

*2010 Gulf of Mexico  
Grouper-Tilefish  
Individual Fishing Quota  
Annual Report*



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## *A Message from the Assistant Regional Administrator*

The 2010 Grouper-Tilefish Annual Report reflects the completion of the first Grouper-Tilefish Individual Fishing Quota (IFQ) season in the Gulf of Mexico. While this report is not intended to be a full comprehensive assessment of the Grouper-Tilefish IFQ program, it does provide an overview of the data and information collected primarily through the IFQ online data collection system. This report provides fishermen, managers, and other constituents with data and information for assessing and evaluating program performance, including information on shares and allocation (e.g. distributions, transactions, prices, and balances), fishing activity (e.g. landings, ex-vessel values, and cost recovery fees), bycatch, and law enforcement activities.

The Grouper-Tilefish IFQ program was implemented to reduce overcapacity and mitigate derby fishing conditions in the grouper-tilefish segment of the commercial reef fish fishery. Regulations prior to implementation of the program resulted in a race to fish that led to early closures and quota overages of some species. The collective harvesting capacity of the commercial fleet was in excess of that needed to harvest the quotas, reducing economic profitability for participants.

During the first year of the program, quota closures were eliminated, as fishermen were allocated percentages of the grouper-tilefish quotas based on historical participation. Ex-vessel prices for grouper-tilefish increased (\$0.16 to \$0.76 per pound) and the number of shareholders decreased by 3% from 766 to 745. The commercial sector landed between 38 to 61% of the annual quota within the five different Grouper-Tilefish IFQ categories. Observed bycatch of undersized fish was lower for gag and comparable for red grouper when compared to 2009 observer data. The 2010 fishing season experienced unprecedented area closures throughout the central Gulf of Mexico brought about by the Deepwater Horizon oil spill that began on April 20, 2010. These large area closures confounded the evaluation of the first year of the program. At the height of the oil spill, nearly 88,552 square miles representing 36.6% of Gulf of Mexico federal waters were closed (Appendix 1).

We are now nearing the end of the second year of the Grouper-Tilefish IFQ program. The National Marine Fisheries Service (NMFS) is committed to the continual improvement of Grouper-Tilefish IFQ management. We have received great feedback and suggestions on how to improve the IFQ program and online system since it began. We would like to thank everyone for their input and I encourage you to continue to share your concerns and input with us.

Sincerely,



Phil Steele  
Assistant Regional Administrator  
for Sustainable Fisheries

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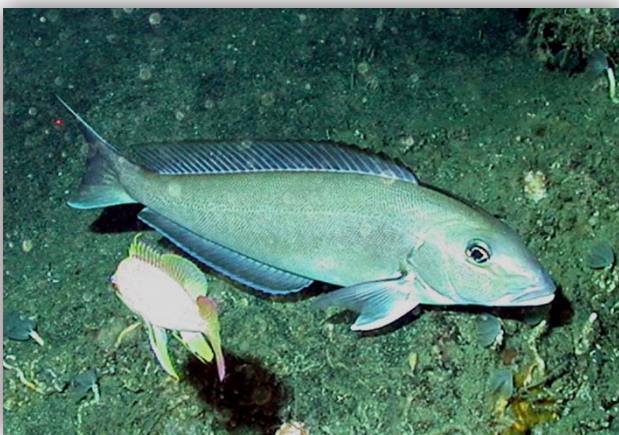
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# *Grouper-Tilefish IFQ Program*

## **History and Objectives**

Prior to implementation of the Grouper-Tilefish IFQ program the commercial grouper-tilefish component of the reef fish fishery was managed with limited access fishing permits, trip limits, closed seasons, and quotas. This management regime resulted in overcapitalization of the commercial grouper-tilefish sector. The collective harvesting capacity of fishing vessels was in excess of that required to harvest the commercial grouper-tilefish quotas, resulting in early quota closures and quota overages. In 2004 and 2005, the shallow-water grouper fishing season was shortened by 6-10 weeks, and between 2003 and 2009, the deep-water grouper and tilefish seasons were shortened by more than 50%. It was anticipated that, under the prevailing management regime, incentives for derby fishing would persist. The Grouper-Tilefish program was implemented to reduce overcapacity of the fishing fleet, increase harvesting efficiency, and eliminate the race to fish. By rationalizing effort and reducing overcapacity, the Grouper-Tilefish IFQ program was expected to prevent or mitigate derby fishing conditions and improve profitability of commercial grouper-tilefish fishermen.

Development of the Grouper-Tilefish IFQ program began in 2008 when a majority of eligible voters, reef fish permit holders having annual average grouper and tilefish landings of at least 8,000 lb during 1999-2004, supported the formation of a Grouper-Tilefish IFQ program through referendum. During 2008, the Gulf Council developed Amendment 29 to the Reef Fish Fishery Management Plan, outlining the key components of the Grouper-Tilefish IFQ program. In January 2009, the Gulf Council approved Amendment 29 by a vote of 14 to 3. Amendment 29 was approved by NOAA Fisheries Service in July 2009. Implementation of the program began in fall 2009 and the first fishing year under the program began on January 1, 2010.



Primary objectives of the program are to reduce overcapacity and mitigate derby fishing conditions. Anticipated benefits of the program include: increased market stability; elimination of quota closures; increased flexibility for fishing operations; cost-effective and enforceable management of the fishery; improved safety at sea; and, optimization of net social, economic, and biological benefits from the fishery. Additionally, the program is intended to provide direct and indirect biological benefits to grouper-tilefish and other marine resources by reducing bycatch and

associated bycatch mortality. These social, economic, and biological benefits collectively are intended to assist NOAA Fisheries Service and the Gulf Council in ending overfishing, rebuilding overfished stocks, and optimizing yield of Gulf of Mexico grouper-tilefish populations.

## Program Overview and Regulations

The Grouper-Tilefish IFQ program is a multi-species program that was divided into five share categories (gag grouper [GG], red grouper [RG], other shallow-water groupers [SWG], deep-water groupers [DWG], and tilefish's [TF]), with each category having separate shares and allocations. Shares are a percentage of the commercial quota assigned to each IFQ shareholder. IFQ allocation is the actual poundage that each IFQ shareholder or allocation holder is ensured the opportunity to possess, land, or sell, during a given calendar year. IFQ allocation is determined based on the annual quota for a share category and the percentage of shares held by the IFQ entity. An IFQ entity is a unique combination of IFQ participants based on their reef fish permit or reef fish dealer permit owners that have received an IFQ account (see glossary for detailed descriptions).

The gag and red grouper IFQ share categories include single species with multiuse flexibility measures in place that allow a portion of the red grouper to be harvested under the gag grouper allocation, or vice versa. This flexibility measure was added to reduce gag and red grouper bycatch. The shallow-water grouper, deep-water grouper and tilefish IFQ share categories are composed of multiple species (Table 1). Scamp, warsaw grouper, and speckled hind are commonly found in both shallow and deep waters. Flexibility measures allow scamp to be landed under the deep-water grouper allocation if an entity has used all their shallow-water grouper allocation. Similarly, warsaw grouper and speckled hind can be landed under the shallow-water grouper allocation if all of the entity's deep-water allocation has been landed. For each IFQ share category, an IFQ entity that owns shares can land 10% over their remaining allocation on the last fishing trip of the year. This overage is then deducted from the shareholder's allocation for the next fishing year. Since the overage needs to be deducted in the following year, IFQ entities that do not own shares, but hold allocation, cannot land in excess of their remaining allocation.

Initial shares were issued to program entities based on the amount of grouper-tilefish logbook landings reported under each entity's qualifying license during 1999 through 2004, with an allowance for dropping one year of data. Initial shares were issued in five different IFQ categories: deep-water grouper, gag grouper, red

**Table 1: Species within each Grouper-Tilefish IFQ share category**

IFQ Category	Species
Gag Grouper (GG)	Gag grouper <sup>1</sup>
Red Grouper (RG)	Red grouper <sup>1</sup>
Deep-water Grouper (DWG)	Misty grouper
	Snowy grouper
	Speckled hind <sup>1</sup>
	Warsaw grouper <sup>1</sup>
	Yellowedge grouper
Shallow-water Grouper (SWG)	Black grouper
	Red hind
	Rock hind
	Scamp*
	Yellowfin grouper
Tilefishes (TF)	Yellowmouth grouper
	Anchor tilefish
	Blackline tilefish
	Blueline tilefish (Grey)
	Golden tilefish
	Goldface Tilefish

<sup>1</sup> Under flexibility measures, fishermen may land: a portion of red grouper under the gag grouper allocation if all red grouper allocation has been landed; a portion of gag grouper under the red grouper allocation if all gag grouper allocation has been landed; scamp as deep-water grouper allocation if all shallow-water grouper allocation has been landed; Warsaw grouper and Speckled hind as shallow-water grouper allocation if all deep-water grouper allocation has been landed.

grouper, other shallow-water grouper, and tilefish. A total of 766 individuals or corporations (entities) qualified for initial shares across all Grouper-Tilefish IFQ categories. Share caps were set for each share category and were based on the maximum percentage of shares a person held at the beginning of the program. An allocation cap was also established. The total allocation cap was set equal to the sum of the maximum allocations associated with the five grouper-tilefish share caps. The allocation cap is calculated annually based on the current fishing year quotas.

For the first five years of the program shares and allocation can only be sold to and fished by an entity that owns a valid or renewable commercial Gulf of Mexico reef fish permit and has an active IFQ online account. After January 1, 2015, all U.S. citizens and permanent resident aliens will be eligible to purchase Grouper-Tilefish IFQ shares and allocation, although a Gulf of Mexico reef fish permit will still be required to harvest, possess, and land any allocation.

Regulations governing the Grouper-Tilefish IFQ program can be found at 50 CFR 622.20 ([http://edocket.access.gpo.gov/cfr\\_2010/octqtr/pdf/50cfr622.20.pdf](http://edocket.access.gpo.gov/cfr_2010/octqtr/pdf/50cfr622.20.pdf)). The Grouper-Tilefish IFQ program is managed with an online accounting system that can be accessed at: <https://ifq.sero.nmfs.noaa.gov/>. Using this website, IFQ fishermen and dealers can log-in to their online IFQ accounts. Important information regarding the IFQ program (e.g. Frequently Asked Questions, User’s Manual, and Fishery Bulletins) is available for download at this website providing potential and active IFQ entities, as well as other constituents, updated information regarding program components and regulations.

The Grouper-Tilefish IFQ program is monitored to prevent one or more participants from purchasing an excessive amount of IFQ shares and monopolizing the fishery, as required by the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act). The Grouper-Tilefish IFQ program has defined share caps (maximum IFQ share allowed to be held by an IFQ participant) for each category as the maximum IFQ share *issued* to an IFQ entity at the time of initial apportionment of the IFQ shares (Table 2). The allocation cap is equal to the total amount of pounds that corresponds to all share caps combined for grouper-tilefish IFQ share categories. The allocation cap for 2010 was 515,727 lb.

IFQ Category	Share Cap %
Gag Grouper	2.349938
Red Grouper	4.331882
Deep-water Grouper	14.704321
Shallow-water Grouper	7.266147
Tilefish	12.212356

All Grouper-Tilefish IFQ fishermen are charged a cost recovery fee to recover a portion of the costs required to administer, manage, and enforce the IFQ program. The cost recovery fee is 3% of the ex-vessel value of the landed fish, and this amount will be re-evaluated and subject to change each year. IFQ dealers are responsible for collecting the cost recovery fee from the fisherman at the time of each sales transaction and submitting fees to NOAA Fisheries Service on a quarterly basis through the IFQ online data collection system.

When harvesting IFQ species, vessels are required to have a commercial reef fish permit. Before leaving port, vessels are required to hail out and declare the fishery they will be participating in and gears used. While at-sea, vessels are monitored using vessel monitoring systems. When returning to port, vessels landing IFQ species must provide a landing notification indicating the time and location of landing, the dealer they intend to sell fish to, and the estimated pounds landed by species. Landing may occur at any time, but fish may only be offloaded between 6 a.m. and 6 p.m. A landing transactions report is completed by the IFQ dealer and validated by the fisherman. The landing transaction includes the date, time, and location of transaction; weight and actual ex-vessel value of fish landed and sold; and the identity of shareholder account, vessel, and dealer.

## *Grouper-Tilefish IFQ Fishing Season*

### **Commercial Quota**

The commercial fishing season for grouper-tilefish is from January 1 to December 31 each year. Annual commercial quotas are established for each Grouper-Tilefish IFQ share category. Quotas are based on stock assessments and historical landings and may be adjusted annually or during the fishing season as new information is obtained. The Grouper-Tilefish IFQ program tracks landings in pounds gutted weight; therefore, throughout this report landings are expressed in terms of pounds of gutted weight. The 2010 grouper-tilefish quotas are summarized in Table 3.

