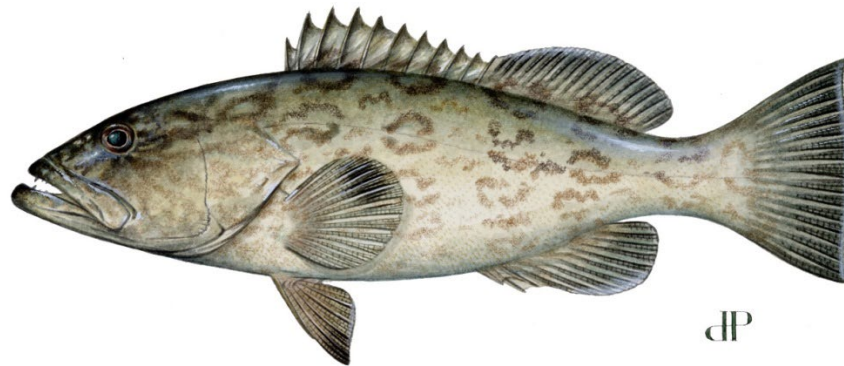


Gulf of Mexico Grouper-Tilefish Individual Fishing Quota Report (2021 update)



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Message from the Assistant Regional Administrator

The Grouper-Tilefish (GT) Individual Fishing Quota (IFQ) annual report is a living document that builds upon previously summarized information and provides a current overview of the GT-IFQ program. The GT-IFQ program includes 13 species in five share categories. This report is not a full comprehensive review of the program, as comprehensive reviews are completed every 5 to 7 years.¹ The first 5-year (2010-2015) review was completed in 2018 and can be found on the Catch Share website,² under Additional Information. A joint five-year assessment of the Red Snapper IFQ (RS-IFQ) and GT-IFQ programs was completed in 2021 and covered 2012-2018 years for both programs.

Outreach efforts for the IFQ programs were virtual in 2020 and continued to be virtual in 2021 due to the pandemic. IFQ customer support held a virtual shareholder workshop to review the system updates and improvements. A panel of staff members from the Permits, Law Enforcement, and Fishery Finance offices were also present at the workshop to answer questions. IFQ customer support held 10 virtual dealer outreach meetings. IFQ customer support will resume in-person dealer visits once pandemic-related travel restrictions for federal employees have been lifted. The Catch Up on Catch Shares IFQ newsletter was re-launched in October 2021, and is being distributed quarterly. The newsletter provides available resources pertaining to the Catch Share online system and information to other relevant fishery management issues, including articles on topics such as community perspectives, upcoming actions, system functions, IFQ data, and links to upcoming events and websites.

The 2021 quota for all share categories remained unchanged from 2020 quotas, with 82% of the programs' quota landed. By share category, between 28% and 45% of GT-IFQ with allocation accounts landed GT-IFQ species, with 36 - 44% of those accounts also holding shares. Average ex-vessel prices increased from 2020, with the largest increase seen in deep-water grouper (+\$0.43/lb). All ex-vessel prices remained considerably greater than pre-IFQ average prices.

In 2021, 59% of shareholder accounts held a Gulf of Mexico commercial reef fish permit and, by share category, held between 69% and 86% of all shares. The average 2021 share prices increased for most share categories since 2020 by between \$0.23/lb and \$0.35/lb, except deep water grouper and gag, which respectively decreased by \$2.82/lb and \$0.63/lb. Allocation prices in 2021 stayed the same or increased slightly since 2020. Share and allocation price reporting has improved slightly, but remains an area of concern.

The National Marine Fisheries Service (NMFS) is committed to the continual improvement of GT-IFQ program. Since the program began, stakeholder feedback and suggestions for the program have been used to improve the system NMFS thanks everyone for their input and encourages them to continue to share their concerns and ideas.

Sincerely,



John C. McGovern, Ph.D.

Assistant Regional Administrator for Sustainable Fisheries

¹ The Guidance For Conducting Review of Catch Share Programs can be found here:
<https://www.fisheries.noaa.gov/national/laws-and-policies/catch-shares>.

² <https://secatchshares.fisheries.noaa.gov/>

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ABBREVIATIONS

| Abbreviation | Description |
|----------------------|--|
| ALS | Accumulated landings system |
| BFT | Bluefin Tuna Individual Bycatch Quota program |
| DWG | Deep-water grouper share category |
| FOIA | Freedom of information act |
| GDP | Gross domestic product |
| GSAD | Gulf and South Atlantic Dealer permit |
| GG | Gag grouper share category |
| GGM | Gag grouper multi-use |
| GT-IFQ | Grouper-Tilefish Individual Fishing Quota |
| Gulf Council | Gulf of Mexico Fishery Management Council |
| Gulf | Gulf of Mexico |
| gw | Gutted weight |
| HBC | Headboat Collaborative pilot program |
| HMS | Highly migratory species |
| IFQ | Individual Fishing Quota |
| JEA | Joint enforcement agreement |
| lb | Pounds |
| LL | Longline gear |
| Magnuson-Stevens Act | Magnuson-Stevens Fishery Conservation and Management Act |
| mp | Million pounds |
| NMFS | National Marine Fisheries Service |
| OLE | Office of Law Enforcement |
| RA | Regional Administrator |
| Reef Fish FMP | Reef Fish Fishery Management Plan |
| Reef fish permit | Gulf of Mexico commercial reef fish permit |
| RFOP | Reef fish observer program |
| RG | Red grouper share category |
| RGM | Red grouper multi-use |
| RS-IFQ | Red snapper Individual Fishing Quota |
| SEFSC | Southeast Fisheries Science Center, NMFS |
| SERO | Southeast Regional Office, NMFS |
| SWG | Other shallow-water grouper share category |
| TF | Tilefish share category |
| TL | Total length |
| USCG | United States Coast Guard |
| VL | Vertical line gear |
| VMS | Vessel Monitoring system |

Program Overview and Regulations

Program Overview

The Grouper-Tilefish individual fishing quota (GT-IFQ) program is a multi-species program, where participants use an online account for all transactions (shares and allocation transfers, landings, and cost recovery fees). The GT-IFQ program has five share categories: gag (GG), red grouper (RG), other shallow-water groupers (SWG), deep-water groupers (DWG), and tilefishes (TF; Table 1). Both GG and RG are single species share categories, while the three remaining categories (SWG, DWG, and TF) are multiple-species categories, designed to capture species complexes that are commonly caught together. For the first five years of the program (2010-2015), anyone who possessed a valid Gulf of Mexico (Gulf) federal dealer permit or Gulf commercial reef fish permit (reef fish permit) was eligible to participate in the program. Beginning, January 1, 2015, all U.S. citizens and permanent resident aliens were eligible to obtain a GT-IFQ shareholder account to purchase shares and allocation. Shares are a percentage of the commercial quota, while allocation refers to the poundage that can be used to possess, land, or transfer during a given calendar year. Allocation is annual and expires on December 31. Only accounts with allocation and a valid reef fish permit can legally harvest GT-IFQ species. [Appendices 1](#) through [3](#) contain a history of the management for GT-IFQ species and implementation of the GT-IFQ program.

Table 1: Species by share category

| IFQ Category | Species ¹ |
|-----------------------------------|-----------------------------|
| Gag (GG) | Gag ² |
| Red Grouper (RG) | Red grouper ² |
| | Snowy grouper |
| Deep-water Grouper (DWG) | Speckled hind ² |
| | Warsaw grouper ² |
| | Yellowedge grouper |
| | Black grouper |
| Other Shallow-water Grouper (SWG) | Scamp ² |
| | Yellowfin grouper |
| | Yellowmouth grouper |
| | Blueline tilefish (grey) |
| Tilefishes (TF) | Golden tilefish |
| | Goldface tilefish |

¹ The following species were removed in 2012: rock hind (SWG), red hind (SWG), misty grouper (DWG), anchor tilefish (TF), and blackline tilefish (TF).

² Includes a multi-use flexibility measure.

There are three main account types in the GT-IFQ system: shareholder, vessel, and dealer accounts. Each account is composed of a unique set of entities (single or combination of individuals and/or business) and no two accounts are composed of the same set of entities. Shareholder accounts may hold shares and allocation or just allocation. A list of all shareholder accounts and the amount of shares held by each account is available through the Additional Information page on the IFQ website, titled IFQ

Gulf Reef Fish Accounts (FOIA).³ This page can be sorted by any of the column headings. An “X” in the Initial column indicate accounts that the account has never been accessed in the system.

Vessel accounts belong to shareholder accounts based on the reef fish permit for that vessel. Vessel accounts only hold allocation for landings. There may be multiple vessel accounts associated with one shareholder account. Sufficient allocation, at least equal to the pounds to be landed, must be in the vessel account or its associated shareholder account at the time of submission of the landing notification. At the time of landing, allocation that is at least equal to the pounds to be landed must be present in the vessel account. Upon completion of a landing transaction, the system deducts the allocation from the vessel account.

Dealer accounts are associated with federal dealer permit holders. Prior to August 7, 2014, the federal dealer permit was the Gulf reef fish dealer permit; afterwards, the federal permit became the Gulf and South Atlantic Dealer (GSAD) permit. Dealers are limited to completing landing transactions, collecting the cost recovery fee from the fishermen, and paying that fee to the National Marine Fisheries Service (NMFS). All GT-IFQ dealers are required to have a Gulf IFQ dealer endorsement, which may be printed through their IFQ account. A printed copy of the IFQ dealer endorsement must accompany vehicles used to transport IFQ species on land. Endorsements are valid when a dealer’s permit and account are active and they do not have any outstanding cost recovery fees. The GT-IFQ program and the Red Snapper Individual Fishing Quota (RS-IFQ) program are contained within the same system and are jointly referred to as the Gulf reef fish IFQ programs. Therefore, there is one dealer endorsement for both programs.

The GT-IFQ program records allocation, landings and quota in pounds (lb) of gutted weight (gw); therefore, throughout this report, allocation, landings, and quotas are in lb gw. Each GT-IFQ share category has distinct shares and associated allocations. At the beginning of each year, NMFS distributes allocation to shareholder accounts based on the annual quota and the share percentage associated with that account. Allocation can be used to account for GT-IFQ species landings or can be transferred to another shareholder. Adjustments (increases or decreases) in the commercial quotas occur due to new information (e.g., stock assessment, calibration, reallocation between fishing sectors). In-season quota increases are distributed proportionately among shareholder accounts based on the percentage of shares held in each account at the time of the adjustment. If a quota decreases in-season, the change is not implemented until the start of the next year, as allocation has already been distributed and transferred within the system.

The GT-IFQ program has several built-in flexibility measures to accommodate the multi-species nature of the commercial reef fish fishery and to reduce bycatch. Two share categories, GG and RG, have a multi-use provision that allows a portion of the red grouper quota to be harvested under the gag allocation, or vice versa. Each year, the system assigns a portion of each shareholder’s GG or RG as a multi-use allocation category: red grouper multi-use (RGM) or gag grouper multi-use (GGM). All

³ <https://secatchshares.fisheries.noaa.gov/foiaInformation>

allocation in the primary category of a shareholder's account must be used before the species can be landed or transferred under the multi-use categories. The system automatically determines the allocation category used for all landings and prohibits multi-use allocation transfers until all primary allocation is exhausted. Three grouper species (scamp, warsaw grouper, and speckled hind) are found in both the shallow and deep-water complexes. Flexibility measures in the GT-IFQ program allow these species to be landed under both share categories. Scamp are designated as a SWG species, but may be landed using DWG allocation once all SWG allocation in an account has been harvested. Warsaw grouper and speckled hind are designated as DWG species and may be landed using SWG allocation after all DWG allocation in an account has been harvested. More information about these flexibility measures are described in the Landings by Species section of this report or can be found under Additional Information on the IFQ website.

The GT-IFQ program also has a built-in 10% overage measure to allow a once-per-year landing overage per share category for any GT-IFQ account that holds shares in that share category. For shareholder accounts with shares, the associated vessel can land once during the year 10% more than their remaining allocation on the vessel per share category. The overage is automatically applied by the system in that year and labeled as an overage. The system automatically deducts this overage from the shareholder's allocation in the following fishing year. Because overages need to be deducted in the following year, GT-IFQ accounts with shares are prohibited from selling shares that would reduce the account's shares to less than the amount needed to repay the overage in the following year. GT-IFQ accounts without shares cannot land an excess of their remaining allocation in that share category.

Program Objectives

The GT-IFQ program, as defined in [Amendment 29](#) to the Fishery Management Plan for Reef Fish Resources of the Gulf of Mexico (Reef Fish FMP), was implemented to reduce overcapacity of the grouper-tilefish fishing fleet, increase harvesting efficiency, and eliminate the race to fish. By rationalizing effort and reducing overcapacity, the GT-IFQ program was expected to prevent or mitigate derby-fishing conditions and improve profitability of commercial grouper-tilefish fishermen. Anticipated benefits of the program include: increased market stability; elimination of quota closures; increased flexibility for fishing operations; cost-effective and enforceable management; improved safety at sea; and balancing of social, economic, and biological benefits. Additionally, the program was 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 NMFS and the Gulf of Mexico Fishery Management Council (Gulf Council) in preventing overfishing and/or rebuilding GT-IFQ stocks through the stewardship aspects of the program.

Program Regulations

The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) requires fishery managers to ensure that no individual, business, or other entity acquires an excessive share of the

privilege. The GT-IFQ program is monitored to prevent any entity from obtaining shares in excess of the established share cap for each share category (Table 2). The share cap for each category was based on the maximum GT-IFQ shares issued to a person, business, or other entity at the time of initial apportionment. An overall allocation cap is set annually and equals the sum of the maximum allocations associated with the five share category caps; an account is restricted from holding more than the allocation cap at any point in time. In 2020, the final allocation cap for the GT-IFQ program after all quota adjustments was 411,818 lb. As of January 1, 2015, any GT-IFQ account may transfer (increase or decrease holdings) GT-IFQ shares and allocation, regardless of reef fish permit status. There are no program fees associated with share or allocation transfers.

Table 2: Share caps

| Category | Share Cap % |
|----------|-------------|
| DWG | 14.704321 |
| GG | 2.349938 |
| RG | 4.331882 |
| SWG | 7.266147 |
| TF | 12.212356 |

All vessels with a reef fish permit are required to submit a declaration (hail-out) prior to leaving port for a fishing trip. While at sea, vessels are monitored using the satellite-based Vessel Monitoring Systems (VMS). Each vessel is required to have an operational NMFS type-approved VMS transmitter. The transmitter automatically determines the vessel's position and transmits that position to NMFS through a NMFS-approved communication service provider. When returning to port, vessels landing GT-IFQ species must provide a pre-landing notification (hail-in) 3 to 24 hours in advance of landing, indicating the time, date, landing location, the intended dealer, and the estimated pounds landed by species. As of January 1, 2019, all reef fish permitted vessels are also required to provide a pre-landing notification for all commercial trips. For vessels without IFQ species on board, the pre-landing notification includes the time, date, landing location, and indication that there are no IFQ species onboard. Vessels that declared a commercial reef fish trip must land at an approved landing location. Landing may occur at any time, but IFQ species may only be offloaded between 6 a.m. and 6 p.m. local time. A landing transaction report is completed by the GT-IFQ dealer and validated by the allocation holder through entry of the vessel signature PIN. The landing transaction includes the date, time, and location of transaction; accurate weight and actual ex-vessel price of fish landed and sold; and the identity of the shareholder account, vessel, and dealer. Landing transactions must be completed on the day of offload, except when being trailered for transport to dealer, where it must be completed before transport. All landing transactions must occur within 96 hours from the time of landing reported in the notification. All landings data are processed on a real-time basis. Current IFQ landings can be accessed at the Southeast Regional Office (SERO) Catch Share Website: <https://secatchshares.fisheries.noaa.gov/home>, through the Additional Information view and listed under the document Commercial Quotas/Catch Allowances (all years).

NMFS monitors the economic performance of the program by collecting share, allocation, and ex-vessel prices. Both the transferor and transferee submit total share value, while just the transferor submits the allocation price per pound. Ex-vessel prices are the prices paid by a dealer per pound of fish before any

deductions are made for transferred (leased) allocation and goods and/or services (bait, ice, fuel, repairs, machinery replacement, etc.). Section 304(d)(2)(A)(i) of the Magnuson-Stevens Act requires a fee to recover the actual costs required to directly administer, manage, and enforce the GT-IFQ program. This fee may not exceed 3% of the actual ex-vessel value. The current cost recovery fee is set at 3%. The Regional Administrator may review and adjust this fee annually. The IFQ allocation holder specified in the landing transaction is responsible for the payment of the cost recovery fees, while the dealer who receives the fish is responsible for collecting the cost recovery fee and submitting the fee to NMFS on a quarterly basis.

Complete regulations governing the GT-IFQ program can be found at 50 CFR § 622.22 (www.ecfr.gov) and the program can be accessed through the SERO Website: <https://secatchshares.fisheries.noaa.gov/home>. Important information regarding the GT-IFQ program is available for download on the website under Additional Information.

Program Performance

Program Participants

Shareholders

For this report, shareholder refers to an account that holds shares, and does not refer to individuals within the accounts. Shareholder account is a type of role within the system. Shareholder accounts may or may not hold shares. Shareholders accounts without shares may still participate in the program by obtaining allocation from another IFQ shareholder account. Allocation holders are any shareholder account that holds allocation, and these shareholder accounts may or may not also hold shares. The number of shareholders changes each year as accounts acquire or divest shares through transfers. For this report, we calculate the number of shareholders at the end of each year. A shareholder may divest their account of shares (i.e., transfer all shares) for a variety of reasons: to exit the IFQ program, to transfer to a new IFQ account after a permit change,⁴ or to manage related IFQ accounts from one account.⁵ Accounts that are not associated with a reef fish permit are termed public participant accounts. Public participant accounts may be related to other shareholder accounts that may hold reef fish permits. Related accounts may be created as a means of separating the assets (e.g., shares from vessel) or for ease of managing the shares and allocation across multiple related accounts (e.g., when each vessel in a fleet is owned by corporation). Discussions with industry representatives indicate this separation of assets may be a growing business practice. Therefore, caution should be used when interpreting trends related to public participant accounts.

⁴ IFQ accounts are established based on the name(s) of the Gulf commercial reef fish permit holder. If the name(s) of the permit holder change (e.g., adding/removing a spouse), a new IFQ account must be established to link to the permit.

⁵ Some IFQ participants are associated with more than one IFQ account (e.g., John Smith vs. John and Jane Smith, incorporating each vessel under a different company name), and therefore may shift all their shareholding to one account for ease of management.

In the first 5 years of the program (2010-2014), the total number of GT-IFQ shareholders (i.e., held shares in at least one share category) decreased each year (Table 3). In 2015, there was an increase in shareholders (+ 17). This increase is most likely due to the opening of the GT-IFQ program to public participation (i.e., allows any U.S. citizen or permanent resident alien to obtain open an account and obtain shares and allocation) and discussions of modifications to the IFQ program in 2015. The number of shareholders continued to increase each year through 2017. The large decrease in total shareholder accounts from 2017 to 2018 (51 accounts) was likely a result of Amendment 36A to the Reef Fish FMP (Amendment 36A). In the 2018 final rule for Amendment 36A, shares from accounts that had not been activated were reverted to NMFS. Gulf Council discussion about potential changes to the IFQ programs continues in Amendment 36B to the Reef Fish FMP in the following years.

Since the start of the program, the majority of shareholders held shares in three or more categories (Table 3). Over time, the proportion of accounts holding shares in one or two share categories has increased and is now 2-3 times greater than at the start of the program. Concurrently, the number of shareholders holding all five categories (GG, RG, DWG, SWG, and TF) has decreased over time from 35% of all shareholders to 26%.

Table 3: Shareholders by number of categories held

| Year | Share Categories | | | | | Total |
|------|------------------|----|-----|-----|-----|-------|
| | 1 | 2 | 3 | 4 | 5 | |
| 2010 | 18 | 34 | 258 | 172 | 261 | 743 |
| 2011 | 22 | 39 | 239 | 176 | 223 | 699 |
| 2012 | 34 | 42 | 225 | 156 | 208 | 665 |
| 2013 | 33 | 48 | 214 | 153 | 196 | 644 |
| 2014 | 37 | 51 | 206 | 145 | 189 | 628 |
| 2015 | 55 | 58 | 208 | 142 | 182 | 645 |
| 2016 | 68 | 59 | 213 | 142 | 171 | 653 |
| 2017 | 81 | 62 | 207 | 142 | 175 | 667 |
| 2018 | 82 | 52 | 182 | 134 | 166 | 616 |
| 2019 | 84 | 59 | 183 | 130 | 159 | 615 |
| 2020 | 81 | 59 | 179 | 126 | 161 | 606 |
| 2021 | 78 | 57 | 177 | 124 | 157 | 593 |

By share category, shareholders decreased through 2016, with a slight increase in 2017 for many categories (Table 4). In 2018, all categories saw a large decrease in shareholders. This decrease continued for all categories through 2021. The difference in trend of shareholders for the program compared to the share categories can be seen in the increase in shareholders holding only shares in only one share category in 2015-2017 (Table 3).

Table 4: Shareholders by share volume and the total share percent held by those accounts

| DWG | Small N (Share %) | Med. N (Share %) | Large N (Share %) | Total | GG | Small N (Share %) | Med. N (Share %) | Large N (Share %) | Total |
|---------|----------------------|---------------------|----------------------|-------|-----------------------|----------------------|--|----------------------|-------|
| Initial | 299 (2%) | 169 (58%) | 12 (40%) | 480 | Initial | 415 (6%) | 330 (88%) | 3 (6%) | 748 |
| 2010 | 300 (2%) | 148 (54%) | 13 (44%) | 461 | 2010 | 424 (5%) | 290 (85%) | 5 (10%) | 719 |
| 2011 | 275 (2%) | 143 (53%) | 13 (45%) | 431 | 2011 | 391 (4%) | 263 (81%) | 7 (15%) | 661 |
| 2012 | 253 (2%) | 134 (49%) | 14 (49%) | 401 | 2012 | 355 (4%) | 249 (80%) | 8 (16%) | 612 |
| 2013 | 238 (2%) | 131 (49%) | 13 (49%) | 382 | 2013 | 342 (4%) | 244 (78%) | 9 (18%) | 595 |
| 2014 | 224 (2%) | 129 (45%) | 15 (53%) | 368 | 2014 | 333 (4%) | 233 (78%) | 9 (18%) | 575 |
| 2015 | 220 (2%) | 131 (48%) | 15 (50%) | 366 | 2015 | 328 (4%) | 238 (80%) | 8 (16%) | 574 |
| 2016 | 215 (2%) | 127 (44%) | 17 (54%) | 359 | 2016 | 328 (4%) | 232 (75%) | 11 (21%) | 571 |
| 2017 | 221 (2%) | 123 (43%) | 17 (55%) | 361 | 2017 | 331 (4%) | 227 (73%) | 12 (23%) | 570 |
| 2018 | 208 (2%) | 118 (41%) | 18 (57%) | 344 | 2018 | 288 (4%) | 223 (73%) | 12 (23%) | 523 |
| 2019 | 206 (2%) | 115 (41%) | 15 (57%) | 336 | 2019 | 289 (4%) | 218 (73%) | 12 (23%) | 519 |
| 2020 | 203 (2%) | 116 (41%) | 15 (58%) | 334 | 2020 | 285 (4%) | 212 (71%) | 13 (25%) | 510 |
| 2021 | 199 (2%) | 113 (40%) | 15 (58%) | 327 | 2021 | 281 (4%) | 205 (70%) | 14 (26%) | 500 |
| RG | Small N (Share %) | Med. N (Share %) | Large N (Share %) | Total | SWG | Small N (Share %) | Med. N (Share %) | Large N (Share %) | Total |
| Initial | 435 (5%) | 248 (77%) | 9 (18%) | 692 | Initial | 467 (6%) | 275 (68%) | 10 (26%) | 752 |
| 2010 | 421 (4%) | 237 (80%) | 7 (16%) | 665 | 2010 | 460 (5%) | 250 (65%) | 11 (30%) | 721 |
| 2011 | 377 (3%) | 227 (81%) | 6 (16%) | 610 | 2011 | 421 (5%) | 242 (65%) | 11 (30%) | 674 |
| 2012 | 349 (3%) | 212 (77%) | 8 (20%) | 569 | 2012 | 384 (4%) | 234 (65%) | 11 (31%) | 629 |
| 2013 | 339 (3%) | 200 (72%) | 11 (25%) | 550 | 2013 | 364 (4%) | 227 (65%) | 13 (31%) | 604 |
| 2014 | 327 (3%) | 192 (71%) | 11 (26%) | 530 | 2014 | 351 (4%) | 218 (64%) | 13 (32%) | 582 |
| 2015 | 332 (3%) | 186 (67%) | 12 (30%) | 530 | 2015 | 346 (4%) | 223 (67%) | 12 (29%) | 581 |
| 2016 | 332 (3%) | 185 (65%) | 13 (32%) | 530 | 2016 | 345 (4%) | 221 (68%) | 11 (28%) | 577 |
| 2017 | 345 (3%) | 190 (65%) | 13 (32%) | 548 | 2017 | 347 (4%) | 219 (70%) | 10 (26%) | 576 |
| 2018 | 303 (3%) | 190 (66%) | 12 (31%) | 505 | 2018 | 295 (4%) | 216 (70%) | 10 (26%) | 521 |
| 2019 | 305 (3%) | 179 (66%) | 12 (31%) | 496 | 2019 | 295 (4%) | 212 (69%) | 10 (27%) | 517 |
| 2020 | 302 (3%) | 172 (61%) | 14 (36%) | 488 | 2020 | 291 (4%) | 211 (69%) | 10 (27%) | 512 |
| 2021 | 296 (3%) | 165 (60%) | 14 (37%) | 475 | 2021 | 284 (4%) | 208 (65%) | 11 (31%) | 503 |
| TF | Small N (Share %) | Med. N (Share %) | Large N (Share %) | Total | Total Shareholders | | Note: N indicates the number of shareholders and percent is the total share percentage held by all of those accounts. Small accounts hold < 0.05%; medium accounts hold 0.05% - 1.49999%; large accounts hold ≥ 1.5% shares. All values were based on the last day of the year, except Initial, which was the program's start date (1/1/2010). | | |
| Initial | 171 (2%) | 100 (36%) | 16 (62%) | 287 | Initial | 766 | | | |
| 2010 | 185 (2%) | 85 (30%) | 17 (68%) | 287 | 2010 | 743 | | | |
| 2011 | 164 (1%) | 79 (28%) | 17 (71%) | 260 | 2011 | 699 | | | |
| 2012 | 155 (1%) | 76 (27%) | 15 (72%) | 246 | 2012 | 665 | | | |
| 2013 | 144 (1%) | 72 (25%) | 16 (74%) | 232 | 2013 | 644 | | | |
| 2014 | 143 (1%) | 69 (26%) | 15 (73%) | 227 | 2014 | 628 | | | |
| 2015 | 143 (1%) | 63 (24%) | 16 (75%) | 222 | 2015 | 645 | | | |
| 2016 | 138 (1%) | 54 (19%) | 19 (80%) | 211 | 2016 | 653 | | | |
| 2017 | 142 (1%) | 54 (20%) | 18 (79%) | 214 | 2017 | 667 | | | |
| 2018 | 134 (1%) | 52 (18%) | 19 (81%) | 205 | 2018 | 616 | | | |
| 2019 | 132 (1%) | 48 (17%) | 18 (82%) | 198 | 2019 | 615 | | | |
| 2020 | 133 (1%) | 50 (17%) | 18 (82%) | 201 | 2020 | 606 | | | |
| 2021 | 132 (1%) | 49 (16%) | 18 (83%) | 199 | 2021 | 593 | | | |

Shareholders are categorized by share volume within a share category: small shareholders hold < 0.05% shares, medium shareholders hold between 0.05-1.4999% shares, while large shareholders hold ≥ 1.5% shares. Since the program began, by share category, the medium shareholders held the majority of shares, while small shareholders accounted for the greatest number of accounts. Decreases in the number of shareholders primarily occurred among small or medium shareholders, with only slight increases in large shareholders. Despite these changes, proportionally there was very little change among small, medium, and large shareholders. For example, the proportion of DWG large shareholders increased from 3% at the start of the program to 5% in recent years, while the medium DWG

shareholders also increased by 2% and small DWG shareholders decreased by 4% during this same period. Since the start of the programs, the greatest number of shareholders hold a small amount of shares, while the smallest number hold largest percentage of shares.

Accounts that are not associated with a reef fish permit are termed public participant accounts, and may include accounts that are related to other shareholder accounts or dealer accounts, accounts that previously held shares, and/or accounts held by any U.S. citizen or permanent resident alien. In the first five years, public participant shareholders could occur if the reef fish permit associated with the account was transferred or terminated. Even in the first year of the program, a small percentage (4%) of shareholders no longer held a reef fish permit ([Appendix 4.1](#)). The number of public participant shareholders more than doubled by the second year of the program for all share categories. The number of public participant shareholders continued to increase through 2017, in part due to public participation in the both Gulf IFQ program. In 2018, the number of shareholders without a permit decreased due to Amendment 36A, which reverted shares from inactivated accounts back to NMFS. The amount of shares reverted to NMFS were nominal, all below 0.5% by share category. The amount of shares held by public participant shareholders was initially small (1% or less), and increased over time. The largest increase in share holdings in public participant shareholders occurred in 2015. Since 2015, public participant shareholders have been holding between 11-32% of the shares in each share category. This information should be interpreted with a degree of caution as many related accounts hold the shares in a separate account from the account linked to the permit and vessel. Due to the migration of the Permits system to a new platform, updated information on permits and shareholders is not available at this time. This information will be updated in later reports.

Allocation Holders

In the GT-IFQ program, an account holder may obtain allocation from shares (distributed at the beginning of the year or from any in-season quota increase) or from the transfer of allocation from another account holder. The number of accounts that hold allocation does not necessarily equal the number of accounts that land allocation, as not all accounts that hold allocation also hold a reef fish permit and some accounts may only transfer allocation. Accounts that hold allocation are termed allocation holders. The number of allocation holders is typically greater than the number of shareholders.

The number of total allocation holders fluctuated over time (Table 5). The number of allocation holders in the entire program was increasing over time, until 2019 when a decrease was seen, which could have been a response to discussions by the Gulf Council for Amendment 36B (Table 5). Within each share category, the number of allocation holders have not exceeded the original allocation holders in recent years.

Table 5: Allocation holders by share status

| DWG | N | With shares | Via Transfer | GG | N | With shares | Via Transfer |
|------------|----------|--------------------|---------------------|------------|----------|--------------------|---------------------|
| 2010 | 512 | 472 (92%) | 40 (8%) | 2010 | 789 | 740 (94%) | 49 (6%) |
| 2011 | 521 | 445 (85%) | 76 (15%) | 2011 | 767 | 694 (90%) | 73 (10%) |
| 2012 | 498 | 416 (84%) | 81 (16%) | 2012 | 743 | 645 (87%) | 98 (13%) |
| 2013 | 465 | 384 (83%) | 81 (17%) | 2013 | 716 | 595 (83%) | 121 (17%) |
| 2014 | 457 | 365 (80%) | 92 (20%) | 2014 | 726 | 580 (80%) | 146 (20%) |
| 2015 | 464 | 351 (76%) | 113 (24%) | 2015 | 753 | 560 (74%) | 193 (26%) |
| 2016 | 462 | 349 (76%) | 113 (24%) | 2016 | 752 | 560 (74%) | 192 (26%) |
| 2017 | 455 | 342 (75%) | 113 (25%) | 2017 | 767 | 556 (72%) | 211 (28%) |
| 2018 | 477 | 345 (72%) | 132 (28%) | 2018 | 756 | 556 (74%) | 200 (26%) |
| 2019 | 449 | 328 (73%) | 121 (27%) | 2019 | 715 | 513 (72%) | 202 (28%) |
| 2020 | 463 | 318 (69%) | 145 (31%) | 2020 | 736 | 509 (69%) | 227 (31%) |
| 2021 | 449 | 317 (71%) | 132 (29%) | 2021 | 727 | 501 (69%) | 226 (31%) |
| RG | N | With shares | Via Transfer | SWG | N | With shares | Via Transfer |
| 2010 | 744 | 690 (93%) | 54 (7%) | 2010 | 762 | 725 (95%) | 37 (5%) |
| 2011 | 739 | 675 (91%) | 64 (9%) | 2011 | 760 | 687 (90%) | 73 (10%) |
| 2012 | 715 | 605 (85%) | 110 (15%) | 2012 | 737 | 644 (87%) | 93 (13%) |
| 2013 | 683 | 563 (82%) | 120 (18%) | 2013 | 720 | 602 (84%) | 118 (16%) |
| 2014 | 689 | 544 (79%) | 145 (21%) | 2014 | 722 | 578 (80%) | 144 (20%) |
| 2015 | 716 | 522 (73%) | 194 (27%) | 2015 | 742 | 555 (75%) | 187 (25%) |
| 2016 | 723 | 543 (75%) | 180 (25%) | 2016 | 738 | 555 (75%) | 183 (25%) |
| 2017 | 750 | 525 (70%) | 225 (30%) | 2017 | 749 | 551 (74%) | 198 (26%) |
| 2018 | 755 | 543 (72%) | 212 (28%) | 2018 | 745 | 548 (74%) | 197 (26%) |
| 2019 | 687 | 494 (72%) | 192 (28%) | 2019 | 694 | 501 (72%) | 193 (28%) |
| 2020 | 694 | 486 (70%) | 208 (30%) | 2020 | 711 | 497 (70%) | 214 (30%) |
| 2021 | 689 | 480 (70%) | 209 (30%) | 2021 | 701 | 493 (70%) | 208 (30%) |
| TF | N | With shares | Via Transfer | ALL | N | With shares | Via Transfer |
| 2010 | 299 | 271 (91%) | 28 (9%) | 2010 | 816 | 765 (94%) | 51 (6%) |
| 2011 | 309 | 263 (85%) | 46 (15%) | 2011 | 833 | 756 (91%) | 77 (9%) |
| 2012 | 292 | 243 (83%) | 49 (17%) | 2012 | 812 | 701 (86%) | 111 (14%) |
| 2013 | 282 | 230 (82%) | 52 (18%) | 2013 | 786 | 659 (84%) | 127 (16%) |
| 2014 | 279 | 217 (78%) | 62 (22%) | 2014 | 795 | 639 (80%) | 156 (20%) |
| 2015 | 287 | 212 (74%) | 75 (26%) | 2015 | 835 | 620 (74%) | 215 (26%) |
| 2016 | 273 | 207 (76%) | 66 (24%) | 2016 | 842 | 655 (78%) | 187 (22%) |
| 2017 | 264 | 196 (74%) | 68 (26%) | 2017 | 872 | 644 (74%) | 228 (26%) |
| 2018 | 286 | 199 (70%) | 87 (30%) | 2018 | 878 | 656 (75%) | 222 (25%) |
| 2019 | 279 | 192 (69%) | 87 (31%) | 2019 | 819 | 603 (74%) | 216 (26%) |
| 2020 | 289 | 185 (64%) | 104 (36%) | 2020 | 833 | 600 (72%) | 233 (28%) |
| 2021 | 288 | 187 (65%) | 101 (35%) | 2021 | 824 | 590 (72%) | 234 (28%) |

Note: N indicates the number of allocation holders and percentage refers to the proportion of those accounts that also hold shares.

Allocation holders can be categorized as those holding or not holding shares (Table 5). Allocation holders that do not hold shares must have obtained allocation through an allocation transfer from another account and are called allocation only accounts. Allocation holders with shares may also increase or decrease the amount of allocation within the account through an allocation transfer from or to another account. At the start of the program, 94% of allocation holders held shares. This percentage has been gradually declining over time, and is currently stabilized around 75% of allocation holders have shares. By share category, the overall trend is similar with a decrease in the percentage of allocation holders with shares. The decreases in allocation holders with shares may have resulted from a variety of factors.

