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Modifications to Commercial Individual Fishing Quota Programs

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Amendment 36B to the Fishery Management Plan for the Reef Fish Resources of the Gulf of Mexico

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ENVIRONMENTAL ASSESSMENT COVER SHEET

Amendment 36B to the Fishery Management Plan for Reef Fish Resources of the Gulf of Mexico

Modifications to Commercial Individual Fishing Quota Programs, Including Environmental Assessment

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ABBREVIATIONS USED IN THIS DOCUMENT

ABC	acceptable biological catch
ACL	annual catch limit
AM	accountability measure
BiOp	biological opinion
COI	certificate of inspection
Council	Gulf of Mexico Fishery Management Council
CSOS	Catch Share Online System
DLMTool	Data Limited Methods Tool
DPS	distinct population segment
DWG	deep-water grouper
EA	environmental assessment
EEZ	exclusive economic zone
EFH	essential fish habitat
EIS	environmental impact statement
EJ	environmental justice
ELMRP	Estuarine Living Marine Resources Program
EOY	end of year
ESA	Endangered Species Act
FMP	Fishery Management Plan
GG	gag (grouper)
GT-IFQ	grouper-tilefish individual fishing quota (program)
Gulf	Gulf of Mexico
gw	gutted weight
IFQ	individual fishing quota
IRFA	initial regulatory flexibility analyses
ITQ	individual transferable quota
Magnuson-Stevens Act	Magnuson-Stevens Fishery Conservation and Management Act
MMPA	Marine Mammal Protection Act
mp	million pounds
MSST	minimum stock size threshold
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Association
NOS	National Ocean Service
OFL	overfishing limit
PAH	polycyclic aromatic hydrocarbons
PP	public participant
pw	product weight
Reef Fish FMP	Reef Fish Fishery Management Plan
RFA	regulatory flexibility analyses
RFFAs	Reasonably Foreseeable Future Actions
RG	red grouper
RIR	regulatory impact review
RQ	regional quotient

RS	red snapper
RS-IFQ	red snapper individual fishing quota (program)
Secretary	Secretary of Commerce
SEDAR	Southeast Data, Assessment and Review
SEFSC	Southeast Fisheries Science Center
SOI	Segments of Interest
SERO	Southeast Regional Office
SOI	Segments of Interest
SSC	Scientific and Statistical Committee
SWG	shallow-water grouper
TF	tilefish
TL	total length
VMS	vessel monitoring system

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CHAPTER 1. INTRODUCTION

1.1 Background

There are two commercial individual fishing quota (IFQ) programs in the Gulf of Mexico (Gulf). The red snapper IFQ (RS-IFQ) program began on January 1, 2007 (GMFMC 2006), and the multi-species grouper-tilefish IFQ (GT-IFQ) program began on January 1, 2010 (GMFMC 2008a; Table 1.1.1). The programs were implemented to reduce overcapacity in the commercial harvest of red snapper, grouper, and tilefish, and to the extent possible, the problems associated with derby fishing conditions.[1] The Council completed 5-year reviews of each program, which found that progress had been made toward achieving the biological and economic goals and objectives to reduce overcapacity and maintain harvest within the commercial catch limits (GMFMC and NMFS 2013, 2018; Appendix E). However, the IFQ programs fundamentally changed the way fishing was prosecuted, leading to new issues that are largely social in nature. For example, the RS-IFQ Program 5-year Review found that entry and participation is now more difficult and costly (GMFMC and NMFS 2013; Appendix E). This is consistent with IFQ programs in other regions, which have recognized that the biological and economic benefits that result from the implementation of IFQ programs come at the expense of new social issues for fishermen entering and participating in these fisheries (Copes 1986; GAO 2004; Pinkerton and Edwards 2009; Carothers et al. 2010; Szymkowiak and Himes-Cornell 2015).

Table 1.1.1. Share categories for species currently managed in the GT-IFQ program.

Multi-species Share Category	Share Category Abbreviation	Species Included
Deep-water grouper	**DWG**	Snowy grouper Speckled hind Warsaw grouper Yellowedge grouper
	GG	Gag
	RG	Red grouper
Shallow-water grouper	**SWG**	Black grouper Scamp Yellowfin grouper Yellowmouth grouper
Tilefish	**TF**	Blueline tilefish Tilefish (golden) Goldface tilefish

As noted in the GT-IFQ Program 5-year Review, fostering access by new entrants would be consistent with the program objectives (GMFMC and NMFS 2018; Appendix E). Further, in a study completed for the GT-IFQ program 5-year review, Griffith et al. (2016) recommended that

[1] Appendix D provides the goals of the programs from the respective amendments implementing each IFQ program.

"allowing people with no direct physical participation in the fishery to purchase shares in the fishery should be reconsidered." This is a reference to the IFQ program provision that allows for shareholders who do not have a commercial permit. These shareholders are referred to as public participants. While public participants may buy and sell shares and the allocation associated with their shares (i.e., leasing), they may not fish for, possess, or sell commercial quantities of the species for which they hold shares and allocation. Thus, it is not possible for public participants to be physically engaged in commercial fishing.

This amendment considers modifying the provision that allows for public participation and evaluates alternatives that would require some or all shareholders to have a commercial reef fish permit. During the development of the IFQ programs, the Gulf of Mexico Fishery Management Council (Council) discussed whether to allow public participation or to require new shareholder accounts be associated with a valid or renewable commercial reef fish permit, which is required to land commercial quantities of the species managed under the IFQ programs. A shareholder account, also referred to as an IFQ account in this document, is considered associated with a permit if it has the exact same entities listed on both the shareholder account and permit. Ultimately, the Council allowed each IFQ program to be open to the public 5 years after implementation. Therefore, for the first 5 years of each program, only those entities that possessed a valid or renewable Gulf commercial reef fish permit were eligible to receive shares and allocation. During those first 5 years, shareholder accounts that no longer had a valid Gulf commercial reef fish permit could maintain or decrease their shares or allocation, but could not obtain additional shares or allocation, nor land IFQ species. As of January 1, 2012, for the RS-IFQ program, and January 1, 2015, for the GT-IFQ program, any U.S. citizen, permanent resident, or U.S. entity (e.g., a business) is eligible to participate in the respective program as a shareholder.

Prior to the opening to public participation in the RS-IFQ program, the Council heard testimony from commercial fishermen who asked the Council to modify the program to continue prohibiting the sale of shares to the general public. In response, the Council initiated an amendment to remove the provision that would allow for public participation, but deferred final action until completion of the RS-IFQ program 5-year review. At the same time, the Council requested that the National Marine Fisheries Service (NMFS) publish a control date in the *Federal Register* notifying RS-IFQ program participants that the requirements for participation may be modified in the future (76 FR 74038, November 30, 2011; Appendix G). A comparable control date was published in the *Federal Register* notifying GT-IFQ program participants that participation requirements may be modified in the future (79 FR 72566, December 8, 2014; Appendix G).

Since implementation of the IFQ programs, the percentage of shares held in shareholder accounts associated with a commercial reef fish permit has decreased, while the percentage of shares held in shareholder accounts that are not associated with a commercial reef fish permit has increased (Figure 1.1.1). At the end of the first year of the RS-IFQ program, 14% of the RS-IFQ shares were held in accounts that were not associated with a commercial reef fish permit (NMFS 2018a), as some initial recipients of shares did not maintain their permit. In contrast, 1% or less of GT-IFQ shares in each share category were held in accounts not associated with a commercial reef fish permit at the end of the first year of that program (NMFS 2018b). The percentage of

shares held in accounts not associated with a commercial reef fish permit continued to increase in both programs until 2015. From 2015 through 2017, the percentage of red snapper shares held in accounts associated with and not associated with a permit remained relatively stable. At the same time, the number of accounts holding shares without a commercial reef fish permit increased. Some of this increase is attributable to the establishment of related accounts. Shareholder accounts are considered related if they have at least one individual or entity in common (see Section 1.3).

Figure 1.1.1. Percent of RS-IFQ and GT-IFQ shares held in shareholder accounts associated with and not associated with a commercial reef fish permit (2007-2017). The solid lines represent shares held in accounts associated with a commercial reef fish permit, and the dotted lines represent shares held in accounts that are not linked to a commercial reef fish permit.
Source: Table 2 in NMFS 2018a and Table 6 in NMFS 2018b.

While the Council has continued to discuss whether to allow public participation to continue, the percentage of shares held by public participants has continued to increase, as has the number of shareholder accounts (both associated with and not associated with shares). As the percentage of shares held by public participants increases, fishermen are increasingly dependent on buying (i.e., leasing) allocation from shareholders who are unable to land the allocation associated with their shares, raising issues of sustainability for fishing communities in the long term (Ropicki et al. 2018). Table 1.1.2 provides the number of shareholder accounts by share and permit status as of February 25, 2020. Table 1.1.3 provides the total number of shareholder accounts (with and without shares) and permit status from 2007 through 2018. To mitigate effects of changing participation requirements, the Council is also evaluating alternatives that would allow shareholders who opened accounts prior to a specified date to retain their shares without being required to obtain a commercial reef fish permit.

Table 1.1.2. Number (and percent) of shareholder accounts (including active, suspended, or initial status) with/without shares in any share category, and with/without a permit, on February 25, 2020.

	Permit	No Permit
Shares	369 (36%)	314 (31%)
No Shares	233 (23%)	108 (11%)

Source: NMFS SERO IFQ and permits databases.

Table 1.1.3. Number of shareholder accounts (with and without shares) that are public (not associated with a commercial permit) and non-public (associated with a commercial permit) for 2007 through 2018, and the percent of accounts that are public.

Year	Accounts (#)	Public (#)	Non-Public (#)	Public (%)
2007	596	88	508	15%
2008	547	135	412	25%
2009	530	147	383	28%
2010	960	166	794	17%
2011	962	224	738	23%
2012	938	237	701	25%
2013	910	252	658	28%
2014	919	274	645	30%
2015	948	303	645	32%
2016	964	331	633	34%
2017	979	338	641	35%
2018	984	353	631	36%

Source: NMFS SERO IFQ database. Note: The number of accounts increased in 2010 when the GT-IFQ program was implemented.

The Council has expressed concerns with reported increases in public participation in the IFQ programs. The IFQ programs have fundamentally changed the way the commercial reef fish fishery is prosecuted, including fishing behavior and relationships among those involved in the fishery. This is especially true for red snapper, which have become more common in the eastern Gulf as the stock recovers. Further, the IFQ programs have allowed for the emergence of new participation roles such as brokers, who buy and sell allocation and shares, but may not land IFQ species. In turn, these changes may make it more difficult for some fishermen to obtain IFQ allocation, especially for red snapper. To address some of the changes resulting from public participation in the IFQ programs and to promote and facilitate share ownership by those who can land the fish, the Council intends to limit share ownership by shareholders without a valid or renewable commercial reef fish permit.

Requiring shareholders to have a commercial reef fish permit is an example of an active participation measure. That is, the requirement is intended to encourage access to a fishery by those physically engaged in the activity of fishing, in order "to ensure that the benefits of fishing

privileges flow to those who are actively fishing" (Szymkowiak and Himes-Cornell 2017). According to Griffith et al. (2016), those who are actively fishing are those who have "skin in the game," referring to people who assume the physical or economic risks of commercial fishing. Szymkowiak and Himes-Cornell (2017) note that active participation measures are "particularly relevant in countries like the U.S., where overarching federal mandates do not constrain participation in fisheries except by U.S. citizenship, so that corporate entities and individuals without fishing experience may participate." Due to the complex ways that both individuals and corporate entities act as participants in the IFQ programs, active participation measures must be applicable to both individuals and corporate entities. This amendment uses the possession of a commercial reef fish permit as a proxy for active participation, as a commercial permit (along with other attending requirements) is required to land the allocation associated with IFQ shares.

1.2 Purpose and Need

The purpose of this action is to limit IFQ share ownership in shareholder accounts without a valid or renewable commercial reef fish permit, thereby promoting share ownership by fishermen who have the ability to land reef fish within the RS and GT-IFQ programs.

The need is to address social issues in the IFQ programs pertaining to public participation and achieve, on a continuing basis, the optimum yield from fish stocks managed under the IFQ programs.

1.3 Additional Information on the IFQ Programs

As mandated by the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), the Council and NMFS collaboratively conducted a 5-year review of the RS-IFQ program (GMFMC and NMFS 2013), which was formally approved at the April 2013 Council meeting, and a 5-year review of the GT-IFQ program (GMFMC and NMFS 2018), which was formally approved at the April 2018 meeting.[2] The next review is expected to be completed in 2020 and assesses both the RS-IFQ and GT-IFQ programs together.

The 5-year reviews concluded that each IFQ program has had moderate success in reducing overcapacity. The 5-year reviews also concluded that the programs have been successful in providing fishermen with the opportunity to harvest and land red snapper, grouper, and tilefish year-round, provided they can obtain the necessary allocation (GMFMC and NMFS 2013, 2018). Further, safety-at-sea has increased and annual fatalities related to fishing have declined. Therefore, the Council indicated that because derby fishing has been eliminated through the IFQ programs, this could be removed as a program goal.

Following approval of the RS-IFQ Program 5-year Review, the Council initiated an amendment (Amendment 36A) to consider modifications to improve the performance of the IFQ programs. The Council took final action on Amendment 36A at its April 2017 meeting (GMFMC 2017a). Amendment 36A expanded the hail-in requirement to all commercial reef fish vessels landing any reef fish species, returned shares held in non-activated accounts to NMFS, and provided the

[2] The conclusions of the reports are provided in Appendix E.

Regional Administrator the authority to withhold IFQ allocation at the beginning of a year in which a quota reduction is to occur. At its August 2019 meeting, the Council divided the actions in Amendment 36B into separate amendments that address additional modifications to the IFQ programs to reflect changes in the fishery since implementation of the IFQ programs. Amendment 36B addresses the requirement for IFQ shareholders to have a commercial reef fish permit. Amendment 36C primarily considers distributing reclaimed shares held by NMFS, the establishment of a quota bank, and requiring accuracy in the estimated weights provided on advance landing notifications.

Overview and Structure of the IFQ Programs

The RS-IFQ and GT-IFQ programs are both administered using the Southeast Regional Office (SERO) Catch Share Online System (CSOS). IFQ program participants do not have separate accounts for each program. This means administrative changes affecting one program would likely affect the other program as well. Both IFQ programs use shares and allocation to distribute and monitor fishing quotas. Shares for each species or species group (share category) represent a percentage of the commercial quota for that share category, such that 100% of shares represent the total commercial quota for a given IFQ managed species or share category. These shares are durable; that is, they may remain with the shareholder year after year unless transferred to another shareholder account or are revoked, limited, or modified by the Council. Allocation refers to the pounds of quota represented by the shares (percent of quota) held by a shareholder and is distributed to shareholder accounts by the first of each year or during the year if an in-season quota increase occurs. Allocation may only be used in the year for which it was distributed; remaining annual allocation is removed from all accounts at the end of the year.

Shares and allocation can be transferred among IFQ program participants. The transfer of shares changes the ownership of those shares and the transfer of allocation transfers the right to catch the quantity of pounds sold, often referred to as "leasing." NMFS does not define leasing; when allocation is moved between accounts, it is called an allocation transfer. Leasing is a term used by fishermen, the public, and academics to refer to the broader transaction between IFQ program participants: both transferring allocation through the online IFQ system and the private financial transaction in which the entity receiving the allocation pays a price per pound of transferred allocation (Pinkerton and Edwards 2009). Appendix H contains a glossary of terms used in the IFQ programs.

Example: [shares] x [quota] = pounds of allocation

Shares = percentage of the total quota.
Allocation = pounds of the total quota represented by the shares.

Year 1

A shareholder has 3% of shares.
Quota is 1.0 mp.
The shareholder receives 30,000 lbs of allocation at beginning of year 1.

Year 2

The next year, the shareholder still has 3% of shares.
Quota increases to 1.5 mp.
The shareholder receives 45,000 lbs of allocation at beginning of year 2.

Year 3

During year 2, the shareholder sells 1% of shares (he now has 2% of shares).
Quota increases to 2.0 mp.
The shareholder receives 40,000 lbs of allocation at beginning of year 3.

Because both programs use the CSOS, the same shareholder accounts are used to participate in both programs (i.e., a fisherman has one IFQ account that can be used for both the RS-IFQ and GT-IFQ programs). For example, in 2016, of the 749 accounts that held shares, 278 (37%) held both RS and GT-IFQ shares (J. Stephen, Southeast Regional Office, pers. comm.). Also, since implementation of the GT-IFQ program on January 1, 2010, a majority of vessels that land red snapper also land grouper-tilefish species, and vice versa (Table 1.3.1). In addition, both programs follow the same regulations for landing notifications (hail-ins), offloading, cost-recovery fees, and account status determinations (e.g., active or inactive). The actions in this amendment address both IFQ programs.

Table 1.3.1. Overlap between vessels landing red snapper and grouper-tilefish.

Year	# Vessels landing GT	% Vessels landing GT also landing RS	# Vessels landing RS	% Vessels landing RS also landing GT
2010	452	78%	384	91%
2011	440	75%	362	91%
2012	449	77%	371	94%
2013	414	81%	368	91%
2014	434	83%	401	90%
2015	446	85%	415	91%
2016	441	87%	430	89%
2017	453	87%	449	87%
2018	455	91%	450	91%

Source: Tables 7 and 9 for grouper-tilefish vessels (NMFS 2019b); Table 5 for red snapper vessels (NMFS 2019a).

While the RS-IFQ program includes a single stock, 13 reef fish species are currently managed under the GT-IFQ program under five share categories. Gag and red grouper represent their own share categories, and the remaining species are managed as multi-species share categories (Table 1.1.1). The deep-water grouper (DWG) share category includes four species; the other shallow-water grouper (SWG) category includes four species; and the tilefish (TF) category includes three species. Additional flexibility is provided to allow some species to be landed under the allocation of another share category. A proportion of gag (GG) and red grouper (RG) allocation may be designated annually as multi-use and converted to gag multi-use and red grouper multi-use allocation. The multi-use allocation is determined based on a formula utilizing the commercial quota, annual catch limits, and the status of the stock. If either stock is under a rebuilding plan, the percentage of the other species multi-use allocation will equal zero. Red grouper multi-use allocation can be used to harvest gag once all gag and gag multi-use allocation in an account has been harvested or transferred out of the vessel and associated shareholder account, and vice versa. Scamp are designated as a SWG species, but may be landed using DWG allocation after all SWG allocation in an account has been harvested or transferred out of the vessel and associated shareholder account. Similarly, warsaw grouper and speckled hind are designated as DWG, but may be landed using SWG allocation after all DWG allocation in an account has been harvested or transferred out of the vessel and associated shareholder account.

IFQ Program Accounts

The CSOS annually determines the account activity in each program with respect to holding shares, holding allocation, and landings. The three main account types in the CSOS are shareholder, vessel, and dealer accounts. Shareholder accounts may hold shares and allocation or just hold allocation; because a shareholder account may not hold shares, it is also referred to as an IFQ account. Vessel accounts are sub-accounts to shareholder accounts and may hold allocation; they do not hold shares. A vessel account is associated with a commercial reef fish permit and a shareholder based on the entities listed on both the permit and shareholder account. Because a reef fish permit is required to harvest IFQ species, the IFQ system will restrict access for vessel accounts no longer associated with a reef fish permit. Dealer accounts are associated with federal dealer permit holders. Allocation must be transferred from a shareholder account to a vessel account, prior to a dealer completing a landing transaction through a dealer account.

Each shareholder account is composed of a unique set of entities and no two accounts are composed of the same set of entities. A unique entity may be a single person or business, or a combination of people and/or businesses. For any business that is part of a shareholder account, NMFS collects the ownership information for that business and the percentage of the business owned by each individual. If a business is owned in part or in total by another business, NMFS collects the ownership information of all parent companies. Owners/shareholders of a business and the percentage held by such an individual may change over time. Any time a change (e.g., ownership, percentage owned, address) is made in ownership within a business, the business must inform NMFS. NMFS tracks owners/shareholders of businesses throughout time using start and end dates for each change submitted to NMFS. This information is critical to ensuring that no one individual exceeds the established share cap for any one share category.

Public Participant (PP) Accounts

For the purpose of this document, shareholder accounts that do not have an associated Gulf commercial reef fish permit (i.e., same entities on the account and permit) and hold shares or allocation are termed public participant (PP) accounts. These PP accounts may include shareholder accounts that were once associated with a Gulf commercial reef fish permit (e.g., initial recipients of shares). As explained above, a shareholder account may hold RS-IFQ shares, GT-IFQ shares, or both types of shares.

PP accounts can be divided into two categories: those accounts created in the first 5 years of the program (i.e., the shareholder account was previously associated with a permit) and accounts that were created after the first 5 years (i.e., did not require an association with a permit to open a shareholder account). Since PP accounts are determined by the permit association and permits can be obtained at any point during the year, the number of PP accounts may fluctuate throughout a year. For the purpose of this amendment, PP accounts are determined by the permit status throughout the year. If an account was associated with a permit at all during the year, it was not considered a PP account for that year. Figure 1.3.1 compares the number and percentage of all shareholder accounts that were associated with a permit (non-public) and those not associated with a permit (public, or PP).

Figure 1.3.1. Public (no permit) and non-public (permit) IFQ shareholder type accounts. The figure on the top provides the number of accounts, while the figure on the bottom provides the percentage of all accounts.

Related Accounts

An individual or entity (e.g., business or non-profit) may be associated with more than one shareholder account. Shareholder accounts with at least one entity in common are called related accounts. While no two IFQ accounts have the same set of entities, one entity may be associated with multiple IFQ accounts. For example, John Smith may hold an account, and John Smith and Jane Smith may hold another account. These accounts are considered related as John Smith is

involved in both accounts. Similarly, if John Smith is an owner of John Smith, Inc., that account is also related to the John Smith account and the John Smith and Jane Smith account. Likewise, an account may be held by John Smith, Inc. and another account is held by Smith LLC. Both John Smith, Inc. and Smith LLC may have one or all owners in common, and therefore are related accounts. Just as the owners of businesses may change, relations between accounts may also change over time. For example, John Smith may have held shares in ABC, Inc. in 2010, but not in 2014. This would mean that the ABC, Inc. account was related to the John Smith account in 2010, but not in 2014.

Although the relationships among accounts is determined at the entity level, the CSOS manages at the account level. Thus, an individual can be involved in accounts with and without shares, with and without associated permits, and with and without landings. Because the CSOS manages at the account level, all transactions (i.e., transfers of shares or allocation and landings) are associated with the account and not the account holders. The exception to this general rule is with respect to the monitoring of share caps, which are mandated to be monitored for control at the entity level.

1.4 History of Management

This summary includes management actions pertinent to red snapper, grouper, and tilefish for the commercial sector, including changes to commercial permit requirements. A complete history of management for the Reef Fish Fishery Management Plan (Reef Fish FMP) is available on the Council's website[3]. A summary of the history of Amendment 36 and its sub-amendments is provided in Appendix A.

The final rule for the **Reef Fish FMP**, with its associated environmental impact statement (EIS), was effective November 8, 1984, and defined the reef fish fishery management unit to include red snapper, red grouper, gag, the shallow-water groupers (scamp, black, yellowmouth, and yellowfin), and the deep-water groupers (snowy, warsaw, speckled hind, and yellowedge), as well as other important reef fish. Among the species currently managed under Gulf IFQ programs, only the tilefishes were not included in the original Reef Fish FMP.

The Reef Fish FMP included regulations designed to rebuild declining reef fish stocks and included a minimum size limit of 13 inches total length (TL) for red snapper, with exceptions that for-hire vessels were exempted until 1987 and each angler could keep 5 undersize fish.

Amendment 1, including environmental assessment (EA), regulatory impact review (RIR), and regulatory flexibility analyses (RFA), was implemented in 1990. The management measures included:

- The addition of 10 species to the management unit including the three species of tilefish that remain managed under the GT-IFQ program (goldface, golden, and blueline).
- Prohibited the sale of undersized red snapper and deleted the allowance to keep five undersized red snapper;
- Set a 20-inch TL minimum size limit on red, yellowfin, black, and gag groupers;

[3] http://www.gulfcouncil.org/fishery_management_plans/reef_fish_management.php

- SWG were defined as black grouper, gag, red grouper, Nassau grouper, yellowfin grouper, yellowmouth grouper, rock hind, red hind, speckled hind, and scamp. DWG were defined as misty grouper, snowy grouper, yellowedge grouper, warsaw grouper, and scamp. Once the SWG quota is filled, landings of scamp are allowed and included under DWG quota; and
- Established a commercial reef fish vessel permit.

On November 7, 1989, NMFS announced that anyone entering the commercial reef fish fishery in the Gulf and South Atlantic after a control date of November 1, 1989, may not be assured of future access to the reef fish fishery if a management regime is developed and implemented that limits the number of participants in the fishery. The purpose of this announcement was to establish a public awareness of potential eligibility criteria for future access to the reef fish resource, and does not prevent any other date for eligibility or other method for controlling fishing effort from being proposed and implemented.

Amendment 3, including EA and RIR and implemented in July 1991, transferred speckled hind from the SWG category to the DWG category.

Amendment 4, including EA, RIR and initial RFA (IRFA), was implemented in May 1992. The amendment established a moratorium on the issuance of new commercial reef fish permits for a maximum period of 3 years. The moratorium was created to moderate short-term future increases in fishing effort and to attempt to stabilize fishing mortality while the Council considered a more comprehensive effort limitation program. It allowed the transfer of permits between vessels owned by the permittee or between individuals when the permitted vessel is transferred.

Amendment 6, including EA, RIR and RFA, implemented in June 1993, extended the provisions of an emergency rule for red snapper endorsements for the remainder of 1993 and 1994, and it allowed the red snapper trip limits for qualifying and non-qualifying permitted vessels to be changed under the framework procedure for specification of the total allowable catch.

Amendment 7, including EA, RIR, and IRFA and implemented in February 1994, established reef fish dealer permitting and record keeping requirements, and allowed transfer of reef fish permits or endorsements in the event of the death or disability of the person who was the qualifier for the permit or endorsement. A proposed provision of this amendment that would have required permitted vessels to sell harvested reef fish only to permitted dealers was disapproved by the Secretary of Commerce and was not implemented.

Amendment 8, including EA, RIR and IRFA, proposed establishment of a red snapper individual transferable quota (ITQ) program. It was approved by NMFS and a final rule was published on November 29, 1995. However, concerns about future Congressional funding for the ITQ program to become operational made it advisable to delay implementation pending Congressional action. In October 1996, Congress, through reauthorization of the Magnuson-Stevens Act, repealed the red snapper ITQ program and prohibited regional councils from submitting, or NMFS from approving and implementing, any new IFQ program before October 1, 2000.

Amendment 9, including EA, RIR and IRFA, implemented in July 1994, provided for collection of red snapper landings and eligibility data from commercial fishermen for the years 1990 through 1992. This amendment also extended the reef fish permit moratorium and red snapper endorsement system through December 31, 1995, to continue the existing interim management regime until longer term measures could be implemented. The Council received the results of the data collection in November 1994, at which time consideration of Amendment 8 resumed.

Amendment 11, including EA, RIR and IRFA, was partially approved by NMFS and implemented in January 1996. The approved provisions included:

- Limited sale of Gulf reef fish by permitted vessels to permitted reef fish dealers;
- Required that permitted reef fish dealers purchase reef fish caught in Gulf federal waters only from permitted vessels;
- Allowed transfer of reef fish permits and fish trap endorsements in the event of death or disability;
- Implemented a new reef fish permit moratorium for no more than 5 years or until December 31, 2000, while the Council considers limited access for the reef fish fishery;
- Allowed permit transfers to other persons with vessels by vessel owners (not operators) who qualified for their reef fish permit.

Amendment 13, including EA, RIR and IRFA, was implemented in September 1996. The amendment further extended the red snapper endorsement system through the remainder of 1996 and, if necessary, through 1997, to give the Council time to develop a permanent limited access system that was in compliance with the new provisions of the Magnuson-Stevens Act.

Amendment 14, including EA, RIR and IRFA, was implemented in March and April 1997. The amendment provided the NMFS Regional Administrator with authority to reopen a fishery prematurely closed before the allocation was reached and modified the provisions for transfer of commercial reef fish vessel permits.

Amendment 15, including EA, RIR and IRFA and implemented in January 1998, included the following actions:

- Modified the red snapper endorsement system to create two classes of red snapper licenses. Class 1 licenses would have a 2,000-lb trip limit and would be issued to endorsement holders on March 1, 1997 and historical captains. Class 2 licenses would have a 500-lb trip limit and would be issued to other reef fish permit holders on March 1, 1997 with red snapper landings between January 1, 1990 and March 1, 1997. Licenses could be transferred without restriction. This red snapper license system was extended indefinitely or until replaced by an alternate license management system.
- Set monthly commercial red snapper openings to open at noon on the first day of each month and close at noon on the fifteenth day of each month until the commercial quota is reached. The commercial season is split into two time periods with the first period to begin on February 1 with two thirds of the quota, and the second period on September 1 with the remainder of the quota.

Amendment 16B, including EA, RIR and IRFA, was implemented on November 24, 1999. Among other actions, this amendment set the minimum size limit in fork length for scamp at 16 inches.

An August 1999 **regulatory amendment**, including EA, RIR, and IRFA and implemented June 19, 2000, increased the commercial size limit for gag from 20 to 24 inches TL, and prohibited the commercial sale of gag, black, and red grouper each year from February 15 to March 15 (the peak of gag spawning season).

Amendment 17, including EA, RIR and IRFA, was implemented in August 2000. This amendment extended the commercial reef fish permit moratorium for another 5 years from its previous expiration date of December 31, 2000 to December 31, 2005, unless replaced sooner by a comprehensive controlled access system. The purpose of the moratorium was to provide a stable environment in the fishery necessary for evaluation and development of a more comprehensive controlled access system for the entire commercial reef fish fishery.

Amendment 18A, including supplemental EIS, RIR and IRFA, was implemented by NMFS in September 2006. Among other actions, this amendment:

- Required a NMFS-approved vessel monitoring system on board vessels with a commercial reef fish permit, including charter vessels that also have a commercial reef fish permit;
- Prohibited persons on vessels with both commercial and charter vessel reef fish permits from retaining reef fish caught under the recreational size, bag, and possession limits when commercial quantities of reef fish are onboard;
- Adjusted the maximum crew size onboard a vessel issued a certificate of inspection (COI) when the vessel has both a commercial and charter/headboat permits for reef fish to the minimum crew size required under the COI.

As part of the implementing regulations, NMFS added provisions to change the permit application process for all permits to an annual rather than biennial procedure, as well as simplifying the income qualification documentation requirements for fisheries having income criteria.

Secretarial Amendment 1, including a supplemental EIS, RIR, and IRFA, was initially submitted to NMFS in September 2002 and was implemented in July 2004. It contained a 10-year rebuilding plan for red grouper based on 3-year intervals.

Amendment 22, including supplemental EIS, RIR, and IRFA, was implemented in July 2005. It modified the red snapper rebuilding plan to rebuild the red snapper stock by 2032.

Amendment 24, including EA, RIR, and IRFA, was implemented August 2005. It established a permanent limited access system for the commercial sector for reef fish. Permits issued under the limited access system are renewable and transferable.

Amendment 26, including supplemental EIS, RIR, and IRFA and implemented in January 2007, established a commercial IFQ program for red snapper. The amendment required that, for any single fishing year, no person shall own IFQ shares that represent a percentage of the total, which

exceeds the maximum percentage issued to a recipient at the time of the initial apportionment of IFQ shares. It also restricted initial eligibility to persons possessing a Class 1 or Class 2 license, and allocated initial IFQ shares proportionately among eligible participants based on average annual landings. During the first 5 years of the program, IFQ shares/allocations can be transferred only to individuals/vessels with a valid commercial reef fish permit and to United States citizens and permanent resident aliens thereafter.

Amendment 27, including supplemental EIS, RIR, and RFA, was implemented in February 2008. Among the actions, the commercial size limit for red snapper was reduced to 13 inches TL.

Amendment 29, including EIS, RIR, and RFA and implemented in January 2010, established the commercial IFQ program for groupers and tilefishes. As with the RS-IFQ program, during the first 5 years of the program, IFQ shares/allocations can be transferred only to individuals/vessels with a valid commercial reef fish permit and to United States citizens and permanent resident aliens thereafter.

Amendment 30B, including EIS, RIR, and RFA and implemented in 2009, addressed the overfishing of gag. Among other actions, the amendment set interim allocations of gag and red grouper catches between the recreational and commercial sectors. The amendment also required that all vessels with federal commercial or charter/headboat permits for reef fish must comply with the more restrictive of state or federal reef fish regulations when fishing in state waters.

Amendment 31, including EIS, RIR, and RFA, was implemented in May 2010. The amendment addressed sea turtle interactions with bottom longline fishing gear and included the following management actions:

- Longline endorsement requirement - Vessels must have average annual reef fish landings of 40,000 lbs gutted weight or more from 1999 through 2007;
- Reef fish bottom longline fishing was restricted to outside the 35-fathom depth contour from June – August.

Amendment 32, including EIS, RIR, and RFA and effective in March 2012, established annual catch limits (ACL) and annual catch targets for 2012 through 2015 for gag and for 2012 for red grouper. The amendment also:

- established a rebuilding plan for gag;
- contained a commercial gag and shallow-water grouper quota adjustment to account for dead discards;
- made adjustments to the multi-use IFQ allocation provisions in the GT-IFQ program; and
- reduced the commercial gag size limit;
- revised gag, red grouper, and shallow-water grouper accountability measures.

Amendment 34, including EA, RIR, and RFA, was implemented in November 2012. The amendment addressed crew size limits for dual-permitted vessels (i.e., vessels with both a charter/headboat and a commercial permit for reef fish), increasing the maximum crew size from three to four. It also eliminated the earned income qualification requirement for the renewal of commercial reef fish permits.

The **Framework Action** to Set the 2013 Gag Recreational Fishing Season and Modify the February-March Shallow-water Grouper Closed Season, eliminated the February 1 through March 31 shallow-water grouper closure shoreward of 20 fathoms.

The **Framework Action** to Retain 2016 Red Snapper Commercial Quota was implemented in December 2015. The action withheld 4.9% of the 2016 commercial red snapper ACL prior to the annual distribution of red snapper allocation to the IFQ shareholders on January 1, 2016. This action allowed the allocations being established through Amendment 28 to be effective for the 2016 fishing year.

Amendment 28, including EIS, RIR, and RFA, was implemented in May 2016. The amendment revised the commercial and recreational sector allocations of the red snapper ACLs, by shifting 2.5% of the commercial sector's allocation to the recreational sector. The resulting sector allocations for red snapper were 48.5% commercial and 51.5% recreational and were applied to the 2016 quotas. On March 3, 2017, a U.S. district court vacated Amendment 28 and subsequently ordered that the sector quotas for 2017 be set consistent with the previous sector allocations of 51% commercial and 49% recreational.

Amendment 44, including EA, RIR, and RFA, was approved on December 21, 2017 (there was no rulemaking associated with this amendment, and therefore no implementation date). The amendment changed the minimum stock size threshold (MSST) for seven reef fish species, including gag, red grouper, and red snapper to be equal to 50% of the biomass at maximum sustainable yield. MSST is used to determine whether or not a stock is considered to be overfished; if the biomass of the stock falls below the threshold then the stock is considered to be overfished. Changing the MSST is not expected to affect management action as fishing is primarily constrained by the overfishing definition. As long as overfishing is prevented, the stock biomass should never drop to the MSST level.

Amendment 36A, including EA, RIR, and RFA, required all reef fish permitted vessels landing federally managed reef-fish to land at approved locations and hail-in at least 3 hours, but no more than 24 hours before landing. The amendment returns red snapper and grouper-tilefish shares from non-activated IFQ accounts to NMFS for redistribution and allows NMFS to withhold a portion of IFQ allocation at the start of the year equal to an anticipated quota reduction. The actions to return non-activated shares and withhold quota in the event of an anticipated quota decrease became effective July 12, 2018. The advance notice of landing requirement became effective January 1, 2019.

The **Framework Action** to Modify Mutton Snapper and Gag Management Measures was effective on July 23, 2018. For gag, the action increased the commercial minimum size limit to 24 inches.

The **Framework Action** to Modify Red Grouper Annual Catch Limits and Annual Catch Targets was implemented October 31, 2019. It reduced the catch limits for red grouper consistent with a May 2019 emergency rule and following an interim red grouper assessment.

CHAPTER 2. MANAGEMENT ALTERNATIVES

2.1 Action 1 - Permit Requirement

Alternative 1: No Action. Do not establish new requirements to obtain or maintain individual fishing quota (IFQ) shares.

Alternative 2: In order to obtain (transfer into a shareholder account) or maintain shares (hold existing shares in a shareholder account), all shareholder accounts must be associated with a valid or renewable commercial reef fish permit. A shareholder account is considered to be associated with a permit if the permit has the exact same entities listed on both the shareholder account and permit.

Alternative 3: In order to obtain (transfer into a shareholder account), or maintain shares (hold existing shares in a shareholder account), shareholder accounts established after December 31, 2014, and that are still active must be associated with a valid or renewable commercial reef fish permit. A shareholder account is considered to be associated with a permit if the permit has the exact same entities listed on both the shareholder account and permit.

Alternative 4: In order to obtain (transfer into a shareholder account), or maintain shares (hold existing shares in a shareholder account), shareholder accounts established after October 2, 2019, (Reef Fish AP meeting date) and that are still active must be associated with a valid or renewable commercial reef fish permit. A shareholder account is considered to be associated with a permit if the permit has the exact same entities listed on both the shareholder account and permit.

Alternative 5: In order to obtain (transfer into a shareholder account), or maintain shares (hold existing shares in a shareholder account), shareholder accounts established following implementation of this amendment must be associated with a valid or renewable commercial reef fish permit. A shareholder account is considered to be associated with a permit if the permit has the exact same entities listed on both the shareholder account and permit.

Discussion:

The red snapper individual fishing quota (RS-IFQ) program began in 2007, and the grouper-tilefish IFQ (GT-IFQ) program began in 2010. For the first 5 years of each program, only those entities that possessed a valid or renewable Gulf of Mexico (Gulf) commercial reef fish permit were eligible to receive shares and allocation. During those first 5 years, shareholder accounts that were not associated with a valid Gulf commercial reef fish permit could maintain or decrease their shares or allocation, but could not obtain additional shares or allocation, nor harvest IFQ species. As of January 1, 2012, for the RS-IFQ program, and January 1, 2015, for the GT-IFQ program, any U.S. citizen or permanent resident is eligible to participate in the respective program as a shareholder.

Since implementation of the RS-IFQ program (and the GT-IFQ program thereafter), the amount of shares held in accounts that are associated with a commercial permit for reef fish has decreased, while the amount of shares held in accounts that are not associated with a commercial reef fish permit has increased (Figure 1.1.1). In response to concerns that it may become increasingly difficult and expensive for commercial fishermen to obtain IFQ shares in the future, the Council is considering modifying public participation in the IFQ programs. In order to promote access to IFQ shares for fishermen who could fish for and land allocation, the Council is considering reinstating the requirement that a shareholder account be associated with a commercial reef fish permit. A shareholder account is considered to be associated with a permit if the permit has the exact same entities listed on both the shareholder account and permit.

Alternative 1 (No Action) would continue to allow public participation in the IFQ programs and shareholder accounts would not need to be associated with a commercial reef fish permits. A shareholder account is an IFQ account that may hold shares and/or allocation, and includes accounts that only hold allocation. A person who does not hold a valid or renewable commercial reef fish permit could continue to open an IFQ shareholder account; obtain, maintain, or transfer shares; and transfer (including buying, selling, gifting, etc.) allocation to other shareholder or vessel accounts. In other words, any U.S. citizen or permanent resident can continue to hold shares and allocation, and transfer shares and allegation, regardless of whether they have the ability to land IFQ species.