**Table 3: 2010 IFQ commercial quotas (gutted weight)**

<b>IFQ Category</b>	<b>Quota (lb)</b>
Gag grouper	1,410,000
Red grouper	5,750,000
Deep-water grouper	1,020,000
Shallow-water grouper	410,000
Tilefishes	440,000

### **Shareholders**

At the start of the Grouper-Tilefish IFQ program, there were 766 shareholders across all Grouper-Tilefish IFQ share categories. An entity can hold shares in multiple IFQ categories. The tilefish IFQ category had the lowest number of shareholders (n=287), followed by deep-water grouper (n=480), red grouper (n=668), gag (n=743) and shallow-water grouper (n=752) (Table 4). By the end of the first year, the number of shareholders had decreased by 3% (n=21) to 745 shareholders in all IFQ categories combined. Within each IFQ category, the greatest decrease in shareholders occurred for shallow-water grouper (n = 31), followed by gag grouper (n = 24), deep-water grouper (n = 10), and red grouper (n = 3) (Table 4). There was no decrease in shareholders in the tilefish IFQ share category (Table 4). The greatest increases in shares occurred for shareholders initially issued the smallest percentage of shares (<0.001%) (Table 4). Note that a shareholder may hold shares in more than one share category and therefore the sum of the shareholders in each category will be greater than the overall number of shareholders. By the end of the 2010 fishing year, the number of shareholders holding < 0.005% of gag shares increased by 35 and the number of shareholders holding < 0.005% of red grouper shares increased by 17 (Table 4). For the deep-water grouper, shallow-water grouper, and tilefish IFQ share categories, the number of shareholders holding < 0.005% of shares increased by 15, 42, and 10,

respectively (Table 4). The number of shareholders holding  $\geq 1\%$  of shares increased by 1 to 4 depending on the IFQ share category. The largest increases occurred in the gag and red grouper share categories (n = 3 and 4, respectively).

**Table 4: Number of initial (01/01/2010) and end of year (EOY, 12/31/2010) shareholders**

Shares (%)	GG		RG		DWG		SWG		TF	
	Initial	EOY	Initial	EOY	Initial	EOY	Initial	EOY	Initial	EOY
< 0.00100	76	105	117	135	90	103	82	114	62	71
0.00100 - 0.00499	97	103	113	112	87	89	110	120	37	38
0.00500 - 0.00999	63	55	52	42	37	33	78	66	25	24
0.01000 - 0.04999	179	161	153	132	85	75	197	160	47	52
0.05000 - 0.09999	98	82	57	54	36	28	80	63	27	24
0.10000 - 0.49999	186	159	142	130	96	85	161	153	46	37
0.50000 - 0.99999	35	37	39	37	25	23	33	33	20	17
$\geq 1.0000$	14	17	19	23	24	25	11	12	23	24
<b>Total</b>	748	719	692	665	480	461	752	721	287	287

Within the first year of the Grouper-Tilefish IFQ program, there were shareholders who sold all their shares within an IFQ share category (Table 5). While it may be assumed that shareholders who sold all their shares have exited from that IFQ share category that may not be the case as these entities may still buy annual allocation or form corporations or partnerships. Within each IFQ category, the total amount of shares sold by entities which sold all shares was less than 15% (Table 5). In 2010, there were also new shareholders for each IFQ share category. These are shareholders who did not hold shares at the start of the program in 2010 but did by the end of the 2010 fishing year. The amount of shares going to the new shareholders was between 3-16% depending on the IFQ share category (Table 5). For the red grouper, gag, and shallow-water grouper IFQ share categories, the amount of shares going to new shareholders was less than the amount of shares sold by shareholders who sold all their shares. For the deep-water grouper IFQ share category, these amounts were similar, while in the tilefish IFQ share category the new shareholders percentage of shares was greater than those who sold all their shares.

**Table 5: Number of shareholders selling all their shares and new shareholders who did not hold shares at the start of the program**

IFQ Category	N	Sold All Shares		N	New Shareholders	
		Shares (%)	Lb. Equivalent		Shares (%)	Lb. Equivalent
Gag Grouper	45	9.55	134,651	16	4.07	57,409
Red Grouper	45	8.84	508,251	18	2.95	169,843
Shallow-water Grouper	44	8.59	35,216	13	5.09	20,850
Deep-water Grouper	36	9.99	101,902	17	9.26	94,446
Tilefishes	18	13.43	59,082	18	16.22	71,389



## Shareholdings by Gulf States

Across all Grouper-Tilefish IFQ share categories, Florida shareholders accounted for the majority of shares held both at the start of the program and at the end of the first year, although the percentage of Florida shareholdings did decrease in each IFQ share category (Table 6). Texas and Louisiana held the next highest percentage of shares within each IFQ share category, followed by Alabama/Mississippi and then the other non-Gulf states. By the end of 2010, Texas fishermen held a greater percentage of shares than initially allocated, while Alabama/Mississippi shareholders held a smaller percentage of shares in all IFQ share categories (Figure 1). Louisiana shareholdings increased for deep-water grouper, shallow-water grouper, and tilefish, but remained similar for gag and red grouper (Figure 1).

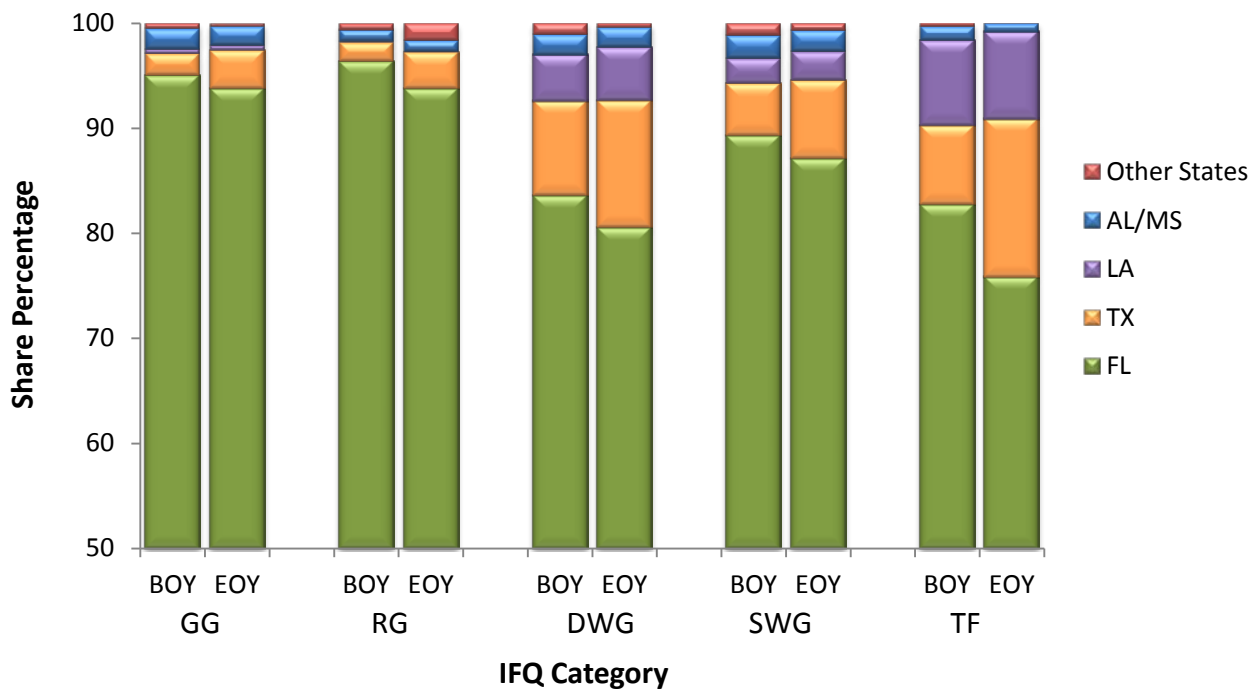
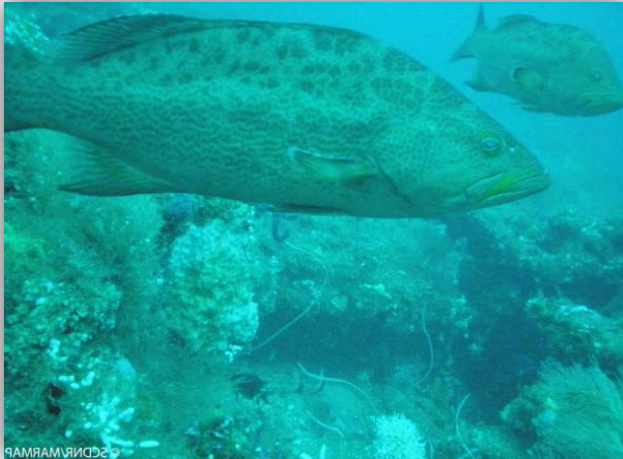


Figure 1: Beginning (BOY) and end of year (EOY) 2010 shareholdings by state of residency and share category (GG = gag grouper, RG = red grouper, DWG = deep water grouper, SWG = shallow-water grouper, and TF = tilefishes)

Table 6: 2010 initial and end of the year shareholdings by state of residency

	GG		RG		DWG		SWG		TF	
	Initial	EOY	Initial	EOY	Initial	EOY	Initial	EOY	Initial	EOY
AL/MS	1.93	1.85	1.09	1.07	1.95	1.85	2.21	2.01	1.31	0.81
FL	95.03	93.85	96.38	93.78	83.61	80.59	89.30	87.15	82.73	75.84
LA	0.45	0.44	0.05	0.04	4.36	5.07	2.43	2.71	8.10	8.27
TX	2.09	3.61	1.86	3.49	9.01	12.11	4.94	7.44	7.58	15.1
Other States	0.50	0.25	0.63	1.63	1.08	0.39	1.12	0.69	0.29	0.01

## Share Transfers



There were 970 share transfers across all Grouper-Tilefish IFQ share categories in 2010. Red grouper had the highest number of share transactions ( $n = 267$ ), followed by gag ( $n = 256$ ), shallow-water grouper ( $n = 195$ ), deep-water grouper ( $n = 161$ ), and tilefish ( $n = 91$ ) (Table 7). Between 24-32% of the shares were transferred in any given IFQ category, with average individual share transfers between 0.09% and 0.35%. The tilefish IFQ share category had the fewest share transfers, but the largest amount of total shares transferred and largest average transfer amount (Table 7). For all IFQ share categories, median share transfers values were lower than mean values and were always  $\leq 0.04\%$  of a share (Table 7). Minimum share transfer percentages across IFQ categories were between 0.000004% and 0.000031%, while maximum share transfer percentages were between 1.03% and 5.95%. The largest share transfer occurred in the deep-water grouper IFQ share category (5.95%).

Prices for share transactions were analyzed by the price per 0.0001% share and the price per one pound equivalent. A pound equivalent is the share percentage for that IFQ share category that would equal one pound. The exact share percentage that is equivalent to one pound depends on the total annual commercial quota and, therefore, is different across IFQ share categories. Overall, 75% of the transactions contained total price information that was greater than \$0.01 (Figure 2). At least 50% of the transactions had prices that were greater than \$0.01 per pound equivalent and less than \$30 per pound equivalent (Figure 3). *Given the large number of transactions that do not report realistic market values for share transfers, results should be viewed with caution.*

**Table 7: Share transfer transactions**

	<b>GG</b>	<b>RG</b>	<b>DWG</b>	<b>SWG</b>	<b>TF</b>
Total number of share transfers	256	267	161	195	91
Total shares transferred	24.0%	24.3%	25.8%	25.6%	31.6%
Average amount of shares transferred	0.09%	0.09%	0.16%	0.13%	0.35%
Median amount of shares transferred	0.04%	0.02%	0.02%	0.02%	0.03%
Minimum amount of shares transferred	0.000031%	0.000004%	0.000001%	0.000010%	0.000004%
Maximum amount of shares transferred	1.03%	2.04%	5.95%	2.44%	5.21%