Factors that may influence the percentage of allocation holders with and without shares include: quota changes, shareholders that manage shares in related accounts,² the ability for shareholders to obtain shares (e.g., availability or price), changes in harvesting behavior, and/or influences from the RS-IFQ program. Quota increases may allow allocation to be indirectly distributed among more participants through transfers, thereby increasing the percentage of allocation only holders. As the quota increases, those with shares receive a larger amount of allocation than under a smaller quota (e.g., 5% of 100 lb = 5 lb, while 5% of 200 lb is 10 lb). If the allocation received by the fisherman is more than needed to land GT-IFQ species, they may transfer allocation to another account that does not have shares, rather than land the allocation themselves. The number of related accounts may create more allocation only account holders, as participants aggregate shares into one account. Reduced availability or increased prices of shares may increase the percentage of allocation only holders, as shares become harder to obtain. Finally, participants mainly fishing in one IFQ program may obtain allocation in the other program to reduce discards of incidental catch, as these species commonly co-occur. In fact, the percentage of GT-IFQ vessels that also land red snapper has increased since the start of the program, and has been consistently around 90% in recent years (Table 6).

Table 6: GT-IFQ vessels landing RS-IFQ

| Year | % vessel overlap with RS-IFQ program |
|-------------|---|
| 2010 | 78% |
| 2011 | 75% |
| 2012 | 77% |
| 2013 | 81% |
| 2014 | 83% |
| 2015 | 85% |
| 2016 | 87% |
| 2017 | 87% |
| 2018 | 91% |
| 2019 | 90% |
| 2020 | 91% |
| 2021 | 90% |

Dealers

The number of dealers receiving GT-IFQ species has increased since the start of the program. Since 2014, the number of dealers has remained slightly over 100 dealers receiving GT-IFQ species (Table 7). Dealers can be categorized by the percentage of annual GT-IFQ species received by the dealer: small (received <1% of GT-IFQ landings), medium (received 1-3% of GT-IFQ landings), and large (>3% of GT-IFQ landings). Some small-sized dealers are likely fishermen who have obtained a GSAD dealer permit to eliminate the need for a seafood wholesaler, and therefore reduce costs and increase profits. Currently, it is not possible to link ownership of a shareholder account to ownership of a dealer account, as accounts may be held under different names (e.g., business vs. individual name(s) vs. different business name). Personal communication with industry representatives indicated that there were

fishermen who also owned dealer permits, but these were not limited to just small-sized dealers. Small dealers represent the majority of dealers, even though they purchase only a small proportion of the overall catch.

The number of medium-sized dealers decreased over time, with a nearly 50% decrease in 2014. Large dealers grew slightly in 2013 and remained consistent thereafter. Small dealers increased over time from 63 in 2010 to nearly 100 in more recent years. The increase in small-sized dealers likely result from fishermen who have obtained a GSAD dealer permit to eliminate the middleman and therefore reduce costs and increase profits. In 2021, there was a decrease in small dealers, which most likely resulted from the pandemic and resulting market conditions.

Table 7: Dealer accounts by landings volume

| Year | Total | Small <1% of landings | Medium 1-3% of landings | Large >3% of landings |
|------|-------|--------------------------|----------------------------|--------------------------|
| 2010 | 85 | 63 (10%) | 15 (28%) | 7 (62%) |
| 2011 | 94 | 75 (13%) | 12 (26%) | 7 (61%) |
| 2012 | 97 | 73 (13%) | 16 (29%) | 8 (58%) |
| 2013 | 96 | 75 (12%) | 11 (20%) | 10 (68%) |
| 2014 | 112 | 94 (14%) | 7 (11%) | 11 (75%) |
| 2015 | 114 | 97 (13%) | 7 (12%) | 10 (76%) |
| 2016 | 107 | 89 (11%) | 8 (14%) | 10 (75%) |
| 2017 | 113 | 95 (14%) | 8 (14%) | 10 (72%) |
| 2018 | 114 | 94 (12%) | 10 (18%) | 10 (70%) |
| 2019 | 117 | 99 (14%) | 8 (14%) | 10 (73%) |
| 2020 | 110 | 93 (14%) | 6 (11%) | 11 (75%) |
| 2021 | 107 | 86 (11%) | 11 (17%) | 10 (71%) |

Note: Dealer size determined by percentage of annual IFQ landings received by each dealer and may include multiple facilities. The percentage refers to the proportion of landings processed by those dealers.

Vessels

The number of vessels harvesting GT-IFQ species decreased from the start of the program (630 vessel) and has been at or below 450 vessels since (Table 1 Table 8; [Appendix 4.2](#)). More vessels consistently harvested species within the GG, RG, and SWG share categories than the DWG or TF share categories. For all share categories, the number of vessels continues to remain below the average number of vessels harvesting GT-IFQ species prior to the program.

Since the start of the program, ~88% of the vessels primarily landed their catch at Florida facilities. Changes in the number of vessels landing in each state may be influenced by factors outside of the GT-IFQ program, and these changes may include, but are not limited to, changes in markets or fishing behavior, availability of facilities, and/or catastrophic events (i.e., hurricanes, red tide events, oil spills). As with accounts holding shares, vessels frequently land fish from more than one share category. In recent years, roughly 60% of the vessels landed species in at least three of the share categories, while no more than 15% land fish in only one share category. Between 10 and 15% of the vessels land fish in all five share categories. Multi-share category landings are expected, as many of the species in the reef fish fishery co-occur and are harvested together. Due to the migration of the Permits system to a new

platform, updated information on landings by states is not available at this time. This information will be updated in later reports.

Table 8: Number vessels that harvested GT-IFQ species

| Year | DWG | GG | RG | SWG | TF | Total GT-IFQ Vessels |
|---------|-----|-----|-----|-----|-----|----------------------|
| Pre-IFQ | 238 | 493 | 546 | 489 | 166 | 630 |
| 2010 | 187 | 415 | 393 | 322 | 79 | 452 |
| 2011 | 192 | 363 | 383 | 307 | 75 | 440 |
| 2012 | 206 | 384 | 398 | 343 | 97 | 449 |
| 2013 | 185 | 367 | 363 | 324 | 78 | 414 |
| 2014 | 186 | 375 | 384 | 353 | 91 | 434 |
| 2015 | 165 | 374 | 376 | 341 | 86 | 446 |
| 2016 | 170 | 382 | 380 | 346 | 85 | 441 |
| 2017 | 164 | 374 | 376 | 330 | 79 | 453 |
| 2018 | 166 | 368 | 376 | 326 | 87 | 455 |
| 2019 | 145 | 354 | 359 | 309 | 96 | 428 |
| 2020 | 147 | 346 | 354 | 315 | 90 | 425 |
| 2021 | 134 | 336 | 326 | 301 | 95 | 393 |

Note: Pre-IFQ years (2007-2009) are an annual average from the Coastal logbook records.

Account Activity

Account activity (active or inactive) can be determined through analyzing allocation and landing transactions during a year. An account is defined as active if that account has landed allocation or transferred allocation (in or out the account) during the fishing year, while inactive accounts neither landed nor transferred allocation during the year. Accounts may be inactive due to several reasons: non-activated accounts (never accessed), shares resulting in negligible pounds for harvest or sale (e.g., 1-5 lb), inability to harvest (e.g., vessel in dry dock), or personal events (e.g., death, medical issues). Account status is determined each year. Active accounts can be further categorized by activity type: those only transferring allocation (no landing), or those landing and/or transferring allocation. Some reasons why an account holder may only transfer allocation may be due to the limitation in harvest ability (e.g., no permit, vessel inoperative), related accounts (e.g., transfer allocation to related account), and/or insufficient allocation to harvest (e.g., shares resulted in only a few pounds of allocation).

The percentage of inactive accounts has not changed more than ~10% over time with between 18 and 34% of accounts remaining inactive (Table 9). The percentages of inactive accounts are lower than at the start of the program. By share category, the percentage of accounts landing allocation is generally less than 50%, with higher percentages occurring for RG, GG, and SWG than DWG and TF. These percentages have remained similar across time within each share category, with variances between 5% and 10%.

Table 9: Allocation accounts by activity

| DWG | N | Inactive | Landing | GG | N | Inactive | Landing | RG | N | Inactive | Landing |
|------------|----------|-----------------|----------------|-----------|----------|-----------------|----------------|--|----------|-----------------|----------------|
| 2010 | 512 | 169 (33%) | 161 (31%) | 2010 | 789 | 244 (31%) | 362 (46%) | 2010 | 744 | 222 (30%) | 348 (47%) |
| 2011 | 521 | 140 (27%) | 169 (32%) | 2011 | 767 | 221 (29%) | 323 (42%) | 2011 | 739 | 184 (25%) | 344 (47%) |
| 2012 | 498 | 104 (21%) | 185 (37%) | 2012 | 743 | 184 (25%) | 344 (46%) | 2012 | 715 | 167 (23%) | 357 (50%) |
| 2013 | 465 | 115 (25%) | 168 (36%) | 2013 | 716 | 206 (29%) | 336 (47%) | 2013 | 683 | 171 (25%) | 332 (49%) |
| 2014 | 457 | 103 (23%) | 168 (37%) | 2014 | 726 | 187 (26%) | 340 (47%) | 2014 | 689 | 153 (22%) | 349 (51%) |
| 2015 | 464 | 109 (23%) | 152 (33%) | 2015 | 753 | 206 (27%) | 337 (45%) | 2015 | 716 | 166 (23%) | 342 (48%) |
| 2016 | 462 | 107 (23%) | 149 (32%) | 2016 | 752 | 200 (27%) | 338 (45%) | 2016 | 723 | 183 (25%) | 347 (48%) |
| 2017 | 455 | 131 (29%) | 148 (33%) | 2017 | 767 | 234 (31%) | 339 (44%) | 2017 | 750 | 207 (28%) | 344 (46%) |
| 2018 | 477 | 139 (29%) | 152 (32%) | 2018 | 756 | 239 (32%) | 333 (44%) | 2018 | 755 | 218 (29%) | 340 (45%) |
| 2019 | 449 | 108 (24%) | 135 (30%) | 2019 | 715 | 198 (28%) | 320 (45%) | 2019 | 687 | 181 (26%) | 326 (47%) |
| 2020 | 463 | 119 (26%) | 137 (30%) | 2020 | 736 | 198 (27%) | 320 (43%) | 2020 | 694 | 176 (25%) | 325 (47%) |
| 2021 | 449 | 111 (25%) | 125 (28%) | 2021 | 727 | 182 (25%) | 313 (43%) | 2021 | 689 | 142 (21%) | 309 (45%) |
| SWG | N | Inactive | Landing | TF | N | Inactive | Landing | | | | |
| 2010 | 762 | 277 (36%) | 282 (37%) | 2010 | 299 | 101 (34%) | 66 (22%) | | | | |
| 2011 | 760 | 261 (34%) | 272 (36%) | 2011 | 309 | 77 (25%) | 68 (22%) | Note: N indicates the number of allocation holders and the percentage refers to the proportion of those accounts that either had landings or were considered inactive. | | | |
| 2012 | 737 | 220 (30%) | 303 (41%) | 2012 | 292 | 59 (20%) | 87 (30%) | | | | |
| 2013 | 720 | 233 (32%) | 297 (41%) | 2013 | 282 | 70 (25%) | 76 (27%) | | | | |
| 2014 | 722 | 208 (29%) | 324 (45%) | 2014 | 279 | 54 (19%) | 83 (30%) | | | | |
| 2015 | 742 | 223 (30%) | 311 (42%) | 2015 | 287 | 64 (22%) | 79 (28%) | | | | |
| 2016 | 738 | 212 (29%) | 312 (42%) | 2016 | 273 | 61 (22%) | 80 (29%) | | | | |
| 2017 | 749 | 243 (32%) | 304 (41%) | 2017 | 264 | 76 (29%) | 72 (27%) | | | | |
| 2018 | 745 | 252 (34%) | 297 (40%) | 2018 | 286 | 82 (29%) | 80 (28%) | | | | |
| 2019 | 694 | 213 (31%) | 285 (41%) | 2019 | 279 | 70 (25%) | 91 (33%) | | | | |
| 2020 | 711 | 215 (30%) | 296 (42%) | 2020 | 289 | 66 (23%) | 83 (29%) | | | | |
| 2021 | 701 | 202 (29%) | 284 (41%) | 2021 | 288 | 52 (18%) | 89 (31%) | | | | |

Accounts landing GT-IFQ species can be categorized as those with and without shares (Table 10). In each share category, landings were primarily associated with accounts that held shares (96-99%) at the start of the program. The percentage of landings from accounts with shares has decreased over time. In 2021, between 36-44% of the accounts landing GT-IFQ species also held shares. While this appears to show a growing disconnect between accounts with shares and those that land those shares, these data must be interpreted with caution. As mentioned previously, many accounts are related to other accounts and conversations with industry representatives have indicated that some fishermen purposely separate their shares from the account landing the allocation. In 2021, at the height of the pandemic, accounts without shares accounted for a higher percentage of landings, with between 56-64% of all landings.

Table 10: Landings by share status

| DWG | w/ shares | | w/o shares | | GG | w/ shares | | w/o shares | |
|------------|------------------|-----|-------------------|-----|------------|------------------|-----|-------------------|-----|
| 2010 | 602,749 lb | 96% | 22,013 lb | 4% | 2010 | 473,362 lb | 96% | 20,576 lb | 4% |
| 2011 | 701,273 lb | 90% | 78,246 lb | 10% | 2011 | 286,560 lb | 90% | 33,577 lb | 10% |
| 2012 | 806,041 lb | 84% | 157,794 lb | 16% | 2012 | 436,556 lb | 83% | 88,510 lb | 17% |
| 2013 | 562,498 lb | 62% | 350,425 lb | 38% | 2013 | 470,701 lb | 81% | 108,963 lb | 19% |
| 2014 | 576,636 lb | 55% | 471,506 lb | 45% | 2014 | 450,465 lb | 65% | 239,048 lb | 35% |
| 2015 | 458,548 lb | 50% | 452,791 lb | 50% | 2015 | 356,593 lb | 64% | 198,348 lb | 36% |
| 2016 | 392,801 lb | 45% | 474,239 lb | 55% | 2016 | 495,483 lb | 64% | 281,707 lb | 36% |
| 2017 | 390,545 lb | 48% | 431,354 lb | 52% | 2017 | 276,519 lb | 62% | 166,637 lb | 38% |
| 2018 | 383,801 lb | 47% | 433,651 lb | 53% | 2018 | 264,948 lb | 59% | 186,966 lb | 41% |
| 2019 | 398,633 lb | 42% | 553,096 lb | 58% | 2019 | 291,178 lb | 62% | 178,697 lb | 38% |
| 2020 | 409,416 lb | 51% | 394,344 lb | 49% | 2020 | 238,560 lb | 51% | 230,002 lb | 49% |
| 2021 | 352,236 lb | 44% | 448,191 lb | 56% | 2021 | 261,398 lb | 42% | 367,098 lb | 58% |
| RG | w/ shares | | w/o shares | | SWG | w/ shares | | w/o shares | |
| 2010 | 2,800,064 lb | 96% | 113,794 lb | 4% | 2010 | 155,091 lb | 98% | 3,143 lb | 2% |
| 2011 | 4,397,093 lb | 92% | 385,101 lb | 8% | 2011 | 170,156 lb | 91% | 16,079 lb | 9% |
| 2012 | 4,513,535 lb | 87% | 703,670 lb | 13% | 2012 | 256,643 lb | 85% | 43,724 lb | 15% |
| 2013 | 3,688,461 lb | 80% | 906,211 lb | 20% | 2013 | 242,464 lb | 79% | 65,382 lb | 21% |
| 2014 | 3,609,728 lb | 66% | 1,888,265 lb | 34% | 2014 | 193,570 lb | 74% | 69,681 lb | 26% |
| 2015 | 2,943,654 lb | 62% | 1,841,338 lb | 38% | 2015 | 193,160 lb | 68% | 89,178 lb | 32% |
| 2016 | 2,619,630 lb | 57% | 2,011,758 lb | 43% | 2016 | 221,279 lb | 62% | 136,884 lb | 38% |
| 2017 | 1,760,921 lb | 52% | 1,616,289 lb | 48% | 2017 | 144,564 lb | 60% | 94,482 lb | 40% |
| 2018 | 1,151,522 lb | 48% | 1,252,778 lb | 52% | 2018 | 126,056 lb | 56% | 98,105 lb | 44% |
| 2019 | 1,081,477 lb | 52% | 1,017,709 lb | 48% | 2019 | 105,958 lb | 57% | 79,056 lb | 43% |
| 2020 | 1,081,245 lb | 46% | 1,294,229 lb | 54% | 2020 | 82,924 lb | 51% | 81,148 lb | 49% |
| 2021 | 1,128,556 lb | 39% | 1,756,488 lb | 61% | 2021 | 82,772 lb | 44% | 104,640 lb | 56% |
| TF | w/ shares | | w/o shares | | | | | | |
| 2010 | 246,987 lb | 99% | 2,721 lb | 1% | | | | | |
| 2011 | 330,997 lb | 86% | 55,137 lb | 14% | | | | | |
| 2012 | 350,670 lb | 78% | 100,451 lb | 22% | | | | | |
| 2013 | 219,869 lb | 50% | 220,222 lb | 50% | | | | | |
| 2014 | 214,600 lb | 41% | 302,668 lb | 59% | | | | | |
| 2015 | 214,554 lb | 40% | 322,958 lb | 60% | | | | | |
| 2016 | 181,045 lb | 42% | 247,958 lb | 58% | | | | | |
| 2017 | 196,264 lb | 40% | 288,631 lb | 60% | | | | | |
| 2018 | 173,916 lb | 45% | 212,222 lb | 55% | | | | | |
| 2019 | 147,814 lb | 35% | 275,112 lb | 65% | | | | | |
| 2020 | 150,061 lb | 43% | 198,783 lb | 57% | | | | | |
| 2021 | 172,799 lb | 36% | 311,244 lb | 64% | | | | | |

Accounts that only transfer allocation may or may not have shares and/or reef fish permits ([Appendix 4.3](#)). Across time and share categories, the majority of the accounts that only transfer allocation held both shares and reef fish permits. The number of accounts only transferring allocation that do not hold shares, has grown since the start of the program, but remained relatively stable since 2015 when the program was opened for public participation. The public participant accounts (i.e., accounts with no permit) that also hold no shares have remained below 20 accounts in any one category represent the lowest number of accounts only transferring allocation. Public participant accounts without shares may function as brokers by simply obtaining and transferring out allocation. Due to the migration of the

Permits system to a new platform, updated information on permits by share status is not available at this time. This information will be updated in later reports.

Program Evaluation

Transactions and Landings

Share Transfers

A share is the percentage of the commercial quota assigned to a shareholder account that results in allocation (pounds) equivalent to the share percentage of the quota. Shares were distributed at the start of the program to participants based on landings history. Share holdings within an account can only be increased or decreased through share transfers. During the first five years of the program, a recipient account was required to have a reef fish permit to receive shares. Thereafter, the only restrictions on a share transfer was if it exceeded the share cap. Share transfers are a two-step process with the transferor initiating the transfer, and completion of the transfer occurring after the transferee accepts the transfer. There may be a delay between initiation of the transfer and final acceptance of the transfer.

The greatest number of share transfers and volume of shares transferred occurred in the first year of the program (Table 10). Thereafter, the number and volume of share transfers were variable with an overall decreasing trend in both number and volume of shares within and across share categories (Table 11). While number and volume of share transfers decreased over time, the average volume of shares per transfer increased slightly over time for most share categories.

In 2015, the number and volume of share transfers was considerably greater than other years. This was primarily attributed to the opening of the GT-IFQ program to public participation. In the following years, the number and volume of share transfers decreased again. Excluding 2010 and 2015, the total volume of shares transferred, by share category each year, were between 3-23%, while the average volume of shares per transaction was less than 1%.

Table 11: Number and volume of share transfers

| DWG | N | Total Shares | Average Shares | GG | N | Total Shares | Average Shares |
|------------|----------|---------------------|-----------------------|------------|----------|---------------------|-----------------------|
| 2010 | 161 | 25.8 | 0.16 | 2010 | 256 | 24.0 | 0.09 |
| 2011 | 96 | 7.0 | 0.07 | 2011 | 138 | 18.8 | 0.14 |
| 2012 | 78 | 9.3 | 0.12 | 2012 | 129 | 14.8 | 0.12 |
| 2013 | 53 | 7.3 | 0.14 | 2013 | 88 | 5.5 | 0.06 |
| 2014 | 62 | 12.6 | 0.20 | 2014 | 106 | 19.2 | 0.18 |
| 2015 | 85 | 32.7 | 0.38 | 2015 | 153 | 24.7 | 0.16 |
| 2016 | 56 | 9.6 | 0.17 | 2016 | 84 | 7.9 | 0.09 |
| 2017 | 31 | 3.0 | 0.10 | 2017 | 67 | 7.1 | 0.11 |
| 2018 | 34 | 11.6 | 0.34 | 2018 | 63 | 4.8 | 0.08 |
| 2019 | 34 | 23.5 | 0.69 | 2019 | 70 | 15.1 | 0.22 |
| 2020 | 28 | 7.2 | 0.26 | 2020 | 59 | 11.8 | 0.20 |
| 2021 | 18 | 3.4 | 0.19 | 2021 | 51 | 8.4 | 0.17 |
| RG | N | Total Shares | Average Shares | SWG | N | Total Shares | Average Shares |
| 2010 | 267 | 24.3 | 0.09 | 2010 | 195 | 25.6 | 0.13 |
| 2011 | 168 | 13.5 | 0.08 | 2011 | 104 | 8.4 | 0.08 |
| 2012 | 202 | 17.2 | 0.08 | 2012 | 97 | 6.9 | 0.07 |
| 2013 | 145 | 13.7 | 0.09 | 2013 | 82 | 12.2 | 0.15 |
| 2014 | 144 | 14.2 | 0.10 | 2014 | 63 | 10.6 | 0.17 |
| 2015 | 214 | 32.9 | 0.15 | 2015 | 97 | 21.6 | 0.22 |
| 2016 | 118 | 13.1 | 0.11 | 2016 | 56 | 7.3 | 0.13 |
| 2017 | 117 | 5.0 | 0.04 | 2017 | 45 | 3.5 | 0.08 |
| 2018 | 84 | 12.3 | 0.15 | 2018 | 55 | 12.3 | 0.22 |
| 2019 | 67 | 8.8 | 0.13 | 2019 | 54 | 14.0 | 0.26 |
| 2020 | 66 | 9.5 | 0.14 | 2020 | 51 | 7.2 | 0.14 |
| 2021 | 47 | 8.3 | 0.18 | 2021 | 43 | 11.2 | 0.26 |
| TF | N | Total Shares | Average Shares | ALL | N | Total Shares | Average Shares |
| 2010 | 91 | 31.6 | 0.35 | 2010 | 970 | 131.30 | 0.14 |
| 2011 | 59 | 9.0 | 0.15 | 2011 | 565 | 56.62 | 0.10 |
| 2012 | 44 | 11.8 | 0.27 | 2012 | 550 | 59.97 | 0.11 |
| 2013 | 29 | 5.5 | 0.19 | 2013 | 397 | 44.34 | 0.11 |
| 2014 | 34 | 16.3 | 0.48 | 2014 | 409 | 72.94 | 0.18 |
| 2015 | 57 | 38.2 | 0.67 | 2015 | 606 | 150.17 | 0.25 |
| 2016 | 34 | 21.1 | 0.62 | 2016 | 348 | 59.04 | 0.17 |
| 2017 | 24 | 3.2 | 0.13 | 2017 | 284 | 21.70 | 0.08 |
| 2018 | 20 | 6.8 | 0.34 | 2018 | 256 | 47.84 | 0.19 |
| 2019 | 14 | 13.8 | 0.98 | 2019 | 239 | 75.14 | 0.31 |
| 2020 | 23 | 6.6 | 0.29 | 2020 | 227 | 42.29 | 0.19 |
| 2021 | 12 | 3.7 | 0.31 | 2021 | 171 | 34.95 | 0.20 |

Note: N indicates the number of share transfers. Total shares is the sum of all shares transferred, and the average shares indicates weighted average amount of shares transferred per transaction.

Allocation Transfers

Annual GT-IFQ allocation is the actual poundage each IFQ account can use or transfer to possess or land GT-IFQ species during a given calendar year. Individual units of allocation cannot be tracked in the system (e.g., the same pounds may be transferred multiple times). Only allocation transfers between shareholder accounts were analyzed in this report, and not transfers within accounts (e.g., shareholder account to own vessel account or vice versa).

The number of allocation transfers and total pounds transferred for the program have increased over time (Table 12). Percentages of the quota transferred ranged from 53% to 294%. In all share categories, the percentage of allocation transferred has exceeded the quota (greater than 100%) in at least one year. The greatest percentage of quota transferred typically occurs in DWG or TF categories, with up to 294% of the quota transferred. The lowest percentages of quota transferred occur most often in GG or SWG categories. The average volume of share transferred correlated to the quotas, with lower quotas having smaller (<2,000 lb) average volumes and lower median volumes (100 lb - 900 lb).

Table 12: Number and volume of allocation transfers

| DWG | N | mp | Avg. lb | Median lb | % quota | GG | N | mp | Avg. lb | Median lb | % quota |
|------------|----------|-----------|----------------|------------------|----------------|------------|----------|-----------|----------------|------------------|----------------|
| 2010 | 490 | 1.027 | 2,097 | 737 | 101% | 2010 | 945 | 0.743 | 787 | 300 | 53% |
| 2011 | 632 | 1.447 | 2,290 | 544 | 142% | 2011 | 1,250 | 0.332 | 266 | 109 | 77% |
| 2012 | 764 | 1.525 | 1,996 | 600 | 135% | 2012 | 1,745 | 0.504 | 289 | 147 | 89% |
| 2013 | 608 | 1.762 | 2,899 | 525 | 158% | 2013 | 1,718 | 0.622 | 362 | 200 | 88% |
| 2014 | 846 | 2.371 | 2,802 | 700 | 214% | 2014 | 2,232 | 1.236 | 554 | 216 | 148% |
| 2015 | 898 | 3.241 | 3,609 | 1,000 | 294% | 2015 | 1,847 | 1.255 | 680 | 232 | 134% |
| 2016 | 947 | 2.439 | 2,575 | 548 | 238% | 2016 | 2,183 | 1.391 | 637 | 229 | 148% |
| 2017 | 780 | 2.153 | 2,761 | 725 | 210% | 2017 | 1,485 | 0.849 | 572 | 200 | 90% |
| 2018 | 820 | 2.297 | 2,802 | 1,000 | 224% | 2018 | 1,274 | 0.705 | 553 | 200 | 75% |
| 2019 | 1,038 | 2.829 | 2,726 | 806 | 276% | 2019 | 1,734 | 1.219 | 703 | 200 | 130% |
| 2020 | 803 | 2.077 | 2,587 | 1,000 | 203% | 2020 | 1,932 | 1.302 | 674 | 200 | 139% |
| 2021 | 953 | 2.406 | 2,525 | 965 | 235% | 2021 | 2,673 | 2.172 | 813 | 207 | 231% |
| RG | N | mp | Avg. lb | Median lb | % quota | SWG | N | mp | Avg. lb | Median lb | % quota |
| 2010 | 1,065 | 3.217 | 3,021 | 926 | 56% | 2010 | 616 | 0.315 | 511 | 186 | 77% |
| 2011 | 1,550 | 4.260 | 2,749 | 1,000 | 81% | 2011 | 568 | 0.273 | 480 | 200 | 67% |
| 2012 | 1,906 | 4.737 | 2,485 | 1,000 | 88% | 2012 | 900 | 0.366 | 406 | 200 | 72% |
| 2013 | 1,752 | 5.579 | 3,185 | 1,000 | 101% | 2013 | 911 | 0.493 | 541 | 212 | 95% |
| 2014 | 2,317 | 7.188 | 3,102 | 1,000 | 128% | 2014 | 1,000 | 0.507 | 507 | 200 | 97% |
| 2015 | 2,480 | 8.655 | 3,490 | 1,072 | 151% | 2015 | 1,084 | 0.577 | 532 | 200 | 110% |
| 2016 | 2,978 | 15.069 | 5,060 | 1,000 | 194% | 2016 | 1,595 | 0.662 | 415 | 200 | 126% |
| 2017 | 1,758 | 8.906 | 5,066 | 1,000 | 114% | 2017 | 1,147 | 0.504 | 440 | 200 | 96% |
| 2018 | 1,373 | 8.391 | 6,112 | 1,000 | 108% | 2018 | 999 | 0.463 | 464 | 200 | 88% |
| 2019 | 2,373 | 6.067 | 2,557 | 500 | 202% | 2019 | 1,165 | 0.549 | 471 | 184 | 105% |
| 2020 | 2,565 | 5.368 | 2,093 | 527 | 179% | 2020 | 1,210 | 0.480 | 396 | 106 | 91% |
| 2021 | 3,078 | 5.727 | 1,861 | 500 | 191% | 2021 | 1,436 | 0.577 | 402 | 100 | 110% |
| TF | N | mp | Avg. lb | Median lb | % quota | ALL | N | mp | % quota | | |
| 2010 | 268 | 0.490 | 1,827 | 445 | 111% | 2010 | 3,384 | 5.792 | 64% | | |
| 2011 | 328 | 0.766 | 2,334 | 518 | 174% | 2011 | 4,328 | 7.078 | 94% | | |
| 2012 | 385 | 0.686 | 1,782 | 406 | 118% | 2012 | 5,700 | 7.817 | 96% | | |
| 2013 | 291 | 0.933 | 3,207 | 600 | 160% | 2013 | 5,280 | 9.389 | 111% | | |
| 2014 | 430 | 1.256 | 2,920 | 700 | 216% | 2014 | 6,825 | 12.557 | 145% | | |
| 2015 | 504 | 1.412 | 2,801 | 888 | 243% | 2015 | 6,813 | 15.139 | 171% | | |
| 2016 | 515 | 1.134 | 2,202 | 500 | 195% | 2016 | 8,218 | 20.695 | 191% | | |
| 2017 | 472 | 1.073 | 2,274 | 544 | 184% | 2017 | 5,642 | 13.485 | 124% | | |
| 2018 | 422 | 0.865 | 2,049 | 500 | 149% | 2018 | 4,888 | 12.722 | 117% | | |
| 2019 | 668 | 1.219 | 1,825 | 500 | 209% | 2019 | 6,978 | 11.882 | 196% | | |
| 2020 | 554 | 0.856 | 1,546 | 500 | 147% | 2020 | 7,064 | 10.084 | 166% | | |
| 2021 | 693 | 1.276 | 1,841 | 500 | 219% | 2021 | 8,833 | 12.158 | 200% | | |

Note: N indicates the number of allocation transfers.

Quota and Landings

Adjustments in quotas can occur due to the stock status change (e.g., new assessment) or management measures (e.g., reallocation between sectors). Quota increases may be applied at any time during the fishing season. Amendment 36A to the Reef Fish FMP (2018) provided NMFS the flexibility to address an anticipated decrease in commercial quota after the start of the fishing year. When such an anticipated decrease is expected, NMFS will withhold from distribution quota equal to the expected decrease. If the quota decrease is not completed before June 1, the withheld quota will be distributed to the IFQ shareholders based on shares at the time of distribution.

The GT-IFQ program began with quotas similar to pre-IFQ values (Table 13). In 2012, the Generic Annual Catch Limit amendment resulted in quota increases for each share category. Additional quota increases have occurred for various stocks over the years, and typically are the result of stock assessments or projections of stock size using the most current landings.

DWG quotas have differed only by ~100,000 lb over time, with a quota increase occurring in 2012 due to the Generic Annual Catch Limit (ACL) amendment. The quota subsequently decreased over the next four years and has since remained at 1.024 mp. The GG quota had a significant decrease 1.310 million pound (mp) decrease in 2011 following a stock assessment. Small quota increases occurred each year from 2012 to 2015. RG quota decreased by 1.4 mp at the start of 2011, followed by a 0.910 mp late year quota increase in November. The quota fluctuated over the next several years between 5.37 mp and 5.72 mp. In late 2016, based on a stock assessment, the quota increased to 7.78 mp. The quota remained at this level through the end of 2018. Updated stock assessment projections decreased the RG quota to 3 mp in 2019 and it has remained at that level. SWG quota increased three times in 2012, 2013, 2014, and 2015 and has remained at 0.525 mp thereafter. TF quota increased in 2012 to 0.582 mp with no further increases.

