vessel's annual dockside revenue from all landings (Table 2.3.2.4).

Table 2.3.2.4. Average annual dockside revenue (2015 $) per longline vessel and trip from Gulf reef fish landings and all landings, and percentage of average (total) annual dockside revenue from reef fish landings, 2010-2015.

Year	Average from Reef Fish (RF)		Average from All		Average Percent from RF	
	Vessel	Trip	Vessel	Trip	Vessel	Trip
2010	$113,558	$16,390	$115,028	$16,602	98.7%	98.7%
2011	$233,403	$21,281	$235,656	$21,486	99.0%	99.0%
2012	$226,141	$22,857	$228,430	$23,088	99.0%	99.0%
2013	$284,889	$25,562	$288,187	$25,858	98.9%	98.9%
2014	$318,153	$29,245	$320,785	$29,487	99.2%	99.2%
2015	$292,299	$26,928	$296,263	$27,293	98.7%	98.7%
Average 2010-14	**$235,229**	**$23,067**	**$237,617**	**$23,304**	**99.0%**	**99.0%**
Average 2011-15	**$270,977**	**$25,174**	**$273,864**	**$25,442**	**98.9%**	**98.9%**

Source: SEFSC Online Economic Query System, April 27, 2017, and BEA for GDP implicit price deflator.

Longline vessels that land reef fish make multi-day trips. The average length of a longline trip that landed reef fish varied from 9.4 to 11.6 days from 2010 through 2015 (Table 2.3.2.5). Note that after 2010 there was a significant increase in both the number of trips and total days.

Table 2.3.2.5. Number of longline days and trips that had reef fish landings, average days per trip, and average landings (lbs gw) of reef per day, 2010 – 2015.

Year	Total Days	Total Trips	Average Days Per Trip	Average lbs of RF per Day
2010	5,006	485	10.3	467
2011	6,868	680	10.1	620
2012	6,137	653	9.4	696
2013	7,229	691	10.5	648
2014	7,823	718	10.9	694
2015	7,812	673	11.6	575
Average 2010-14	**6,613**	**645**	**10.2**	**625**
Average 2011-15	**7,174**	**683**	**10.5**	**647**

Source: SEFSC Online Economic Query System, April 27, 2017.

2.4 Impacts of Management Action

The proposed action increases the allowable number of unrigged hooks that commercial reef fish vessels with a bottom longline endorsement in the Gulf may carry onboard. Economic analysis of the net benefits from the proposed action is comprised of both the resulting costs and benefits. Since the alternatives relax an existing regulation that limits the number of unrigged hooks carried onboard, the longline industry and vessels would not be expected to bear any costs as a result of increased unrigged hooks. As a result, analysis focuses on the expected benefits. All alternatives permit additional unrigged hooks, from 750 to an unlimited number. This provides greater benefits through reduced operational costs and opportunities for increased revenue, by reducing the likelihood of either a vessel cutting a trip short to return to shore for additional hooks, or of a vessel continuing a trip with a reduced number of rigged hooks. Thus, while not quantifiable given current data, the expected net benefits are positive for all alternatives.

This action would affect 62 vessels with the bottom longline endorsement, of which 61 are valid. In 2015, the 61 longline vessels had 675 trips with reef fish landings; the average reef fish landings per trip were 6,114 pounds gutted weight. While the 1,000 hook limit did not reduce the average vessel's landings per trip, expected benefits from this proposed action would include fuel cost reductions, by avoiding inshore runs to obtain additional hooks because of hook loss. The per vessel benefits would depend on the number of trips currently affected by the aforementioned fuel costs, as well as the time spent returning to the mainland to obtain additional hooks. Industry representatives have alluded to increased hook loss due to shark bite offs, and a significant number of trips are affected, thus there are economic benefits expected from this proposed action.

2.5 Public and Private Costs of Regulations

The preparation, implementation, enforcement, and monitoring of this or any federal action involves the expenditure of public and private resources that can be expressed as costs associated with the regulations. Costs associated with this specific action include:

Council costs of document preparation, meetings, and information dissemination……....$20,000

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

TOTAL……..…….....$30,000

The development of this proposed action has been undertaken by NMFS and the Council. The Council and NMFS costs of document preparation are based on staff time, travel, printing, and any other relevant items where funds were expended directly for this specific action. No changes in enforcement costs are anticipated.