Alternatives 2-5 would require all or some shareholder accounts to be associated with a valid or renewable commercial reef fish permit. A shareholder account is associated with a permit when the exact same entities are listed on both the shareholder account and permit. A single individual may be listed on multiple accounts; see Section 1.3 for more on related accounts. A shareholder account in the name of a business would need to be associated with a single permit issued to that business, regardless of the number or owners of the business. An active shareholder account is defined as an account that has transferred allocation during the calendar year or an account associated with a vessel that has landed allocation during the year. Account activity status is determined yearly based on the actions taken by the account holder.

Table 2.1.1 provides information for 2015 and 2018 on the number of permits that may be available for shareholders that may need a commercial reef fish permit to comply with new requirements. Throughout 2015, there were 868 valid or renewable commercial permits for reef fish. Over the course of the year, 533 vessels with a commercial reef fish permit landed at least one pound of reef fish species, which is an indication of the number of actively fished permits. The number of latent permits is estimated by subtracting the number of permits being fished from the total number of permits. Within the IFQ online system in 2015, there were 763 shareholder accounts associated with commercial reef fish permit, although not all of these accounts were actively used by the account holder that year. Of those 763 shareholder accounts associated with a commercial reef fish permit, there were 485 vessel accounts that recorded landings of IFQ species. At the end of 2018, there were 845 valid or renewable commercial permits for reef fish, of which 528 were used to land at least one pound of reef fish. Thus, 317 permits are considered latent for that year. Also, at the end of 2018, 458 IFQ accounts associated with a reef fish permit made landings of IFQ species.

Table 2.1.1. Commercial reef fish permits in relation to landings and IFQ accounts in 2015 and 2018.

	2015	2018
Reef Fish Permits	**868**	**845**
Vessels with reef fish landings[1]	533	528
"Latent" permits[1]	335	317
IFQ accounts associated with Reef Fish Permits		
With active IFQ account	763	736
With IFQ landings	485	458

Sources: 2015 data from NMFS SERO permit database accessed 4/22/2016 and Southeast Fisheries Science Center (SEFSC) Coastal Logbooks accessed 4/25/2016. For 2018, permit database accessed 2/12/2020 and Coastal Landings accessed May 2019.

[1]The SEFSC Coastal logbook records were accessed to determine the number of vessels that harvested reef fish and this can be a proxy to determine the number of active reef fish permits.

Alternative 2 would require all shareholder accounts to be associated with a valid or renewable commercial reef fish permit to obtain or maintain shares. The shareholder accounts with shares would be required to obtain a permit in the same name(s) as on the shareholder accounts or divest their shares (see Action 2) once notified by the National Marine Fisheries Service (NMFS) that they are no longer allowed to hold shares because they lack the proper permit. A shareholder account without an associated permit would still be allowed to obtain and maintain allocation (e.g., dealers buying allocation for vessels that sell to them).

Alternatives 3 and **4** are similar to **Alternative 2** except that shareholder accounts established before the date specified in the alternative would be able to obtain and maintain IFQ shares regardless of whether those accounts are associated with commercial reef fish permits. Table 2.1.2 provides an estimate of the number of accounts that may be required to obtain a commercial reef fish permit, and the number of accounts that would be exempt from the requirement to obtain a reef fish permit under **Alternatives 3** and **4**, based on the number of shareholder accounts on February 25, 2020 (see Table 1.1.2). For **Alternative 3**, shareholder accounts established before January 1, 2015, would be exempt from the requirement to be associated with a commercial reef fish permit, and for **Alternative 4**, shareholder accounts established before October 2, 2019, would be exempt from that requirement. **Alternative 3** is intended to protect historical participants still holding shares in the IFQ programs, because those that initially had a permit but then sold it would be allowed to continue to hold shares in the program. Participants without permits and who were not shareholders in the during the initial 5 years of the respective IFQ program, but who obtained red snapper or grouper-tilefish shares after January 1, 2015, would need to obtain a permit and link it to their shareholder account or divest their shares per Action 2. **Alternative 4** is intended to protect participants who obtained shares after the IFQ programs were open to any U.S. citizen or permanent resident, until the date of a recent Council advisory panel meeting. AP members raised expressed concerns about **Alternative 5**, which would allow a lot of time for people to open accounts and continue to hold shares without obtaining a commercial reef fish permit. Adopting the recommendation of the AP, the Council added **Alternative 4**, which would allow the owner of an account established as

of the day of the meeting to obtain and maintain allocation without having an associated commercial reef fish permit (e.g., allocation brokers).

Table 2.1.2. Estimates for the number of accounts that would be required to become associated with a commercial reef fish permit and the number of accounts that would be exempt under **Alternatives 2-4**.

Alternative	Accounts required to be associated with a permit (#)	Accounts exempt from permit requirement (#)
2	314	0
3	64	250
4	4	310

Source: NMFS SERO IFQ and permits databases. Number of accounts with shares but no permit on February 25, 2020, including active, initial, and suspended accounts.

Alternative 5 is the least restrictive alternative regarding share ownership because it would allow all shareholders holding shares at the time this amendment is implemented to continue to hold their shares in accounts without associated commercial reef fish permits. Any shareholder account established prior to the implementation of the final rule for this amendment would be allowed to obtain or maintain shares. Shareholder accounts established following implementation of the final rule for this amendment would need to have a valid or renewable commercial reef fish permit associated with the shareholder account to obtain or maintain shares.

2.2 Action 2 - Share Divestment

Note: Action 2 is applicable only if an alternative other than Alternative 1 is chosen in Action 1. Alternative 3 may be selected as preferred in addition to selecting Alternative 1 or Alternative 2. A shareholder account is considered to be associated with a permit if the permit has the exact same entities listed on both the shareholder account and permit.

Alternative 1: No Action. If the Council requires some or all shareholder accounts to be associated with a commercial reef fish permit in Action 1, shareholders must be in compliance with the requirement by the effective date of the final rule implementing this amendment, or the shares will be reclaimed by NMFS.

Alternative 2: NMFS will reclaim all shares in a shareholder account that is not associated with a commercial reef fish permit:

> **Option 2a:** 1 year following the effective date of the final rule implementing this amendment.
>
> **Option 2b:** 3 years following the effective date of the final rule implementing this amendment.
>
> **Option 2c:** 5 years following the effective date of the final rule implementing this amendment.

Alternative 3: After implementation of this amendment, if a shareholder account no longer has an associated valid or renewable reef fish permit (i.e., the permit is transferred or is not renewed within one year of the expiration date and is terminated), the shareholder(s) must divest of the account's shares as needed to meet the requirements set in Action 1 or the shares will be reclaimed by NMFS:

> **Option 3a:** 1 year following the transfer or termination of the permit.
>
> **Option 3b:** 3 years following the transfer or termination of the permit.
>
> **Option 3c:** 5 years following the transfer or termination of the permit.

Discussion:

If a shareholder account does not meet the criteria under Action 1, Alternatives 2-4, the owner(s) must divest of the shares in that account. Owners of shareholder accounts would be required to divest their shares (Action 1, Alternatives 2-4) once notified by NMFS that they no longer qualify to hold shares under the IFQ program. If the account holder(s) did not divest the shares as required by NMFS, NMFS would reclaim those shares. The shares would be placed in the NMFS account that currently contains the shares reclaimed through Amendment 36A, until such time that the Council determines the method and recipients of the shares (to be addressed through Amendment 36C).

Alternative 1 (No Action) would not delay the requirement to have an account associated with a commercial reef fish permit, and thus, shareholders must be in compliance with the proposed requirements put in place in Action 1 by the effective date of the final rule implementing this amendment. NMFS would reclaim shares in any account required to be associated with a commercial reef fish permit per Action 1 that is not associated with a permit at that time. Further, under **Alternative 1**, after the implementation of this amendment, NMFS would reclaim shares from a shareholder account that is no longer associated with a commercial reef fish permit because, for example, that permit is transferred or terminated.

Alternative 2 would provide the owner(s) of a shareholder account that is not associated with a commercial reef fish permit as required by Action 1 a period of time after the implementation of this amendment to associate their account with a permit or to divest their shares. If they do not divest their shares within the time allotted in **Options 2a-2c**, NMFS would reclaim the shares. **Alternative 3** addresses shareholder accounts that lose an association with a commercial reef fish permit as required in Action 1 after the implementation of this amendment and provides a period of time during which the shareholder can reestablish that association with a permit (**Options 3a-3c**) or the shares would be reclaimed by NMFS. A shareholder would be out of compliance if the account is no longer associated with a valid or renewable permit linked to their account, either because the permit was transferred or allowed to terminate.

Alternatives 2 and **3** have options that specify the amount of time a shareholder with an account that is not associated with a commercial reef fish permit would have to either obtain a permit or divest the shares. The shortest period provided is **Option a** of each alternative, which allows one year from the effective date of the final rule implementing this amendment (**Option 2a**) or one year following the transfer or termination of the permit (**Option 3a**). **Option b** of each alternative provides a 3-year period from the effective date of the final rule implementing this amendment (**Option 2b**), or 3 years following the transfer or termination of the permit (**Option 3b**). **Option c** of each alternative provides the longest time period, allowing 5 years from implementation of this amendment (**Option 2c**) or following the transfer or termination of the permit (**Option 3c**). The longer the time period a shareholder has before the required divestment of shares, the longer the shareholder has to consider alternatives to divestment (i.e., associating the account with a permit).

CHAPTER 3. AFFECTED ENVIRONMENT

3.1 Description of the Fishery

Fishing in the Gulf of Mexico (Gulf) is divided into two broad sectors: commercial and recreational. Management of the commercial and recreational sectors fishing for reef fish in federal waters of the Gulf began in 1984 with the implementation of the Fishery Management Plan for the Reef Fish Resources in the Gulf of Mexico (Reef Fish FMP). The Reef Fish FMP has been continuously amended through plan amendments and framework actions (previously known as regulatory amendments). A summary of reef fish management actions can be found on the Gulf of Mexico Fishery Management Council's (Council) webpage.[4] Presently, the reef fish fishery management unit contains 31 species (see Section 3.3). The commercial harvest of 13 of these species are managed under individual fishing quota (IFQ) programs (Table 1.1.1).

The actions in this amendment affect management of the two commercial IFQ programs in the Gulf. Thus, the remainder of this section focuses on the commercial sector and provides information on the number of commercial vessel permits, and annual quotas and landings for species managed under the IFQ programs.

The red snapper IFQ (RS-IFQ) program began on January 1, 2007 (GMFMC 2006) and is a single species program. The multi-species grouper-tilefish IFQ (GT-IFQ) program began on January 1, 2010 (GMFMC 2008a), and includes five share categories. Two share categories are represented by a single species (gag grouper (GG) and red grouper (RG)) and three share categories include multiple species (deep-water grouper (DWG) includes snowy grouper, speckled hind, warsaw grouper, and yellowedge grouper; shallow-water grouper (SWG) includes black grouper, scamp, yellowfin grouper, and yellowmouth grouper; and tilefish (TF) includes blueline tilefish, golden tilefish, and goldface tilefish). The IFQ programs provide shareholders with allocation at the beginning of each year, which may be harvested by the shareholder or transferred to another IFQ program participant's vessel account for harvest. Because the allocation can be landed at any time, the program allows for year-round harvest opportunity provided that a vessel has sufficient allocation for a given species. See Section 1.3 for additional information on the IFQ program's online system and types of accounts.

A commercial vessel permit for reef fish is required for the commercial harvest of reef fish species from the Gulf exclusive economic zone (EEZ). Commercial reef fish permits are under a moratorium and are thus limited access; no new permits are available. Commercial permits are valid for fishing for one year and may be renewed up to one year after the date of expiration; those permits that have expired within one year are termed renewable. Both valid and renewable permits may be transferred to another operator and vessel. As of December 31, 2018, there were a total of 845 valid or renewable commercial permits for reef fish. Of these, 99.3% provide a mailing address in a Gulf state (Table 3.1.1). These vessels must have a vessel monitoring system onboard. A detailed description of the fishing gears and methods used in the commercial reef fish fishery is provided in Amendment 1 to the Reef Fish FMP (GMFMC 1989).

[4] http://gulfcouncil.org/fishery-management/

Table 3.1.1. Number and percentage of vessels with a commercial permit for reef fish by state as of December 31, 2018.

Year	Number	Percent
AL	38	4.5%
FL	667	80.1%
LA	43	5.1%
MS	7	0.8%
TX	74	8.8%
Subtotal	**839**	**99.3%**
Other	6	0.7%
Total	**845**	**100.0%**

Source: NMFS SERO permit database last updated 9/27/2019.

Only vessels with a valid reef fish permit can harvest reef fish in the EEZ, and those that use bottom longline gear in the EEZ east of 85º30'W. longitude must also have a valid eastern Gulf longline endorsement. To harvest IFQ species, a vessel permit must be associated with a shareholder account, also called an IFQ account, and must possess sufficient allocation for the species to be harvested. IFQ shares and allocation are transferable and eligible vessels can receive allocation from other IFQ participants. Table 3.1.2 provides the commercial landings from 2010 through 2018 for IFQ-managed species and the percentage of the quota landed each year.

Table 3.1.2. Commercial landings for IFQ-managed species by share category in pounds gutted weight (2010-2018).

RS	Landings (lbs gw)	% Quota
2010	3,056,044	96%
2011	3,238,335	98%
2012	3,636,395	98%
2013	4,908,598	97%
2014	5,016,056	99%
2015	6,472,261	99%
2016	6,057,498	99%
2017	6,287,083	100%
2018	6,285,704	100%

RG	Landings (lbs gw)	% Quota
2010	2,913,858	51%
2011	4,782,194	91%
2012	5,217,205	97%
2013	4,594,672	83%
2014	5,497,993	98%
2015	4,784,992	84%
2016	4,631,388	60%
2017	3,377,210	43%
2018	2,404,300	31%

GG	Landings (lbs gw)	% Quota
2010	493,938	35%
2011	320,137	74%
2012	525,066	93%
2013	579,664	82%
2014	689,513	83%
2015	554,941	59%
2016	777,190	83%
2017	443,156	47%
2018	451,914	48%

DWG	Landings (lbs gw)	% Quota
2010	624,762	61%
2011	779,519	76%
2012	963,835	86%
2013	912,923	82%
2014	1,048,142	94%
2015	911,339	83%
2016	867,040	85%
2017	821,899	80%
2018	817,452	80%

SWG	Landings (lbs gw)	% Quota
2010	158,234	39%
2011	186,235	45%
2012	300,367	59%
2013	307,846	59%
2014	263,251	50%
2015	282,338	54%
2016	358,163	68%
2017	239,046	46%
2018	224,161	43%

TF	Landings (lbs gw)	% Quota
2010	249,708	57%
2011	386,134	88%
2012	451,121	78%
2013	440,091	76%
2014	517,268	89%
2015	537,512	92%
2016	429,003	74%
2017	484,895	83%
2018	386,138	66%

Source: Red snapper landings from Table 11 in NMFS 2019a; grouper and tilefish landings from Table 16 in NMFS 2019b. Landings are provided in gutted weight and can be converted to whole weight by multiplying red snapper landings by 1.1; grouper by 1.05, and tilefishes by 1.12.

3.2 Description of the Physical Environment

General Description of the Physical Environment

The physical environment for Gulf reef fish is detailed in the Environmental Impact Statement for the Generic Essential Fish Habitat (EFH) Amendment (GMFMC 2004a), Generic Amendment 3 (GMFMC 2005), and the Generic Annual Catch Limits/Accountability Measures (ACL/AM) Amendment (GMFMC 2011a), which are hereby incorporated by reference.

The Gulf has a total area of approximately 600,000 square miles (1.5 million km^2), including state waters (Gore 1992). It is a semi-enclosed, oceanic basin connected to the Atlantic Ocean by the Straits of Florida and to the Caribbean Sea by the Yucatan Channel (Figure 3.2.1). Oceanographic conditions are affected by the Loop Current, discharge of freshwater into the northern Gulf, and a semi-permanent, anti-cyclonic gyre in the western Gulf. The Gulf includes both temperate and tropical waters (McEachran and Fechhelm 2005). Gulf water temperatures range from 54º F to 84º F (12º C to 29º C) depending on time of year and depth of water. Mean annual sea surface temperatures ranged from 73 º F through 83º F (23-28º C) including bays and bayous (Figure 3.1.1) between 1982 and 2009, according to satellite-derived measurements (NODC 2011).[5] In general, mean sea surface temperature increases from north to south with large seasonal variations in shallow waters.

General Description of the Reef Fish Physical Environment

In general, reef fish are widely distributed in the Gulf, occupying both pelagic and benthic habitats during their life cycle. A planktonic larval stage lives in the water column and feeds on zooplankton and phytoplankton (GMFMC 2004a). Juvenile and adult reef fish are typically demersal and usually associated with bottom topographies on the continental shelf (less than 100 m) which have high relief, i.e., coral reefs, artificial reefs, rocky hard-bottom substrates, ledges and caves, sloping soft-bottom areas, and limestone outcroppings. However, several species are found over sand and soft-bottom substrates. For example, juvenile red snapper are common on mud bottoms in the northern Gulf, particularly off Texas through Alabama. Also, some juvenile snapper (e.g., mutton, gray, red, dog, lane, and yellowtail snappers) and grouper (e.g., goliath, red, gag, and yellowfin groupers) are associated with inshore seagrass beds, mangrove estuaries, lagoons, and larger bay systems.

[5] NODC 2011: http://accession.nodc.noaa.gov/0072888

Figure 3.2.1. Physical environment of the Gulf, including major feature names and mean annual sea surface temperature as derived from the Advanced Very High-Resolution Radiometer Pathfinder Version 5 sea surface temperature data set (http://accession.nodc.noaa.gov/0072888).

Historic Places

With respect to the National Register of Historic Places, there is one site listed in the Gulf. This is the wreck of the *U.S.S. Hatteras*, located in federal waters off Texas. Historical research indicates that over 2,000 ships have sunk on the Federal Outer Continental Shelf in the Gulf 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 the Bureau of Ocean Energy Management's website.[6]

Northern Gulf of Mexico Hypoxic Zone

Every summer in the northern Gulf, a large hypoxic zone forms. It is the result of allochthonous materials and runoff from agricultural lands by rivers to the Gulf, increasing nutrient inputs from the Mississippi River, and a seasonal layering of waters in the Gulf. The layering of the water is temperature and salinity dependent and prevents the mixing of higher oxygen content surface

[6] http://www.boem.gov/Environmental-Stewardship/Archaeology/Shipwrecks.aspx

water with oxygen-poor bottom water. For 2019, the extent of the hypoxic area was estimated to be 6,952 square miles and ranks as the eighth largest event over the past 33 years the area has been mapped.[7] The hypoxic conditions in the northern Gulf directly affect less mobile benthic macroinvertebrates (e.g., polychaetes) by influencing density, species richness, and community composition (Baustian and Rabalais 2009). However, more mobile macroinvertebrates and demersal fishes (e.g., gray snapper) are able to detect lower dissolved oxygen levels and move away from hypoxic conditions. Therefore, although not directly affected, these organisms are indirectly affected by limited prey availability and constrained available habitat (Baustian and Rabalais 2009; Craig 2012).

Greenhouse Gases

The Intergovernmental Panel on Climate Change[8] has indicated greenhouse gas emissions are one of the most important drivers of recent changes in climate. Wilson et al. (2014) inventoried the sources of greenhouse gases in the Gulf from sources associated with oil platforms and those associated with other activities such as fishing. A summary of the results of the inventory are shown in Table 3.2.1 with respect to total emissions and from fishing. Commercial fishing and recreational vessels make up a small percentage of the total estimated greenhouse gas emissions from the Gulf (2.04% and 1.67%, respectively).

Table 3.2.1. Total Gulf greenhouse gas emissions estimates (tons per year [tpy]) from oil platform and non-oil platform sources, commercial fishing, and percent greenhouse gas emissions from commercial fishing vessels of the total emissions.* Data are for 2011 only.

Emission source	CO_2	Greenhouse CH_4	Gas N_2O	Total CO_{2e}**
Oil platform	5,940,330	225,667	98	11,611,272
Non-platform	14,017,962	1,999	2,646	14,856,307
Total	**19,958,292**	**227,665**	**2,743**	**26,467,578**
Commercial fishing	531,190	3	25	538,842
Recreational fishing	435,327	3	21	441,559
Percent commercial fishing	2.66%	>0.01%	0.91%	2.04%
Percent recreational fishing	2.18%	>0.01%	0.77%	1.67%

*Compiled from Tables 6-11, 6-12, and 6-13 in Wilson et al. (2014). **The CO_2 equivalent (CO_2e) emission estimates represent the number of tons of CO_2 emissions with the same global warming potential as one ton of another greenhouse gas (e.g., CH_4 and N_2O). Conversion factors to CO_{2e} are 21 for CH_4 and 310 for N_2O

[7] http://gulfhypoxia.net
[8] https://www.ipcc.ch/srocc/

3.3 Description of the Biological Environment

The biological environment of the Gulf, including the species addressed in this amendment, is described in detail in the Generic EFH Amendment (GMFMC 2004a), Generic ACL/AM Amendment (GMFMC 2011a), and Reef Fish Amendments 28 (GMFMC 2015) and 40 (GMFMC 2014) and is incorporated here by reference and further summarized below.

General Information on Reef Fish Species

The National Ocean Service (NOS) collaborated with the National Marine Fisheries Service (NMFS) and the Gulf of Mexico Fishery Management Council (Council) to develop distributions of reef fish (and other species) in the Gulf (SEA 1998). The NOS obtained fishery-independent data sets for the Gulf, including Southeast Area Monitoring and Assessment Program and state trawl surveys. Data from the Estuarine Living Marine Resources Program (ELMRP) contain information on the relative abundance of specific species (highly abundant, abundant, common, rare, not found, and no data) for a series of estuaries, by five life stages (adult, spawning, egg, larvae, and juvenile) and month for five seasonal salinity zones (0-0.5, 0.5-5, 5-15, 15-25, and greater than 25 parts per thousand). NOS staff analyzed these data to determine relative abundance of the mapped species by estuary, salinity zone, and month. For some species not in the ELMRP database, distribution was classified as only observed or not observed for adult, juvenile, and spawning stages.

Reef fish are widely distributed in the Gulf, occupying both pelagic and benthic habitats during their life cycle. Habitat types and life history stages can be found in more detail in GMFMC (2004a). In general, both eggs and larval stages are planktonic. Larvae feed on zooplankton and phytoplankton. Exceptions to these generalizations include gray triggerfish, which lay their eggs in depressions in the sandy bottom (Simmons and Szedlmayer 2012), and gray snapper whose larvae are found around submerged aquatic vegetation. Juvenile and adult reef fish are typically demersal, and are usually associated with bottom topographies on the continental shelf (less than 328 feet; less than 100 m) which have high relief, i.e., coral reefs, artificial reefs, rocky hard-bottom substrates, ledges and caves, sloping soft-bottom areas, and limestone outcroppings. However, several species are found over sand and soft-bottom substrates. Juvenile red snapper are common on mud bottoms in the northern Gulf, particularly from Texas to Alabama. Also, some juvenile snappers (e.g., mutton, gray, red, dog, lane, and yellowtail snappers) and groupers (e.g., goliath grouper, red, gag, and yellowfin groupers) have been documented in inshore seagrass beds, mangrove estuaries, lagoons, and larger bay systems (GMFMC 1981). More detail on hard bottom substrate and coral can be found in the FMP for Corals and Coral Reefs (GMFMC and SAFMC 1982).

Status of Reef Fish Stocks

The Reef Fish FMP currently encompasses 31 species (Table 3.3.1). Eleven other species were removed from the FMP in 2012 through the Generic ACL/AM Amendment (GMFMC 2011a). The NMFS Office of Sustainable Fisheries updates its Status of U.S. Fisheries Report to Congress[9] on a quarterly basis utilizing the most current stock assessment information. Stock

[9] https://www.fisheries.noaa.gov/national/population-assessments/fishery-stock-status-updates

assessments and status determinations have been conducted and designated for 12 stocks and can be found on the Council[10] and Southeast Data, Assessment and Review (SEDAR)[11] websites. Of the 12 stocks for which stock assessments have been conducted, the first quarter report of the 2020 Status of U.S. Fisheries classifies only one as overfished (greater amberjack), and two stocks as undergoing overfishing (gray snapper and greater amberjack). Reef fish species managed under IFQ programs include red snapper, gag, red grouper, shallow-water grouper (black grouper, scamp, yellowfin grouper, and yellowmouth grouper), deep-water grouper (des snowy grouper, speckled hind, warsaw grouper, and yellowedge grouper) and tilefish (blueline tilefish, golden tilefish, and goldface tilefish). None of these species is currently considered overfished or undergoing overfishing (Table 3.3.1). The status of both assessed and unassessed stocks, as of the writing of this report is provided in Table 3.3.1. However, it should be noted that although gray triggerfish and red snapper are not overfished, these stocks are under rebuilding plans.

A stock assessment was conducted for Atlantic goliath grouper (SEDAR 47 2016). The Scientific and Statistical Committee (SSC) accepted the assessment's general findings that the stock was not overfished nor experiencing overfishing. Although the SSC determined Atlantic goliath grouper to not be experiencing overfishing based on annual harvest remaining below the overfishing limit (OFL), the SSC deemed the assessment not suitable for stock status determination and management advice.

Stock assessments were conducted for seven reef fish stocks using the Data Limited Methods Tool (DLMTool; SEDAR 49 2016). These stocks are identified in Table 3.3.1. This method allows the setting of OFL and acceptable biological catch (ABC) based on limited data and life history information, but does not provide assessment-based status determinations. Data were requested for these stocks but it was determined not enough information was available to complete an assessment even using the DLMTool. These stocks are not experiencing overfishing based on annual harvest remaining below the OFL, but no overfished status determination has been made (Table 3.3.1). Lane snapper was the only stock with adequate data to be assessed using the DLMTool methods resulting in OFL and ABC recommendations by the SSC.

The remaining species within the Reef Fish FMP have not been assessed at this time. Therefore, their stock status is unknown (Table 3.3.1). For those species that are listed as not undergoing overfishing, that determination has been made based on the annual harvest remaining below the OFL. Scamp is undergoing a research track assessment at this time.

[10] www.gulfcouncil.org
[11] http://sedarweb.org/

Table 3.3.1. Status of species in the Reef Fish FMP grouped by family.

Common Name	Scientific Name	Stock Status		Most recent assessment or SSC workshop
		Overfishing	Overfished	
Family Balistidae – Triggerfishes				
gray triggerfish	*Balistes capriscus*	N	N	SEDAR 43 2015
Family Carangidae – Jacks				
greater amberjack	*Seriola dumerili*	Y	Y	SEDAR 33 Update 2016a
lesser amberjack	*Seriola fasciata*	N	Unknown	SEDAR 49 2016
almaco jack	*Seriola rivoliana*	N	Unknown	SEDAR 49 2016
banded rudderfish	*Seriola zonata*	Unknown	Unknown	
Family Labridae – Wrasses				
hogfish	*Lachnolaimus maximus*	N	N	SEDAR 37 2014
Family Malacanthidae – Tilefishes				
tilefish (golden)	*Lopholatilus chamaeleonticeps*	N	N	SEDAR 22 2011a
blueline tilefish	*Caulolatilus microps*	Unknown	Unknown	
goldface tilefish	*Caulolatilus chrysops*	Unknown	Unknown	
Family Serranidae – Groupers				
gag	*Mycteroperca microlepis*	N	N	SEDAR 33 Update 2016b
red grouper	*Epinephelus morio*	N	N	SEDAR 61 2019
scamp	*Mycteroperca phenax*	Unknown	Unknown	
black grouper	*Mycteroperca bonaci*	N	N	SEDAR 19 2010
yellowedge grouper	*Hyporthodus flavolimbatus*	N	N	SEDAR 22 2011b
snowy grouper	*Hyporthodus niveatus*	N	Unknown	SEDAR 49 2016
speckled hind	*Epinephelus drummondhayi*	N	Unknown	SEDAR 49 2016
yellowmouth grouper	*Mycteroperca interstitialis*	N	Unknown	SEDAR 49 2016
yellowfin grouper	*Mycteroperca venenosa*	Unknown	Unknown	
warsaw grouper	*Hyporthodus nigritus*	N	Unknown	
*Atlantic goliath grouper	*Epinephelus itajara*	N	Unknown	SEDAR 47 2016
Family Lutjanidae – Snappers				
queen snapper	*Etelis oculatus*	N	Unknown	
mutton snapper	*Lutjanus analis*	N	N	SEDAR 15A Update 2015
blackfin snapper	*Lutjanus buccanella*	N	Unknown	
red snapper	*Lutjanus campechanus*	N	N	SEDAR 31 Update 2015
cubera snapper	*Lutjanus cyanopterus*	N	Unknown	
gray snapper	*Lutjanus griseus*	Y	N	
lane snapper	*Lutjanus synagris*	N	Unknown	SEDAR 49 2016
silk snapper	*Lutjanus vivanus*	Unknown	Unknown	
yellowtail snapper	*Ocyurus chrysurus*	N	N	SEDAR 64 2019
vermilion snapper	*Rhomboplites aurorubens*	N	N	SEDAR 45 2016
Wenchman	*Pristipomoides aquilonaris*	N	N	SEDAR 49 2016

Note: *Atlantic goliath grouper is a protected grouper (i.e., ACL is set at zero) and benchmarks do not reflect appropriate stock dynamics.

Bycatch of Managed Finfish Species

Many of the reef fish species co-occur with each other and can be incidentally caught when fishermen target certain species. In some cases, these fish may be discarded for regulatory reasons and thus are considered bycatch. Bycatch practicability analyses have been completed for red snapper (GMFMC 2004b, GMFMC 2007, GMFMC 2014, GMFMC 2015), grouper (GMFMC 2008b, GMFMC 2009, GMFMC 2010, GMFMC 2011b, GMFMC 2012a), vermilion snapper (GMFMC 2004c, GMFMC 2017c), greater amberjack (GMFMC 2008c, GMFMC 2012b, GMFMC 2017d), gray triggerfish (GMFMC 2012c), and hogfish (GMFMC 2016). These analyses examined the effects of fishing on these species. In general, these analyses have found that reducing bycatch provides biological benefits to managed species as well as benefits to the fishery through less waste, higher yields, and less forgone yield. However, in some cases, actions are approved that can increase bycatch through regulatory discards such as increased minimum sizes and closed seasons. Under these circumstances, there is some biological benefit to the managed species that outweigh any increases in discards from the action.

Protected Species

NMFS manages marine protected species in the Southeast region under the Endangered Species Act (ESA) and the Marine Mammal Protection Act (MMPA). A very brief summary of these two laws and more information is available on NMFS Office of Protected Resources website[12]. There are 21 ESA-listed species of marine mammals, sea turtles, fish, and corals that may occur in the EEZ of the Gulf. There are 91 stocks of marine mammals managed within the Southeast region plus the addition of the stocks such as North Atlantic right whales, and humpback, sei, fin, minke, and blue whales that regularly or sometimes occur in Southeast region managed waters for a portion of the year (Hayes et al. 2018). All marine mammals in U.S. waters are protected under the MMPA.

Of the four marine mammals that may be present in the Gulf (sperm, sei, fin, and Gulf Bryde's), the sperm, sei, and Gulf of Mexico Bryde's whale are listed as endangered under the ESA. Bryde's whales are the only resident baleen whales in the Gulf. Manatees, listed as threatened under the ESA, also occur in the Gulf and are the only marine mammal species in this area managed by the U.S. Fish and Wildlife Service.

The gear used by the Gulf reef fish fishery is classified in the MMPA 2019 List of Fisheries as a Category III fishery (84 FR 22051). This classification indicates the annual mortality and serious injury of a marine mammal stock resulting from any fishery is less than or equal to 1% of the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population. Dolphins are the only species documented as interacting with the reef fish fishery. Bottlenose dolphins prey upon bait, catch, and/or released discards of fish from the reef fish fishery. They are also a common predator around reef fish vessels, feeding on the discards. Marine Mammal Stock Assessment Reports and additional information are available on the NMFS Office of Protected Species website.[13]

[12] https://www.fisheries.noaa.gov/about/office-protected-resources
[13] https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessment-reports-species-stock

Sea turtles, fish, and corals that are listed as threatened or endangered under the ESA occur in the Gulf. These include the following: six species of sea turtles (Kemp's ridley, loggerhead (Northwest Atlantic Ocean distinct population segment (DPS)), green (North Atlantic and South Atlantic DPSs), leatherback, and hawksbill); five species of fish (Gulf sturgeon, smalltooth sawfish, Nassau grouper, oceanic whitetip shark and giant manta ray); and six species of coral (elkhorn, staghorn, lobed star, mountainous star, boulder star, and rough cactus). Critical habitat designated under the ESA for smalltooth sawfish, Gulf sturgeon, and the Northwest Atlantic Ocean DPS of loggerhead sea turtles occur in the Gulf, though only loggerhead critical habitat occurs in federal waters.

The most recent biological opinion (BiOp) for the Reef Fish FMP was completed on September 30, 2011. The BiOp determined the operation of the Gulf reef fish fishery managed under the Reef Fish FMP is not likely to adversely affect ESA-listed marine mammals or elkhorn and staghorn coral, and was not likely to jeopardize the continued existence of sea turtles (loggerhead, Kemp's ridley, green, hawksbill, and leatherback) or smalltooth sawfish. Since issuing the opinion, in memoranda dated September 16, 2014, and October 7, 2014, NMFS concluded that the activities associated with the Reef Fish FMP is not likely to adversely affect critical habitat for the Northwest Atlantic Ocean loggerhead sea turtle DPS and four species of corals (lobed star, mountainous star, boulder star, and rough cactus). On September 29, 2016, NMFS requested reinitiation of Section 7 consultation on reef fish fishing managed by the Reef Fish FMP because new species (i.e., Nassau grouper [81 FR 42268] and green sea turtle North Atlantic and South Atlantic DPSs [81 FR 20057]) were listed under the ESA that may be affected by the fishery. NMFS documented a determination that the operation of the fishery during the reinitiation period is not likely to adversely affect these species.

On January 22, 2018, NMFS published a final rule (83 FR 2916) listing the giant manta ray as threatened under the ESA. On January 30, 2018, NMFS published a final rule (83 FR 4153) listing the oceanic whitetip shark as threatened under the ESA. In a memorandum dated March 6, 2018, NMFS revised the request for reinitiation of consultation on the Reef Fish FMP to address the listings of the giant manta and oceanic whitetip. In that memorandum, NMFS also determined that fishing under the Reef Fish FMP during the extended re-initiation period will not jeopardize the continued existence of the giant manta ray, oceanic whitetip shark, Nassau grouper, or the North Atlantic and South Atlantic DPSs of green sea turtles.

NMFS published a final rule on April 15, 2019, listing the Gulf Bryde's whale as endangered. In a memorandum dated June 20, 2019, NMFS revised the reinitiation request to include the Gulf Bryde's whale and determined that fishing under the Reef Fish FMP during the re-initiation period will not jeopardize the continued existence of any of the newly listed species discussed above.

Climate Change

Climate change projections predict increases in sea-surface temperature and sea level; decreases in sea-ice cover; and changes in salinity, wave climate, and ocean circulation.[14] These changes are likely to affect plankton biomass and fish larvae abundance that could adversely affect fish, marine mammals, seabirds, and ocean biodiversity. Kennedy et al. (2002) and Osgood (2008) have suggested global climate change could affect temperature changes in coastal and marine ecosystems that can influence organism metabolism and alter ecological processes such as productivity and species interactions, change precipitation patterns and cause a rise in sea level. This could change the water balance of coastal ecosystems; altering patterns of wind and water circulation in the ocean environment; and influence the productivity of critical coastal ecosystems such as wetlands, estuaries, and coral reefs. The National Oceanic and Atmospheric Association (NOAA) Climate Change Web Portal[15] predicts the average sea surface temperature in the Gulf will increase by 1-3ºC for 2010-2070 compared to the average over the years 1950-2010. For reef fishes, Burton (2008) speculated climate change could cause shifts in spawning seasons, changes in migration patterns, and changes to basic life history parameters such as growth rates. The smooth puffer and common snook are examples of species for which there has been a distributional trend to the north in the Gulf. For other species, such as red snapper and the dwarf sand perch, there has been a distributional trend towards deeper waters. For other fish species, such as the dwarf goatfish, there has been a distributional trend both to the north and to deeper waters. These changes in distributions have been hypothesized as a response to environmental factors, such as increases in temperature.

The distribution of native and exotic species may change with increased water temperature, as may the prevalence of disease in keystone animals such as corals and the occurrence and intensity of toxic algae blooms. Hollowed et al. (2013) provided a review of projected effects of climate change on the marine fisheries and dependent communities. Integrating the potential effects of climate change into the fisheries assessment is currently difficult due to the time scale differences (Hollowed et al. 2013). The fisheries stock assessments rarely project through a time span that would include detectable climate change effects. However, some stocks, including gray snapper, have shown increases in abundance in the northern Gulf (Fodrie et al. 2010) and Texas estuaries (Tolan and Fisher 2009) during the interval between 1979 and 2006. This may be a result of increasing water temperatures in coastal environments.

***Deepwater Horizon* MC252 Oil Spill**

The presence of polycyclic aromatic hydrocarbons (PAH), which are highly toxic chemicals that tend to persist in the environment for long periods of time, in marine environments can have detrimental impacts on marine finfish, especially during the more vulnerable larval stage of development (Whitehead et al. 2012). When exposed to realistic, yet toxic levels of PAHs (1–15 µg/L), greater amberjack larvae develop cardiac abnormalities and physiological defects (Incardona et al. 2014). The future reproductive success of long-lived species, including red drum and many reef fish species, may be negatively affected by episodic events resulting in high-mortality years or low recruitment. These episodic events could leave gaps in the age

[14] http://www.ipcc.ch/
[15] https://www.esrl.noaa.gov/psd/ipcc/

structure of the population, thereby affecting future reproductive output (Mendelssohn et al. 2012). Other studies have described the vulnerabilities of various marine finfish species, with morphological and/or life history characteristics similar to species found in the Gulf, to oil spills and dispersants (Hose et al. 1996; Carls et al. 1999; Heintz et al. 1999; Short 2003).

Increases in histopathological lesions were found in red snapper in the area affected by the oil, but Murawski et al. (2014) found that the incidence of lesions had declined between 2011 and 2012. The occurrence of such lesions in marine fish is not uncommon (Sindermann 1979; Haensly et al. 1982; Solangi and Overstreet 1982; Khan and Kiceniuk 1984, 1988; Kiceniuk and Khan 1987; Khan 1990). Red snapper diet was also affected after the spill. A decrease in zooplankton consumed, especially by adults (greater than 400 mm total length) over natural and artificial substrates may have contributed to an increase in the consumption of fish and invertebrate prey – more so at artificial reefs than natural reefs (Tarnecki and Patterson 2015).

In addition to the crude oil, over a million gallons of the dispersant, Corexit 9500A®, was applied to the ocean surface and additional hundreds of thousands of gallons of dispersant was pumped to the mile-deep wellhead (National Commission 2010). No large-scale applications of dispersants in deep water had been conducted until the *Deepwater Horizon* MC252 oil spill. Thus, no data exist on the environmental fate of dispersants in deep water. The effect of oil, dispersants, and the combination of oil and dispersants on fishes of the Gulf remains an area of concern.