Table 13: IFQ commercial quota by year

| DWG | Jan 1 | Quota Increase | Increase Date | Dec 31 | GG | Jan 1 | Quota Increase | Increase Date | Dec 31 |
|-------|------------------------|----------------|---------------|-----------|--|------------------------|----------------|---------------|-----------|
| 2009* | 1,020,000 | | | 1,020,000 | 2009* | 1,320,000 ¹ | | | 1,320,000 |
| 2010 | 1,020,000 | | | 1,020,000 | 2010 | 1,410,000 | | | 1,410,000 |
| 2011 | 1,020,000 | | | 1,020,000 | 2011 | 100,000 | 330,000 | 6/1 | 430,000 |
| 2012 | 1,020,000 | 107,000 | 1/30 | 1,127,000 | 2012 | 430,000 | 137,000 | 3/12 | 567,000 |
| 2013 | 1,118,000 | | | 1,118,000 | 2013 | 708,000 | | | 708,000 |
| 2014 | 1,110,000 | | | 1,110,000 | 2014 | 835,000 | | | 835,000 |
| 2015 | 1,101,000 | | | 1,101,000 | 2015 | 939,000 | | | 939,000 |
| 2016 | 1,024,000 | | | 1,024,000 | 2016 | 939,000 | | | 939,000 |
| 2017 | 1,024,000 | | | 1,024,000 | 2017 | 939,000 | | | 939,000 |
| 2018 | 1,024,000 | | | 1,024,000 | 2018 | 939,000 | | | 939,000 |
| 2019 | 1,024,000 | | | 1,024,000 | 2019 | 939,000 | | | 939,000 |
| 2020 | 1,024,000 | | | 1,024,000 | 2020 | 939,000 | | | 939,000 |
| 2021 | 1,024,000 | | | 1,024,000 | 2021 | 939,000 | | | 939,000 |
| RG | Jan 1 | Quota Increase | Increase Date | Dec 31 | SWG | Jan 1 | Quota Increase | Increase Date | Dec 31 |
| 2009* | 5,750,000 ¹ | | | 5,750,000 | 2009* | 410,000 ¹ | | | 410,000 |
| 2010 | 5,750,000 | | | 5,750,000 | 2010 | 410,000 | | | 410,000 |
| 2011 | 4,320,000 | 910,000 | 11/2 | 5,230,000 | 2011 | 410,000 | | | 410,000 |
| 2012 | 5,370,000 | | | 5,370,000 | 2012 | 410,000 | 99,000 | 1/30 | 509,000 |
| 2013 | 5,530,000 | | | 5,530,000 | 2013 | 518,000 | | | 518,000 |
| 2014 | 5,630,000 | | | 5,630,000 | 2014 | 523,000 | | | 523,000 |
| 2015 | 5,720,000 | | | 5,720,000 | 2015 | 525,000 | | | 525,000 |
| 2016 | 5,720,000 | 2,060,000 | 10/12 | 7,780,000 | 2016 | 525,000 | | | 525,000 |
| 2017 | 7,780,000 | | | 7,780,000 | 2017 | 525,000 | | | 525,000 |
| 2018 | 7,780,000 | | | 7,780,000 | 2018 | 525,000 | | | 525,000 |
| 2019 | 3,000,000 | | | 3,000,000 | 2019 | 525,000 | | | 525,000 |
| 2020 | 3,000,000 | | | 3,000,000 | 2020 | 525,000 | | | 525,000 |
| 2021 | 3,000,000 | | | 3,000,000 | 2021 | 525,000 | | | 525,000 |
| TF | Jan 1 | Quota Increase | Increase Date | Dec 31 | <p>* Indicates the quota in the year prior to the GT-IFQ Program.</p> <p>¹ The total shallow-water grouper quota was an aggregate of the other shallow-water species, red grouper, and gag which was 7.48 mp in 2009. In this table, the gag and red grouper individual quotas are listed, while the remainder of the aggregate quota is listed as the SWG quota.</p> | | | | |
| 2009* | 440,000 | | | 440,000 | | | | | |
| 2010 | 440,000 | | | 440,000 | | | | | |
| 2011 | 440,000 | | | 440,000 | | | | | |
| 2012 | 440,000 | 142,000 | 1/30 | 582,000 | | | | | |
| 2013 | 582,000 | | | 582,000 | | | | | |
| 2014 | 582,000 | | | 582,000 | | | | | |
| 2015 | 582,000 | | | 582,000 | | | | | |
| 2016 | 582,000 | | | 582,000 | | | | | |
| 2017 | 582,000 | | | 582,000 | | | | | |
| 2018 | 582,000 | | | 582,000 | | | | | |
| 2019 | 582,000 | | | 582,000 | | | | | |
| 2020 | 582,000 | | | 582,000 | | | | | |
| 2021 | 582,000 | | | 582,000 | | | | | |

The percentage of the quota landed can be influenced by environmental disasters such as hurricanes, although effects may be variable across regions, and other natural events (e.g., red tide). The percentage of the program landings are largely driven by the share categories with larger quotas (i.e., DWG and RG). Between 39-92% of the program's quota is landed annually, with the lowest years occurring in 2010, 2017, and 2018 (Table 14). The lower percentage of quota landed in 2010 was due to the impact of the Deepwater Horizon (DWH) oil spill that closed off large areas to fishing ([Appendix 2](#)). The lower program landings in 2017 and 2018's are directly related to the large RG quota and proportionally smaller percentage of quota landed. The RG share category consistently has the largest quota each year,

with fishermen landing 43-98% of the quota throughout the years. The years with the lowest utilization of the quota corresponded with the years with considerably greater quotas (7.78 mp). From 2011 to 2016, 4.5-5.5 mp of quota were landed, regardless of the increased quota in 2016. Landings decreased in 2017 to 3.3 mp despite a 7.78 mp quota, and have since been under a 3 mp quota. Decreased landings were likely related to decreases in stock size due to environmental conditions and were not caused by the IFQ program's management. Even with a consistent DWG quota since 2016, the percentage of quota landed is between 78% - 93% of the quota. The greatest landings occurred in 2014 (1.05 mp) with a quota of 1.110 mp. Despite an increased quota from 2015 onward (0.939 mp), the percentage of GG quota landed has been decreased from 2017-2020, with only an increased in landings in 2021. SWG landings have also decreased in recent years despite having a consistent quota of 0.525 mp since 2015. TF quota has been consistent since 2012 at 0.582 mp, but landings have varied between 60% - 92% of the quota.

By share category, monthly landings average between 2% to 25%, indicating a year round fishery for all categories ([Appendix 5](#)). Peak monthly landings for GG and RG typically occur in early spring from February through May. Both DWG and SWG landings peaked in late spring and summer between May and August. TF landings were generally greater in October. All share categories saw increased landings in December, as participants seek to use allocation before it expires for the year. In 2020, landings were decreased in April and May as a result of the pandemic.

Table 14: Annual landings

| DWG | Landings | % Quota | GG | Landings | % Quota |
|------------|-----------------|----------------|------------|-----------------|----------------|
| 2010 | 624,762 | 61% | 2010 | 493,938 | 35% |
| 2011 | 779,519 | 76% | 2011 | 320,137 | 74% |
| 2012 | 963,835 | 86% | 2012 | 525,066 | 93% |
| 2013 | 912,923 | 82% | 2013 | 579,664 | 82% |
| 2014 | 1,048,142 | 94% | 2014 | 689,513 | 83% |
| 2015 | 911,339 | 83% | 2015 | 554,941 | 59% |
| 2016 | 867,040 | 85% | 2016 | 777,190 | 83% |
| 2017 | 821,899 | 80% | 2017 | 443,156 | 47% |
| 2018 | 817,452 | 80% | 2018 | 451,914 | 48% |
| 2019 | 951,729 | 93% | 2019 | 469,875 | 50% |
| 2020 | 803,760 | 78% | 2020 | 468,562 | 50% |
| 2021 | 800,288 | 78% | 2021 | 628,496 | 67% |
| RG | Landings | % Quota | SWG | Landings | % Quota |
| 2010 | 2,913,858 | 51% | 2010 | 158,234 | 39% |
| 2011 | 4,782,194 | 91% | 2011 | 186,235 | 45% |
| 2012 | 5,217,205 | 97% | 2012 | 300,367 | 59% |
| 2013 | 4,594,672 | 83% | 2013 | 307,846 | 59% |
| 2014 | 5,497,993 | 98% | 2014 | 263,251 | 50% |
| 2015 | 4,784,992 | 84% | 2015 | 282,338 | 54% |
| 2016 | 4,631,388 | 60% | 2016 | 358,163 | 68% |
| 2017 | 3,377,210 | 43% | 2017 | 239,046 | 46% |
| 2018 | 2,404,300 | 31% | 2018 | 224,161 | 43% |
| 2019 | 2,099,186 | 70% | 2019 | 185,014 | 35% |
| 2020 | 2,375,474 | 79% | 2020 | 165,072 | 31% |
| 2021 | 2,884,527 | 96% | 2021 | 187,386 | 36% |
| TF | Landings | % Quota | All | Landings | % Quota |
| 2010 | 249,708 | 57% | 2010 | 4,440,500 | 49% |
| 2011 | 386,134 | 88% | 2011 | 6,454,219 | 86% |
| 2012 | 451,121 | 78% | 2012 | 7,457,594 | 91% |
| 2013 | 440,091 | 76% | 2013 | 6,835,196 | 81% |
| 2014 | 517,268 | 89% | 2014 | 8,016,167 | 92% |
| 2015 | 537,512 | 92% | 2015 | 7,071,122 | 80% |
| 2016 | 429,003 | 74% | 2016 | 7,062,784 | 65% |
| 2017 | 484,895 | 83% | 2017 | 5,366,206 | 49% |
| 2018 | 386,138 | 66% | 2018 | 4,283,965 | 39% |
| 2019 | 422,926 | 73% | 2019 | 4,128,730 | 68% |
| 2020 | 348,844 | 60% | 2020 | 4,161,712 | 69% |
| 2021 | 484,032 | 83% | 2021 | 4,984,729 | 82% |

Landings by Species

Three of the share categories (DWG, SWG, and TF) contain multiple species. One species within each of these categories comprises the majority of the landings for that share category (Table 15; Figure 1). Landings may be strongly influenced by social and economic factors such as share price, allocation price, allocation availability, market desirability, and ex-vessel price for these species within the IFQ program. All of the species in a category use the same shares and allocation, although landings and ex-vessel prices may differ among these species. Differences in ex-vessel price among species within the same share category may influence the fishing behavior as fishermen target species that receive a higher

ex-vessel price. While this may occur in non-catch share fisheries, this behavior may be magnified due to the allocation costs and availability. If a fisherman has limited allocation available, they may change effort to harvest the fish with a higher ex-vessel value to maximize their economic benefits.

DWG species

The DWG share category contains four species: snowy grouper, speckled hind, warsaw grouper, and yellowedge grouper. Yellowedge grouper accounted for 70-82% of the DWG landings, followed by snowy grouper (9-17%; Table 15; Figure 1). Both warsaw grouper and speckled hind landings were typically less than 10% each year. Warsaw grouper landings have been decreasing since 2013, which was the year landings for Warsaw grouper were highest.

SWG species

The SWG share category contains four species: black grouper, scamp, yellowfin grouper, and yellowmouth grouper. Scamp accounted for 70-85% of the SWG landings, followed by black grouper (11-26%). Both yellowfin grouper and yellowmouth grouper are each less than 1% of the landings (Table 15; Figure 1). The landings of species within SWG have changed with the start of the GT-IFQ program, with an increased proportion of scamp landings and decreased proportion of black grouper and yellowfin grouper landings. Yellowfin grouper landings pre-IFQ consisted of 2% of the SWG landings, but decreased to less than 1% during the GT-IFQ years. Black grouper landings pre-IFQ made up 36% of the SWG landings, but decreased at the start of the GT-IFQ program to represent only 12%. The black grouper landings then increased to 26% in 2014 and 23% in 2015, but have since represented between 15% and 20% in more recent years.

TF species

The TF share category contains three species: golden tilefish, blueline tilefish, and goldface tilefish. During the program, golden tilefish accounted for 70-90% of the TF landings, followed by blueline tilefish (9-30%) and goldface tilefish (<1% to 7%; Table 15; Figure 1). The landings of species within TF have changed with the start of the GT-IFQ program. Prior to the GT-IFQ program, golden tilefish comprised 74% of the TF landings, but increased to 84% in the first year of the GT-IFQ program. Thereafter, golden tilefish landings continued to comprise an increasing proportion of the TF landings until 2019 when landings returned to their pre-IFQ levels. In contrast, blueline tilefish composed 26% of the TF landings before the GT-IFQ program began, but then dropped to 9% at the start of the program. Blueline tilefish did not comprise more than 18% of the TF landings once the program began, but like golden tilefish, blueline tilefish also returned to pre-IFQ levels in 2019 and has remained there since. Goldface tilefish in the first year of the GT-IFQ program comprised 7% of the TF landings, but in the following years decreased considerably and continues to account for less than 1% of the TF landings.

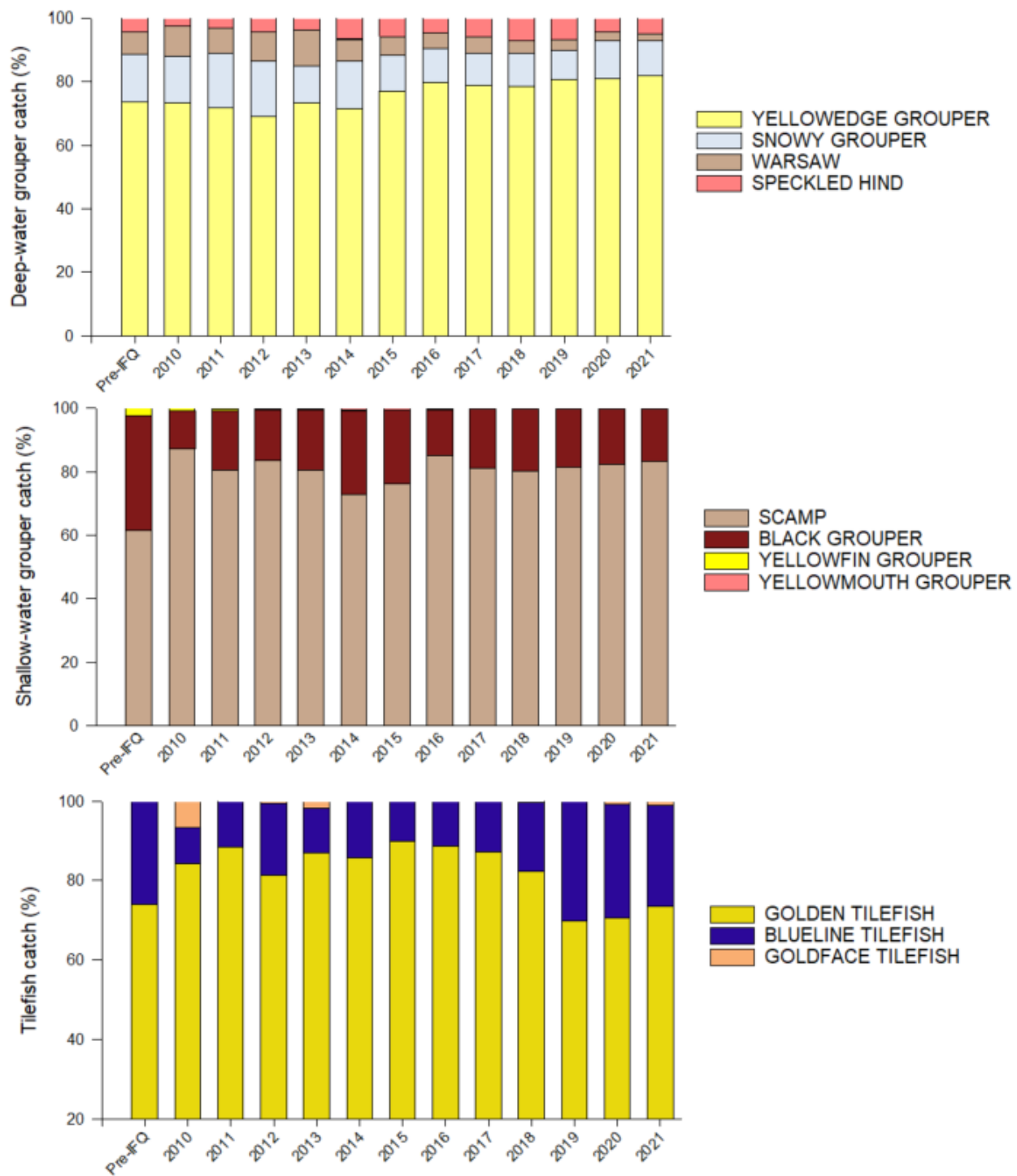


Figure 1. Species landings within share categories

Table 15: Landings by species and year

| Share Cat. | DWG | | | | GG | RG | SWG | | | | TF | | |
|----------------------|---------------|---------------|----------------|--------------------|---------|-------------|---------------|---------|-------------------|----------------------|-------------------|-----------------|--------------------------------|
| Species | Snowy grouper | Speckled hind | Warsaw grouper | Yellowedge grouper | Gag | Red grouper | Black grouper | Scamp | Yellowfin grouper | Yellow mouth grouper | Blueline tilefish | Golden tilefish | Goldface tilefish ² |
| Pre-IFQ ¹ | 161,175 | 47,913 | 74,476 | 792,055 | 952,555 | 3,910,083 | 156,778 | 266,193 | 10,122 | 466 | 123,072 | 352,080 | NA |
| 2010 | 90,180 | 15,359 | 56,496 | 443,887 | 496,826 | 2,910,970 | 20,905 | 153,533 | 1,394 | 85 | 22,555 | 209,641 | 16,559 |
| 2011 | 132,971 | 24,925 | 61,661 | 558,908 | 318,663 | 4,783,668 | 34,970 | 149,286 | 945 | 548 | 44,841 | 341,260 | 33 |
| 2012 | 168,759 | 43,344 | 86,212 | 667,785 | 523,138 | 5,219,133 | 47,537 | 249,320 | 739 | 506 | 82,025 | 366,763 | 2,333 |
| 2013 | 108,689 | 34,922 | 103,074 | 673,349 | 575,335 | 4,599,001 | 56,750 | 242,170 | 856 | 959 | 49,454 | 383,132 | 7,505 |
| 2014 | 159,857 | 72,241 | 75,426 | 773,621 | 586,377 | 5,601,905 | 60,555 | 167,840 | 568 | 1,285 | 74,221 | 442,992 | 55 |
| 2015 | 108,980 | 55,550 | 55,502 | 735,218 | 542,774 | 4,797,159 | 54,831 | 182,108 | 442 | 1,046 | 53,681 | 483,779 | 35 |
| 2016 | 94,830 | 41,151 | 44,635 | 709,349 | 910,996 | 4,497,582 | 48,788 | 284,987 | 709 | 754 | 47,898 | 380,125 | 212 |
| 2017 | 87,587 | 51,061 | 44,362 | 677,926 | 492,095 | 3,328,271 | 37,032 | 162,435 | 152 | 390 | 61,808 | 423,054 | 33 |
| 2018 | 89,416 | 60,618 | 35,976 | 677,310 | 492,934 | 2,363,280 | 34,806 | 142,787 | 440 | 260 | 66,936 | 318,133 | 1,069 |
| 2019 | 91,430 | 67,082 | 33,590 | 804,558 | 532,015 | 2,037,046 | 25,634 | 113,908 | 377 | 164 | 127,162 | 295,691 | 73 |
| 2020 | 99,072 | 36,187 | 22,707 | 665,412 | 475,714 | 2,368,322 | 25,345 | 118,784 | 66 | 259 | 99,688 | 246,168 | 2,988 |
| 2021 | 91,258 | 41,428 | 17,419 | 681,667 | 562,849 | 2,950,174 | 25,890 | 129,792 | 47 | 173 | 123,191 | 355,304 | 5,537 |

¹ Pre-IFQ data were averaged over three years: 2007-2009.

² Goldface tilefish were grouped with unclassified tilefish prior to the start of the GT-IFQ program.

³ Pounds are by species and not the share category the species of landing.

Multi-use for gag and red grouper species

Table 16: Multi-use allocation

| Year | GGM | RGM |
|------|-------|------|
| 2010 | 8% | 4% |
| 2011 | 8% | NA |
| 2012 | 8% | NA |
| 2013 | 70% | NA |
| 2014 | 47% | NA |
| 2015 | 33% | 4.8% |
| 2016 | 33% | 4.8% |
| 2017 | 43.6% | 3.5% |
| 2018 | 43.6% | 3.5% |
| 2019 | 17% | 9.2% |
| 2020 | 17% | 9.2% |
| 2021 | 17% | 9.2% |

A portion of the gag or red grouper allocation may be reserved each year for multi-use allocation, which may be used to land either gag or red grouper. The multi-use provision is to ensure that there may be allocation to use if either gag or red grouper are landed as incidental catch. The percentage of multi-use may change each year and may even be zero (Table 16). Since 2013, the red grouper multi-use (RGM) and gag multi-use (GGM) allocation was based on formulas (see below) using the commercial quota and the annual catch limits for gag and red grouper. If either stock is under a rebuilding plan, the percentage of the other species multi-use allocation will equal zero. Multi-use allocation cannot be used until all the species-specific allocation has been landed or transferred,

including allocation in shareholder and all associated vessel(s) accounts. For example, gag may not be landed under GGM or RGM until there is no GG allocation remaining in the shareholder and associated vessel(s) accounts. Similarly, multi-use allocation may only be transferred after landing or transferring all the corresponding species-specific allocation in the shareholder and associated vessel(s) accounts.

$$RGM \text{ allocation} = 100 * \frac{(Gag \text{ ACL} - Gag \text{ Commercial Quota})}{Red \text{ Grouper Commercial Quota}}$$

$$GGM \text{ allocation} = 100 * \frac{(Red \text{ Grouper ACL} - Red \text{ Grouper Commercial Quota})}{Gag \text{ Commercial Quota}}$$

There was no RGM allocation from 2011-2014 because gag was under a rebuilding plan. Since 2017, multi-use has been set at 43.6% GGM and 3.5% RGM, as the buffers between the ACL and quota for both species have remained constant. The majority of RGM and GGM multi-use allocation was used typically to harvest gag (Table 17). In 2020, the majority of RGM multi-use allocation was used to harvest red grouper, and in 2021, both RGM and GGM multi-use allocation were predominantly used to harvest red grouper.

Table 17: Percentage of multi-use landings

| Year | RGM | | GGM | |
|------|------------------|------------------|------------------|--------------------|
| | Red Grouper | Gag | Red Grouper | Gag |
| 2010 | 73% (13,833 lb) | 27% (5,091 lb) | 28% (2,203 lb) | 72% (5,654 lb) |
| 2011 | NA | NA | 14% (1,474 lb) | 86% (8,700 lb) |
| 2012 | NA | NA | 6% (1,928 lb) | 94% (32,230 lb) |
| 2013 | NA | NA | 1% (4,329 lb) | 99% (376,528 lb) |
| 2014 | NA | NA | 35% (103,151 lb) | 65% (188,950 lb) |
| 2015 | 82% (98,466 lb) | 18% (20,998 lb) | 26% (33,165 lb) | 74% (92,661 lb) |
| 2016 | 8% (11,441 lb) | 92% (135,471 lb) | 1% (1,665 lb) | 99% (220,088 lb) |
| 2017 | 11% (6,145 lb) | 89% (51,137 lb) | 2% (2,198 lb) | 98% (116,163 lb) |
| 2018 | 4% (1,656 lb) | 96% (41,364 lb) | 0.3% (344 lb) | 99.7% (114,984 lb) |
| 2019 | 38% (43,610 lb) | 62% (71,349 lb) | 19% (9,209 lb) | 81% (39,266 lb) |
| 2020 | 74% (85,218 lb) | 27% (30,677 lb) | 46% (23,525 lb) | 54% (27,701 lb) |
| 2021 | 96% (235,454 lb) | 4% (9,272 lb) | 77% (74,919 lb) | 23% (22,200 lb) |

Remaining Allocation and Overage Measure

At the end of each year on December 31, any remaining allocation in an account expires. Over 69% of the accounts have remaining allocation in at least one share category (Table 17). Within a share category, the percentage of accounts with remaining allocation is never less than 39% and as great as 90%. In recent years, the percentage of accounts with remaining allocation have decreased compared to the early years of the program (Table 18). By share category, roughly half of these accounts were inactive. The majority of remaining pounds, however, were held by active accounts.

Table 18: Number of accounts with remaining allocation and volume by activity status

| DWG | Acct | lb | Inact. lb | Inact. Acct | GG | Acct | lb | Inact. lb | Inact. Acct |
|------|-----------|-----------|--------------|----------------|------|-----------|-----------|--------------|----------------|
| 2010 | 390 (76%) | 395,615 | 64,601 | 169 | 2010 | 706 (89%) | 916,034 | 114,277 | 257 |
| 2011 | 283 (54%) | 240,703 | 15,731 | 140 | 2011 | 531 (69%) | 109,780 | 17,991 | 259 |
| 2012 | 235 (47%) | 163,126 | 11,177 | 103 | 2012 | 425 (57%) | 41,981 | 11,808 | 221 |
| 2013 | 253 (54%) | 205,088 | 14,192 | 115 | 2013 | 467 (65%) | 128,169 | 21,471 | 217 |
| 2014 | 195 (43%) | 62,405 | 5,406 | 103 | 2014 | 418 (58%) | 145,486 | 17,536 | 196 |
| 2015 | 238 (51%) | 189,347 | 8,411 | 109 | 2015 | 519 (69%) | 384,151 | 51,875 | 232 |
| 2016 | 228 (49%) | 156,744 | 11,209 | 107 | 2016 | 463 (62%) | 162,234 | 37,993 | 220 |
| 2017 | 250 (55%) | 202,191 | 24,698 | 131 | 2017 | 556 (72%) | 495,728 | 72,492 | 250 |
| 2018 | 264 (55%) | 206,622 | 44,402 | 139 | 2018 | 573 (76%) | 487,166 | 100,678 | 262 |
| 2019 | 202 (45%) | 71,973 | 9,766 | 108 | 2019 | 503 (70%) | 467,614 | 80,922 | 224 |
| 2020 | 256 (55%) | 220,000 | 27,248 | 119 | 2020 | 503 (68%) | 468,807 | 61,945 | 221 |
| 2021 | 207 (46%) | 446,382 | 34,440 | 111 | 2021 | 434 (60%) | 617,434 | 106,998 | 212 |
| RG | Acct | lb | Inact. lb | Inact. Acct | SWG | Acct | lb | Inact. lb | Inact. Acct |
| 2010 | 666 (90%) | 2,835,405 | 343,665 | 235 | 2010 | 630 (83%) | 251,503 | 33,961 | 277 |
| 2011 | 501 (68%) | 448,926 | 64,216 | 184 | 2011 | 513 (68%) | 223,743 | 22,514 | 261 |
| 2012 | 356 (50%) | 152,249 | 38,159 | 167 | 2012 | 441 (60%) | 208,450 | 22,711 | 220 |
| 2013 | 441 (65%) | 935,526 | 62,605 | 171 | 2013 | 493 (68%) | 210,129 | 20,999 | 233 |
| 2014 | 317 (46%) | 132,651 | 46,907 | 153 | 2014 | 461 (64%) | 259,689 | 20,948 | 208 |
| 2015 | 478 (67%) | 935,240 | 58,501 | 190 | 2015 | 499 (67%) | 242,619 | 26,732 | 223 |
| 2016 | 582 (80%) | 3,148,565 | 194,289 | 191 | 2016 | 476 (64%) | 166,837 | 25,570 | 212 |
| 2017 | 571 (76%) | 4,403,288 | 463,690 | 221 | 2017 | 538 (72%) | 285,942 | 50,372 | 243 |
| 2018 | 607 (80%) | 5,376,103 | 681,565 | 242 | 2018 | 536 (72%) | 300,925 | 59,759 | 252 |
| 2019 | 478 (70%) | 898,038 | 187,090 | 203 | 2019 | 485 (70%) | 337,610 | 52,680 | 213 |
| 2020 | 443 (64%) | 621,566 | 126,335 | 199 | 2020 | 483 (68%) | 358,547 | 58,045 | 215 |
| 2021 | 309 (45%) | 222,544 | 83,018 | 163 | 2021 | 447 (64%) | 670,472 | 108,032 | 202 |
| TF | Acct | lb | Inact. lb | Inact. Acct | ALL | Acct | lb | Inact. lb | Inact. Acct |
| 2010 | 219 (73%) | 190,857 | 59,798 | 101 | 2010 | 750 (92%) | 4,589,414 | 453,584 | 245 |
| 2011 | 142 (46%) | 53,920 | 5,343 | 77 | 2011 | 667 (80%) | 1,077,088 | 96,463 | 260 |
| 2012 | 130 (45%) | 130,903 | 5,951 | 59 | 2012 | 596 (73%) | 696,709 | 75,785 | 254 |
| 2013 | 148 (52%) | 141,968 | 11,614 | 70 | 2013 | 608 (77%) | 1,620,880 | 110,513 | 244 |
| 2014 | 113 (41%) | 64,855 | 2,380 | 54 | 2014 | 561 (71%) | 665,086 | 85,800 | 232 |
| 2015 | 122 (43%) | 44,613 | 4,410 | 64 | 2015 | 635 (76%) | 1,795,970 | 109,014 | 251 |
| 2016 | 121 (44%) | 153,031 | 14,684 | 61 | 2016 | 692 (82%) | 3,787,411 | 238,076 | 251 |
| 2017 | 133 (50%) | 97,149 | 10,317 | 76 | 2017 | 695 (80%) | 5,484,298 | 529,912 | 276 |
| 2018 | 157 (55%) | 195,955 | 43,906 | 82 | 2018 | 723 (82%) | 6,566,771 | 861,310 | 298 |
| 2019 | 128 (46%) | 158,757 | 5,989 | 70 | 2019 | 628 (77%) | 1,933,992 | 300,076 | 252 |
| 2020 | 159 (55%) | 232,923 | 18,187 | 66 | 2020 | 632 (76%) | 1,901,837 | 259,540 | 259 |
| 2021 | 113 (39%) | 195,334 | 6,280 | 52 | 2021 | 572 (69%) | 2,152,166 | 284,452 | 252 |

An overage flexibility measure allows accounts that hold shares to land in excess of their remaining allocation once per category per year. This overage measure allows one of the shareholder's vessels to land 10% more allocation for that category than was on the vessel at that point in time. Such overages are anticipated to occur because it is difficult to accurately estimate the weight of fish at sea. Overage typically occur late in the year, as there must be no allocation in the shareholder or any associated vessel accounts for the overage measure to take effect, but may occur at any point in time. All overages are deducted from the shareholder's allocation in the following year. The shareholder is prevented from transferring shares equal to the overage.

The total amount of landings from overages is small, less than 0.05% each year (Table 19). By share category, only a small number of accounts (< 30) utilized the overage provision. Average overages per share category are low (between 2 and 1,139 lb), while median values were typically smaller (between 1 and 105 lb).

Table 19: Number of accounts with overages and associated volume

| DWG | Acct | lb (gw) | Average lb | Median lb | GG | Acct | lb (gw) | Average lb | Median lb |
|------------|-------------|----------------|-------------------|------------------|------------|-------------|----------------|-------------------|------------------|
| 2010 | 2 | 31 | 16 | 16 | 2010 | 5 | 372 | 74 | 49 |
| 2011 | 8 | 260 | 33 | 22 | 2011 | 20 | 206 | 10 | 3 |
| 2012 | 2 | 88 | 44 | 44 | 2012 | 24 | 263 | 11 | 5 |
| 2013 | 4 | 30 | 8 | 5 | 2013 | 9 | 79 | 9 | 4 |
| 2014 | 5 | 491 | 98 | 4 | 2014 | 3 | 14 | 5 | 4 |
| 2015 | 4 | 325 | 81 | 57 | 2015 | 4 | 25 | 6 | 6 |
| 2016 | 2 | 46 | 23 | 23 | 2016 | 7 | 277 | 40 | 15 |
| 2017 | 4 | 74 | 19 | 21 | 2017 | 4 | 27 | 7 | 4 |
| 2018 | 4 | 93 | 23 | 23 | 2018 | 7 | 33 | 5 | 1 |
| 2019 | 4 | 206 | 52 | 11 | 2019 | 4 | 16 | 4 | 4 |
| 2020 | 5 | 223 | 45 | 25 | 2020 | 2 | 162 | 81 | 81 |
| 2021 | 1 | 65 | 65 | 65 | 2021 | 1 | 8 | 8 | 8 |
| RG | Acct | lb (gw) | Average lb | Median lb | SWG | Acct | lb (gw) | Average lb | Median lb |
| 2010 | 14 | 52 | 52 | 26 | 2010 | 0 | 0 | 0 | 0 |
| 2011 | 13 | 1,139 | 1,139 | 31 | 2011 | 8 | 253 | 32 | 16 |
| 2012 | 9 | 236 | 236 | 6 | 2012 | 7 | 69 | 10 | 6 |
| 2013 | 4 | 85 | 85 | 8 | 2013 | 6 | 113 | 19 | 2 |
| 2014 | 6 | 833 | 833 | 79 | 2014 | 4 | 43 | 11 | 3 |
| 2015 | 6 | 688 | 688 | 41 | 2015 | 2 | 8 | 4 | 4 |
| 2016 | 1 | 82 | 82 | 82 | 2016 | 3 | 25 | 8 | 10 |
| 2017 | 3 | 318 | 106 | 48 | 2017 | 5 | 31 | 6 | 8 |
| 2018 | 3 | 149 | 50 | 9 | 2018 | 1 | 2 | 2 | 2 |
| 2019 | 7 | 675 | 96 | 12 | 2019 | 1 | 12 | 12 | 12 |
| 2020 | 7 | 854 | 122 | 46 | 2020 | 1 | 12 | 12 | 12 |
| 2021 | 7 | 178 | 25 | 1 | 2021 | 1 | 38 | 38 | 38 |
| TF | Acct | lb (gw) | Average lb | Median lb | ALL | Acct | lb (gw) | Average lb | Median lb |
| 2010 | 0 | 0 | 0 | 0 | 2010 | 9 | 455 | 51 | 26 |
| 2011 | 3 | 22 | 7 | 7 | 2011 | 48 | 1,880 | 39 | 10 |
| 2012 | 0 | 0 | 0 | 0 | 2012 | 33 | 656 | 20 | 10 |
| 2013 | 3 | 17 | 6 | 4 | 2013 | 23 | 324 | 14 | 4 |
| 2014 | 3 | 127 | 42 | 32 | 2014 | 19 | 1,508 | 79 | 30 |
| 2015 | 2 | 209 | 105 | 105 | 2015 | 16 | 1,255 | 78 | 35 |
| 2016 | 0 | 0 | 0 | 0 | 2016 | 12 | 430 | 36 | 12 |
| 2017 | 0 | 0 | 0 | 0 | 2017 | 14 | 450 | 32 | 14 |
| 2018 | 2 | 53 | 27 | 27 | 2018 | 14 | 330 | 24 | 8 |
| 2019 | 1 | 13 | 13 | 13 | 2019 | 13 | 922 | 71 | 11 |
| 2020 | 3 | 57 | 19 | 5 | 2020 | 15 | 1,308 | 87 | 46 |
| 2021 | 2 | 45 | 23 | 2 | 2021 | 9 | 334 | 37 | 4 |

Effort and Discards

Effort

Effort for all trips landing GT-IFQ species was determined using the Southeast Fisheries Science Center's (SEFSC) coastal logbook records, which were available for 2007-2020⁶. SEFSC coastal logbook data for 2021 were not available in time for release of this report. The number of trips, average trip length, average landings of GT-IFQ species per trip, and average total landings per trip are analyzed by gear (Table 20). Note that values are not adjusted for misidentified species (e.g., gag as black grouper). Vertical line (VL) gear included all types of vertical gear (e.g., hand lines, bandit reels, hook and line, etc.), as well as miscellaneous gear (e.g., spearfishing). The longline gear category (LL) does not include any other gear. Differences in effort may be influenced by gear and region. Due to the multi-species nature of the reef fish fishery, effort data on a share category may also be influenced by the targeted species for each trip. This information was not utilized, as the analysis was by share category and not by species.

The number of trips taken to harvest GT-IFQ species were consistently greater on trips using VL gear than LL gear (Table 20 and Table 21). The average number of trips with VL gear were less than pre-IFQ years, yet remained consistent between 3,000 and 4,500 trips/year. In 2020 and 2021, the number of trips decreased to around 3,000 trips, which is likely in response to the pandemic. The average length of trips with VL gear remained consistent both pre-IFQ and post-IFQ, around 4 days. The average pounds of GT-IFQ species decreased in 2016 for trips with VL gear from between 550-700 lb/trip to 300-505 lb/trip, which coincided with a decrease in average pounds of RG caught per trip. Average total landings per trip has consistently been between 1,600 and 2,000 lb/trip since the GT-IFQ program has been implemented.

On average, 650-820 trips are taken each year using LL gear. This is decreased from pre-IFQ years where more than 1,000 GT trips were taken per year. Trip length has remained consistent pre- and post-IFQ near 10-12 days. The average pounds of GT-IFQ species landed per trip has been generally greater post-IFQ (3,600 – 7,000 lb/trip) than pre-IFQ (3,600 lb/trip) as have total landings per trip (pre-IFQ = 4,000 lb/trip vs post-IFQ 4,500 – 7,600 lb/trip). In more recent years, however, there has been fewer average pounds per trip, which may be due to the pandemic and increased quota for the RS-IFQ program. The majority of the catch by weight on LL gear trips is composed of GT-IFQ species.

Differences in pre-IFQ to post-IFQ may be influenced by factors both directly and indirectly related to the GT-IFQ program, such as elimination of trip limits and short fishing seasons, increases in quota, changes in fishermen targeting behavior, and regulations on other reef fish species.