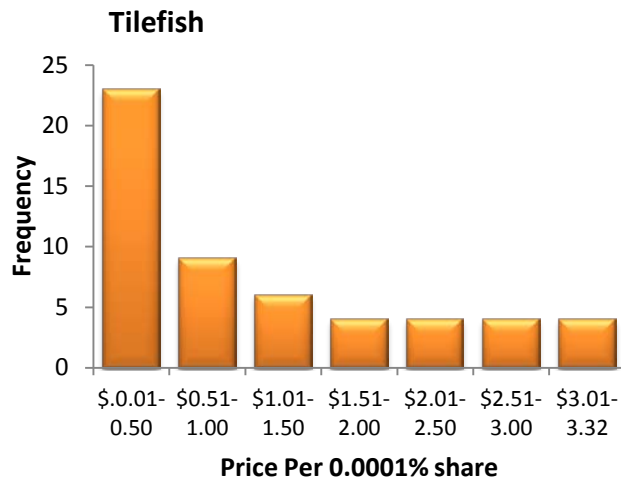
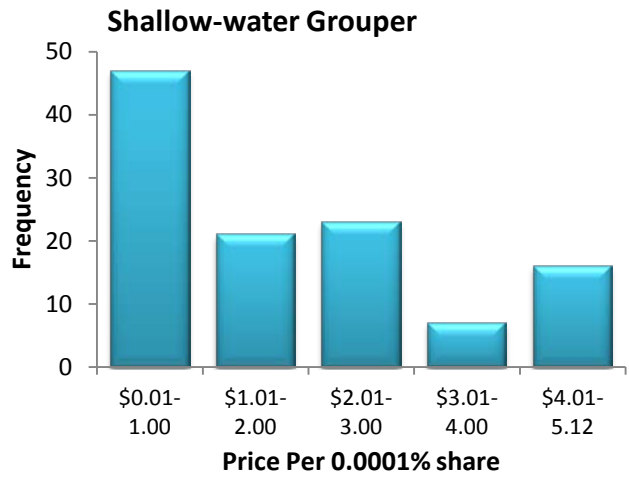
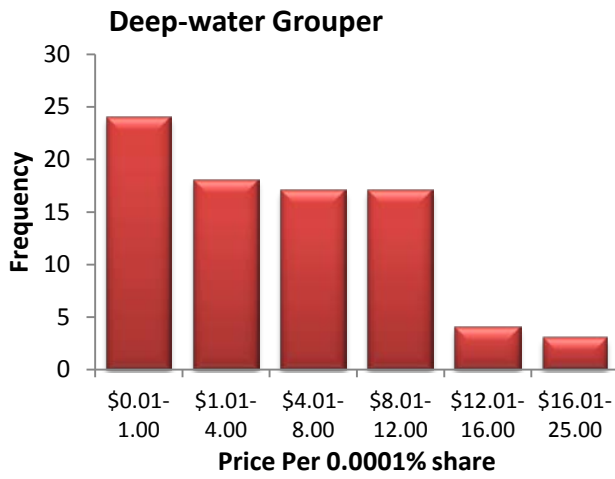
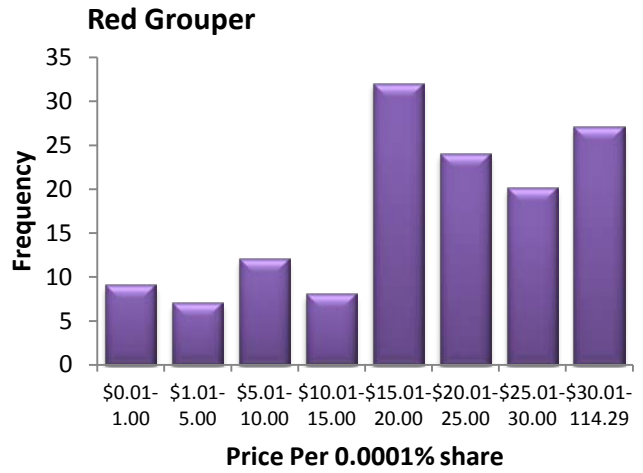
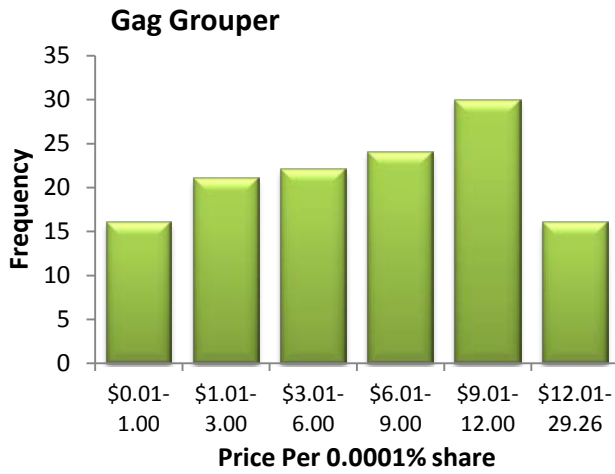


Figure 2: Share price per 0.0001% share

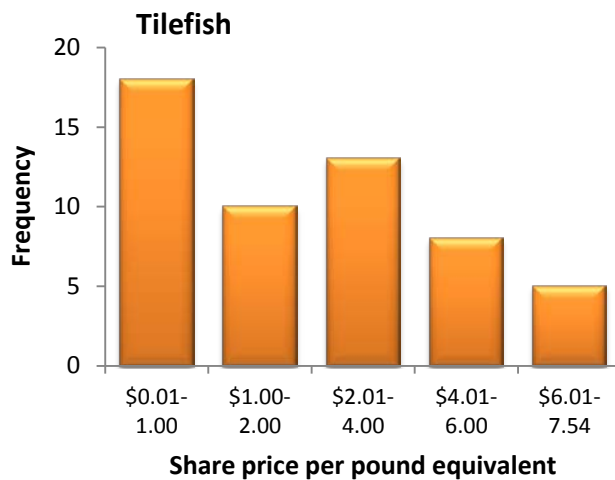
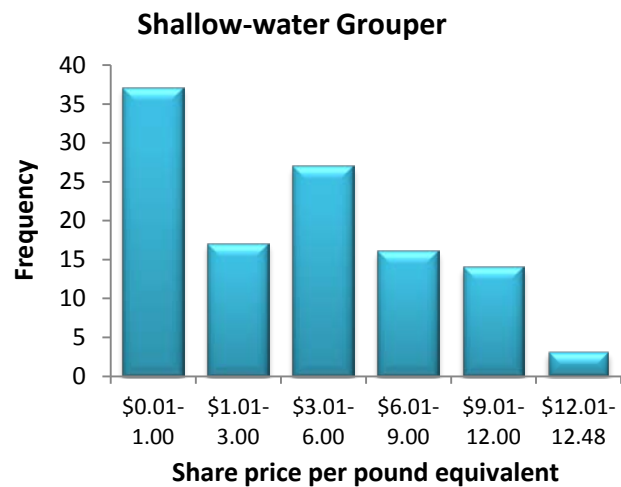
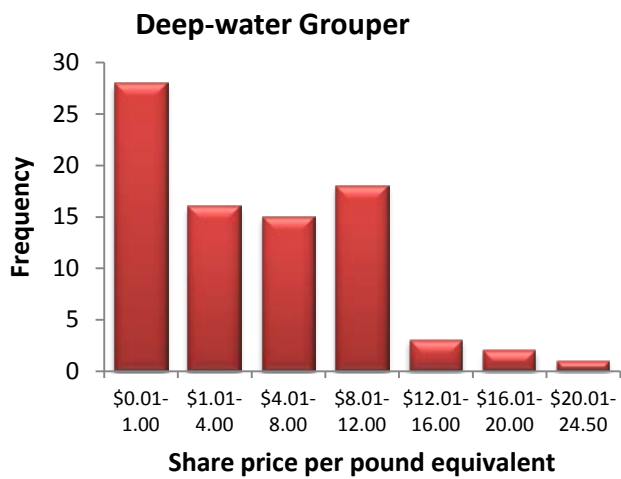
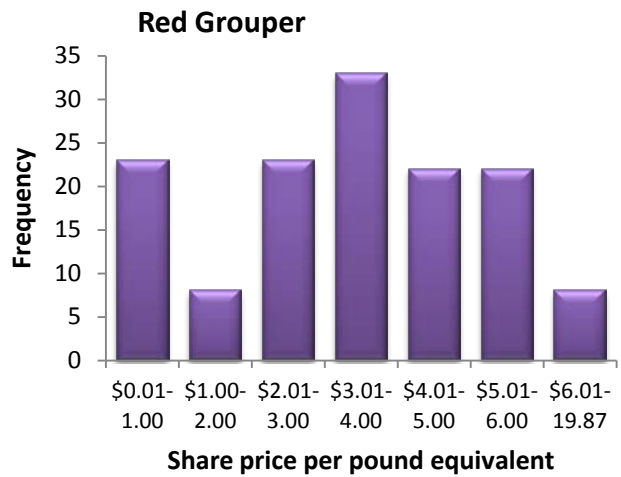
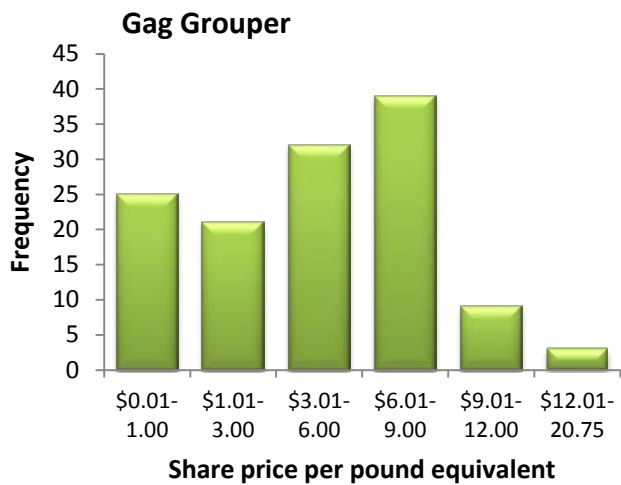


Figure 3: Share price per one pound equivalent

The average price per 0.0001% share for red grouper, \$20.67, was the highest price per 0.0001% share among all IFQ share categories, followed by gag (\$6.75) and deep-water grouper (\$4.99) (Table 8). The average price per 0.0001% share was below \$2.00 for both shallow-water grouper (\$1.64) and tilefish (\$1.08). The average price per pound equivalent for deep-water grouper, \$4.89, was the highest price per pound equivalent among all share categories, followed by gag (\$4.79), shallow-water grouper (\$4.01), red grouper (\$3.59) and tilefish (\$2.45) (Table 8).

**Table 8: Pricing for share transfers transactions<sup>1</sup>**

	<b>GG</b>	<b>RG</b>	<b>DWG</b>	<b>SWG</b>	<b>TF</b>
Num. of transactions with a total price > \$0.01	199	213	122	152	72
Percent of transactions with a total price > \$0.01	78%	80%	76%	78%	79%
Num. of transaction with price/1 lb equivalent > \$0.01 and < \$30.	129	139	83	114	54
Average price / 0.0001% share	\$6.75	\$20.67	\$4.99	\$1.64	\$1.08
Median price / 0.0001% share	\$6.50	\$20.12	\$3.07	\$1.27	\$0.88
Average price/1 lb equivalent of shares	\$4.79	\$3.59	\$4.89	\$4.01	\$2.45
Median share price/1 lb equivalent of shares	\$4.61	\$3.50	\$3.01	\$3.10	\$1.99

<sup>1</sup> Price data has not been adjusted for inflation. Total prices were required but participants may have entered \$0.01 in lieu of an actual price. Therefore, average and median price data excludes transactions where total prices that were <= \$0.01, price per pound equivalents that were <= \$0.01, and price per pound equivalents that were greater than \$30. Given the large number of transactions that do not report realistic market values for share transfers, results should be viewed with caution

## Allocation Transfers

Annual IFQ allocation is the actual poundage of fish that any IFQ entity can use to possess, land, or sell grouper-tilefish during a given fishing year. Allocation is distributed to each IFQ shareholder at the beginning of each calendar year and expires at the end of the calendar year. After the initial distribution of allocation, any IFQ entity that has a valid Gulf of Mexico reef-fish permit (both those with and without shares) may purchase allocation from any other IFQ entity.

In 2010, 5,792,418 pounds of allocation were transferred among entities through 3,384 allocation transactions. The greatest number of allocation transfers occurred for red grouper, followed by gag, shallow-water grouper, deep-water grouper and tilefish (Table 9). Deep-water grouper and tilefish had total allocation transfers that were greater than the quota. This occurs because the IFQ system does not track allocation pounds individually and, therefore, counts multiple transactions of the same allocation. The maximum amount of allocation transferred during one transaction was 100,000 lb for red grouper and shallow-water grouper, 39,457 lb for tilefish, 26,043 lb for gag, and 10,000 lb for deep-water grouper. The minimum amount transferred for all IFQ categories was one pound. The average

allocation traded per transaction was 787 lb for gag, 3,021 lb for red grouper, 2,097 lb for deep-water grouper, 511 lb for shallow-water grouper, and 1,827 lb for tilefish (Table 9). A few large transactions led to high average transfer amounts; therefore, median values were considered more indicative of typical allocation transfers than average values. Median allocation pounds transferred were highest in red grouper, followed by deep-water grouper, tilefish, gag, and shallow-water grouper (Table 9).

Table 9: Allocation transfer transactions

	<b>GG</b>	<b>RG</b>	<b>DWG</b>	<b>SWG</b>	<b>TF</b>
Total pounds of allocation traded <sup>1</sup>	743,266	3,217,048	1,027,477	315,042	489,585
Number of allocation transfers	945	1,065	490	616	268
Average allocation amount traded in pounds	787	3,021	2,097	511	1,827
Median allocation amount traded in pounds	300	926	737	186	445
Minimum allocation amount traded in pounds	1	1	1	1	1
Maximum allocation amount traded in pounds	26,043	100,000	100,000	10,000	39,457
Percentage of entities entering a price	23.70%	24.13%	18.98%	18.18%	16.42%
Average price per allocation pound <sup>2</sup>	\$0.95	\$0.69	\$1.09	\$0.97	\$0.67
Median price per allocation pound <sup>2</sup>	\$1.00	\$0.50	\$1.00	\$1.00	\$0.50
Minimum price per allocation pound <sup>2</sup>	\$0.02	\$0.01	\$0.02	\$0.01	\$0.10
Maximum price per allocation pound <sup>2</sup>	\$3.00	\$4.50	\$4.00	\$4.00	\$3.00

<sup>1</sup> In calculating the total pounds of allocation traded, multiple transactions of a single allocation were not tracked separately.

<sup>2</sup> Prices have not been adjusted for inflation. Most prices were reported on a per pound basis. However, some transactions reported the total value paid for all allocation bought. If the price per pound entered was greater or equal to \$5.00, then the price was assumed to be a total price. This price was then divided by the pounds to calculate the actual price per pound. Excluded from the analysis were any prices per pound that were less than or equal to \$0.01/lb or were greater than \$5.50/lb.