Red Tide

Red tide is a common name for harmful algal blooms caused by species of dinoflagellates and other organisms that cause the water to appear to be red. Red tide blooms occur in the Gulf almost every year, generally in late summer or early fall. They are most common off the central and southwestern coasts of Florida between Clearwater and Sanibel Island but may occur anywhere in the Gulf. More than 50 species capable of causing red tides occur in the Gulf, but one of the best-known species is *Karenia brevis*. This organism produces toxins capable of killing fish, birds and other marine animals.[16]

The effects of red tide on fish stocks have been well established. In 2005, a severe red tide event occurred in the Gulf along with an associated large decline in multiple abundance indices for red grouper, gag, and other species thought to be susceptible to mortality from red tide events. It is unknown whether mortality occurs via absorption of toxins across gill membranes (Abbott et al. 1975, Baden 1988), ingestion of toxic biota (Landsberg 2002), or from some indirect effect of red tide such as hypoxia (Walter et al. 2013). In 2018, a severe red tide event occurred off the southwest coast of Florida from Monroe County to Sarasota County that persisted for more than 10 months; the impacts on fish stocks will likely be considered in future stock assessments.

[16] http://myfwc.com/research/redtide/general/about/

3.4 Description of the Economic Environment

A description of the reef fish stocks affected by the actions considered in this amendment is provided in Section 3.3. Additional details on the economic environment of the RS-IFQ and GT-IFQ programs are provided in Reef Fish Amendment 36A (GMFMC 2017a). This amendment does not contain management measures that would affect the recreational sector and thus additional details on the economic environment of that sector are not provided here. Recent descriptions and performance information related to the GT-IFQ and RS-IFQ programs are included in the 5-year review of the GT-IFQ program (GMFMC and NMFS 2018), the Gulf of Mexico 2018 Red Snapper Individual Fishing Quota Annual Report (NMFS 2019a) and the Gulf of Mexico 2018 Grouper-Tilefish Individual Fishing Quota Annual Report (NMFS 2019b). These reports include detailed information on program participants, program activity, quota, landings, price information, and enforcement. The information in those reports is incorporated here by reference.

3.4.1 Permits

Any fishing vessel that harvests and sells any of the reef fish species managed under the Reef Fish FMP from the Gulf EEZ, including IFQ species, must have a valid Gulf commercial reef fish permit. As shown in Table 3.4.1.1, the number of permits that were valid or renewable in a given year has continually decreased in the years after the RS-IFQ program was implemented in 2007. This decline has continued since the GT-IFQ program was implemented in 2010, but at a slower rate, particularly after 2015. As of February 27, 2020, there were 834 valid or renewable commercial reef fish permits, 763 of which were valid. A renewable permit is an expired limited access permit that cannot be actively fished, but can be renewed for up to one year after expiration.

Table 3.4.1.1. Number of valid or renewable commercial reef fish permits, 2008-2019.

Year	Number of Permits
2008	1,099
2009	998
2010	969
2011	952
2012	917
2013	895
2014	882
2015	868
2016	852
2017	850
2018	845
2019	842

Source: NMFS SERO SF Access permits database.

Although a single permit is attached to a single vessel and many businesses own one vessel, some businesses hold or own multiple permits and vessels. Multiple vessels owned by a single

business are often referred to as a "fleet." As illustrated in Table 3.4.1.2, at the end of 2018, which is essentially equivalent to Jan. 1, 2019, 94 businesses owned two or more valid or renewable reef fish permits. Although these businesses represented only 14.8% of the businesses with permits, they held 35.5% of the permits, which illustrates some degree of concentration in the ownership of permitted vessels. The maximum number of permitted vessels held by a single business was 16.

Table 3.4.1.2. Vessels and businesses with a commercial reef fish permit, end of year (EOY) 2018.

No. of Vessels Owned by a Business	No. of Businesses	No. of Total Permitted Vessels	% of Businesses	% of Permitted Vessels
1	543	543	85.2%	64.5%
2	60	120	9.4%	14.3%
3	15	45	2.4%	5.3%
4	8	32	1.3%	3.8%
5-6	3	17	.5%	2.0%
7-10	6	53	.9%	6.3%
15-16	2	32	.3%	3.8%
Total	637	842	100%	100.0%

Source: NMFS SERO permits and IFQ databases, March 23, 2020.

Although all permitted vessels may harvest non-IFQ reef fish species (e.g., vermilion snapper), not all permitted vessels are eligible to harvest IFQ species. A permitted vessel must be linked to a "current" IFQ account in order to be eligible to harvest IFQ species.[17] Thus, because some vessels are not linked to a current IFQ account, fewer permitted vessels are eligible to harvest IFQ species and, in turn, fewer businesses may accrue revenue from the harvest of IFQ species.

Table 3.4.1.3. IFQ Eligible vessels and businesses with a Gulf reef fish permit, EOY 2018.

No. of Vessels Owned by a Business	No. of Businesses	No. of Total Permitted Vessels	% of Businesses	% of Permitted Vessels
1	450	450	84.6%	63.1%
2	52	104	9.8%	14.6%
3	13	39	2.4%	5.5%
4	6	24	1.1%	3.4%
5-6	3	17	.6%	2.4%
7-10	6	48	1.1%	6.7%
15-16	2	31	.4%	4.3%
Total	532	713	100%	100.0%

Source: NMFS SERO permits and IFQ databases, March 23, 2020.

[17] The linked account must have annual allocation in it in order for the permitted vessel to actually harvest IFQ species. A "current" account is an account that has not been closed or suspended.

Table 3.4.1.3 shows that, at the end of 2018, only 713 permitted vessels were linked to an IFQ account, and these vessels were owned by 532 businesses. Thus, 129 permitted vessels were not eligible to harvest IFQ species and 105 businesses with reef fish permits could not accrue revenue from the harvest of IFQ species. The degree of concentration among IFQ-eligible permitted vessels is slightly greater than with all permitted vessels, as businesses owning multiple IFQ-eligible vessels represent only 15.4% of the businesses, but hold 36.9% of the permitted vessels that can harvest IFQ species.

As the number of permits have changed over time, so has the market value of these permits.[18] Specifically, as shown in Table 3.4.1.4, the market value of a commercial reef fish permit was relatively stable from 2006 through 2011, though minor increases were seen in 2009 before the GT-IFQ program was established. The market value increased somewhat from 2011-2013, remaining stable through 2015. However, after 2015, the price of these permits has steadily increased as the number of permits stabilized, with the price being 164% higher on average in 2019 compared to 2015. Partial year data for 2020 indicates that the price has continued to increase, with the current market value being at least $18,000 and some permits selling for $20,000.

Table 3.4.1.4. Average market value of commercial reef fish permits, 2006-2019 (2019$).

Year	Average Market Value of Permit
2006	$4,956
2007	$4,859
2008	$4,766
2009	$5,913
2010	$4,676
2011	$4,580
2012	$5,617
2013	$6,624
2014	$6,501
2015	$6,433
2016	$8,749
2017	$13,842
2018	$15,266
2019	$17,000

Source: NMFS SERO permits database, Feb, 26, 2020.

3.4.2 IFQ Accounts

As of February 19, 2020, there were 684 IFQ accounts with shares in one or more share categories. The total percentage of shares held in these accounts does not sum to 100% in Table

[18] The median was used to represent the market price of permits rather than the mean because the distribution of the data was somewhat skewed and because the price data had to be filtered to eliminate a relatively large number of reported values that included the sales value of other permits and/or the vessel, as well as reported values that likely represented the "lease" value rather than the sales value of the permit.

3.4.2.1, because a small percentage of shares in each category were reclaimed under Reef Fish Amendment 36A.[19] On average (mean), each of these accounts holds 0.146% of the shares in each category. As discussed in Reef Fish Amendment 36A (GMFMC 2017a), the distribution of shares within all categories is highly skewed. In other words, some accounts have a relatively high percentage of the shares in a category while others have no or a very low percentage of the shares. The largest or maximum percent of shares held by a single account in each category ranges from 2.33% for gag (GG) to 4.265% for red grouper (RG), 4.433% for other shallow-water grouper (SWG), 4.487% for red snapper (RS), 12.212% for tilefish (TF), and 14.704% for deep-water grouper (DWG). The account that has the highest percentages of DWG and TF shares are at the share cap for those categories. The account that has the highest percentage of RG shares is near the 4.331% share cap for RG. Thus, in percentage terms, these estimates indicate there are some relatively large shareholders in the DWG and TF categories in particular. This finding is consistent with findings in GMFMC and NMFS (2018) which indicate the concentration of shares is greatest in the TF and DWG categories and least in the GG category. Even though the concentration of shares is relatively high for TF and DWG, concentration levels in those and other categories, as well as for all categories combined, are still considered to be "unconcentrated" and thus quota share markets are considered to be competitive (i.e., no business or other entity has the ability to exercise market power by controlling an "excessive" amount of the shares and thereby share prices).[20]

Table 3.4.2.1. Quota share statistics (in percent) for all IFQ accounts, February 19, 2020.

Statistic	DWG Shares	RG Shares	GG Shares	SWG Shares	TF Shares	RS Shares
Minimum	0.000	0.000	0.000	0.000	0.000	0.000
Maximum	14.704	4.265	2.330	4.433	12.212	4.487
Total	99.978	99.900	96.825	99.550	99.953	99.929
Mean	0.146	0.146	0.146	0.146	0.146	0.146

Source: NMFS SERO IFQ database accessed 2/19/2020.

As with permitted vessels, although it is common for a single IFQ account with shares to be held by a single business, some businesses have multiple IFQ accounts with shares. The 684 IFQ accounts are owned by 594 businesses.

Further, although some IFQ accounts are linked to a single permitted vessel, others are linked to multiple permitted vessels or are not linked to a permitted vessel at all. The latter accounts are held by businesses that sell their annual allocation rather than harvest it. Of the 684 IFQ accounts with shares, 369 accounts were linked to one or more permitted vessels, while 315 accounts were not linked to a permitted vessel. The 369 accounts were linked to a total of 453 permitted vessels and these accounts and vessels were owned by 329 businesses. Most

[19] Shares were reclaimed from accounts that had never been activated since the start of the IFQ program.

[20] These conclusions hold regardless of the measure of concentration (e.g., the Herfindahl-Hirschman Index (HHI), C5, or C3) or the unit of analysis (e.g., IFQ account, lowest known entity (LKE), and affiliated accounts/businesses). The Horizontal Merger Guidelines from the US Department of Justice and the Federal Trade Commission identify markets with an HHI below 1,500 to be Unconcentrated (no concerns over the exercise of market power), HHI between 1,500 and 2,500 to be Moderately Concentrated (possible concern with market power being exercised given a sufficient increase in concentration), and above 2,500 to be Highly Concentrated (exercise of market power is likely, particularly if concentration increases further).

businesses only own one or two IFQ accounts and permitted vessels. But, one business has 13 IFQ accounts and there are 3 businesses that own 10 or more permitted vessels. The 315 IFQ accounts that were not linked to a vessel were owned by 295 businesses and the vast majority of these businesses only held one or two IFQ accounts with shares.

As shown in Table 3.4.2.2, the 329 businesses that own permitted vessels hold the majority of shares in all share categories, ranging from a low of just over 66% of the DWG shares to a high of more than 79% of the SWG shares. On average, these 329 businesses own between .2%-.24% of the shares in each category. The maximum percentage of shares owned by a business varies considerably, ranging from about 3.86% of the GG shares to 11.88% of the TF shares.

Table 3.4.2.2. Quota share statistics (in percent) for businesses with permitted vessels, February 19, 2020.

Statistic	DWG Shares	RG Shares	GG Shares	SWG Shares	TF Shares	RS Shares
Maximum	8.725	5.665	3.857	5.136	11.879	5.076
Total	66.424	68.966	72.764	79.253	69.462	68.653
Mean	0.202	0.210	0.221	0.241	0.211	0.209

Source: NMFS SERO IFQ database accessed 2/19/2020.

As shown in Table 3.4.2.3, the 295 businesses that own shares, but do not own permitted vessels, own fewer shares in total compared to the businesses that own permitted vessels. However, the percentages are not insignificant, ranging from a low of about 20.3% of the SWG shares to a high of about 33.6% of the DWG shares. Each of these businesses owns between .07% and .11% of the shares in each category on average. The maximum percentage of shares owned by one of these businesses varies considerably, ranging from about 2.33% of the GG shares to 14.7% of the DWG shares. The business that possesses the highest percentage of shares in the DWG and TF categories is at the cap for both categories.

Table 3.4.2.3. Quota share statistics (in percent) for businesses without permitted vessels, February 19, 2020.

Statistic	DWG Shares	RG Shares	GG Shares	SWG Shares	TF Shares	RS Shares
Maximum	14.704	5.073	2.330	1.944	12.212	3.661
Total	33.555	30.934	27.061	20.297	30.492	31.276
Mean	0.114	0.105	0.092	0.069	0.103	0.106

Source: NMFS SERO IFQ database accessed 2/19/2020.

In general, the information in Tables 3.4.2.2 and 3.4.2.3 can be used to determine the distribution of annual allocation, the market value of shares, the market value of annual allocation, and the potential ex-vessel value of annual allocation if used for harvesting between businesses with shares that own permitted vessels and businesses with shares that do not own permitted vessels. However, ex-vessel value would not accrue to businesses that do not possess permit because a permit is needed to harvest IFQ species.

The amount of annual allocation (quota pounds) that an account holder receives each year is not only conditional on the percentage of shares held in a category, but also the commercial quota applicable to that category. The 2019 quotas for each share category were as follows: 6,937,838 lbs gutted weight (gw) for RS, 3 million pounds (mp) gw for RG, 1.024 mp gw for DWG, 582,000 lbs gw for TF, and 525,000 lbs gw for SWG. Table 3.4.2.4 presents statistics regarding annual allocation to shareholder accounts based on the share statistics in Table 3.4.2.1 and these quotas. Based on this information, the average account holder received about 19,000 lbs gw of allocation in 2019 across all share categories.

Table 3.4.2.4. Annual allocation statistics for IFQ accounts, February 19, 2020.

Statistic	DWG Allocation	RG Allocation	GG Allocation	SWG Allocation	TF Allocation	RS Allocation
Maximum	150,572	127,945	21,879	23,275	71,076	311,299
Total	1,023,778	2,996,996	937,355	522,637	581,728	6,932,877
Mean	1,497	4,382	1,370	764	850	10,136

Source: NMFS SERO IFQ database accessed 2/19/2020.

Because the actions considered in this amendment are primarily concerned with IFQ accounts that hold shares but are not associated with a permit, Table 3.4.2.5 provides statistics regarding the amount of allocation held by the 295 businesses that possess these accounts. Information in this table again reflects that these businesses control just over 31% of the total allocation in the two IFQ programs, or around 3.98 million lbs (gw), with 87% of that amount coming from the possession of RS allocation. The largest amount of allocation controlled by a single business without a permit is almost 660,000 lbs (gw), while the average amount of allocation held by a business without a permit is almost 13,500 lbs (gw).

Table 3.4.2.5. Annual allocation statistics for businesses without permitted vessels, February 19, 2020 (2019$).

Statistic	DWG	RG	GG	SWG	TF	RS	All
Maximum	150,572	152,199	21,879	10,207	71,076	253,967	659,900
Total	343,601	928,024	254,105	106,561	177,461	2,169,847	3,979,600
Mean	1,165	3,146	861	361	602	7,355	13,490

Source: NMFS SERO IFQ database accessed 2/19/2020.

Shares have value in multiple ways. First, shares have value because they are an asset. The asset value of each account's shares is determined by the market price of the shares and the amount of shares it contains. Statistics regarding the value of the shares held by all IFQ accounts are in Table 3.4.2.6. The total value of all shares held by IFQ accounts is more than $329 million (2019$), with the bulk of that value coming from ownership of RS shares, which accounts for almost 87% of the combined total value. This is also true for the average IFQ account that holds shares. The average value of an account that holds shares is slightly more than $481,000. The account with the largest asset share value is worth about $13.8 million, with RS shares representing the bulk of that value (about 93%). Compared to conditions in 2015, RG shares currently represent a far smaller percentage of a share account holder's IFQ asset

portfolio, which was around 29% at that time. The same is true for the other GT share categories, with RS shares now dominating that portfolio.

Table 3.4.2.6. Quota share value statistics for all IFQ accounts (2019$).

Statistic	DWG	RG	GG	SWG	TF	RS	All
Maximum	$1,376,230	$728,007	$208,945	$130,804	$675,221	$12,816,182	$13,831,668
Total	$9,357,329	$17,052,906	$8,951,736	$2,937,222	$5,526,415	$285,426,564	$329,252,173
Mean	$13,680	$24,931	$13,087	$4,294	$8,080	$417,290	$481,363

Note: Share value estimates are based on average 2019 share prices per pound (NMFS SERO IFQ database accessed 2/11/2020).

Table 3.4.2.7. Average share prices by share category, 2015-2019 (2019$).

Share category	2015	2016	2017	2018	2019
RS	$36.07	$32.56	$36.27	$36.90	$41.17
RG	$13.80	$10.74	$5.39	$4.17	$5.69
GG	$23.58	$15.18	$16.55	$9.95	$9.55
DWG	$13.67	$13.25	$13.16	$11.11	$9.14
SWG	$7.23	$6.20	$9.06	$4.96	$5.62
TF	$9.85	$10.64	$9.07	$10.89	$9.50

Source: NMFS SERO IFQ database accessed 2/11/2020.

The information in Table 3.4.2.6 reflects the asset value of shares based on 2019 share prices in Table 3.4.2.7. However, with the exception of RS shares, and TF shares to a lesser extent, average share prices for other share categories have continuously declined over the past 5 years, as illustrated in Table 3.4.2.7. Specifically, RG and GG share prices have declined by 59% during this time. The declines for DWG and TF prices have been less, but are still noticeable. TF share prices have been relatively steady, while RS share prices have increased by more than 14%.

Because the actions considered in this amendment are primarily concerned with IFQ accounts that hold shares but are not associated with a permit, Table 3.4.2.8 provides statistics regarding the value of the shares held by the 295 businesses that possess these accounts. Information in this table again reflects that these businesses control just over 31% of the total value of shares in the two IFQ programs, with 87% of that value coming from the possession of RS shares. The largest share value controlled by a single business without a permit is worth just over $13.6 million, while the average value of shares held by a business without a permit is just over $347,000.

Table 3.4.2.8. Quota share value statistics for businesses without permitted vessels, February 19, 2020 (2019$).

Statistic	DWG	RG	GG	SWG	TF	RS	All
Maximum	$1,376,230	$866,012	$208,945	$57,361	$675,221	$10,455,838	$13,639,607
Total	$3,140,514	$5,280,459	$2,426,700	$598,875	$1,685,884	$89,332,592	$102,465,025
Mean	$10,646	$17,900	$8,226	$2,030	$5,715	$302,822	$347,339

Note: Share value estimates are based on average 2019 share prices per pound (NMFS SERO IFQ database accessed 2/11/2020).

In addition to their asset value, shares have value because they result in annual allocation, which can either be sold or used for harvesting purposes (i.e., landings). Annual allocation that is sold results in revenue for the business holding the allocation. This revenue likely represents an equivalent amount of profit as the business does not pay cost recovery fees when selling allocation and any other monetary costs associated with selling allocation are likely trivial. Statistics regarding the potential market value associated with the annual allocation for each account with shares are provided in Table 3.4.2.9.

Table 3.4.2.9. Potential market value of annual allocation in 2020 for all IFQ accounts (2019$).

Statistic	DWG	RG	GG	SWG	TF	RS	All
Maximum	$158,101	$75,488	$18,597	$13,732	$51,175	$1,148,694	$1,239,345
Total	$1,074,967	$1,768,227	$796,751	$308,356	$418,844	$25,582,318	$29,949,463
Mean	$1,572	$2,585	$1,165	$451	$612	$37,401	$43,786

Note: Annual allocation market value estimates are based on average 2019 allocation prices (NMFS SERO IFQ database accessed 2/11/2020)

The average market value of annual allocation should approximate the expected net revenue or economic profit of the annual allocation in the short-term (i.e., in a given year). Thus, if all of the annual allocation held by IFQ accounts was harvested, economic profits from those landings would be expected to be more than $29.9 million, with the bulk of those profits (85%) arising from the harvest of RS. Although one account would be expected to earn about $1.2 million in short-term profits if all allocation was either sold and/or used for harvesting, the average short-term profit per account would only be expected to be a little more than $44,000.[21] However, while complete or nearly utilization of the RS commercial quota and thus annual allocation is typical, that has not been the case for quotas and annual allocation in the GT-IFQ program. In 2019, quota utilization rates in the GT categories ranged from 35% to 93%, with an overall average of 68%. Thus, realized total annual profits would more likely be slightly less (about $28.4 million), and profits per business would be slightly lower at around $41,700.

The information in Table 3.4.2.9 reflects the market value of allocation based on 2019 allocation prices as shown in Table 3.4.2.10. However, with the exception of RS allocation, allocation prices for other share categories have declined over the past 5 years, as illustrated in Table

[21] "Accounts" do not actually harvest landings and thus do not earn profits per se; rather, vessels and the businesses that own them do. Further, annual allocation is often transferred, so the actual distribution of short-term profits would likely differ from the potential distribution of short-term profits based on the distribution of annual allocation at the beginning of the year. The purpose of these estimates is to characterize the distribution of annual allocation and its value across accounts in the short-term.

3.4.2.10. Specifically, RG and GG allocation prices have declined by 49% and 58% during this time. The declines for DWG and TF allocation prices have been less, but are still noticeable. If these trends continue, then the estimates in Table 3.4.2.10 may overestimate the market value of these allocations in 2020. TF share prices have been relatively steady, while RS share prices have increased by more than 14%. Thus, if the upward trend in RS allocation prices continues, the estimated market value of RS allocation in Table 3.4.2.9 may underestimate actual market value in 2020. Compared to conditions in 2015, RG allocation currently represents a far smaller percentage of a share account holder's allocation portfolio, which was around 29% at that time. The same is true for the other GT share categories, with RS allocation now dominating that portfolio.

Table 3.4.2.10. Average allocation prices by share category, 2015-2019 (2019$).

Share category	2015	2016	2017	2018	2019
RS	$3.31	$3.41	$3.46	$3.46	$3.69
RG	$1.15	$0.95	$0.44	$0.33	$0.59
GG	$2.03	$1.47	$1.51	$1.03	$0.85
DWG	$1.26	$1.23	$1.23	$1.01	$1.05
SWG	$0.64	$0.59	$0.60	$0.54	$0.59
TF	$0.83	$0.71	$0.75	$0.73	$0.72

Source: NMFS SERO IFQ database accessed 2/11/2020.

Similar to shares, annual allocation tends to be "unconcentrated" across accounts. According to GMFMC and NMFS (2018), concentration is low across all share categories combined and for most share categories, with the exception of TF which is typically "moderately concentrated." Also, concentration of annual allocation is the lowest at the beginning of each year, when it is based on the distribution of shares. Concentration in all categories is seasonal and increases as the year progresses or stabilizes in the 3rd or 4th quarter, but the markets are still largely "unconcentrated" with the exception of TF. But even at moderate levels of concentration, there is no evidence of market power being exercised in any of the markets for annual allocation (i.e., markets for annual allocation are competitive).

Because the actions considered in this amendment are primarily concerned with IFQ accounts that hold shares but are not associated with a permit, Table 3.4.2.11 provides statistics regarding the value of the allocation held by the 295 businesses that possess these accounts. Information in this table again reflects that these businesses control just over 31% of the total value of allocation in the two IFQ programs, with 87% of that value coming from the possession of RS allocation. The largest allocation value controlled by a single business without a permit is worth just over $1.26 million, while the average value of allocation held by a business without a permit is almost $31,600. Again, realized value in the form of actual annual revenue and profits is likely less from allocation in the GT-IFQ program as quota utilization is typically well below 100% in those categories. Thus, annual profit for these businesses from the sale of allocation is more likely to be around $8.9 million in total and $30,200 per business on average.

Table 3.4.2.11. Allocation value statistics for businesses without permitted vessels, February 19, 2020 (2019$).

Statistic	DWG	RG	GG	SWG	TF	RS	All
Maximum	$158,101	$89,797	$18,597	$6,022	$51,175	$937,140	$1,260,832
Total	$360,781	$547,534	$215,989	$62,871	$127,772	$8,006,735	$9,321,683
Mean	$1,223	$1,856	$732	$213	$433	$27,141	$31,599

Note: Allocation value estimates are based on average 2019 allocation prices per pound (NMFS SERO IFQ database accessed 2/11/2020).

The same general findings regarding the market value of annual allocation also apply to the potential ex-vessel value of that annual allocation. The markets for landed product largely have the same characteristics as the markets for annual allocation (i.e., unconcentrated overall and for most categories, except landings of TF which are "moderately concentrated"). Thus, markets for landed product of IFQ species are thought to be competitive. Even if market power is not detected in these markets, the Council may have distributional or "fairness" concerns as the distributions of shares, allocation, landings, and revenue in the Gulf IFQ programs are highly unequal. In fact, they are the most unequal of any catch share program in the U.S. (GMFMC and NMFS 2018).

The information in Table 3.4.2.12 reflects the potential ex-vessel value of allocations in 2020 based on 2019 ex-vessel prices and commercial quotas in 2020. Only businesses with IFQ accounts that are linked to a permit are allowed to harvest IFQ species, estimates of ex-vessel value are not germane to businesses that do not possess permits.

As illustrated in Table 3.4.2.13, with the exception of TF, and RS to some extent, ex-vessel prices have steadily increased from 2015 through 2019. For example, ex-vessel prices for gag, SWG and DWG have increased by 11%, 12%, and 13%, respectively. The ex-vessel price for RS has only increased by 2%, and that increase almost entirely occurred in 2019. The ex-vessel price for RG has increased by almost 26%, while the ex-vessel price for TF has decreased by about 7%. These trends are nearly the opposite of the trends for allocation prices, suggesting that it is likely becoming relatively more profitable for those with shares to harvest their allocation rather than sell it, all other things being equal.[22]

Table 3.4.2.12. Potential ex-vessel value of annual allocation in 2020 for all IFQ accounts (2019$).

Statistic	DWG	RG	GG	SWG	TF	RS	All
Maximum	$844,710	$675,549	$132,149	$129,408	$204,699	$1,643,659	$2,075,597
Total	$5,743,393	$15,824,137	$5,661,622	$2,905,864	$1,675,376	$36,605,593	$68,415,986
Mean	$8,397	$23,135	$8,277	$2,449	$4,248	$53,517	$100,023

Note: Potential ex-vessel value estimates are based on 2019 average ex-vessel prices NMFS SERO (IFQ database accessed 2/11/2020).

[22] Preliminary information suggests that the recent pandemic has caused ex-vessel prices for most IFQ species to decline, thus reversing the previous trend. As effects on allocation prices have not yet been determined, whether it is currently more profitable for IFQ account holders to sell or use allocation for landings purposes is unknown.

Table 3.4.2.13. Average ex-vessel prices by share category, 2015-2019 (2019$).

Share category	2015	2016	2017	2018	2019
RS	$5.18	$5.17	$5.18	$5.19	$5.28
RG	$4.23	$4.26	$4.45	$4.83	$5.31
GG	$5.44	$5.45	$5.47	$5.76	$6.04
DWG	$4.96	$4.91	$4.93	$5.17	$5.61
SWG	$4.95	$4.92	$4.96	$5.30	$5.56
TF	$3.11	$3.12	$3.10	$2.87	$2.88

Source: NMFS SERO IFQ database accessed 2/11/2020.

3.4.3 Vessels

The information in Table 3.4.3.1 describes the landings and revenue for vessels that harvested IFQ species in each year from 2014 through 2018, as well as their revenue from Gulf non-IFQ species, and South Atlantic fisheries. Although a majority of these vessels' gross revenue came from harvesting IFQ species, a significant portion came from harvesting non-IFQ species in the Gulf, with a minor amount coming from harvests in the South Atlantic.

Some important trends can be seen in Table 3.4.3.1. In general, vessel participation in the IFQ programs tends to be very fluid. However, the number of vessels that harvested IFQ species in each year from 2014 through 2016 was relatively stable, ranging between 473 and 487 vessels. Vessel participation increased by more than 5% in 2017 to 513 vessels, likely in response to the upward trend in IFQ revenue from 2011 through 2015 (GMFMC 2017a), but declined slightly in 2018 to 502 vessels. These 502 vessels were owned by 394 businesses. In 2018, the maximum gross revenue from commercial fishing for a single business was $4.69 million (2019$), while the average gross revenue was approximately $150,000 per business.[23]

IFQ revenue peaked in 2015 and remained relatively stable in 2016. However, it declined in 2017 and 2018 by more than 18% from its peak in 2015. Not only did IFQ revenue for the IFQ vessels decrease in recent years, revenue from non-IFQ species in the Gulf also declined by about 18% from 2016 to 2018. Although revenue from South Atlantic landings does not make up a significant portion of the IFQ vessels' total revenue, it continually declined from 2014 through 2018, by almost 43% during that time. As a result, total revenue for these vessels declined by almost 18% from 2015 through 2018.

[23] Only revenues from commercial harvesting are accounted for in these estimates and thus do not account for revenues the business may have earned from selling annual allocation.

Table 3.4.3.1. Landings and revenue statistics for vessels harvesting IFQ species by year, 2014-2018 (2019$).

Year	Number of Vessels	Statistic	IFQ Revenue	Gulf Non-IFQ Revenue	South Atlantic Revenue	Total Revenue
2014	473	Maximum	$2,384,939	$300,104	$125,063	$2,387,842
		Total	$58,778,434	$9,296,600	$766,602	$68,841,636
		Mean	$124,267	$19,655	$1,621	$145,543
2015	484	Maximum	$2,708,555	$304,970	$112,904	$2,715,183
		Total	$62,689,496	$8,489,181	$697,198	$71,875,875
		Mean	$129,524	$17,540	$1,440	$148,504
2016	487	Maximum	$2,259,525	$242,494	$99,390	$2,339,708
		Total	$60,892,137	$9,141,918	$621,715	$70,655,771
		Mean	$125,035	$18,772	$1,277	$145,084
2017	513	Maximum	$2,336,305	$216,904	$149,465	$2,358,048
		Total	$54,815,660	$8,913,904	$606,509	$64,336,072
		Mean	$106,853	$17,376	$1,182	$125,411
2018	502	Maximum	$2,091,909	$190,863	$107,512	$2,110,894
		Total	$51,186,656	$7,475,362	$440,279	$59,102,297
		Mean	$101,965	$14,891	$877	$117,734

Source: NMFS SERO IFQ database accessed 2/19/2020 and SEFSC Socioeconomic Panel (Version 10).

These declines occurred even though the RG commercial quota increased from 5.63 mp gw in 2014 to 7.78 mp gw by late 2016, and remained at that level through 2018. Also, the RS commercial quota increased from approximately 5.054 mp gw in 2014 to 6.312 mp gw through mid-2017, and remained at that level through 2018. Given that ex-vessel prices were also increasing for most IFQ species during this time, landings and revenue would be expected to increase, likely significantly, with such increases under stable biological and economic conditions. Thus, it appears that biological and/or economic conditions for at least some IFQ species are not stable. Based on information in NMFS (2019a), conditions in the RS-IFQ program appear to be stable or improving. Conversely, as suggested in NMFS (2019b), conditions in the GT-IFQ program are not stable as landings in all share categories have been trending down, and the percentage of the commercial quota harvested in each category has therefore also been declining. Specifically, while 92% of the combined commercial quotas in the GT-IFQ program was harvested in 2014, only 39% was harvested in 2018, with RG experiencing the most precipitous declines in absolute and relative terms. A recent stock assessment for RG indicates that the red grouper stock is in decline (SEDAR 61 2019). However, other GT species may also be in decline based on the information in NMFS (2019b). These findings reflect the interdependency between species harvested in the RS-IFQ and GT-IFQ programs (i.e., biological or economic factors that affect the commercial harvest of one species can and often do affect the commercial harvest of other species).

The maximum annual gross revenue earned by a single vessel from commercial fishing during this time was almost $2.72 million (2019$) in 2015, though the average gross revenue per vessel was only about $148,500 that year. Similar to the trends in total revenue for the IFQ vessels, these values decreased to $2.11 million and slightly less than $118,000 by 2018, representing a 21% decline in average total revenue per vessel. Average IFQ revenue per vessel also decreased from $129,524 per vessel to $101,965, similarly decreasing by about 21% during this time.

Estimates of economic returns have not been available historically for the commercial sector of the Gulf reef fish fishery. Recent reports (Overstreet, Perruso, and Liese 2017, Overstreet and Liese 2018a, and Overstreet and Liese 2018b) provided the first such estimates. These estimates are specific to economic performance in 2014, 2015 and 2016, respectively. Overstreet and Liese (2018b) also provides average estimates of economic returns across 2014-2016, which are the most useful for current purposes, and thus findings from that report are summarized below. Given the declines in landings and revenue for IFQ vessels discussed above, it is quite likely that economic returns were likely different by 2018 than they were in 2016, and thus the estimates below should be used with some caution. However, some of the findings for 2014-2016 seem to be consistent with the results above for 2014-2016.

Estimates in these reports are based on a combination of Southeast Coastal logbook data, a supplemental economic add-on survey to the logbooks, and an annual economic survey at the vessel level. The economic surveys collect data on gross revenue, variable costs, fixed costs, as well as some auxiliary economic variables (e.g., market value of the vessel). The report provides estimates of critical economic variables for the commercial sector of the Gulf reef fish fishery as a whole, but also provides estimates by "subsets" within this sector. These subsets are referred to as Segments of Interest (SOI). Subsets are generally defined at the individual species (e.g., red snapper), species group (e.g., jacks), and/or gear-level (e.g., longline). In addition, estimates are provided at the trip level and the annual vessel level for each SOI. For current purposes, the most important results are those for vessels that harvested IFQ species.

From an economic returns perspective, the two most critical results at the trip level are the estimates of trip net cash flow and trip net revenue. Trip net cash flow is trip revenue minus the costs for fuel, bait, ice, groceries, miscellaneous, hired crew, and purchases of annual allocation from other allocation holders. Thus, this estimate represents the amount of cash generated by a typical reef fish trip over and above the cash cost of taking the trip (i.e., variable costs of the trip) and is a proxy for producer surplus at the trip level. Trip net revenue is trip revenue minus the costs for fuel, bait, ice, groceries, miscellaneous, hired crew, and the opportunity cost of owner's time as captain. By including opportunity cost of the owner's time and excluding purchases of annual allocation, trip net revenue is a measure of the commercial fishing trip's economic profit.

Table 3.4.3.2 illustrates the economic "margins" generated on IFQ trips, i.e., trip net cash flow and trip net revenue as a percentage of trip revenue. According to this table, 33%, 15%, and 20% (or 62% in total) of the average revenues generated on IFQ trips were used to pay for crew costs, fuel/supplies costs, and purchases of annual allocation, while the remaining 38% was net cash flow back to the owner(s). The margin associated with trip net revenue was higher at 52%. Thus, trip cash flow and trip net revenue were both positive on average from 2014 through 2016, generally indicating that IFQ trips were profitable during this time.

Table 3.4.3.2. Economic characteristics of IFQ trips 2014-2016 (2019$).

Year	2014	2015	2016	Average
Number of Observations	1,154	1,656	1,775	
Response Rate (%)	80%	85%	94%	
SOI Trip				
Owner-Operated	71%	64%	67%	67.30%
Fuel Used per Day at Sea (gallons/day)	46	46	40	44
Total Revenue	100%	100%	100%	100%
Costs (% of Revenue)				
Fuel	6.60%	4.80%	4.10%	5.20%
Bait	3%	3.20%	3.40%	3.20%
Ice	1.40%	1.50%	1.70%	1.50%
Groceries	2.40%	2.30%	3.10%	2.60%
Miscellaneous	2.50%	2.40%	3%	2.60%
Hired Crew	28.10%	25.70%	27%	26.90%
IFQ Purchase	14.80%	27.20%	19%	20.30%
OC Owner-Captain Time	6.20%	5.80%	7%	6.30%
Trip Net Cash Flow	41%	33%	39%	38%
Trip Net Revenue	50%	54%	51%	52%
Labor - Hired & Owner	34%	32%	34%	33.30%
Fuel & Supplies	16%	14%	15%	15%
Input Prices				
Fuel Price (per gallon)	$3.74	$2.68	$2.15	$2.86
Hire Crew Wage (per crew-day)	$349	$292	$267	$305
Productivity Measures				
Landings/Fuel Use (lbs/gallon)	13.5	12.7	11.8	13.0
Landings/Labor Use (lbs/crew-day)	222	206	170	199

Source: Overstreet and Liese (2018b)

Table 3.4.3.3 provides estimates of the important economic variables at the annual level for all vessels that had IFQ landings in each year from 2014 through 2016. Similar to the trip level, the three most important estimates of economic returns are net cash flow, net revenue from operations,[24] and economic return on asset value. Of these measures, net revenue from operations most closely represents economic profits to the owner(s). Net cash flow is total annual revenue minus the costs for fuel, other supplies, hired crew, vessel repair and maintenance, insurance, overhead, loan payments, and purchases of annual allocation. Net revenue from operations is total annual revenue minus the costs for fuel, other supplies, hired crew, vessel repair and maintenance, insurance, overhead, and the opportunity cost of an owner's time as captain as well as the vessel's depreciation. Economic return on asset value is calculated by dividing the net revenue from operations by the vessel value.

[24] Net revenue from operations accrues to the vessel owner and, when applicable, the IFQ shareholder, who may not be the same entity.

Net cash flow and net revenue from operations at the annual vessel level were both positive from 2014-2016, generally indicating that IFQ vessels in the commercial sector were profitable, though some vessels earned much greater profits than others. More specifically, net cash flow and net revenue from operations averaged 26% and 35%, respectively, while the economic return on asset value was approximately 54% during this time.

For purposes of this amendment, it is also worth noting that the average market value of IFQ vessels declined by almost 30% from 2014 to 2016, with the average value over this time being about $109,000. Also, though not reflected in these tables, the average price of a vessel monitoring system unit is currently about $3,000. This is a one-time cost for a vessel owner. In addition, vessel owners are expected to incur recurring costs for communication and maintenance, average costs for which are estimated to be $900 and $500 each year, respectively (personal communication, NMFS Office of Law Enforcement).

Table 3.4.3.3. Economic Characteristics of IFQ Vessels from 2014-2016 (2019$).

Year	**2014**	**2015**	**2016**	**Average**
Number of Observations	81	101	117	N/A
Response Rate (%)	63%	78%	84%	N/A
SOI Vessel				
Owner-Operated	76%	70%	79%	75%
For-Hire Active	6%	15%	16%	12%
Vessel Value	$128,923	$106,972	$90,726	$108,874
Total Revenue	100%	100%	100%	100%
Costs (% of Revenue)				
Fuel	8%	6%	6.60%	6.90%
Other Supplies	9.70%	9.20%	10.70%	9.90%
Hired Crew	27.10%	25.50%	24.30%	25.60%
Vessel Repair & Maintenance	7.60%	6.60%	8.50%	7.60%
Insurance	1%	0.80%	1%	0.90%
Overhead	5%	5.40%	4.90%	5.10%
Loan Payment	0.80%	1.40%	1.30%	1.20%
IFQ Purchase	11.50%	24.40%	14.30%	16.70%
OC Owner-Captain Time	5.60%	5.30%	6.60%	5.80%
Net Cash Flow	29%	21%	28%	26%
Net Revenue for Operations	32%	38%	34%	35%
Depreciation	3.70%	3%	3.20%	3.30%
Fixed Costs	14%	13%	14%	14%
Labor - Hired & Owner	33%	31%	31%	32%
Fuel & Supplies	18%	15%	17%	17%
Economic Return (on asset value)	43.80%	64.40%	53.90%	54%

Source: Overstreet and Liese (2018b)

Overstreet and Liese (2018b) only provide estimates of economic returns from 2014 through 2016, and thus it cannot be used to assess how economic returns and related measures have

changed since the implementation of the IFQ programs. However, Liese (pers. comm., Nov. 22, 2017) has conducted an analysis that compares economic returns and related measures in 2006 and 2014, and thus examines how they have changed since the implementation of the GT and RS-IFQ programs. Because of the years chosen, the changes in economic performance indicated by these results can only, at best, be attributed to the combination of the two IFQ programs as opposed to one or the other. Also, his results apply to all trips that landed Gulf reef fish species as opposed to landings of species managed under one or both of the IFQ programs. Further, as these results are preliminary, only a generally qualitative overview can be provided.