⁶ SEFSC Coastal Logbooks accessed 9/13/2022

Table 20: Vertical line¹ effort (number of trips) harvesting GT-IFQ species

| DWG | Trips | Avg. days/trip | Avg. lb/trip | Avg. Total Landing lb/trip | GG | Trips | Avg. days/trip | Avg. lb/trip | Avg. Total Landing lb/trip |
|---------|-------|----------------|--------------|----------------------------|---------|-------|----------------|--------------|----------------------------|
| Pre-IFQ | 477 | 6.0 | 286 | 3,118 | Pre-IFQ | 3,348 | 4.4 | 202 | 1,358 |
| 2010 | 563 | 5.8 | 196 | 3,995 | 2010 | 2,711 | 4.7 | 139 | 1,575 |
| 2011 | 624 | 6.1 | 211 | 4,091 | 2011 | 2,143 | 4.6 | 109 | 2,002 |
| 2012 | 839 | 6.5 | 231 | 3,825 | 2012 | 2,664 | 4.4 | 146 | 1,955 |
| 2013 | 697 | 6.1 | 174 | 3,964 | 2013 | 2,460 | 4.7 | 153 | 1,878 |
| 2014 | 711 | 5.7 | 162 | 4,257 | 2014 | 2,698 | 4.6 | 131 | 1,835 |
| 2015 | 565 | 5.9 | 157 | 4,201 | 2015 | 2,287 | 4.3 | 122 | 1,727 |
| 2016 | 549 | 6.1 | 126 | 4,415 | 2016 | 2,626 | 4.3 | 192 | 1,600 |
| 2017 | 425 | 6.1 | 139 | 4,653 | 2017 | 2,234 | 4.2 | 137 | 1,541 |
| 2018 | 364 | 6.2 | 131 | 4,489 | 2018 | 2,018 | 4.0 | 154 | 1,579 |
| 2019 | 372 | 5.7 | 156 | 3,941 | 2019 | 2,067 | 3.7 | 164 | 1,690 |
| 2020 | 270 | 5.1 | 129 | 4,139 | 2020 | 1,940 | 3.5 | 147 | 1,727 |
| 2021 | 254 | 5.0 | 156 | 5,437 | 2021 | 1,919 | 3.8 | 164 | 1,976 |
| RG | Trips | Avg. days/trip | Avg. lb/trip | Avg. Total Landing lb/trip | SWG | Trips | Avg. days/trip | Avg. lb/trip | Avg. Total Landing lb/trip |
| Pre-IFQ | 4,222 | 4.3 | 466 | 1,166 | Pre-IFQ | 2,648 | 5.0 | 94 | 2,152 |
| 2010 | 3,183 | 4.7 | 488 | 1,342 | 2010 | 1,773 | 5.6 | 65 | 2,400 |
| 2011 | 3,201 | 4.3 | 520 | 1,648 | 2011 | 1,974 | 5.2 | 53 | 2,562 |
| 2012 | 3,407 | 4.4 | 633 | 1,749 | 2012 | 2,380 | 5.5 | 76 | 2,581 |
| 2013 | 3,186 | 4.4 | 465 | 1,492 | 2013 | 1,943 | 5.7 | 78 | 2,615 |
| 2014 | 3,482 | 4.3 | 560 | 1,459 | 2014 | 2,000 | 5.4 | 62 | 2,515 |
| 2015 | 3,387 | 4.1 | 547 | 1,330 | 2015 | 1,807 | 5.1 | 62 | 2,585 |
| 2016 | 3,234 | 4.1 | 385 | 1,243 | 2016 | 2,043 | 5.3 | 79 | 2,600 |
| 2017 | 2,899 | 4.1 | 350 | 1,214 | 2017 | 1,651 | 5.2 | 56 | 2,663 |
| 2018 | 2,636 | 3.8 | 249 | 1,197 | 2018 | 1,605 | 4.9 | 51 | 2,477 |
| 2019 | 2,619 | 3.5 | 220 | 1,210 | 2019 | 1,540 | 4.6 | 45 | 2,612 |
| 2020 | 2,516 | 3.4 | 284 | 1,247 | 2020 | 1,460 | 4.2 | 44 | 2,599 |
| 2021 | 2,372 | 3.6 | 427 | 1,470 | 2021 | 1,422 | 4.4 | 56 | 3,032 |
| TF | Trips | Avg. days/trip | Avg. lb/trip | Avg. Total Landing lb/trip | ALL | Trips | Avg. days/trip | Avg. lb/trip | Avg. Total Landing lb/trip |
| Pre-IFQ | 201 | 5.8 | 79 | 3,049 | Pre-IFQ | 5,484 | 4.2 | 556 | 1,480 |
| 2010 | 159 | 6.3 | 72 | 3,357 | 2010 | 3,898 | 4.6 | 556 | 1,667 |
| 2011 | 206 | 5.8 | 52 | 3,735 | 2011 | 3,935 | 4.4 | 545 | 1,953 |
| 2012 | 251 | 6.5 | 175 | 3,686 | 2012 | 4,216 | 4.5 | 703 | 2,004 |
| 2013 | 207 | 5.9 | 89 | 2,908 | 2013 | 3,903 | 4.4 | 551 | 1,872 |
| 2014 | 243 | 5.0 | 145 | 2,797 | 2014 | 4,351 | 4.2 | 593 | 1,840 |
| 2015 | 211 | 4.9 | 139 | 2,635 | 2015 | 4,306 | 4.0 | 548 | 1,742 |
| 2016 | 149 | 5.3 | 167 | 2,780 | 2016 | 4,246 | 4.1 | 473 | 1,707 |
| 2017 | 154 | 5.3 | 65 | 2,614 | 2017 | 3,883 | 4.0 | 382 | 1,658 |
| 2018 | 132 | 5.1 | 113 | 2,814 | 2018 | 3,485 | 3.8 | 319 | 1,638 |
| 2019 | 191 | 5.2 | 201 | 2,041 | 2019 | 3,462 | 3.5 | 312 | 1,662 |
| 2020 | 148 | 4.2 | 131 | 1,924 | 2020 | 3,192 | 3.4 | 350 | 1,716 |
| 2021 | 155 | 4.5 | 314 | 2,755 | 2021 | 2,960 | 3.6 | 505 | 2,070 |

Data from the SEFSC Coastal Logbook records were available as of 9/13/2022 and may not contain complete 2021 data. Pre-IFQ data are the average from 2007-2009. The total number of trips maybe be less than the sum across gear, because some vessels may use multiple gear types.

¹ Vertical line includes spearfishing, buoy, and other gear types.

Table 21: Longline effort (number of trips) harvesting GT-IFQ species

| DWG | Trips | Avg. days/trip | Avg. lb/trip | Avg. Total Landing lb/trip | GG | Trips | Avg. days/trip | Avg. lb/trip | Avg. Total Landing lb/trip |
|---------|-------|----------------|--------------|----------------------------|---------|-------|----------------|--------------|----------------------------|
| Pre-IFQ | 443 | 10.0 | 2,151 | 4,592 | Pre-IFQ | 664 | 10.4 | 410 | 4,042 |
| 2010 | 243 | 10.5 | 2,025 | 4,798 | 2010 | 348 | 10.8 | 293 | 4,969 |
| 2011 | 296 | 10.4 | 2,131 | 6,443 | 2011 | 363 | 10.5 | 208 | 6,732 |
| 2012 | 341 | 9.9 | 2,131 | 6,456 | 2012 | 408 | 9.7 | 301 | 7,274 |
| 2013 | 336 | 10.9 | 2,307 | 7,190 | 2013 | 481 | 10.3 | 365 | 6,847 |
| 2014 | 348 | 11.6 | 2,513 | 7,740 | 2014 | 526 | 11.1 | 365 | 7,644 |
| 2015 | 385 | 12.3 | 2,175 | 6,923 | 2015 | 563 | 11.8 | 421 | 6,773 |
| 2016 | 436 | 12.1 | 1,794 | 6,799 | 2016 | 650 | 11.5 | 589 | 6,580 |
| 2017 | 406 | 12.5 | 1,871 | 5,847 | 2017 | 584 | 12.3 | 282 | 5,441 |
| 2018 | 365 | 12.3 | 2,145 | 5,544 | 2018 | 517 | 12.1 | 311 | 4,982 |
| 2019 | 370 | 12.1 | 2,366 | 5,382 | 2019 | 465 | 11.9 | 360 | 4,875 |
| 2020 | 370 | 10.6 | 2,020 | 4,718 | 2020 | 482 | 10.5 | 346 | 4,816 |
| 2021 | 354 | 11.0 | 2,021 | 5,305 | 2021 | 525 | 10.3 | 371 | 5,489 |
| RG | Trips | Avg. days/trip | Avg. lb/trip | Avg. Total Landing lb/trip | SWG | Trips | Avg. days/trip | Avg. lb/trip | Avg. Total Landing lb/trip |
| Pre-IFQ | 778 | 10.0 | 2,502 | 3,772 | Pre-IFQ | 680 | 10.3 | 280 | 4,055 |
| 2010 | 342 | 10.8 | 3,673 | 4,848 | 2010 | 303 | 10.7 | 250 | 4,954 |
| 2011 | 556 | 10.2 | 5,253 | 6,346 | 2011 | 447 | 10.4 | 184 | 6,591 |
| 2012 | 508 | 9.4 | 5,483 | 6,837 | 2012 | 459 | 9.9 | 263 | 6,985 |
| 2013 | 546 | 10.3 | 5,269 | 6,723 | 2013 | 490 | 10.7 | 288 | 7,156 |
| 2014 | 584 | 10.7 | 5,719 | 7,259 | 2014 | 490 | 11.3 | 193 | 7,848 |
| 2015 | 571 | 11.5 | 4,681 | 6,433 | 2015 | 538 | 12.0 | 206 | 6,801 |
| 2016 | 665 | 11.1 | 4,530 | 6,207 | 2016 | 605 | 11.6 | 297 | 6,827 |
| 2017 | 621 | 11.8 | 3,521 | 5,021 | 2017 | 561 | 12.5 | 180 | 5,515 |
| 2018 | 541 | 11.8 | 2,919 | 4,683 | 2018 | 524 | 12.3 | 168 | 5,173 |
| 2019 | 516 | 11.6 | 2,579 | 4,489 | 2019 | 436 | 12.1 | 156 | 5,065 |
| 2020 | 550 | 10.0 | 2,689 | 4,483 | 2020 | 443 | 10.7 | 170 | 4,863 |
| 2021 | 533 | 10.1 | 3,278 | 5,298 | 2021 | 458 | 10.6 | 193 | 5,681 |
| TF | Trips | Avg. days/trip | Avg. lb/trip | Avg. Total Landing lb/trip | ALL | Trips | Avg. days/trip | Avg. lb/trip | Avg. Total Landing lb/trip |
| Pre-IFQ | 289 | 10.2 | 1,606 | 4,875 | Pre-IFQ | 1,063 | 9.9 | 3,638 | 4,035 |
| 2010 | 152 | 9.6 | 1,600 | 4,859 | 2010 | 489 | 10.3 | 4,436 | 4,868 |
| 2011 | 181 | 10.3 | 2,028 | 6,524 | 2011 | 681 | 10.1 | 5,986 | 6,341 |
| 2012 | 225 | 9.8 | 1,634 | 6,183 | 2012 | 660 | 9.4 | 6,247 | 6,592 |
| 2013 | 178 | 11.2 | 2,183 | 7,345 | 2013 | 684 | 10.5 | 6,370 | 6,885 |
| 2014 | 193 | 12.1 | 3,156 | 9,093 | 2014 | 722 | 10.9 | 7,078 | 7,673 |
| 2015 | 227 | 12.3 | 2,183 | 7,272 | 2015 | 730 | 11.6 | 5,964 | 6,702 |
| 2016 | 196 | 12.7 | 1,930 | 6,938 | 2016 | 821 | 11.4 | 5,767 | 6,373 |
| 2017 | 237 | 12.6 | 1,937 | 6,042 | 2017 | 781 | 11.9 | 4,701 | 5,332 |
| 2018 | 211 | 12.6 | 1,661 | 6,018 | 2018 | 705 | 11.9 | 4,200 | 4,998 |
| 2019 | 273 | 12.5 | 1,296 | 5,629 | 2019 | 706 | 11.7 | 3,960 | 4,923 |
| 2020 | 292 | 10.7 | 1,120 | 4,784 | 2020 | 763 | 10.1 | 3,664 | 4,506 |
| 2021 | 303 | 11.0 | 1,285 | 5,323 | 2021 | 738 | 10.2 | 4,248 | 5,305 |

Data from the SEFSC Coastal Logbook records were available as of 9/13/2022 and may not contain complete 2021 data. Pre-IFQ data are the average from 2007-2009. The total number of trips maybe be less than the sum across gear, because some vessels may use multiple gear types.

The GT-IFQ species are part of the reef fish complex that contains both IFQ and non-IFQ species. Vessels typically harvest both IFQ, including red snapper, and non-IFQ species on the same trip. The RS-IFQ and GT-IFQ programs eliminated the mini seasons (red snapper) and derby fishing conditions, as well as the trip limits associated with grouper and tilefish species. Gag continues to make up 25% or less

of the total catch for trips using either VL or LL gear, as it did pre-IFQ (Table 22). Red grouper caught on VL trips pre-IFQ was bimodal in relation to total catch, either being 25% or less of the catch landed or between 76-100% of the landed catch. This trend continued after the IFQ program. For trips using LL gear, red grouper generally was 76-100% of the total catch landed both pre- and post-IFQ. In recent years (2018-2021), there is a slight shift towards red grouper making up less than 76% of the landed catch. This shift is due to the lower quota for red group and catchability.

Table 22: Percentage of gag and red grouper pounds landed to total reef fish pounds landed

| Fleet | Year | % of gag to all reef fish landed | | | | Year | % of red grouper to all reef fish landed | | | |
|----------------------------|---------|----------------------------------|--------|--------|---------|---------|--|--------|--------|---------|
| | | 0-25% | 26-50% | 51-75% | 76-100% | | 0-25% | 26-50% | 51-75% | 76-100% |
| Vertical Line ¹ | Pre-IFQ | 60.8 | 16.4 | 10.2 | 12.5 | Pre-IFQ | 33.7 | 12.5 | 14.2 | 39.7 |
| | 2010 | 74.3 | 14 | 6.6 | 5.1 | 2010 | 42.9 | 14.4 | 14.5 | 28.3 |
| | 2011 | 83.8 | 8.1 | 4.4 | 3.6 | 2011 | 48.4 | 12.8 | 14.5 | 24.3 |
| | 2012 | 81.5 | 9.9 | 4.9 | 3.6 | 2012 | 44.6 | 15.7 | 16.2 | 23.5 |
| | 2013 | 78.7 | 10.3 | 6.5 | 4.5 | 2013 | 42.4 | 18.5 | 14.4 | 24.7 |
| | 2014 | 81.2 | 9.2 | 4.6 | 5 | 2014 | 40.7 | 16 | 12.8 | 30.5 |
| | 2015 | 80.2 | 8.9 | 4.2 | 6.6 | 2015 | 37.6 | 15.8 | 10.2 | 36.4 |
| | 2016 | 74.6 | 13.5 | 6.5 | 5.4 | 2016 | 43.8 | 16.5 | 13.7 | 25.9 |
| | 2017 | 78 | 14.1 | 4.8 | 3 | 2017 | 43.2 | 16.3 | 13.6 | 27 |
| | 2018 | 77.5 | 13 | 5.7 | 3.8 | 2018 | 51.7 | 18.2 | 12.9 | 17.1 |
| | 2019 | 78.2 | 14.8 | 4.6 | 2.4 | 2019 | 55.6 | 18.3 | 9.8 | 16.3 |
| | 2020 | 78.7 | 11.9 | 5.3 | 4.2 | 2020 | 52.1 | 19.7 | 11.9 | 16.3 |
| | 2021 | 82.5 | 9.9 | 3.9 | 3.8 | 2021 | 44.9 | 19.2 | 15.4 | 20.5 |
| Long Line | Pre-IFQ | 88.1 | 9.8 | 1.6 | 0.5 | Pre-IFQ | 13.4 | 13.3 | 19.5 | 53.7 |
| | 2010 | 97.1 | 2.6 | 0.3 | 0 | 2010 | 10.5 | 8.2 | 17.5 | 63.7 |
| | 2011 | 99.4 | 0.6 | 0 | 0 | 2011 | 5.2 | 7.4 | 11 | 76.4 |
| | 2012 | 98.8 | 1.2 | 0 | 0 | 2012 | 6.7 | 8.9 | 14.4 | 70.1 |
| | 2013 | 97.9 | 2.1 | 0 | 0 | 2013 | 6 | 7.5 | 18.3 | 68.1 |
| | 2014 | 97.3 | 2.7 | 0 | 0 | 2014 | 7.9 | 6.8 | 15.4 | 69.9 |
| | 2015 | 93.6 | 6.4 | 0 | 0 | 2015 | 8.8 | 14.7 | 17.7 | 58.8 |
| | 2016 | 89.7 | 9.5 | 0.8 | 0 | 2016 | 7.4 | 10.7 | 23.9 | 58 |
| | 2017 | 96.9 | 3.1 | 0 | 0 | 2017 | 10.8 | 9.7 | 25.9 | 53.6 |
| | 2018 | 95.2 | 4.6 | 0.2 | 0 | 2018 | 13.1 | 18.5 | 22.2 | 46.2 |
| | 2019 | 93.8 | 5.4 | 0.9 | 0 | 2019 | 17.4 | 20.9 | 25.2 | 36.4 |
| | 2020 | 92.3 | 7.7 | 0 | 0 | 2020 | 13.8 | 21.1 | 22.5 | 42.5 |
| | 2021 | 94.1 | 5.5 | 0.4 | 0 | 2021 | 13.9 | 18.6 | 26.8 | 40.7 |

Data from the SEFSC Coastal Logbook records were available as of 9/13/2022 and may not contain complete 2021 data. Pre-IFQ data are the average from 2007-2009.

¹ Vertical line includes spearfishing, buoy, and other gear types.

Discards

Data from the SEFSC reef fish observer program (RFOP) were used to evaluate changes in GT-IFQ species discards. Data were used from only those trips selected as part of the normal observer selection process; therefore, no special project trips were included. Data from the RFOP were categorized by gear: longline (LL) and vertical line (VL; primarily hand lines and bandit reels, but also includes buoy and spearfishing effort). The number of RFOP trips sampled has been variable over time and generally has been decreasing in number in the more recent years of the program compared to the initial years (Table 23). A larger percentage of RFOP coverage shifted towards vessels using LL gear beginning in 2009 and coverage levels have fluctuated between gear every year since. Insufficient data were available to include 2020 in this report due to the pandemic, but sample sizes improved in 2021.

RFOP observers record disposition status as: landed/kept, discarded alive, discarded dead, and unknown. These disposition statuses were used to calculate discard ratios by gear and region. The discard ratio is the number of discarded fish for each fish landed. Values greater than one indicated that more fish are being discarded than kept. Discard ratios may be influenced by the amount of allocation available to the observed vessels.

IFQ species may be discarded due to the lack of allocation or fish that are below the minimum size limit. Five species in the GT-IFQ program have minimum size limits: gag, red grouper, black grouper, scamp, and yellowfin grouper. Due to limited sample sizes, this report concentrates on only gag and red grouper discards through the RFOP. From 2007 through 2011, the minimum size limit for gag was 24 inches total length (TL). Starting in 2012, the minimum size limit was reduced to 22 inches TL, but was increased to 24 inches TL again in 2018 ([Appendix 3.1](#)). In 2009 and prior to the start of the GT-IFQ program, the red grouper minimum size limit changed from 20 inches TL to 18 inches TL ([Appendix 3.2](#)).

Gag and red grouper were caught on the 35% or more of the trips sampled by the RFOP observers each year. Typically, a higher number of observed trips occurred on vessels fishing with VL gear rather than LL gear. Gag and red grouper were observed on 60% or more of the LL gear trips, and between 34%-74% of VL gear trips.

Table 23: Reef fish observer trips¹

| Year | All trips | | | | | LL trips | | | VL trips ² | | |
|------|-----------|-----|------|-----|------|----------|----|----|-----------------------|-----|-----|
| | All | GG | % GG | RG | % RG | All | GG | RG | All | GG | RG |
| 2007 | 111 | 68 | 61% | 73 | 66% | 11 | 8 | 9 | 100 | 60 | 64 |
| 2008 | 62 | 37 | 60% | 38 | 61% | 5 | 1 | 2 | 57 | 36 | 36 |
| 2009 | 83 | 52 | 63% | 58 | 70% | 33 | 24 | 22 | 50 | 28 | 36 |
| 2010 | 136 | 84 | 62% | 99 | 73% | 55 | 41 | 39 | 81 | 43 | 60 |
| 2011 | 194 | 144 | 74% | 153 | 79% | 81 | 71 | 72 | 113 | 73 | 81 |
| 2012 | 280 | 186 | 66% | 204 | 73% | 19 | 16 | 15 | 261 | 170 | 189 |
| 2013 | 220 | 140 | 64% | 158 | 72% | 83 | 68 | 70 | 137 | 72 | 88 |
| 2014 | 147 | 79 | 54% | 94 | 64% | 28 | 22 | 21 | 119 | 57 | 73 |
| 2015 | 241 | 127 | 53% | 146 | 61% | 26 | 22 | 21 | 215 | 105 | 125 |
| 2016 | 212 | 125 | 59% | 127 | 60% | 56 | 45 | 43 | 156 | 80 | 84 |
| 2017 | 85 | 35 | 41% | 47 | 55% | 14 | 11 | 11 | 71 | 24 | 36 |
| 2018 | 45 | 24 | 53% | 23 | 51% | 4 | 3 | 4 | 41 | 21 | 19 |
| 2019 | 36 | 16 | 44% | 17 | 47% | 5 | 5 | 4 | 31 | 11 | 13 |
| 2020 | 26 | 9 | 35% | 10 | 38% | NA | NA | NA | NA | NA | NA |
| 2021 | 52 | 27 | 52% | 28 | 54% | 10 | 8 | 6 | 42 | 19 | 22 |

¹ Data source: SEFSC Reef Fish Observer Program, accessed 5/27/2022

² Vertical line includes buoy and spearfishing trips

Note: Insufficient data were available to include 2020 due to the pandemic.

Both gag and red grouper discard rates were low, and often were less than one fish discarded per one landed fish for harvest under both VL and LL gear (Table 24). Gag discard rates during IFQ years were greatest early in the program, which coincided with the DWH oil spill event (2010) and decreased gag quota (2011). Gag discard rates since 2012 remained at less than one fish discarded per every fish caught, regardless of harvest gear. Discard rates for red grouper were low, near or under one fish discarded per landed fish, from 2010 through 2016, regardless of gear. Trips using LL gear had an increased discard rate in recent years. This is possibly influenced by the low sample size during these years.

Table 24: Discard ratio (number discarded to landed fish) of vertical line and longline gear

| Gag | VL | LL | Red grouper | VL | LL |
|------------|-----------|-------------------|--------------------|-----------|-----------|
| 2007 | 0.63 | 0.03 | 2007 | 0.75 | 1.45 |
| 2008 | 0.34 | 0.00 ² | 2008 | 0.81 | 1.17 |
| 2009 | 1.45 | 0.08 | 2009 | 0.83 | 1.15 |
| 2010 | 1.45 | 0.04 | 2010 | 0.93 | 1.18 |
| 2011 | 1.13 | 2.16 | 2011 | 0.64 | 0.89 |
| 2012 | 0.47 | 0.44 | 2012 | 0.44 | 0.88 |
| 2013 | 0.23 | 0.52 | 2013 | 0.42 | 0.50 |
| 2014 | 0.15 | 0.05 | 2014 | 0.25 | 0.55 |
| 2015 | 0.16 | 0.01 | 2015 | 0.41 | 0.52 |
| 2016 | 0.17 | 0.04 | 2016 | 0.54 | 0.51 |
| 2017 | 0.19 | 0.04 | 2017 | 0.57 | 1.11 |
| 2018 | 0.34 | 0.01 | 2018 | 1.29 | 1.19 |
| 2019 | 0.55 | 0.13 | 2019 | 0.8 | 1.62 |
| 2020 | NA | NA | 2020 | NA | NA |
| 2021 | 0.45 | 0.07 | 2021 | 0.43 | 0.64 |

¹ Data from the Reef Fish Observer Program accessed are as of 5/27/2022. Pre-IFQ data are 2007-2009.

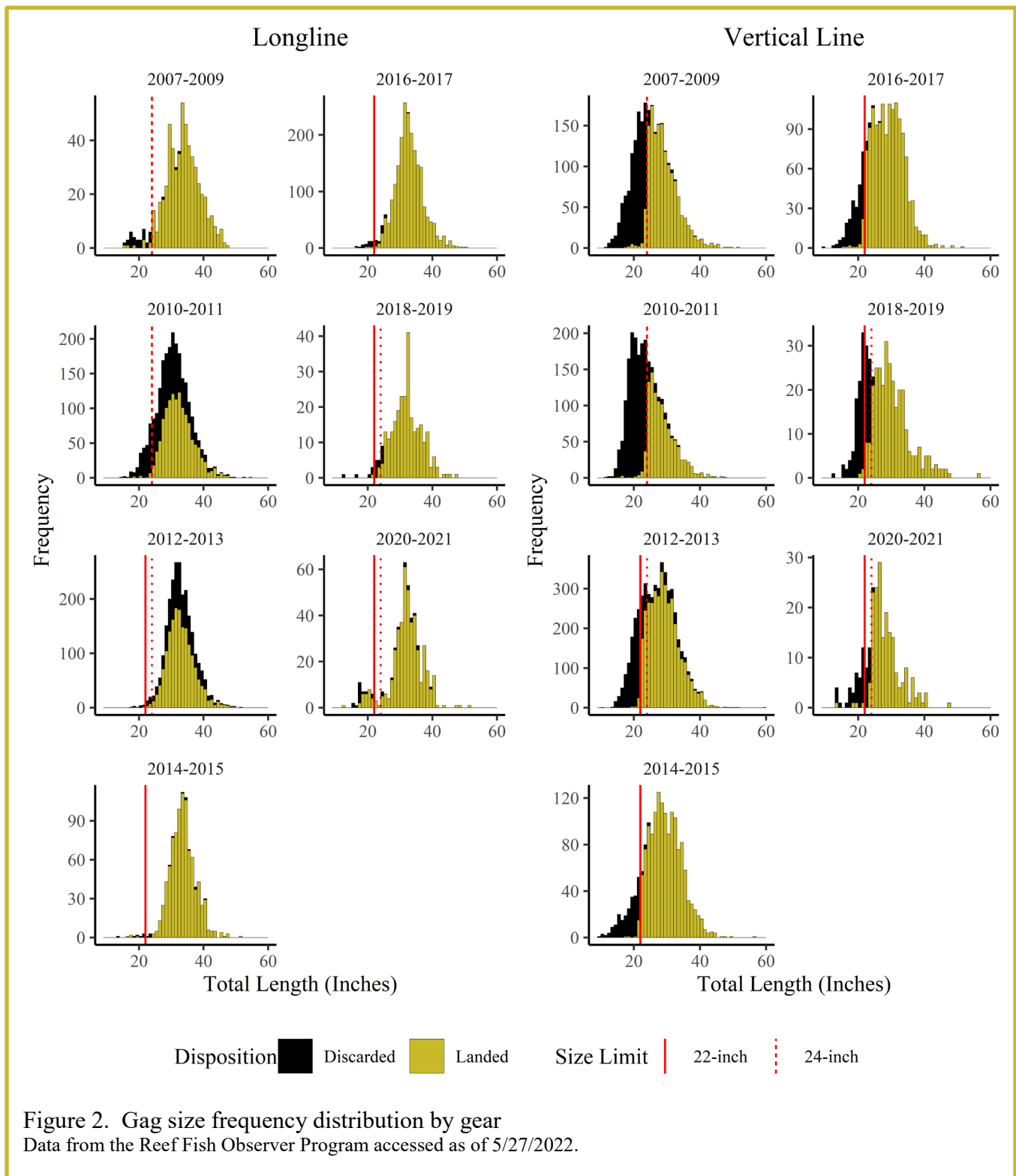
² Indicates that all fish were landed and no fish were discarded.

Note: Insufficient data were available to include 2020 due to the pandemic.

Discarded fish were analyzed by length (Figure 2 and 3). Landed to discarded length distributions of gag and red grouper further compare gear differences (Figures 2 and 3). Length information obtained by the RFOP was converted to maximum TL using conversion factors found in SEDAR 33 and SEDAR 42. Length frequencies were calculated by year and gear and aggregated every two years into one inch bins (e.g., if $1 \leq \text{length} < 2$ then length = 1) for each disposition of discarded or landed. VL vessels target gag in the 22-30 inch TL size bins and red grouper in the 18-24 inch TL size bin. For VL gear, few gag or red grouper were discarded above the minimum size limit except for 2011-2012 for gag. Discards in these years are most likely due to low or no allocation available to the vessel, because the quota was considerably lower in those years than other years (Table 13). In most recent years, few VL discards of gag were observed, most likely related to the gag minimum size being reduced in 2012 and the increases in quotas. There was a slight increase in VL discards of red grouper associated with an increase in undersized red grouper seen in 2017 (SEDAR 61).

LL trips typically capture larger gag in the 30-36 inch TL size bins and red grouper in the 18-20 inch TL size bins. Few fish are discarded above the size limit for LL gear, except for gag in 2011 through 2013, which was probably due to a lack of allocation from the decreased quotas. Due to the gear type and

location fished, LL gear does not often encounter gag below the size limit. Discards for gag are most likely related to available allocation. There was an increase in the LL discards of red grouper in 2017-2019, which is possibly due to the increase in undersized red grouper caught by the gear.



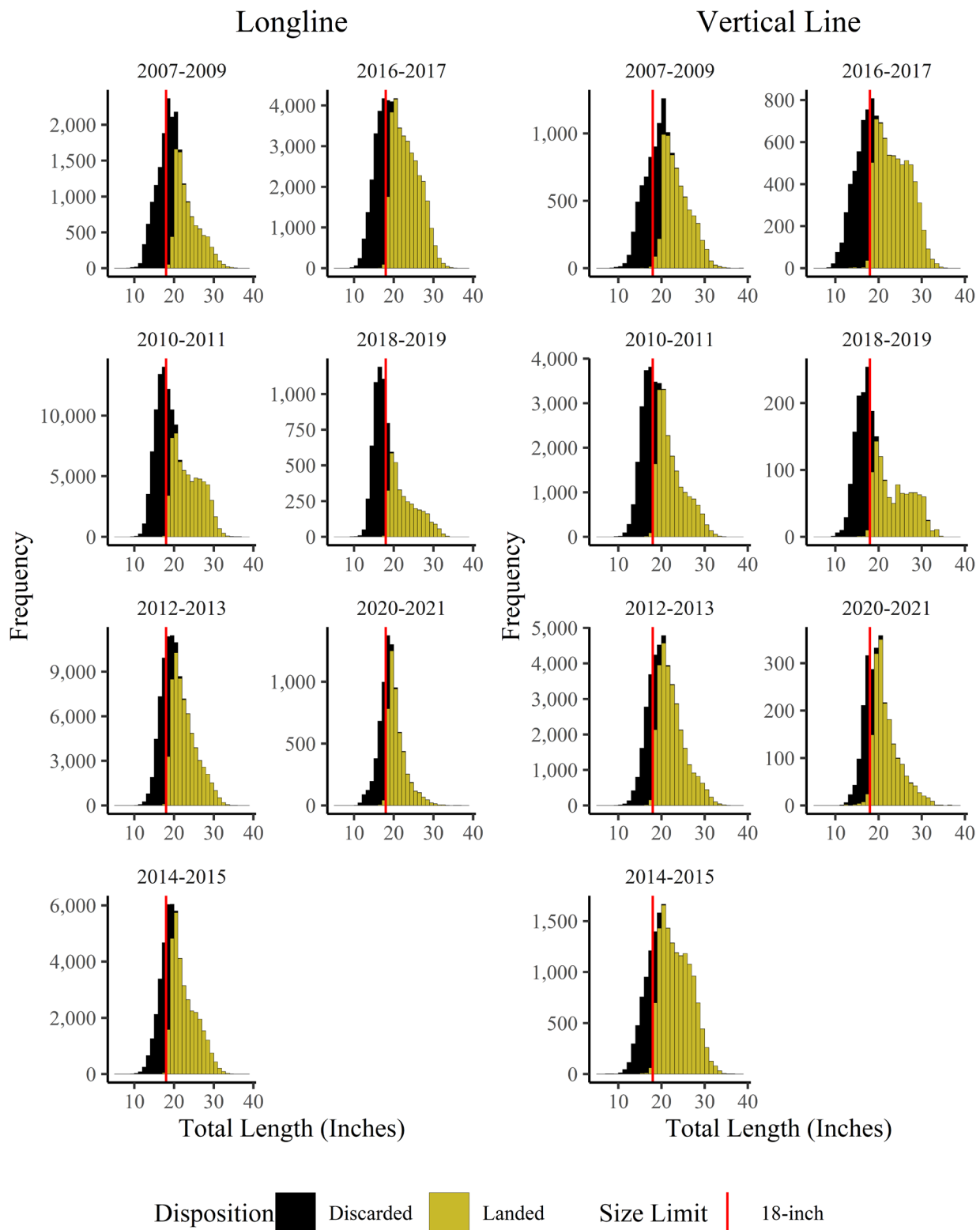


Figure 3. Red grouper size frequency distribution by gear
Data from the Reef Fish Observer Program accessed as of 5/27/2022.

The RFOP determines immediate discard mortality through surface observations of individual fish after discard. Some fish were recorded with an unknown discarded disposition due to the difficulty in observing discards attributed to poor lighting, high seas, or other factors. Short-term survival was assumed if the fish rapidly or slowly was able to descend and immediate mortality was classified when the fish floated on the surface or floated on the surface then slowly descended (not swimming). Individual fish recorded as dead upon arrival were included in the analyses since the goal was to examine total discard mortality. The immediate mortality percentage was determined using the number discarded dead out of those released as either alive or dead. Confidence intervals were calculated using the score interval with continuity correction. Interpretation of the immediate discard mortality should be taken with caution, as it is based on a small sample size and may not be indicative of the fishery as a whole.

In general, LL gear had higher mortality rates compared to VL for both gag and red grouper (Table 25; Figure 4). Immediate discard mortalities rates were between 3-71% for LL and between 1-19% for VL. Red grouper discard mortalities rates are typically greater than gag discard mortalities. Confidence intervals for gag caught on LL gear are considerably greater than gag on VL or red grouper on either VL or LL, and therefore some caution should be taken when interpreting these values. Additionally, many of these differences in discard mortality observed are likely to be confounded by other factors such as depth of capture, gear type, and sample size.

Table 25: Immediate discard mortality percent by gear

| Gag | VL | LL | Red grouper | VL | LL |
|------------|-----------|-----------|--------------------|-----------|-----------|
| Pre-IFQ | 1% | 21% | Pre-IFQ | 10% | 25% |
| 2010 | 1% | 26% | 2010 | 17% | 33% |
| 2011 | 2% | 11% | 2011 | 13% | 24% |
| 2012 | 4% | 19% | 2012 | 14% | 21% |
| 2013 | 3% | 34% | 2013 | 12% | 31% |
| 2014 | 3% | 25% | 2014 | 15% | 32% |
| 2015 | 7% | 71% | 2015 | 13% | 30% |
| 2016 | 11% | 27% | 2016 | 16% | 33% |
| 2017 | 9% | 50% | 2017 | 18% | 29% |
| 2018 | 8% | 50% | 2018 | 12% | 26% |
| 2019 | 8% | 35% | 2019 | 13% | 17% |
| 2020 | NA | NA | 2020 | NA | NA |
| 2021 | 0% | 3% | 2021 | 19% | 19% |

¹ Data from the Reef Fish Observer Program accessed as of 5/27/2022. Pre-IFQ data are 2007-2009.

Note: Insufficient data were available to include 2020 due to the pandemic.