Prices for allocation are not required in the IFQ system, and only 21% of allocation transactions had associated price data (Table 9). Most prices were reported on a per pound basis; however some transactions reported the total value paid for all allocation bought. Prices greater or equal to \$5.00/lb were assumed to be a total price, and were then divided by the pounds to calculate the actual price per pound. Excluded from the analysis were any prices per pound that were less than or equal to \$0.01/lb or were greater than \$5.50/lb. Gag and red grouper had the greatest percentage of reported prices (~24%), while tilefish had the lowest percentage of reported prices (16%) (Table 9). Average allocation price per pound for each IFQ category ranged between \$0.67 (tilefish) and \$1.09 (deep-water grouper) (Table 9). Median prices were similar and ranged from \$0.50 (tilefish and red grouper) to \$1.00 (deep-water grouper, gag grouper, and shallow-water grouper). Minimum prices were ≤ \$0.10 per pound while maximum prices were ≥ \$4.50 per pound (Table 9). As with the share transaction price information, *given the large number of transactions without reliable price data, results should be viewed with caution.*



In 2010, 816 entities held allocation in the Grouper-Tilefish IFQ program. This includes both those that held shares as well as those that held allocation without shares. The highest number of entities holding allocation occurred in gag (n = 789), followed by shallow-water grouper (n = 762), red grouper (n = 744), deep-water grouper (n = 512) and tilefish (n = 299) (Table 10). The majority (>90%) of the entities that held allocation also held shares (Table 10). Entities were considered active in the IFQ program if they landed, sold, and/or bought allocation. Within any IFQ category, active entities always comprised more than 60% of all entities (Table 10). There were between 22-47% entities in each share category that reported landing grouper-tilefish. Of these entities, more than 90% of them were shareholders. Between 23-44% of the entities only traded allocation and did not land fish.

Table 10: Allocation activity for 2010

	<b>GG</b>		<b>RG</b>		<b>DWG</b>		<b>SWG</b>		<b>TF</b>	
	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>
Entities with allocation	789	100	744	100	512	100	762	100	299	100
Entities receiving allocation through shares	740	94	690	93	472	92	725	95	271	91
Entities with allocation but not holding shares	49	6	54	7	40	8	37	5	28	9
Inactive entities <sup>1</sup>	244	31	222	30	169	33	277	36	101	34
Active entities <sup>1</sup>	545	69	522	70	343	67	485	64	198	66
Entities who only traded allocation	183	23	174	23	182	36	203	27	132	44
Entities who sold all their allocation	53	7	56	8	82	16	87	11	61	20
Entities that landed fish	362	46	348	47	161	31	282	37	66	22
Entities that landed fish and held shares	326	41	312	42	148	29	262	34	62	21

<sup>1</sup> Inactive entities are entities that have share holdings but did not land, buy or sell allocation; this includes both entities who have never logged into their account and those that have logged into their account.

## End of Year Allocation Balances

Unused allocation accounted for 39% to 65% of the quota within the individual IFQ categories (Table 11). Gag had the highest percentage of unused allocation (65%), which consisted of 916,034 pounds held in 706 accounts. Deep-water grouper had the lowest percentage (39%) of unused allocation which consisted of 395,615 pounds held in 390 accounts. Red grouper had the greatest pounds of unused allocation (2,832,529 lb), which accounted for 49% of the quota (Table 11), while tilefish had the smallest pounds of unused allocation (190,857 lb) that consisted of 43% of the quota. The majority of the unused allocation was held by active entities (Table 11). The maximum pounds of unused allocation held in any one account were 134,667 lb of red grouper. Maximum amounts in the other IFQ categories were 101,043 lb in deep-water grouper, 35,457 lb in gag grouper, 30,679 lb in shallow-water grouper, and 18,259 lb in tilefish (Table 11). Average amounts of unused allocation in accounts were 1,298 lb in gag grouper, 4,253 lb in red grouper, 1,014 lb in deep-water grouper, 399 lb in shallow-water grouper, and 871 lb in tilefish. Median amounts of unused allocation were considerably smaller than average amounts (Table 11). Only a few entities landed more than their allocation (10% overage allowance) (Table 11). Within any IFQ category, between 14 to 44% of the accounts had less than 26 pounds of allocation (Table 12). In the red grouper IFQ category, 43% of the accounts had greater than 1,000 pounds, while the other IFQ categories had between 10 to 28% of the accounts with greater than 1,000 pounds (Table 12). For all IFQ categories, the accounts with balances > 500 lb were predominately active accounts, while inactive accounts were largely less than 100 lb.



**Table 12: Remaining allocation balances**

Remaining Allocation (lb)	Active Accounts					Inactive Accounts				
	GG	RG	DWG	SWG	TF	GG	RG	DWG	SWG	TF
1-25	66	48	55	103	47	75	44	86	130	50
26-50	23	26	22	24	10	26	13	16	43	11
51-100	22	19	22	37	16	33	31	16	34	9
101-200	38	34	22	32	10	22	25	19	28	7
201-500	81	21	33	65	9	28	41	9	28	7
501-1,000	54	29	20	39	6	38	46	7	7	9
1,001-above	178	45	47	53	20	22	244	16	7	8
<b>Total</b>	462	222	221	353	118	244	444	169	277	101

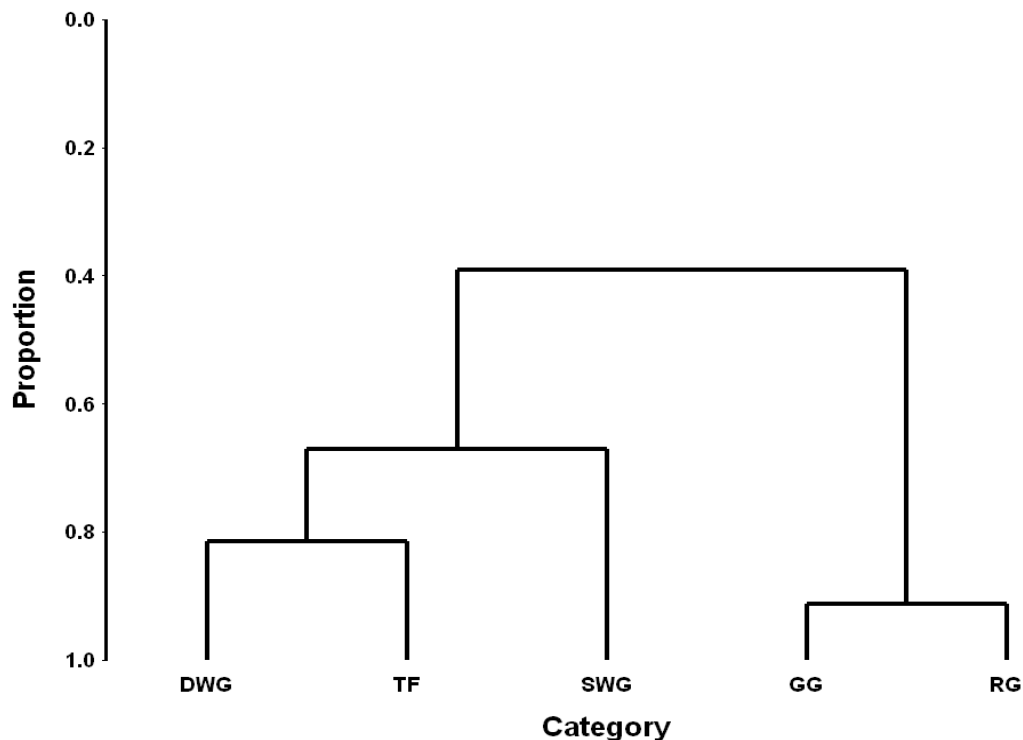


## Grouper-Tilefish Fishing Activity and Landings



There were 452 vessels that reported landing grouper-tilefish. The red grouper IFQ category had the greatest number of vessels operating in 2010 ( $n = 415$ ), followed by gag ( $n = 393$ ), shallow-water grouper ( $n = 322$ ), deep-water grouper ( $n = 187$ ), and tilefish ( $n = 79$ ) (Table 13). Of the 452 vessels, there were 25 vessels that only landed fish in one Grouper-Tilefish IFQ category. There were 54 vessels that landed fish in all five Grouper-Tilefish IFQ categories, with 44 of these vessels also landing red snapper, another IFQ program species. The

remaining vessels landed species from multiple IFQ categories. Deep-water grouper, tilefish, and shallow-water grouper were often landed with the same vessels, while other vessels landed both gag and red grouper (Figure 4). For all Grouper-Tilefish IFQ categories, the majority of vessels reported landings in Florida. The number of trips and days spent fishing were highest off Florida compared to the other Gulf States (Table 13). For gag and red grouper, average landings in Florida were greater than those in the other Gulf states, while deep-water and shallow-water groupers had similar average landings when compared to other Gulf states. Tilefish had considerably higher average landings per trip off Alabama-Texas than off Florida.



**Figure 4: Dendrogram showing the level of association of IFQ share categories based on vessel trips landing species from multiple IFQ share categories.**

Note: The dendrogram was created using a divisive and iterative non-hierarchical clustering process based on the 95% of variance explained by the clusters. Clusters are more correlated among themselves than across variables in other clusters.

**Table 13: Fishing effort and average landings**

IFQ Category	States <sup>1</sup>	Num. Vessels	Trips	Days Away <sup>2</sup>	Avg. Landings / Trip (lb)
GG	FL	378	3,048	15,018	160
	AL-TX	37	157	1,036	48
	<i>Total</i>	<i>415</i>	<i>3,205</i>	<i>16,054</i>	<i>154</i>
RG	FL	383	3,718	17,713	783
	AL-TX	10	45	214	24
	<i>Total</i>	<i>393</i>	<i>3,763</i>	<i>17,927</i>	<i>774</i>
DWG	FL	138	658	3,663	657
	AL-TX	49	290	2,000	664
	<i>Total</i>	<i>187</i>	<i>948</i>	<i>5,663</i>	<i>659</i>
SWG	FL	282	1,742	11,855	79
	AL-TX	40	242	2,033	85
	<i>Total</i>	<i>322</i>	<i>1,984</i>	<i>13,888</i>	<i>80</i>
TF	FL	64	261	1,644	541
	AL-TX	15	68	766	1,597
	<i>Total</i>	<i>79</i>	<i>329</i>	<i>2,410</i>	<i>759</i>
All G-T	FL	401	4,354	19,603	944
	AL-TX	67	393	2,333	840
	<i>Total</i>	<i>468</i>	<i>4,747</i>	<i>21,936</i>	<i>935</i>

<sup>1</sup> Based on where a vessel reported a majority of its landings; 10 vessels reported landings in both Florida and other Gulf States in 2010.

<sup>2</sup> Days away from port are calculated for all shallow-water grouper, including red and gag grouper. Days away based on reported state of landings. Data for days away from coastal logbook records as of 9/25/2010.

Landed fish in each IFQ category ranged between 39 and 61% of the quotas (Table 14). There were 97 licensed IFQ dealers that received grouper-tilefish species, with 77% of the dealers located in Florida. The majority of landings for all IFQ categories were primarily in Florida versus the other Gulf States (Table 14). Gag landings comprised 43% of the quota, with the highest landings occurring in the winter-spring months (Dec – May). Red grouper was almost exclusively landed in Florida and landings were 51% of the quota. Monthly red grouper landings were between 174,968 to 347,699 pounds, with higher landings occurring from September through December (Table 14, Figure 5). Sixty-one percent of the deep-water grouper quota was landed in 2010, with peak landings occurring in April and May (91,009 - 100,750 lb). Deep-water grouper landings were lowest in July (23,210 lb) and from September through November (26,855 - 31,500 lb) (Table 14, Figure 5). Shallow-water grouper had the smallest percentage (39%) of the quota landed when compared to all other IFQ categories. Shallow-water groupers were primarily caught in the beginning of the year from January through April, with a decreasing trend in landings for the rest of the year (Figure 5). Fifty-seven percent of the tilefish quota was landed, with slightly more than half of the landings occurring in Florida. Peak tilefish landings occurred in March, April and December (Figure 5). All IFQ categories, except red grouper, had an increase in landings in December as commercial fishermen sought to harvest unused allocation before the end of the fishing year. The low landings in the summer months for all IFQ categories may be due in part to the fishing area closures related to the Deep Water Horizon oil spill (Appendix 1).

**Table 14: Reported landings (lb) by month**

Category		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Annual
GG	FL	43,184	48,111	59,234	53,420	55,829	43,339	22,327	25,130	26,757	24,967	19,366	64,683	486,347
	Gulf-wide	43,562	48,530	59,766	54,033	56,455	43,773	22,486	27,624	27,371	25,727	19,537	65,074	493,938
	% Quota	3.82	4.26	5.24	4.74	4.95	3.84	1.97	2.42	2.40	2.26	1.71	5.71	43.33
	Cum. % Quota	3.82	8.08	13.32	18.06	23.01	26.85	28.83	31.25	33.65	35.91	37.62	43.33	
RG	Gulf-wide <sup>1</sup>	195,473	178,559	207,862	174,968	183,095	331,751	152,992	199,203	344,546	347,699	324,820	275,766	2,916,734
	% Quota	3.40	3.11	3.61	3.04	3.18	5.77	2.66	3.46	5.99	6.05	5.65	4.80	50.73
	Cum. % Quota	3.40	6.50	10.12	13.16	16.35	22.12	24.78	28.24	34.23	40.28	45.93	50.73	
DWG	FL	27,245	42,644	50,159	71,704	82,974	27,999	14,949	51,796	4,950	12,462	20,678	24,769	432,329
	Gulf-wide	35,392	50,751	61,150	91,009	100,750	55,413	23,210	73,442	27,411	26,855	31,500	47,879	624,762
	% Quota	3.47	4.98	6.00	8.92	9.88	5.43	2.28	7.20	2.69	2.63	3.09	4.69	61.25
	Cum. % Quota	3.47	8.45	14.44	23.36	33.24	38.67	40.95	48.15	50.84	53.47	56.56	61.25	
SWG	FL	17,319	19,540	19,078	15,649	10,281	12,072	6,572	9,860	8,766	6,046	4,531	8,068	137,782
	Gulf-wide	18,664	21,420	21,456	17,821	12,579	13,769	7,091	11,915	11,266	7,618	5,880	8,755	158,234
	% Quota	4.55	5.22	5.23	4.35	3.07	3.36	1.73	2.91	2.75	1.86	1.43	2.14	38.59
	Cum. % Quota	4.55	9.78	15.01	19.36	22.42	25.78	27.51	30.42	33.17	35.02	36.46	38.59	
TF	FL	8,341	20,853	28,757	30,543	13,859	3,240	1,317	7,861	4,789	1,213	8,379	11,969	141,121
	Gulf-wide	8,394	21,028	33,462	44,533	22,382	10,397	4,229	24,940	11,826	19,335	14,521	34,661	249,708
	% Quota	1.91	4.78	7.61	10.12	5.09	2.36	0.96	5.67	2.69	4.39	3.30	7.88	56.75
	Cum. % Quota	1.91	6.69	14.29	24.41	29.50	31.86	32.82	38.49	41.18	45.57	48.87	56.75	

<sup>1</sup> To maintain confidentiality only Gulf-wide red grouper landings are shown.