First, effort in the commercial sector of the fishery has decreased significantly according to multiple measures. Specifically, the number of vessels, trips, and days at sea decreased by 31%, 38%, and 28%, respectively, between 2006 and 2014. At the same time, landings of Gulf reef fish were relatively unchanged, decreasing by about 4% during that time. Thus, output per unit of input (one measure of productivity) has increased significantly since the IFQ programs were implemented. Further, even though landings have remained about the same, the average ex-vessel price of Gulf reef fish landings increased by 20% during this time, resulting in a 16% increase in total annual revenues from these landings.

Because productivity increased, costs decreased. Specifically, crew costs decreased by 6%, other variable costs (supplies, fuel, etc.) decreased by 33%, and fixed costs decreased by 19%. The decrease in crew costs was driven by a decrease in crew days of 26%, as crew compensation per day actually increased by 24% (i.e., the amount of labor used decreased somewhat significantly, but "wages" increased somewhat significantly as well). Similarly, even though fuel prices increased by 25%, a 49% decrease in fuel usage was the primary driver of the decline in other variable costs. In addition, the opportunity costs associated with the owner's labor time and capital invested in the vessel decreased by 16% and 31%, respectively.

Because costs decreased, significantly lower percentages of the total revenues had to be used to cover these costs, in turn resulting in much higher economic returns and margins. Net cash flow to the owner(s) increased by more than 300% while net revenue from operations increased by more than 400%. Trip net revenue as a percentage of total trip revenue increased by 94% while, at the vessel level, net revenue from operations as a percentage of total revenues increased by 180%. While such increases may appear to be exorbitant, it must be kept in mind that, in 2006, net cash flows were only slightly above the break-even point and net revenues from operations were negative (i.e., commercial reef fish levels were earning economic losses on average).

3.4.4 IFQ Dealers

The information in Table 3.4.4.1 illustrates the purchasing activities of dealers that bought IFQ landings from vessels from 2014 through 2018.[25] Like vessels, dealer participation in the IFQ programs is fluid and not all of these dealers were active in one or both IFQ programs in each year during this time. Information on the number of dealers active in each of the two programs

[25] The number of IFQ dealers and the value of their IFQ landings purchases are slightly different in Table 3.2.4.1 than in the IFQ programs' annual reports. The estimates in this table are based on Accumulated Landings System (ALS) data, which tends to produce different estimates of ex-vessel landings and value for IFQ species, and thus the number of IFQ dealers as well, due to waterbody code assignment issues in the Keys.

in a specific year is provided in the annual reports (NMFS 2019a, 2019b). The number of dealers that purchased IFQ landings has been relatively stable during this time, with an average of 135 dealers purchasing IFQ landings each year.

Although most dealers that purchase IFQ landings rely heavily on those purchases, purchases of non-IFQ species in the Gulf and the South Atlantic are also important, i.e., the purchasing portfolios of Gulf IFQ dealers are generally more diversified than landings portfolios of Gulf IFQ vessels. As a result, Gulf IFQ dealers are much more reliant on purchase of non-IFQ landings in the Gulf and landings from the South Atlantic compared to IFQ vessels. Further, dependency on Gulf IFQ purchases as opposed to purchases of non-IFQ species in the Gulf and South Atlantic varies considerably by dealer.

Table 3.4.4.1. Dealer statistics for dealers that purchased IFQ landings by year, 2014-2018. All dollar estimates are in 2019$.*

Year	Number of Dealers	Statistic	IFQ Purchases	Gulf Non-IFQ Purchases	South Atlantic Purchases	Total Purchases
2014	135	Maximum	$6,909,731	$12,329,746	$4,128,319	$13,219,673
		Total	$58,661,601	$57,835,600	$17,309,170	$133,806,371
		Mean	$434,530	$428,412	$128,216	$991,158
2015	143	Maximum	$7,737,859	$7,633,810	$3,406,249	$8,917,566
		Total	$60,490,346	$50,830,595	$13,859,068	$125,180,008
		Mean	$423,009	$355,459	$96,917	$875,385
2016	124	Maximum	$9,873,563	$8,079,619	$3,848,256	$10,541,374
		Total	$59,760,150	$57,242,048	$16,839,568	$133,841,765
		Mean	$481,937	$461,629	$135,803	$1,079,369
2017	135	Maximum	$8,060,928	$9,275,039	$5,151,898	$10,312,813
		Total	$53,568,612	$57,619,322	$23,723,845	$134,911,779
		Mean	$396,805	$426,810	$175,732	$999,347
2018	136	Maximum	$7,956,983	$7,373,814	$4,403,264	$8,581,393
		Total	$49,914,258	$56,754,758	$20,546,417	$127,215,433
		Mean	$367,017	$417,314	$151,077	$935,408

Source: SEFSC Fishing Communities Web Query Tool, Version 1.

In addition, although the trend in purchases of IFQ landings by dealers necessarily mimics the trend in IFQ vessel revenues, the trends in purchases of non-IFQ species in the Gulf and South Atlantic do not mirror the trends for vessels. For example, purchases of non-IFQ landings in the Gulf by IFQ dealers have remained relatively constant from 2014 through 2018, whereas IFQ vessels' landings of non-IFQ species in the Gulf declined noticeably in 2018. Further, although landings of South Atlantic species by IFQ vessels consistently declined during this time, IFQ dealers increased their purchases of South Atlantic landings in 2017 and 2018, which allowed them to compensate for the decline in purchases of IFQ landings. Thus, the aforementioned diversity in their portfolios has allowed IFQ dealers to be more flexible and adaptive to changes in the IFQ fisheries. As a result, the total value of seafood purchases by IFQ dealers, and the average value of those purchases per dealer, has remained relatively constant from 2014-2018, unlike IFQ vessels that experienced noticeable declines in their revenues after 2016.

3.4.4 Imports

Imports of seafood products compete in the domestic seafood market and have in fact dominated many segments of the seafood market. Imports aid in determining the price for domestic seafood products and tend to set the price in the market segments in which they dominate. Seafood imports have downstream effects on the local fish market. At the harvest level for IFQ species, imports affect the returns to fishermen through the ex-vessel prices they receive for their landings. As substitutes to domestic production of IFQ species, imports tend to cushion the adverse economic effects on consumers resulting from a reduction in domestic landings. The following describes the imports of fish products which directly compete with domestic harvest of red grouper. All monetary estimates are in 2019 dollars.

Total imports of snapper increased significantly (36%) from 2014 through 2016, increasing from about 33 mp product weight (pw) to 45 mp pw during this time. However, snapper imports declined slightly thereafter to about 43 mp pw in 2018. Revenue from snapper imports followed a similar pattern, increasing from almost $105 million in 2014 to $136 million in 2016, but then falling to about $134 million in 2018. Although the average price per pound fluctuated somewhat between 2014 and 2018, moving inversely to volume, it generally vacillated around $3.05/lb. Imports of fresh snapper increased steadily from 23.6 mp pw in 2014 to 31.2 mp pw in 2017, before declining slightly to 31.2 mp pw in 2018. Total revenue from fresh snapper imports increased from $78 million in 2014 to an all-time high of $98.5 million in 2018. The average price decreased from $3.32/lb to $3/lb between 2014 and 2017 as volume increased, but rose to $3.21/lb in 2018 when volume declined. Imports of fresh snappers primarily originated in Mexico, Panama, and Nicaragua, and entered the U.S. through the port of Miami. Imports of frozen snapper were substantially less than imports of fresh snapper from 2014 through 2018. Frozen snapper imports ranged from 9.3 mp pw worth $26.5 million in 2014 to 14.4 mp pw worth $40.2 million in 2018. The average price fluctuated around $2.85/lb during this time. Imports of frozen snapper primarily originated in Brazil. The majority of frozen snapper imports entered the U.S. through the ports of Miami and New York.

Total imports of grouper increased significantly (64%) from 10.4 mp pw in 2014 to 17.1 mp pw in 2018. Total revenue from grouper imports also increased significantly (43%) from $42.3 million to $60.3 million during this time period. Revenue from grouper imports did not increase as significantly as the volume due to a 15% decrease in the average price per pound of grouper imports. Imports of frozen grouper were minimal from 2014 through 2016, decreasing from 1.75 mp pw in 2014 to only 0.81 mp pw in 2016. However, frozen grouper imports increased significantly in 2018, up to 4.6 mp pw. As a result, frozen grouper composed 27% of total grouper imports in 2018 compared to only 17% in 2014. Further, the average price per pound of frozen imports decreased significantly, from $2.67/lb to only $1.27/lb between 2015 and 2018. Similarly, total revenue from frozen grouper decreased from $3.8 million to $1.5 million from 2014 to 2016, but then increased to $5.8 million in 2018. The decline in the average price of frozen grouper in combination with frozen product making up a higher proportion of total imports explains why revenue from grouper imports, frozen and in total, did not increase as significantly as volume from 2014 through 2018. The volume and revenue from fresh grouper imports also increased from 2014 through 2018, increasing from 8.6 mp pw and $38.5 million in 2014 to 12.5 mp pw and $54.5 million in 2018, respectively. Average price was relatively stable at around $4.38/lb. Thus, the price premium attached to fresh grouper relative to frozen grouper

is much greater than the premium attached to fresh snapper compared to frozen snapper. The bulk of fresh and frozen grouper imports originated in Mexico and entered the U.S. through Miami and Tampa.

3.4.5 Economic Impacts of the Gulf of Mexico IFQ Fisheries

The commercial harvest and subsequent sales and consumption of fish generates business activity as fishermen expend funds to harvest the fish and consumers spend money on goods and services, such as IFQ species purchased at a local fish market and served during restaurant visits. These expenditures spur additional business activity in the region(s) where the harvest and purchases are made, such as jobs in local fish markets, grocers, restaurants, and fishing supply establishments. In the absence of the availability of a given species for purchase, consumers would spend their money on substitute goods and services. As a result, the analysis presented below represents a distributional analysis only; that is, it only shows how economic impacts may be distributed through regional markets and should not be interpreted to represent the impacts if these species are not available for harvest or purchase.

In addition to these types of impacts, economic impact models can be used to determine the sources of the impacts. Each impact can be broken down into direct, indirect, and induced economic impacts. "Direct" economic impacts are the results of the money initially spent in the study area (e.g., country, region, state, or community) by the fishery or industry being studied. This includes money spent to pay for labor, supplies, raw materials, and operating expenses. The direct economic impacts from the initial spending create additional activity in the local economy, i.e., "indirect" economic impacts. Indirect economic impacts are the results of business-to-business transactions indirectly caused by the direct impacts. For example, businesses initially benefiting from the direct impacts will subsequently increase spending at other local businesses. The indirect economic impact is a measure of this increase in business-to-business activity, excluding the initial round of spending which is included in the estimate of direct impacts. "Induced" economic impacts are the results of increased personal income caused by the direct and indirect economic impacts. For example, businesses experiencing increased revenue from the direct and indirect impacts will subsequently increase spending on labor by hiring more employees, increasing work hours, raising salaries/wage rates, etc. In turn, households will increase spending at local businesses. The induced impact is a measure of this increase in household-to-business activity.

Estimates of the U.S. average annual business activity associated with the commercial harvest of IFQ species in the Gulf were derived using the model developed for and applied in NMFS (2018)[26] and are provided in Table 3.4.6.1. Specifically, these impact estimates reflect the expected impacts from average annual gross revenues generated by landings of IFQ species from 2014 through 2018. This business activity is characterized as jobs (full and part-time), income impacts (wages, salaries, and self-employed income), value-added impacts (the difference between the value of goods and the cost of materials or supplies), and output impacts (gross business sales). Income impacts should not be added to output (sales) impacts because this would result in double counting.

[26] A detailed description of the input/output model is provided in NMFS (2011).

Table 3.4.6.1. Average annual economic impacts of IFQ species in the commercial sector of the Gulf reef fish fishery. All monetary estimates are in thousands of 2018 dollars[27] and employment is measured in full-time equivalent jobs.

Harvesters	Direct	Indirect	Induced	Total
Employment impacts	1,265	197	260	1,722
Income impacts	30,587	5,679	13,733	49,999
Total value-added impacts	32,604	20,445	23,497	76,546
Output Impacts	56,653	46,092	45,613	148,358
Primary dealers/processors	**Direct**	**Indirect**	**Induced**	**Total**
Employment impacts	263	105	183	551
Income impacts	9,980	9,197	8,699	27,877
Total value-added impacts	10,638	11,736	16,378	38,752
Output impacts	32,122	24,195	32,014	88,331
Secondary wholesalers/distributors	**Direct**	**Indirect**	**Induced**	**Total**
Employment impacts	122	27	119	268
Income impacts	5,946	1,768	6,253	13,967
Total value-added impacts	6,338	2,966	10,681	19,985
Output impacts	15,925	5,806	20,772	42,504
Grocers	**Direct**	**Indirect**	**Induced**	**Total**
Employment impacts	524	59	116	699
Income impacts	12,230	4,064	6,139	22,433
Total value-added impacts	13,037	6,548	10,392	29,978
Output impacts	20,903	10,635	20,403	51,941
Restaurants	**Direct**	**Indirect**	**Induced**	**Total**
Employment impacts	3,263	218	533	4,014
Income impacts	49,061	14,880	28,102	92,043
Total value-added impacts	52,297	26,597	47,349	126,243
Output impacts	95,625	41,621	93,434	230,680
Harvesters and seafood industry	**Direct**	**Indirect**	**Induced**	**Total**
Employment impacts	5,437	606	1,211	7,254
Income impacts	107,804	35,588	62,926	206,318
Total value-added impacts	114,914	68,292	108,297	291,503
Output impacts	221,228	128,349	212,237	561,815

The results provided should be interpreted with caution and demonstrate the limitations of these types of assessments. These results are based on average relationships developed through the analysis of many fishing operations that harvest many different species; specifically reef fish in this case. Separate models for individual species are not available. Between 2014 and 2018, landings of Gulf IFQ species resulted in approximately $56.65 million (2018$) in gross revenue on average. In turn, this revenue generated employment, income, value-added, and output impacts of 7,254 jobs, $206.3 million, $291.5 million, and $561.8 million per year, respectively, on average.

[27] The commercial economic impact model has not been updated yet to produce estimates in 2019$.

3.5 Description of the Social Environment

This amendment affects the participants in the RS-IFQ and GT-IFQ programs. This section provides the background for the proposed actions which will be evaluated in Chapter 4. Commercial reef fish permits are included by state and community in order to provide information on the geographic distribution of reef fish permit holders. Descriptions of RS-IFQ and GT-IFQ participants' accounts with and without permits are included at the state and community level. The top fishing communities involved in red snapper and grouper tilefish fishing in the Gulf are identified. These community level data are presented in order to meet the requirements of National Standard 8 of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act). National Standard 8 requires the consideration of the importance of fishery resources to human communities when considering changes to fishing regulations.

Recent descriptions of the RS-IFQ and GT-IFQ programs are contained in annual reports produced by NMFS (2019a and 2019b) and in Amendment 36A (GMFMC 2017a), and are incorporated here by reference. These reports and amendment include detailed information on IFQ program participants, program activity, quotas, landings, price information, enforcement, commercial engagement, regional quotient, local quotient, vulnerability indices, and top red snapper and grouper-tilefish communities.

3.5.1 Commercial Permits

As described in Section 3.1, the majority of commercial reef fish permits are issued to individuals residing in a Gulf state (99.3% as of December 31, 2018), with the greatest proportion residing in Florida (80.1%), followed by Texas (8.8%), Louisiana (5.1%), Alabama (4.5%), and Mississippi (0.8%, Table 3.1.1).

As of February 17, 2020, a total of 833 commercial reef fish permits were valid, renewable, or transferable (SERO Permit Office). Commercial reef fish permits are held by entities with mailing addresses in a total of 242 communities. Communities with the most commercial reef fish permits are located in Florida and Texas (Table 3.5.1.1). The community with the most Gulf commercial reef fish permits is Panama City, Florida (approximately 8.2% of commercial reef fish permits, Table 3.5.1.1).

Table 3.5.1.1. Top communities by number of commercial reef fish permits.

State	Community	Permits
FL	Panama City	69
FL	Key West	39
FL	St. Petersburg	30
FL	Destin	23
FL	Largo	22
TX	Galveston	22
FL	Pensacola	20
FL	Cortez	19
FL	Seminole	19
FL	Tampa	16
FL	Clearwater	14
FL	Hudson	11
FL	Naples	11
TX	Houston	11
FL	Apalachicola	10
FL	Lecanto	10
FL	Lynn Haven	10
FL	Steinhatchee	10
FL	Tarpon Springs	10
FL	Winter Springs	10

Source: NMFS SERO permit database accessed 2/17/20.

3.5.2 IFQ Accounts

To land IFQ-managed species, fishermen need a permitted vessel and sufficient IFQ allocation in the vessel's account to land the fish. Some accounts are held in the name of an individual, or more than one individual, while others form business entities and open accounts in the name of the business. This makes it more difficult to talk about the social environment, because we don't always know who is behind the account, and whether the holders of an account reside in the same area. In the following analysis, accounts are described at the state and community level based on the mailing address of the individual; business; or primary entity which equates to the primary individual listed on the account, if the account is held by more than one individual.

IFQ Accounts

Also called shareholder accounts, an IFQ account is required to hold shares and allocation. As described above, people hold shares in accounts either as an individual, group of individuals, or a business. The number of accounts is used here as a proxy to represent the number of participants As of February 19, 2020, a total of 683 IFQ accounts held shares in either the RS-IFQ program or GT-IFQ program, or both programs (IFQ database; includes active and suspended accounts). The majority of accounts with shares have a mailing address in Florida (76.9% of accounts with

shares, Table 3.5.2.1), followed by Texas (9.5%), Alabama (4.5%), and Louisiana (4.2%). Accounts with mailing addresses in Mississippi and in other states (Arkansas, Georgia, Iowa, Michigan, North Carolina, New York, Ohio, Oregon, South Carolina, Tennessee, Utah, and Wyoming) also hold shares, but these states represent a smaller percentage of the total number of accounts with shares.

The greatest proportion of shares in all share categories including deep-water grouper (DWG), red grouper (RG), gag (GG), other shallow-water grouper (SWG), tilefish (TF), and red snapper (RS) are held in accounts with mailing addresses in Florida, followed by Texas, and Louisiana (Table 3.5.2.1). Accounts in other Gulf states also hold shares, but these states represent a smaller percentage of shares in each share category. Accounts in other states hold a sizable percentage of shares for many of the share categories (for example, 8.826% DWG, 8.439% RG, and 8.693% TF).

Table 3.5.2.1. Number of IFQ accounts with shares by state, including the percentage of shares by state by share category.

State	Accounts	DWG Shares (%)	RG Shares (%)	GG Shares (%)	SWG Shares (%)	TF Shares (%)	RS Shares (%)
AL	31	1.015	0.870	1.647	1.981	0.492	4.412
FL	525	51.245	84.268	89.385	77.309	42.369	46.890
LA	29	5.817	0.005	0.372	2.748	10.230	8.399
MS	10	0.445	0.143	0.218	0.668	0.154	2.424
TX	65	32.630	6.175	4.386	12.584	38.015	35.031
Other	23	8.826	8.439	3.817	4.260	8.693	2.772
Total	**683**	**99.978**	**99.900**	**99.825**	**99.550**	**99.953**	**99.929**

Source: NMFS SERO IFQ database accessed 2/19/20. Note: Includes active and suspended accounts.

IFQ accounts with shares are held by people with mailing addresses in a total of 233 communities (IFQ database accessed 2/19/20). Communities with the most accounts with shares are located in Florida and Texas (Table 3.5.2.2). The community with the most accounts with shares is Panama City, Florida (7.3% of accounts with shares), followed by Key West, Florida (3.7%), and Largo, Florida (3.1%).

Table 3.5.2.2. Top communities by number of IFQ accounts with shares, including the percentage of shares by community by share category.

State	Community	Accounts	DWG Shares (%)	RG Shares (%)	GG Shares (%)	SWG Shares (%)	TF Shares (%)	RS Shares (%)
FL	Panama City	50	12.803	4.912	17.952	12.262	7.867	11.863
FL	Key West	25	0.204	0.519	0.238	1.513	0.848	0.008
FL	Largo	21	2.216	8.511	5.891	2.614	0.514	0.470
FL	St. Petersburg	18	2.077	4.472	2.316	2.443	0.775	0.089
FL	Destin	17	2.589	0.177	1.084	1.076	4.186	6.288
FL	Cortez	16	4.083	6.342	1.714	2.213	3.454	0.024
FL	Pensacola	15	1.260	0.038	0.577	1.883	4.082	2.795
TX	Galveston	14	7.561	0.487	0.805	2.818	18.245	14.337
FL	Steinhatchee	13	0.061	2.126	2.894	1.371	0.029	0.524
FL	Tallahassee	13	0.001	0.540	1.227	0.124	0.002	1.151
FL	Tampa	12	0.172	0.548	1.746	1.157	0.020	0.013
FL	Apalachicola	11	3.112	3.159	7.532	4.698	3.024	0.558
TX	Houston	11	19.783	4.864	1.506	5.265	14.743	4.577
FL	Clearwater	10	0.591	6.754	4.286	1.943	0.638	0.014
FL	Seminole	10	1.665	3.163	1.418	1.900	2.692	0.024
FL	Tarpon Springs	10	1.045	2.102	2.623	1.199	0.306	0.077

Source: NMFS SERO IFQ database accessed 2/19/20.

The largest or maximum percent of shares held in a community ranges from 8.511% for RG, 12.262% for SWG, 14.337% for RS, 17.952% for GG, 18.245% for TF, and 19.783% for DWG (IFQ database accessed 2/19/20). The percentage of shares by community varies widely by share category and a large number of accounts with shares may not necessarily correlate to a large percentage of shares in a particular category (Table 3.5.2.2). Some communities with a relatively smaller number of accounts may have a larger percentage of shares in a particular share category or categories. The community of Panama City, Florida includes the greatest percentage of shares for GG and SWG; Galveston, Texas for TF and RS; Houston, Texas for DWG; and Largo, Florida for RG.

IFQ Accounts with Permits

As of February 19, 2020, a total of 369 IFQ accounts held shares in at least one share category and were also associated with a commercial reef fish permit (IFQ database; includes active and suspended accounts). The majority of accounts with shares that are also associated with a permit have a mailing address in Florida (78% of accounts with shares that are associated with permits, Table 3.5.2.3), followed by Texas (10.3%), Louisiana (4.6%), and Alabama (4.3%). Accounts with mailing addresses in Mississippi and in other states (Arkansas, Georgia, New York, and South Carolina) also hold shares and are associated with permits, but these states represent a smaller percentage of the total number of accounts with shares that are also associated with permits.

Table 3.5.2.3. Number of IFQ accounts with shares that are associated with permits by state, including the percentage of shares by state by share category.

State	Accounts	DWG Shares (%)	RG Shares (%)	GG Shares (%)	SWG Shares (%)	TF Shares (%)	RS Shares (%)
AL	16	0.444	0.845	1.375	1.623	0.405	3.558
FL	288	41.148	62.204	67.238	63.112	36.581	31.609
LA	17	4.605	0.001	0.214	1.785	10.145	6.551
MS	4	0.251	0.141	0.186	0.405	0.147	0.058
TX	38	15.541	4.107	3.812	11.083	19.566	25.415
Other	6	4.437	1.844	0.463	1.454	2.618	1.454
Total	**369**	**66.425**	**69.140**	**73.287**	**79.462**	**69.462**	**67.978**

Source: NMFS SERO IFQ database accessed 2/19/20. Note: Includes active and suspended accounts.

The total percentage of shares held by accounts that are associated with permits ranges from 66.425% for DWG, 67.978% for RS, 69.140% for RG, 69.462% for TF, 73.287% for GG, and 79.462% for SWG (Table 3.5.2.3). The greatest proportion of shares that are associated with permits are held by accounts with mailing addresses in Florida, followed by Texas, and Louisiana. Accounts in other Gulf states also hold shares and are associated with permits, but these states represent a smaller percentage of shares in each share category. Accounts in other states hold a somewhat sizable percentage of shares for some of the share categories (for example, 4.437% DWG and 2.618% TF).

IFQ accounts with shares that are also associated with permits have mailing addresses in a total of 152 communities (IFQ database accessed 2/19/20). Communities with the most accounts with shares that are associated with permits are located in Florida and Texas (Table 3.5.2.4). The community with the most accounts with shares that are associated with permits is Panama City, Florida (7.3% of accounts with shares that are associated with permits), followed by Cortez and Key West, Florida (each with 4.1%). The largest or maximum percent of shares held in a community by accounts that are associated with permits ranges from 6.719% for RG, 10.821% for SWG, 10.945% for RS, 11.777% for DWG, 12.045% for TF, and 12.768% for GG (IFQ database accessed 2/19/20). The percentage of shares by community varies widely by share category and a large number of accounts may not necessarily correlate to a large percentage of shares in a particular category (Table 3.5.2.4). Some communities with a relatively smaller number of accounts may have a larger percentage of shares in a particular share category or categories. The community of Panama City, Florida includes the greatest percentage of shares for DWG, GG, and SWG; Galveston, Texas for TF and RS; and Largo, Florida for RG.

Table 3.5.2.4. Top communities by number of IFQ accounts with shares that are associated with permits, including the percentage of shares by community by share category.

State	Community	Accounts	DWG Shares (%)	RG Shares (%)	GG Shares (%)	SWG Shares (%)	TF Shares (%)	RS Shares (%)
FL	Panama City	27	11.777	4.183	12.768	10.821	6.578	10.772
FL	Cortez	15	4.026	5.744	1.629	2.138	3.414	0.023
FL	Key West	15	0.046	0.253	0.121	1.139	0.003	0.000
FL	Largo	11	1.329	6.719	4.739	2.208	0.206	0.042
FL	St. Petersburg	11	1.779	4.121	2.309	1.919	0.775	0.089
TX	Galveston	9	6.840	0.118	0.320	1.888	12.045	10.945
TX	Houston	9	5.078	3.179	1.506	5.265	2.530	4.309
FL	Apalachicola	8	3.108	3.078	7.441	4.308	3.024	0.557
FL	Destin	8	2.421	0.029	0.842	0.942	4.185	5.801
FL	Seminole	8	1.662	3.046	1.418	1.899	2.688	0.024
FL	Steinhatchee	7	0.061	1.670	2.419	1.336	0.028	0.496
FL	Tampa	7	0.170	0.447	1.735	0.157	0.020	0.011
FL	Fort Walton Beach	6	0.378	0.152	0.423	0.607	0.043	0.976
FL	Naples	6	0.060	1.043	0.515	0.846	0.000	0.010
FL	Pensacola	6	0.822	0.018	0.303	1.008	4.053	1.647
FL	Tarpon Springs	6	1.044	2.015	2.477	1.109	0.304	0.077

Source: NMFS SERO IFQ database accessed 2/19/20.

IFQ Accounts without Permits

As of February 19, 2020, a total of 314 IFQ accounts held shares in at least one share category and did not hold a commercial reef fish permit (IFQ database; includes active and suspended accounts). The majority of accounts with shares, but that are not associated with permits have a mailing address in Florida (75.5% of accounts with shares, but without permits, Table 3.5.2.5), followed by Texas (8.6%), Alabama (4.8%), Louisiana (3.8%), and Mississippi (1.9%). Accounts with mailing addresses in other states (Georgia, Iowa, Michigan, North Carolina, New York, Ohio, Oregon, South Carolina, Tennessee, Utah, and Wyoming) also hold shares without permits and cumulatively these states represent a sizable percentage of the total number of accounts with shares, but without permits (5.4%).

Table 3.5.2.5. Number of IFQ accounts with shares, but without permits by state, including the percentage of shares by state by share category.

State	Accounts (#)	DWG Shares (%)	RG Shares (%)	GG Shares (%)	SWG Shares (%)	TF Shares (%)	RS Shares (%)
AL	15	0.571	0.025	0.272	0.358	0.087	0.854
FL	237	10.097	22.064	22.147	14.197	5.788	15.281
LA	12	1.212	0.004	0.158	0.963	0.085	1.848
MS	6	0.194	0.002	0.032	0.263	0.007	2.365
TX	27	17.090	2.069	0.574	1.501	18.449	9.616
Other	17	4.389	6.595	3.354	2.806	6.075	1.987
Total	**314**	**33.553**	**30.759**	**26.537**	**20.088**	**30.492**	**31.951**

Source: NMFS SERO IFQ database accessed 2/19/20. Note: Incudes active and suspended accounts.

The total percentage of shares held by accounts that are not associated with permits ranges from 20.088% for SWG, 26.537% for GG, 30.492% for TF, 30.759% for RG, 31.951% for RS, and 33.553% for DWG (Table 3.5.2.5). The greatest proportion of shares that are not associated with permits are held by accounts with mailing addresses in Florida and Texas. Accounts in other Gulf states also hold shares and are not associated with permits, but these states represent a smaller percentage of shares in each share category. IFQ accounts in other states that are not associated with permits hold a sizable percentage of shares for some of the share categories (for example, 6.595% RG and 6.075% TF).

IFQ accounts with shares, but without permits have mailing addresses in a total of 154 communities (IFQ database accessed 2/19/20). Communities with the most accounts with shares that are not associated with permits are located in Florida and Texas (Table 3.5.2.6). The community with the most accounts with shares, but without permits, is Panama City, Florida (7.3% of accounts with shares, but without permits, Table 3.5.2.6), followed by Key West, Largo, and Tallahassee, Florida (each with 3.2%).

The largest or maximum percent of shares held in a community by accounts that are not associated with permits ranges from 1.944% for SWG, 4.562% for RS, 5.073% for RG, 5.184% for GG, 12.212% for TF, and 14.704% for DWG (IFQ database accessed 2/19/20). The percentage of shares by community varies widely by share category and a large number of accounts may not necessarily correlate to a large percentage of shares in a particular category (Table 3.5.2.6). Some communities with a relatively small number of accounts may have a larger percentage of shares in a particular share category or categories (for example, three accounts in Mt. Pleasant, South Carolina hold 6.072% of TF shares). The community of Houston, Texas (not shown in Table 3.5.2.6) includes the greatest percentage of shares for DWG and TF; Lecanto, Florida (not shown in Table 3.5.2.6) for RG and SWG; Panama, Florida for GG; and Lynn Haven, Florida for RS.

Table 3.5.2.6. Top communities by number of IFQ accounts with shares, but without permits, including the percentage of shares by community by share category.

State	Community	Accounts (#)	DWG Shares (%)	RG Shares (%)	GG Shares (%)	SWG Shares (%)	TF Shares (%)	RS Shares (%)
FL	Panama City	23	1.025	0.729	5.184	1.441	1.290	1.091
FL	Key West	10	0.158	0.266	0.117	0.374	0.845	0.008
FL	Largo	10	0.887	1.791	1.152	0.407	0.308	0.429
FL	Tallahassee	10	0.000	0.433	0.766	0.057	0.000	0.390
FL	Destin	9	0.168	0.148	0.242	0.134	0.001	0.487
FL	Pensacola	9	0.438	0.019	0.273	0.875	0.029	1.148
FL	Lynn Haven	7	0.008	0.197	0.669	0.343	0.000	4.562
FL	St. Petersburg	7	0.298	0.351	0.007	0.524	0.000	0.000
FL	Steinhatchee	6	0.000	0.456	0.475	0.035	0.000	0.028
FL	Clearwater	5	0.353	1.018	2.427	0.010	0.292	0.000
FL	Hudson	5	0.557	0.940	0.770	0.277	0.561	0.000
FL	Madeira Beach	5	0.849	0.573	0.357	0.478	0.458	0.025
FL	Tampa	5	0.002	0.101	0.011	1.001	0.000	0.002
TX	Galveston	5	0.721	0.369	0.485	0.930	6.199	3.392
FL	Palm Harbor	4	0.207	0.830	1.097	0.397	0.001	0.022
FL	Panacea	4	0.000	0.065	0.185	0.002	0.000	0.000
FL	Riverview	4	0.000	0.547	0.003	0.000	0.000	0.000
FL	Tarpon Springs	4	0.000	0.087	0.146	0.090	0.002	0.000

Source: NMFS SERO IFQ database accessed 2/19/20.

3.5.3 Fishing Communities

This section provides two analyses to measure the importance of the IFQ programs to communities in the Gulf. The Fishing Engagement Index scores and Regional Quotient are provided for both programs together, then for each program individually. The Fishing Engagement Index is an indicator of the importance of the IFQ species in a community relative to other communities. It is a measure of the presence of fishing activity for IFQ species, including pounds and value, number of reef fish permits, and number of reef fish dealers within the community. Another measure of a community's involvement in the IFQ programs is its Regional Quotient (RQ). The IFQ RQ is the proportion of IFQ allocation landed within a community out of the total amount of IFQ allocation landed. It is an indicator of the percent contribution in value of IFQ allocation landed within that community relative to all communities.

IFQ Programs

The Fishing Engagement Index scores for the RS-IFQ and GT-IFQ Programs are presented in Table 3.5.3.1. Table 3.5.3.1 identifies the top 20 communities that were highly engaged (1.0 standard deviation or more above the mean) in the IFQ Programs for at least 1 year from 2014 through 2018.

Table 3.5.3.1. Fishing Engagement Index scores of communities highly engaged in the IFQ Programs for 1 or more years from 2014 through 2018.

Community	2014	2015	2016	2017	2018
Madeira Beach, FL	9.523	9.047	8.723	8.177	7.722
Galveston, TX	6.254	6.939	7.508	7.403	7.606
Panama City, FL	6.235	5.863	6.062	6.764	7.068
Destin, FL	3.652	4.263	3.747	3.710	3.528
Key West, FL	3.635	3.782	4.030	3.321	3.270
Apalachicola, FL	2.431	2.435	2.469	2.658	2.800
Golden Meadow, LA	1.362	1.760	1.563	2.570	2.771
Cortez, FL	2.002	2.054	2.397	2.247	2.149
Tarpon Springs, FL	3.350	2.609	2.545	2.176	2.096
Pensacola, FL	1.903	1.712	1.667	1.371	1.621
St. Petersburg, FL	1.016	0.957	1.163	1.584	1.459
Houma, LA	0.160	0.551	0.469	1.172	1.351
Indian Shores, FL	1.095	1.082	0.932	1.237	1.325
Venice, LA	0.958	1.038	1.043	0.968	1.110
Bon Secour, AL	0.142	0.144	0.753	0.775	1.071
Redington Shores, FL	1.451	1.527	1.306	1.099	0.969
Ft. Myers Beach, FL	1.180	1.506	0.945	0.995	0.913
Steinhatchee, FL	1.217	1.351	1.325	1.017	0.875
Bayou La Batre, AL	0.255	0.405	0.507	1.005	0.749
Ft. Myers, FL	0.401	0.541	1.005	0.935	0.547

Source: NMFS SERO Community ALS, and NMFS SERO IFQ and permits databases accessed 2/19/20. Note: Shaded cells indicate high engagement.

The majority of highly engaged communities are in Florida, with Galveston, Texas and Golden Meadow, Louisiana the only two communities outside the state that were highly engaged throughout the time series. Other communities, like Indian Shores, Redington Shores, and Steinhatchee, Florida, have been highly engaged 4 out of the 5 years. Venice, Louisiana was highly engaged for 3 out of the 5 years.

The engagement scores for the communities that were highly engaged throughout the time series display some fluctuation, but tend to be fairly stable for most communities. The community of Madeira Beach, Florida has remained at the top throughout the time series, but has demonstrated a decrease in engagement in recent years.

The RS-IFQ and GT-IFQ RQ is presented in Figure 3.5.3.1. A community's proportion of total landings is not static and changes over time, and therefore, Figure 3.5.3.1 provides rankings by RQ value for 5 years: 2014 to 2018.

Figure 3.5.3.1. Top 10 communities ranked by RQ (value) for RS and GT-IFQ allocation, 2014 through 2018. The actual RQ values (y-axis) are omitted from the figure to maintain confidentiality.
Source: NMFS SERO IFQ database accessed 2/12/20.

The top three communities in terms of the value of commercial landings of RS and GT-IFQ allocation are Galveston, Texas; Madeira Beach, Florida; and Panama City, Florida (Figure 3.5.3.1). Although Madeira Beach, Florida ranked first for the value of red snapper and grouper-tilefish landings in 2014 through 2016, the community has since been replaced by Galveston, Texas in terms of landings of red snapper and grouper-tilefish.

Red Snapper
The Fishing Engagement Index scores for the RS-IFQ Program are presented in Table 3.5.3.2. There are 13 communities in Table 3.5.3.2 that rank as highly engaged (1.0 standard deviation or more above the mean) in the RS-IFQ Program for at least 1 year from 2014 through 2018.

Table 3.5.3.2. Fishing Engagement Index scores of communities highly engaged in the RS-IFQ Program for one or more years from 2014 through 2018.

Community	2014	2015	2016	2017	2018
Galveston, TX	12.169	11.349	12.488	11.198	11.371
Panama City, FL	5.008	5.116	4.815	6.380	6.579
Destin, FL	6.826	7.432	6.170	5.605	4.774
Golden Meadow, LA	2.361	2.606	2.496	3.151	3.298
Madeira Beach, FL	1.755	1.947	1.766	2.046	2.698
Apalachicola, FL	1.703	2.138	1.790	2.446	2.383
Houma, LA	0.357	1.161	1.004	2.475	2.380
Key West, FL	2.188	2.291	2.264	2.252	2.217
Pensacola, FL	1.549	1.546	1.446	1.520	1.589
Freeport, TX	1.067	1.396	1.084	1.628	1.329
Matagorda, TX	0.875	1.106	1.015	1.231	1.238
Tarpon Springs, FL	1.237	1.207	1.151	1.121	1.229
Port Bolivar, TX	1.007	1.249	0.924	1.101	1.094

Source: NMFS SERO Community ALS, and NMFS SERO IFQ and permits databases accessed 2/19/20. Note: Shaded cells indicate high engagement.

Highly engaged communities are located in Texas, Florida, and Louisiana. Houma, Louisiana and Matagorda, Texas were highly engaged for 4 of the 5 years. For those communities that rank highest, RS-IFQ engagement has fluctuated. The community of Galveston, Texas has remained at the top for the entire time series. The community of Panama City, Florida has demonstrated an increase in RS-IFQ engagement; whereas the community of Destin, Florida has demonstrated a decrease in recent years.

The RS-IFQ RQ is presented in Figure 3.5.3.2. A community's proportion of total landings is not static and changes over time, and therefore, Figure 3.5.3.2 provides rankings by RQ value for 5 years: 2014 to 2018.

Figure 3.5.3.2. Top 10 communities ranked by RQ (value) for red snapper, 2014 through 2018. The actual RQ values (y-axis) are omitted from the figure to maintain confidentiality.
Source: NMFS SERO IFQ database accessed 2/12/20.

The top three communities in terms of the value of commercial landings of red snapper are Galveston, Texas; Destin, Florida; and Golden Meadow, Louisiana (Figure 3.5.3.2). The community of Galveston, Texas consistently ranked first for the value of red snapper landings from 2014 through 2018.