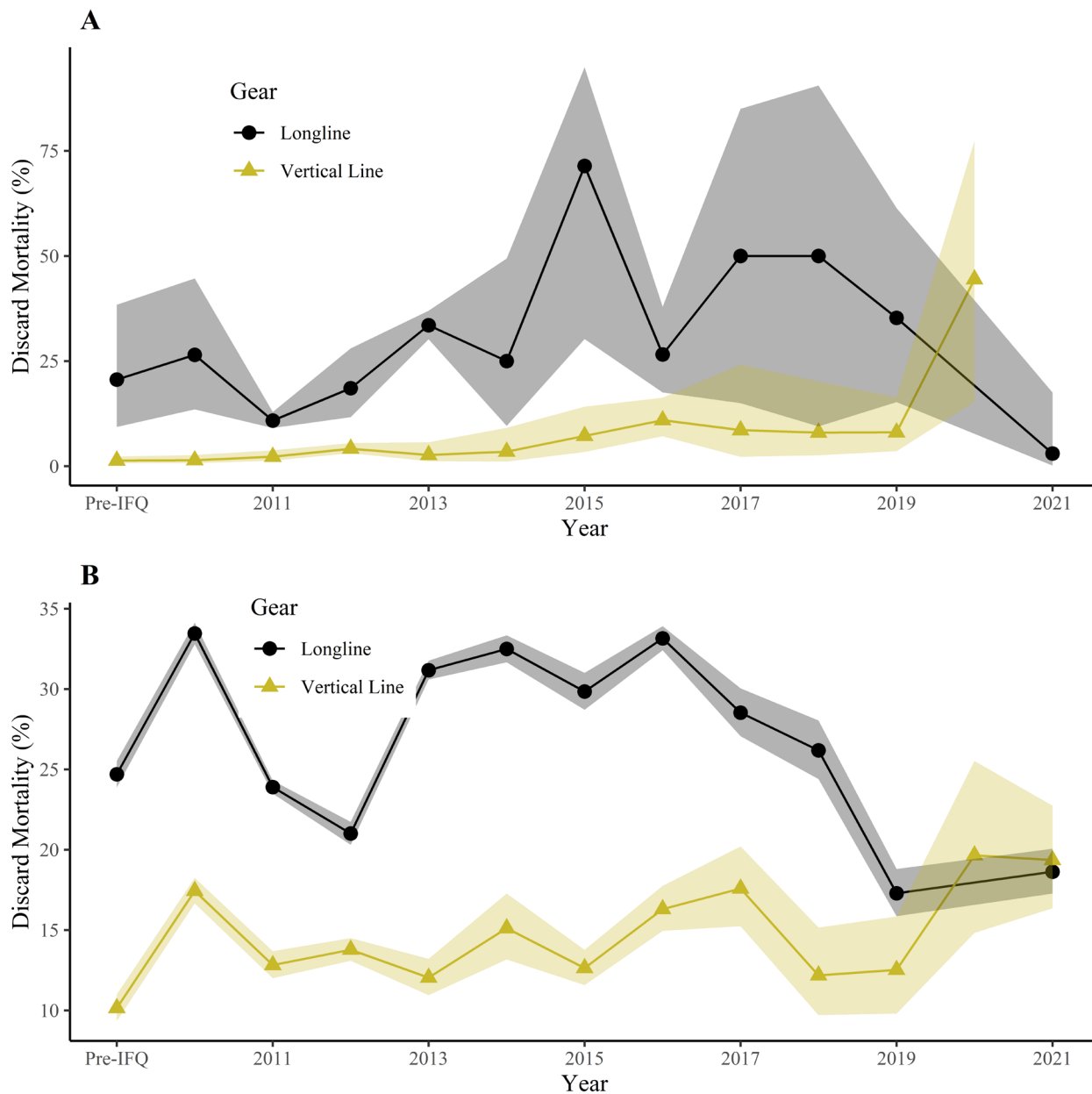


Figure 4. Immediate discard mortality by gear for gag (A) and red grouper (B)
Data from the Reef Fish Observer Program accessed as of 5/27/2022.

Price Information

Share, allocation, and ex-vessel price information is important for evaluating the performance of catch share programs. Economic theory suggests that when fishermen no longer have to engage in a “race for fish,” their profits will likely increase as they adjust their operations to take advantage of weather and market conditions. The elimination of “derby” fishing is expected to increase market stability. As more efficient and profitable operators are willing to pay higher prices to purchase shares and allocation, share and allocation prices increase, which may result in increased profits. Theoretically, allocation

prices should reflect the expected annual profit from harvesting one unit of quota, whereas, share prices should reflect the net present value of the expected profit from harvesting one unit of quota in the long-run. Dockside or ex-vessel prices are anticipated to increase as well as fishermen no longer have to race to fish, which in turn should reduce market gluts and generate higher quality products. All inflation-adjusted values in the analysis below were calculated based on the Gross Domestic Product (GDP) deflator.⁷ The GDP deflator was chosen as the measure of inflation because it includes prices for all domestically produced goods and services and so is broader than other indexes.

Share Transfer Prices

Reporting of share transfer value was not required until mid-2010, when a minimum transfer value of \$0.01 was required for all share transfers. Each year, there are share transactions that have either under-reported or missing share transfer value information. Submitted share transfer values were converted to a share price per equivalent pound⁸ based on the quota at the time of transfer. Transactions that reported low or no value could be due to, but not limited to, any of the following: entering a price per pound equivalent instead of transaction price, reluctance to enter price information, gifts, transferring to a related accounts, part of a package deal (e.g., sale of shares with a permit, vessel, and/or other equipment), and/or unrecorded bartering of shares within the GT-IFQ or RS-IFQ programs. This misreporting of value led to a 2012-2013 mail survey to participants about share value and prices. The survey was mailed to both the transferor and transferee for all past transfers where information was incomplete or identified as an outlier value. Participants were asked to verify or correct the value and price information and select one of seven share transfer reasons: “Barter trade for allocation,” “Barter trade for shares,” “Gift,” “Transfer to a related account,” “Sale to another shareholder,” “Package deal,” and “No comment.” Beginning in 2013, a submission of one of these share transfer reasons was required to complete every share transfer to better monitor the performance of the program.

The majority of share transfers have either “Sale to another shareholder” or “No comment” selected as the transfer reason ([Appendix 6](#)). By volume, the most listed reasons were “Sale to another shareholder,” “Transfer to a related account,” and “No comment.” By transfers, “Sale to another shareholder” and “No comment” are the most often selected reasons. Discussion at the Council’s Advisory Panels indicate that transfers to related accounts may be interpreted differently by participants. The intent was to identify transfers between accounts with a similar entity, but industry also interpreted related accounts to include business relationships.

For share price analysis, the data were limited to share transfers with representative price per pound equivalents ([Appendix 7](#)). Confusion between the price and value can still be found in the data, with participants entering the price per pound instead of the total value in the system. For example, a share transfer equivalent to 33 lb of DWG with a total value of \$13 was entered, resulting in a price per pound

⁷ <http://www.bea.gov/national/index.htm#gdp>

⁸ A price per pound equivalent is the share percentage that would equal one pound for that particular period. The exact share percentage that is equivalent to one pound depends on the total commercial quota and will change as the quota changes from year to year or within a year for any quota increases.

less than a dollar. The value of \$13 is most likely the price per pound and not the total value. Adjustments were made to the analyzed dataset to account for these types of errors. Adjustments were made to the analyzed dataset to account for this type of error. This error type was more often found in the early years of the program. From 2013 onward, the system started collecting price data from the transferee of the share transfer in addition to the transferor, and sometimes these prices did not match. When the prices differed between the transferor and transferee, a final price was determined based on the more representative transfer value entered. For example, if the transferor enters \$13 for a DWG share transfers equivalent to 33 lb and the transferee enters \$429 for the same transfer, the \$429 is the value used in analysis, as it is assumed that the \$13 was a price per pound instead of total value. All values were weighted by the pounds instead of on a transactional basis.

Submission of representative share prices has been improving in recent years, but continues to remain a problem (Table 26). Since 2013, representative share prices have been between 55-75% of all submitted prices, while in earlier years they were near or under 50% of all prices submitted. The transactions that do not contain representative prices often selected “Transfer to a Related Account” and “No comment” as the transfer reason. Share prices within categories, typically followed similar patterns as the program as a whole.

Since the start of the program, the average price per equivalent pound increased for all share categories. The GG share category had the greatest variability in share price that corresponded to quota changes. In recent years (2019-2021), the average share prices have not varied much, with DWG being an exception. From 2019 to 2020, the DWG average share price increased by nearly \$5.00 to \$13.96 per equivalent pound, and then decreased in 2021 by nearly \$3.00 to \$11.14 per equivalent pound. This variability in the DWG average price is likely impact of the pandemic.

Table 26: Number of representative share transfers with prices

| DWG | N | % | Avg. | Median | Inf.-adj. avg* | GG | N | % | Avg. | Median | Inf.-adj. avg* |
|------|-----|-----|---------|---------|----------------|------|-----|-----|--|---------|----------------|
| 2010 | 53 | 33% | \$8.19 | \$9.00 | \$10.08 | 2010 | 107 | 42% | \$5.35 | \$6.00 | \$6.59 |
| 2011 | 44 | 46% | \$11.35 | \$12.02 | \$13.68 | 2011 | 47 | 34% | \$24.24 | \$25.00 | \$29.23 |
| 2012 | 34 | 44% | \$10.78 | \$12.00 | \$12.76 | 2012 | 68 | 53% | \$25.91 | \$30.00 | \$30.67 |
| 2013 | 30 | 57% | \$12.58 | \$12.00 | \$14.63 | 2013 | 52 | 59% | \$31.41 | \$30.02 | \$36.54 |
| 2014 | 38 | 61% | \$13.04 | \$13.00 | \$14.89 | 2014 | 78 | 74% | \$30.18 | \$30.02 | \$34.47 |
| 2015 | 40 | 47% | \$12.74 | \$13.00 | \$14.40 | 2015 | 94 | 61% | \$21.97 | \$22.00 | \$24.85 |
| 2016 | 37 | 66% | \$12.48 | \$12.75 | \$13.97 | 2016 | 55 | 65% | \$14.29 | \$15.00 | \$16.00 |
| 2017 | 23 | 74% | \$12.63 | \$12.80 | \$13.88 | 2017 | 42 | 63% | \$15.88 | \$16.00 | \$17.45 |
| 2018 | 15 | 44% | \$10.92 | \$13.25 | \$11.72 | 2018 | 39 | 62% | \$9.78 | \$10.00 | \$10.49 |
| 2019 | 25 | 74% | \$9.14 | \$7.49 | \$9.63 | 2019 | 50 | 71% | \$9.55 | \$10.00 | \$10.07 |
| 2020 | 15 | 54% | \$13.96 | \$12.00 | \$14.54 | 2020 | 37 | 63% | \$8.82 | \$7.00 | \$9.19 |
| 2021 | 11 | 61% | \$11.14 | \$10.05 | \$11.14 | 2021 | 38 | 74% | \$8.19 | \$8.00 | \$8.19 |
| RG | N | % | Avg. | Median | Inf.-adj. avg* | SWG | N | % | Avg. | Median | Inf.-adj. avg* |
| 2010 | 111 | 42% | \$3.73 | \$3.30 | \$4.59 | 2010 | 76 | 39% | \$6.91 | \$6.49 | \$8.51 |
| 2011 | 76 | 45% | \$6.24 | \$5.97 | \$7.52 | 2011 | 42 | 40% | \$9.93 | \$11.99 | \$11.97 |
| 2012 | 124 | 61% | \$8.02 | \$8.00 | \$9.49 | 2012 | 41 | 42% | \$7.80 | \$7.99 | \$9.23 |
| 2013 | 106 | 73% | \$13.16 | \$13.70 | \$15.31 | 2013 | 49 | 60% | \$8.30 | \$7.25 | \$9.66 |
| 2014 | 107 | 74% | \$13.06 | \$13.00 | \$14.91 | 2014 | 33 | 52% | \$7.36 | \$7.50 | \$8.40 |
| 2015 | 150 | 70% | \$12.86 | \$13.00 | \$14.54 | 2015 | 62 | 64% | \$6.74 | \$6.00 | \$7.62 |
| 2016 | 81 | 69% | \$10.11 | \$10.00 | \$11.32 | 2016 | 26 | 46% | \$5.84 | \$5.97 | \$6.54 |
| 2017 | 90 | 77% | \$5.17 | \$5.00 | \$5.68 | 2017 | 25 | 56% | \$8.69 | \$11.00 | \$9.55 |
| 2018 | 53 | 63% | \$4.10 | \$4.20 | \$4.40 | 2018 | 27 | 49% | \$4.87 | \$4.50 | \$5.23 |
| 2019 | 50 | 75% | \$5.69 | \$5.75 | \$6.00 | 2019 | 42 | 78% | \$5.62 | \$5.50 | \$5.92 |
| 2020 | 47 | 71% | \$6.17 | \$6.00 | \$6.43 | 2020 | 28 | 55% | \$5.08 | \$5.00 | \$5.29 |
| 2021 | 35 | 75% | \$6.40 | \$4.58 | \$6.40 | 2021 | 31 | 72% | \$5.62 | \$5.50 | \$5.62 |
| TF | N | % | Avg. | Median | Inf.-adj. avg* | ALL | N | % | *Inflation adjustments from: http://www.bea.gov/ with 2021 as the base year using the GDP deflator. Note: N indicates the number of share transfers that provided representative share transfer prices. | | |
| 2010 | 38 | 42% | \$3.11 | \$2.15 | \$3.83 | 2010 | 385 | 40% | | | |
| 2011 | 24 | 41% | \$5.77 | \$5.14 | \$6.96 | 2011 | 233 | 41% | | | |
| 2012 | 14 | 32% | \$8.22 | \$9.00 | \$9.73 | 2012 | 281 | 51% | | | |
| 2013 | 13 | 45% | \$8.44 | \$8.00 | \$9.82 | 2013 | 250 | 63% | | | |
| 2014 | 17 | 50% | \$8.75 | \$8.50 | \$9.99 | 2014 | 273 | 67% | | | |
| 2015 | 33 | 58% | \$9.18 | \$9.00 | \$10.38 | 2015 | 379 | 63% | | | |
| 2016 | 21 | 62% | \$10.02 | \$10.00 | \$11.22 | 2016 | 220 | 63% | | | |
| 2017 | 16 | 67% | \$8.70 | \$9.00 | \$9.56 | 2017 | 196 | 69% | | | |
| 2018 | 6 | 30% | \$10.70 | \$10.25 | \$11.48 | 2018 | 140 | 55% | | | |
| 2019 | 11 | 79% | \$9.50 | \$8.88 | \$10.01 | 2019 | 178 | 74% | | | |
| 2020 | 12 | 52% | \$8.48 | \$9.00 | \$8.83 | 2020 | 139 | 61% | | | |
| 2021 | 7 | 58% | \$9.18 | \$9.50 | \$9.18 | 2021 | 122 | 71% | | | |

Allocation Transfer Prices

Allocation transfer prices are collected on a per pound basis, but were not required to complete a transfer until late 2020. Each year, allocation transfers were either missing price information or have under-reported price information (e.g., \$0.01/lb). Transfers that had low or no price information may be due to, but not limited to, any of the following: reluctance to enter price information, gift, transferring to a related account, part of package deal, or bartering for shares and/or allocation. To better evaluate the program's performance, the selection of one of seven allocation transfer reasons was required for every allocation transfer beginning in 2013. Allocation transfer reasons that could be selected were "Barter

trade for allocation,” “Barter trade for shares,” “Gift,” “Transfer to a related account,” “Sale to another shareholder,” “Package Deal,” and “No comment” ([Appendix 8](#)).

Fifty-two percent or more of the allocation transactions each year had no or under-reported allocation prices (e.g., \$0.01/lb). Since the implementation of requiring a transfer price with every allocation transfer in 2020, however, there has been an improvement in the percent of representative prices reported. In 2021, only 26% of allocation transfers had an under-reported price. The majority of allocation transfers had “No comment” selected as the allocation transfer reason, followed by “Sale to another shareholder” and “Transfer to a related account” ([Appendix 8](#)). While not all transfers are of equal quantities, a similar pattern occurred looking at the total amount of allocation transferred.

For the allocation price analysis, data were limited to representative prices ([Appendix 7](#)). Unadjusted inflation prices were used when determining outlier price values each year, whereas inflation-adjusted average values are compared across time. As the pounds per allocation transfer are variable, all statistics were computed by using a weighted pounds model and not on a transactional basis.

In the early years of the program, representative prices were between 14% and 51% of all submitted prices. There was some improvement between 2014 and 2020 thanks to outreach efforts, with 42% to 51% of reported allocation prices being representative (Table 27). The implementation of requiring allocation prices with each transfer in late 2020 further improved the percentage of representative prices reported to between 56% and 75% across all share categories. There is still a need to improve reported allocation prices. A large majority of the transactions that did not contain representative prices listed “No comment” as the transfer reason, again indicating a reluctance to submit accurate price information.

Inflation adjusted average allocation prices have decreased over time for all share categories (Table 27), with the greatest differences occurring in GG (\$1.95/lb), SWG (\$0.88/lb), and RG (\$0.83/lb). Average allocation prices might be influenced by quotas and the availability of multi-use allocation. The median, the middle value in a distribution, generally has been slightly greater than the average value for DWG, similar for TF and RG, and lesser for GG and SWG. When median values are greater than average values, this indicates that there are more values on the lower end of the distribution. These lower values may be due to fluctuations in allocation price across regions or during the year ([Appendix 9](#)).

Table 27: Number of representative allocation transfers and prices

| DWG | N | % | Avg. | Median | Inf.-adj. avg* | GG | N | % | Avg. | Median | Inf.-adj. avg* |
|------|-------|-----|--------|--------|-------------------|------|-------|-----|--|--------|-------------------|
| 2010 | 68 | 14% | \$1.32 | \$1.50 | \$1.62 | 2010 | 150 | 16% | \$1.18 | \$1.00 | \$1.45 |
| 2011 | 116 | 18% | \$1.36 | \$1.40 | \$1.64 | 2011 | 303 | 24% | \$1.74 | \$1.50 | \$2.10 |
| 2012 | 213 | 28% | \$1.19 | \$1.25 | \$1.41 | 2012 | 631 | 36% | \$2.27 | \$2.25 | \$2.69 |
| 2013 | 215 | 35% | \$1.14 | \$1.15 | \$1.33 | 2013 | 705 | 41% | \$2.40 | \$2.50 | \$2.79 |
| 2014 | 325 | 38% | \$1.11 | \$1.10 | \$1.27 | 2014 | 1,015 | 45% | \$2.04 | \$2.00 | \$2.33 |
| 2015 | 282 | 31% | \$1.18 | \$1.25 | \$1.33 | 2015 | 847 | 46% | \$1.90 | \$2.00 | \$2.14 |
| 2016 | 285 | 30% | \$1.16 | \$1.20 | \$1.30 | 2016 | 1017 | 47% | \$1.38 | \$1.25 | \$1.55 |
| 2017 | 250 | 32% | \$1.18 | \$1.25 | \$1.29 | 2017 | 574 | 39% | \$1.45 | \$1.50 | \$1.59 |
| 2018 | 296 | 36% | \$0.99 | \$1.00 | \$1.06 | 2018 | 439 | 49% | \$1.01 | \$1.00 | \$1.09 |
| 2019 | 403 | 39% | \$1.05 | \$1.00 | \$1.10 | 2019 | 768 | 44% | \$0.85 | \$0.80 | \$0.90 |
| 2020 | 315 | 39% | \$1.05 | \$1.00 | \$1.09 | 2020 | 869 | 45% | \$0.73 | \$0.75 | \$0.76 |
| 2021 | 532 | 56% | \$1.04 | \$1.00 | \$1.04 | 2021 | 1,641 | 61% | \$0.80 | \$0.80 | \$0.80 |
| RG | N | % | Avg. | Median | Inf.-adj. avg* | SWG | N | % | Avg. | Median | Inf.-adj. avg* |
| 2010 | 153 | 14% | \$0.92 | \$1.00 | \$1.13 | 2010 | 75 | 12% | \$1.15 | \$1.00 | \$1.41 |
| 2011 | 482 | 31% | \$0.54 | \$0.50 | \$0.65 | 2011 | 117 | 21% | \$1.25 | \$1.40 | \$1.51 |
| 2012 | 746 | 39% | \$0.79 | \$0.75 | \$0.93 | 2012 | 279 | 31% | \$1.15 | \$1.00 | \$1.36 |
| 2013 | 827 | 47% | \$0.97 | \$1.00 | \$1.13 | 2013 | 354 | 39% | \$0.83 | \$0.75 | \$0.97 |
| 2014 | 1,337 | 58% | \$0.97 | \$1.00 | \$1.11 | 2014 | 443 | 44% | \$0.73 | \$0.60 | \$0.83 |
| 2015 | 1,331 | 54% | \$1.07 | \$1.00 | \$1.21 | 2015 | 529 | 49% | \$0.60 | \$0.50 | \$0.68 |
| 2016 | 1,391 | 47% | \$0.89 | \$0.95 | \$1.00 | 2016 | 870 | 55% | \$0.56 | \$0.50 | \$0.62 |
| 2017 | 898 | 51% | \$0.42 | \$0.40 | \$0.46 | 2017 | 545 | 48% | \$0.58 | \$0.60 | \$0.63 |
| 2018 | 668 | 49% | \$0.32 | \$0.20 | \$0.34 | 2018 | 474 | 47% | \$0.53 | \$0.50 | \$0.57 |
| 2019 | 1,270 | 54% | \$0.59 | \$0.60 | \$0.62 | 2019 | 497 | 43% | \$0.59 | \$0.60 | \$0.62 |
| 2020 | 1,473 | 57% | \$0.47 | \$0.50 | \$0.49 | 2020 | 642 | 53% | \$0.57 | \$0.70 | \$0.59 |
| 2021 | 2,304 | 75% | \$0.65 | \$0.60 | \$0.65 | 2021 | 902 | 63% | \$0.59 | \$0.50 | \$0.59 |
| TF | N | % | Avg. | Median | Inf.-adj. avg* | ALL | N | % | *Inflation adjustments from: http://www.bea.gov/ with 2021 as the base year using the GDP deflator. Note: N indicates the number of allocation transfers that provided representative allocation prices. | | |
| 2010 | 35 | 13% | \$0.65 | \$0.50 | \$0.80 | 2010 | 481 | 14% | | | |
| 2011 | 62 | 19% | \$0.67 | \$0.70 | \$0.80 | 2011 | 1,080 | 25% | | | |
| 2012 | 93 | 24% | \$0.66 | \$0.65 | \$0.78 | 2012 | 1,962 | 34% | | | |
| 2013 | 88 | 30% | \$0.67 | \$0.65 | \$0.78 | 2013 | 2,188 | 41% | | | |
| 2014 | 153 | 36% | \$0.72 | \$0.75 | \$0.82 | 2014 | 3,273 | 48% | | | |
| 2015 | 186 | 37% | \$0.77 | \$0.75 | \$0.88 | 2015 | 3,175 | 47% | | | |
| 2016 | 202 | 39% | \$0.66 | \$0.75 | \$0.74 | 2016 | 3,765 | 46% | | | |
| 2017 | 171 | 36% | \$0.72 | \$0.75 | \$0.79 | 2017 | 2,438 | 43% | | | |
| 2018 | 189 | 45% | \$0.72 | \$0.75 | \$0.77 | 2018 | 2,066 | 42% | | | |
| 2019 | 368 | 55% | \$0.72 | \$0.75 | \$0.76 | 2019 | 3,306 | 47% | | | |
| 2020 | 317 | 57% | \$0.63 | \$0.75 | \$0.65 | 2020 | 3,616 | 51% | | | |
| 2021 | 465 | 67% | \$0.63 | \$0.60 | \$0.63 | 2021 | 5,844 | 66% | | | |

Ex-vessel Prices

Ex-vessel prices, the price paid to the vessel operator by a dealer per pound of fish, are required to complete a landing transaction, with a minimum value of \$0.01/lb. Ex-vessel prices may differ by region, season, and year. Ex-vessel prices may be under-reported for a variety of reasons: to minimize cost recovery fees and/or capital gains, contractual arrangements between dealers and shareholders, and deductions for transferred allocation, goods (e.g., bait, ice, fuel), and/or services (e.g., repairs, machinery

replacement). In June 2011, regulations modified the definition for ex-vessel price and explicitly prohibited the deduction of allocation, goods, and/or services when reporting the ex-vessel price. For ex-vessel price analysis, the data were limited to representative ex-vessel prices ([Appendix 7](#)). All statistics were weighted by pounds rather than on a transactional basis. All ex-vessel prices prior to the start of the program were calculated using the SEFSC Accumulated Landings System (ALS) database.⁹ After the start of the GT-IFQ program, ex-vessel prices are reported to both the ALS and GT-IFQ systems, but IFQ prices are used in this analysis.

Ex-vessel price may be influenced by the amount of quota, demand (local, Gulf-wide, or the Southeast region), landings, and local economic differences. The majority (94-100%) of ex-vessel prices submitted were representative of the industry (Table 28). After adjusting for inflation, there has been a steady increase in the ex-vessel price received per pound of fish in all share categories. Slightly lower values in 2020 were seen and are indicative of the pandemic's effect on the industry. GG typically has the greatest ex-vessel prices compared to the other categories, and TF consistently has the lowest ex-vessel prices. Median ex-vessel prices are typically slightly lower than average values in all share categories.

⁹ SEFSC Accumulated Landings System accessed on 3/29/2022.

Table 28: Number of ex-vessel transactions and prices

| DWG | N | % | Avg. | Median | Inf.-adj. avg* | GG | N | % | Avg. | Median | Inf.-adj. avg* |
|------|-------|------|--------|--------|-------------------|--|-------|-----|--------|--------|-------------------|
| 2010 | 1,529 | 94% | \$3.61 | \$3.70 | \$4.44 | 2010 | 3,226 | 99% | \$4.27 | \$4.25 | \$5.26 |
| 2011 | 1,961 | 96% | \$3.80 | \$3.75 | \$4.58 | 2011 | 2,811 | 98% | \$4.59 | \$4.75 | \$5.53 |
| 2012 | 2,450 | 96% | \$4.06 | \$4.00 | \$4.81 | 2012 | 3,562 | 98% | \$4.69 | \$4.75 | \$5.55 |
| 2013 | 2,006 | 97% | \$4.30 | \$4.50 | \$5.00 | 2013 | 3,509 | 99% | \$4.90 | \$5.00 | \$5.70 |
| 2014 | 2,090 | 97% | \$4.44 | \$4.50 | \$5.07 | 2014 | 3,940 | 98% | \$4.83 | \$5.00 | \$5.52 |
| 2015 | 1,762 | 97% | \$4.62 | \$4.95 | \$5.22 | 2015 | 3,179 | 97% | \$5.07 | \$5.25 | \$5.73 |
| 2016 | 1,825 | 97% | \$4.62 | \$4.95 | \$5.17 | 2016 | 3,505 | 98% | \$5.13 | \$5.25 | \$5.74 |
| 2017 | 1,601 | 97% | \$4.73 | \$4.85 | \$5.20 | 2017 | 2,914 | 99% | \$5.25 | \$5.25 | \$5.77 |
| 2018 | 1,494 | 99% | \$5.08 | \$5.25 | \$5.45 | 2018 | 2,746 | 99% | \$5.66 | \$5.75 | \$6.07 |
| 2019 | 1,659 | 98% | \$5.61 | \$5.80 | \$5.91 | 2019 | 2,678 | 99% | \$6.04 | \$6.25 | \$6.37 |
| 2020 | 1,370 | 97% | \$5.26 | \$5.25 | \$5.48 | 2020 | 2,655 | 98% | \$5.89 | \$6.00 | \$6.13 |
| 2021 | 1,400 | 97% | \$5.69 | \$5.60 | \$5.69 | 2021 | 2,946 | 99% | \$6.18 | \$6.20 | \$6.18 |
| RG | N | % | Avg. | Median | Inf.-adj. avg* | SWG | N | % | Avg. | Median | Inf.-adj. avg* |
| 2010 | 3,803 | 99% | \$3.05 | \$3.00 | \$3.75 | 2010 | 2,282 | 98% | \$4.06 | \$4.10 | \$5.00 |
| 2011 | 4,563 | 99% | \$3.15 | \$3.24 | \$3.80 | 2011 | 2,782 | 97% | \$4.14 | \$4.00 | \$4.99 |
| 2012 | 4,587 | 99% | \$3.21 | \$3.25 | \$3.80 | 2012 | 3,273 | 97% | \$4.33 | \$4.25 | \$5.13 |
| 2013 | 4,383 | 100% | \$3.54 | \$3.55 | \$4.12 | 2013 | 2,954 | 98% | \$4.48 | \$4.50 | \$5.21 |
| 2014 | 4,891 | 99% | \$3.77 | \$3.80 | \$4.31 | 2014 | 3,188 | 98% | \$4.50 | \$4.50 | \$5.14 |
| 2015 | 5,009 | 98% | \$3.94 | \$4.00 | \$4.45 | 2015 | 3,046 | 96% | \$4.61 | \$4.50 | \$5.21 |
| 2016 | 5,123 | 98% | \$4.01 | \$4.05 | \$4.49 | 2016 | 3,413 | 98% | \$4.63 | \$4.50 | \$5.18 |
| 2017 | 4,455 | 99% | \$4.27 | \$4.25 | \$4.69 | 2017 | 2,849 | 98% | \$4.76 | \$5.00 | \$5.23 |
| 2018 | 3,983 | 99% | \$4.75 | \$4.79 | \$5.10 | 2018 | 2,769 | 99% | \$5.21 | \$5.25 | \$5.59 |
| 2019 | 3,985 | 99% | \$5.31 | \$5.40 | \$5.60 | 2019 | 2,468 | 98% | \$5.56 | \$5.50 | \$5.86 |
| 2020 | 3,639 | 97% | \$5.09 | \$5.00 | \$5.29 | 2020 | 2,323 | 97% | \$5.53 | \$5.55 | \$5.76 |
| 2021 | 3,658 | 97% | \$5.23 | \$5.25 | \$5.23 | 2021 | 2,358 | 98% | \$5.92 | \$6.00 | \$5.92 |
| TF | N | % | Avg. | Median | Inf.-adj. avg | *Inflation adjustments from: http://www.bea.gov/ with 2021 as the base year using the GDP deflator. Note: N indicates the number of ex-vessel transactions and prices are based on the category under which a species was landed. Under flexibility measures, when a species is landed under its secondary category, the price is captured for that category (e.g., red grouper landed under gag multi is counted in the GG price per pound). | | | | | |
| 2010 | 357 | 100% | \$2.07 | \$2.11 | \$2.55 | | | | | | |
| 2011 | 411 | 100% | \$2.31 | \$2.40 | \$2.79 | | | | | | |
| 2012 | 529 | 99% | \$2.27 | \$2.25 | \$2.69 | | | | | | |
| 2013 | 447 | 98% | \$2.58 | \$2.75 | \$3.00 | | | | | | |
| 2014 | 512 | 94% | \$2.61 | \$2.80 | \$2.98 | | | | | | |
| 2015 | 531 | 97% | \$2.90 | \$3.00 | \$3.28 | | | | | | |
| 2016 | 470 | 99% | \$2.94 | \$3.15 | \$3.29 | | | | | | |
| 2017 | 492 | 99% | \$2.97 | \$3.20 | \$3.26 | | | | | | |
| 2018 | 477 | 99% | \$2.82 | \$3.00 | \$3.03 | | | | | | |
| 2019 | 638 | 100% | \$2.88 | \$3.00 | \$3.04 | | | | | | |
| 2020 | 636 | 99% | \$2.79 | \$3.00 | \$2.91 | | | | | | |
| 2021 | 792 | 100% | \$3.09 | \$3.15 | \$3.09 | | | | | | |

Ex-vessel prices evaluated at the species level may reveal which species are driving the average ex-vessel prices for multi-species share categories. Red grouper and gag species prices will differ slightly from the RG and GG share categories, as the share categories are based on the allocation used to harvest and the species are based on specimen caught, regardless of allocation used to harvest the species. Similar to the ex-vessel prices seen by share category, species ex-vessel prices have increased over time for most species, with the exception of 2020 values. The ex-vessel prices in 2020 were most likely influenced by the pandemic and dropped for nearly all species compared to the previous year. Within the DWG category, yellowedge grouper always had the greatest ex-vessel price, and can be as much as a \$1.00/lb or more greater than warsaw grouper, which typically had the lowest DWG ex-vessel price

(Table 29). Within the SWG category, black grouper generally had the greatest ex-vessel prices, while yellowfin grouper generally had the lowest ex-vessel prices. Yellowmouth grouper also typically had lower ex-vessel prices than both black grouper and scamp. Within the TF category, golden tilefish typically had the greatest ex-vessel price, while blueline tilefish typically had the lowest price. Goldface tilefish landings only comprise less than 1% of the TF landings, and so these values should be taken with a degree of caution.

Table 29: Average inflation adjusted ex-vessel price by species

| Share Cat. | Species | Pre-IFQ | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|------------|---------------------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| DWG | Snowy grouper | \$4.03 | \$3.87 | \$4.17 | \$4.08 | \$4.32 | \$4.43 | \$4.74 | \$4.82 | \$4.88 | \$5.21 | \$5.59 | \$5.33 | \$5.47 |
| | Speckled hind | \$3.68 | \$3.74 | \$3.83 | \$3.86 | \$4.12 | \$4.25 | \$4.53 | \$4.40 | \$4.52 | \$5.19 | \$5.52 | \$5.26 | \$5.34 |
| | Warsaw grouper | \$3.62 | \$3.20 | \$3.26 | \$3.68 | \$4.18 | \$4.28 | \$4.44 | \$4.35 | \$4.47 | \$4.56 | \$4.78 | \$4.44 | \$4.72 |
| | Yellowedge grouper | \$4.58 | \$4.71 | \$4.84 | \$5.16 | \$5.26 | \$5.32 | \$5.37 | \$5.30 | \$5.28 | \$5.53 | \$6.00 | \$5.53 | \$5.74 |
| GG | Gag | \$5.05 | \$5.27 | \$5.53 | \$5.55 | \$5.71 | \$5.69 | \$5.81 | \$5.73 | \$5.78 | \$6.06 | \$6.39 | \$6.19 | \$6.26 |
| RG | Red grouper | \$3.69 | \$3.74 | \$3.80 | \$3.80 | \$4.12 | \$4.32 | \$4.45 | \$4.46 | \$4.67 | \$5.09 | \$5.57 | \$5.28 | \$5.23 |
| | Black grouper | \$4.78 | \$4.90 | \$5.02 | \$5.14 | \$5.24 | \$5.38 | \$5.53 | \$5.52 | \$5.61 | \$5.84 | \$6.24 | \$5.96 | \$6.04 |
| | Scamp | \$5.17 | \$5.03 | \$5.06 | \$5.21 | \$5.29 | \$5.22 | \$5.28 | \$5.18 | \$5.34 | \$5.71 | \$5.99 | \$5.87 | \$6.07 |
| SWG | Yellowfin grouper | \$4.72 | \$4.19 | \$3.81 | \$4.25 | \$4.82 | \$5.05 | \$4.57 | \$4.20 | \$4.54 | \$4.09 | \$4.86 | \$4.58 | \$5.75 |
| | Yellowmouth grouper | \$3.55 | \$4.84 | \$4.68 | \$5.24 | \$4.29 | \$4.60 | \$4.62 | \$5.45 | \$4.49 | \$4.12 | \$4.76 | \$5.02 | \$5.41 |
| | Blueline tilefish | \$1.92 | \$1.16 | \$1.36 | \$1.56 | \$1.75 | \$1.54 | \$1.79 | \$1.99 | \$1.90 | \$2.04 | \$2.16 | \$2.01 | \$2.31 |
| TF | Golden tilefish | \$2.49 | \$2.66 | \$2.98 | \$2.95 | \$3.16 | \$3.22 | \$3.44 | \$3.46 | \$3.46 | \$3.24 | \$3.42 | \$3.25 | \$3.36 |
| | Goldface tilefish | \$2.22 | \$3.11 | \$1.69 | \$2.86 | \$2.78 | \$1.14 | \$2.11 | \$2.25 | \$3.30 | \$2.37 | \$2.58 | \$3.45 | \$3.40 |

Note: Ex-vessel prices are on a species level, not a share category level, and therefore average price for red grouper and gag species will differ compared to the RG and GG categories. Pre-IFQ prices are the average ex-vessel prices from 2007-2009.