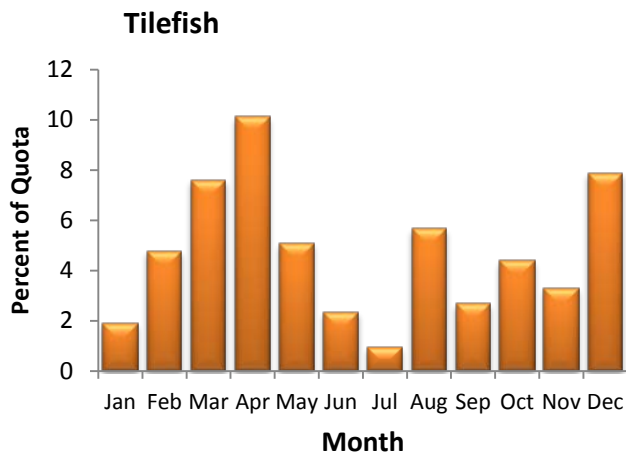
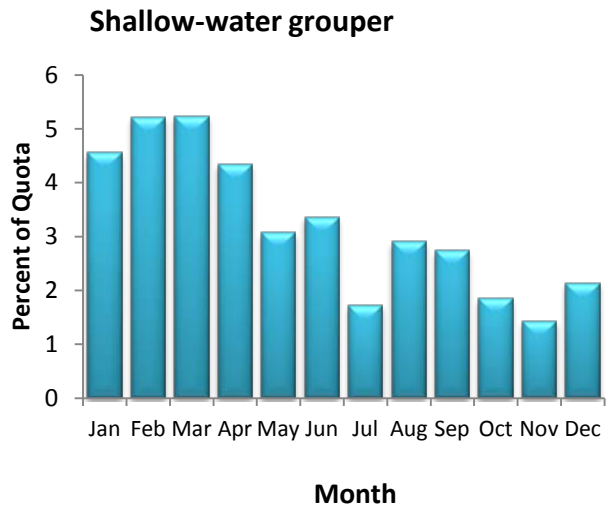
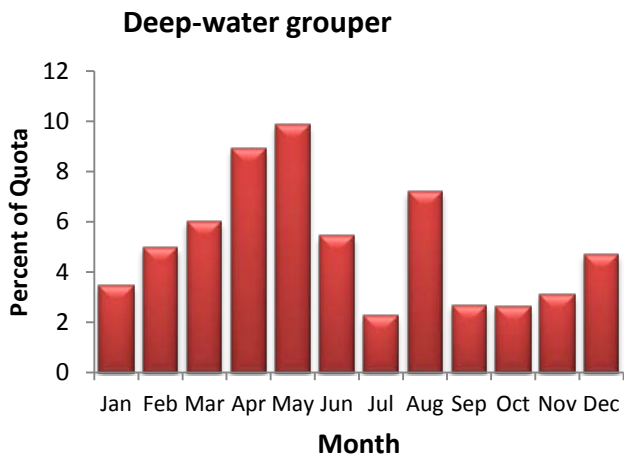
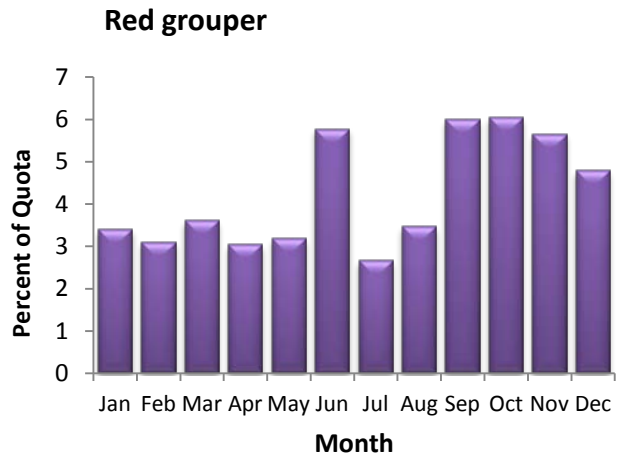
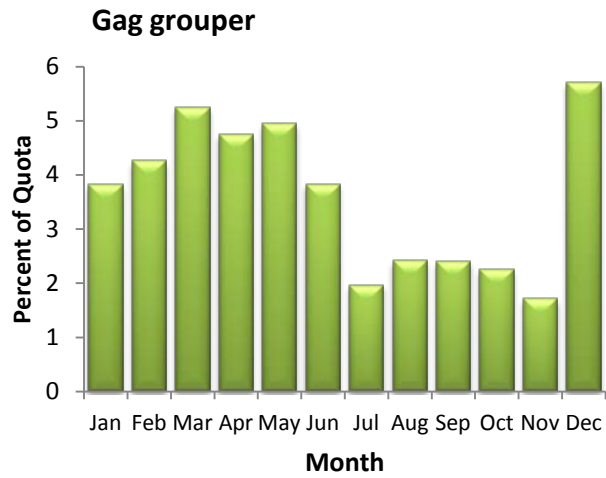


Figure 5: Percentage of the quota landed by month and share category

## Ex-vessel Values and Cost Recovery Fees

The Magnuson-Stevens Fishery Conservation and Management Act requires the Secretary of Commerce to implement a cost recovery program to recover the actual cost of managing and enforcing the IFQ program. The cost recovery fee established for the Grouper-Tilefish IFQ program is currently 3% of the actual ex-vessel value of any Grouper-Tilefish IFQ species. IFQ allocation holders who complete a landing transaction with an IFQ dealer are responsible for payment of the fee. The dealer who receives the Grouper-Tilefish IFQ species is responsible for collecting and submitting the fee on a quarterly basis to NOAA Fisheries Service. Monies collected are used for administration of the program, maintenance and upkeep of the online system and software, research, and enforcement of the Grouper-Tilefish IFQ program.

**Table 15: Ex-vessel value**

Quarter	GG	RG	DWG	SWG	TF	Total
Jan – Mar	\$ 652,576	\$ 1,861,720	\$ 528,830	\$ 247,310	\$ 133,771	\$3,424,208
Apr – Jun	\$ 667,977	\$ 2,157,953	\$ 884,214	\$ 181,582	\$ 163,045	\$4,054,771
Jul – Sept	\$ 319,252	\$ 2,073,131	\$ 423,109	\$ 119,613	\$ 75,822	\$3,010,928
Oct - Dec	\$ 465,324	\$ 2,784,057	\$ 369,952	\$ 88,622	\$ 145,068	\$3,853,024
Total	\$ 2,105,130	\$ 8,862,106	\$ 2,206,106	\$ 637,127	\$ 517,706	\$14,342,930

Total ex-vessel value for the Grouper-Tilefish IFQ program was \$14,328,175 (Table 15). In 2010, the ex-vessel value of gag was over \$2 million with more than 60% of the dollars generated in the first half of the year. Red grouper ex-vessel value exceeded \$8 million, with the lowest values generated in the first quarter of the year. Deep-water grouper ex-vessel value was over \$2 million, with the second quarter generating 40% of the total value. Shallow-water and tilefish ex-vessel values were under \$1 million dollars. Shallow-water grouper ex-vessel values were greatest in the first quarter and lowest in the fourth quarter. Tilefish ex-vessel values were lowest in the third quarter. Cost recovery fees followed a similar pattern to the ex-vessel values and produced an annual total of \$430,525 for all Grouper-Tilefish IFQ categories combined (Table 16).

**Table 16: Cost recovery fees**

Quarter	GG	RG	DWG	SWG	TF	Total
Jan – Mar	\$ 19,578	\$ 55,852	\$ 15,865	\$ 7,420	\$ 4,013	\$102,728
Apr – Jun	\$ 20,040	\$ 64,739	\$ 26,527	\$ 5,448	\$ 4,891	\$121,645
Jul – Sept	\$ 9,578	\$ 62,194	\$ 12,693	\$ 3,589	\$ 2,275	\$90,329
Oct - Dec	\$ 13,960	\$ 83,522	\$ 11,099	\$ 2,659	\$ 4,352	\$115,592
Total	\$ 63,156	\$ 266,308	\$ 66,184	\$ 19,115	\$ 15,531	\$430,294

**Table 17: Ex-vessel values by species**

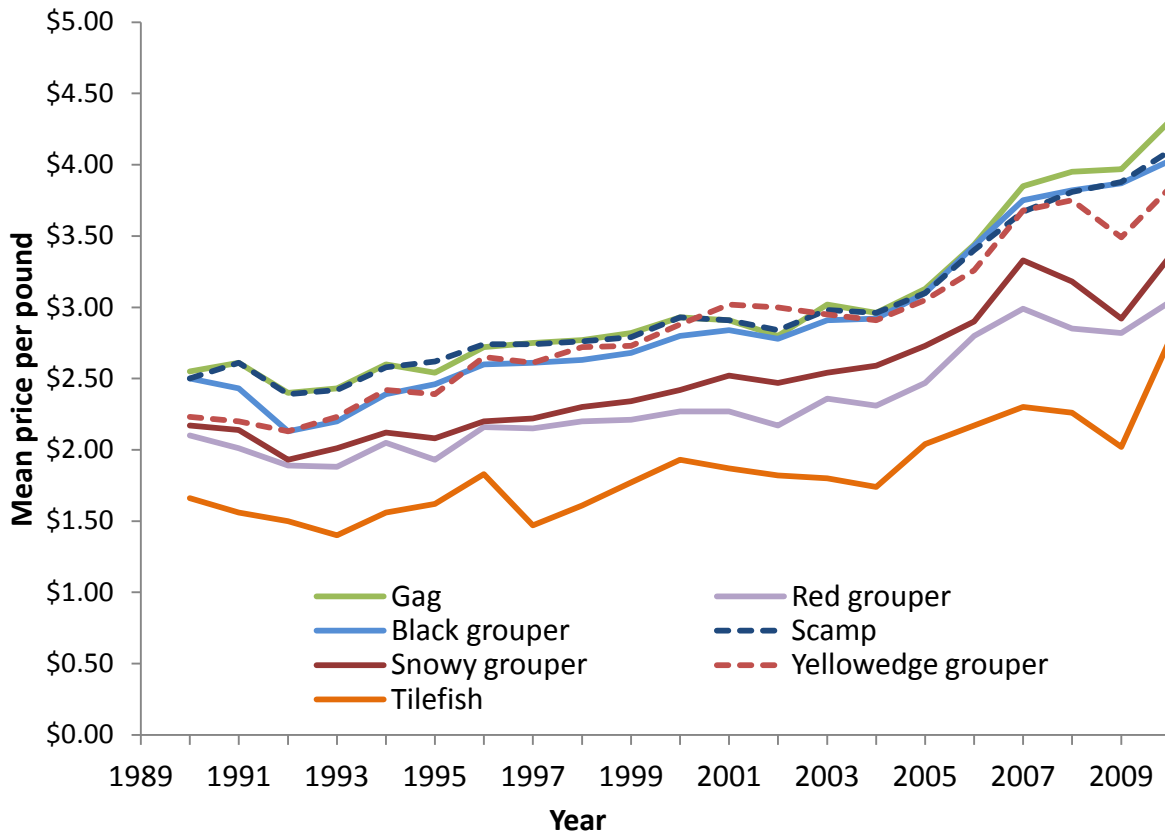
<b>IFQ Category</b>	<b>Species</b>	<b>Jan – Mar</b>	<b>Apr – Jun</b>	<b>Jul – Sept</b>	<b>Oct - Dec</b>	<b>Total</b>
Gag Grouper	Gag grouper <sup>1</sup>	\$ 655,304	\$ 670,481	\$ 326,757	\$ 467,343	\$ 2,119,886
Red Grouper	Red grouper <sup>1</sup>	\$ 1,858,993	\$ 2,155,449	\$ 2,065,626	\$ 2,782,039	\$ 8,876,862
	Misty Grouper <sup>2</sup>					\$ 901
Deep-water Grouper	Snowy Grouper	\$ 49,331	\$ 124,558	\$ 50,046	\$ 48,366	\$ 272,301
	Speckled Hind <sup>1</sup>	\$ 12,657	\$ 15,241	\$ 14,399	\$ 2,819	\$ 45,116
	Warsaw Grouper <sup>1</sup>	\$ 42,261	\$ 45,205	\$ 30,994	\$ 27,847	\$ 146,308
	Yellowedge Grouper	\$ 407,059	\$ 677,177	\$ 303,866	\$ 276,621	\$ 1,664,723
	Black grouper	\$ 27,400	\$ 21,107	\$ 24,717	\$ 9,598	\$ 82,821
Shallow-water Grouper	Red hind	\$ 475	\$ 386	\$ 142	\$ 166	\$ 1,169
	Rock hind	\$ 136	\$ 657	\$ 100	\$ 315	\$ 1209
	Scamp <sup>1</sup>	\$ 236,125	\$ 179,145	\$ 116,897	\$ 91,459	\$ 623,625
	Yellowfin grouper <sup>2</sup>					\$ 4,746
	Yellowmouth grouper <sup>2</sup>					\$ 315
Tilefishes	Blueline tilefish	\$ 3,164	\$ 6,224	\$ 6,463	\$ 5,345	\$ 21,196
	Golden tilefish	\$ 62,333	\$ 109,891	\$ 69,359	\$ 125,077	\$ 366,660
	Goldface Tilefish	\$ 68,056	\$ 46,341	-	\$ 14,645	\$ 129,043

<sup>1</sup> Values differ from Table 12 due to flexibility measures for gag, red grouper, speckled hind, warsaw grouper, and scamp. For example, in Table 12 if gag is landed as red grouper multiuse allocation, it is counted as part of the ex-vessel value generated for the red grouper IFQ category. In Table 14 (check table reference), values are calculated by species level and not by IFQ category level.