2.6 Determination of Significant Regulatory Action

Pursuant to E.O. 12866, a regulation is considered a "significant regulatory action" if it is likely to result in: 1) An annual effect of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities; 2) create a serious inconsistency or otherwise interfere with an action taken or planned by another agency; 3) materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights or obligations of recipients thereof; or 4) raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in this executive order. Based on the expected positive net benefits due to potential reductions in operating costs and increased revenue for a maximum of 61 vessels, this proposed action has been determined to not be economically significant for the purposes of E.O. 12866.

CHAPTER 3. REGULATORY FLEXIBILITY ACT ANALYSIS

3.1 Introduction

The purpose of the Regulatory Flexibility Act (RFA) is to establish a principle of regulatory issuance that agencies shall endeavor, consistent with the objectives of the rule and applicable statutes, to fit regulatory and informational requirements to the scale of businesses, organizations, and governmental jurisdictions subject to regulation. To achieve this principle, agencies are required to solicit and consider flexible regulatory proposals, and to explain the rationale for their actions, to assure that such proposals are given serious consideration. The RFA does not contain any decision criteria; instead, the purpose of the RFA is to inform the agency, as well as the public, of the expected economic impacts of the alternatives contained in the fishery management plan (FMP) or amendment (including framework management measures and other regulatory actions). It also ensures that the agency considers alternatives that minimize the expected impacts while meeting the goals and objectives of the FMP and applicable statutes.

With certain exceptions, the RFA requires agencies to conduct a regulatory flexibility analysis for each proposed rule. The regulatory flexibility analysis is designed to assess the impacts various regulatory alternatives would have on small entities, including small businesses, and to determine ways to minimize those impacts. The following regulatory flexibility analysis was conducted to determine if the proposed rule would have a significant economic impact on a substantial number of small entities or not.

3.2 Statement of the need for, objective of, and legal basis for the proposed action

The primary purpose and need, issues, problems, and objectives of the proposed action are presented in Section 1.2 and are incorporated herein by reference.

3.3 Identification of federal rules which may duplicate, overlap, or conflict with the proposed rule

No federal rules have been identified that duplicate, overlap or conflict with the proposed rule.

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

The rule would directly apply to businesses that operate in the commercial fishing industry (NAICS 11411) and particularly, those that operate commercial fishing vessels that harvest reef fish with longline gear in the eastern Gulf of Mexico (Gulf) exclusive economic zone (EEZ). Any commercial fishing vessel that harvests any species or species group of the reef fish fishery

in the Gulf EEZ must have a valid commercial reef fish permit that is specifically assigned to that vessel. The permit is a limited access permit.

There are 848 vessels with a Gulf reef fish permit and 795 of those vessels possess a valid permit as of February 21, 2017. The other 53 vessels hold a reef fish permit that is not valid but is renewable.

A total of 631 businesses own the 848 vessels in the Gulf reef fish fleet, and the sizes of their individual fleets vary from one to 17. Approximately 85% of the businesses have one vessel in the Gulf reef fish fleet, and collectively the one-vessel businesses account for approximately 63% of the vessels that make up the Gulf reef fish fleet (Table 3.4.1). Six of the businesses own approximately 9% of the Gulf reef fish fleet.

Table 3.4.1. Vessels and businesses with a Gulf reef fish permit.

Number		Percentage	
Vessels in Individual Fleet	**Businesses**	**All Vessels in Gulf Fleet**	**Businesses**
1	534	63.1%	84.6%
2	57	13.4%	9.0%
3	21	7.8%	3.4%
4	7	2.8%	1.1%
5	3	1.8%	0.5%
6 to 7	3	2.4%	0.5%
8 to 10	3	3.2%	0.5%
11 to 13	0	0.0%	0.0%
14 to 17	3	5.5%	0.5%
Total	**631**	**100.0%**	**100.0%**

Source: SERO Permit Information Management System (PIMS) as of February 21, 2017.

Landings from the reef fish fishery account for almost all landings of the average vessel using longline gear to harvest reef fish in the Gulf. During the two five-year periods (2010 – 2014 and 2011-2015), dockside revenue from reef fish landings represented approximately 99% of the average longline vessel's annual dockside revenue from all landings (Table 3.4.2).