Pre-IFQ annual average ex-vessel prices from the SEFSC's ALS were adjusted for inflation based on the GDP deflator. In general, ex-vessel prices were stable for most species since the late 1990s onward and then increased with the start of the GT-IFQ program. The exceptions were yellowmouth grouper and yellowfin grouper, which had highly variable ex-vessel prices both pre- and post-IFQ. Pre-IFQ the blueline tilefish ex-vessel price was steadily decreasing. Once the GT-IFQ program was implemented, the blueline tilefish ex-vessel price has continued to increase. In comparison, golden tilefish ex-vessel price was stable since 2000, and increased with the start of the GT-IFQ program.

Cost Recovery and Ex-vessel Value

The Magnuson-Stevens Act requires the Secretary of Commerce to adopt regulations implementing a cost recovery program to recover the actual incremental costs of managing and enforcing the GT-IFQ program. The cost recovery fee established for the GT-IFQ program is currently 3% of the actual ex-vessel value of GT-IFQ species. GT-IFQ fishermen who completed a landing transaction were responsible for payment of the fee. The dealer who purchased GT-IFQ species was responsible for collecting and submitting to NMFS the fee on a quarterly basis. Monies collected were used for administration of the program, maintenance and upgrades to the online system, enforcement of the GT-IFQ program, and scientific research.

Cost recovery fees were calculated from the reported ex-vessel value, and therefore changes in ex-vessel prices and landings will affect the amount of cost recovery fees collected (Table 30 and Table 31). Ex-vessel values in the program were highest in 2014 (\$31,220,969), which resulted in the highest total cost recovery fees collected at \$936,634. Ex-vessel prices and resulting cost recovery fees have been decreasing in most years since. The variability in ex-vessel value is a consequence of changing quotas, variable landings, and changes in ex-vessel price over time. The RG share category ex-vessel value has represented more than 50% of the total GT-IFQ ex-vessel value throughout most of the program. The cost recovery fees recorded here were based on landings and may not represent the actual dollars recovered, due to non-payment by IFQ participants. Overall, there are very few dealers that did not pay the cost recovery fees and the amount not collected is often less than 0.50% of the expected recovered dollars. Dealer accounts with unpaid cost recovery fees are set to delinquent and cannot accept more IFQ landings until the delinquent fees are paid to the agency.

Table 30: Ex-vessel value by share category

| Year | DWG | GG | RG | SWG | TF | Total |
|------|-------------|-------------|--------------|-------------|-------------|--------------|
| 2010 | \$2,206,106 | \$2,105,130 | \$8,875,259 | \$637,127 | \$517,706 | \$14,341,283 |
| 2011 | \$2,949,252 | \$1,463,237 | \$15,049,541 | \$765,285 | \$893,616 | \$21,120,932 |
| 2012 | \$3,909,578 | \$2,457,341 | \$16,739,801 | \$1,285,110 | \$1,023,692 | \$25,415,521 |
| 2013 | \$3,912,673 | \$2,831,039 | \$16,251,479 | \$1,368,639 | \$1,134,578 | \$25,498,408 |
| 2014 | \$4,647,386 | \$3,317,315 | \$20,729,024 | \$1,180,005 | \$1,347,240 | \$31,220,969 |
| 2015 | \$4,204,690 | \$2,802,739 | \$18,853,659 | \$1,289,988 | \$1,555,302 | \$28,706,377 |
| 2016 | \$3,998,935 | \$3,981,994 | \$18,542,049 | \$1,652,826 | \$1,261,874 | \$29,437,677 |
| 2017 | \$3,876,639 | \$2,321,605 | \$14,392,388 | \$1,134,004 | \$1,438,310 | \$23,162,946 |
| 2018 | \$4,150,613 | \$2,554,003 | \$11,405,696 | \$1,166,757 | \$1,088,903 | \$20,365,972 |
| 2019 | \$5,338,015 | \$2,833,128 | \$11,080,157 | \$1,017,722 | \$1,219,101 | \$21,488,123 |
| 2020 | \$4,140,886 | \$2,748,131 | \$12,023,907 | \$899,350 | \$971,254 | \$20,783,528 |
| 2021 | \$4,494,792 | \$3,879,405 | \$15,021,216 | \$1,103,757 | \$1,496,465 | \$25,995,635 |

Table 31: Cost recovery fees by share category

| Year | DWG | GG | RG | SWG | TF | Total |
|------|-----------|-----------|-----------|----------|----------|-----------|
| 2010 | \$66,184 | \$63,156 | \$266,260 | \$19,115 | \$15,531 | \$430,246 |
| 2011 | \$88,479 | \$43,899 | \$451,488 | \$22,960 | \$26,809 | \$633,634 |
| 2012 | \$117,288 | \$73,722 | \$502,196 | \$38,555 | \$30,711 | \$762,477 |
| 2013 | \$117,381 | \$84,932 | \$487,547 | \$41,060 | \$34,037 | \$764,959 |
| 2014 | \$139,423 | \$99,521 | \$621,957 | \$35,401 | \$40,417 | \$936,634 |
| 2015 | \$126,141 | \$84,084 | \$565,612 | \$38,701 | \$46,659 | \$861,198 |
| 2016 | \$119,969 | \$119,462 | \$556,264 | \$49,587 | \$37,856 | \$883,137 |
| 2017 | \$116,300 | \$69,650 | \$431,774 | \$34,022 | \$43,150 | \$694,896 |
| 2018 | \$124,519 | \$76,622 | \$342,173 | \$35,004 | \$32,667 | \$610,985 |
| 2019 | \$160,141 | \$84,996 | \$332,407 | \$30,534 | \$36,573 | \$644,651 |
| 2020 | \$124,227 | \$82,446 | \$360,719 | \$26,982 | \$29,138 | \$623,511 |
| 2021 | \$134,844 | \$116,384 | \$450,639 | \$33,114 | \$44,895 | \$779,875 |

Enforcement and Administrative Actions

Law Enforcement Activities

Effective law enforcement is a crucial component of the IFQ programs. Special agents and officers from the National Oceanic and Atmospheric Administration's (NOAA) National Marine Fisheries Service's (NMFS) Office of Law Enforcement (OLE) Southeast Division, the U.S. Coast Guard (USCG) and state wildlife officers and game wardens under authority of state law, or operating under the authority of joint enforcement agreements (JEA) with OLE, enforce the regulated activities mandated under the Gulf IFQ programs through a variety of mechanisms. These mechanisms include at-sea and dockside inspections, offload monitoring, investigations of potential violations, and the seizure of illegally caught fish.

Enforcement of the IFQ regulations includes all of the enforcement options and activities present in all of NOAA's enforcement work. Law enforcement personnel from OLE, the USCG, and state JEA partners conduct at-sea and dockside patrols and inspections designed to educate the regulated community about the program and detect and deter violations. In addition, OLE conducts follow up investigations in the event of more complicated violations such as the undocumented landing and sale of IFQ species and the trafficking of illegally landed red snapper or grouper-tilefish in interstate or foreign commerce. If the USCG or JEA partners detect a violation related to the IFQ program, they can provide compliance assistance to fix the violation on the spot such as educating fishermen on the use of the technology used to monitor the program (VMS and IFQ notification systems), or, if the violation is of a more serious nature, they can forward the case to OLE for additional action. OLE's enforcement options include a wider range of actions including compliance assistance, written warnings, summary

settlements¹⁰, referral to NOAA's Office of General Counsel, Enforcement Section, for consideration of a civil penalty, or referral to the Department of Justice for prosecution of a criminal offense.

Major violations detected by law enforcement since the implementation of the IFQ programs include false reporting of species landed and under reporting of total weights landed. More typical violations include landing prior to the three-hour minimum landing notice, landing at an unspecified or unapproved location, insufficient allocation, transporting IFQ species without an approval code, completing a landing transaction without a landing notification, and offloading after approved hours. Typical dealer violations include misreporting IFQ species, failure to provide a current dealer permit and/or IFQ dealer endorsement, and failure to report IFQ species landed. The seizure of illegal catch is also an enforcement option, although OLE usually reserves this option for the most egregious violations. As the program has matured, the number of federal IFQ related cases that have resulted in seizures has decreased.

In 2021, OLE agents and officers in the Southeast Division conducted approximately 177 patrols. These patrols included monitoring the offloading of catch and investigations involving IFQ program regulations. The number of incidents resulting in seizures has decreased since the start of the program, and OLE continues to work with partners to proactively enforce IFQ regulations. In 2021, there were 116 IFQ investigations that resulted in the issuance of compliance assistance, written warnings, and violations.

Summary of the 2021 fishing year

In the 12th year of the GT-IFQ program, the program has shown continued progress in achieving its main objectives of reducing overcapacity and mitigating the derby fishing conditions and auxiliary objectives such as increased market stability, fishing flexibility, and balancing social, economic, and biological benefits. During the 12 years of the program, there have been changes in participation and activity in the program. Participation can be seen in the status of accounts in relation to holding shares, permits, and allocation, while activity is determined in relation to accounts transferring shares or allocation or landing red snapper. The following tables provide a summary of the 2021 values and change from the previous year for changes in participation and activity (Table 32), transfers and landings (Table 33), economic information (Table 34), and effort and discards (Table 35).

¹⁰ Summary settlements are offers issued by OLE to settle violations listed on the Office of General Counsel, Enforcement Section's Summary Settlement Schedules. The summary settlement program is designed to provide a mechanism to resolve relatively low-level violations quickly, efficiently, and without the more formal procedures involved when the Office of General Counsel assesses a civil penalty. Up until 2019, previous settlement schedules only included penalties for red snapper violations and did not contain IFQ specific violations. In June 2019, the Southeast Region summary settlement schedule added penalties for IFQ specific violations. OGC/Enforcement. The schedule now includes provisions for violating IFQ regulations relating to transport on land, landing notifications, arrival times, offloads, landing locations, and sufficient allocation. Fees begin at \$1,000 for each first offense and increase by \$500 for each subsequent second and third offense. See <https://www.gc.noaa.gov/gces/2019/SE-SSS-Final-6-27-19.pdf>.

Table 32: GT-IFQ program participation and activity

| | | 2021 Value | Change from 2020 |
|---------------|------------------------------------|------------|------------------|
| Participation | Shareholders | 593 | -13 |
| | Allocation Holders | 824 | -9 |
| | Dealers | 107 | -3 |
| | Vessels | 393 | -32 |
| Activity | Shareholders without permits | | |
| | Number of accounts | 245 | +7 |
| | Percentage of accounts | 41% | +2% |
| | Allocation holders without shares | | |
| | Number | 234 | +1 |
| | Percentage | 28% | 0% |
| | GT-IFQ Vessels landing RS-IFQ fish | 90% | -1% |
| | Accounts with remaining allocation | 572 | -60 |
| | Number of Active accounts | 320 | -53 |
| | Percentage of accounts | 69% | -6% |
| | Number of accounts with overages | 9 | -6 |
| | Overage pounds | 334 lb | -974 lb |

Table 33: GT-IFQ program transfers and landings

| | | 2021 Value | Change from 2020 |
|------------------------|----------------------------------|---------------|------------------|
| Transfers and Landings | Number of Share Transfers | 171 | -56 |
| | Percentage of Shares Transferred | 35% | -7% |
| | Number of Allocation Transfers | 8,833 | +1,769 |
| | Amount of allocation transferred | 12,158,356 lb | +2,074,681 lb |
| | Percentage of quota transferred | 200% | +34% |
| | Landings Percentage of Quota | 82% | +14% |

Table 34: GT-IFQ program economic information

| | | 2021 Value | Change from 2020 |
|----------------------|--|--------------|------------------|
| Economic Information | Average share price per pound | | |
| | DWG | \$11.14 | -\$2.82 |
| | GG | \$8.19 | -\$0.63 |
| | RG | \$6.40 | +\$0.23 |
| | SWG | \$5.62 | +\$0.54 |
| | TF | \$9.18 | +\$0.70 |
| | Percent of Representative Share Transfer Prices | 71% | +10% |
| | Average Allocation price per pound | | |
| | DWG | \$1.04 | -\$0.01 |
| | GG | \$0.80 | +\$0.07 |
| | RG | \$0.65 | +\$0.18 |
| | SWG | \$0.59 | +\$0.02 |
| | TF | \$0.63 | \$0 |
| | Percent of Representative Allocation Transfer Prices | 66% | +15% |
| | Average Ex-vessel price per pound | | |
| | DWG | \$5.69 | +\$0.43 |
| | GG | \$6.18 | +\$0.20 |
| | RG | \$5.23 | +\$0.14 |
| | SWG | \$5.92 | +\$0.39 |
| | TF | \$3.09 | +\$0.30 |
| | Total ex-vessel value of GT-IFQ | \$25,995,635 | +\$5,215,499 |

Table 35: GT-IFQ program effort and discards

| | | 2021 Value | Change from 2020 |
|---------------------|----------------------|------------|------------------|
| Effort and Discards | VL Trips | 2,960 | -232 |
| | VL Days/Trip | 3.6 | -0.2 |
| | VL Avg lb/Trip | 505 lb | +155 lb |
| | LL Trips | 738 | -25 |
| | LL Days/Trip | 10.2 | +0.1 |
| | LL Avg lb/Trip | 4,248 lb | -584 lb |
| | VL Discard Ratio D:L | | |
| | Red Grouper | -- | -- |
| | Gag | -- | -- |
| | VL Discard Mortality | | |
| | Red Grouper | -- | -- |
| | Gag | -- | -- |
| | LL Discard Ratio D:L | | |
| | Red Grouper | -- | -- |
| | Gag | -- | -- |
| | LL Discard Mortality | | |
| | Red Grouper | -- | -- |
| | Gag | -- | -- |

Looking Ahead

The final rule for Amendment 36A to the Reef Fish FMP was effective on July 12, 2018 (83 FR 27297), and revoked shares non-activated IFQ accounts and allowed NMFS to withhold a portion of the quota from distribution if a quota reduction is anticipated. The Gulf Council is currently considering additional changes to both the RS-IFQ and GT-IFQ programs through Amendment 36B and 36C to the Reef Fish FMP, which would also establish a use for the revoked shares from Amendment 36A. Amendment 36B aims to improve the performance of the RS-IFQ and GT-IFQ programs based on suggestions from the Red Snapper 5-year review, an advisory panel, and Gulf Council discussions. Amendment 36B, which is under development by the Gulf Council, considers shareholding requirements and divestment of shares resulting from such restrictions, while Amendment 36C deals with the redistribution of reclaimed shares from 36A (and potentially 36B), quota banks, and accuracy of weights estimated in landing notifications.

The Catch Share Online System successfully transitioned to a new system on December 21, 2020. This migration was necessary as the software that supported the system was at end of life. On August 27, 2021, the Permit Information Management System was also migrated to a new platform to modernize that system. Since both migrations, improvements to the systems have been a continued effort to improve function and connectivity between the systems. The SERO Catch Share staff are continuously looking for ways to improve the interaction with the online Website. If you have a suggestion on how the online system can be further improved, please call or e-mail SERO Catch Share customer support as listed on the cover page.

Appendices

Appendix 1: Program history

Development of the Grouper-Tilefish (GT) Individual Fishing Quota (IFQ) program began in 2008, when a majority of eligible voters, Gulf of Mexico (Gulf) reef fish permit holders that had annual average grouper and tilefish landings of at least 8,000 pounds during 1999-2004, supported the formation of the GT-IFQ program through a referendum. During 2008, the Gulf of Mexico Fishery Management Council (Gulf Council) developed [Amendment 29](#)¹¹ to the Fishery Management Plan for the Reef Fish Resources of the Gulf of Mexico, outlining the key components of the GT-IFQ program. In January 2009, the Gulf Council approved Amendment 29 by a vote of 14 to 3. Amendment 29¹² was approved by NOAA's National Marine Fisheries Service (NMFS) in July 2009. Implementation of the program began in fall 2009 and the first fishing year of the program began on January 1, 2010. For the first five years of the program, shares and allocation could only be sold to and fished by an entity that held a valid commercial reef fish permit and had an active GT-IFQ online account. After January 1, 2015, all U.S. citizens and permanent resident aliens were eligible to purchase GT-IFQ shares and allocation, although a valid reef fish permit was still required to harvest, possess, and land any allocation.

Prior to implementation of the GT-IFQ program, commercial grouper-tilefish species were managed with limited access fishing permits, trip limits, size limits, closed seasons, and quotas. This resulted in overcapitalization of the commercial grouper-tilefish segment of the reef fish fishery. The collective harvesting capacity of fishing vessels was in excess of that required to harvest the commercial grouper-tilefish quotas, resulting in quota overages and early closures. 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%. The deep-water grouper and tilefish seasons year-round seasons in 2003-2004 were shortened by more than 50% with closures in April through June, and seasons as short as 15 weeks. It was anticipated that under the prevailing management regime incentives for derby fishing would persist.

Initial shares were issued based on the amount of grouper-tilefish logbook landings reported under each entity's qualifying permit during 1999 through 2004, with an allowance for dropping one year of data. Initial shares were issued in five different GT-IFQ categories: deep-water grouper, gag, red grouper, other shallow-water grouper, and tilefish (Table 1). There were 766 GT-IFQ shareholder accounts created based on the number of entities (unique individual[s] and/or corporations) that qualified for initial shares in one or more share categories. Initial quota shares issued to an account ranged from 2.35 to 14.7% depending on the share category (Table 2). The minimum amount of shares issued for any share category was 0.000001%.

¹¹ https://gulfcouncil.org/wp-content/uploads/Reef-Fish-Amdt-29-Dec-08_508Compliant.pdf

¹² <https://www.federalregister.gov/documents/2009/08/31/E9-20954/fisheries-of-the-caribbean-gulf-of-mexico-and-south-atlantic-reef-fish-fishery-of-the-gulf-of-mexico>

In mid-2010, shortly following the start of the GT-IFQ program, share transfer prices became mandatory for the transferor to report. On June 1, 2011, actual ex-vessel price was redefined to ensure equivalent reporting among dealers. The definition now states that “actual ex-vessel price” represents the price paid per pound of fish before any deductions are made for transferred (leased) allocation (i.e., pounds of fish) and goods and/or services (e.g., bait, ice, fuel, repairs, machinery replacement).

A survey on share price was conducted 2012-2013 to update share prices and share reasons for those years. In 2013, transfer reasons were added to both share and allocation transfers in order to capture more information about the types of transfer that occur and the reasons for the transfers, especially as how they related to price. Also in 2013, the share transfer price became mandatory for the transferee to report as they accepted the share transfer. In 2015, transfer reasons for shares and allocation became mandatory. On Dec 21, 2020, allocation prices became mandatory.

On October 27, 2014, there were administrative revisions to IFQ programs to improve enforcement, monitoring, and administration, and to clarify existing regulatory requirements. The rule made changes to landing notifications, offloading, landing transactions, as well as administrative changes. Modification to landing notifications included: 1) allows allocation be held in either a vessel or linked shareholder account at the time the landing notification is submitted, 2) extends the landing notification reporting window from 12 to 24 hours, 3) requires that vessels must land within an hour after the arrival time given in the landing notification, and 4) specifies that any changes to a landing notification would require a new landing notification and would supersede a previous notification. The captain will not be required to wait an additional 3 hours if only one superseding landing notification has been submitted for the trip. If more than one superseding notification has been made for a trip or the landing location is changed, the vessel will be required to provide at least 3 hours’ notice before landing. The rule also allows vessels to land prior to the 3-hour notification if an authorized officer is present, is available to meet the vessel, and authorizes the vessel to land early. The final rule included a change to the offloading process, where offloading could continue past 6 p.m. if an authorized officer is present, is available to remain at the offloading site while the offload continues, and authorizes the vessel to continue offloading. The rule modified landing transactions such that: 1) requires the dealer and vessel to complete a landing transaction on the day of offload and within 96 hours of the landing, and 2) prohibits the deduction of ice and water weight when reporting an IFQ landing transaction unless the actual weight of the ice and water is determined using a scale. The intent of these modifications is to improve timeliness and accuracy of landing transactions. The administrative changes included: 1) allowing participants to close an IFQ account by submitting a Close Account form to NMFS, and 2) allows NMFS to close an IFQ account if no landing transactions or IFQ transfers have been completed by the IFQ account holder in at least one year and if either the account does not hold shares or allocation (shareholder account) or the account has paid all cost recovery (dealer account). The rule also clarified the following: 1) fish must be sold to a federally permitted dealer and dealers must report all landings and their actual ex-vessel value via the IFQ system, 2) a dealer may only receive IFQ fish that have a corresponding transaction approval code, 3) removed a phrase stating NMFS will “add other methods of complying with advance notice of landing requirement” because NMFS has already identified numerous methods for submitting landing notifications, 4) removed regulatory language that prevents a dealer

from completing a landing transaction if a landing notification is not submitted, and 5) explicitly stated that IFQ species must be landed at an approved landing location.

The IFQ website and database systems were modified in 2014 and 2015 to include the Gulf Headboat Collaborative (HBC) pilot program and the Highly Migratory Species (HMS) Bluefin Tuna Individual Bycatch Quota (BFT) program. With the additions of these programs, the homepage was retitled to “SERO Catch Shares Programs” and additional information was added for each program. Each program contains a separate tab on the Public home page with information specific to that program and the Log In dialogue box was changed to reflect the additional roles for each program. The public “View Landing Locations” page was changed to include both IFQ and HBC landing locations, with a drop down box to select by program. The Additional Information page was changed to allow for selection of documents by program: IFQ, HBC, or BFT.

In 2017, Amendment 36A to the Reef Fish FMP (Commercial IFQ Program Modifications) was approved by the Gulf Council. The final rule published on June 12, 2018 (83 FR 27297). Amendment 36A included three actions: 1) require that the owner or operator of a commercial reef fish permitted vessel landing commercially caught, federally managed reef fish from the Gulf provide a landing notification at least 3 hours, but no more than 24 hours, in advance of landing, 2) return permanently to NMFS any shares contained in IFQ accounts that have never been activated since January 1, 2010, and 3) allow NMFS to withhold the distribution of IFQ allocation equal the amount of an expected commercial quota reduction on January 1, for any IFQ species or multi-species quota, and redistribute the allocation back to fishermen should the expected quota reduction not be implemented by June 1. The effective date for the return of shares and the provision to withhold quota was effective July 11, 2018, but the effective date for the advance notification of landing was delayed until Jan 1, 2019. Additional information can be found on the Southeast Region webpage:

<https://www.fisheries.noaa.gov/action/reef-fish-amendment-36a-modifications-commercial-individual-fishing-quota-programs>.

In 2017, updates were made to improve the GT-IFQ program. IFQ staff created the IFQ species identification document, which provides helpful tips when identifying and differentiating similar IFQ species (e.g., red snapper and mutton snapper, black grouper and gag, golden tilefish, and goldface tilefish). This document was made available under additional information tab in the online system. Additionally, GIS interactive maps of dealer and landing locations was added on the public home page. The log in procedure to the catch share online system was also simplified. Users no longer have to specify their role before logging in, and users no longer have to click the “Accept Terms of Use.” Simply clicking on the login button indicates acceptance of the Terms of Use of the web application. The final addition to the online system was a print button on confirmation screens when performing allocation or share transfers.

Several updates were made in 2018 to improve the Gulf Reef Fish IFQ online systems. A new share and allocation calculator was added to the home page that can convert between share percentages and

equivalent pounds for each share category. VMS lists for dealers and landing locations have been generated to assign a code to each unique dealer and landing location. These codes will replace the text lists that were formerly used to select form for each landing notification submitted via VMS. This change removes the need to update VMS units when new dealers and landing locations are added to the program. Additionally, a new feature to view what has been typed into the PIN field when logging into a user account was added to allow the user to see what they have entered.

Also in 2018, a stock assessment assessed a lower yield of RG available. This assessment resulted in a quota decrease that became effective January 1, 2019.

In 2020-2021, a five-year joint review of both the RS-IFQ and GT-IFQ programs was conducted, making it the second instance that each of the programs were reviewed. The first review of each program aimed to compare the fisheries before and after the implementation of the programs, and specifically to evaluate the progress towards achieving the stated goals of reducing overcapacity and eliminating the problems associated with derby fishing. The joint review aimed to compare more recent trends seen in the program to those seen when the programs were first implemented to further analyze the program's progress in achieving those goals. Data were obtained from a variety of sources: the SERO IFQ database; Southeast Fisheries Science Center's coastal logbooks accumulated landings system, and reef fish observer program; the National Institute of Occupational Safety and Health; and surveys of the IFQ participants. In general, the review found that the program remains moderately to highly successful in achieving its stated goals, although there is still room for further achievement. Areas that have room for improvement include overcapacity, discard mortality, price reporting, and social and community analyses.

In late 2020, the IFQ system was redesigned to function in a cloud environment and additional features were added to the system for flexibility and security. The cloud environment should ensure that the system remains running even during natural disasters such as a hurricane. The system was brought up to current security standards to secure the transmission and storage of program information. The website was redesigned to allow access through mobile devices and tablets and the landing transaction form was modified to allow for the entry of different prices for the same species in one landing transaction. The IFQ program migrated to the new platform in late December 2020, after two years of development.

In late 2021, several improvements were developed for the IFQ system. The loan program was officially launched on September 2, 2021 to support NOAA's Fisheries Finance Program to issue loans for IFQ related needs. On September 11, 2021, a new Vessel Signature PIN was developed that will have fewer security requirements compared to the Vessel Account PIN to ease the difficulty of submitting a landing transaction. A new feature was also incorporated alongside the Vessel Signature PIN to require that the Vessel Signature PIN be provided to confirm that a landing transaction submission will draft a 10% allocation overage from the Vessel account. This additional warning was implemented to provide a warning to users to confirm they wish to take advantage of that flexibility.

Appendix 2: 2010 Deepwater Horizon (DWH) oil spill closures

| Closure Date | Area (sq mi) | Area (sq km) | % Coverage of Gulf EEZ | % Change in Coverage |
|--------------|-----------------|-----------------|---------------------------|-------------------------|
| 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 |

Appendix 3: Commercial Management History for Grouper-Tilefish Species

Appendix 3.1: Gag grouper commercial management history

| Year | Days Open | Size Limit (" TL) | Quota ¹ (mp gw) | Harvest ² (mp gw) | Commercial Management Action |
|------|-----------|-------------------|----------------------------|------------------------------|---|
| 1990 | 311 | 20 | 7.8 SWG | 0.79 | 20" TL minimum size limit SWG season: Jan 1 – Nov 7 (Amend. 1) Created deep-water and shallow-water aggregates (Amend. 1) 11 mp ww commercial quota for all groupers: 1.8 mp ww for DWG (Amend. 1) Established commercial reef fish permit (Amend. 1) Longline gear prohibited inshore of 50 fathoms depth west and 20 fathoms east of Cape San Blas, FL (Amend. 1) |
| 1991 | 365 | 20 | 7.8 SWG | 0.93 | |
| 1992 | 366 | 20 | 8.2 SWG | 1.24 | Establish a moratorium on issuing new reef fish permits for 3 years, but allows transfers (Amend. 4) |
| 1993 | 365 | 20 | 8.2 SWG | 1.48 | |
| 1994 | 365 | 20 | 8.2 SWG | 1.28 | Extends reef fish permit moratorium through 1995 |
| 1995 | 365 | 20 | 8.2 SWG | 1.34 | |
| 1996 | 366 | 20 | 8.2 SWG | 1.27 | New reef fish permit moratorium through 2000 (Amend. 11) |
| 1997 | 365 | 20 | 8.2 SWG | 1.4 | |
| 1998 | 365 | 20 | 8.2 SWG | 2.25 | |
| 1999 | 320 | 24 | 8.2 SWG | 1.74 | Increased commercial size limit to 24" TL Prohibited sale of gag from Feb 15 – Mar 15 (peak gag spawning season) Established two marine reserves |
| 2000 | 320 | 24 | 8.2 SWG | 1.91 | Extend reef fish permit moratorium through 2005 (Amend. 17) |
| 2001 | 320 | 24 | 8.2 SWG | 2.78 | |
| 2002 | 320 | 24 | 8.2 SWG | 2.66 | |
| 2003 | 320 | 24 | 8.2 SWG | 2.29 | |
| 2004 | 275 | 24 | 8.8 SWG | 2.88 | Secretarial amendment 1 reduced the SWG quota to 8.8 mp gw |
| 2005 | 320 | 24 | 8.8 SWG | 2.47 | Established permanent limited access system for commercial Gulf reef fish (Amend. 24) Aggregate deep-water and shallow-water grouper commercial trip limit of 6,000 lb gw |
| 2006 | 320 | 24 | 8.8 SWG | 1.37 | Required commercially permitted reef fish vessels to be equipped with VMS |
| 2007 | 320 | 24 | 8.8 SWG | 1.26 | |
| 2008 | 320 | 24 | 8.8 SWG | 1.32 | |
| 2009 | 320 | 24 | 1.32 | 0.75 | Defined maximum stock size threshold and optimum yield for gag Set gag and red grouper allocations between recreational and commercial sectors Reduced SWG quota from 8.80 mp to 7.8 mp Set gag quota at 1.32 mp gw (Amend 30B) Repealed the commercial closed season (Feb 15-Mar 15) Jan – April seasonal closure at Edges 40 fathom contour and at Steamboat Lumps (Amend 31) Created a longline endorsement permit for vessels in the Eastern Gulf (Amend 31) May – Oct: Emergency interim regulation prohibiting longlines inside of 50 fathoms Oct: Reef fish bottom longline fishing restricted inside of the 35-fathom depth contour and limited to 1,000 hooks, with no more than 750 rigged for fishing under Endangered Species Act |
| 2010 | 365 | 24 | 1.410 | 0.497 | Began the IFQ system for commercial grouper and tilefish (Amend. 29) Longline endorsement required (Amend. 31) Reef fish bottom longline fishing restricted to outside the 35-fathom depth contour from June – August (Amend. 31) Longlines limited to 1000 hooks, with no more than 750 rigged for fishing (Amend. 31) |
| 2011 | 365 | 24 | 0.430 | 0.319 | Gag quota initially set at 0.10 mp gw Mid-year quota increase of 0.33 mp gw |
| 2012 | 366 | 22 | 0.567 | 0.523 | Mid-year quota increase of 0.137 mp gw Set ACLs and ACTs for gag (Amend. 32) Established rebuilding plan for gag (Amend. 32) Adjust multi-use IFQ shares in the GT-IFQ program (Amend. 32) Reduced gag commercial size limit to 22" TL (Amend. 32) |
| 2013 | 365 | 22 | 0.708 | 0.575 | |
| 2014 | 365 | 22 | 0.835 | 0.586 | |
| 2015 | 365 | 22 | 0.939 | 0.542 | |
| 2016 | 366 | 22 | 0.939 | 0.777 | |
| 2017 | 365 | 24 | 0.939 | 0.443 | Increased gag commercial size limit to 24" TL (Framework Action) |
| 2018 | 365 | 24 | 0.939 | 0.452 | |
| 2019 | 365 | 24 | 0.939 | 0.470 | |
| 2020 | 366 | 24 | 0.939 | 0.469 | |
| 2021 | 365 | 24 | 0.939 | 0.628 | |

¹ Prior to 2009, gag was included in the shallow-water groupers (SWG) quota. During this time, SWG included: black grouper, gag, red grouper, yellowfin grouper, yellowmouth grouper, rock hind, red hind, speckled hind, and scamp.

² Harvest from 1990-2009 taken from the SEFSC ACL database; harvest from 2010 to current from IFQ database.

Appendix 3.2: Red grouper commercial management history

| Year | Days Open | Size Limit (" TL) | Quota ¹ (mp gw) | Harvest ² (mp gw) | Commercial Management Action |
|------|-----------|-------------------|----------------------------|------------------------------|--|
| 1990 | 311 | 20 | 7.8 SWG | 4.74 | SWG season: Jan 1 – Nov 7 (Amend. 1) Created deep-water and shallow-water aggregates (Amend. 1) 11 mp ww commercial quota for all groupers: 1.8 mp ww for DWG (Amend. 1) Established commercial reef fish permit (Amend. 1) Longline gear prohibited inshore of 50 fathoms depth west and 20 fathoms east of Cape San Blas, FL (Amend. 1) |
| 1991 | 365 | 20 | 7.8 SWG | 5.07 | |
| 1992 | 366 | 20 | 8.2 SWG | 4.46 | Establish a moratorium on issuing new reef fish permits for 3 years, but allows transfers (Amend. 4) |
| 1993 | 365 | 20 | 8.2 SWG | 6.36 | |
| 1994 | 365 | 20 | 8.2 SWG | 4.89 | Extends reef fish permit moratorium through 1995 |
| 1995 | 365 | 20 | 8.2 SWG | 4.65 | |
| 1996 | 366 | 20 | 8.2 SWG | 4.34 | New reef fish permit moratorium through 2000 (Amend. 11) |
| 1997 | 365 | 20 | 8.2 SWG | 4.67 | |
| 1998 | 365 | 20 | 8.2 SWG | 3.70 | |
| 1999 | 320 | 20 | 8.2 SWG | 5.80 | Prohibited sale of red grouper from Feb 15 – Mar 15 (peak gag spawning season) Established two marine reserves |
| 2000 | 320 | 20 | 8.2 SWG | 5.70 | Extend reef fish permit moratorium through 2005 (Amend. 17) |
| 2001 | 320 | 20 | 8.2 SWG | 5.80 | |
| 2002 | 320 | 20 | 8.2 SWG | 5.79 | |
| 2003 | 320 | 20 | 8.2 SWG | 4.83 | |
| 2004 | 319 | 20 | 5.31 | 5.64 | |
| 2005 | 282 | 20 | 5.31 | 5.38 | Established permanent limited access system for commercial Gulf reef fish (Amend. 24) Aggregate deep-water and shallow-water grouper commercial trip limit of 6,000 lb gw Secretarial Amendment 1 to the Reef Fish FMP set red grouper quota at 5.31 mp gw |
| 2006 | 365 | 20 | 5.31 | 5.10 | |
| 2007 | 365 | 20 | 5.31 | 3.64 | |
| 2008 | 366 | 20 | 5.31 | 4.75 | |
| 2009 | 365 | 18 | 5.75 | 3.70 | Set gag and red grouper allocations between recreational and commercial sectors Reduced SWG quota from 8.90 mp to 7.48 mp Increased red grouper quota from 5.31 to 5.75 mp Repealed the commercial closed season (Feb 15-Mar 15) Jan – April seasonal closure at Edges 40 fathom contour and at Steamboat Lumps May – Oct: Emergency interim regulation prohibiting longlines inside of 50 fathoms Oct: Reef fish bottom longline fishing restricted inside of the 35-fathom depth contour and limited to 1,000 hooks, with no more than 750 rigged for fishing under Endangered Species Act |
| 2010 | 365 | 18 | 5.750 | 2.911 | Began the IFQ system for commercial grouper and tilefish (Amend. 29) Longline endorsement required (Amend. 31) Reef fish bottom longline fishing restricted to outside the 35-fathom depth contour from June – August (Amend. 31) Longlines limited to 1000 hooks, with no more than 750 rigged for fishing (Amend. 31) Set red grouper TAC at 5.68 mp gw for 2011 (76% commercial = 4.32 mp gw) |
| 2011 | 365 | 18 | 5.230 | 4.784 | Mid-year quota increase of 0.91 mp gw Regulatory amendment allows red grouper TAC to increase until 2015, as long as TAC not exceeded in previous years |
| 2012 | 366 | 18 | 5.370 | 5.219 | Set ACLs and ACTs for red grouper (Amend. 32) Adjust multi-use IFQ shares in the GT-IFQ program (Amend. 32) |
| 2013 | 365 | 18 | 5.530 | 4.599 | |
| 2014 | 365 | 18 | 5.630 | 5.602 | |
| 2015 | 365 | 18 | 5.720 | 4.798 | |
| 2016 | 366 | 18 | 7.780 | 4.631 | Mid-year quota increase of 2.06 mp gw |
| 2017 | 365 | 18 | 7.780 | 3.377 | |
| 2018 | 365 | 18 | 7.780 | 2.404 | |
| 2019 | 365 | 18 | 3.000 | 2.099 | |
| 2020 | 366 | 18 | 3.000 | 2.375 | |
| 2021 | 65 | 18 | 3.000 | 2.885 | |

¹ Prior to 2004, red grouper was included in the shallow-water groupers (SWG) quota. During this time, SWG included: black grouper, gag, red grouper, yellowfin grouper, yellowmouth grouper, rock hind, red hind, speckled hind, and scamp.