Grouper-Tilefish

The Fishing Engagement Index scores for the GT-IFQ Program are presented in Table 3.5.3.3. Table 3.5.3.3 identifies the top 19 communities that were highly engaged (1.0 standard deviation or more above the mean) in the GT-IFQ Program for at least 1 year from 2014 through 2018.

Table 3.5.3.3. Fishing Engagement Index scores of communities highly engaged in the GT-IFQ Program for 1 or more years from 2014 through 2018.

Community	2014	2015	2016	2017	2018
Madeira Beach, FL	11.618	11.774	11.502	11.478	11.267
Panama City, FL	5.829	5.323	5.660	5.800	6.218
Key West, FL	3.700	3.841	4.127	3.419	3.382
Galveston, TX	2.598	3.151	3.354	3.695	3.276
Cortez, FL	2.448	2.911	3.032	3.124	3.138
Apalachicola, FL	2.424	2.323	2.600	2.511	2.867
Tarpon Springs, FL	3.697	3.011	2.929	2.637	2.548
Destin, FL	1.704	1.692	1.714	1.755	1.801
Saint Petersburg, FL	1.039	1.020	1.316	1.842	1.763
Redington Shores, FL	1.836	2.055	1.785	1.590	1.611
Indian Shores, FL	1.166	1.312	1.096	1.451	1.588
Golden Meadow, LA	0.607	0.783	0.636	1.395	1.558
Clearwater, FL	0.977	0.927	0.648	0.829	1.315
Pensacola, FL	1.619	1.323	1.298	0.923	1.100
Bokeelia, FL	0.386	0.432	0.625	0.660	1.065
Fort Myers Beach, FL	1.279	1.432	1.061	1.111	1.017
Steinhatchee, FL	1.252	1.352	1.334	0.984	0.851
Crystal River, FL	1.091	1.032	0.899	0.741	0.757
Fort Myers, FL	0.449	0.586	1.196	1.161	0.725

Source: NMFS SERO Community ALS, and NMFS SERO IFQ and permits databases accessed 2/19/20. Note: Shaded cells indicate high engagement.

The majority of highly engaged communities are in Florida, with Galveston, Texas the only community outside of Florida that was highly engaged throughout the time series. The community of Pensacola, Florida has been highly engaged for 4 of the 5 years. The community of Steinhatchee, Florida has been highly engaged for 3 of the 5 years. The GT-IFQ engagement scores for highly engaged communities display some fluctuation, but tend to be fairly stable for most communities. The community of Madeira Beach, Florida has remained at the top throughout the time series.

The GT-IFQ RQ is presented in Figure 3.5.3.3. A community's proportion of total landings is not static and changes over time, and therefore, Figure 3.5.3.3 provides rankings by RQ value for 5 years: 2014 to 2018.

Figure 3.5.3.3. Top 10 communities ranked by RQ (value) for grouper-tilefish, 2014 through 2018. The actual RQ values (y-axis) are omitted from the figure to maintain confidentiality.
Source: NMFS SERO IFQ database accessed 2/12/20.

The top four communities in terms of the value of grouper-tilefish landings are Madeira Beach, Panama City, Apalachicola, and Cortez, Florida (Figure 3.5.3.3). The community of Madeira Beach, Florida consistently ranked first for the value of grouper-tilefish landings from 2014 through 2018.

3.5.4 Environmental Justice

Executive Order (E.O.) 12898 requires federal agencies conduct their programs, policies, and activities in a manner to ensure individuals or populations are not excluded from participation in, or denied the benefits of, or subjected to discrimination because of their race, color, or national origin. In addition, and specifically with respect to subsistence consumption of fish and wildlife, federal agencies are required to collect, maintain, and analyze information on the consumption patterns of populations who principally rely on fish and/or wildlife for subsistence. The main focus of E.O. 12898 is to consider "the disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories…" This E.O. is generally referred to as environmental justice (EJ).

Information is available concerning communities overall status with regard to minorities and poverty (e.g., census data). To help assess whether any EJ concerns may be present within regional communities, a suite of indices were created to examine the social vulnerability of coastal communities. The three indices are poverty, population composition, and personal disruptions. The variables included in each of these indices have been identified through the literature as being important components that contribute to a community's vulnerability. Indicators such as increased poverty rates for different groups, more single female-headed

households and households with children under the age of five, disruptions such as higher separation rates, higher crime rates, and unemployment all are signs of populations experiencing vulnerabilities. Again, for those communities that exceed the threshold it would be expected that they would exhibit vulnerabilities to sudden changes or social disruption that might accrue from regulatory change.

Figures 3.5.4.1 and 3.5.4.2 provide the social vulnerability of the top commercial reef fish communities identified in Section 3.5 as having the most IFQ accounts, permits, and landings. Two communities exceed the threshold of one standard deviation above the mean for all three indices (Bayou La Batre, Alabama and Freeport, Texas). Several other communities exceed the threshold of one standard deviation above the mean for any of the indices (Bon Secour, Alabama; Crystal River, Florida; Lecanto, Florida; Venice, Louisiana; and Houston, Texas). These communities would be the most likely to exhibit vulnerabilities to social or economic disruption due to regulatory change.

Figure 3.5.4.1. Social vulnerability indices for top commercial reef fish communities.
Source: NMFS SERO, Community Social Vulnerability Indicators Database 2018 (American Community Survey 2012-2016).

Figure 3.5.4.2. Social vulnerability indices for top commercial reef fish communities.
Source: NMFS SERO Community Social Vulnerability Indicators Database 2018 (American Community Survey 2012-2016).

People in these communities may be affected by fishing regulations in two ways: participation and employment. Although these communities may have the greatest potential for EJ concerns, data are not available on the race and income status for those involved in the local fishing industry (employment), or for their dependence on reef fish generally or IFQ-managed species, specifically (participation). Although no EJ issues have been identified, the absence of potential EJ concerns cannot be assumed.

3.6 Description of the Administrative Environment

3.6.1 Federal Fishery Management

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

Responsibility for federal fishery management is shared by the Secretary of Commerce (Secretary) and eight regional fishery management councils that represent the expertise and interests of constituent states. Regional councils are responsible for preparing, monitoring, and revising management plans for fisheries needing management within their jurisdiction. The Secretary is responsible for promulgating regulations to implement proposed plans and

amendments after ensuring management measures are consistent with the Magnuson-Stevens Act and with other applicable laws summarized in Appendix B. In most cases, the Secretary has delegated this authority to NMFS.

The Council is responsible for fishery resources in federal waters of the Gulf. These waters extend to 200 nautical miles offshore from the seaward boundaries of the Gulf States of Alabama, Florida, Louisiana, Mississippi, and Texas, as those boundaries have been defined by law. The length of the Gulf coastline is approximately 1,631 miles. Florida has the longest coastline of 770 miles along its Gulf coast, followed by Louisiana (397 miles), Texas (361 miles), Alabama (53 miles), and Mississippi (44 miles).

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

Regulations contained within FMPs are enforced through actions of NOAA's Office of Law Enforcement, the United States Coast Guard, and various state authorities. To better coordinate enforcement activities, federal and state enforcement agencies have developed cooperative agreements to enforce the Magnuson-Stevens Act. These activities are being coordinated by the Council's Law Enforcement Technical Committee and the Gulf States Marine Fisheries Commission's Law Enforcement Committee, which have developed joint enforcement agreements and cooperative enforcement programs.[28]

The RS-IFQ and GT-IFQ programs are administered by NMFS. The programs annually place allocation into shareholder accounts. NMFS records landing transactions and allocation and share transfers.[29] The Magnuson-Stevens Act requires the Secretary to adopt regulations implementing a cost recovery program to recover the actual costs of managing, administering, and enforcing the IFQ programs. The cost recovery fee established for the IFQ programs is currently 3% of the actual ex-vessel value of IFQ species. The IFQ allocation holders who complete a landing transaction with a dealer are responsible for payment of the fee. Monies collected are used for administration of the program, maintenance and upkeep of the online system and software, enforcement of the IFQ program, and scientific research. Total recovery fees for each year can be found in the 2019 RS-IFQ and GT-IFQ program annual reports (NMFS 2019a and 2019b).

Reef fish stocks are assessed through the SEDAR process. As species are assessed, stock condition and acceptable biological catch levels are evaluated. As a result, periodic adjustments to stock ACLs and other management measures are deemed needed to prevent overfishing. Management measures are implemented through plan or regulatory amendments.

[28] https://www.gsmfc.org/ijf.php
[29] https://portal.southeast.fisheries.noaa.gov/cs/main.html#

3.6.2 State Fishery Management

The purpose of state representation at the Council level is to ensure state participation in federal fishery management decision-making and to promote the development of compatible regulations in state and federal waters. The state governments of Texas, Louisiana, Mississippi, Alabama, and Florida have the authority to manage their respective state fisheries. Each of the five Gulf States exercises legislative and regulatory authority over their respective state's natural resources through discrete administrative units. Although each agency is the primary administrative body with respect to the states' natural resources, all states cooperate with numerous state and federal regulatory agencies when managing marine resources. A more detailed description of each state's primary regulatory agency for marine resources is provided on their respective web pages (Table 3.6.2.1).

Table 3.6.2.1. Gulf state marine resource agencies and Web pages.

State Marine Resource Agency	Web page
Alabama Marine Resources Division	http://www.outdooralabama.com/
Florida Fish and Wildlife Conservation Commission	http://myfwc.com/
Louisiana Department of Wildlife and Fisheries	http://www.wlf.louisiana.gov/
Mississippi Department of Marine Resources	http://www.dmr.ms.gov/
Texas Parks and Wildlife Department	http://tpwd.texas.gov/

CHAPTER 4. ENVIRONMENTAL CONSEQUENCES

4.1 Permit Requirement

Alternative 1: No Action. Do not establish new requirements to obtain or maintain individual fishing quota (IFQ) shares.

Alternative 2: In order to obtain (transfer into a shareholder account) or maintain shares (hold existing shares in a shareholder account), all shareholder accounts must be associated with a valid or renewable commercial reef fish permit. A shareholder account is considered to be associated with a permit if the permit has the exact same entities listed on both the shareholder account and permit.

Alternative 3: In order to obtain (transfer into a shareholder account), or maintain shares (hold existing shares in a shareholder account), shareholder accounts established after December 31, 2014, and that are still active must be associated with a valid or renewable commercial reef fish permit. A shareholder account is considered to be associated with a permit if the permit has the exact same entities listed on both the shareholder account and permit.

Alternative 4: In order to obtain (transfer into a shareholder account), or maintain shares (hold existing shares in a shareholder account), shareholder accounts established after October 2, 2019, (Reef Fish AP meeting date) and that are still active must be associated with a valid or renewable commercial reef fish permit. A shareholder account is considered to be associated with a permit if the permit has the exact same entities listed on both the shareholder account and permit.

Alternative 5: In order to obtain (transfer into a shareholder account), or maintain shares (hold existing shares in a shareholder account), shareholder accounts established following implementation of this amendment must be associated with a valid or renewable commercial reef fish permit. A shareholder account is considered to be associated with a permit if the permit has the exact same entities listed on both the shareholder account and permit.

4.1.1 Direct and Indirect Effects on the Physical Environment

As described in Section 3.2, adult reef fish such as red snapper, groupers, and tilefish, which are targeted by the reef fish fishery, are typically associated with hard bottom (e.g., coral reefs, artificial reefs, rocky hard-bottom substrates, ledges and caves, sloping soft-bottom areas, and limestone outcroppings). Commercial reef fish fishing uses handlines (mostly bandit rigs and electric reels, occasionally rod-and-reel) and bottom longlines (see GMFMC 2011b, 2015, and 2017a). The following describes the effects of common fishing gear on the physical environment.

Handline gear used in fishing for reef fish is generally suspended over hard bottom because many managed reef fish species occur higher over this type of substrate than over sand or mud

bottoms (GMFMC 2004a). Handline gear is less likely to contact the bottom than longlines, but still has the potential to snag and entangle bottom structures and cause tear-offs or abrasions (Barnette 2001). In using bandit gear, a weighted line is lowered to the bottom, and then the lead is raised slightly off the bottom (Siebenaler and Brady 1952). The gear is in direct contact with the bottom for only a short period of time. Barnette (2001) suggests that physical impacts may include entanglement and minor degradation of benthic species from line abrasion and the use of weights (sinkers). Commercial fishing with rod-and-reel also lays gear on the bottom. The terminal part of the gear is either lifted off the bottom like fishing with bandit gear, or left contacting the bottom. Sometimes the fishing line can become entangled on coral and hard bottom outcroppings. The subsequent algal growth can foul and eventually kill the underlying coral (Barnette 2001). Researchers conducting studies in the restricted fishing area at Madison-Swanson reported seeing lost fishing line on the bottom, much of which appeared to be fairly old and covered with growth (A. David, Southeast Fisheries Science Center, pers. comm.), a clear indication that bottom fishing has had an impact on the physical environment prior to fishing being prohibited in the area (GMFMC 2003).

Anchor damage is also associated with handline fishing vessels, particularly by the recreational sector where fishermen may repeatedly visit well-marked fishing locations. Hamilton (2000) points out that "favorite" fishing areas such as reefs are targeted and revisited multiple times, particularly with the advent of global positioning technology. The cumulative effects of repeated anchoring could damage the hard bottom areas where fishing for reef fish occurs.

Bottom longline gear is deployed over hard bottom habitats using weights to keep the gear in direct contact with the bottom. Its potential for adverse impact is dependent on the type of habitat it is set on, the presence or absence of currents, and the behavior of fish after being hooked. In addition, this gear upon retrieval can abrade, snag, and dislodge smaller rocks, corals, and sessile invertebrates (Hamilton 2000; Barnette 2001). Direct underwater observations of longline gear in the Pacific halibut fishery by High (1998) noted that the gear could sweep across the bottom. Some halibut were observed pulling portions of longlines 15 to 20 feet over the bottom. Although the gear was observed in contact with or snagged on a variety of objects including coral, sturdy soft corals (e.g., gorgonians) usually appeared unharmed while stony corals often had portions broken off. However, in a different study where deployed bottom longline gear was directly observed (Atlantic tilefish fishery), no evidence of gear movement was documented, even when placed in strong currents (Grimes et al. 1982). This was attributed to anchors set at either end of the bottom longline as well as sash weights along the line to prevent movement. Based on these direct observations, it is logical to assume that bottom longline gear would have a minor impact on sandy or muddy habitat areas. However, due to the vertical relief that hard bottom and coral reef habitats provide, it would be expected that bottom longline gear may become entangled, resulting in potential negative impacts to habitat (Barnette 2001). Because bottom longlines are a minor gear type used in harvesting reef fish by the commercial sector, any effects to the physical environment by this gear as a result of this action would likely be minor.

It is unclear whether commercial reef fish vessel permits are needed to hold IFQ shares (**Alternatives 2-5**) or not (**Alternative 1**) should affect on the physical environment. Although not directly affecting the physical environment, indirect effects may occur if changing the share

ownership requirement causes a shift vessels being used and gear types being deployed. However, the extent of any shift would be constrained by the annual catch limits (ACL) and quotas that govern how many fish may be caught. Thus, any effect would likely be minimal regardless of the alternative.

4.1.2 Direct and Indirect Effects on the Biological Environment

Types of direct and indirect effects from fishery management actions have been discussed in detail for a variety of reef fish species in past Reef Fish FMP Amendments (e.g., GMFMC 2004a, 2007, 2008a 2008b, 2008c, 2009, 2011b, 2012b, 2012c, 2015, 2016, and 2017a) and are incorporated here by reference. Management actions that affect this environment mostly relate to the impacts of fishing on a species' population size, life history, and the role of the species within its habitat. Removal of fish from the population through fishing reduces the overall population size. Fishing gears have different selectivity patterns which refer to a fishing method's ability to target and capture organisms by size and species. This would include the number of discards, mostly sublegal fish or fish caught during seasonal closures, and the mortality associated with releasing these fish. Potential impacts of the 2010 *Deepwater Horizon* MC252 oil spill on the biological/ecological environment, bycatch, and protected species are discussed in Section 3.3. This action is not expected to have any significant effect on the biological environment regardless of which alternative is selected. The IFQ species affected by this action are managed by quotas and ACLs that limit the harvest. Thus, whether IFQ accounts must be associated with a commercial reef fish permit (**Alternatives 2-5**) or not (**Alternative 1**), should not substantially affect IFQ stocks. Thus, the action should have no direct or indirect effects on the biological environment.

4.1.3 Direct and Indirect Effects on the Economic Environment

Alternative 1 (No Action) would not establish additional requirements to obtain or maintain IFQ shares. Shareholder account owners would be able to continue to participate in the IFQ programs with or without having reef fish permits associated with their accounts. Therefore, **Alternative 1** would not be expected to result in economic effects.

Alternatives 2-5 would establish new permit requirements to acquire or maintain IFQ shares in shareholder accounts. **Alternative 2** would require that in order to acquire or maintain IFQ shares, all shareholder accounts must be associated with a valid or renewable commercial reef fish permit. **Alternatives 3-5** would require an associated permit for various subsets of shareholder accounts. Shareholder accounts created before January 1, 2015 (**Alternative 3**), or before October 3, 2019 (**Alternative 4**), or before the implementation date of this amendment (**Alternative 5**) would be exempt from the permit requirement. Relative to **Alternative 1**, economic effects expected to result from these alternatives would be determined by several factors including the number of shareholder accounts subject to the new permit requirement and possible mitigating actions considered by owners of these shareholder accounts to lessen potential adverse effects.

Alternative 5, which is the least restrictive of the measures, would grandfather all shareholder accounts created before the implementation date of this amendment and only apply the

commercial reef fish permit requirement to shareholder accounts created thereafter. Therefore, **Alternative 5** would not be expected to affect the operations of shareholder accounts established before the implementation date of this action. As a result, owners of these grandfathered shareholder accounts would not be expected to bear any economic costs relative to **Alternative 1**. Additional economic costs, if any, would be borne by persons who elect to establish new shareholder accounts without a commercial reef fish permit despite the permit requirement. To fully participate in the IFQ programs (own and transfer IFQ shares), these persons would have to acquire a commercial reef fish permit and satisfy the conditions of maintaining the permit, including vessel monitoring system (VMS) requirements for the vessels associated with the permits. Under **Alternative 5**, it is likely that a limited number (or nil) of new shareholder accounts without permit would be created after the implementation of this amendment. However, **Alternative 5** may result in a proliferation of new accounts without a permit prior to the implementation of this amendment. These accounts would be created just to be grandfathered and potentially used later for speculative purposes.

Alternative 2, which will not grandfather any shareholder account and require all accounts to be associated with a commercial reef fish permit, would be the most restrictive alternative. Based on Table 1.1.2, 314 shareholder accounts with shares and 108 accounts without shares were not associated with a commercial reef fish permit as of February 25, 2020. Therefore, about 422 shareholder accounts would lose the ability to obtain or maintain IFQ shares under **Alternative 2** following implementation of this amendment. Shareholder accounts with shares but without a permit would subsequently be required to divest of their shares according to the schedule set in Action 2 and incur economic losses commensurate to the value of their IFQ shareholdings when they are reclaimed by the National Marine Fisheries Service (NMFS). It is highly unlikely that, as rational economic agents, owners of shareholder accounts with shares and without a permit would not pursue mitigating measures and simply wait until NMFS reclaims their shares. It is more plausible to assume that these owners will either sell their shares and exit the program or adjust to the permit requirement and continue to enjoy the economic benefits associated with IFQ share ownership. To prevent their shares from being reclaimed by NMFS and preserve the ability to obtain and maintain shares, owners of shareholder accounts without a permit could acquire a commercial reef fish permit. Table 2.1.1 indicates that by the end of 2018, there were 317 valid commercial reef fish that have not registered landings in The Southeast Fisheries Service Center Coastal logbook records. Some or all of these permits without landings or "latent" may be available for sale. In fact, Council's deliberations relative to the establishment of a permit requirement appear to have already impacted the permit market. Between 2016 and 2019, average prices for commercial reef fish permits have increased from $8,749 to $17,000 (Table 3.4.1.4). Anecdotal information suggests that some permits are now selling for $20,000. This upward trend in permit prices is expected to continue as the development of this amendment progresses. In addition to the permit cost, owners of shareholder accounts who elect to buy a permit will have to incur costs to satisfy the conditions of the permit, i.e., maintain a vessel with functioning VMS. As discussed in section 3.4, the average prices for an IFQ vessel and a VMS unit are currently $109,000 and $3,000, respectively. Annual average communication and maintenance costs are estimated at $900 and $500, respectively. Given the substantial total costs to be incurred to acquire a vessel and a permit, and satisfy the conditions of the permit, some owners of shareholder accounts without a permit and subject to the permit requirement may enter into a business partnership with owners of shareholder accounts already associated with permits

(or grandfathered and therefore exempt from the permit requirement). Potential business agreements could include the creation of joint ventures as well as the contractual agreements requiring compensation from the owners without permit. In the end, it is expected that owners of shareholder accounts subject to the permit requirement will find suitable solutions to continue to benefit from their IFQ shares. It is also expected that the acquisition of latent permits and the business solutions implemented to circumvent the permit requirement would result in increases in transaction costs and potential decreases in the amount of annual allocation traded. Therefore, adverse economic effects stemming from the diminished ability to source annual allocation would be a likely consequence of the establishment of a permit requirement. These expected adverse effects would be primarily borne by fishermen who rely on purchasing annual allocation to harvest IFQ species.

Alternatives 3 and **4** would be expected to result in economic effects between the effects expected from the least restrictive alternative (**Alternative 5**) and the most restrictive one (**Alternative 2**). Because **Alternative 4** would exempt a greater number of shareholder accounts without a permit by setting a later date of account creation to be exempted from the permit requirement, it is expected to result in smaller economic effects than **Alternative 3**.

4.1.4 Direct and Indirect Effects on the Social Environment

Effects would not be expected from **Alternative 1** (No Action) and no changes would be made to the requirements to hold IFQ shares. Public participants (i.e., shareholders who have accounts that are not associated with a commercial reef fish permit) would continue to be allowed to hold their shares, and those buying shares in the future would not be required to obtain a commercial reef fish permit.

Short-term
By requiring some or all shareholder accounts to be associated with a commercial permit, greater direct effects would be expected under **Alternatives 2-5** compared to **Alternative 1**. Among **Alternatives 2-5**, **Alternative 5** would have the fewest direct effects on shareholders, as no current shareholders would be required to obtain a commercial permit. Any U.S. citizen or permanent resident could continue to open an account until the date of implementation of this amendment without having to obtain a commercial reef fish permit. On the other hand, allowing all accounts to be grandfathered in until the time this amendment is implemented would likely result in many new accounts being established before that time, without shares or a permit, and maintained for future speculative purposes. Under **Alternative 5**, these accounts would not be required to be associated with a commercial permit in the future and could potentially be transferred through private transactions similar to the way permits are transferred. (However, the name on the account may not be changed; a name change would require the creation of a new shareholder account). The effects from any creation of additional accounts are uncertain, but could indirectly confound progress toward the action's intent over the long term, as acquiring one of these grandfathered accounts would essentially replace the need for obtaining a commercial permit.

Alternative 2 would have the greatest effects as the most shareholders would be affected by being required to associate a commercial permit with each shareholder account. **Alternatives 3**

and **4** would have intermediary effects between **Alternatives 2** and **5**, by exempting some but not all accounts from the requirement to have a commercial permit. Exempting more accounts from the requirement would result in fewer expected effects. **Alternative 3** would exempt IFQ accounts established before public participation began in the GT-IFQ program (December 31, 2014) and **Alternative 4** would exempt all accounts established on or before the date of the Ad Hoc RS & GT-IFQ Advisory Panel (AP) meeting (October 2, 2019). Table 1.1.2 provides the number of accounts[30] with and without shares and permits on February 25, 2020. On that day there were 422 IFQ accounts without a permit; 314 accounts had shares in at least one share category and 108 accounts held no shares. Under **Alternative 2**, all 422 accounts would lose the ability to obtain or maintain shares, and the holders of the 314 accounts with shares would be required to obtain a commercial permit to keep the shares in the account. Action 2 addresses the process for shareholders to comply with permit requirement.

Alternatives 3 and **4** would affect far fewer shareholders than **Alternative 2** and exempt many IFQ accounts from the need to obtain a permit to keep their shares (Table 2.1.2). Of the 314 accounts with shares but no associated permit, 20% (64 accounts) were created after public participation began in the GT-IFQ program and the holders of these accounts would be required to obtain a commercial permit (**Alternative 3**). Of the 108 accounts with neither shares or an associated permit, 52% (56 accounts) were opened after public participation began and would be ineligible to hold shares in the future unless they first obtained a permit. Under **Alternative 4**, 1.3% of the 314 accounts with shares but no permit was created since the AP meeting and would require a permit to keep the shares, while 2.8% of the accounts with neither shares nor a permit would lose the ability to hold shares without first obtaining a permit.

The actual short-term effects for the shareholders who would be required to obtain a permit under the respective alternatives would depend on the varied responses to the new requirement. Shareholders would be expected to respond in different ways, including consolidating accounts, obtaining a commercial permit, forming new business partnerships, and/or selling their shares and exiting the program. It remains unknown how many affected shareholders would respond to a new permit requirement in each of these ways. Shareholders with an ownership stake in more than one IFQ account (i.e., related accounts) would be most likely to consolidate their related accounts. This would reduce the effects from being required to obtain a permit, but retain any smaller impacts from forgoing the use of multiple accounts, such as to facilitate the separation of assets for legal protection.

Some affected shareholders would be expected to obtain a permit. The permits are limited access and permit transfers are negotiated as private business transactions, requiring the affected shareholder to locate a permit from an existing permit holder. NMFS does not collect surrendered permits and make them available to the public; NMFS executes the transfer between the old and new permit holder. At the end of 2018, there were 845 commercial vessels with reef fish permits. During that year, 528 of those vessels landed reef fish. Thus, 317 permits were not used throughout that year for fishing and may provide an estimate of the number of permits that could be available to shareholders who need one. The cost of permits has increased 164% on average in 2019 compared to 2015, and some permits are reported to have sold for $20,000

[30] Includes active, suspended, and initial accounts, but not closed accounts.

(Section 3.4.1). Further, a permit must be registered to a vessel with a functioning VMS, incurring additional costs (Sections 3.4.1 and 4.1.3).

The actions in this amendment are intended to promote share ownership by fishermen who have the ability to land reef fish within the IFQ programs by reinstating the permit requirement that was in place for the initial 5 years of each IFQ program for some or all current participants. Griffith et al. (2016) recommended that the Council reconsider allowing people with no direct physical participation in the fishery to purchase shares. However, public participation has been in place for over 9 years in the RS-IFQ program (opened to the public in 2012) and over 5 years in the GT-IFQ program. Given the years during which existing participants have become accustomed to participating in the program and the substantial costs of obtaining and maintaining a permit, it should be assumed that some affected shareholders would employ strategies that enable them to maintain their shareholdings, such as by forming new business partnerships. It is possible that some shareholders may decide to sell their shares and exit the fishery, as well. It remains unknown which shareholders would form partnerships and which would divest themselves of their shares, but the decision of each shareholder could relate to their social connections and trust in others within the fishery. Nevertheless, it is not possible to predict who would be the recipients of shares sold by those who elect to exit the fishery, although they would be expected to benefit from the available shares.

Long-term
Each of **Alternatives 2-5** would have similar additional effects on people intending to buy shares in the future. This would include current fishermen who do not own shares or a permit, and future participants such as new entrants to commercial fishing (i.e., the next generation of fishermen). Compared to **Alternative 1**, to begin to buy shares for an account that is not grandfathered in would require that the account have an associated permit entailing the substantial costs described above and in Sections 3.4.1 and 4.1.3.

This action is intended to promote share ownership by fishermen with the ability to harvest the allocation associated with their shares. The commercial reef fish permit is a proxy for this type of participation. It would be expected that this action would disincentivize people who would enter the fishery for the purpose of investing in shares and selling the allocation annually (but do not intend to participate in the physical activity of fishing), by requiring the costly investment in a permit (and other attending requirements). However, many current permit holders do not fish on their vessel, and many captains and crew do not share ownership in the vessel (including associated permit) on which they fish. **Alternatives 2-5** would prohibit such non-vessel owning fishermen from buying small amounts of shares before they have obtained a permit. This would restrict such fishermen to leasing quota (i.e., buying allocation) from shareholders who may have a permit, but do not participate in the physical activity of fishing.

4.1.5 Direct and Indirect Effects on the Administrative Environment

This action would directly affect the administrative environment of the Southeast Regional Office (SERO). These effects would primarily be based on the ability of SERO to match IFQ share accounts with vessels with a valid or renewable commercial reef fish permit. **Alternative 1**, No Action, would not change the administrative environment because any requirements to

obtain or maintain IFQ shares would not change. **Alternatives 2-5** would require SERO to do additional work. First, SERO would need to determine which entities that hold IFQ share accounts are not in compliance because their account is not associated with vessels with a valid or renewable commercial reef fish permit. After this determination is made, those entities would need to be notified they are out of compliance and what steps they need to take to either come into compliance or divest their shares. In addition, SERO would need to monitor those entities wishing to retain their shares do become compliant with the new share account requirements. Lastly, any account that is not associated with an active or renewable permit may have associated shares reclaimed by NMFS and transferred into a NMFS managed IFQ account**.** Under **Alternative 2**, all share accounts would need to be associated with a valid or renewable commercial reef fish permit. Those that are not would either need to come into compliance or they would need to divest their shares to ensure their shares are not reclaimed by NMFS (Action 2). To monitor accounts, coding changes in the existing software would need to be added to disallow shares being transferred to an account not associated with a permit. **Alternatives 3-5** add extra complexity in that the date the account was established needs to be compared to the date specified in each alternative. Some shares would qualify to be grandfathered in depending on when they were established, and other accounts would not. Those entities holding non-compliant share accounts would either need associate them with a valid or renewable commercial reef fish permit or divest their shares. For **Alternatives 2-5**, the needed tracking could be automated, reducing the effects of tracking accounts and permits on the administrative environment; however, this would incur a cost to SERO in both dollars and time to update the software.

4.2 Share Divestment

Note: Action 2 is applicable only if an alternative other than Alternative 1 is chosen in Action 1. Alternative 3 may be selected as preferred in addition to selecting Alternative 1 or Alternative 2. A shareholder account is considered to be associated with a permit if the permit has the exact same entities listed on both the shareholder account and permit.

Alternative 1: No Action. If the Council requires some or all shareholder accounts to be associated with a commercial reef fish permit in Action 1, shareholders must be in compliance with the requirement by the effective date of the final rule implementing this amendment, or the shares will be reclaimed by NMFS.

Alternative 2: NMFS will reclaim all shares in a shareholder account that is not associated with a commercial reef fish permit:

> **Option 2a:** 1 year following the effective date of the final rule implementing this amendment.
>
> **Option 2b:** 3 years following the effective date of the final rule implementing this amendment.
>
> **Option 2c:** 5 years following the effective date of the final rule implementing this amendment.

Alternative 3: After implementation of this amendment, if a shareholder account no longer has an associated valid or renewable reef fish permit (i.e., the permit is transferred or is not renewed within one year of the expiration date and is terminated), the shareholder(s) must divest of the account's shares as needed to meet the requirements set in Action 1 or the shares will be reclaimed by NMFS:

Option 3a: 1 year following the transfer or termination of the permit.

Option 3b: 3 years following the transfer or termination of the permit.

Option 3c: 5 years following the transfer or termination of the permit.

4.2.1 Direct and Indirect Effects on the Physical Environment

Direct and indirect effects of fishing on the physical environment are described in Section 4.1.1 and incorporated here by reference. This action would define when an entity with a shareholder account with shares that are not associated with a commercial reef fish permit must divest their shares as needed to meet the requirements set in Action 1 or the shares would be reclaimed by NMFS. Shares would need to divested upon implementation of Action 1 (**Alternative 1**), within a grace period from when Action 1 is implemented (**Alternative 2)** defined by options of 1, 3, and 5 years (**Options 2a-2c**, respectively). **Alternative 3** would apply a grace period after Action 1 is implemented with the grace period defined by options of 1, 3, and 5 years (**Options 3a-3c**, respectively). Although not directly affecting the physical environment, indirect effects may occur under either **Alternative 2** or **3** if divesting shares from one account to another, or from one shareholder to a different shareholder, causes a shift in vessels being used and gear types being deployed. However, any effect would likely be minimal regardless of the alternative because the any affected shares would likely still be used to harvest IFQ species and would not be removed from the program.

4.2.2 Direct and Indirect Effects on the Biological Environment

Direct and indirect effects of fishing on the biological/ecological environment are described in Section 4.1.2 and incorporated here by reference. This action would define when an entity with a shareholder account that is not associated with a commercial reef fish permit must divest their shares as needed to meet the requirements set in Action 1 or the shares would be reclaimed by NMFS. Shares would need to divested upon implementation of Action 1 (**Alternative 1**), within a grace period from when Action 1 is implemented (**Alternative 2)** defined by options of 1, 3, and 5 years (**Options 2a-2c**, respectively), or a grace period subsequent to Action 1 being implemented (**Alternative 3)** defined by options of 1, 3, and 5 years (**Options 3a-3c**, respectively). Any effects from this action would not be direct, but rather indirect. Through divesting shares from one account to another, or from one shareholder to a different shareholder, may cause a shift in vessels being used and gear types being deployed. However, any effect would likely be minimal regardless of the alternative because the most shares would likely remain in use within the program and total harvests are constrained by ACLs and quotas.

4.2.3 Direct and Indirect Effects on the Economic Environment

All alternatives considered in this action would only be relevant if the Council elects to require that shareholder accounts be associated with permits to obtain or maintain IFQ shares in Action 1. **Alternative 1** (No Action) would reclaim IFQ shares from all shareholder accounts that do not meet the requirement set in Action 1 on the day of the effective date of the final rule implementing this amendment. Therefore, owners of non-compliant IFQ shareholder accounts would incur economic losses equivalent to the value of their shares. Figure 1.1.1 provides the percentages of RS-IFQ and GT-IFQ shares held in accounts without a commercial reef fish permit between 2007 and 2017. Average share prices by share category are provided in Table 3.4.2.6. However, aggregate economic losses would be mitigated by future economic benefits accruing to future recipients of the reclaimed shares. Reclaimed shares would be held in a NMFS account that currently contains the shares reclaimed through Amendment 36A until the Council determines the method and recipients of the shares. The longer reclaimed shares are held in a NMFS account, the smaller the benefits to future recipients would be because each passing calendar year would deprive potential users from the value of the annual allocations that could have been fished during that period.

Relative to **Alternative 1**, options in **Alternative 2** would be less restrictive because they would provide an adjustment period before the shares are reclaimed, thereby allowing owners of non-compliant shareholder accounts to meet the permit requirement or adopt mitigation measures. **Options a**, **b**, and **c** would grant a 1, 3, and 5-year adjustment period after the effective date of the final rule implementing this amendment, respectively. Other things equal, a longer adjustment period would be expected to result in fewer shares to reclaim. Therefore, **Option c** would be expected to result in the smallest adverse economic losses to owners of non-compliant shareholder accounts. However, as discussed in Action 1, it is not expected that these owners would let their shares be reclaimed without taking action to preserve their economic interest. **Alternative 3** considers options to address the longer-term prospects of non-compliance with the permit requirement. In the future, should owners fail to maintain their shareholder accounts in compliance, e.g., by failing to maintain the validity of their permit or by transferring their permit, **Options a**, **b**, and **c** would allow for a 1, 3, and 5-year probationary period before their shares are reclaimed, respectively. As in **Alternative 2**, **Option c** in **Alternative 3** would be the least constraining option because it would grant the longest probationary period to future owners of non-compliant shareholders accounts. Therefore, other things equal, **Alternative 3-Option c** would be expected to result in the fewest adverse economic effects to entities with non-compliant accounts. Potential detrimental economic effects would be expected to potentially be greater for **Option a**, which correspond to the shortest grace period.

Combined potential economic effects expected to result from **Actions 1** and **2** would be determined by the number of shareholder accounts that do not meet the permit requirements, the length of the grace period afforded to non-compliant shareholder accounts subject to share divestment, and the suite of mitigating measures adopted by owners of these accounts. Without any measure to mitigate a potential loss of IFQ shares because of non-compliance, a greater number of grandfathered shareholder accounts without a permit (a smaller number of accounts subject to divestment) combined with a longer grace period before a required divestment would be expected to result in fewer adverse economic effects to owners of these accounts. For

example, **Alternative 5** in **Action 1** combined with **Alternative 2-Option c** and **Alternative 3-Option c** in **Action 2** would be expected to result in the smallest adverse economic effects. It follows that the more diligent and effective owners of non-compliant shareholder accounts subject to divestment become, the fewer IFQ shares would be available for divestment at the end of the probationary period selected.

4.2.4 Direct and Indirect Effects on the Social Environment

The effects of this action are related to Action 1, as this action applies to those shareholders identified in Action 1 as required to have a commercial permit associated with the shareholder account. The greatest direct effects would be expected under **Alternative 1** (No Action), as shareholders without a permit associated with their account on the day this amendment is implemented would have their shares reclaimed by NMFS. It remains unknown how many shareholders would not be able to obtain a permit or divest themselves of their shares and have their shares reclaimed. As discussed for Action 1 (Section 4.1.4), most shareholders would be expected to make arrangements to ensure their shareholdings are in compliance or to divest themselves of their shares, and it would not be likely for NMFS to reclaim a substantial amount of shares. However, the greatest amount of shares that would be reclaimed would be expected to occur under **Alternative 1**.

Alterative 2 provides options specifying a period of time following implementation of this amendment for shareholders to comply with the new requirement and obtain a permit or divest themselves of their shares. Compared with **Alternative 1**, the more time provided for shareholders to comply with the requirement, the more negative effects would be reduced and the less likely it would be for shares to remain in accounts that are not associated with a permit, resulting in them being reclaimed by NMFS. Thus, the fewest negative effects on shareholders from this alternative would be expected under **Option 2c** (5 years), followed by **Option 2b** (3 years) and **Option 2a** (1 year).

Alterative 3 addresses shareholder accounts that fall out of compliance with the permit requirement in the future, subsequent to implementation of this amendment. Thus, this alternative may be selected alongside **Alternative 1**. Similar to **Alternative 2**, the more time provided for shareholders to bring their account into compliance (**Option 3c** within 5 years, followed by **Option 3b** within 3 years, and **Option 3a** within 1 year), the lesser the negative effects would be expected for the shareholder, in terms of potentially having shares reclaimed by NMFS. However, **Alternative 3** would affect shareholders who have allowed their shareholder account to fall out of compliance, rather than ones who are directly affected by Action 1. Shareholders may fall out of compliance if they do not renew their permit or if they choose to transfer their permit. It is possible that shareholders could take advantage of a longer time period, such as 5 years (**Option 3c**), to move a permit to an account without a permit, for the purpose of bringing that account into compliance with the requirement before shares are reclaimed. Thus, it is possible under **Alternative 3** that providing a longer time period to shareholders to resolve future compliance issues could result in unintended consequences if it enables permits to be transferred among accounts for the purpose of restarting the clock each time an account falls out of compliance.

4.2.5 Direct and Indirect Effects on the Administrative Environment

Under **Alternative 1**, No Action, shares would need to be divested upon implementation of Action 1 or be reclaimed by NMFS. **Alternative 2** provides a grace period from when Action 1 is implemented defined by options of 1, 3, and 5 years (**Options 2a**, **2b**, and **2c**, respectively). Subsequent to Action 1 being implemented, should an entity no longer have a permit associated with the shareholder account (e.g., sells the permitted vessel), **Alternative 3** would provide them with a grace period defined by options of 1, 3, and 5 years (**Options 3a**, **3b**, and **3c**, respectively) to either secure a new permit or divest their shares before the shares would be reclaimed by NMFS.