Table 3.4.2. Average dockside revenue (2015$) from reef fish and all landings per longline vessel* and per longline trip, 2010-2015.

Year	Average from Reef Fish (RF)		Average from All Fisheries		Average Percent from RF	
	Vessel	Trip	Vessel	Trip	Vessel	Trip
2010	$113,558	$16,390	$115,028	$16,602	98.7%	98.7%
2011	$233,403	$21,281	$235,656	$21,486	99.0%	99.0%
2012	$226,141	$22,857	$228,430	$23,088	99.0%	99.0%
2013	$284,889	$25,562	$288,187	$25,858	98.9%	98.9%
2014	$318,153	$29,245	$320,785	$29,487	99.2%	99.2%
2015	$292,299	$26,928	$296,263	$27,293	98.7%	98.7%
Average 2010-14	**$235,229**	**$23,067**	**$237,617**	**$23,304**	**99.0%**	**99.0%**
Average 2011-15	**$270,977**	**$25,174**	**$273,864**	**$25,442**	**98.9%**	**98.9%**

Source: SEFSC Online Economic Query System, April 27, 2017, and BEA for GDP implicit price deflator.
*Includes all vessels that harvest reef fish using any type of longline gear in the Gulf.

A business in the commercial fishing industry is a small business if it and its affiliates have combined annual receipts less than $11 million. The average dockside revenue from all landings per vessel ($273,864) indicates all of the businesses that operate longline vessels that land reef fish are small.

Any of these small businesses that own a vessel that uses bottom longline to fish for reef fish in the Gulf EEZ east of 85°30' west longitude, east of Cape San Blas, Florida must also have an Eastern Gulf reef fish longline endorsement on board that vessel. As of February 21, 2017, there are 62 vessels with the bottom longline endorsement, and 61 are valid. The endorsement has been a requirement since May 26, 2010, and the number has varied from 62 to 61 (Table 3.4.3). One of the 62 endorsements is currently attached to a vessel without a Gulf reef fish permit, and therefore that vessel cannot harvest any species or species group in the fishery. All but one of the 62 endorsements (98.4%) has a mailing recipient with a Florida address.

Table 3.4.3. Number of vessels with a bottom longline endorsement.

Year	Number of Vessels with Bottom Longline Endorsement
2010	62
2011	62
2012	62
2013	61
2014	61
2015	62
2016	62

The 61 vessels with a both a bottom longline endorsement and Gulf reef fish permit represent approximately 6% of the 848 vessels that make up the Gulf reef fish fleet. Thirty-six small businesses operate these 61 longline vessels, and they are estimated to represent approximately 6% of the 631 small businesses with one or more vessels with a Gulf reef fish permit (Table 3.4.4).

Table 3.4.4. Vessels and businesses with a valid Gulf bottom longline reef fish endorsement.

Vessels in Individual Fleet	Total Vessels with Reef Fish Permit	Number with Valid Bottom Longline Endorsement		Percent with Bottom Longline Endorsement	
		Total Vessels	Businesses	Vessels	Businesses
1	534	16	16	1.9%	2.5%
2	114	7	6	0.7%	1.0%
3	63	9	5	0.6%	0.8%
4	28	3	2	0.2%	0.3%
5	15	6	2	0.2%	0.3%
6 to 7	20	3	1	0.1%	0.2%
8 to 10	27	3	1	0.1%	0.2%
11 to 13	0	0	0	0.0%	0.0%
14 to 17	47	14	3	0.4%	0.5%
Total	**848**	**61**	**36**	**4.2%**	**5.7%**

Source: SERO PIMS as of February 21, 2017.

The 61 vessels that have a bottom longline endorsement would be directly affected by this action, but those vessels are not separated from other longline vessels for this analysis. However, because 98.4% of the endorsements are held by Florida residents, and the endorsement is required to use bottom longline gear east of Cape San Blas, Florida, landings of reef fish in Florida, by all longline vessels, is used as a proxy for the landings and dockside revenues of the bottom longline vessels with the endorsement.