<sup>2</sup> To maintain confidentiality the ex-vessel values are not reported by quarter for the following species: misty grouper, yellowfin grouper, yellowmouth grouper, blackline tilefish and anchor tilefish.

Deep-water grouper ex-vessel values are primarily driven by yellowedge grouper, which accounted for 78% of the total ex-vessel value of deep-water grouper, followed by snowy grouper (13%), warsaw grouper (7%), speckled hind (2%) and misty grouper (<1%) (Table 17). Shallow-water grouper ex-vessel values are primarily driven by scamp (87%), followed by black grouper (12%), and the remaining species consisting of 1% of the ex-vessel value (Table 17). Tilefish ex-vessel prices were predominately driven by golden tilefish (71%), followed by goldface tilefish (25%), and blueline tilefish (4%) (Table 17).

Average Grouper-Tilefish ex-vessel prices, calculated from the South East Fisheries Science Center’s (SEFSC) accumulated landings system, gradually increased between 1990 and 2004. In the mid-2000s, a sharp increase in price occurred as quotas began to be met, followed by a decline in the late 2000s (Figure 6). With the start of the IFQ program in 2010, ex-vessel prices increased for all species (Figure 6). Tilefish had a 37% increase in average ex-vessel price with values going from \$2.02/lb in 2009 to \$2.78/lb in 2010 (Figure 6). Average ex-vessel prices increased by 15% (\$0.76/lb) for snowy grouper, 10% (\$0.35/lb) for yellowedge grouper, 9% (\$0.22/lb) for gag, 8% (\$0.22/lb) for red grouper, and 4% (\$0.16/lb) for black grouper (Figure 6).



**Figure 6: Average ex-vessel price/pound by year\***

\* Average prices for 1990-2010 from SEFSC Accumulated Landings System

The average and median price per pound of landed fish reported to the IFQ online system was highest for gag and shallow water grouper, followed by deep-water grouper, red grouper, and tilefish (Table 18). Average values were weighted based on the annual ex-vessel values and landings, while median values were derived from the IFQ online system. The average and median ex-vessel prices reported for gag were \$4.26 and \$4.25 per pound, respectively. For shallow-water grouper, the average reported price per pound was \$4.03 and the median ex-vessel price was \$4.20. Average ex-vessel prices for deep-water grouper, red grouper, and tilefish were \$3.53, \$3.04, and \$2.07 per pound, respectively. Average and median prices per pound landed were based on all species landed within a share category; therefore,

average ex-vessel prices for multi-species categories are influenced by the more predominant species and differences in individual species ex-vessel values.

**Table 18: Average and median prices per pound landed in 2010**

IFQ category	Annual Ex-vessel Value	Annual Landings	Average \$/lb Landed <sup>1</sup>	Median \$/lb Landed
GG	\$ 2,105,130	\$ 493,938	\$4.26	\$ 4.25
RG	\$ 8,876,862	\$ 2,916,734	\$3.04	\$ 3.20
DWG	\$ 2,206,106	\$ 624,762	\$3.53	\$ 3.25
SWG	\$ 637,127	\$ 158,234	\$4.03	\$ 4.20
TF	\$ 517,706	\$ 249,708	\$2.07	\$ 1.85

<sup>1</sup> Average price per landed pound is a weighted average price based on the annual ex-vessel value and annual landings.

Viewing the average or median price per landed pound at the species level reveals differences in pricing within each IFQ category (Table 19). Within the deep-water grouper IFQ category, yellowedge grouper had the highest average price per pound landed, followed by snowy grouper, misty grouper, speckled hind and warsaw grouper (Table 19). The highest average price per pound landed in the shallow-water grouper IFQ category was scamp, followed by black grouper, yellowmouth grouper, yellowfin grouper, rock hind, and red hind. In the tilefish IFQ category, golden and goldface tilefish average prices per pound landed were approximately \$1.00 greater than the other tilefish species.

**Table 19: Price per pound landed statistics<sup>1</sup>**

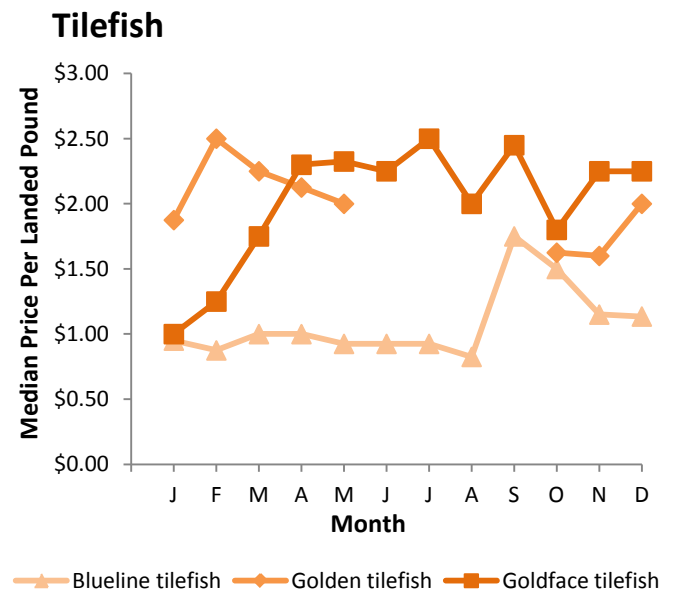
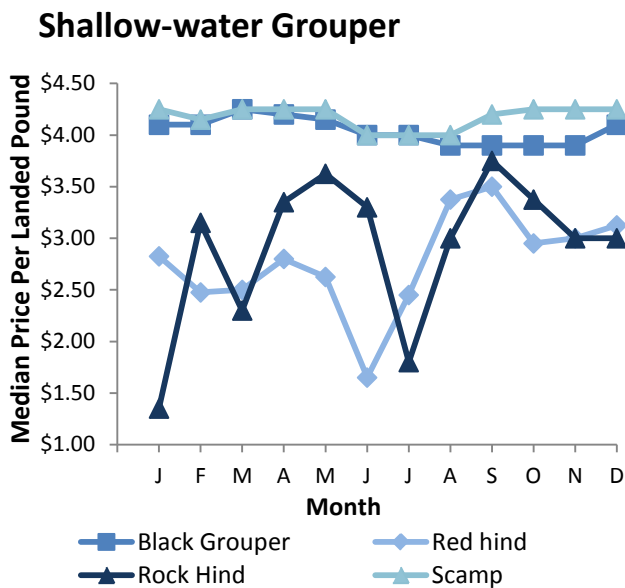
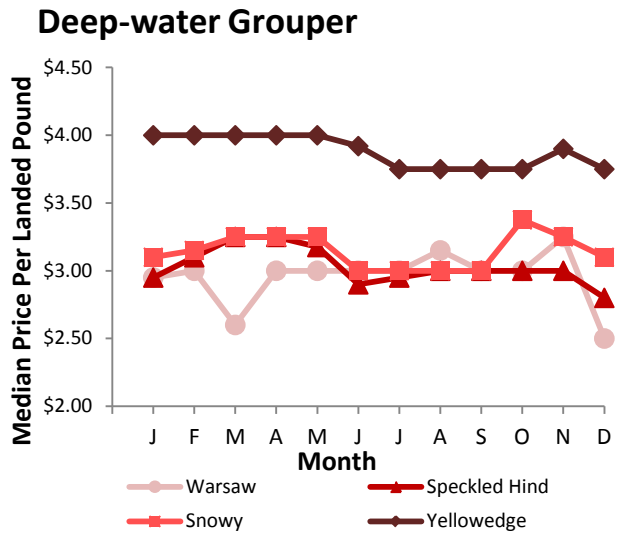
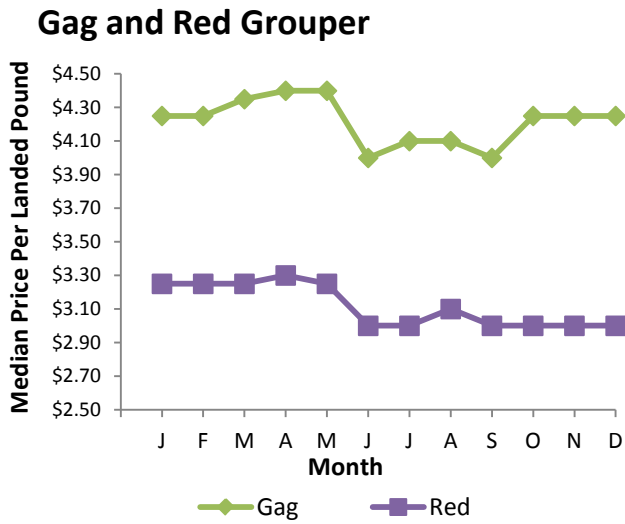
IFQ Category	Species	Average <sup>2</sup>	Median	Min	Max
Gag Grouper	Gag grouper	\$ 4.27	\$ 4.25	\$ 0.01	\$ 5.25
Red Grouper	Red grouper	\$ 3.04	\$ 3.20	\$ 0.01	\$ 5.00
	Snowy Grouper	\$ 3.02	\$ 3.15	\$ 0.01	\$ 4.35
	Speckled Hind	\$ 2.94	\$ 3.00	\$ 0.01	\$ 5.00
	Warsaw Grouper	\$ 2.59	\$ 3.00	\$ 1.00	\$ 5.00
	Yellowedge Grouper	\$ 3.75	\$ 4.00	\$ 0.01	\$ 4.75
	Black grouper	\$ 3.96	\$ 4.00	\$ 0.01	\$ 4.95
Shallow-water Grouper	Red hind	\$ 2.49	\$ 2.80	\$ 1.50	\$ 4.00
	Rock hind	\$ 3.12	\$ 3.00	\$ 0.60	\$ 4.00
	Scamp	\$ 4.06	\$ 4.20	\$ 0.01	\$ 5.25
Tilefishes	Blueline tilefish	\$ 0.94	\$ 1.00	\$ 0.25	\$ 2.75
	Golden tilefish	\$ 2.17	\$ 2.13	\$ 0.35	\$ 3.40
	Goldface Tilefish	\$ 2.26	\$ 2.00	\$ 1.00	\$ 3.10

<sup>1</sup> Prices per pound that were  $\geq$  \$10/pound were excluded from the analysis; prices for some species have been excluded to maintain confidentiality.

<sup>2</sup> Average price per landed pound is a weighted average price calculated from the individually entered prices per pound landed.



Scamp, yellowedge grouper, red grouper, black grouper, snowy grouper, gag grouper, and speckled hind had stable ex-vessel prices (< \$0.50 range) throughout the year, while yellowfin grouper, goldface tilefish, red hind, and rock hind had variable ex-vessel prices (≥ \$1.45 range) throughout the year (Figure 7). In June and July there was a decrease in ex-vessel price for many of the groupers, which occurred at the height of the Deepwater Horizon oil spill. Some of these species (misty grouper, gag grouper, snowy grouper, and scamp) later had an increase in the ex-vessel prices towards the end of the year. This may be in part due to the opening of fishing grounds following the Deepwater Horizon oil spill and from commercial fishermen seeking to use all their allocation by the end of the year.



**Figure 7: Median ex-vessel price per pound landed by species throughout the year**

Prices differ by month and state and are in part due to differences in retail markets, but are also likely due to differences in reporting accuracy among dealers. To maintain confidentiality, average red

grouper prices are reported Gulf-wide, with the lowest prices occurring in the summer months (Table 20). Florida prices were generally greater than the other Gulf states, except for red grouper (Table 20). Gag prices were on average \$1.00 or more per pound higher in the Florida than in the other Gulf States (Table 20). Tilefish average prices fluctuated more in the other Gulf States than at Florida dealers, with values as low as \$0.52/lb to values as great as \$2.48/lb (Table 20). Some of the lowest prices seen may be due to dealers reporting ex-vessel prices minus deductions for transferred or leased allocation, goods (e.g. bait, ice, fuel), and/or services (e.g. repairs, machinery replacement). In 2011, a new rule clarified the definition of ex-vessel price as the price paid per pound of fish before any deductions are made for transferred (leased) allocation and goods and services (e.g. bait, ice, fuel, repairs, machinery replacement). Fishing ground closures associated with the oil spill resulted in decreased landings, particularly off Alabama and Mississippi, may have also contributed to lower prices being reported.