Effects on the administrative environment from **Alternative 1** would be similar to those described in Section 4.1.5 depending on which Action 1 alternative is selected as preferred. **Alternative 2** provides a grace period over which the effects from the Action 1 preferred alternative would span and so would spread out any adverse effects from Action 1 over a longer period of time. **Option 2a** provides the shortest time period, **Option 2c** the longest, and **Option 2b** would be intermediate. Although spreading the effects over a longer time period under However, **Alternative 2** would also entail a cost to SERO through software upgrades to track entities to ensure they come into compliance with Action 1 over the time period selected in **Options 2a-2c**. **Alternative 3** would apply to IFQ program compliance after Action 1 is implemented and so would add to the administrative environment through similar costs associated with software upgrades to monitor compliance as would be needed in **Alternative 2**. Entities would need to be tracked to ensure they divest their shares over the time period selected in **Options 3a-3c**.

As with Action 1, none of the effects described above would be significant to the administrative environment. The current SERO IFQ programs already have the ability to track shareholder accounts and link those to commercial reef fish vessel permits. The main effect would be to add computer code to the existing software to track accounts and make sure they are in compliance.

4.3 Cumulative Effects Analysis

Federal agencies preparing an environmental assessment (EA) must also consider cumulative effects of a proposed action and other actions. Cumulative effects are those effects that result from incremental impacts of a proposed action when added to other past, present, and reasonably foreseeable future actions (RFFA), regardless of which agency (federal or non-federal) or person undertakes such actions. Cumulative effects can result from individually minor but collectively significant actions that take place over a period of time (40 C.F.R. 1508.7). Below is our five-step cumulative effects analysis that identifies criteria that must be considered in an EA.

1. *The area in which the effects of the proposed action will occur* - The affected area of this proposed action encompasses the state and federal waters of the Gulf as well as Gulf communities that are dependent on the IFQ fishery. For more information about the area in which the effects of this proposed action would occur, please see Chapter 3, Affected Environment that goes into detail about these important resources as well as other relevant features of the human environment.

2. *The impacts that are expected in that area from the proposed action* - The proposed action would limit IFQ share ownership by shareholders without a valid or renewable commercial reef fish permit and provide a time period for shareholders not in compliance to divest themselves of their shares. The environmental consequences of the proposed status determination criteria are analyzed in detail in Sections 4.1-4.2. Limiting IFQ share ownership should have very little effect on the physical and biological/ecological environment because the actions are not expected to alter the manner in which the fishery is prosecuted. These actions would affect the social and economic environments, although the effects are difficult to predict as it remains unknown how various participants would respond to a new permit requirement. The effects would also depend on how many shareholder accounts are allowed to remain without a commercial permit and the amount of time provided for shareholders to comply with the permit requirement by obtaining a permit.

3. *Other Past, Present and Reasonably Foreseeable Future Actions (RFFAs) that have or are expected to have impacts in the area* - There are tens of thousands of actions going on in the Gulf annually. Many of these activities are expected to have impacts associated with them. It is not possible, nor necessary to list all of them here. Below are discussed the actions expected to have the potential to combine with the effects of the proposed action to have some kind of a cumulative effects.

Other Fishery related actions - The cumulative effects from managing the reef fish fishery have been analyzed in Amendments 30A (GMFMC 2008c), 30B (GMFMC 2008b), 31 (GMFMC 2009), 32 (GMFMC 2011b), 40 (GMFMC 2014), and 28 (GMFMC 2015) and are incorporated here by reference. Additional pertinent past actions are summarized in the history of management (Section 1.3). Present and RFFAs include: Amendment 36C, which would further revise the red snapper and grouper-tilefish commercial IFQ programs; Amendment 52, which address red snapper allocation; Amendment 53, which would revise red grouper allocations and ACLs; an action to revise the ABC control rule and framework procedures; a fishery ecosystem plan; and framework actions addressing lane snapper and vermilion snapper. Descriptions of these actions can be found on the Council's website.[31]

Non-fishery related actions - Actions affecting the reef fish fishery have been described in previous cumulative effect analyses [e.g., Amendment 40 (GMFMC 2014)]. Four important events include impacts of the *Deepwater Horizon* MC252 oil spill, the Northern Gulf Hypoxic Zone, red tide, and climate change. Reef fish species and red drum are mobile and are able to avoid hypoxic conditions, so any effects from the Northern Gulf Hypoxic Zone on these species are likely minimal regardless of this action. Impacts from the *Deepwater Horizon* MC252 oil spill are still being examined; however, as indicated in Section 3.3, the oil spill had some adverse effects on fish species. It is unlikely that the oil spill in conjunction with implementing constraints on IFQ shareholders would have any significant cumulative effect given the primarily administrative function of this action. Although fish may be able to avoid high concentrations of red tide, red tide does cause fish kills primarily in coastal waters and these fish kills do include reef fish and red drum. They are most common off the central and southwestern coasts of Florida, but may occur anywhere in the Gulf. As with the *Deepwater Horizon* MC252 oil spill, it

[31] http://gulfcouncil.org/

is unlikely that red tide in conjunction with the management criteria in this amendment would have any significant cumulative effect given the primarily administrative function of this action.

There is a large and growing body of literature on past, present, and future impacts of global climate change induced by human activities. Some of the likely effects commonly mentioned are sea level rise, increased frequency of severe weather events, and change in air and water temperatures. The Intergovernmental Panel on Climate Change has numerous reports addressing their assessments of climate change.[32] Global climate changes could affect the Gulf fisheries as discussed in Section 3.3. However, the extent of these effects cannot be quantified at this time. The proposed action is not expected to significantly contribute to climate change through the increase or decrease in the carbon footprint from fishing as these actions should not change how the fishery is prosecuted. As described in Section 3.3, the contribution to greenhouse gas emissions from fishing is minor compared to other emission sources (e.g., oil platforms).

4. The impacts or expected impacts from these other actions - The cumulative effects from managing the reef fish fishery have been analyzed in other actions as listed in part three of this section. They include detailed analysis of the reef fish fishery, cumulative effects on non-target species, protected species, and habitats in the Gulf. Cumulative effects from these actions have not been considered significant. NMFS does monitor fisheries and stocks, and has the ability with the Council through the Magnuson-Stevens Act to address these effects should they arise.

5. *The overall impact that can be expected if the individual impacts are allowed to accumulate:* Present and RFFAs are listed in Part 3 of this section and pertinent past actions are summarized in the history of management (Section 1.4). This proposed action, combined with past actions present actions, and RFFAs, is not expected to have significant beneficial or adverse effects on the physical and biological/ecological environments because this action is not expected to affect current fishing practices. However, for the social and economic environments, short-term adverse effects would be expected for some shareholders who would be required to obtain a permit. Although negatively affected by the requirement to obtain a commercial permit, many shareholders would be expected to mitigate these negative effects in different ways, including the establishment of new business partnerships that may allow them to retain their shareholdings. For the long term, possession of a commercial permit would be required to obtain shares, requiring a greater financial investment in a permit and other associated requirements before shares could be purchased. This may have unintended negative effects on small operators and new entrants attempting to buy shares. These effects are likely minimal as the proposed actions, along with past, present, and RFFAs, are not expected to alter the manner in which the reef fish fishery is prosecuted. Because it is unlikely there would be any changes in how the reef fish fishery is prosecuted, this action, combined with past, present, and RFFAs, is not expected to have significant adverse effects on public health or safety.

6. Summary: The proposed action, if conducted in a manner consistent with specific alternatives, is not expected to have individual significant effects to the biological, physical, or socio-economic environment. The effects of the proposed action are, and will continue to be, monitored through collection of landings data by NMFS, stock assessments and stock assessment updates, life history studies, economic and social analyses, and other scientific observations.

[32] http://www.ipcc.ch/publications_and_data/publications_and_data.shtml

Commercial data are collected through trip ticket programs, port samplers, and logbook programs, as well as dealer reporting through the IFQ program.

For the reasons outlined in this Cumulative Effects Analysis and the rest of the environmental assessment, we do not expect this proposed action to have the potential to combine with other past, present and reasonably foreseeable future actions to have a significant cumulative effect on the human environment.

CHAPTER 5. LIST OF PREPARERS

PREPARERS

Name	Expertise	Responsibility	Agency
Ava Lasseter	Anthropologist	Co-Team Lead – Amendment development, social analyses	GMFMC
Peter Hood	Fishery biologist	Co-Team Lead – Amendment development, biological analyses, cumulative effects analysis	SERO
Assane Diagne	Economist	Economic analyses	GMFMC
Mike Travis	Economist	Economic analyses	SERO
Christina Package-Ward	Anthropologist	Social environment	SERO
Alisha DiLeone	Fishery biologist	Data analyses	SERO
Lisa Hollensead	Fishery biologist	Description of the fishery	GMFMC

REVIEWERS

Name	Expertise	Responsibility	Agency
Noah Silverman	Environmental Protection Specialist	National Environmental Policy Act review	SERO
Mara Levy	Attorney	Legal review	NOAA GC
Adam Bailey	Technical writer and editor	Regulatory writer	SERO
Scott Sandorf	Technical writer and editor	Regulatory writer	SERO
Jennifer Lee	Biologist	Protected Resources review	SERO
David Dale	Biologist	Essential Fish Habitat review	SERO
Mike Jepson	Anthropologist	Review	SERO
Juan Agar	Economist	Review	SEFSC
Carrie Simmons	Fishery biologist	Review	GMFMC
John Froeschke	Fishery biologist	Review	GMFMC

GMFMC = Gulf of Mexico Fishery Management Council; NOAA GC = National Oceanic and Atmospheric Administration General Counsel; SEFSC = Southeast Fisheries Science Center; SERO = Southeast Regional Office of the National Marine Fisheries Service

CHAPTER 6. LIST OF AGENCIES, ORGANIZATIONS, AND PERSONS CONSULTED

AGENCIES and ORGANIZATIONS CONSULTED

National Marine Fisheries Service
- Southeast Fisheries Science Center
- Southeast Regional Office
- Office for Law Enforcement
- Endangered Species Division
- Domestic Fisheries Division

NOAA General Counsel

Environmental Protection Agency (Region 4 and 6)
United States Coast Guard
United States Fish and Wildlife Services
Department of Interior. Office of Environmental Policy and Compliance
Department of State, Office of Marine Conservation,
Marine Mammal Commission

Texas Parks and Wildlife Department
Alabama Department of Conservation and Natural Resources/Marine Resources Division
Louisiana Department of Wildlife and Fisheries
Mississippi Department of Marine Resources
Florida Fish and Wildlife Conservation Commission

CHAPTER 7. REFERENCES

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APPENDIX A. ALTERNATIVES CONSIDERED BUT REJECTED (INCLUDING A HISTORY OF AMENDMENT 36)

The Gulf of Mexico Fishery Management Council (Council) received a presentation on the history of Amendment 36 at its January 2020 meeting, which can be viewed here: http://gulfcouncil.org/wp-content/uploads/B-5a-RF36-presentation.pdf. The Council has been considering a requirement for individual fishing quota (IFQ) program shareholders to have a commercial reef fish permit since 2011. This appendix provides the alternatives considered but rejected since the August 2018 Council meeting and a summary of the history of Amendment 36 including its division into sub-amendments and additional information specific to the Council's evaluation of a requirement for shareholders to have a commercial reef fish permit.

Alternatives Considered but Rejected

The following are the alternatives and options considered but rejected by the Council since its August 2018 meeting, when the Council first reviewed a draft of Amendment 36B.

At its August 2018 meeting, the Council removed from consideration the following:
In Action 1.1 (now Action 1) Options b from each of Alternatives 2 through 5:

> **Option b:** A valid Gulf of Mexico and South Atlantic dealer permit with an IFQ dealer account.

In Action 1.2 (now Action 2) Option 2a.

> **Option 2a:** On the effective date of the final rule implementing this amendment.

In Action 1.2 (now Action 2) Option 2b from Alternative 2 and Option 3a from Alternative 3.

> **Option 2b:** Before the beginning of the calendar year following the effective date of the final rule implementing this amendment.
>
> **Option 3a:** Before the beginning of the calendar year following the sale or termination of the permit.

At its June 2019 meeting, the Council removed Alternative 5 from Action 1.1 (now Action 1):

> **Alternative 5**: Restrict the amount of shares that may be held at any one time by a shareholder account without a valid or renewable commercial reef fish permit to a maximum of:
>
> **Option 5a**: 5% of a share category's share cap.
> **Option 5b**: 10% of a share category's share cap.
> **Option 5c**: 20% of a share category's share cap.

Option 5d: 30% of a share category's share cap.

Brief History of Amendment 36

For the first 5 years of each of the red snapper (RS) and grouper-tilefish (GT) IFQ programs, a commercial reef fish permit was required to receive (e.g., buy) shares and allocation. As of January 1, 2010, for the RS-IFQ program, and January 1, 2015, for the GT-IFQ program, any U.S. citizen or permanent resident could open a shareholder account and obtain shares and allocation. Those shareholder accounts with shares but without an associated commercial reef fish permit are termed public participants. A commercial reef fish permit remains a requirement for landing IFQ-managed species. Shortly before the date for which pubic participation began for each program, the Council published control dates notifying the public that the Council may modify the participation requirement in the future.

The Council initiated work on Amendment 36 at its August 2011 meeting. The amendment had one action, which would have required all shareholders to have a commercial permit for reef fish. However before taking final action at its January 2012 meeting, the Council deferred action on the amendment to await the results of the RS-IFQ Program 5-year Review. The Council reinitiated work on Amendment 36 in April 2014, reviewing a list of potential modifications to the IFQ programs. One of these modifications was to reinstate the requirement that shareholders possess a commercial reef fish permit. The Council was able to develop some actions more quickly than others, and in January 2016, divided the document into Amendments 36A and 36B, so that the more developed actions could move forward while the Council continued to evaluate others. In April 2017, the Council took final action on Amendment 36A. The Council continued work on Amendment 36B, which included the action requiring shareholders to have a commercial permit, until again dividing the amendment into Amendment 36B and 36C at its August 2019 meeting. Amendment 36B includes the action requiring shareholders to have a commercial reef fish permit; the remaining actions are included in Amendment 36C.

Amendments 36A, 36B, and 36C

Amendment 36A required all reef fish permitted vessels landing federally managed reef-fish to land at approved locations and hail-in at least 3 hours, but no more than 24 hours before landing. The amendment returns red snapper and grouper-tilefish shares from non-activated IFQ accounts to the National Marine Fisheries Service (NMFS) for redistribution and allows NMFS to withhold a portion of IFQ allocation at the start of the year equal to an anticipated quota reduction. The actions to return non-activated shares and withhold quota in the event of an anticipated quota decrease became effective July 12, 2018. The advance notice of landing requirement became effective January 1, 2019.

This Amendment 36B proposes to require shareholder accounts to be associated with a commercial reef fish permit. A supporting action provides alternatives for a timeframe within which shareholders have to comply with the new requirement.

Amendment 36C is evaluating the development of a quota bank. Additional actions would distribute the shares reclaimed through Amendment 36A and require accuracy in the estimated weights provided in advance landing notifications.

Commercial Reef Fish Permit Requirement

The Council has been evaluating a requirement for shareholders to have a commercial reef fish permit since initiating Amendment 36 in August 2011. The original Amendment 36 evaluated the following alternatives, selecting Alternative 4 as preferred at its October 2011 meeting:

> **Action 1. Modify Red Snapper IFQ Share and Allocation Transferability Provisions**
>
> **Alternative 1:** No Action – Beginning January 1, 2012, red snapper IFQ shares and allocations can be transferred to any U.S. citizen or permanent resident alien.
>
> **Alternative 2:** Upon implementation of the final rule for Amendment 36 to the Reef Fish Fishery Management Plan (FMP) and through December 31, 2014, red snapper IFQ shares and allocations can be transferred only to commercial reef fish permit holders. Beginning January 1, 2015, red snapper IFQ shares and allocations can be transferred to any U.S. citizen or permanent resident alien.
>
> **Alternative 3:** Upon implementation of the final rule for Amendment 36 to the Reef Fish FMP and through December 31, 2016, red snapper IFQ shares and allocations can be transferred only to commercial reef fish permit holders. Beginning January 1, 2017, red snapper IFQ shares and allocations can be transferred to any U.S. citizen or permanent resident alien.
>
> **Preferred Alternative 4:** Upon implementation of the final rule for Amendment 36 to the Reef Fish FMP and until the Council modifies the transferability provisions for the red snapper IFQ program, red snapper IFQ shares and allocations can be transferred only to commercial reef fish permit holders.

At its next meeting in January 2012, the Council discontinued work on the amendment[33] and did not take final action. In 2014, the Council reviewed a list of potential IFQ program modifications that had been compiled from law enforcement advisory panel, the RS-IFQ Program 5-year Review, the Ad Hoc RS-IFQ Advisory Panel, and Council discussion. Table A-1 provides the list of potential modifications to the IFQ programs considered by the Council, and the Council meeting date for the action taken.

[33] The motion specified that the action be moved to Amendment 37, which at the time was the numbered document for the Red Snapper IFQ Program 5-year Review.

Table A-1. Potential modifications to the IFQ programs considered by the Council upon reinitiating work on Amendment 36 in 2014.

Document or Status	Potential modification considered by the Council	Council meeting date and dissolution
36B	Require commercial reef fish permit, or limit amount of shares non-permitted entities may possess	Aug 2011: sole action in RF36; Jan 2016: moved to 36B; Aug 2019: remains in 36B
36A	Require a VMS hail-in for all commercial reef fish trips	Jan 2016: moved to 36A; Apr 2017: final action
	Reclaim shares from inactivated accounts	Jan 2016: moved to 36A; Apr 2017: final action
	Delay distribution of some IFQ allocation at the beginning of the year in which a quota decrease is expected to occur	Jan 2016: moved to 36A; Apr 2017: final action
	Require dealer notification of intent to offload (removed before final action)	Aug 2016: added to 36A; Apr 2017: removed from 36A
36C	Redistribute shares from inactivated accounts to small shareholders; new entrants; to reduce regulatory discards, through permit banks or NMFS.	Jan 2016: moved to 36A; Apr 2017: moved to 36B; Aug 2019: moved to 36C
	Redistribute quota increases above 9.12 million pounds to new entrants and small shareholders and to reduce regulatory discards	Jan 2016: moved to 36B; Aug 2019: moved to 36C
	Require accuracy in estimated weights on advanced landing notifications	Apr 2014: removed; Apr 2018: added to 36B; Aug 2019: moved to 36C
Removed	Allocation cap on amount that may be held by an individual or entity, or how much a vessel can use.	Jan 2016: put in RF36B; Aug 2017: removed
	Establish use-it-or-lose-it provisions	Jan 2016: moved to 36B; Apr 2018: removed
	Restrictions on sale of allocation or shares; Restrict ability for shareholders to sell or lease their shares and allocation without actively fishing	Jan 2016: moved to 36B; Aug 2017: removed
	Allow a fisherman without sufficient allocation for his red snapper catch to acquire the needed allocation prior to the next fishing trip	Jun 2015: removed
	Allow shares held by an entity without a commercial reef fish permit to fish and land the allocation associated with those shares	Jun 2015: removed
	Eliminate the red snapper commercial size limit	Jun 2015: removed
	Consider a full retention fishery for red snapper	Jun 2015: removed
	Collect rent via auctions of IFQ shares and allocation	Aug 2014: removed; June 2017: request for legal determination; Apr 2018: staff white paper presented

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 fishery management in federal waters of the exclusive economic zone. However, fishery management decision-making is also affected by a number of other federal statutes designed to protect the biological and human components of U.S. fisheries, as well as the ecosystems that support those fisheries. Major laws affecting federal fishery management decision-making are summarized below.

Administrative Procedure Act

All federal rulemaking is governed under the provisions of the Administrative Procedure Act (APA) (5 U.S.C. 551 et seq.), which establishes a "notice and comment" procedure to enable public participation in the rulemaking process. Under the APA, 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 APA also establishes a 30-day waiting period from the time a final rule is published until it takes effect.

Coastal Zone Management Act

Section 307(c)(1) of the federal Coastal Zone Management Act of 1972 (CZMA), as amended, requires that 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 NMFS regulations at 15 C.F.R. part 930, subpart C. According to these regulations and CZMA Section 307(c)(1), when taking an action that affects any land or water use or natural resource of a state's coastal zone, NMFS is required to provide a consistency determination to the relevant state agency at least 90 days before taking final action.

Upon submission to the Secretary, NMFS will determine if this plan amendment is consistent with the Coastal Zone Management programs of the states of Alabama, Florida, Louisiana, Mississippi, and Texas to the maximum extent possible. NMFS's 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 (DQA) (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 DQA 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 fishery management plans (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 Act, FMPs and amendments must be based on the best information available. They should also properly reference all supporting materials and data, and be reviewed by technically competent individuals. With respect to original data generated for FMPs and amendments, it is important to ensure that the data are collected according to documented procedures or in a manner that reflects standard practices accepted by the relevant scientific and technical communities. Data will also undergo quality control prior to being used by the agency and a pre-dissemination review.

Endangered Species Act

The Endangered Species Act (ESA) of 1973, as amended, (16 U.S.C. Section 1531 et seq.) requires federal agencies to use their authorities to conserve endangered and threatened species. The ESA requires NMFS, when proposing a fishery action that "may affect" critical habitat or endangered or threatened species, to consult with the appropriate administrative agency (itself for most marine species, the U.S. Fish and Wildlife Service for all remaining species) to determine the potential impacts of the proposed action. Consultations are concluded informally when proposed actions may affect but are "not likely to adversely affect" endangered or threatened species or designated critical habitat. Formal consultations, including a biological opinion, are required when proposed actions may affect and are "likely to adversely affect" endangered or threatened species or adversely modify designated critical habitat. If jeopardy or adverse modification is found, the consulting agency is required to suggest reasonable and prudent alternatives.

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

Since issuing the biological opinion, in memoranda dated September 16, 2014, and October 7, 2014, NMFS concluded that the activities associated with the Reef Fish FMP will not adversely affect critical habitat for the Northwest Atlantic Ocean loggerhead sea turtle distinct population

segment (DPS) and four species of corals (*Mycetophyllia ferox*, *Orbicella annularis*, *O. faveolata*, and *O. franksi*). In a memorandum dated September 29, 2016, NMFS indicated that several species (green sea turtle North Atlantic and South Atlantic DPSs, and Nassau grouper) have been recently listed under the ESA that may be affected by fishing managed under the FMP, thus triggering the need for reinitiation of consultation. In the September 29, 2016, memorandum, NMFS concluded that allowing continued authorization of the reef fish fishery in federal waters during the reinitiation period will not violate Section 7(a)(2) or 7(d). Implementing the proposed action during the re-initiation period in no way alters the existing Section 7(a)(2) and 7(d) findings.

Marine Mammal Protection Act

The Marine Mammal Protection Act (MMPA) established a moratorium, with certain exceptions, on the taking of marine mammals in U.S. waters and by U.S. citizens on the high seas, and on the importing of marine mammals and marine mammal products into the United States. Under the MMPA, the Secretary of Commerce (authority delegated to NMFS) is responsible for the conservation and management of cetaceans and pinnipeds (other than walruses). The Secretary of the Interior is responsible for walruses, sea and marine otters, polar bears, manatees, and dugongs.

Part of the responsibility that NMFS has under the MMPA involves monitoring populations of marine mammals to make sure that they stay at optimum levels. If a population falls below its optimum level, it is designated as "depleted," and a conservation plan is developed to guide research and management actions to restore the population to healthy levels.

In 1994, Congress amended the MMPA to govern the taking of marine mammals incidental to commercial fishing operations. This amendment required the preparation of stock assessments for all marine mammal stocks in waters under U.S. jurisdiction, development and implementation of take-reduction plans for stocks that may be reduced or are being maintained below their optimum sustainable population levels due to interactions with commercial fisheries, and studies of pinniped-fishery interactions.

Under Section 118 of the MMPA, NMFS must publish, at least annually, a List of Fisheries that places all U.S. commercial fisheries into one of three categories based on the level of incidental serious injury and mortality of marine mammals that occurs in each fishery. The categorization of a fishery in the List of Fisheries determines whether participants in that fishery may be required to comply with certain provisions of the MMPA, such as registration, observer coverage, and take reduction plan requirements. The primary gears used in the Gulf of Mexico reef fish fishery are still classified in the most recent MMPA List of Fisheries as Category III fishery. The conclusions of the most recent List of Fisheries for gear used by the reef fish fishery can be found in Section 3.3.

Paperwork Reduction Act

The Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3501 et seq.) regulates the collection of public information by federal agencies to ensure the public is not overburdened with information

requests, the federal government's information collection procedures are efficient, and federal agencies adhere to appropriate rules governing the confidentiality of such information. The PRA requires NMFS to obtain approval from the Office of Management and Budget before requesting most types of fishery information from the public. The actions in Amendment 36B do not affect existing or introduce new recordkeeping or reporting requirements. Therefore, these actions do not implicate the PRA.

Executive Orders

E.O. 12630: Takings

The Executive Order on Government Actions and Interference with Constitutionally Protected Property Rights that became effective March 18, 1988, requires each federal agency to 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 National Oceanic and Atmospheric Administration Office of General Counsel will determine whether a Taking Implication Assessment is necessary for this amendment.

E.O. 12866: Regulatory Planning and Review

Executive Order 12866: Regulatory Planning and Review, signed in 1993, requires federal agencies to assess the costs and benefits of their proposed regulations, including distributional impacts, and to select alternatives that maximize net benefits to society. To comply with E.O. 12866, NMFS prepares a Regulatory Impact Review (RIR) for all fishery regulatory actions that either implement a new fishery management plan or significantly amend an existing plan (See Chapter 5). RIRs provide a comprehensive analysis of the costs and benefits to society of proposed regulatory actions, the problems and policy objectives prompting the regulatory proposals, and the major alternatives that could be used to solve the problems. The reviews also serve as the basis for the agency's determinations as to whether proposed regulations are a "significant regulatory action" under the criteria provided in E.O. 12866 and whether proposed regulations will have a significant economic impact on a substantial number of small entities in compliance with the Regulatory Flexibility Analysis. A regulation is significant if it a) has an annual effect on the economy of $100 million or more or adversely affects in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments and communities; b) creates a serious inconsistency or otherwise interferes with an action taken or planned by another agency; c) materially alters the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or d) raises novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in this Executive Order.

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

This Executive Order mandates that each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high

and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories and possessions. The Executive Order is described in more detail relative to fisheries actions in Section 3.5.5.

E.O. 12962: Recreational Fisheries

This Executive Order 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 (Council) 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 Council also is responsible for developing, in cooperation with federal agencies, States and Tribes, a Recreational Fishery Resource Conservation Plan - to include a five-year agenda. Finally, the Order requires NMFS and the U.S. Fish and Wildlife Service to develop a joint agency policy for administering the ESA.

E.O. 13132: Federalism

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

E.O. 13158: Marine Protected Areas

This Executive Order 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, habitat

areas of particular concern, and gear-restricted areas in the eastern and northwestern Gulf of Mexico.

Essential Fish Habitat

The amended Magnuson-Stevens Act included a new habitat conservation provision known as essential fish habitat (EFH) that requires each existing and any new FMPs to describe and identify EFH for each federally managed species, minimize to the extent practicable impacts from fishing activities on EFH that are more than minimal and not temporary in nature, and identify other actions to encourage the conservation and enhancement of that EFH. To address these requirements the Council has, under separate action, approved an Environmental Impact Statement (GMFMC 2004) to address the new EFH requirements contained within the Magnuson-Stevens Act. Section 305(b)(2) requires federal agencies to obtain a consultation for any action that may adversely affect EFH. An EFH consultation will be conducted for this action.

References

GMFMC. 2004. Final environmental impact statement for the generic essential fish habitat amendment to the following fishery management plans of the Gulf of Mexico: shrimp fishery of the Gulf of Mexico, red drum fishery of the Gulf of Mexico, reef fish fishery of the Gulf of Mexico, stone crab fishery of the Gulf of Mexico, coral and coral reef fishery of the Gulf of Mexico, spiny lobster fishery of the Gulf of Mexico and South Atlantic, coastal migratory pelagic resources of the Gulf of Mexico and South Atlantic. Gulf of Mexico Fishery Management Council. Tampa, Florida. http://www.gulfcouncil.org/Beta/GMFMCWeb/downloads/Final%20EFH%20EIS.pdf

NMFS. 2011. Biological opinion on the continued authorization of Reef Fish fishing under the Gulf of Mexico Reef Fish Fishery Management Plan. September 30, 2011. Available at: http://sero.nmfs.noaa.gov/pr/esa/Fishery%20Biops/03584%20GOM%20Reef%20Fish%20BiOp%202011%20final.pdf

APPENDIX C. SUMMARIES OF PUBLIC COMMENTS RECEIVED

Scoping workshops were held from March 10-24, 2015 at the following locations:

Tuesday - March 10, 2015
Courtyard Marriott
142 Library Drive
Houma, LA 70360

Thursday - March 12, 2015
Hilton Garden Inn
6703 Denny Avenue
Pascagoula, MS 39567

Monday - March 16, 2015
Hilton Galveston Island Hotel
5400 Seawall Boulevard
Galveston Island, TX 77551

Tuesday - March 17, 2015
Renaissance Mobile
64 South Water Street
Mobile, AL 36602

Tuesday - March 17, 2015
Hawthorn Suites by Wyndham
501 East Goodnight Avenue
Aransas Pass, TX 78336

Wed - March 18, 2015
Hilton Garden Inn
1101 US Highway 231
Panama City, FL 32405

Tuesday - March 24, 2015
Hilton St. Petersburg
950 Lake Carillon Drive
St. Petersburg, FL 33716

Houma, Louisiana
March 10, 2015

Program Eligibility Requirements

- **Should accounts with shares but without a commercial reef fish permit be allowed to harvest the allocation associated with those shares?**

We still feel like we're overcapitalized so, expanding eligibility seems like a slippery slope. The requirement to have a reef fish permit to harvest fish needs to stay.

Inactive Accounts and Redistribution of IFQ Shares to Address Regulatory Discards

- **Should shares be redistributed from inactive accounts to those with no or small shares or to new entrants to reduce regulatory discards?**

The Council should consider coming up with some type of financing program. New entrants can't afford to buy shares and the banks won't back loans for boating startups. Bankers don't understand it. Some kind of government run loan process could help new entrants more than gifting them small shares. It seems like redistributing them to the guys that are already in the fishery is more reasonable. Finance the new entrants rather than gift them.

Full retention requirements to address regulatory discards

- **Should the full retention of all commercially caught red snapper be required?**

Full retention is a great goal. Some of the people targeting vermillion or grouper are pulling up lots of red snapper and killing them. Full retention would force those fishermen to make the effort to get allocation. There might need to be quota banks to help with this, and you may need to give them extra to get the necessary allocation if you require full retention. If we can sell a fish that is big enough to bite the hook, there will be a market for the fish smaller than 13 inches. Full retention will be a lot harder on some of the guys than on others but we should throw fish in the box rather than throw them back dead if we catch them.

Caps on the Use or Possession of IFQ Shares and Allocation

- **Should caps on the amount of IFQ allocation held by and entity be established?**

The cap's example are difficult to handle and we are not so sure that it's harmed anyone. There hasn't been a mega corporation that's tried to buy everyone out.

Requirements for the Use of Shares and Allocation

- **Should use-it or lose-it provisions be established?**

The broker situation takes care of itself. In the derby days or even pre-derby, as people got older, they hired captains to run their boats. The current use of the IFQ program is no different. Some of the active shareholders do the same as we've always done. The have someone run their boat or just sell their allocation.

Here in Louisiana we're in a pure red snapper environment. Forcing me to stay on my boat rather than sell my allocation or hire a captain would exacerbate the bycatch issue. Captains would continue fishing rather than lease to people in the south east who don't have snapper quota, but are catching snapper because the population is expanding.

- **Should a "lease-to-own" provision be considered?**

Lease to own sounds neat but may cause fishermen who are selling allocation to an individual go back to fishing rather than give someone else 'credit' for his harvest. It would promote owners to keep harvesting their own allocation rather than let others earn credit for something that isn't

theirs. A credit towards ownership arrangement should be done on an individual level rather than at the agency level.

Enforcement of all Reef Fish Landings

- **Should all commercial reef fish vessels be required to hail-in, even if they are not landing IFQ species?**

Hail in and out for all reef fishermen is a good idea. It's a great enforcement tool and it gives law enforcement a better heads up. They don't have to check every landing but it is good information to know.

Council member and staff:
Myron Fischer
Emily Muehlstein
Bernie Roy

Pascagoula, MS
March 12, 2015

Program Eligibility Requirements

- **Should the future transfer of shares to only shareholder accounts that hold a valid commercial reef fish permit?**

It's fine how it is.

- **Should accounts with shares but without a commercial reef fish permit be allowed to harvest the allocation associated with those shares?**

Allowing shareholders/allocation holders to harvest without a reef fish permit goes against the goal of the program and would promote overcapitalization.

Inactive Accounts and Redistribution of IFQ Shares to Address Regulatory Discards

- **Should the closure of accounts and redistribution of shares in accounts that have never been activated in the current system be allowed if the accounts are not active by a specified date?**

1% is a great margin for any program. Leave it like it is. Those people know they have shares and they should be allowed to sell it when they want to.

To achieve optimum yield the Council may want consider allowing the allocation in inactive accounts to rollover and be distributed amongst active accounts.

- **Should shares be redistributed from inactive accounts to those with no or small shares or to new entrants to reduce regulatory discards?**

People in the program today have suffered the pains of the program. Therefore, they should reap the benefits of the program rather than being penalized by losing additional shares. People who have been actively fishing should be given first opportunity for ownership.

It would be difficult to decide who qualifies as new entrants or small shareholders. Additionally, new entrants can get in to the program, plenty of new entrants have bought in. It was understood when the program was initiated that this would happen. Shares would have a high value and the fishery would consolidate, making it difficult for new entrants.

Full retention requirements to address regulatory discards

- **Should the full retention of all commercially caught red snapper be required?**

It's probably not legal and it definitely would not work to require full retention. You cannot make someone keep what they catch and it seems difficult to enforce.

Typically, commercial fishermen aren't going to hang around and catch the wrong size or species of fish. They are already policing themselves.

The market value of the different sizes of fish will be an issue. Fishermen won't want to use their allocation on the less valued fish.

There isn't data to justify worrying about regulatory discard on the commercial side. The snapper population has exploded, so it's obviously not a biological issue.

Caps on the Use or Possession of IFQ Shares and Allocation

- **Should caps on the amount of IFQ allocation held by and entity be established?**

There is already a cap on shares and that was initiated when the program was put in place. The current share caps are fine.

- **Should caps on the amount of IFQ allocation landed by a single vessel be established?**

You shouldn't limit what a vessel can harvest that is like directly capping what a person can make. A vessel can only catch so much a year anyhow, so there is no need to put a limit on it.

- **Should a cap on the amount of shares or allocation a non-reef fish permitted shareholder may possess be established?**

The program was established to be traded and there is no need to undo the system. The only reason the program sold initially was because of the flexibility it allowed. It doesn't make sense to socialize the program and keep everyone at some artificial level.

Requirements for the Use of Shares and Allocation

- **Should unused IFQ allocation be allowed to roll-over for use in the following year?**

There are a lot of reasons the fish aren't caught in a year; weather, engine failure, personal reasons, etc. Unharvested allocation should be rolled over so people can catch their fish the next year.

- **Should a "lease-to-own" provision be considered?**

Lease-to-own is an interesting approach and people would have demonstrated through trip tickets that they've fished should be given priority if a situation arises where new shares become available.

Mid-Year Quota Changes

- **Should a portion of shareholders' allocation be withheld at the beginning of the year if a mid-year quota reduction is expected?**

Would it be more practical to handle the quota reduction in the following year rather than mid-year? Don't be conservative and hold back, rather, reduce the share of the individual fishermen who have already caught their allocation in the following year.

During the mid-year quota increase derby-like conditions were created and the market value of red snapper dropped. If there was a large increase late in the year the Council should consider adding the extra in the following year.

Enforcement of all Reef Fish Landings

- **Should all commercial reef fish vessels be required to hail-in, even if they are not landing IFQ species?**

No. If they have VMS we know where there are so it's not necessary. If violations happen it's a small problem.

Council member and staff:
Leann Bosarge
Emily Muehlstein
Bernie Roy

Galveston, Texas
March 16, 2015

Program Eligibility Requirements

- **Should the future transfer of shares to only shareholder accounts that hold a valid commercial reef fish permit?**

The IFQ program is achieving its intended goals as is. Red snapper is a public resource, and the public should be able to participate in the IFQ program if they wish.

- **Should accounts with shares but without a commercial reef fish permit be allowed to harvest the allocation associated with those shares?**

The fishery is still overcapitalized, but it is currently under refinement to a smaller number of participants. If they were to allow people without a reef fish permit to harvest then the progress we've made to reduce overcapitalization would be reversed. Allowing anyone with IFQ to fish would definitely increase overcapitalization.

- **Should shareholders not actively engaged in fishing be allowed to transfer their shares and allocation to other shareholders?**

Transferability of shares should be market driven. Members of the public should be allowed to buy and sell shares and allocation.

Inactive Accounts and Redistribution of IFQ Shares to Address Regulatory Discards

- **Should the closure of accounts and redistribution of shares in accounts that have never been activated in the current system be allowed if the accounts are not active by a specified date?**

IFQ account holders should be contacted about their inactive accounts. The agency needs to do their due diligence and let people know that they have inactive shares.

Inactivity may be caused by displacement or disaster so share owners should be given time and warning before accounts are closed.

- **Should shares be redistributed from inactive accounts to those with no or small shares or to new entrants to reduce regulatory discards?**

The fish in inactive accounts need to be harvested. A quota bank could be used to address the issue of dead discards. The allocation could be distributed to all reef fish permit holders, not just IFQ share owners.

If shares are redistributed they should be given to active shareholders. Allowing new entrants goes against the goal of reducing overcapitalization in the fishery. The program was set up to be

market driven, you can be a new entrant by buying from current shareholders. Use the market-based system, it's already in place and there is no need to start a new program.

New entrants to the program should be considered. Some qualification of what defines a new entrant would be necessary.

Full retention requirements to address regulatory discards

- **Should the full retention of all commercially caught red snapper be required?**

Actions that can prevent fish from being thrown back dead should be considered, on the recreational side also. Throwing back perfectly good fish dead makes no sense.

Eliminating the minimum size limit and implementing full retention will allow the market-based system to work to its full potential. It will teach fishermen to fish smarter and more efficiently. Making fishermen keep everything they catch will make them behave more conscientiously.

Caps on the Use or Possession of IFQ Shares and Allocation

- **Should caps on the amount of IFQ allocation held by and entity be established?**

Leave it just like it is. It works as a market-based system for economic efficiency and changing the amount an individual can own would not necessarily change economic efficiency of the program. Reducing the share cap may increase overcapacity. No one voiced any desire for caps to be put into place.

- **Should caps on the amount of IFQ allocation landed by a single vessel be established?**

Putting restrictions on an entity who has the capability of harvesting a large amount of fish will hurt the effort of reducing overcapacity.

Requirements for the Use of Shares and Allocation

- **Should use-it or lose-it provisions be established?**

Leave it alone, the current framework is working fine. The beauty of the system is that it is flexible. One fisher's boat breaks down, another fisherman can use quota. Exclusion is a problem for those on the outside, but not for those on the inside of the IFQ program. By restricting brokering, you would be closing the door of opportunity for others. There is no market advantage or biological advantage to do so.

- **Should restrictions be placed on the sale of IFQ allocation and shares?**

Some people are long-term fishermen who are leasing their fish out to others for various personal reasons, and are not brokers per se. It would be difficult to separate the different users and restrict them.