² Harvest from 1990-2009 taken from the SEFSC ACL database; harvest from 2010 to current from IFQ database.

Appendix 3.3: SWG commercial management history

| Year | Days Open | Quota ¹ (mp gw) | Harvest ² (mp gw) | Commercial Management Action |
|------|-----------|-------------------------------|---------------------------------|--|
| 1990 | 311 | 7.8 | 6.94 | SWG season: Jan 1 – Nov 7 (Amend. 1) Created deep-water and shallow-water aggregates (Amend. 1) 11 mp ww commercial quota for all groupers: 1.8 mp ww for DWG (Amend. 1) Established commercial reef fish permit (Amend. 1) Longline gear prohibited inshore of 50 fathoms depth west and 20 fathoms east of Cape San Blas, FL (Amend. 1) Minimum size limit: Nassau grouper, yellowfin grouper, and black grouper = 20” TL |
| 1991 | 365 | 7.8 | 7.07 | Speckled hind moved from shallow-water grouper to deep-water grouper (Amend. 3) |
| 1992 | 366 | 8.2 | 6.58 | Establish a moratorium on issuing new reef fish permits for 3 years, but allows transfers (Amend. 4) Scamp is shallow-water until closed, then deep-water Conversion from ww to gw modified to 1.05 for DWG and SWG |
| 1993 | 365 | 8.2 | 8.61 | |
| 1994 | 365 | 8.2 | 6.80 | Extends reef fish permit moratorium through 1995 |
| 1995 | 365 | 8.2 | 6.50 | |
| 1996 | 366 | 8.2 | 6.12 | New reef fish permit moratorium through 2000 (Amend. 11) |
| 1997 | 365 | 8.2 | 6.53 | Prohibited the harvest of Nassau grouper (Amend 14). |
| 1998 | 365 | 8.2 | 6.38 | |
| 1999 | 320 | 8.2 | 8.11 | Established two marine reserves |
| 2000 | 320 | 8.2 | 8.18 | Extend reef fish permit moratorium through 2005 (Amend. 17) |
| 2001 | 320 | 8.2 | 9.19 | |
| 2002 | 320 | 8.2 | 9.05 | |
| 2003 | 320 | 8.2 | 7.77 | |
| 2004 | 319 | 8.88 | 8.88 | |
| 2005 | 282 | 8.88 | 8.18 | Established permanent limited access system for commercial Gulf reef fish (Amend. 24) Aggregate deep-water and shallow-water grouper commercial trip limit of 6,000 lb gw |
| 2006 | 365 | 8.88 | 6.74 | |
| 2007 | 365 | 8.88 | 5.19 | |
| 2008 | 366 | 8.88 | 6.35 | |
| 2009 | 365 | 7.48 | 4.70 | Reduced SWG quota from 8.88 mp to 7.48 mp Jan – April seasonal closure at Edges 40 fathom contour and at Steamboat Lumps May – Oct: Emergency interim regulation prohibiting longlines inside of 50 fathoms Oct: Reef fish bottom longline fishing restricted inside of the 35-fathom depth contour and limited to 1,000 hooks, with no more than 750 rigged for fishing under Endangered Species Act |
| 2010 | 365 | 0.410 | 0.176 | Began the IFQ system for commercial grouper and tilefish (Amend. 29) Longline endorsement required (Amend. 31) Reef fish bottom longline fishing restricted to outside the 35-fathom depth contour from June – August (Amend. 31) Longlines limited to 1000 hooks, with no more than 750 rigged for fishing (Amend. 31) Reduced SWG quota to 0.41 mp Multi-use flexibility allows warsaw grouper and speckled hind to be landed with SWG allocation |
| 2011 | 365 | 0.410 | 0.187 | |
| 2012 | 366 | 0.509 | 0.298 | Increased TAC to 0.51 mp Minimum size limits: black grouper = 24” TL; yellowfin grouper = 20” TL; Scamp = 16” TL |
| 2013 | 365 | 0.518 | 0.301 | |
| 2014 | 365 | 0.523 | 0.230 | |
| 2015 | 365 | 0.525 | 0.238 | |
| 2016 | 366 | 0.525 | 0.358 | |
| 2017 | 365 | 0.525 | 0.239 | |
| 2018 | 365 | 0.525 | 0.224 | |
| 2019 | 365 | 0.525 | 0.185 | |
| 2020 | 366 | 0.525 | 0.165 | |
| 2021 | 365 | 0.525 | 0.187 | |

¹ In 1990-1996, shallow-water grouper included: black grouper, gag, red grouper, yellowfin grouper, yellowmouth grouper, rock hind, red hind, scamp, speckled hind, and Nassau grouper. In 1991, speckled hind was moved to deep-water grouper. In 1997, Nassau grouper was removed from shallow-water grouper and harvest was prohibited. From 2004-2009, while red grouper had its own quota, it was also part of the aggregate SWG quota. In 2009, both gag and red grouper had their own quota, which was also part of the aggregate SWG quota. Beginning in 2010, gag and red grouper quotas were removed from the shallow-water aggregate quota. In 2012, red hind and rock hind were removed.

² Harvest from 1990-2009 taken from the SEFSC ACL database; harvest from 2010 to current from IFQ database.

Appendix 3.4: DWG commercial management history

| Year | Days Open | Quota ¹ (mp gw) | Harvest ² (mp gw) | Commercial Management Action |
|------|-----------|-------------------------------|---------------------------------|---|
| 1990 | 365 | 1.52 | 1.03 | Created deep-water and shallow-water aggregates (Amend. 1) 11 mp ww commercial quota for all groupers: 1.8 mp ww for DWG (Amend. 1) Established commercial reef fish permit (Amend. 1) Longline gear prohibited inshore of 50 fathoms depth west and 20 fathoms east of Cape San Blas, FL (Amend. 1) |
| 1991 | 365 | 1.52 | 1.00 | Speckled hind moved from shallow-water grouper to deep-water grouper (Amend. 3) |
| 1992 | 366 | 1.6 | 1.28 | Establish a moratorium on issuing new reef fish permits for 3 years, but allows transfers (Amend. 4) Scamp is shallow-water until closed then deep-water Conversion from ww to gw modified to 1.05 for DWG and SWG |
| 1993 | 365 | 1.6 | 0.95 | |
| 1994 | 365 | 1.6 | 1.27 | Extends reef fish permit moratorium through 1995 |
| 1995 | 365 | 1.6 | 0.97 | |
| 1996 | 366 | 1.6 | 0.63 | New reef fish permit moratorium through 2000 (Amend. 11) |
| 1997 | 365 | 1.6 | 0.90 | |
| 1998 | 365 | 1.6 | 0.77 | |
| 1999 | 365 | 1.6 | 1.20 | Established two marine reserves |
| 2000 | 366 | 1.6 | 1.39 | Extend reef fish permit moratorium through 2005 (Amend. 17) |
| 2001 | 365 | 1.6 | 1.04 | |
| 2002 | 365 | 1.6 | 1.07 | |
| 2003 | 365 | 1.6 | 1.54 | |
| 2004 | 177 | 1.02 | 1.25 | Reduced commercial quota for DWG (Secretarial Amend. 1) Established permanent limited access system for commercial Gulf reef fish (Amend. 24) Aggregate deep-water and shallow-water grouper commercial trip limit of 6,000 lb gw Closed on June 23, 2005 |
| 2005 | 130 | 1.02 | 1.14 | Closed on June 27, 2006 |
| 2006 | 152 | 1.02 | 1.07 | Closed on June 2, 2007 |
| 2007 | 173 | 1.02 | 1.16 | Closed on May 10, 2008; re-opened DWG Nov 1-10, 2008 |
| 2008 | 142 | 1.02 | 1.11 | Jan – April seasonal closure at Edges 40 fathom contour and at Steamboat Lumps May – Oct: Emergency interim regulation prohibiting longlines inside of 50 fathoms Oct: Reef fish bottom longline fishing restricted inside of the 35-fathom depth contour and limited to 1,000 hooks, with no more than 750 rigged for fishing under Endangered Species Act |
| 2009 | 196 | 1.02 | 1.13 | Began the IFQ system for commercial grouper and tilefish (Amend. 29) Longline endorsement required (Amend. 31) Reef fish bottom longline fishing restricted to outside the 35-fathom depth contour from June – August (Amend. 31) Longlines limited to 1000 hooks, with no more than 750 rigged for fishing (Amend. 31) Reduced DWG quota to 1.02 mp Multi-use flexibility allows scamp to be landed with DWG allocation |
| 2010 | 365 | 1.020 | 0.606 | |
| 2011 | 365 | 1.020 | 0.779 | |
| 2012 | 366 | 1.127 | 0.966 | Increased TAC to 1.13 mp; misty grouper removed from Reef Fish FMP and IFQ program |
| 2013 | 365 | 1.118 | 0.920 | |
| 2014 | 365 | 1.110 | 1.081 | |
| 2015 | 365 | 1.101 | 0.955 | |
| 2016 | 366 | 1.024 | 0.867 | |
| 2017 | 365 | 1.024 | 0.822 | |
| 2018 | 365 | 1.024 | 0.817 | |
| 2019 | 365 | 1.024 | 0.952 | |
| 2020 | 366 | 1.024 | 0.804 | |
| 2021 | 365 | 1.024 | 0.800 | |

¹ Deep-water grouper in 1990 included: misty grouper, snowy grouper, yellowedge grouper, and warsaw grouper. In 1991, speckled hind was moved from shallow-water grouper to deep-water grouper and scamp was included as deep-water grouper once the shallow-water grouper quota was filled. In 2010, the IFQ system was established and included: misty grouper, snowy grouper, yellowedge grouper, warsaw grouper, and speckled hind. While scamp may be landed with deep-water allocation, it is not included in the quota. In 2012, misty grouper was removed from the deep-water grouper.

² Harvest from 1990-2009 taken from the SEFSC ACL database; harvest from 2010 to current from IFQ database.

Appendix 3.5: TF commercial management history

| Year | Days Open | Quota ¹ (mp gw) | Harvest ² (mp gw) | Commercial Management Action |
|------|-----------|-------------------------------|---------------------------------|---|
| 1990 | 365 | NA | 0.39 | Established commercial reef fish permit Longline gear prohibited inshore of 50 fathoms depth west and 20 fathoms east of Cape San Blas, FL Added golden tilefish, goldface tilefish, blackline tilefish, anchor tilefish, and blueline tilefish to the FMP (Amend. 1). |
| 1991 | 365 | NA | 0.33 | |
| 1992 | 366 | NA | 0.40 | Establish a moratorium on issuing new reef fish permits for 3 years, but allows transfers (Amend. 4) |
| 1993 | 365 | NA | 0.37 | |
| 1994 | 365 | NA | 0.49 | Extends reef fish permit moratorium through 1995 |
| 1995 | 365 | NA | 0.49 | |
| 1996 | 366 | NA | 0.23 | New reef fish permit moratorium through 2000 (Amend. 11) |
| 1997 | 365 | NA | 0.44 | |
| 1998 | 365 | NA | 0.36 | |
| 1999 | 365 | NA | 0.42 | Established two marine reserves |
| 2000 | 366 | NA | 0.55 | Extend reef fish permit moratorium through 2005 (Amend. 17) |
| 2001 | 365 | NA | 0.53 | |
| 2002 | 365 | NA | 0.55 | |
| 2003 | 365 | NA | 0.48 | |
| 2004 | 366 | 0.44 | 0.61 | Secretarial Amendment 1: established a commercial quota of 0.44 mp gw for all tilefish (equal to average annual harvest from 1996-2000) |
| 2005 | 324 | 0.44 | 0.63 | Established permanent limited access system for commercial Gulf reef fish (Amend. 24) Aggregate deep-water and shallow-water grouper commercial trip limit of 6,000 lb gw |
| 2006 | 202 | 0.44 | 0.42 | |
| 2007 | 107 | 0.44 | 0.42 | |
| 2008 | 130 | 0.44 | 0.50 | |
| 2009 | 134 | 0.44 | 0.55 | Jan – April seasonal closure at Edges 40 fathom contour and at Steamboat Lumps May – Oct: Emergency interim regulation prohibiting longlines inside of 50 fathoms Oct: Reef fish bottom longline fishing restricted inside of the 35-fathom depth contour and limited to 1,000 hooks, with no more than 750 rigged for fishing under Endangered Species Act |
| 2010 | 365 | 0.440 | 0.250 | Began the IFQ system for commercial grouper and tilefish (Amend. 29) Longline endorsement required (Amend. 31) Reef fish bottom longline fishing restricted to outside the 35-fathom depth contour from June – August (Amend. 31) Longlines limited to 1000 hooks, with no more than 750 rigged for fishing (Amend. 31) |
| 2011 | 365 | 0.440 | 0.386 | |
| 2012 | 366 | 0.582 | 0.451 | Increased TAC to 0.58 mp; Anchor and blackline tilefish removed from Reef Fish FMP and IFQ program. |
| 2013 | 365 | 0.582 | 0.440 | |
| 2014 | 365 | 0.582 | 0.517 | |
| 2015 | 365 | 0.582 | 0.537 | |
| 2016 | 366 | 0.582 | 0.429 | |
| 2017 | 365 | 0.582 | 0.485 | |
| 2018 | 365 | 0.528 | 0.386 | |
| 2019 | 365 | 0.528 | 0.423 | |
| 2020 | 366 | 0.528 | 0.349 | |
| 2021 | 365 | 0.528 | 0.484 | |

¹ Tilefish included: Golden tilefish, blueline tilefish, goldface tilefish, anchor tilefish, and blackline tilefish. In 2012, anchor and blackline tilefish were removed from the GT-IFQ program.

² Harvest from 1990-2009 taken from the SEFSC ACL database; harvest from 2010 to current from IFQ database.

Appendix 4: Gulf of Mexico Commercial Reef Fish Permit Data

On August 27, 2021, the NMFS Permits Information Management System (PIMS) Database was transitioned onto a new platform to modernize the database, improve data collection, and automate many permitting processes for permit holders in the Southeast region. Summarization of the data on the new platform will require new tools and techniques that were not yet available for this report. All tables that require data from the PIMS Database, therefore, are presented here through 2020.

Appendix 4.1: Shareholders by permit status and the total share percentage held by those accounts

| Cat. | Year | Permit N (share%) | No Permit N (share%) | Cat. | Year | Permit N (share%) | No Permit N (share%) |
|------|------|----------------------|-------------------------|-------|------|----------------------|-------------------------|
| DWG | 2010 | 449 (99%) | 12 (1%) | GG | 2010 | 690 (99%) | 29 (<1%) |
| | 2011 | 392 (96%) | 39 (4%) | | 2011 | 578 (98%) | 83 (2%) |
| | 2012 | 359 (97%) | 42 (3%) | | 2012 | 513 (97%) | 99 (3%) |
| | 2013 | 323 (95%) | 59 (5%) | | 2013 | 475 (94%) | 120 (6%) |
| | 2014 | 296 (93%) | 72 (7%) | | 2014 | 433 (94%) | 142 (6%) |
| | 2015 | 275 (87%) | 91 (13%) | | 2015 | 404 (87%) | 170 (13%) |
| | 2016 | 262 (85%) | 97 (15%) | | 2016 | 390 (85%) | 181 (15%) |
| | 2017 | 252 (85%) | 109 (15%) | | 2017 | 379 (83%) | 191 (15%) |
| | 2018 | 239 (69%) | 105 (31%) | | 2018 | 359 (80%) | 164 (19%) |
| | 2019 | 224 (69%) | 112 (31%) | | 2019 | 343 (76%) | 176 (24%) |
| RG | 2020 | 213 (82%) | 121 (18%) | | 2020 | 328 (73%) | 182 (27%) |
| | 2010 | 641 (99%) | 24 (<1%) | SWG | 2010 | 692 (99%) | 29 (<1%) |
| | 2011 | 537 (98%) | 73 (2%) | | 2011 | 591 (97%) | 83 (3%) |
| | 2012 | 479 (98%) | 90 (2%) | | 2012 | 527 (96%) | 102 (4%) |
| | 2013 | 440 (96%) | 110 (4%) | | 2013 | 479 (94%) | 125 (6%) |
| | 2014 | 402 (95%) | 128 (5%) | | 2014 | 433 (92%) | 149 (8%) |
| | 2015 | 369 (80%) | 161 (20%) | | 2015 | 404 (85%) | 177 (15%) |
| | 2016 | 360 (79%) | 170 (21%) | | 2016 | 390 (85%) | 187 (15%) |
| | 2017 | 362 (80%) | 186 (20%) | | 2017 | 380 (85%) | 196 (15%) |
| | 2018 | 339 (79%) | 166 (21%) | | 2018 | 352 (83%) | 169 (17%) |
| | 2019 | 321 (72%) | 175 (28%) | | 2019 | 342 (82%) | 175 (18%) |
| TF | 2020 | 305 (71%) | 183 (29%) | | 2020 | 330 (80%) | 182 (19%) |
| | 2010 | 282 (99%) | 5 (<1%) | Total | 2010 | 714 | 29 |
| | 2011 | 238 (98%) | 22 (2%) | | 2011 | 612 | 87 |
| | 2012 | 224 (98%) | 22 (2%) | | 2012 | 556 | 109 |
| | 2013 | 200 (96%) | 32 (4%) | | 2013 | 507 | 137 |
| | 2014 | 187 (95%) | 40 (5%) | | 2014 | 465 | 163 |
| | 2015 | 167 (89%) | 55 (11%) | | 2015 | 441 | 204 |
| | 2016 | 155 (87%) | 56 (13%) | | 2016 | 430 | 223 |
| | 2017 | 154 (89%) | 60 (11%) | | 2017 | 424 | 243 |
| | 2018 | 151 (79%) | 54 (21%) | | 2018 | 398 | 218 |
| | 2019 | 140 (70%) | 58 (30%) | | 2019 | 385 | 230 |
| | 2020 | 137 (82%) | 64 (18%) | | 2020 | 368 | 238 |

Note: N indicates the number of shareholders and share percent is the total share percentage held by all of those accounts. Shares from 2018 to 2020 do not equal 100% as the reverted shares are held in an administrative account until the Gulf Council determines distribution.

Appendix 4.2: Vessels that harvested GT-IFQ species by region

| Cat. | Year | N | FL | Other Gulf | Cat. | Year | N | FL | Other Gulf |
|------|------|-----|-----|------------|-------|------|-----|-----|------------|
| DWG | 2010 | 238 | NA | NA | GG | 2010 | 493 | NA | NA |
| | 2011 | 187 | 142 | 59 | | 2011 | 415 | 379 | 44 |
| | 2012 | 192 | 148 | 54 | | 2012 | 363 | 336 | 29 |
| | 2013 | 206 | 165 | 52 | | 2013 | 384 | 354 | 37 |
| | 2014 | 185 | 144 | 52 | | 2014 | 367 | 334 | 40 |
| | 2015 | 186 | 143 | 47 | | 2015 | 375 | 348 | 29 |
| | 2016 | 165 | 125 | 47 | | 2016 | 374 | 347 | 32 |
| | 2017 | 170 | 130 | 47 | | 2017 | 382 | 346 | 41 |
| | 2018 | 164 | 123 | 46 | | 2018 | 374 | 347 | 30 |
| | 2019 | 166 | 122 | 47 | | 2019 | 368 | 341 | 31 |
| | 2020 | 145 | 109 | 44 | | 2020 | 354 | 323 | 36 |
| RG | 2010 | 546 | NA | NA | SWG | 2010 | 489 | NA | NA |
| | 2011 | 393 | 383 | 11 | | 2011 | 322 | 284 | 54 |
| | 2012 | 383 | 375 | 9 | | 2012 | 307 | 270 | 43 |
| | 2013 | 398 | 386 | 13 | | 2013 | 343 | 304 | 52 |
| | 2014 | 363 | 356 | 9 | | 2014 | 324 | 282 | 52 |
| | 2015 | 384 | 371 | 13 | | 2015 | 353 | 310 | 46 |
| | 2016 | 376 | 369 | 9 | | 2016 | 341 | 299 | 53 |
| | 2017 | 380 | 361 | 21 | | 2017 | 346 | 295 | 59 |
| | 2018 | 376 | 368 | 8 | | 2018 | 330 | 287 | 48 |
| | 2019 | 376 | 371 | 7 | | 2019 | 326 | 279 | 55 |
| | 2020 | 359 | 349 | 10 | | 2020 | 309 | 260 | 54 |
| TF | 2010 | 166 | NA | NA | Total | 2010 | 630 | NA | NA |
| | 2011 | 79 | 66 | 22 | | 2011 | 452 | 401 | 64 |
| | 2012 | 75 | 59 | 23 | | 2012 | 440 | 388 | 59 |
| | 2013 | 97 | 81 | 21 | | 2013 | 449 | 398 | 61 |
| | 2014 | 78 | 61 | 23 | | 2014 | 414 | 364 | 57 |
| | 2015 | 91 | 75 | 18 | | 2015 | 434 | 386 | 51 |
| | 2016 | 86 | 66 | 24 | | 2016 | 446 | 397 | 57 |
| | 2017 | 85 | 66 | 22 | | 2017 | 441 | 387 | 60 |
| | 2018 | 79 | 60 | 21 | | 2018 | 453 | 403 | 55 |
| | 2019 | 87 | 65 | 24 | | 2019 | 455 | 402 | 61 |
| | 2020 | 96 | 78 | 22 | | 2020 | 428 | 374 | 61 |

Note: N indicates the number of shareholders and share percent is the total share percentage held by all of those accounts. Shares from 2018 to 2020 do not equal 100% as the reverted shares are held in an administrative account until the Gulf Council determines distribution.

Appendix 4.3: Number and volume of accounts only transferring allocation

| DWG | N (% accts) | Shares | | No Shares | | GG | N (% accts) | Shares | | No Shares | |
|------|----------------|--------|--------------|-----------|--------------|------|----------------|--------|--------------|-----------|--------------|
| | | Permit | No Permit | Permit | No Permit | | | Permit | No Permit | Permit | No Permit |
| 2010 | 182 (36%) | 148 | 7 | 27 | NA | 2010 | 183 (23%) | 156 | 14 | 13 | NA |
| 2011 | 212 (41%) | 142 | 30 | 40 | NA | 2011 | 223 (29%) | 164 | 35 | 24 | NA |
| 2012 | 209 (42%) | 147 | 30 | 32 | NA | 2012 | 215 (29%) | 156 | 37 | 22 | NA |
| 2013 | 182 (39%) | 126 | 24 | 32 | NA | 2013 | 174 (24%) | 123 | 33 | 18 | NA |
| 2014 | 186 (41%) | 128 | 29 | 29 | NA | 2014 | 199 (27%) | 137 | 38 | 24 | NA |
| 2015 | 203 (44%) | 114 | 35 | 43 | 11 | 2015 | 210 (28%) | 110 | 47 | 41 | 12 |
| 2016 | 206 (45%) | 110 | 46 | 43 | 7 | 2016 | 214 (28%) | 111 | 61 | 31 | 11 |
| 2017 | 176 (39%) | 83 | 48 | 35 | 10 | 2017 | 194 (25%) | 81 | 63 | 39 | 11 |
| 2018 | 186 (39%) | 81 | 56 | 36 | 13 | 2018 | 184 (24%) | 79 | 62 | 31 | 12 |
| 2019 | 206 (46%) | 98 | 62 | 32 | 14 | 2019 | 197 (28%) | 84 | 66 | 30 | 17 |
| 2020 | 207 (45%) | 83 | 59 | 48 | 17 | 2020 | 218 (30%) | 84 | 75 | 39 | 20 |

| RG | N (% accts) | Shares | | No Shares | | SWG | N (% accts) | Shares | | No Shares | |
|------|----------------|--------|--------------|-----------|--------------|------|----------------|--------|--------------|-----------|--------------|
| | | Permit | No Permit | Permit | No Permit | | | Permit | No Permit | Permit | No Permit |
| 2010 | 174 (23%) | 144 | 12 | 18 | NA | 2010 | 203 (27%) | 172 | 14 | 17 | NA |
| 2011 | 211 (29%) | 156 | 37 | 18 | NA | 2011 | 227 (30%) | 162 | 36 | 29 | NA |
| 2012 | 191 (27%) | 136 | 34 | 21 | NA | 2012 | 214 (29%) | 155 | 37 | 22 | NA |
| 2013 | 180 (26%) | 122 | 31 | 27 | NA | 2013 | 190 (26%) | 121 | 34 | 35 | NA |
| 2014 | 187 (27%) | 127 | 39 | 20 | NA | 2014 | 190 (26%) | 126 | 39 | 25 | NA |
| 2015 | 208 (29%) | 110 | 46 | 36 | 16 | 2015 | 208 (28%) | 106 | 44 | 46 | 12 |
| 2016 | 193 (27%) | 98 | 60 | 24 | 11 | 2016 | 214 (29%) | 109 | 60 | 35 | 10 |
| 2017 | 199 (27%) | 77 | 61 | 46 | 15 | 2017 | 202 (27%) | 86 | 59 | 46 | 11 |
| 2018 | 197 (26%) | 75 | 68 | 39 | 15 | 2018 | 195 (26%) | 76 | 60 | 46 | 13 |
| 2019 | 180 (26%) | 73 | 70 | 25 | 12 | 2019 | 196 (28%) | 90 | 63 | 29 | 14 |
| 2020 | 193 (28%) | 74 | 77 | 25 | 17 | 2020 | 200 (28%) | 80 | 65 | 35 | 20 |

| TF | N (% accts) | Shares | | No Shares | |
|------|----------------|--------|--------------|-----------|--------------|
| | | Permit | No Permit | Permit | No Permit |
| 2010 | 132 (44%) | 105 | 3 | 24 | NA |
| 2011 | 164 (53%) | 111 | 20 | 33 | NA |
| 2012 | 146 (50%) | 105 | 18 | 23 | NA |
| 2013 | 136 (48%) | 97 | 11 | 28 | NA |
| 2014 | 142 (51%) | 98 | 18 | 26 | NA |
| 2015 | 144 (50%) | 82 | 25 | 30 | 7 |
| 2016 | 132 (48%) | 74 | 32 | 22 | 4 |
| 2017 | 116 (44%) | 55 | 30 | 23 | 8 |
| 2018 | 124 (43%) | 62 | 27 | 28 | 7 |
| 2019 | 118 (42%) | 56 | 36 | 14 | 12 |
| 2020 | 140 (48%) | 57 | 36 | 37 | 10 |

Note: N indicates the number of accounts only transferring allocation. The percentage under N indicates the percentage of these accounts out of all accounts with allocation.

Appendix 5: Monthly landings by share category

Appendix 5.1: DWG monthly landings

| DWG | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|---------|
| Jan | 35,392 | 38,204 | 34,848 | 29,235 | 32,717 | 49,141 | 22,883 | 31,203 | 26,003 | 32,756 | 30,355 | 34,223 |
| Feb | 50,751 | 58,313 | 42,385 | 34,613 | 69,426 | 30,201 | 53,885 | 82,037 | 40,594 | 55,972 | 81,966 | 42,575 |
| Mar | 61,150 | 57,849 | 57,181 | 55,393 | 77,186 | 70,793 | 71,268 | 66,274 | 51,282 | 84,469 | 71,289 | 61,330 |
| Apr | 91,009 | 60,320 | 66,874 | 108,063 | 83,354 | 113,801 | 87,684 | 77,450 | 60,621 | 64,067 | 33,812 | 69,534 |
| May | 100,750 | 50,734 | 72,627 | 118,960 | 75,556 | 92,505 | 100,293 | 96,044 | 93,159 | 62,379 | 65,066 | 81,278 |
| Jun | 55,413 | 82,159 | 78,863 | 102,574 | 118,921 | 132,601 | 110,991 | 88,361 | 90,413 | 104,374 | 92,985 | 98,418 |
| Jul | 23,210 | 78,053 | 78,803 | 82,606 | 202,172 | 105,722 | 116,957 | 127,458 | 137,637 | 122,188 | 97,004 | 108,454 |
| Aug | 73,442 | 107,643 | 109,564 | 136,636 | 121,783 | 75,875 | 94,728 | 87,208 | 124,413 | 162,450 | 87,288 | 83,900 |
| Sept | 27,411 | 41,232 | 92,812 | 50,247 | 59,900 | 57,064 | 42,143 | 30,605 | 41,019 | 55,793 | 41,212 | 39,723 |
| Oct | 26,855 | 71,477 | 118,894 | 65,751 | 47,439 | 60,078 | 57,404 | 32,449 | 33,029 | 68,553 | 61,869 | 51,751 |
| Nov | 31,500 | 68,986 | 89,764 | 62,209 | 47,896 | 38,770 | 40,162 | 39,611 | 51,059 | 71,950 | 54,782 | 41,451 |
| Dec | 47,879 | 64,549 | 121,220 | 66,636 | 111,792 | 84,788 | 68,642 | 63,199 | 68,223 | 66,778 | 86,132 | 87,651 |

Appendix 5.2: GG monthly landings

| GG | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|------|--------|--------|--------|--------|---------|--------|---------|--------|--------|--------|--------|---------|
| Jan | 43,562 | 24,071 | 60,119 | 53,809 | 33,365 | 38,717 | 33,482 | 33,005 | 34,882 | 74,982 | 36,767 | 50,766 |
| Feb | 48,530 | 20,557 | 47,387 | 53,261 | 72,979 | 40,135 | 139,315 | 66,707 | 52,881 | 69,149 | 49,407 | 45,799 |
| Mar | 59,766 | 8,535 | 84,824 | 67,014 | 54,496 | 68,525 | 96,987 | 40,255 | 31,632 | 54,160 | 48,158 | 41,590 |
| Apr | 54,033 | 6,470 | 48,400 | 62,902 | 59,951 | 48,889 | 77,818 | 37,960 | 38,530 | 44,890 | 17,757 | 41,403 |
| May | 56,455 | 7,542 | 54,861 | 79,613 | 69,165 | 56,515 | 90,094 | 50,348 | 51,732 | 67,217 | 82,664 | 55,389 |
| Jun | 43,773 | 35,315 | 25,247 | 48,369 | 60,321 | 65,145 | 66,023 | 36,954 | 40,718 | 30,830 | 59,586 | 53,568 |
| Jul | 22,486 | 25,211 | 44,672 | 38,466 | 36,146 | 37,457 | 40,623 | 28,171 | 21,296 | 26,979 | 32,264 | 46,476 |
| Aug | 27,624 | 25,077 | 23,116 | 35,058 | 31,287 | 34,054 | 28,506 | 17,899 | 29,344 | 20,592 | 33,291 | 25,366 |
| Sept | 27,371 | 27,614 | 29,441 | 22,929 | 22,746 | 22,785 | 74,168 | 20,029 | 25,351 | 18,453 | 14,678 | 25,586 |
| Oct | 25,727 | 23,666 | 24,270 | 27,367 | 38,902 | 21,120 | 59,567 | 20,194 | 30,315 | 12,763 | 11,920 | 35,240 |
| Nov | 19,537 | 34,324 | 32,495 | 19,533 | 42,836 | 39,099 | 37,644 | 40,452 | 54,907 | 19,654 | 18,896 | 54,277 |
| Dec | 65,074 | 81,755 | 50,234 | 71,343 | 167,319 | 82,500 | 32,963 | 51,182 | 40,326 | 30,206 | 63,174 | 153,036 |

Appendix 5.3: RG monthly landings

| RG | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|-----------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Jan | 192,597 | 331,276 | 421,337 | 332,092 | 320,089 | 346,553 | 170,241 | 232,104 | 195,935 | 162,085 | 169,512 | 237,536 |
| Feb | 178,559 | 448,858 | 470,532 | 425,215 | 518,127 | 377,266 | 581,470 | 327,810 | 308,346 | 187,709 | 241,030 | 270,238 |
| Mar | 207,862 | 466,548 | 630,864 | 347,683 | 513,430 | 586,891 | 583,068 | 430,109 | 308,390 | 255,016 | 259,061 | 365,120 |
| Apr | 174,968 | 401,810 | 509,247 | 433,049 | 559,346 | 563,888 | 476,261 | 329,932 | 245,129 | 197,722 | 140,073 | 278,286 |
| May | 183,095 | 459,804 | 609,515 | 410,599 | 658,087 | 397,064 | 478,636 | 330,111 | 245,245 | 302,151 | 201,318 | 234,483 |
| Jun | 331,751 | 291,691 | 281,429 | 282,897 | 411,045 | 330,577 | 315,392 | 205,155 | 164,136 | 125,119 | 154,252 | 212,642 |
| Jul | 152,992 | 256,111 | 533,947 | 238,039 | 366,299 | 240,003 | 207,021 | 184,824 | 117,896 | 76,566 | 114,911 | 186,586 |
| Aug | 199,203 | 289,854 | 333,414 | 267,511 | 329,075 | 287,456 | 207,372 | 137,714 | 106,545 | 87,697 | 131,988 | 151,635 |
| Sept | 344,546 | 440,791 | 337,003 | 459,665 | 543,291 | 493,225 | 372,265 | 205,423 | 190,387 | 145,707 | 226,274 | 276,540 |
| Oct | 347,699 | 394,506 | 355,110 | 481,298 | 539,281 | 320,964 | 364,584 | 300,597 | 161,661 | 143,312 | 239,861 | 229,876 |
| Nov | 324,820 | 408,189 | 299,272 | 310,562 | 292,391 | 354,287 | 370,822 | 287,991 | 200,971 | 190,630 | 162,181 | 167,440 |
| Dec | 275,766 | 592,756 | 435,535 | 606,062 | 447,532 | 486,818 | 504,256 | 405,440 | 159,659 | 225,472 | 335,013 | 274,145 |

Appendix 5.4: SWG monthly landings

| SWG | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Jan | 18,664 | 13,712 | 19,805 | 24,189 | 11,348 | 17,726 | 11,116 | 12,229 | 10,041 | 15,233 | 6,522 | 10,712 |
| Feb | 21,420 | 21,907 | 22,302 | 29,567 | 26,529 | 16,604 | 32,714 | 24,863 | 20,137 | 16,694 | 10,939 | 9,658 |
| Mar | 21,456 | 17,805 | 30,298 | 27,567 | 23,814 | 28,584 | 34,914 | 21,771 | 12,737 | 15,387 | 13,234 | 14,867 |
| Apr | 17,821 | 12,847 | 20,776 | 28,918 | 20,973 | 22,090 | 32,585 | 18,995 | 17,917 | 14,667 | 12,054 | 15,260 |
| May | 12,579 | 16,762 | 26,444 | 39,789 | 20,476 | 26,645 | 36,499 | 31,114 | 26,683 | 17,709 | 19,556 | 17,535 |
| Jun | 13,769 | 17,283 | 18,799 | 32,217 | 26,542 | 37,722 | 40,439 | 18,746 | 24,544 | 24,932 | 25,056 | 24,841 |
| Jul | 7,091 | 16,725 | 28,985 | 32,899 | 22,743 | 26,372 | 36,981 | 29,861 | 21,336 | 21,176 | 24,560 | 25,980 |
| Aug | 11,915 | 17,534 | 28,351 | 24,286 | 28,620 | 27,986 | 34,842 | 22,444 | 30,266 | 22,100 | 20,287 | 14,691 |
| Sept | 11,266 | 14,286 | 21,451 | 13,299 | 16,704 | 9,690 | 31,470 | 10,040 | 17,965 | 12,463 | 7,976 | 11,216 |
| Oct | 7,618 | 8,353 | 28,290 | 18,703 | 22,184 | 11,750 | 30,357 | 11,126 | 14,844 | 5,761 | 6,396 | 11,275 |
| Nov | 5,880 | 10,693 | 23,001 | 10,924 | 18,084 | 22,307 | 20,943 | 15,239 | 14,930 | 7,591 | 5,234 | 9,903 |
| Dec | 8,755 | 18,328 | 31,865 | 25,488 | 25,234 | 34,862 | 15,303 | 22,618 | 12,761 | 11,301 | 12,258 | 21,448 |

Appendix 5.5: TF monthly landings

| TF | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|-----------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Jan | 8,394 | 28,302 | 18,918 | 19,636 | 14,271 | 26,292 | 15,950 | 14,374 | 8,973 | 11,703 | 15,916 | 17,783 |
| Feb | 21,028 | 18,835 | 29,397 | 8,331 | 38,503 | 25,885 | 20,441 | 34,527 | 28,926 | 25,816 | 44,447 | 21,427 |
| Mar | 33,462 | 27,464 | 31,960 | 14,501 | 26,818 | 60,672 | 33,709 | 46,303 | 33,615 | 30,635 | 19,428 | 59,607 |
| Apr | 44,533 | 26,043 | 30,920 | 25,456 | 31,315 | 53,782 | 51,830 | 64,892 | 28,367 | 23,196 | 12,439 | 17,718 |
| May | 22,382 | 23,297 | 24,966 | 49,315 | 32,253 | 34,327 | 42,204 | 37,944 | 31,125 | 39,180 | 25,288 | 37,391 |
| Jun | 10,397 | 32,987 | 24,185 | 26,924 | 43,517 | 54,986 | 46,044 | 33,311 | 35,113 | 32,173 | 27,722 | 40,575 |
| Jul | 4,229 | 33,504 | 22,632 | 19,910 | 51,868 | 46,521 | 34,901 | 58,800 | 48,434 | 44,515 | 37,659 | 66,664 |
| Aug | 24,940 | 20,209 | 34,894 | 61,498 | 48,118 | 47,284 | 36,617 | 34,494 | 39,926 | 53,815 | 38,670 | 57,607 |
| Sept | 11,826 | 16,098 | 52,189 | 24,329 | 34,918 | 25,380 | 18,795 | 27,484 | 28,420 | 31,809 | 23,436 | 38,214 |
| Oct | 19,335 | 25,582 | 86,750 | 59,911 | 66,799 | 55,348 | 42,618 | 53,605 | 35,578 | 44,295 | 37,705 | 40,167 |
| Nov | 14,521 | 55,566 | 21,861 | 54,381 | 26,247 | 45,084 | 24,889 | 40,276 | 24,290 | 27,849 | 28,205 | 41,300 |
| Dec | 34,661 | 78,247 | 72,449 | 75,899 | 102,641 | 61,951 | 61,005 | 38,885 | 43,371 | 57,940 | 37,929 | 45,579 |

Appendix 6: Share Transfer Reasons

Beginning in 2013, share transfers required the selection of one of seven transfer reasons for every share transfer to better monitor the program's performance. The tables below contain the number of share transactions and percentage transferred by transfer reason between 2013 and 2021.