The number of vessels that used longline gear to land reef fish in Florida decreased substantially after the endorsement requirement of 2010 (Table 3.4.5). However, average annual landings of all reef fish landed in Florida by all longline vessels decreased slightly from 2005-2009 to 2011-2015: from approximately 4.3 million lbs gw to 4.2 million lbs gw.

Average annual landings of reef fish (in Florida), per longline vessel and per trip, did not decrease after the endorsement requirement and hook limits were put into place in 2010; instead, average annual landings per vessel almost doubled (Table 3.4.5). Average annual dockside revenue (2015 $) per vessel more than doubled (Table 3.4.6). In part, that can be explained by the majority of longline vessels that did not meet the minimum average annual landings requirement of 40,000 lbs to qualify for an endorsement (GMFMC 2010). The endorsement requirement and hook limits (750 in water and 1,000 on board) did not reduce the remaining longline vessels' average annual landings of reef fish in Florida or average annual dockside revenue from reef fish landed in Florida. Note that the average length of a trip (number of days) increased from 9 days from 2005-2009 to 10 days from 2011-2015, which indicates the cost per trip would have increased (Table 3.4.5).

Table 3.4.5. Total Gulf reef fish landed in Florida by longline vessels, number of longline vessels and longline trips with Gulf reef fish landed in Florida, and average reef fish landed in Florida per longline vessel and per longline trip from 2005-2015.

Year	Gulf Reef Fish (RF) Landings in FL (lbs gw)	LL Vessels with RF landings in FL	Average Landings of RF in FL (lbs gw) per LL Vessel	LL Trips with RF Landings in FL	Average RF Landings per Trip	Average Days per Trip with RF Landings
2005	5,190,733	141	36,814	1,381	3,759	7.6
2006	4,817,688	121	39,816	1,469	3,280	8.2
2007	3,986,395	117	34,072	1,174	3,396	9.5
2008	4,676,863	110	42,517	1,190	3,930	9.7
2009	2,583,911	92	28,086	641	4,031	10.8
2010	2,015,314	64	31,489	435	4,633	10.5
2011	3,811,093	56	68,055	620	6,147	10.1
2012	3,923,086	60	65,385	612	6,410	9.3
2013	4,148,023	55	75,419	642	6,461	10.2
2014	4,906,337	62	79,134	683	7,184	10.7
2015	4,127,082	61	67,657	675	6,114	11.4
Average 2005-2009	**4,251,118**	**116**	**36,261**	**1,171**	**3,679**	**9**
Average 2011-2015	**4,183,124**	**59**	**71,130**	**646**	**6,463**	**10**

Source: SEFSC Online Economic Query System, May 8, 2017.

Table 3.4.6. Total annual dockside revenue (2015 $) from Gulf reef fish landings in Florida by longline vessels, and average annual dockside revenue from those landings per vessel, 2005-2015.

Year	Dockside Revenue (2015 $)	
	Total	Average per Vessel
2005	$15,829,505	$112,266
2006	$15,448,624	$127,675
2007	$13,735,313	$117,396
2008	$15,063,865	$136,944
2009	$7,923,991	$86,130
2010	$6,994,359	$109,287
2011	$13,066,351	$233,328
2012	$13,727,199	$228,787
2013	$15,599,414	$283,626
2014	$18,941,719	$305,512
2015	$16,535,050	$271,066
Average 2005-2009	**$13,600,260**	**$116,082**
Average 2011-2015	**$15,573,947**	**$264,464**

Source: SEFSC Online Economic Query System, May 8, 2017, and BEA for GDP implicit price deflator .

3.5 Description of the projected reporting, record-keeping and other compliance requirements of the proposed rule

The action would not impose additional reporting or record-keeping requirements on small businesses. Since 2010, no more than 1,000 hooks can be onboard, and no more than 750 hooks can be in the water, or rigged for bottom longline fishing in the Gulf EEZ. Prior to 2010, there were no limits on the number of hooks in the water or onboard. This action could increase the number of hooks that a bottom longline vessel can have onboard, but not the number that can be in the water. Logbook data does not include the number of hooks onboard, but only the number that are deployed in water, so it is conservatively assumed here that the typical bottom longline vessel has onboard the maximum number of hooks.