Fishermen find quota if they need it; leasing and brokering when practicable to assist one another. If someone wants to buy quota, they can and, local fishermen help other fishers get quota to use for bycatch. Fishermen that have available quota can capitalize on those fishermen out on the water and have them bring in fish for them as dealers to fill orders. Dealers hire fishermen to fish and can provide them quota if they don't have enough in their IFQ account. Fishermen can change behavior to avoid bycatch when no allocation is available.

- **Should a "lease-to-own" provision be considered?**

Eliminate the problems for new entrants by offering a loan program. The federally backed loan program for new entrants that was suggested by the AP should move forward. Consider making a place in the Federal Registry where fishermen can register their right to harvest; they can use that as collateral to get loans. Banks need something to collateralize. New guys can come into the system by buying shares and creating history. If an entity buys allocation, then they could be entered into a sort of lottery program, or some sort of lease to own program to help new entrants transition in to the program. At some point, new entrants will need to be considered so those fishermen need to be considered now. Current fishermen are getting older.

<u>Mid-Year Quota Changes</u>

- **Should a portion of shareholders' allocation be withheld at the beginning of the year if a mid-year quota reduction is expected?**

Withholding quota would either create a shortage or a potential end of year glut. Mid-year changes up or down are not good for businesses. Business plans are made at the beginning of the year. Midyear increases causes a market glut. With a higher percentage of fish, you have to find a higher percentage of customers. Fluctuations are not desirable for operating a business and create market inequities and instability. Make end of year quota increases available the next year on Jan 1st to avoid derby fishing conditions. For the best benefit of the country, the fishermen need to know when they can fish.

Get the Council and the stock assessment process in line to set quota at the beginning of the year rather than allow mid-year quota changes. Move data assessments to an earlier time and obtain real time reporting so managers can make decisions early on in the year, rather than making mid-year adjustments.

Council process is inefficient, small shareholders needs the fish as soon as they are available. Mid-season or not, a small shareholder will take fish whenever they can get them. A business plan is not as important to small operations.

<u>Enforcement of all Reef Fish Landings</u>

- **Should all commercial reef fish vessels be required to hail-in, even if they are not landing IFQ species?**

Yes, hailing in for all would give proper notification to law enforcement and get rid of violators. Everybody with federal reef fish permits should have VMS on board and follow a hail-in/hail-out requirement. It would increase expenses for law enforcement.

Additional Issues

The 5-year review program should include people with a vested interest.

A water weight percentage should be brought back (ice weight). Ice and slime weight gain that causes variances between weight when the fish is being offloaded and weight at the fish house (about 3%) needs to be considered.

Council member and staff:
Robin Riechers
Emily Muehlstein
Karen Hoak

Aransas Pass, TX
March 17, 2015

Program Eligibility Requirements

- **Should the future transfer of shares to only shareholder accounts that hold a valid commercial reef fish permit?**

Commercial quota is there to be fished and should be caught to achieve optimum yield. The only fear is that someone could buy up quota with no intention of fishing it; protections should be put in place to prevent that.

Inactive Accounts and Redistribution of IFQ Shares to Address Regulatory Discards

- **Should shares be redistributed from inactive accounts to those with no or small shares or to new entrants to reduce regulatory discards?**

Shares from inactive accounts should be available for public purchase or distributed to small entities rather than large current shareholders. Inactive shares could be purchased at market price from a quota bank

Inactive shares should be put into a quota bank. They could be used to manage the program more efficiently, like for discard mortality and better conservation of the resource. Also, they

could be made available for use in pilot programs (i.e., commercial/recreational hybrid programs and research).

- **Should future increases to commercial red snapper quota be redistributed to new entrants or small shareholders?**

Increases in quota should benefit current shareholders. The industry already rebuilt the fishery taking on VMS and other burdens, and eventually benefited from those changes making them fully accountable, self-policing, etc. Non-accountable sectors should not benefit with the efforts from those who were and are accountable.

People who were granted fish benefited from being granted fish, and commercial fishermen are not the only folks who should benefit from a rebuilding fishery.

Full retention requirements to address regulatory discards

- **Should the commercial red snapper minimum size limit be removed, requiring commercial fishermen to retain all caught red snapper?**

Remove minimum size limit for the commercial fishery based on the fact that smaller fish are targeted. When they fish by size selection, they use smaller weaker hooks which target smaller fish, and then dead discards become an issue. By removing the size limit, they can use smaller hooks leaving the larger breeding stock in the water.

- **Should the full retention of all commercially caught red snapper be required?**

Full retention seems good as long as it's good for the fish population. Breeding fish may be left in the water which would be good. Throwing back small fish dead is not beneficial.

Full retention may be a bad idea. On the west coast entire fisheries have been completely shut down because of choke species. If there is a species or sub-allocation of a species in a full retention fishery, and all the allocation gets used up, if you interact with that species, all fishing stops. Full retention program would require you to fully retain the species whose fishery is completely closed because of the full retention policy. One bad move in one day can cause a huge problem for everybody making it unlawful to fish at all, as in rockfish in California

A full retention program would have to be thoroughly vetted, phased in with a sun-set. The Council might consider making full retention only effective while the commercial season is open for the specific species is open.

Caps on the Use or Possession of IFQ Shares and Allocation

- **Should caps on the amount of IFQ allocation held by and entity be established?**

The 6% ownership cap put in place represented the largest harvester at the onset of the program. Social engineering by regulators will not provide better management than the free market already has.

Requirements for the Use of Shares and Allocation

- **Should use-it or lose-it provisions be established?**

Shares and allocations should remain in the hands of fishermen, but we should not to have 5 or 6 entities owning the whole fishery in a monopoly situation.

- **Should unused IFQ allocation be allowed to roll-over for use in the following year?**

Rollover, if done well, would serve the primary program goals well. Roll-over should be permitted when a commercial shareholder has issues that make it impossible for fishing to occur. Council will have to constrain what would constitute an emergency, or restrict number of times a person could roll-over allocation. The roll-over should allow fishermen to catch their fish but not artificially manipulate the market by withholding quota into the following year. A derby at the end of the year could be avoided by reducing the roll-over quota by a certain percentage, rather than allowing the entire allocation amount to roll-over.

- **Should a "lease-to-own" provision be considered?**

The guy buying allocation should get credit. He should not have to be dependent on the seller indefinitely. Sooner or later, he should get credit for being the fisherman catching the fish. There should be a time limit for selling your allocation – meaning you can sell you allocation so many years before you have to sell the shares or harvest them yourself.

Use it or lose it, it goes back to regulators being involved in social engineering. Fishermen should negotiate deals with the share owners, not have the government mandating when a person should achieve benefits. These are private transactions, not governmental regulations.

Mid-Year Quota Changes

- **Should a portion of shareholders' allocation be withheld at the beginning of the year if a mid-year quota reduction is expected?**

Instead of withholding every year to adjust for catastrophic events, take out quota at the beginning of the next year; that will meet the program goals far better than an in-season closure and the loss will be distributed better across all participants. If there is a stock assessment year is coming up and people are concerned about a reduction mid-year there may be a race to fish in the beginning of the year.

Enforcement of all Reef Fish Landings

- **Should all commercial reef fish vessels be required to hail-in, even if they are not landing IFQ species?**

If hail in/hail out would solve the problem, it should be required. Operators following the rules would not have a problem with the new requirement. Operators fishing for other species legally would not likely have a problem with it either. The only people that would object to the new requirement are likely to be those doing illegal things.

Only permit holders should weigh in on this issue, others' opinions shouldn't matter.

Additional Issues

Inter-sector trading should not be allowed.

Red snapper is rebuilding by using the IFQ program. It is effective and meeting its goals of reducing overcapacity, minimizing derby conditions, and rebuilding the resource. The program does not need wholesale changes to add in efficiencies and complications. Overharvesting has not been occurring. Improvements should promote accountability, assist in achieving OY, and collaboration between user groups. New entrants can buy into the program as is, and management is best left in the hands of the shareholders.

Council member and staff:
Greg Stunz
Emily Muehlstein
Karen Hoak

Mobile, AL
March 17, 2015

Program Eligibility Requirements

- **Should the future transfer of shares be restricted to only shareholder accounts that hold a valid commercial reef fish permit?**

No: Fishermen have invested in shares, and need the flexibility, such as in the event of accidents and other incidents.

Yes: Only if you have a commercial reef fish permit should you be able to buy shares, catch, and land fish.

- **Should accounts with shares but without a commercial reef fish permit be allowed to harvest the allocation associated with those shares?**

No:

- Commercial reef fish permit is needed for landing because they would have VMS and follow landing procedures. Need enforcement to sanction poaching vessels.
- This would allow more commercial fishing participants, and commercial reef fish permits are under a moratorium.
- This would open the commercial fishery to recreational participation.

➢ **Should shareholders not actively engaged in fishing be allowed to transfer their shares and allocation to other shareholders?**

Yes: Support for a use-it or lose-it provision. *[Use* referred to not withholding allocation from being landed.] Must use the shares you have, or a percentage of the shares you have. Catching optimum yield is the goal, so allocation needs to be used.

Inactive Accounts and Redistribution of IFQ Shares to Address Regulatory Discards

➢ **Should the closure of accounts and redistribution of shares in accounts that have never been activated in the current system be allowed if the accounts are not active by a specified date?**

Yes:

- But, there is a difference between accounts that have never been active and accounts not being used for a year or two. Those accounts that have never been active should have shares redistributed.
- Notice should be given now that shares in accounts that have never been active will be redistributed at the 10-year anniversary of the program.
- Only for accounts that have never been active or inactive for a decade should redistribution be considered.

➢ **Should shares be redistributed from inactive accounts to those with no or small shares or to new entrants to reduce regulatory discards?**

No:

- Redistributed shares should not just be given away. Shareholders earned their fish by landings history or they have invested in buying shares. Supports redistribution for discards.
- If additional fees are considered for the commercial sector, consider using value from the shares to be redistributed from inactive accounts.
- For redistribution have NMFS establish permit banks to sell allocations to increase cost recovery funds for law enforcement.
- Providing for new entrants is not a concern at this time.
- Distribute shares in equal amounts or according to their share percentage, but only among snapper IFQ shareholders. Providing allocation for red snapper discards in one area means less allocation and more discards in other areas. It may be possible to exchange allocation between species.
- Shares should stay within the red snapper fishery.

Full retention requirements to address regulatory discards

- **Should the commercial red snapper minimum size limit be removed, requiring commercial fishermen to retain all caught red snapper?**

No:

- There may not be a market for smaller fish.
- Non-IFQ commercial fishermen catch red snapper, too. So, there would not be sufficient allocation.

Yes: There is a market for small fish and good prices for them, so support for eliminating minimum size limit, but not full retention.

- **Should the full retention of all commercially caught red snapper be required?**

No:

- Should be fishermen's choice for what kind of fish they want to keep.
- People may not be willing to sell their allocation(s).

Yes: Support for the idea but difficult to do.

Caps on the Use or Possession of IFQ Shares and Allocation

- **Should caps on the amount of IFQ allocation held by and entity or landed by a single vessel be established?**

No: Opposed to caps on annual allocation for vessels or a single entity.

- **Should a cap on the amount of shares or allocation a non-reef fish permitted shareholder may possess be established?**

No: This would affect investment in the fishery among related accounts.

Requirements for the Use of Shares and Allocation

- **Should restrictions be placed on the sale of IFQ allocation and shares?**

No:

- Selling allocation should be allowed.
- Selling allocation means the fish still get caught. What does it matter who catches them?

Mid-Year Quota Changes

- **Should a portion of shareholders' allocation be withheld at the beginning of the year if a mid-year quota reduction is expected?**

No:

- Quota increases and decreases should only happen at the beginning of the year. Do not allow a mid-year quota increase or decrease, for either the commercial or recreational sectors. Distribution of quota at the beginning of the year only brings stability to the market.
- Another person agreed, but felt quota changes should occur at the beginning of the year for the commercial sector, only.

Enforcement of all Reef Fish Landings

- **Should all commercial reef fish vessels be required to hail-in, even if they are not landing IFQ species?**

Yes:

- Provided the IFQ participants are not charged for it.
- This would protect IFQ program participants.
- But, this could burden law enforcement resources, so their funding needs to be increased.

Additional Issues

General comments

- Happy with current program, so why change it?
- The discard problem is because of too many red snapper in certain areas of the Eastern Gulf.
- None of the proposed changes will help with the program or the recovery of the fishery.
- To do many of these changes NMFS would need to identify related accounts who are actively involved in fishing and who are investors.

Council member and staff:
David Walker
Ava Lasseter
Charlotte Schiaffo

10 people attended including:
Randy Boggs
Susan Boggs
Miranda Eubanks
Roy Howard
Larry Huntley
Tommy Land
Tom Steber
Brian Swindle
Carolyn Wood

Panama City, FL
March 18, 2015

Program Eligibility Requirements

- **Should the future transfer of shares be restricted to only shareholder accounts that hold a valid commercial reef fish permit?**

No:
- Everyone should have a chance to enter the program.
- Once you let the public buy shares, no restrictions should be put on their ability to receive full compensation for the use of their shares.
- Should require a commercial reef fish permit, except could impact fish houses' ability to keep allocation on hand for vessels that offload.
- Requiring shareholders to have a commercial reef fish permit will keep the fish in the fishery, but that would result in fishermen selling their boats and keeping their permits, resulting in a de facto fleet reduction.
- The program is working well, so why change it?

Yes:
- The program is working great, but there are issues that need to be addressed on permit eligibility.
- Support the requirement to have a reef fish permit; reducing overcapacity is a goal of the program, so fleet reduction would be beneficial.

- **Should accounts with shares, but without a commercial reef fish permit be allowed to harvest the allocation associated with those shares?**

No: Attendees do not support this suggestion.

- **Should shareholders not actively engaged in fishing be allowed to transfer their shares and allocation to other shareholders?**

Yes:
- There was support because fish houses need fish for bycatch and small shareholders, and it would benefit retiring fishermen.
- Leasing helps reduce discards, helps other fishermen, and those who do not hold shares.

Inactive Accounts and Redistribution of IFQ Shares to Address Regulatory Discards

- **Should the closure of accounts and redistribution of shares in accounts that have never been activated in the current system be allowed if the accounts are not active by a specified date?**

Yes: Attendees support this suggestion.

- **Should shares be redistributed from inactive accounts to those with no or small shares or to new entrants to reduce regulatory discards?**

No:
- Does not support giving new entrants shares in the red snapper IFQ program. If going to give away shares, put a moratorium on selling shares to anyone.
- Historical participants should be considered for the distribution of shares from inactive accounts.

Yes:
- It would help new entrants and small shareholders. There is a need for small shareholders to obtain more shares.
- Support redistribution of shares for small shareholders to account for regulatory discards.
- To do so, set up a pool of fish with the quota from inactive accounts, from which small shareholders and new entrants can buy shares. (Based on the Pacific Northwest federal fishery program.)
- Qualifiers for small shareholders and new entrants would be used for a federal IFQ bank.
- Some form of cap needs to be considered on the amount financed to new entrants and small shareholders.

Suggested criteria of a new entrant or small shareholder:
- Must have a reef fish permit and would not be allowed to lease fish.
- Don't prohibit a new entrant or small shareholder to lease their quota.
- New entrants and small shareholders are those who own shares equal to or less than 2,500 lbs.
- Own or lease a fishing vessel, and actively engage in reef fishing for a minimum of 24 months.

Full retention requirements to address regulatory discards

➢ **Should the commercial red snapper minimum size limit be removed, requiring commercial fishermen to retain all caught red snapper?**

No:
- Sounds like a good idea, but hard to execute and impractical.
- Discard mortality is a by-product of not having enough allocation.

Yes:
- Eliminate it; there is no biological reason to have a 13" size limit.
- Create a quota bank for fishermen to use for smaller fish that would now be retained, which would offset and reduce the dead discard uncertainty buffer [that is built into the red snapper quota].

➢ **Should the full retention of all commercially caught red snapper be required?**

No:
- There would be no way to stay within the available allocation. Discard mortality is a by-product of not having enough allocation.
- Have tried this in trawling, when fishermen have no control of what is coming over the rail.

- Would not be possible if had a choke species closure, where capture of another species is prohibited.

Yes: Full retention could work if increase the quota substantially (to 18mp).

Caps on the Use or Possession of IFQ Shares and Allocation

➢ **Should caps on the amount of IFQ allocation held by and entity or landed by a single vessel be established?**

No:
- This would negatively affect the market.
- Allocation caps would be detrimental to the industry because wholesalers need a reliable, steady supply of product.
- Caps can be circumvented.

➢ **Should a cap on the amount of shares or allocation a non-reef fish permitted shareholder may possess be established?**

No: Not necessary at this time. Such a provision could be needed in future, and if so would be addressed then.

Requirements for the Use of Shares and Allocation

➢ **Should use-it or lose-it provisions be established?**

No: Unless distributed allocation is not being harvested, this is not needed.

➢ **Should restrictions be placed on the sale of IFQ allocation and shares?**

No.

➢ **Should unused IFQ allocation be allowed to roll-over for use in the following year?**

No:
- This could complicate the process and harm the market.
- For conservation reasons, it's okay to leave a little extra fish in the water at the end of the year.
- This could affect the quota for the following year.

Yes: Could establish a provision for people who buy allocation ("lease fish") to have a buffer of 10% of their on-board poundage. Those accounts would start with a negative balance at the beginning of the next year.

➢ **Should a "lease-to-own" provision be considered?**

No:
- Concern that shareholders would be forced to give up their shares.
- Could reduce availability of quota to new entrants and small shareholders because shareholders don't want to give up shares.

- Some of this may already be going on among private entities. NMFS should not be a part of these private business transactions.

Yes: If we could track new entrants or small shareholders leasing allocation, give those who regularly buy allocation priority access to any new or unused fish that become available.

Mid-Year Quota Changes

- **Should a portion of shareholders' allocation be withheld at the beginning of the year if a mid-year quota reduction is expected?**

No:
- This could hurt small fishermen.
- If a quota decrease occurs, deduct it from the following year's quota.

Enforcement of all Reef Fish Landings

- **Should all commercial reef fish vessels be required to hail-in, even if they are not landing IFQ species?**

No: Recreational sector does not have such a requirement.

Yes:
- But, don't require reef fish vessels not carrying IFQ species to land at approved locations. Do require them to declare the landing sites.
- Require a simple landing notification without species information, and then do random checks instead. This keeps honest people honest and less honest people a little less dishonest.

Additional Issues

General comments
The IFQ program has stabilized the fishery.
The current IFQ program is working for now.
No need for Amendment 36, program is working fine.
There would be negative consequences in further micromanaging the fishery.

Price caps on selling allocation
- Establish a cap to the price of allocation ("lease price") of not more than 50% (or some other value) of the ex-vessel price. The rationale is it would possibly slow down the people (brokers) who are buying allocation strictly to resell the allocation to others.
    - Could have a problem because you don't always know the ex-vessel price.
- Opposes putting caps on the sale of allocation ("lease prices") because the system is based on the free market and the prices could only be supported by whatever the leasee is willing to pay.
- It hurts everyone if a cap is put on allocation price because it hurts the supply.

- Price controls established by the government have never worked.
- Price controls can be easily circumvented.

Grace period for acquiring allocation

- If bringing in red snapper without allocation, allow vessels to obtain the allocation to cover the poundage within a 30-day time limit with a maximum amount of 200 lbs. If can't obtain allocation, the value of the fish is forfeit and turned over to NMFS. Limit the frequency this provision could be used. Or, prohibit a vessel from returning to fish until allocation has been acquired to cover fish caught on a previous trip.

Council member and staff:
Pamela Dana
Ava Lasseter
Charlotte Schiaffo

21 people attended including:
Greg Abrams
Walter Akins
Jerry Anderson
Dean Cox
Mike Eller
Frank Gomez
Chuck Guilford
John Harris
H.R. Hough
Gary Jarvis
Bart Niquet
Chris Niquet
Michelle Sempsrott
Russell Underwood
Mike Whitfield

St. Petersburg, FL
March 24, 2015

Program Eligibility Requirements

- **Should the future transfer of shares be restricted to only shareholder accounts that hold a valid commercial reef fish permit?**

No:

- This item originated from a previous concern for a problem that has not materialized. Fishermen were concerned that shareholders would "sit on" and not fish distributed allocation.
- Realization the fishermen are aging, and after 5 years the fishery opened up, without issue. Changing things around now will add an element of uncertainty into the program.
- Status quo adds stability to the program.
- Program is a market-based fishery and is currently reducing overcapitalization. The program is working as it should.
- The fishermen are seeing problems (bycatch in the eastern gulf) and fixing the problems themselves. They are being proactive (i.e., industry-sponsored quota banks have been established for bycatch).
- As long as the shares are available on the open market, it is acceptable. It does not matter who owns the shares.

- **Should accounts with shares but without a commercial reef fish permit be allowed to harvest the allocation associated with those shares?**

No:

- Allowing someone without a reef fish permit to land allocation makes no sense. It would be hard to enforce. They would need to have VMS, and all other fishing requirements. It would disassemble the whole program. Too confusing. To land commercial fish, they would be required to have everything the commercial fishermen need to have.
- Promotes overcapitalization.
- Does not align with the goals of the program.
- Does not align with the purpose and need of Amendment 36.
- Provisions are already in place that define a commercial fishing boat.
- Reef fish permits are under moratorium for a good reason.

- **Should shareholders not actively engaged in fishing be allowed to transfer their shares and allocation to other shareholders?**

Yes:

- It promotes flexibility in the program and helps people who do not have allocation to be able to buy it for bycatch purposes.
- Fishermen depend on people with allocation who are not fishing to support other fishermen's fishing and bycatch.
- Fishermen need to be able to buy allocation ("lease") from someone who has some.

- If someone is required to fish their allocation, they will do so. Then, others will no longer be able to buy that allocation ("lease") from them, which will increase dead discards.
- Businesses have built stable business plans, and if you start to restrict one component of it, then you hurt the business plan.

Inactive Accounts and Redistribution of IFQ Shares to Address Regulatory Discards

➢ **Should the closure of accounts and redistribution of shares in accounts that have never been activated in the current system be allowed if the accounts are not active by a specified date?**

Yes:

- Close accounts after a reasonable period of time. In the interim, distribute the allocation among the current shareholders proportionately. Shareholders of the inactive accounts would be notified, but in the meantime, the allocation would not be wasted. Distributing the allocation would make people take action in activating their accounts.
- Notify inactive account shareholders that shares or allocation will be redistributed to established industry quota banks.

➢ **Should shares be redistributed from inactive accounts to those with no or small shares or to new entrants to reduce regulatory discards?**

No:

- If we are going to define a new entrant, use definition from the loan program.
- New entrants should not be given preferential treatment. Redistribute shares from inactive accounts proportionately among the grouper IFQ shareholders (assists with bycatch).

Full retention requirements to address regulatory discards

➢ **Should the commercial red snapper minimum size limit be removed and commercial fishermen be required to retain all caught red snapper?**

No:

- Keep status quo.
- Doing both of these together would reduce discards. Of all the suggestions in the document, these are the only two that reduce discards. If this could reduce discards substantially, it could increase allowable yield by reducing the discard assumption in the assessment process. Current mortality assumption is 20%. This proposed mortality assumption is 100%.
- Full retention could create problems with SPR.
- If you want to decrease discards, you must promote the transferring of allocation (leasing).
- The fishermen are using allocation sparingly. They are using it for bycatch (eastern gulf), and not for targeting red snapper. They are managing the bycatch.

Yes:

- For those who want electronic monitoring, full retention should speed up the implementation process.
- To get rid of discards, every fish caught needs to be landed and sold. Fish caught above allocation should be kept and sold with the money from the sale of the fish going into a government account. The fisherman has 30 days to find allocation with no fine/penalty. If

he can't cover the allocation, the government gets the funds which go towards the costs of the program or improvements in the program.

-

Caps on the Use or Possession of IFQ Shares and Allocation

➢ **Should new caps on the use or possession of IFQ shares and allocation be established?**

No:

- No caps should be established. All allocation should be available for sale to fishermen and get fished. Don't muck up the system.
- Caps do not promote conservation.

Requirements for the Use of Shares and Allocation

➢ **Should use-it or lose-it provisions be established?**

No:

- Supports being able to use the allocation distributed from one's shares, or to sell it (allocation) to other fishermen that have a reef fish permit.
- Every year, some allocation is left on the table, and they don't want to lose it through additional restrictions.

➢ **Should restrictions be placed on the sale of IFQ allocation and shares?**

No:

- Investment in the program has been heavy by fishermen. Why should they have restrictions imposed on them?
- It does not help conservation.
- It would restrict new entrants and those who are retiring and getting out of the fishery.
- A person might have more than one account, and restrictions would prevent him from transferring allocation between accounts.
- It does not align with the goals of the IFQ program.
- Recent discussions of restricting allocation have resulted in people fishing their allocation instead of selling it ("leasing") because they are afraid of losing their shares if they don't fish them.

➢ **Should unused IFQ allocation be allowed to roll-over for use in the following year?**

No:

- Allocation must be used by the end of the year or you lose it. Keep status quo.
- Unused allocation builds the stock for the following year, which increases the quota. It's a good conservation method for the future.

Yes: Banking and borrowing may be an appropriate use for rollover of unused allocation, for the individual or the fleet as a whole.

➢ **Should a "lease-to-own" provision be considered?**

No:

- If a person was forced to sell their shares after selling their allocation ("leasing"), they would stop selling allocation in order to keep their shares.

- The government should not be involved in telling individuals they have to participate in a lease-to-own provision. The decision should be between the business partners as a private negotiation.
- An IFQ is an economic and conservation tool. This proposal does not promote conservation and it devalues allocation and shares.
- New entrants have to buy allocation ("lease"). New entrants do not need the government to intervene for them. No welfare program is needed. Government loan program would be acceptable for fishermen or new entrant to invest in the fishery.

Mid-Year Quota Changes

➢ **Should a portion of shareholders' allocation be withheld at the beginning of the year if a mid-year quota reduction is expected?**

No:

- This would promote instability in the fishery and in business operations.
- NMFS needs to be accountable for making quota changes before the start of the fishing year.

Enforcement of all Reef Fish Landings

➢ **Should all commercial reef fish vessels be required to hail-in, even if they are not landing IFQ species?**

Yes.

Additional Issues

General comments

- Add more species to the IFQ program to generate more cost recovery fees.
- Raise the crew size requirement for dually permitted vessels.
- Implement a federally backed program for IFQ share purchases.
- Establish some type of centralized management account (through a fish house or some umbrella entity) to hold allocation, and a fisherman can access it to get allocation through the fish house or entity.
- The Gulf Council should maintain management of the IFQ system and should vehemently oppose any scheme to take this authority away from them.
- Why fix something if it isn't broken? Reef Fish Amendment 36 should be scrapped.

Accounts and allocation

- Allocation needs to be in the account before the 3-hour notice. There are problems in the system where fish are being confiscated and fines levied because allocation is being transferred after they have given their 3-hour notice of hailing-in. There needs to be help with these issues.
- Develop a provision to allow fishermen to purchase allocation after landing to cover fish already caught. For example, establish a grace period to find allocation needed for their catch. (3 days proposed.) This would provide needed flexibility.

Council member and staff:

John Sanchez
Doug Gregory
Karen Hoak
Ava Lasseter

12 people attended including:
Glen Brooks
Bill Tucker
Steve Maisel
Jim Clements
Eric Brazer
Brad Gorst
Brian Lewis
Frank Chivas
Joseph Abdo
Cody Chivas

APPENDIX D. GOALS OF THE IFQ PROGRAMS

Red Snapper IFQ Program (Amendment 26; GMFMC 2006)

The purpose of the IFQ program proposed in this amendment is ***to reduce overcapacity in the commercial fishery and to eliminate, to the extent possible, the problems associated with derby fishing***, in order to assist the Council in achieving OY. In a 1999 review of the effectiveness of IFQ programs worldwide, the National Research Council concluded such programs are valuable in addressing these two long-standing fishery problems (NRC 1999). Case studies describing the effects of existing IFQ programs are provided in Appendix G of that publication. The harvest privileges provided by IFQ programs are intended to give fishermen a long-term interest in the health and productivity of the fishery and, thus, an incentive to conserve it for the future. By eliminating the incentive to over invest in the fishery, these privileges eliminate the incentive to race for fish. IFQ programs are generally effective in controlling exploitation, reducing the incentive to fish during unsafe conditions, improving fishery profitability, and extending the availability of fresh fish products to consumers. In some cases, these programs also have been shown to increase product quality by improving fishing and handling methods by allowing fishermen greater flexibility in operations. The proposed IFQ program is intended to help the Council address overfishing by reducing the rate of discard mortality that normally increases with increased fishing effort in overcapitalized fisheries (NRC 1999; Leal et al. 2005). IFQs provide the opportunity to better utilize fishing and handling methods and reduce bycatch of non-targeted species. Improving catch efficiency may also result in a decrease in regulatory discards of red snapper and other reef fish species by allowing fishermen the choice on when and where to fish. Additionally, the slower paced fishery anticipated under the IFQ program will support fewer fishermen operating over a longer season.

Grouper-Tilefish IFQ Program (Amendment 29; GMFMC 2008)

The purpose of this amendment is to rationalize effort and reduce overcapacity in the commercial grouper and tilefish fisheries in order to achieve and maintain optimum yield (OY) in these multi-species fisheries. Rationalization is defined as "a management plan that results in an allocation of labor and capital between fishing and other industries that maximizes the net value of production" (Fin 2003). Terry and Kirkley (2006) defined overcapacity as the difference between harvesting capacity and a management target catch, given the stock conditions associated with that target catch. Excess capacity is defined as the difference between harvest capacity and actual harvests.

Rationalizing effort should mitigate some of the problems resulting from derby fishing conditions or at least prevent the condition from becoming more severe. Reducing overcapitalization should improve profitability of commercial grouper fishermen. Collectively, working conditions including safety at sea should improve and bycatch in the tilefish and grouper fisheries should be reduced, and a flexible and effective integrated management approach for tilefish and the grouper complex and tilefish should follow. This amendment evaluates several management programs that could be capable either independently or in combination of accomplishing the objectives specified above.

References

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National Research Council (NRC). 1999. Sharing the fish: Toward a national policy for individual fishing quotas. Washington, DC: National Academy Press. 422 pp.

Terry J.M. and J.E. Kirkley (eds). 2006. Assessments of excess fishing capacity in select federally-managed commercial fisheries – National Marine Fisheries Services.

APPENDIX E. CONCLUSIONS FROM THE RED SNAPPER AND GROUPER-TILEFISH 5-YEAR REVIEW

The Red Snapper Individual Fishing Quota (IFQ) program 5-year review was completed by NMFS and Council staff (GMFMC and NMFS 2013). The conclusions from the review are provided below.

The original purpose and need defined in Amendment 26 (GMFMC 2006), reads as follows:

> *The purpose of the IFQ program proposed in this amendment is to reduce overcapacity in the commercial fishery and to eliminate, to the extent possible, the problems associated with derby fishing, in order to assist the Council in achieving OY.*

National Standard 1 of the Magnuson-Stevens Act mandates conservation and management measures prevent overfishing and achieve OY from a fishery. OY is defined as the amount of fish that will provide the greatest overall benefit to the nation, particularly with respect to food production and recreational opportunities. OY must take into account the protection of marine ecosystems and is prescribed based on the maximum sustainable yield (MSY) from the fishery, as reduced by any relevant economic, social, or ecological factors. In practice, the commercial sector's share of the quota is equivalent to the sector's share of OY for the red snapper fishery. Commercial harvests that are equal or very close to the quota without exceeding it would be consistent with the prevention of overfishing and achievement of OY mandated by the Magnuson-Stevens Act.

The RS-IFQ program 5-year review (GMFMC and NMFS 2013) evaluated the progress of the program towards achieving its goals and objectives. The performance of the RS-IFQ program in achieving OY was assessed by measuring its ability to constrain harvest at or below the quota while allowing RS-IFQ participants to harvest as much red snapper as possible.

Recommendations from the review have been presented to the Council and incorporated into the potential changes included in this scoping document. As part of the process of considering program modifications, the Council may wish to evaluate modifications to continue progress towards the program's goals and objectives, to improve program performance, participant satisfaction, and to continue assisting the Council in achieving OY.

The conclusions of the RS-IFQ program 5-year review[34] are:

Participant Consolidation and Overcapacity

> Conclusion 1: The RS-IFQ program has had moderate success reducing overcapacity, however economic analyses indicate that additional reductions in fleet capacity are still necessary.

[34] The full supporting summaries for each conclusion are provided in Appendix B. The entire Red Snapper IFQ Program 5-year review may be accessed at http://www.gulfcouncil.org/docs/amendments/Red%20Snapper%205-year%20Review%20FINAL.pdf

Achievement (or Harvesting) of Optimum Yield

Conclusion 2: The RS-IFQ program has been successful in reducing quota overages, which is consistent with the achievement of OY. Landings have averaged greater than 95% of the commercial quota; however, many inactive accounts remain and account for as much as 1.5% of the commercial quota.

Mitigating the Race to Fish and Safety at Sea

Conclusion 3: The RS-IFQ program was successful at mitigating the race to fish providing fishermen with the opportunity to harvest and land red snapper year-round. Inflation-adjusted share, allocation, and ex-vessel prices increased, indicating that fishermen were successfully maximizing profits and had increased confidence in the RS-IFQ program. Safety at sea has increased and annual mortalities related to fishing have declined since the RS-IFQ implementation. [According to Boen and Keithly (2012),] medium and large shareholders perceive that the RS-IFQ program has improved safety at sea.

Biological Outcomes

Conclusion 4: The implementation of the RS-IFQ program coupled with revisions to the red snapper rebuilding plan and reductions in quota and the commercial size limit, have all contributed to lower commercial fishing mortality rates and reduced discards. The RS-IFQ system has also prevented commercial quota overruns, which were frequent prior to RS-IFQ implementation. Discards continue to be high in the eastern Gulf where a large percentage of legal-sized red snapper are discarded by fishermen due to a lack of allocation.

Social Impacts

Conclusion 5: Large shareholders and western Gulf shareholders are generally more supportive of the RS-IFQ program than small to medium shareholders and those from the eastern Gulf. Entry and participation in the red snapper fishery is now more difficult and costly due to the increased costs of shares and allocation. Consolidation has resulted in less competition for harvest and higher revenues per trip. Crew sizes are smaller, but the ability to hire and keep stable crews has improved. The increase in the number of shareholders not landing any fish has led to perceptions that many are profiting from the program at the expense of hard-working fishermen.

Enforcement and Program Administration

Conclusion 6: RS-IFQ participants are generally satisfied with the IFQ online system and customer service when contacting NMFS and the 24-hour call service for advance landing notifications. Vessel monitoring systems, notification requirements, and random dockside inspections aid enforcement in monitoring program compliance; however, a variety of enforcement violations have been identified. Compliance has improved since RS-IFQ program implementation but additional enforcement efforts may be necessary to deter violations. IFQ program expenses currently exceed the 3% cost recovery collected for program administration, research, and enforcement.

References

Boen, C. and W. Keithly. 2012. Gulf of Mexico Red Snapper IFQ Program: Survey Results and Analysis.

GMFMC. 2006. Final amendment 26 to the Gulf of Mexico reef fish fishery management plan to establish a red snapper individual fishing quota program, including supplemental environmental impact statement, initial regulatory flexibility analysis, and regulatory impact review. Gulf of Mexico Fishery Management Council. Tampa, Florida. http://www.gulfcouncil.org/Beta/GMFMCWeb/downloads/Amend26031606FINAL.pdf

GMFMC and NMFS. 2013. Red snapper individual fishing quota program 5-year review. Jointly prepared by Gulf of Mexico Fishery Management Council and NMFS Southeast Regional Office. Tampa and St. Petersburg, FL. http://www.gulfcouncil.org/docs/amendments/Red%20Snapper%205-year%20Review%20FINAL.pdf

The Grouper-Tilefish Individual Fishing Quota (IFQ) program 5-year review was completed by NMFS and Council staff (GMFMC and NMFS 2018). The conclusions from the review are provided below.

The original purpose and need defined in Amendment 29 (GMFMC 2008), reads as follows:

> *The purpose of this amendment is to rationalize effort and reduce overcapacity in the commercial grouper and tilefish fisheries in order to achieve and maintain optimum yield (OY) in these multi-species fisheries.*

This section summarizes the main conclusions of this initial review of the grouper-tilefish individual fishing quota (GT-IFQ) program and discusses the progress made towards achieving the stated goals and objectives of the program. In addition, the section includes recommendations made by the Gulf of Mexico Fishery Management Council (Council), its scientific and statistical committees (Standing and Socioeconomic SSCs) and advisory panel (Ad Hoc Red Snapper and Grouper-Tilefish IFQ Advisory Panel).

Data Collection and Reporting

- The collection of share and allocation prices has greatly improved since the addition of transfer reasons. However, gaps still exist in the data. Additional measures such as mandatory price reporting and further limiting the range of prices that can be entered may be needed.

- Different data collection programs, which are run for different purposes, have led to duplicative reporting and data discrepancies. Efforts are under way to reduce the data inconsistencies between the IFQ, coastal logbooks, and trip ticket data collection programs.

Participation and Operational Changes

- Stochastic frontier analyses indicate that following the implementation of the GT-IFQ program, fishing capacity and overcapacity have declined. Capacity utilization has increased and the technical efficiency of the fleet has increased for remaining vessels.

- The GT-IFQ program, in conjunction with other regulations, especially the enactment of a bottom longline (BLL) endorsement, has resulted in consolidation and efficiency gains within the BLL and vertical line (VL) sectors, which have seen a reduction in active vessels by 48% and 33%, respectively. However, further consolidation is possible as fishing capacity remains large relative to the available quotas.

Share and Allocation Caps

- Based on Gini coefficient estimates, the distributions of shares as well as landings by share category at the lowest known entity level have changed little if at all since the IFQ programs were implemented.

- Market power analyses concluded that market power does not exist in any of the markets for landings, shares, or annual allocation and that economies of scale are not being exhausted, i.e., average costs of production are not being minimized.

- Existing share and annual allocation caps are not constraining landings. Retaining the current share and annual allocation caps would still prevent participants from exercising market power and would not preclude businesses from achieving economies of scale under current market conditions. Additional flexibility from expanding the size of some of the smaller caps would not create additional risk of market power being exercised, and would provide even more flexibility for the type of consolidation that would improve cost efficiency.

Share, Allocation, and Ex-Vessel Prices

- Analyses of share and allocation prices have been hindered by missing or erroneous (e.g., under-reported values such as $0.01 per pound) data. The collection of accurate share and allocation prices continue to be a challenge.

- Although grouper ex-vessel prices increased during the review period, the introduction of the GT-IFQ program does not appear to have an appreciable effect on ex-vessel prices for Gulf groupers.

- The flexibility afforded by the GT-IFQ program has improved the profitability of fishing operations. Fishermen are able to reduce operating costs, thereby improving net revenues

Catch and Sustainability

- The GT-IFQ program has provided year-round fishing opportunities to participating commercial fishermen for all grouper and tilefish species included in the program.

- Gag (GGM) and red grouper (RGM) multi-use shares were not as effective as anticipated. As a result, the program could be streamlined by eliminating GGM and RGM shares and distributing red grouper and gag shares exclusively as red grouper and gag, respectively.

- Multi-use provisions for other shallow-water grouper (SWG) and DWG and overage provisions for all GT-IFQ categories should be maintained as they effectively contributed to reducing discards of GT-IFQ species.