**Table 20: Average price paid per pound landed by state and month<sup>1</sup>**

	GG		RG		DWG		SWG		TF	
	FL	Other Gulf	Other Gulf	FL	Other Gulf	FL	Other Gulf	FL	Other Gulf	
<b>January</b>	\$ 4.22	\$ 2.53	\$ 3.35	\$ 3.71	\$ 2.61	\$ 4.03	\$ 3.10	\$ 2.21	\$ 2.33	
<b>February</b>	\$ 4.30	\$ 3.41	\$ 3.46	\$ 4.01	\$ 2.56	\$ 4.08	\$ 2.99	\$ 2.22	\$ 2.32	
<b>March</b>	\$ 4.38	\$ 3.25	\$ 3.21	\$ 3.73	\$ 2.58	\$ 4.20	\$ 3.29	\$ 2.30	\$ 0.52	
<b>April</b>	\$ 4.43	\$ 3.16	\$ 3.65	\$ 3.88	\$ 2.77	\$ 4.25	\$ 3.47	\$ 2.38	\$ 1.74	
<b>May</b>	\$ 4.40	\$ 3.63	\$ 3.58	\$ 3.86	\$ 3.04	\$ 4.30	\$ 3.64	\$ 2.21	\$ 1.77	
<b>June</b>	\$ 4.16	\$ 3.53	\$ 3.00	\$ 3.41	\$ 3.03	\$ 4.06	\$ 3.57	\$ 1.68	\$ 2.06	
<b>July</b>	\$ 4.16	\$ 3.15	\$ 3.00	\$ 3.78	\$ 3.21	\$ 4.03	\$ 3.54	\$ 2.10	\$ 2.20	
<b>August</b>	\$ 4.17	\$ 2.47	-	\$ 3.72	\$ 2.83	\$ 4.07	\$ 3.21	\$ 0.95	\$ 2.10	
<b>September</b>	\$ 4.21	\$ 3.56	-	\$ 3.70	\$ 3.02	\$ 4.10	\$ 3.46	\$ 1.46	\$ 2.37	
<b>October</b>	\$ 4.22	\$ 3.55	\$ 3.73	\$ 3.87	\$ 3.00	\$ 4.06	\$ 3.58	\$ 1.89	\$ 2.07	
<b>November</b>	\$ 4.24	\$ 3.71	\$ 3.73	\$ 3.66	\$ 3.42	\$ 4.10	\$ 3.45	\$ 2.01	\$ 2.48	
<b>December</b>	\$ 4.23	\$ 2.90	\$ 3.50	\$ 4.01	\$ 2.89	\$ 4.11	\$ 3.04	\$ 2.13	\$ 2.10	
<b>Annual</b>	\$ 4.28	\$ 3.05	\$ 3.43	\$ 3.80	\$ 2.93	\$ 4.12	\$ 3.38	\$ 2.14	\$ 1.99	

<sup>1</sup> Price data only includes prices/pound that were greater than or equal to \$0.50 and ≤ \$10.00.

## Grouper-Tilefish Bycatch

Reef fish observer data for gag and red grouper were used to evaluate changes in bycatch associated with these IFQ categories pre- and post-implementation of the Grouper-Tilefish IFQ program. Gag has a minimum size limit of 24" TL while red grouper's minimum size limit is 18" TL. The red grouper minimum size limit was reduced from 20" to 18" TL on May 18, 2009. The number of observer trips increased from 2009 to 2010 for both species (Table 21), with longline trips receiving a higher proportion of observances in 2010 than in 2009. In 2009, there were slightly more observer trips in the NW Florida region, but in 2010 this changed considerably to 62% of the gag and 71% of the red grouper

observer trips occurring in the SW Florida region (Table 21). The number of observed red grouper on observer trips also increased from 2009 to 2010, which is primarily due to the increased number of observed longline trips. While red grouper saw the number of fish per longline trip increase from an average of 516 red grouper/trip to 596 red grouper/trip, the average number of gag per longline trip was similar (2009 n = 15/trip; 2010 n = 14/trip). The percentage of discarded fish decreased for gag in 2010 from 42% to 33% (Table 21), but the percentage of red grouper remained similar (2009 51% vs. 2010 53%), indicating that the IFQ program may be reducing the amount of discarded gag, but not affecting the discarding of red grouper.

**Table 21: Bycatch statistics for gag and red grouper from the reef fish observer program**

	Gag Grouper		Red Grouper	
	2009	2010	2009	2010
<b>Total number of trips observed with species</b>	<b>52</b>	<b>91</b>	<b>58</b>	<b>108</b>
H&L/bandit trips	27	26	32	30
Longline trips	25	65	26	78
SW Florida Trips (statzones 1-5)	23	56	27	77
NW Florida Trips (statzones 6-21) <sup>1</sup>	29	35	31	31
<b>Total number observed</b>	<b>1,091</b>	<b>1,745</b>	<b>16,918</b>	<b>50,432</b>
H&L/bandit	728	807	3,510	3,950
Longline	363	938	13,408	46,482
Total fish/total trips – H&L/bandit	27	31	110	132
Total fish/total trips – Longline	15	14	516	596
Number landed/kept	627	1,173	8,269	23,324
Number discarded alive	457	559	6,724	19,456
Number discarded dead	6	11	1,885	7,015
Number unknown disposition	1	2	40	637
Percentage landed/kept	57.5%	67.2%	48.9%	46.2%
Percentage discarded alive	41.9%	32.0%	39.7%	38.6%
Percentage discarded dead	0.5%	0.6%	11.1%	13.9%
Percentage unknown disposition	0.1%	0.1%	0.2%	1.3%
<b>Landed to discard ratio (x landed: 1 discard)</b>				
Gulf-wide all gears	1.35	2.06	0.96	0.88
Gulf-wide H&L/bandit	0.67	0.64	1.28	0.71
Gulf-wide longline	12.41	11.01	0.89	0.90
SW Florida Trips (statzones 1-5)	0.88	0.81	0.89	0.90
NW Florida Trips (statzones 6-21) <sup>1</sup>	8.68	11.89	1.22	0.78

<sup>1</sup> Most trips occurred in statzones 6-10; observed trips from AL-TX included to maintain data confidentiality.

Gag discards decreased gulf-wide for all gears. In 2010, two gag were landed for every one gag discarded compared to 2009 when 1.3 gag were landed for every gag discarded. This change was primarily due to a decrease in discarded gag in the NW Florida region (8 gag landed/1 discard in 2009

vs. 12 gag landed/1 discard in 2010). The 2010 red grouper discard ratio increased a small amount from the 2009 discard ratio (Table 21). This was primarily due to the increased discards of red grouper in the H&L/Bandit sector (1.28 red grouper landed/1 discard in 2009 vs. 0.71 red grouper landed/1 discard in 2010) and fishing in the NW Florida region (1.2 red grouper landed/1 discard in 2009 vs. 0.78 red grouper landed/1 discard in 2010).

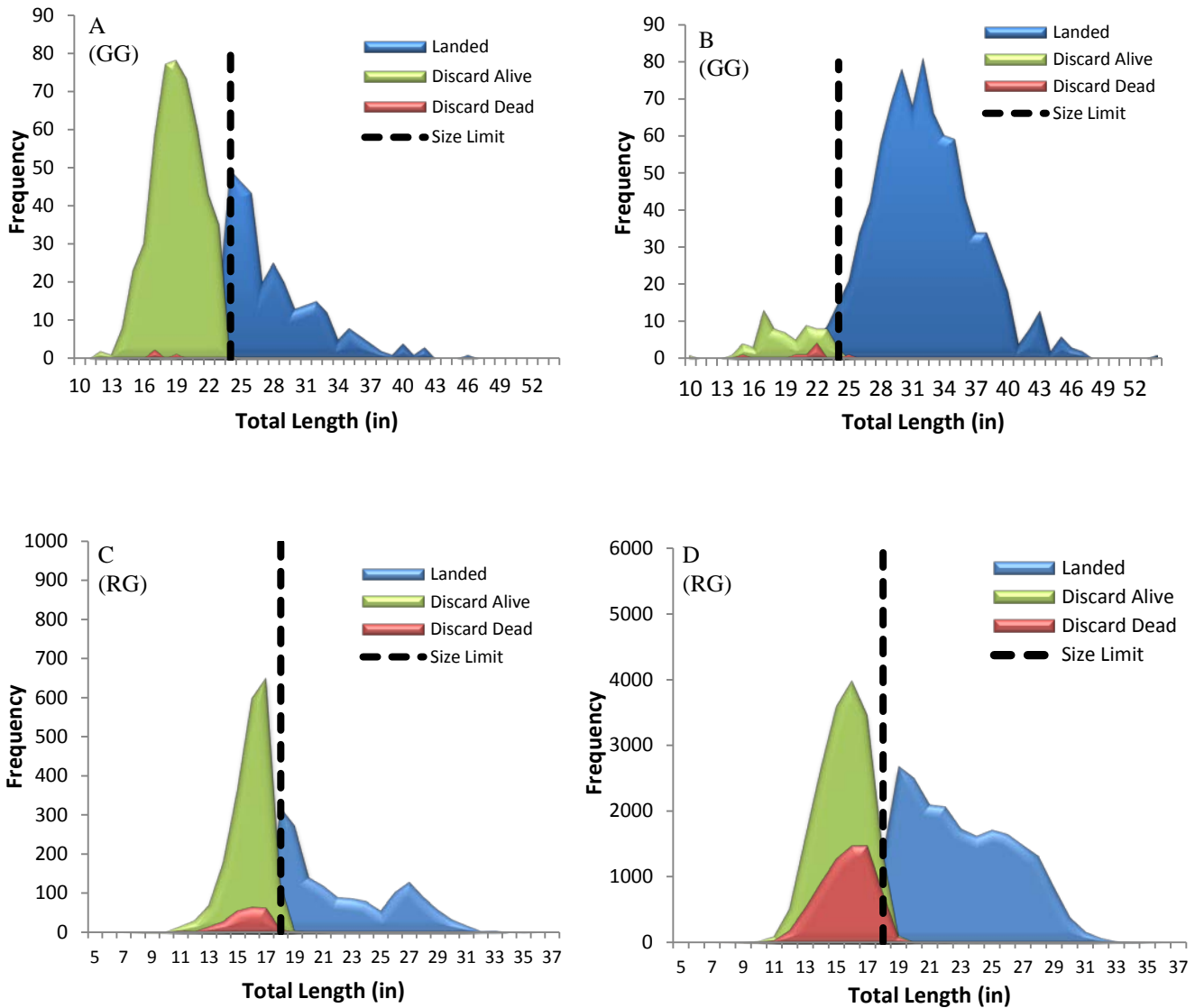


Figure 8: Size frequency distribution of gag vertical line (A) and longline (B) and red grouper vertical line (C) and longline (D) discards and landings for 2010 (Source: SEFSC reef fish observer program). The fate of a small number of red snapper discards was reported as unknown and not included here.

In 2010, the frequency of discarded gag was more pronounced in the vertical line (61%) catches than in the longline catches (8%) (Figures 8A and B). All but one gag that was discarded was below the legal size limit for both vertical line and longline catches (Figure 8A and B). In vertical line catches, gag discards peaked at 19" TL, while in longline catches the peak discard size for gag was 17" TL. Very

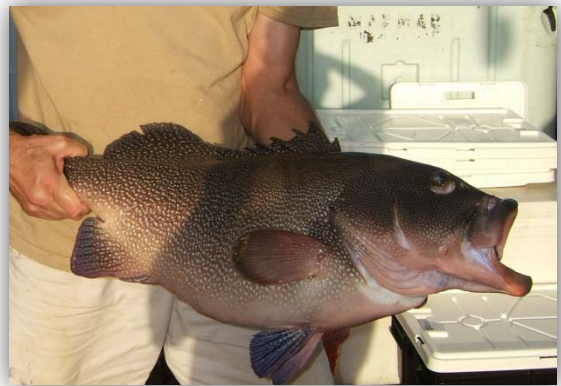
few of the discarded gag were observed to be dead discards, less than 1% in vertical line catches and 10% in longline catches.

For red grouper, the frequency of discarded red grouper was similar in both vertical line catches (58%) and longline catches (52%) (Figures 8C and D). The majority of the discarded red grouper was at or below the legal size limit (18" TL) for both vertical and longline catches. Red grouper discards peaked at 17" TL in vertical line catches and 16" TL for longline catches (Figures 8C and D). The proportion of dead discards was higher in longline catches (28%) than vertical line catches (11%).

Overall, while there were high discards in both gag vertical line catches, and red grouper vertical and longline catches, the majority of discarded fish were observed to be returned alive. Although dead discards were observed to be low, the proportion of fish discarded was high, and delayed mortality resulting from barotraumas may affect the survival these fish.