Appendix 6.1: Count of Share Transfer Reasons

| Share Transfer Reason | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|-------------------------------|------|------|------|------|------|------|------|------|------|
| Barter trade for allocation | - | 7 | 16 | 4 | 1 | - | 1 | - | - |
| Barter trade for shares | 8 | 10 | 40 | 12 | 14 | 1 | - | - | 2 |
| Gift | 11 | 11 | - | 2 | 13 | 6 | 8 | 15 | 10 |
| No comment | 67 | 68 | 164 | 94 | 62 | 83 | 61 | 65 | 38 |
| Package deal | 22 | 22 | 8 | 4 | 7 | 34 | 14 | 5 | - |
| Transfer to a related account | 66 | 44 | 91 | 55 | 36 | 24 | 17 | 48 | 20 |
| Sale to another shareholder | 223 | 247 | 287 | 136 | 151 | 108 | 138 | 94 | 101 |

Appendix 6.2: Percent of Shares Transferred for Each Transfer Reason

| Share Transfer Reason | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|-------------------------------|-------|-------|-------|-------|------|-------|-------|-------|-------|
| Barter trade for allocation | - | 0.97 | 1.28 | 0.03 | 0.01 | - | 0.13 | - | - |
| Barter trade for shares | 0.22 | 4.62 | 7.95 | 0.59 | 1.62 | 0.10 | - | - | 0.01 |
| Gift | 0.12 | 2.49 | - | 0.15 | 1.12 | 0.84 | 0.36 | 1.07 | 1.44 |
| No comment | 12.74 | 10.68 | 32.28 | 24.09 | 4.54 | 10.67 | 10.00 | 11.03 | 10.33 |
| Package deal | 3.62 | 3.40 | 0.87 | 0.35 | 0.03 | 8.00 | 1.09 | 2.68 | - |
| Transfer to a related account | 12.88 | 11.06 | 46.58 | 12.42 | 5.10 | 3.26 | 6.83 | 11.55 | 2.47 |
| Sale to another shareholder | 14.76 | 39.73 | 61.22 | 19.06 | 9.28 | 24.97 | 56.73 | 15.94 | 20.69 |

Appendix 7: Price Analysis Rationale

Price information is crucial to the economic evaluation of the program. The Grouper-Tilefish Individual Fishing Quota (GT-IFQ) program continues to have price collection or reporting issues with respect to share transfers, allocation transfers, and ex-vessel prices, although some improvements have occurred. Since mid-year 2010, a minimum transfer price of \$0.01 has been required for all share transfers. Despite requiring participants to enter a transaction price for share transfers, many share transactions specify a transaction value of \$0.01. A minimum allocation transfer price of \$0.01 was only recently required by the online system as of December 21, 2020. Share prices were analyzed by year and generally resulted in right skewed distributions. Maximum share prices were selected to exclude unusually high and infrequent share prices. Minimum values were selected based on low-value outliers. Allocation prices were analyzed on a yearly basis. Allocation prices generally had a bimodal distribution that depicted a subset of transactions with low price information. The minimum allocation price was set to the valley between the bi-modal distributions. The maximum allocation prices were selected to exclude unusually high and infrequent allocation prices, including all prices in excess of the maximum ex-vessel value reported. Share and allocation prices included in the analyses were equal to or greater than the minimum value selected and equal to or less than the maximum value selected (see table above).

| Cat. | Year | Share | | Allocation | | Cat. | Year | Share | | Allocation | |
|------|------|-------|------|------------|--------|------|------|-------|------|------------|--------|
| | | Min. | Max. | Min. | Max. | | | Min. | Max. | Min. | Max. |
| DWG | 2010 | \$2 | \$30 | \$0.50 | \$3.00 | GG | 2010 | \$2 | \$40 | \$0.50 | \$5.00 |
| | 2011 | \$2 | \$30 | \$0.50 | \$3.00 | | 2011 | \$4 | \$60 | \$0.50 | \$5.00 |
| | 2012 | \$2 | \$30 | \$0.50 | \$4.00 | | 2012 | \$4 | \$60 | \$0.50 | \$5.00 |
| | 2013 | \$2 | \$30 | \$0.50 | \$3.00 | | 2013 | \$4 | \$60 | \$0.50 | \$5.00 |
| | 2014 | \$2 | \$30 | \$0.50 | \$3.00 | | 2014 | \$5 | \$60 | \$0.50 | \$5.00 |
| | 2015 | \$2 | \$30 | \$0.50 | \$3.00 | | 2015 | \$5 | \$60 | \$0.50 | \$5.00 |
| | 2016 | \$2 | \$30 | \$0.50 | \$3.50 | | 2016 | \$5 | \$60 | \$0.50 | \$5.00 |
| | 2017 | \$2 | \$30 | \$0.50 | \$3.00 | | 2017 | \$5 | \$60 | \$0.50 | \$5.00 |
| | 2018 | \$2 | \$30 | \$0.50 | \$3.00 | | 2018 | \$5 | \$60 | \$0.50 | \$5.00 |
| | 2019 | \$2 | \$30 | \$0.50 | \$3.00 | | 2019 | \$5 | \$60 | \$0.50 | \$5.00 |
| | 2020 | \$2 | \$30 | \$0.50 | \$3.00 | | 2020 | \$4 | \$60 | \$0.50 | \$5.00 |
| RG | 2021 | \$2 | \$30 | \$0.50 | \$3.00 | | 2021 | \$4 | \$60 | \$0.50 | \$5.00 |
| | 2010 | \$2 | \$15 | \$0.30 | \$4.00 | SWG | 2010 | \$2 | \$30 | \$0.30 | \$5.00 |
| | 2011 | \$2 | \$15 | \$0.30 | \$4.00 | | 2011 | \$2 | \$30 | \$0.30 | \$5.00 |
| | 2012 | \$2 | \$15 | \$0.30 | \$4.00 | | 2012 | \$3 | \$30 | \$0.30 | \$5.00 |
| | 2013 | \$2 | \$20 | \$0.30 | \$4.00 | | 2013 | \$3 | \$30 | \$0.20 | \$5.00 |
| | 2014 | \$3 | \$20 | \$0.30 | \$4.00 | | 2014 | \$3 | \$30 | \$0.20 | \$5.00 |
| | 2015 | \$3 | \$20 | \$0.30 | \$4.00 | | 2015 | \$3 | \$30 | \$0.20 | \$5.00 |
| | 2016 | \$3 | \$20 | \$0.30 | \$4.00 | | 2016 | \$3 | \$30 | \$0.20 | \$4.00 |
| | 2017 | \$2 | \$20 | \$0.10 | \$4.00 | | 2017 | \$3 | \$30 | \$0.20 | \$4.00 |
| | 2018 | \$2 | \$20 | \$0.10 | \$4.00 | | 2018 | \$3 | \$30 | \$0.20 | \$4.00 |
| | 2019 | \$2 | \$20 | \$0.10 | \$4.00 | | 2019 | \$3 | \$30 | \$0.20 | \$4.00 |
| | 2020 | \$2 | \$20 | \$0.10 | \$4.00 | | 2020 | \$3 | \$30 | \$0.20 | \$4.00 |
| TF | 2021 | \$2 | \$20 | \$0.10 | \$4.00 | | 2021 | \$3 | \$30 | \$0.20 | \$4.00 |
| | 2010 | \$1 | \$20 | \$0.10 | \$2.00 | | | | | | |
| | 2011 | \$1 | \$20 | \$0.10 | \$2.00 | | | | | | |
| | 2012 | \$1 | \$20 | \$0.10 | \$2.00 | | | | | | |
| | 2013 | \$1 | \$20 | \$0.10 | \$4.00 | | | | | | |
| | 2014 | \$1 | \$20 | \$0.10 | \$4.00 | | | | | | |
| | 2015 | \$1 | \$20 | \$0.10 | \$4.00 | | | | | | |
| | 2016 | \$1 | \$20 | \$0.10 | \$4.00 | | | | | | |
| | 2017 | \$1 | \$20 | \$0.10 | \$3.00 | | | | | | |
| | 2018 | \$1 | \$20 | \$0.10 | \$3.00 | | | | | | |
| | 2019 | \$1 | \$20 | \$0.10 | \$3.00 | | | | | | |
| | 2020 | \$1 | \$20 | \$0.10 | \$3.00 | | | | | | |
| | 2021 | \$1 | \$20 | \$0.10 | \$3.00 | | | | | | |

Ex-vessel prices have varied since the start of the GT-IFQ program. Extremely low prices have been attributed to dealers reporting ex-vessel prices after deducting for transferred or leased allocation, goods (e.g., bait, ice, fuel) and/or services (e.g., repairs, machinery replacement). The definition of actual ex-vessel price was changed through regulations in June 2011 and prohibits the cost of allocation transfers, goods, and /or services from being deducted from ex-vessel prices. Despite the new regulation in 2011, ex-vessel prices in some instances continue to be under-reported in the IFQ online system. An expected range of reasonable prices was calculated for each price variable by investigating the frequency of each price within a given year(s). Any price value outside the given range was excluded from analysis. All price information decisions were verified against averages submitted by industry representatives. Ex-vessel prices were analyzed on a yearly basis. Ex-vessel price distributions were left skewed, with infrequent but unusually low prices for many of the species. Minimum prices were selected to exclude these unusually low and infrequent ex-vessel prices. It is thought that these prices reflect an additional deduction as stated above. The maximum value was selected as <\$10. Since 2014, \$20 is the maximum amount allowed to be entered into the system. Any values of \$10 were excluded, as they most likely resulted from typographical errors when entering the value. The table below shows the minimum price that was included in the ex-vessel price analyses.

Ex-vessel minimum price:

| Year | Deep Water Grouper | | | | Gag | Red Grouper | Shallow Water Grouper | | | | Tilefish | | |
|------|--------------------|---------------|----------------|--------------------|--------|-------------|-----------------------|--------|-------------------|---------------------|-------------------|-----------------|-------------------|
| | Snowy Grouper | Speckled Hind | Warsaw Grouper | Yellowedge Grouper | | | Black Grouper | Scamp | Yellowfin Grouper | Yellowmouth Grouper | Blueline Tilefish | Golden Tilefish | Goldface Tilefish |
| 2010 | \$2.20 | \$2.00 | \$1.20 | \$2.20 | \$2.70 | \$2.00 | \$2.80 | \$2.50 | \$2.00 | \$2.80 | \$0.20 | \$0.50 | \$0.50 |
| 2011 | \$2.20 | \$2.00 | \$1.20 | \$2.20 | \$2.70 | \$2.00 | \$2.80 | \$2.50 | \$2.00 | \$2.80 | \$0.20 | \$1.00 | \$0.50 |
| 2012 | \$2.20 | \$2.00 | \$1.20 | \$2.20 | \$2.90 | \$2.00 | \$2.80 | \$3.20 | \$2.00 | \$2.80 | \$0.50 | \$1.00 | \$0.50 |
| 2013 | \$2.20 | \$2.00 | \$2.20 | \$2.20 | \$2.90 | \$2.00 | \$2.80 | \$3.20 | \$2.00 | \$2.80 | \$0.80 | \$1.00 | \$0.50 |
| 2014 | \$2.20 | \$2.00 | \$2.20 | \$2.20 | \$2.90 | \$2.00 | \$2.80 | \$3.20 | \$2.00 | \$2.80 | \$0.80 | \$1.00 | \$0.50 |
| 2015 | \$2.20 | \$2.00 | \$2.20 | \$2.20 | \$2.90 | \$2.00 | \$2.80 | \$3.20 | \$2.00 | \$2.80 | \$0.80 | \$1.00 | \$0.50 |
| 2016 | \$2.20 | \$2.00 | \$2.20 | \$2.20 | \$2.90 | \$2.00 | \$2.80 | \$3.20 | \$2.00 | \$2.80 | \$0.80 | \$1.00 | \$0.50 |
| 2017 | \$2.20 | \$2.00 | \$2.20 | \$2.20 | \$2.90 | \$2.00 | \$2.80 | \$3.20 | \$2.00 | \$2.80 | \$0.80 | \$1.00 | \$0.50 |
| 2018 | \$2.20 | \$2.00 | \$2.20 | \$2.20 | \$2.90 | \$2.00 | \$2.80 | \$3.20 | \$2.00 | \$2.80 | \$0.80 | \$1.00 | \$0.50 |
| 2019 | \$2.20 | \$2.00 | \$2.20 | \$2.20 | \$2.90 | \$2.00 | \$2.80 | \$3.20 | \$2.00 | \$2.80 | \$0.80 | \$1.00 | \$0.50 |
| 2020 | \$2.20 | \$2.00 | \$2.20 | \$2.20 | \$2.90 | \$2.00 | \$2.80 | \$3.20 | \$2.00 | \$2.60 | \$0.80 | \$1.00 | \$0.50 |
| 2021 | \$2.20 | \$2.00 | \$2.20 | \$2.20 | \$2.90 | \$2.00 | \$2.80 | \$3.20 | \$2.00 | \$2.60 | \$0.80 | \$1.00 | \$0.50 |

Appendix 8: Allocation Transfer Reasons

Beginning in 2013, allocation transfers required the selection of one of seven transfer reasons for every allocation transfer to better monitor the program's performance. The tables below contain the number of allocation transactions and the total pounds transferred by transfer reason between 2013 and 2021.

Appendix 8.1: Count of Allocation Transfer Reasons

| Allocation Transfer Reason | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|-------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Barter trade for allocation | 167 | 98 | 101 | 28 | 32 | 19 | 5 | 24 | 47 |
| Barter trade for shares | 14 | 19 | 35 | 9 | 10 | 45 | 15 | 5 | 9 |
| Gift | 139 | 126 | 80 | 113 | 128 | 179 | 180 | 149 | 175 |
| No comment | 2,276 | 3,145 | 3,484 | 4,850 | 5,406 | 4,377 | 6,032 | 5,742 | 5,883 |
| Package deal | 60 | 77 | 23 | 41 | 22 | 22 | 47 | 9 | 19 |
| Transfer to a related account | 1,075 | 1,043 | 1,211 | 1,409 | 1,671 | 1,838 | 2,575 | 2,798 | 2,601 |
| Sale to another shareholder | 1,549 | 2,317 | 1,879 | 1,764 | 2,031 | 2,127 | 2,646 | 2,486 | 4,491 |

Appendix 8.2: Pounds of Allocation Transferred for Each Transfer Reason

| Allocation Transfer Reason | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|-------------------------------|-----------|-----------|-----------|------------|------------|------------|------------|------------|-----------|
| Barter trade for allocation | 242,245 | 175,545 | 214,922 | 38,546 | 42,186 | 24,505 | 3,023 | 54,133 | 41,936 |
| Barter trade for shares | 62,235 | 56,675 | 292,573 | 7,054 | 8,312 | 42,549 | 10,004 | 8,443 | 7,604 |
| Gift | 147,140 | 81,314 | 38,276 | 202,270 | 177,616 | 157,690 | 253,538 | 128,924 | 176,508 |
| No comment | 3,363,517 | 5,362,720 | 6,196,445 | 11,990,710 | 12,297,855 | 10,101,566 | 10,662,533 | 10,605,738 | 9,772,723 |
| Package deal | 140,648 | 467,153 | 107,961 | 80,734 | 37,519 | 43,034 | 1,776,317 | 58,556 | 63,316 |
| Transfer to a related account | 3,011,559 | 2,651,134 | 3,819,045 | 4,043,051 | 3,936,138 | 5,584,058 | 4,374,343 | 4,317,216 | 4,307,884 |
| Sale to another shareholder | 2,422,142 | 3,763,044 | 4,469,944 | 4,331,621 | 5,281,279 | 4,733,629 | 6,142,046 | 5,446,879 | 8,734,000 |

Appendix 9: Average monthly allocation prices adjusted for inflation by share category

All monthly allocation prices are adjust for inflation using: <http://www.bea.gov/> with 2021 as the base year using the GDP deflator.

Appendix 9.1: DWG monthly allocation prices adjusted for inflation

| DWG | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Jan | \$1.35 | \$1.60 | \$1.46 | \$1.20 | \$1.29 | \$1.26 | \$1.29 | \$1.31 | \$1.23 | \$1.21 | \$1.19 | \$1.04 |
| Feb | \$1.50 | \$1.82 | \$1.54 | \$1.27 | \$1.27 | \$1.35 | \$1.31 | \$1.33 | \$1.16 | \$1.03 | \$1.11 | \$0.87 |
| Mar | \$1.38 | \$1.60 | \$1.60 | \$1.36 | \$1.15 | \$1.33 | \$1.35 | \$1.26 | \$1.24 | \$1.08 | \$1.08 | \$1.06 |
| Apr | \$1.77 | \$1.71 | \$1.38 | \$1.30 | \$1.19 | \$1.32 | \$1.35 | \$1.34 | \$1.22 | \$1.05 | \$1.11 | \$1.03 |
| May | \$1.74 | \$1.92 | \$1.50 | \$1.54 | \$1.14 | \$1.36 | \$1.32 | \$1.27 | \$1.26 | \$1.05 | \$1.07 | \$1.02 |
| Jun | \$1.85 | \$1.77 | \$1.55 | \$1.51 | \$1.29 | \$1.41 | \$1.35 | \$1.35 | \$0.94 | \$1.10 | \$1.07 | \$1.08 |
| Jul | \$1.66 | \$1.46 | \$1.46 | \$1.40 | \$1.31 | \$1.40 | \$1.32 | \$1.30 | \$0.99 | \$1.08 | \$1.10 | \$1.11 |
| Aug | \$1.83 | \$1.78 | \$1.31 | \$1.43 | \$1.27 | \$1.39 | \$1.28 | \$1.31 | \$0.98 | \$1.10 | \$1.02 | \$1.05 |
| Sept | \$1.77 | \$1.46 | \$1.46 | \$1.40 | \$1.36 | \$1.28 | \$1.19 | \$1.19 | \$0.92 | \$0.94 | \$1.15 | \$1.22 |
| Oct | \$1.83 | \$1.42 | \$1.35 | \$1.34 | \$1.35 | \$1.18 | \$1.18 | \$1.33 | \$0.79 | \$1.10 | \$0.94 | \$1.13 |
| Nov | \$1.02 | \$1.37 | \$1.16 | \$0.97 | \$1.35 | \$1.31 | \$0.90 | \$0.87 | \$0.94 | \$1.10 | \$1.26 | \$1.04 |
| Dec | \$0.96 | \$1.30 | \$1.03 | \$1.17 | \$1.20 | \$1.22 | \$0.91 | \$0.94 | \$1.18 | \$1.01 | \$0.85 | \$0.94 |

Appendix 9.2: GG monthly allocation prices adjusted for inflation

| GG | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|-----------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Jan | \$1.53 | \$2.38 | \$2.06 | \$2.57 | \$2.11 | \$2.31 | \$1.57 | \$1.74 | \$1.20 | \$0.95 | \$0.85 | \$0.78 |
| Feb | \$1.45 | \$1.62 | \$2.01 | \$2.71 | \$3.67 | \$2.19 | \$1.43 | \$1.65 | \$0.86 | \$0.91 | \$0.77 | \$0.64 |
| Mar | \$1.53 | \$1.87 | \$2.32 | \$3.05 | \$2.68 | \$2.56 | \$1.40 | \$1.56 | \$0.93 | \$0.89 | \$0.85 | \$0.77 |
| Apr | \$1.37 | \$1.66 | \$2.19 | \$3.01 | \$2.96 | \$2.22 | \$1.41 | \$1.55 | \$1.06 | \$0.89 | \$0.84 | \$0.76 |
| May | \$1.48 | \$3.46 | \$2.36 | \$3.26 | \$2.87 | \$2.28 | \$1.57 | \$1.55 | \$0.83 | \$0.96 | \$0.79 | \$0.78 |
| Jun | \$1.33 | \$2.66 | \$3.11 | \$3.23 | \$3.11 | \$2.08 | \$1.39 | \$1.40 | \$1.14 | \$0.75 | \$0.72 | \$0.77 |
| Jul | \$1.77 | \$2.83 | \$3.24 | \$2.98 | \$2.89 | \$1.59 | \$1.33 | \$1.33 | \$0.86 | \$0.93 | \$0.61 | \$0.79 |
| Aug | \$0.76 | \$2.23 | \$2.75 | \$3.46 | \$2.68 | \$1.88 | \$1.40 | \$1.66 | \$2.12 | \$0.91 | \$0.82 | \$0.81 |
| Sept | \$1.35 | \$2.56 | \$3.15 | \$2.93 | \$2.51 | \$1.98 | \$1.71 | \$1.74 | \$1.02 | \$0.86 | \$0.80 | \$0.77 |
| Oct | \$0.73 | \$1.99 | \$2.98 | \$2.84 | \$1.96 | \$1.50 | \$1.82 | \$1.21 | \$1.13 | \$0.90 | \$0.64 | \$0.88 |
| Nov | \$1.03 | \$1.93 | \$2.98 | \$2.27 | \$1.69 | \$1.92 | \$1.87 | \$1.52 | \$0.95 | \$0.89 | \$0.81 | \$0.83 |
| Dec | \$1.30 | \$0.96 | \$3.03 | \$2.20 | \$1.37 | \$2.13 | \$1.56 | \$1.31 | \$1.27 | \$0.92 | \$0.74 | \$0.88 |

Appendix 9.3: RG monthly allocation prices adjusted for inflation

| RG | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|-----------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Jan | \$1.14 | \$0.52 | \$0.72 | \$1.13 | \$1.04 | \$1.16 | \$1.07 | \$0.46 | \$0.41 | \$0.67 | \$0.47 | \$0.48 |
| Feb | \$1.22 | \$0.57 | \$0.79 | \$1.15 | \$1.05 | \$1.24 | \$0.95 | \$0.52 | \$0.29 | \$0.62 | \$0.46 | \$0.57 |
| Mar | \$1.00 | \$0.59 | \$0.90 | \$1.19 | \$1.06 | \$1.26 | \$1.01 | \$0.56 | \$0.23 | \$0.53 | \$0.53 | \$0.58 |
| Apr | \$1.61 | \$0.70 | \$0.96 | \$1.21 | \$1.08 | \$1.24 | \$0.90 | \$0.43 | \$0.21 | \$0.55 | \$0.58 | \$0.60 |
| May | \$0.57 | \$0.76 | \$1.07 | \$1.23 | \$1.12 | \$1.31 | \$1.03 | \$0.47 | \$0.26 | \$0.53 | \$0.54 | \$0.56 |
| Jun | \$0.73 | \$0.76 | \$1.05 | \$1.24 | \$1.14 | \$1.37 | \$0.96 | \$0.46 | \$0.24 | \$0.65 | \$0.54 | \$0.69 |
| Jul | \$0.57 | \$0.81 | \$1.11 | \$1.23 | \$1.15 | \$1.29 | \$0.97 | \$0.45 | \$0.23 | \$0.64 | \$0.51 | \$0.81 |
| Aug | \$2.15 | \$0.80 | \$0.97 | \$1.16 | \$1.12 | \$1.27 | \$1.09 | \$0.69 | \$0.28 | \$0.66 | \$0.55 | \$0.78 |
| Sept | \$0.91 | \$0.82 | \$1.14 | \$1.07 | \$1.15 | \$1.20 | \$1.01 | \$0.41 | \$1.52 | \$0.57 | \$0.48 | \$0.83 |
| Oct | \$0.80 | \$0.78 | \$1.20 | \$0.99 | \$1.22 | \$1.04 | \$0.87 | \$0.34 | \$1.01 | \$0.55 | \$0.47 | \$0.90 |
| Nov | \$1.12 | \$0.64 | \$1.12 | \$1.01 | \$1.22 | \$1.13 | \$0.95 | \$0.36 | \$0.25 | \$0.57 | \$0.46 | \$1.02 |
| Dec | \$0.66 | \$0.57 | \$1.05 | \$0.73 | \$1.18 | \$1.11 | \$0.96 | \$0.33 | \$0.33 | \$0.55 | \$0.44 | \$1.00 |

Appendix 9.4: SWG monthly allocation prices adjusted for inflation

| SWG | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Jan | \$1.38 | \$1.70 | \$1.46 | \$0.98 | \$0.90 | \$0.72 | \$0.59 | \$0.60 | \$0.59 | \$0.66 | \$0.64 | \$0.54 |
| Feb | \$1.39 | \$1.70 | \$1.28 | \$0.79 | \$0.90 | \$0.70 | \$0.50 | \$0.66 | \$0.43 | \$0.60 | \$0.55 | \$0.53 |
| Mar | \$1.64 | \$1.01 | \$1.25 | \$1.01 | \$0.69 | \$0.69 | \$0.68 | \$0.66 | \$0.62 | \$0.64 | \$0.87 | \$0.59 |
| Apr | \$1.97 | \$1.80 | \$1.37 | \$1.11 | \$0.89 | \$0.64 | \$0.56 | \$0.62 | \$0.65 | \$0.56 | \$0.79 | \$0.49 |
| May | \$1.64 | \$2.23 | \$1.33 | \$0.83 | \$0.94 | \$0.70 | \$0.57 | \$0.63 | \$0.50 | \$0.61 | \$0.58 | \$0.48 |
| Jun | \$1.77 | \$1.72 | \$2.06 | \$1.49 | \$1.02 | \$0.72 | \$0.65 | \$0.76 | \$0.55 | \$0.65 | \$0.57 | \$0.49 |
| Jul | \$2.15 | \$1.34 | \$0.97 | \$1.12 | \$0.86 | \$0.58 | \$0.82 | \$0.54 | \$0.40 | \$0.51 | \$0.54 | \$0.61 |
| Aug | \$0.82 | \$1.75 | \$0.97 | \$0.81 | \$0.96 | \$0.54 | \$0.64 | \$0.62 | \$0.76 | \$0.61 | \$0.47 | \$0.60 |
| Sept | \$1.00 | \$1.27 | \$1.92 | \$1.08 | \$0.79 | \$0.71 | \$0.63 | \$0.73 | \$0.62 | \$0.62 | \$0.60 | \$0.56 |
| Oct | \$1.16 | \$0.89 | \$1.75 | \$1.09 | \$0.80 | \$0.58 | \$0.75 | \$0.75 | \$0.60 | \$0.58 | \$0.47 | \$0.69 |
| Nov | \$1.49 | \$0.95 | \$1.30 | \$0.95 | \$0.93 | \$0.80 | \$0.54 | \$0.65 | \$0.50 | \$0.71 | \$0.59 | \$0.54 |
| Dec | \$1.75 | \$1.06 | \$1.12 | \$0.77 | \$0.83 | \$0.67 | \$0.45 | \$0.56 | \$0.49 | \$0.60 | \$0.54 | \$1.10 |

Appendix 9.5: TF monthly allocation prices adjusted for inflation

| TF | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Jan | \$1.03 | \$0.89 | \$0.85 | \$0.71 | \$0.82 | \$0.85 | \$0.77 | \$0.80 | \$0.89 | \$0.87 | \$0.65 | \$0.54 |
| Feb | \$0.81 | \$0.76 | \$0.77 | \$0.83 | \$0.79 | \$0.79 | \$0.76 | \$0.68 | \$0.84 | \$0.85 | \$0.78 | \$0.68 |
| Mar | \$0.68 | \$0.84 | \$0.84 | \$0.78 | \$0.77 | \$1.02 | \$0.67 | \$0.89 | \$0.82 | \$0.72 | \$0.69 | \$0.63 |
| Apr | \$0.62 | \$0.78 | \$0.53 | \$0.93 | \$0.93 | \$0.99 | \$1.01 | \$0.81 | \$0.53 | \$0.74 | \$0.73 | \$0.65 |
| May | \$0.74 | \$0.84 | \$1.04 | \$0.91 | \$0.87 | \$0.68 | \$0.72 | \$0.87 | \$0.89 | \$0.77 | \$0.39 | \$0.60 |
| Jun | \$0.00 | \$0.71 | \$0.83 | \$0.79 | \$0.90 | \$0.94 | \$0.79 | \$0.85 | \$0.59 | \$0.64 | \$0.59 | \$0.74 |
| Jul | \$1.02 | \$0.60 | \$0.86 | \$0.99 | \$0.87 | \$0.93 | \$0.60 | \$0.64 | \$0.56 | \$0.66 | \$0.62 | \$0.61 |
| Aug | \$0.62 | \$0.80 | \$0.71 | \$0.87 | \$0.78 | \$0.93 | \$0.78 | \$0.65 | \$0.62 | \$0.75 | \$0.68 | \$0.63 |
| Sept | \$0.00 | \$0.80 | \$0.78 | \$0.72 | \$0.90 | \$0.96 | \$0.86 | \$0.87 | \$0.67 | \$0.67 | \$0.54 | \$0.66 |
| Oct | \$0.74 | \$0.81 | \$0.91 | \$1.08 | \$0.88 | \$0.64 | \$0.84 | \$0.94 | \$0.91 | \$0.66 | \$0.70 | \$0.62 |
| Nov | \$0.00 | \$0.61 | \$0.86 | \$0.58 | \$0.89 | \$0.79 | \$0.63 | \$0.57 | \$0.43 | \$0.67 | \$0.57 | \$0.82 |
| Dec | \$0.84 | \$0.48 | \$0.70 | \$0.55 | \$0.63 | \$0.73 | \$0.25 | \$0.48 | \$1.44 | \$0.60 | \$0.53 | \$0.61 |

Appendix 10: Glossary

10% Overage – A provision in the IFQ program that allows IFQ accounts that hold shares to land 10% over their remaining allocation on the last fishing trip of the year. Any overage will be deducted from the shareholder's allocation for the next fishing year and the shareholder is restricted from selling shares that would prohibit this take back action.

Active Account – An account in which the allocation holder has landed, bought, and/or sold allocation within that year. Accounts activity status changes yearly based on the actions taken by the account.

Allocation – Allocation is the actual poundage of GT-IFQ species by which an account 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 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 GT-IFQ share category's quota. Dealer accounts may not possess allocation.

Allocation Holder – An account that holds allocation and may or may not hold shares.

Allocation Only Holder – An account that only holds allocation and does not hold shares.

Allocation Transfer – A transfer of allocation (pounds) from one shareholder account to another shareholder account. Before January 1, 2015, allocation could be transferred only to an entity that held a valid Gulf commercial reef fish permit.

Entity – An individual, business, or association participating in the IFQ program. Each IFQ account is owned by a unique entity.

Ex-vessel price – The price paid to the vessel by a dealer per pound of fish before any deductions are made for transferred (leased) allocation and goods and/or services (e.g., bait, ice, fuel, repairs, machinery replacement, etc.).

Ex-vessel value - A measure of the dollar value of commercial landings, usually calculated as the price per pound at first purchase of the commercial landings multiplied by the total pounds landed.

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.

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

Inactive Account – An account in which the allocation holder has neither landed, bought, nor sold allocation within that year, including those who never logged into their account. Accounts activity status changes yearly based on the actions taken by the account.

Initial Account - An account that was never logged into by the account's owner(s).

Landing Notification - A required 3-24 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 – The dealer completes a landing transaction by entering the date, time, and location of transaction; weight and actual ex-vessel price of GT-IFQ species landed and sold; and information necessary to identify the fisherman, vessel, and dealer involved in the transaction into the IFQ online system. The fisherman landing IFQ species must validate the dealer transaction report by entering his vessel's 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.

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.

Pound Equivalent – The share percentage that would equal one pound for that particular time period. The exact share percentage that is equivalent to one pound depends on the total commercial quota and will change as the quota changes from year to year or within a year from any quota increases.

Public Participant – Accounts that do not have an associated Gulf commercial reef fish permit. Public participants may hold and transfer shares and allocation, but cannot harvest GT-IFQ species.

Share – A share is the percentage of the commercial quota assigned to a shareholder account that results in allocation (pounds) equivalent to the share percentage of the quota. With limited exceptions, your percent share of the quota does not change unless shares are transferred into or out of an account. 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 from purchasing an excessive amount of IFQ shares and monopolizing the GT-IFQ commercial sector.

Share Transfer – A transfer of shares from one shareholder account to another account. A shareholder must initiate the share transfer and the receiver must accept the transfer by using the online IFQ system. Before January 1, 2015, shares could be transferred only to an entity that held a valid Gulf commercial reef fish permit.

Shareholder – An account that holds a percentage of the commercial GT-IFQ quota by share category.

Shareholder Account – A type of IFQ account that may hold shares and/or allocation. This includes accounts that only hold allocation.