- The GT-IFQ program has successfully met its objectives relative to discard reduction for red grouper. After the implementation of the GT-IFQ, red grouper discards and discard ratios significantly decreased across the Gulf of Mexico (Gulf) and for all gear types. However, due to a significant quota reduction, gag discards and discard ratios increased in 2011 but declined afterwards as the gag quota increased.

Safety-at-Sea

- The GT-IFQ program has successfully met its objectives relative to improving the safety-at sea of participating commercial fishermen.
- The GT-IFQ has allowed fishermen to select more favorable weather conditions to plan fishing trips and has resulted in significant decreases in the number of fatalities (Marvasti and Dakhlia 2017).

- Safety-at sea improvements were corroborated by which were corroborated by survey responses provided by captains and crewmembers

New Entrants

- Promoting new entrants may seem inconsistent with the program goal of reducing overcapacity. However, new entrants are often participants in the fishery, e.g., crew and hired captains who do not own shares but could buy allocation.

- Fostering access by new entrants would be consistent with the program objectives. Loan programs, share redistributions and quota banks could be considered.

Monitoring and Enforcement

- Seized annual allocation cannot be deducted from the shareholder's account before settlement of the case. Seizures may not be the strongest deterrent from violation of IFQ regulations because of the lengthy delay between the seizure and the adjudication of the citation.

- Updates to the Southeast Region summary settlement schedule to allow for greater penalties in relation to red snapper violations improved the enforcement of the red snapper (RS)-IFQ program. A similar approach could be considered for the GT-IPQ program.

Administration and Cost Recovery

- During the review period, collected cost recovery fees have fully funded the GT-IFQ program (including enforcement activities and salaries and benefits of staff working on the program).

- Changes to the administration of the program, including the provision of outreach material, are enacted on an as needed basis. Several administrative changes have been implemented during the review period, e.g., improvements to the reporting of share and allocation transfer prices.

Program Duration

- GT-IFQ shares are issued for 10 years, but they will be renewed if not rescinded, limited, or modified. Longer duration is more conducive to longer term planning and conservation.

- To promote the full utilization of the available quotas, the Council has revoked IFQ shares from non-activated accounts, i.e., accounts possessing shares but none of the shares or annual allocation associated with the shares has been landed or transferred to another account since 2010.

References

GMFMC. 2008. Final Amendment 29 to the reef fish fishery management plan – effort management in the commercial grouper and tilefish fisheries including draft environmental impact statement and regulatory impact review. Gulf of Mexico Fishery Management Council. Tampa, Florida. http://www.gulfcouncil.org/Beta/GMFMCWeb/downloads/Final%20Reef%20Fish%20Amdt%2029-Dec%2008.pdf

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APPENDIX F. ADVISORY PANEL MEETING SUMMARIES

This section includes the summary reports from advisory panel meetings that addressed modifications to the commercial individual fishing quota (IFQ) programs. The summaries from the following meetings are included:

- Ad Hoc Red Snapper IFQ Advisory Panel (November 5-6, 2013)
- Reef Fish Advisory Panel (October 4-5, 2016; only recommendations regarding commercial IFQ program modifications are included)
- Ad Hoc Red Snapper/Grouper-Tilefish IFQ Advisory Panel (April 10, 2018)
- Ad Hoc Red Snapper/Grouper-Tilefish IFQ Advisory Panel (November 7, 2018)

Red Snapper IFQ Advisory Panel Meeting Summary
Gulf Council Office
Tampa, FL
November 5-6, 2013

In attendance	Council and Staff	Other attendees
Tom Adams	Doug Boyd	Jim Clements
Billy Archer	Assane Diagne	Sue Gerhart
Buddy Bradham	Ava Lasseter	Cathy Gill
Jason DeLaCruz	Karen Hoak	Buddy Guindon
Bob Gill	Carrie Simmons	Stephen Holiman
John Graham	Steven Atran	Peter Hood
Scott Hickman		Mike Jepson
Chris Horton		Tony Lamberte
David Krebs		Mara Levy
Seth Macinko		Kristen McConnell
Jerry Rouyea		Christina Package
Bob Spaeth		Jessica Stephen
Bill Tucker		Melissa Thompson
David Walker		Donny Waters
Mike Whitfield		Wayne Werner
Troy Williamson		
Jim Zubrick		

The meeting convened at 9 a.m. The AP appointed Bob Gill as Chair and Scott Hickman as Vice-chair. Assane Diagne reviewed the actions and preferred alternatives from Amendment 26, which established the Red Snapper IFQ program. Jessica Stephen summarized the IFQ program's 5-year review conclusions.

The AP then commented on the 5-year review. Overall, members felt that the program is working well and achieving its goals. The AP discussed whether the program goals should be modified or refined, and whether it is desirable to further reduce overcapacity. It was noted that

fewer vessels than the existing fleet can harvest the entire commercial quota, but maximizing economic efficiency is not the goal of the fishery. Other potential goals could address new entrants to replace retiring fishermen, and minimizing discards.

The AP also discussed the 3% recovery fee, with some members wanting IFQ program participants to pay more, and other members pointing out that 3% is the maximum allowable under the Magnuson-Stevens Act, and that the recovery fee was never intended to pay for the program.
Jessica Stephen reviewed the administrative changes NMFS is making to the IFQ programs and gave an overview of the IFQ program structure, to provide context and background information for members of the AP who are not familiar with the program. The AP then reviewed each of the actions from Reef Fish Amendment 26, which established the red snapper IFQ program.

The AP discussed the IFQ program duration and review requirements. Because red snapper is part of a multi-species fishery, members felt the red snapper IFQ program review should be aligned with other IFQ managed species, and passed the following motion:

Motion: That consideration be given to the future consolidation of the red snapper and the grouper/tilefish IFQ program reviews.

Addressing ownership caps, AP members who are IFQ program participants explained that the existing 6% cap reflected the landings of a fleet owner, not an individual fisherman. There was discussion about IFQ shareholders who sell allocation but no longer fish, and concern that putting controls on the market-based system would affect the functioning of the program.

Concerning the eligibility requirements for the transfer of IFQ shares, the AP discussed IFQ shareowners who do not possess a reef fish permit. Some members felt it was important to distinguish the IFQ program as a tool to support the commercial industry rather than being an investment tool. The AP passed the following motion.

Motion: To restrict the future transfer of shares to only those individuals possessing a valid commercial reef fish permit.

Mara Levy reviewed the legal issues and referendum requirements in the Magnuson-Stevens Act which pertain to IFQ programs. It would be necessary to define who would be included in any future referendum.

Following review of the amendment's actions, the AP discussed the conclusions from the red snapper IFQ program 5-year review. The AP noted that discards have decreased in some parts of the Gulf and increased in others. The AP expressed that a full retention fishery is ultimately the direction they need to go in the future, even though the transition has been painful in other regions and it may not be popular in the Gulf. The AP passed the following motion.

Motion: To recommend that the Council consider a regulatory full retention red snapper fishery, with no size limits.

The AP then discussed whether enforcement should be increased at landing sites, and whether the number of approved landing sites should be decreased. No additional recommendations to the 5-year review were made.

The AP reviewed the objectives of the IFQ program. Members discussed the objective to reduce overcapacity, and what vessel capacity the industry should aim for. There has been redirected effort toward other reef fish species, and most vessels target multiple species, not red snapper alone. The AP discussed capping the price at which allocation could be leased, but expressed concerns that shareowners would modify their behavior and use of allocation in ways unintended by the lease price cap. The AP discussed red snapper discards on vessels without sufficient allocation, and passed the following motion.

Motion: That the Council consider alternatives to allow a fisherman that does not have sufficient allocation to cover bycatch, to acquire the needed allocation prior to taking their next trip.

Next, the AP discussed shares held in accounts that have never been activated, alongside the issue of how to procure quota to provide for discards and new entrants to the fishery. The AP considered developing a type of quota set-aside, and expressed the need for the industry to further discuss these issues. The following motions resulted from the discussion.

Motion: Allow redistribution of shares in accounts that have never been activated since 2010, if the accounts are not active by December 31, 2014.

Motion: That the Council establish a quota bank using the shares from the inactive accounts from the previous motion.

Motion: That the shares from the previous motion be utilized for new entrants, to address discards, and to reduce bycatch.

Motion: The Council should develop a new ad hoc Advisory Panel, primarily of commercial red snapper stakeholders, to develop a plan to address new entrants' participation and bycatch, using future red snapper quota increases.

The AP then reviewed the presentation on administrative changes to the IFQ program. The issues raised here mainly concerned the timing and feasibility of landings and required notifications. Currently, a vessel is required to land within a declared 30-minute window, which some members of the AP felt is too short. Recognizing that modifying the landing time window affects how long enforcement officials must wait at the landing site, the AP passed the following motion.

Motion: 1-hour window to land (e.g., if landing at 5 pm, could land any time between 5-6 pm).

Another issue pertained to the required time limit for dealers to report landing transactions. Some members reported that the time requirement is too restrictive around holiday weekends.

Jessica Stephen noted that even if the time period for the transaction was to be extended, fish may not be moved until the dealer submits the landing transaction. The AP then passed the following motion.

Motion: Offloading and landing transaction must occur within 72 hours of landing, excluding holidays and Sundays.
Finally, the issue of offloading after hours was discussed, and the AP passed the following motion.

Motion: If offloading has begun prior to 6 pm, offloading may continue after 6pm if law enforcement authorizes offload after hours

Other issues discussed included support for prohibiting deduction of ice and water weight when completing a landing transaction, and reviewing the number of approved landing locations. The AP then discussed other items outside of their charge.

The AP discussed the potential collection of a resource rent on the commercial red snapper quota but the motion recommending to the Council to consider imposing a resource rent failed. AP members indicated that rents were collected for oil and minerals and that the public should be compensated. It was also indicated that rent collections were not the norm in fisheries and that collections should not be limited to the commercial sector but include all users of the red snapper resource.

A member raised the issue of dual-permitted vessels having a crew size limit when fishing commercially, stating that the rule prohibits these vessels from taking family members fishing. Another member noted that eliminating the crew size restriction would give those with dual-permitted vessels with IFQ shares an unfair advantage. The AP passed the following motion.

Motion: To eliminate the crew size limit for dual permitted vessels fishing under the commercial IFQ system.

The AP then discussed putting additional reef fish species into IFQ programs, noting that effort had been redirected from those species now managed under IFQs, toward these other species. Members felt an IFQ program was important as an effort control for these species. The AP passed the following motion.

Motion: That the Council consider reopening Amendment 33, adding in all applicable reef fish to the IFQ program.

Finally, the AP discussed the concept of "dude fishing", where passengers pay to experience commercial fishing. There was discussion as to whether this would be considered commercial or charter fishing, as well as safety issues. The AP passed the following motion.

Motion: Request that the Council ask staff to develop a discussion paper on an option for commercial dude trips in the Gulf. A commercial dude trip is where a member of the recreational public goes out on a commercial fishing experience.

The meeting adjourned shortly before noon.

Reef Fish Advisory Panel Summary
Gulf of Mexico Fishery Management Council
Gulf Council Conference Room
Tampa, Florida
October 4-5, 2016

Reef Fish AP members present:

Martin Fisher, Chair	Buddy Guindon	Mike Thierry
Patrick Bennett	Scott Hickman	Tom Turke*
Jason DeLaCruz	David Krebs	Ed Walker
F.J. Eicke	Jane Black-Lee	James (Mike) Whitfield
James Eliason	Mike Nugent	Jim Zurbrick

Gulf Council Staff:	**Council Member**:	**Public:**
Steven Atran	Ed Swindell	Joe O'Hop
John Froeschke		Jay Lucas
Karen Hoak		Ed Mancini
Morgan Kilgour		Sharon McBreen
Ava Lasseter		G.P. Schmahl
Jessica Matos		Bob Spaeth
Ryan Rindone		
Camilla Shireman		
Carrie Simmons		

* AP member was absent the morning of the second day. Eight AP members could not attend out of 23 AP members.

Reef Fish Amendment 36A Commercial IFQ Modifications

Staff reviewed the actions and alternatives in the amendment. For Action 1, the AP discussed whether reef fish permitted vessels not carrying IFQ species should be required to hail-in. Some members noted that the hail-in should not be made any more complex than what is currently required of vessels carrying IFQ species. AP members supported the requirement for all reef fish permitted vessels to hail-in. Based on the current preferred alternative in the Modifications to Charter Vessel and Headboat Reporting Requirements amendment, some members stated that the Council seems to be moving towards a mandatory hail-in requirement for for-hire vessels. Thus, this same rule should apply to commercial vessels, too.

By a vote of 13 to 0 and 2 abstentions, the AP recommends in Action 1, that Alternative 3 be its preferred alternative.

Alternative 3: The owner or operator of a commercial reef fish permitted vessel landing any commercially caught, federally managed species from the Gulf is responsible for ensuring that NMFS is contacted at least 3 hours, but no more than 24 hours, in advance of landing. If IFQ species are to be landed, all IFQ advance notice of landings regulations must be followed. If no IFQ species are to be landed, information required with the advance notice of landings will include date, time, location of landing, and vessel identification number (Coast Guard certificate of documentation or state registration number).

The AP discussed Action 2, which addresses the return of inactivated shares to NMFS (Action 2.1) and the proposed methods of redistributing the inactivated shares (Action 2.2). AP members supported the action to return the shares in inactivated accounts to NMFS, but noted that the red snapper program has been in place longer than the grouper-tilefish IFQ program. Thus, there was support for providing additional time for shareholders of inactivated accounts in the grouper-tilefish program to divest of their shares.

By a vote of 12 to 0 and 3 abstentions, the AP recommends in Action 2.1, Alternative 2 Option 2a and Alternative 3, Option 3b as its preferred alternatives.

Alternative 2: For shares in red snapper IFQ program accounts that have never been activated in the current system, return the shares to NMFS:

Option 2a: on the effective date of the final rule implementing this amendment.

Alternative 3: For shares in grouper-tilefish IFQ program accounts that have never been activated in the current system, return the shares to NMFS:

Option 3b: one year following the effective date of the final rule implementing this amendment.

For Action 2.2, the AP discussed the alternatives for redistributing the shares from the inactivated accounts. AP members noted that the amount of quota for each share category was relatively small, and support was expressed for the use of quota banks. Following a failed substitute motion to recommend redistributing the shares to the allocation-only account holders, the AP passed the following motion:

By a vote of 9 to 4 and 2 abstentions, the AP recommends in Action 2.2, that Alternative 3 be its preferred alternative.

Alternative 3: Redistribute the shares from each share category according to the proportion of shares held by shareholders of that share category at the time the shares are redistributed by NMFS.

Action 3 considers providing authority to NMFS to withhold IFQ annual allocation at the beginning of the year, should a quota reduction be expected to occur during that mid-year. One member noted he could support the reduction in quota mid-year if it was for biological reasons, but not for political reasons. Other AP members noted there are problems with managing quota changes mid-year, as the market is affected, especially if changes occur late in the year.

By a vote of 13 to 0 and 2 abstentions, the AP recommends in Action 3, that Alternative 1 be its preferred alternative.

> **Alternative 1**: No Action. Distribute 100% of red snapper and grouper-tilefish annual allocation to IFQ shareholders on January 1 of each year.

Staff reviewed Action 4, which the Council requested to be added to the document at its August 2016 meeting. The action would require IFQ dealers to notify NMFS when a commercial vessel will begin offloading IFQ species. AP members discussed whether this is a regional or Gulf-wide law enforcement issue. Other members responded that it has been a problem among small, mobile operations, rather than at large fish houses. Some AP members were concerned that this would put an additional burden on dealers, including any potential violations from inaccurate or incomplete notifications. Some AP members felt the burden should be on the vessel operators rather than the dealers, but a motion to make this change to the action failed. Another member expressed concern that the details of the notification requirement remain largely unknown and the logistics would be defined by NMFS (e.g., ability to resubmit notification due to delay in offload and window of time for offloading). Additionally, this would be the first-time dealers would have to worry about this aspect of enforcement.

By a vote of 9 to 0 and 6 abstentions the AP recommends in Action 4, that the preferred alternative be Alternative 2.

> **Alternative 2**: Require IFQ dealers to notify NMFS when a vessel will offload IFQ species. The notification must be made at least 1 hour, and no more than 24 hours, before offloading begins.

Ad Hoc Red Snapper/Grouper-Tilefish IFQ Advisory Panel
Meeting Summary
Tampa, FL
April 10, 2018

Advisory Panel Members
Jane Black-Lee
William Copeland
Jason DeLaCruz
Jonathan "David" Floyd
Keith "Buddy" Guindon
Scott Hickman
David Krebs
Harris Pappas
Dennis Parker
Franklin Parker
Nick Ruland
Lisa Schmidt
Jerri Smitko
James "Brian" Swindle
Theodore "Steve" Tomeny
David Walker
Wayne Werner
Jim Zurbrick

Council, Council Staff and NMFS Staff
John Sanchez
Leann Bosarge
Ava Lasseter
Karen Hoak
Assane Diagne

Jessica Stephen
Mike Travis
Matt Freeman

Others
Ryan Bradley
Eric Brazer
Allisha DiLeone
Bob Gill
Brad Gorst
Mike Jepson
Wallace Lee
Christina Package-Ward
Elizabeth Silleck

The Ad Hoc Red Snapper/Grouper-Tilefish IFQ Advisory Panel (AP) was convened April 10, 2018 in Tampa, Florida to provide recommendations to the Gulf of Mexico Fishery Management Council (Council) on the commercial IFQ programs. David Krebs was elected Chair and David Walker was elected Vice-Chair.

Grouper-Tilefish IFQ Program 5-year Review

Staff gave a presentation on the Grouper-Tilefish IFQ Program 5-year Review and summarized the supporting surveys with program participants, dealers, and captains and crew. The AP discussed discards and noted that some concerns are specific to the Red Snapper IFQ program and may not be applicable to the Grouper-Tilefish IFQ program. AP members expressed concern with the red grouper quota increases, noting that there is a problem with the stock as the fleet is not catching the quota. In that case, the AP noted that further reducing fishing capacity for red grouper may not be desirable. The AP then passed the following motion.

> **To endorse the conclusion of the Grouper-Tilefish IFQ program, that the program is meeting its objectives. The AP formally endorses the conclusion of this review in accordance with the MSA.**

The AP discussed the multiple reporting systems in which commercial reef fish fishermen must participate and the difficulties in reconciling the different datasets. The AP then passed the following motion.

> **That staff develop the use of a system using a unique trip ID number (hail out number) to follow the entire transaction from start to finish.**

AP members discussed missing or inaccurate annual allocation and share prices and made the following motion.

> **To support exploration of strategies to improve the collection of accurate share and allocation price data.**

Reef Fish Amendment 36A

Staff reviewed the actions taken in Reef Fish Amendment 36A, on which the Council took final action in April 2017. The amendment is currently under review by the Secretary of Commerce. The AP then passed the following motion, with one in opposition.

The IFQ AP supports the original Reef Fish AP [Oct 4-5, 2016] recommendation to not allow withholding allocation at the beginning of the year in advance of an anticipated quota reduction.

Reef Fish Amendment 36B

Staff reviewed the options paper for Amendment 36B. AP members noted that the IFQ programs have changed the way fishermen fish and discussed several ideas including setting up an exchange. The exchange would assist small operators to find allocation openly, help in adjusting the distribution of allocation to better reflect the geographical distribution of the fish, and support communities where fewer fish are available locally when shares are sold to fishermen in other parts of the Gulf, e.g., when older fishermen retire or pass away. Other AP members did not want the government controlling where shares go and noted that redistribution methods would be a big change to the system and unintended consequences could result.

AP members discussed the potential action to require shareholders to have a reef fish permit. AP members noted that, during the design phase of the program, the commercial industry expressed its opposition to opening the program to people without permits. However, now that permits have not been required for several years, unintended consequences could arise from reinstating the permit requirement. For example, the cost of permits has increased dramatically in anticipation that the requirement may be reinstated, and it will cost new entrants even more to get into the fishery. It was also noted that people would be able to find ways around the permit requirement, if reinstated, such as through the creation of corporations. With four in opposition, the AP then passed the following motion.

> **For program participation, do not require a reef fish permit to be a shareholder thereby retaining the current regulations.**

AP members discussed the small amount of shares held in the non-activated accounts that will be returned to NMFS when Amendment 36A is implemented. AP members expressed interest in improving access to quota for new entrants and discussed that guidelines could be established to define new entrants. AP members noted the importance of industry input in future decisions on quota availability. With four opposed and one abstention, the AP passed the following motion.

> **To create a quota set aside from non-activated accounts to run a NOAA quota bank for addressing commercial discards. NOAA shall create an industry steering committee to advise in the administration of the program.**

AP members further discussed the goals and objectives of the IFQ programs, including the relationship between reducing overcapacity and the need for new entrants in the fishery, and stated that further progress could be made toward reducing capacity and improving safety-at-sea. With two in opposition, the AP passed the following motion.

> **For Goals and Objectives: To retain the goals of reducing overcapacity and improving safety at sea.**

An AP member noted that a lease-to-own provision would be unenforceable and would lead to increased lease prices. With no opposition, the AP passed the following motion.

> **To move Section 2.3.1 (Lease-to-own provision) to considered but rejected.**

Although share and allocation transfers are processed through the NMFS online system, the agreement is a private transaction made between two parties. An AP member who is a new entrant described his difficulty in finding allocation to lease, as he does not personally know many shareholders who may have allocation available. He expressed interest in having a public marketplace where people with shares or allocation available for purchase could be connected with those looking to buy it. NMFS staff suggested that a message board to help connect buyers and sellers of shares and allocation could be considered. With no opposition, the AP passed the following motion.

> **For NMFS to establish an information exchange for shares/allocation of IFQ reef fish. Guidelines for the scope and rules of operation to be established, once approved.**

Concerning quota set-asides, an AP member raised the issue of distributing future quota increases differently than to existing shareholders. With three AP members abstaining, the AP passed the following motion.

> **The AP would like to consider future potential set asides of a percentage of any quota increases, after the Council and the Advisory Panel designs a mechanism with an associated purpose and need.**

AP members discussed the white paper on rents and royalties that was requested by the Council at its January 2018 meeting. The following motion passed with no opposition.

> **To recommend to the Council to include, in developing the white paper on rents and royalties requested by the Council at its January 2018 meeting:**
>
> - **a list of the goals and objectives of Amendment 26 and how imposing royalties would either advance or undermine those goals and objectives, and**
> - **information on the likely effects of royalties on consumer prices for commercially caught red snapper, and on lease prices for allocation along with resulting impacts on new entrants and bycatch.**
>
> **<u>Council Motion January 2018</u>:** To instruct staff to start a white paper exploring rents/royalties in the Gulf commercial red snapper fishery for allocation above 4.65 million pounds. The white paper should include but not be limited to: a definition of rents/royalties, examples of resource rent collection in other public resource uses, a calculation of Gulf red snapper rents/royalties value, alternative methods of rents/royalties collection and alternative methods for redistribution of shares.

With one opposed, the AP passed the following motion.

To recommend to the Council to analyze recreational rents and royalties as part of the white paper.

AP members discussed how a loan program could be used to help new entrants buy into the IFQ programs. NMFS staff indicated that a national loan program is under development. With one in opposition, the AP passed the following motion.

To support the development and implementation of an IFQ loan/fisheries finance program in the Gulf of Mexico similar to the model used in the Pacific Northwest.

Other business

With no opposition, AP members passed two motions relative to the Council's January 2018 motion directing Council staff to begin work on a scoping document to examine red snapper allocation.

In reference to the January 2018 Council motion, to direct staff to include in the allocation scoping document, all Gulf Council-managed species with a commercial and recreational component.

Council Motion January 2018: To direct staff to develop a scoping document to evaluate the allocations of red snapper, taking into account previous deliberations in Amendment 28 and any new information and considers a broad range of social, economic, data correction, and management factors.

To recommend to the Council to include, in developing the allocation scoping document:

- **information regarding overages by the recreational sector (and the private angler component in particular) and the de facto reallocations to the recreational sector that have resulted;**
- **the dollar value of losses to the commercial sector, including all levels in the supply and distribution chain, that has occurred as a result of this de facto reallocation;**
- **recreational sector discards and discard mortality;**
- **management uncertainty in both the for-hire and private angler components; and**
- **information regarding the consumer demand for and supply chain of commercially caught red snapper, including an assessment of the number and location of end use consumers of commercially caught Gulf red snapper.**

The meeting adjourned at 5:25 pm.

Ad Hoc Red Snapper/Grouper-Tilefish IFQ Advisory Panel
Meeting Summary
Tampa, FL
November 7, 2018

Advisory Panel Members
Jane Black-Lee
William Copeland
Jason DeLaCruz
J. David Floyd
Buddy Guindon
Scott Hickman
David Krebs
H.D. Pappas
Dennis Parker
Nick Ruland
Lisa Schmidt
Jerri Smitko
Brian Swindle
Steve Tomeny
David Walker
Wayne Werner
Jim Zubrick

Council, Council Staff, and NMFS Staff
Leann Bosarge
Assane Diagne
Ava Lasseter
Jessica Matos
Roy Crabtree
Alisha DiLeone
Peter Hood

Others
Eric Brazer – presenter
Paul Parker – presenter
Karen Bell
Casey Streeter

The Ad Hoc Red Snapper/Grouper-Tilefish IFQ Advisory Panel (AP) was convened at 8:30 a.m. on November 7, 2018, in Tampa, Florida to provide recommendations to the Gulf of Mexico Fishery Management Council (Council) on the commercial IFQ programs and the proposed actions in Amendment 36B. The AP approved the April 2018 meeting summary and adopted the agenda, then heard presentations on privately run quota banks from Eric Brazer (Gulf of Mexico Shareholders' Alliance) and Paul Parker (Trust Conservation Innovation). Following the presentations, the AP began discussing modifications to the IFQ programs and quota banks.

In response to questions from AP members, Dr. Crabtree noted that for a quota bank to be feasible, there would need to be enough fish in it to make it worth running. He added that it would likely take at least a year after the Council takes final action on an amendment to get a quota bank up and running.

AP members discussed concerns relative to establishing a quota bank, highlighting the following:

- the importance of first identifying a purpose and need;
- the Fishery Finance Program is available for fishermen to obtain a loan to buy shares;
- the importance of not disassembling the IFQ system, which is working; and
- that the industry has the ability to develop necessary solutions in their own communities.

AP members expressed support for quota banks based on the following:

- some quota could be used for regulatory discards, because red snapper are now in the east while groupers are declining;
- need a way for replacement fishermen to enter the fishery; and
- there is limited availability of shares in southern Florida.

An AP member noted that with the red snapper quota increasing in 2019, part of the increase could be used for a quota bank. He added that there are problems in the grouper fishery and asked if an allocation trading program could be considered, such that some number of pounds of grouper allocation could be traded for red snapper allocation.

AP members also discussed the amount of red snapper quota that would be needed by a vessel, and whether red snapper should be a targeted commercial fishery or if instead, allocation should be used primarily for incidental catches. Regarding auctions, there was concern expressed as small participants would be unable to compete with large well-funded organizations.

Following a lunch break, AP members resumed the discussion alongside the proposed actions in Amendment 36B. AP members discussed the proposal to require shareholders to have a commercial reef fish permit (Action 1). An AP member felt that implementing this after years of IFQ management would lead to even more consolidation in the fishery. There was concern that any new restrictions would affect existing permit prices and availability. A member noted that as a result of considering this action, the price of a commercial reef fish permit has increased to $20,000. AP members also noted ways that participants could get around the new requirement, and wondered if the Council intended that dealers should be required to possess a permit and vessel. By a vote of 14 to 3, the AP then passed the following motion:

To recommend to the Council in Action 1, Alternative 1 be the preferred.
Alternative 1: Do not establish requirements to obtain or maintain shares.

Because the AP does not support a requirement that shareholders possess a commercial reef fish permit, the AP did not support Action 1.2, which addresses the divestment of shares in the event some shareholders are unable to obtain a permit, if required in Action 1.1. The AP passed the following motion:

To recommend to the Council in Action 1.2 to make Alternative 1 the preferred.
Alternative 1: No Action. If the Council requires some or all shareholders to possess a commercial reef fish permit in Action 1.1, there is no specified time by which shareholders must comply with the requirement.

The AP discussed Action 2, which would distribute the shares from non-activated accounts reclaimed through Amendment 36A, in terms of the creation of a quota bank. An AP member said it would be helpful to get an estimate of the amount of discarded red snapper in the eastern Gulf. This would help the Council determine the quota needs to address the problem. AP members discussed alternative methods to distribute IFQ shares from non-activated accounts. Recognizing that the amount of reclaimed shares may not be enough for a distribution to all eligible accounts, the AP passed the following motion by a vote of 15 to 1:

To recommend to the Council to add an alternative [to Action 2] to equally distribute reclaimed shares held by NMFS among all accounts with landings of the most current year of each share category to shareholders within one month of the effective date for the final rule implementing this amendment.

The AP noted its appreciation for the opportunity to discuss ways to alleviate problems such as the increase of red snapper in the eastern Gulf. However, AP members added that the commercial industry does not support most of the changes proposed in Amendment 36B.

The AP discussed Action 4, which considers requiring hail-in estimates to be more accurate. Some AP members felt such a requirement was unnecessary, stating the hail-in estimate was not intended to be used to penalize fishermen. An AP member questioned whether it was necessary to have an estimated weight at all, but another member thought it was good to give law enforcement an idea about the approximate magnitude of the catch. Some members noted it is most important that a vessel has sufficient allocation in its account for landings. The AP then passed the following motion by a vote of 15 to 1:

To recommend to the Council in Action 4, to make Alternative 1 the preferred.
Alternative 1: Do not change the current reporting requirement regarding estimated weight of IFQ species to be landed on the advance landing notification.

The AP then resumed discussing Amendment 36B and the pros and cons of a quota bank. The AP developed the following statement and table, and passed each by a vote of 16 to 1:

To make a statement to the Council to consider the following discussion regarding unintended consequences from Action 1.1:

- There is concern that all permits will be bought up by those who need to keep their shares, so permits would not be available, or the price would be driven higher to those who need them to fish.
- If we change the system that is in place, it will affect the availability of leased fish and probably drive the lease price to available fish even higher.
- Talking about this amendment has led to more and more new shareholders and more and more participants in the fishery and has possibly artificially raised the price of permits. People anticipating that the Council will further limit access to the fishery would cause a rush of people to get into the fishery before the changes are implemented.
- Speaking to the requirement for shareholders to have a permit in Action 1.1, dealers who own shares and don't own permitted vessels and lease allocation to vessels that fish for them would be adversely impacted.
- If you have a shareholder and put in place a permit requirement he could go to a vessel owner with a permit and make a contractual agreement where he would be leasing the permit.

Pro – For a NOAA quota bank	Con – against a NOAA quota bank
	Council designed with little input on how they will fill it
It would be run by the government, so it will be slow and hard to make adjustments	**What you hand off may not be what they build**
Direct quota to deal with discards in more timely fashion	**The industry already has a quota bank that is 3 years old**
	We already have de facto quota banks in the fish houses to balance out a year's worth of quota
	We don't know who the quota can be auctioned to once it's in the bank
	We don't know how many fish it would take to alleviate the commercial discard problem in the eastern Gulf

The AP also discussed the issue with red grouper availability and passed the following motion:

The AP supports the Council's reduction of the red grouper ACL.

The meeting adjourned at 5 p.m.

Failed and withdrawn motions:

Motion: To recommend the Gulf Council to direct NOAA staff to study and develop an Actions and Alternatives for modifying the distribution of commercial allocation within the IFQ fisheries

to provide greater flexibility to address current and future issues and concerns. Specifically, this analysis should examine replacing the current % of allocation/share by a fixed lbs/share.
Motion failed 2-13.

Motion: To recommend the Council adopt Action 3.1 Alternative 1 as the preferred.
***Alternative 1**: No Action. Do not add allocation to the quota bank from any share category. The quota bank holds shares reclaimed through Amendment 36A or Action 1 of Amendment 36B.*
Motion tabled.

Substitute Motion: To consider under 2.2 Action 2 that unclaimed shares be set aside for a science/observer-based program which is intended to validate/retain dead discards on sanctioned fishing/research trips.
Motion failed.

2nd Substitute motion: Open a quota bank and use all 12 years' worth of fish.
Motion failed.

Motion: To recommend to the Council that in Action 2 to make Alternative 4 the preferred.
***Alternative 4**: Establish a NMFS-administered quota bank with the reclaimed shares. NMFS will retain the shares and distribute the allocation associated with the shares each year.*
Motion failed.

Substitute motion: That unclaimed shares be set aside to be used in an industry/NMFS coalition quota bank to address discard mortality.
Substitute motion withdrawn.

*Motion: **Alternative 1**: No Action. Do not distribute reclaimed shares, including the shares reclaimed through Amendment 36A or Action 1 of Amendment 36B at this time.*
Motion failed 3 – 10.

Motion: To recommend to the Council in Action 2, Alternative 3 be the preferred.
***Alternative 3**: Proportionally distribute reclaimed shares held by NMFS among accounts with shareholdings of each share category within one month of the effective date for the final rule implementing this amendment.*
Motion withdrawn.

Motion: To recommend to the Council in Action 2, Alternative 2 be the preferred.
***Alternative 2**: Equally distribute reclaimed shares held by NMFS among all accounts with shares of each share category to shareholders within one month of the effective date for the final rule implementing this amendment.*
Substitute motion made that carried.

APPENDIX G. CONTROL DATES

Gulf of Mexico Fishery Management Council
Managing Fishery Resources in the U.S. Federal Waters of the Gulf of Mexico

2203 N. Lois Avenue, Suite 1100
Tampa, Florida 33607 USA
Phone: 813.348.1630 • Toll free: 888.833.1844 • Fax: 813.348.1711
www.gulfcouncil.org

November 1, 2011

005995 NOV 20 11

Dr. Roy Crabtree
Regional Administrator
National Marine Fisheries Service
263 13th Avenue South
St. Petersburg, Florida 33701

Dear Dr. Crabtree,

During its October 24-28, 2011 meeting in New Orleans, Louisiana, the Gulf of Mexico Fishery Management Council discussed Reef Fish Amendment 36, which considers changes to red snapper IFQ shares and allocation transfer provisions. This letter is written to request that NOAA Fisheries establish a control date of January 1, 2012, to notify red snapper shareholders that the Council is contemplating a "use it or lose it" provision, so anyone who owns red snapper shares after January 1, 2012 and is not using them may be at risk of losing them.

Sincerely,

Robert Gill
Council Chairman

SB:AD:tk

C: Gulf Council
Technical staff

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Gulf of Mexico Fishery Management Council
Managing Fishery Resources in the U.S. Federal Waters of the Gulf of Mexico

2203 N. Lois Avenue, Suite 1100
Tampa, Florida 33607 USA
Phone: 813.348.1630 • Toll free: 888.833.1844 • Fax: 813.348.1711
www.gulfcouncil.org

October 30, 2014

Dr. Roy Crabtree
Regional Administrator
National Marine Fisheries Service
263 13th Avenue South
St. Petersburg, Florida 33701

006434 OCT 20 14

Dear Dr. Crabtree,

This letter requests NMFS establish a control date of January 1, 2015 for grouper-tilefish IFQ shareholders in the Gulf of Mexico. This control date will notify grouper-tilefish IFQ shareholders that the Gulf of Mexico Fishery Management Council (Council) is considering modification to the participation requirements for entities obtaining transfers of grouper-tilefish IFQ shares after January 1, 2015.

During its June 23-27, 2014 meeting, the Council directed staff to develop the appropriate document to consider restricting transfer of grouper-tilefish and red snapper IFQ shares to commercial reef fish permit holders beyond the first 5 years of the IFQ program. Grouper-tilefish IFQ shares will become available for transfer to entities without a commercial reef fish permit beginning January 1, 2015. Due to the short time between the June 2014 meeting and January 1, 2015, it was not possible to implement an appropriate action to respond to the Council's June motion. Thus, at its October 20-23, 2014 meeting, the Council requested establishment of the control date, until the issue may be further evaluated in a plan amendment.

Similarly, the Council requested NMFS establish a control date of January 1, 2012, to notify red snapper IFQ shareholders that the Council is considering modifications to the programs' participation requirements. Red snapper IFQ shares became available for transfer to entities without a commercial reef fish permit on January 1, 2012. NMFS published this control date in the federal register, which remains in effect.

Sincerely,

Carie M. Simmons for:

Kevin Anson
Council Chairman

AL: CMS

cc: Gulf Council / Technical Staff / Steve Branstetter, Ph.D.

APPENDIX H. INDIVIDUAL FISHING QUOTA PROGAM GLOSSARY

Active Account – An account in which the allocation holder has landed, bought, and/or sold (i.e., transferred) allocation within that year. Account activity status is determined yearly based on the actions taken by the account holder.

Allocation – Allocation is the actual poundage of IFQ-managed species (by share category) by which an account holder is ensured the opportunity to possess, land, sell, or transfer during a given calendar year. IFQ allocation is distributed to each IFQ shareholder at the beginning of each calendar year or any in-season quota increase, and expires at the end of each calendar year. Annual IFQ allocation is determined by the amount of the shareholder's IFQ share and the amount of the annual commercial quota at the time of distribution. Dealer accounts may not possess allocation.

Allocation Transfer – A transfer of allocation (pounds) from one shareholder account to another shareholder or vessel account. Allocation transfers are an immediate one-step process. As soon as the allocation holder completes the transfer, the allocation is in the recipient's account. This is different from the two-step share transfer process, and was created so that allocation could immediately be placed in a vessel account while the vessel was at sea.

Entity – An individual, business, or association participating in the IFQ program. Each IFQ account is associated with a unique set of entities.

Gulf of Mexico Commercial Reef Fish Permit Holder – An entity that possesses a valid Gulf commercial reef fish permit and therefore, is eligible to be exempt from bag limits, to fish under a quota, or to sell Gulf reef fish in or from the Gulf exclusive economic zone. There is an annual fee associated with the permit.

Landing Transaction – A report that is completed by an IFQ dealer using the online IFQ system. This report includes the date, time, and location of the transaction; weight and actual ex-vessel price of IFQ fish landed and sold; and information necessary to identify the fisherman, vessel, and dealer involved in the transaction. The fisherman landing IFQ species must validate the dealer transaction report by entering his vessel's personal identification number when the transaction report is submitted. After the dealer submits the report and the information has been verified, the website will send a transaction approval code to the dealer and the allocation holder. Allocation equal to the landing is deducted from the vessel account upon completion of the landing transaction.

Participant - An individual, business, or other entity that is part of an IFQ entity. For example, John Smith, the participant, may belong to multiple entities such as John Smith, John and Jane Smith, and ABC Company. Share caps are tracked at the IFQ participant level, business level, and IFQ account level.

Public Participant Account – A shareholder account that does not have a permit associated with the account (i.e., the IFQ account and permit have the same entities). Public participants may hold, buy, sell, and transfer shares and allocation, but cannot harvest IFQ species.

Share – A share is the percentage of a commercial quota assigned to a shareholder account that results in allocation (pounds) equivalent to the share percentage of the quota. Shares are permanent until subsequently transferred or revoked. Dealer accounts may not possess shares.

Share Cap – The maximum share allowed to be held by a person, business, or other entity. The share cap prevents one or more IFQ shareholders or entities from controlling an excessive amount of IFQ shares and holding a monopoly in the IFQ program.

Share Transfer – The change in ownership of shares from one shareholder account to another shareholder account. A shareholder must initiate the share transfer and the receiver must accept the transfer by using the online IFQ system. Share transfers are a two-step process with the transferor initiating the transfer, but the completion does not occur until the transferee accepts the transfer. There may be a delay between initiation of the transfer and final acceptance of the transfer.

Shareholder – An entity that holds a percentage of commercial IFQ quota for any share category.

Shareholder Account – A type of IFQ account that may hold shares and/or allocation. This includes accounts that only hold allocation.