Any bottom longline vessel that would increase the number of hooks onboard beyond 1,000 would do so only if there were an economic benefit of doing so. One potential reason would be to have more replacement hooks available during a trip. However, the extent of hook loss and the impact that lost or damaged hooks may have on bottom longline trips is unknown. Because this action would not change the number of hooks that can be in the water at any time, there is expected to be little to no change in average reef fish landings and dockside revenue from those landings per trip or per vessel. Small businesses are encouraged to comment on this expectation.

3.6 Significance of economic impacts on a substantial number of small entities

Because this action would not change the number of hooks in the water at any time, it is expected that there would be little to no change in average annual landings of reef fish per trip or per vessel. Thus, from that it is concluded that this rule would not have a significant economic impact on a substantial number of small entities under the RFA, 5 U.S.C. 601 et seq.

CHAPTER 4. REFERENCES

GMFMC 2010. Final Amendment 31 to the fishery management plan for reef fish resources in the Gulf of Mexico. Addresses bycatch of sea turtles in the bottom longline component of the Gulf of Mexico reef fish fishery including environmental impact statement and regulatory impact review. Gulf Fishery Management Council, 2203 N. Lois Ave, Tampa, Florida 33607. http://gulfcouncil.org/docs/amendments/Final%20Amendment%2031%20-%20revised%20-%2002-2010.pdf

NMFS. 2005. Endangered Species Act – Section 7 consultation on the continued authorization of reef fish fishing under the Gulf of Mexico Reef Fish Fishery Management Plan and Proposed Amendment 23. Biological Opinion, February 15. 115 p. plus appendices. http://www.nmfs.noaa.gov/ocs/mafac/meetings/2012_10/docs/2009_gom_reef_fish_re-in_bo.pdf

NMFS. 2009a. Endangered Species Act – Section 7 consultation on the continued authorization of reef fish fishing under the Gulf of Mexico Reef Fish Fishery Management Plan. Biological Opinion, October 13. 196 p. plus appendices. http://www.nmfs.noaa.gov/ocs/mafac/meetings/2012_10/docs/2009_gom_reef_fish_re-in_bo.pdf

NMFS. 2009b. Cumulative effects of Amendment 31 regulations upon effective effort impacting sea turtle takes in the Gulf of Mexico reef fish bottom longline fishery. 23 p. http://s3.amazonaws.com/zanran_storage/sero.nmfs.noaa.gov/ContentPages/52087303.pdf

APPENDIX A. CURRENT REGULATIONS

Current regulations regarding the seasonal closure and hooks per vessel are as follows:
§ 622.35 Gear restricted areas.
(b) Seasonal prohibitions applicable to bottom longline fishing for Gulf reef fish. (1) From June through August each year, bottom longlining for Gulf reef fish is prohibited in the portion of the Gulf EEZ east of 85°30′ W. long. that is shoreward of rhumb lines connecting, in order, the following points:

Point	North lat.	West long.
A	28°58.70′	85°30.00′
B	28°59.25′	85°26.70′
C	28°57.00′	85°13.80′
D	28°47.40′	85°3.90′
E	28°19.50′	84°43.00′
F	28°0.80′	84°20.00′
G	26°48.80′	83°40.00′
H	25°17.00′	83°19.00′
I	24°54.00′	83°21.00′
J	24°29.50′	83°12.30′
K	24°26.50′	83°00.00′

(2) Within the prohibited area and time period specified in paragraph (b)(1) of this section, a vessel with bottom longline gear on board may not possess Gulf reef fish unless the bottom longline gear is appropriately stowed, and a vessel that is using bottom longline gear to fish for species other than Gulf reef fish may not possess Gulf reef fish. For the purposes of paragraph (b) of this section, appropriately stowed means that a longline may be left on the drum if all gangions and hooks are disconnected and stowed below deck; hooks cannot be baited; and all buoys must be disconnected from the gear but may remain on deck.

(3) Within the Gulf EEZ east of 85°30′ W. long., a vessel for which a valid eastern Gulf reef fish bottom longline endorsement has been issued that is fishing bottom longline gear or has bottom longline gear on board cannot possess more than a total of 1000 hooks including hooks on board the vessel and hooks being fished and cannot possess more than 750 hooks rigged for fishing at any given time. For the purpose of this paragraph, "hooks rigged for fishing" means hooks attached to a line or other device capable of attaching to the mainline of the longline.