## Law Enforcement Activities

Law enforcement is a crucial component of the IFQ program. Agents and officers from NOAA/NMFS Office of Law Enforcement (OLE) Southeast Division, the U.S. Coast Guard and participating Joint Enforcement Agreement (JEA) states enforce the regulated activities mandated under the Gulf of Mexico Grouper-Tilefish IFQ program. State wildlife officers and game wardens contribute to the enforcement of the IFQ program under the auspices of the Cooperative Enforcement Agreement, by patrolling the waterfront, meeting vessels upon landing, and monitoring offloads. OLE Special Agents conduct random monitoring of vessels, assist state wildlife officers and game wardens with violations requiring further investigation and conduct independent investigations, especially in cases involving the suspected trafficking or illegal harvest of grouper-tilefish in interstate commerce. During offshore boardings, the U.S. Coast Guard and JEA partners with long range capabilities ensure that vessels harvesting grouper-tilefish are eligible entities in the Grouper-Tilefish IFQ program.



Major violations since implementation of the Grouper-Tilefish IFQ program include false reporting of species and under reporting of total weights landed. Typical violations include landing prior to the three-hour minimum landing notice, landing at a location other than given in the landing notification, transporting an IFQ species without an approval code, completing a landing transaction without a landing notification, and offloading after approved hours. The 2010 cases resulted in 2 seizures totaling 800 pounds of grouper with a corresponding value of \$2,950.

There were between 283 and 3659 landing notifications for Grouper-Tilefish IFQ categories made in 2010. Of these, between 3 to 4% had no corresponding landing transaction. There were between 328 and 3594 landing transactions made for each IFQ category, and of these between 5 to 8.5% had no corresponding landing notification. Both the red grouper and gag IFQ categories had the most landing notifications and landing transactions (Table 22), but also had the highest percentages of landings without notifications. In contrast, the tilefish IFQ category had the lowest number of landing notifications and landing transactions, with the smallest percentage of landing transactions without landing notifications. The high percentage of notifications without landing transactions is in part due to multiple notifications being submitted for the same landing transaction.

**Table 22: Landing notifications and transactions**

	<b>GG</b>	<b>RG</b>	<b>DWG</b>	<b>SWG</b>	<b>TF</b>
Number of landing notifications (LN)	3,196	3,659	862	1,986	283
Number of landing transactions (LT)	3,098	3,594	941	2,001	328
Number of LN without corresponding LT	131	161	36	77	12
Number of LT without corresponding LN	227	307	61	142	19

### *Summary*

This report represents the first year of Grouper-Tilefish IFQ management. The intent of this report is to provide fishermen, managers, and other constituents with data and information to evaluate program performance. The report is not intended to represent a comprehensive review of the Grouper-Tilefish IFQ program.

In the first year of the program, the Grouper-Tilefish IFQ program saw a 3% consolidation of shareholders. The number of shareholders for each IFQ share category varied, with tilefish having the smallest number of shareholders. At the start of the program shareholders were predominately residing in Florida. With the consolidation of shareholders, the distribution of shares shifted in both amounts and location. At the end of the year, there were more shareholders holding small share amounts (< 0.005%), and a decrease in the number of shareholders residing in Florida. The red grouper and gag share categories saw the highest number of share transfers, although most were for small amounts of shares. Tilefish had the highest total share transfers, and the average amount of share transfers was also greater than other IFQ share categories.



The IFQ program contains both entities that own shares as well as those that buy annual allocation. Greater than 60% of the entities in each share category were considered active entities, those that landed, sold, or bought allocation during the year. Most of the unused allocation remaining at the end of the year belonged to active entities, with many accounts containing small amounts of unused allocation (<50 lb). The accounts that had large amounts (> 500 lb) generally belonged to active entities, except in the red grouper IFQ category. Many of the entities owned shares in more than one IFQ category, and in fact most of the vessels landed species from multiple IFQ categories. Only 25 vessels landed species from just one IFQ category, while 54 vessels landed species in all 5 IFQ share categories.

Only 39-61% of the quota was landed among the different IFQ categories. Landings varied by month and species, and the low catches in the summer months were affected by fishing ground closures associated with the Deep Water Horizon oil spill event. Gag, shallow-water grouper, and deep-water grouper were primarily caught in the beginning of the year, while red grouper was primarily caught at the end of the year. Tilefish were caught sporadically throughout the year. Total ex-vessel value for all five IFQ categories totaled \$14,328,175 with cost recovery fees collected equal to \$430,525. Average ex-vessel prices within a category were often driven by one species. Deep-water grouper ex-vessel prices were primarily related to yellowedge grouper prices, while shallow-water grouper were primarily from scamp prices, and tilefish were from golden tilefish prices. Mean ex-vessel prices have increased for all IFQ species since the beginning of the program, indicating growth within the market.

There was a drop in discards for gag, which was primarily due to a decrease in discarded fish in the NW Florida region. Almost all gag were discarded due to size limits, regardless of gear type, and discard mortality was low. Red grouper discard ratios remained similar to 2009 values, with almost all red grouper being discarded due to size limits. Discard mortality occurred more often in longline catches than in vertical line catches.

Overall, the first year of the Grouper-Tilefish IFQ program shows that progress was made toward extending fishing seasons, reducing quota overages, increasing ex-vessel prices. This program will continue to be monitored in future years to evaluate program performance.



## *Looking Ahead*



In 2011, there were a few changes affecting the Grouper-Tilefish IFQ program. For red grouper, the quota was increased on November 2, 2011, from 4.32 million pounds to 5.23 million pounds. This increase was due to updated projections that incorporated actual landing estimates for 2010. Additionally, the definition of actual ex-vessel value was changed on June 1, 2011. The new definition states “actual ex-vessel value” represents the price paid per pound of fish before any deduction are made for transferred (leased) allocation and goods and services (e.g. bait, ice, fuel, repairs, machinery replacement). Beginning in 2012, regulatory changes for gag will be implemented. During the 2011 fishing season, interim regulations reduced the commercial quota to 430,000 pounds. Amendment 32 to the Reef Fish Fishery Management Plan, if approved by NOAA Fisheries Service, will establish a rebuilding plan for gag grouper. The rebuilding plan allows annual increases in gag commercial quota as long as the combined commercial and recreational annual catch limits are not exceeded. Amendment 32 also proposes reducing the commercial gag minimum size limit from 24 to 22 inches total length, sets red grouper multiuse allocation equal to zero until gag is rebuilt, and establishes formulas to allow NOAA Fisheries Service to make annual adjustments to gag and red grouper multiuse allocation.

Additionally, beginning in 2012 annual catch limits will be established for all federally managed species, including grouper-tilefish. Quotas for all grouper-tilefish IFQ categories are set to increase. IFQ shareholders will receive an increase in allocation once these new quotas are established. Quota increases for deep-water grouper and tilefish were due in part to stock assessments, which indicated neither yellowedge grouper nor golden tilefish were undergoing overfishing (fishing mortality above level that maximizes yield) or overfished (biomass below biomass level that maximizes yield).

Shareholders and dealers can also expect to see continued improvements to the online IFQ system. The online system has been under development since the implementation of the red snapper IFQ program in 2007, and improvements have already been made to make the system more user-friendly. Some improvements that have already been seen include the creation of allocation and share transaction ledgers that allow an entity to see all their allocation or share transactions since 2010, the creation of the important messages header, the automation of share transfers, and allowing multiple IFQ categories to be transferred to the shareholder’s vessel at one time. Additionally, a video tutorial was added to instruct users on how to use the IFQ on-line system, and small changes have been made to the website to visually enhance the pages for easier use. If you have suggestions on how the online system can be improved please call or e-mail IFQ customer support.



## *Appendix 1*

Size and percent coverage of fishing area closures in 2011 due to the Deepwater Horizon oil spill

<b>Date of Closure</b>	<b>Area (sq mi)</b>	<b>Area (sq km)</b>	<b>Percent Coverage of Gulf EEZ</b>	<b>Percent Change in Coverage</b>
2-May	6,817	17,648	2.8	N/A
7-May	10,807	27,989	4.5	58.5
11-May	16,027	41,511	6.6	48.3
12-May	17,651	45,717	7.3	10.1
14-May	19,377	50,187	8.0	9.8
17-May	24,241	62,784	10.0	25.1
18-May	45,728	118,435	18.9	88.6
21-May	48,005	124,333	19.8	5.0
25-May	54,096	140,109	22.4	12.7
28-May	60,683	157,169	25.1	12.2
31-May	61,854	160,200	25.6	1.9
1-Jun	75,920	196,633	31.4	22.7
2-Jun	88,522	229,270	36.6	16.6
4-Jun	78,182	202,491	32.3	-11.7
5-Jun	78,603	203,582	32.5	0.5
7-Jun	78,264	202,703	32.3	-0.4
16-Jun	80,806	209,286	33.4	3.2
21-Jun	86,985	225,290	35.9	7.6
23-Jun	78,597	203,564	32.5	-9.6
28-Jun	80,228	207,790	33.2	2.1
4-Jul	81,181	210,259	33.5	1.2
12-Jul	84,101	217,821	34.8	3.6
13-Jul	83,927	217,371	34.7	-0.2
22-Jul	57,539	149,026	23.8	-31.4
10-Aug	52,395	135,703	21.7	-8.9
27-Aug	48,114	124,614	19.9	-8.2
2-Sep	43,000	111,369	17.8	-10.6
3-Sep	39,885	103,303	16.5	-7.2
21-Sep	31,915	82,659	13.2	-20.0
1-Oct	26,287	68,083	10.9	-17.6
5-Oct	23,360	60,502	9.7	-11.1
15-Oct	16,481	42,686	6.8	-29.4
22-Oct	9,444	24,461	3.9	-42.7
15-Nov	1,041	2,697	0.4	-89.0

## *Glossary*

**Active IFQ Account** – An account whose IFQ shareholder, allocation holder, or dealer has landed, bought, or sold allocation.

**Commercial Gulf Reef Fish Permit Holder** – An individual who possesses a commercial Gulf 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 eligibility requirement and an annual fee associated with the permit.

**IFQ Allocation** – IFQ allocation is the actual poundage for an IFQ category that each IFQ shareholder or allocation holder is ensured the opportunity to possess, land, or sell, during a given calendar year. IFQ allocation will be distributed to each IFQ shareholder at the beginning of each calendar year, and will expire 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 for each IFQ category.

**IFQ Allocation Transfer** – Through January 1, 2015, allocation can be transferred only to an entity that holds a valid Gulf of Mexico commercial vessel reef fish permit. Allocation transfers are accomplished by using the online IFQ Web site at <http://ifq.sero.nmfs.noaa.gov/>. The online IFQ Web site provides a transaction approval code to the transferor and transferee confirming each allocation transfer.

**IFQ Dealer Endorsement** – The IFQ dealer endorsement is a document that a dealer must possess in order to receive Gulf IFQ species. The dealer endorsement can be downloaded **free of charge** from the IFQ dealer's online account.

**IFQ Entity** - A unique combination of IFQ participants based on the ownership of either their reef fish permit or reef fish dealer permit that have received an IFQ account. For example, John Smith may be an entity by himself, but also part of the entity John and Jane Smith, as well as the entity ABC Company in which he is a shareholder. IFQ shares, share and allocation transactions, and landings are all tracked at the IFQ entity level.

**IFQ Participant** - An individual or corporation 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 and allocation caps are tracked at the IFQ participant level and not the IFQ entity level.

**IFQ Share** – An IFQ share is the percentage of the commercial quota assigned to each IFQ shareholder. With limited exceptions, the amount of the IFQ share allocated to each IFQ shareholder will not change unless the IFQ shareholder sells all or a portion of his or her IFQ share, or purchases additional IFQ shares from another IFQ shareholder. IFQ shares can be sold, but cannot be used to possess, land, or sell IFQ species unless the IFQ shareholder also possesses IFQ allocation.

**IFQ Share Ownership Cap** – The IFQ share cap prevents one or more IFQ shareholders from purchasing an excessive amount of IFQ shares and monopolizing the fishery.

**IFQ Share Transfer** – Through January 1, 2015, shares can be transferred only to an entity that holds a valid Gulf of Mexico commercial reef fish permit. A shareholder must initiate the share transfer by using the online IFQ website at <http://ifq.sero.nmfs.noaa.gov/>. Share transfers are permanent, until subsequently transferred.

**IFQ Shareholder** – An IFQ shareholder is an individual who holds a percentage of the quota for at least one of the commercial Grouper-Tilefish IFQ categories. The percentage, or share, determines the actual pounds (IFQ allocation) of Gulf Grouper-Tilefish a shareholder will be allowed to harvest each year.

**Inactive IFQ Account** - An account whose IFQ shareholder, allocation holder, or dealer has not bought, sold, or landed allocation in the current year.

**Landing Notification** – A required 3-12 hour advanced landing notification stating the vessel identification, approved landing location, dealer’s business name, time of arrival, and estimated pounds to be landed in each IFQ share category. Landing notifications can be submitted using either a vessel’s VMS unit, through an IFQ entity’s on-line account, or through the IFQ call service. The landing notification is intended to provide law enforcement officers the opportunity to be present at the point of landing so they can monitor and enforce IFQ requirements dockside. For the purpose of these regulations, the term landing means to arrive at the dock, berth, beach, seawall, or ramp.

**Landing Transaction** – A landing transaction report that is completed by an IFQ dealer using the online IFQ system. This report includes the date, time, and location of transaction; weight and actual ex-vessel value of grouper-tilefish 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 unique 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.

**Median** - The middle value in a statistical distribution, above and below which lie an equal number of values.

### *Photo Credits*

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