

Update on Recreational Saltwater Fisheries Data Collection Programs



December 12, 2018



Florida Fish and Wildlife Conservation Commission

This presentation provides an update on current programs in place to collect catch and effort data for Florida's saltwater recreational fisheries, including the Gulf Reef Fish Survey (GRFS) and potential future approaches.

Division: Fish and Wildlife Research Institute

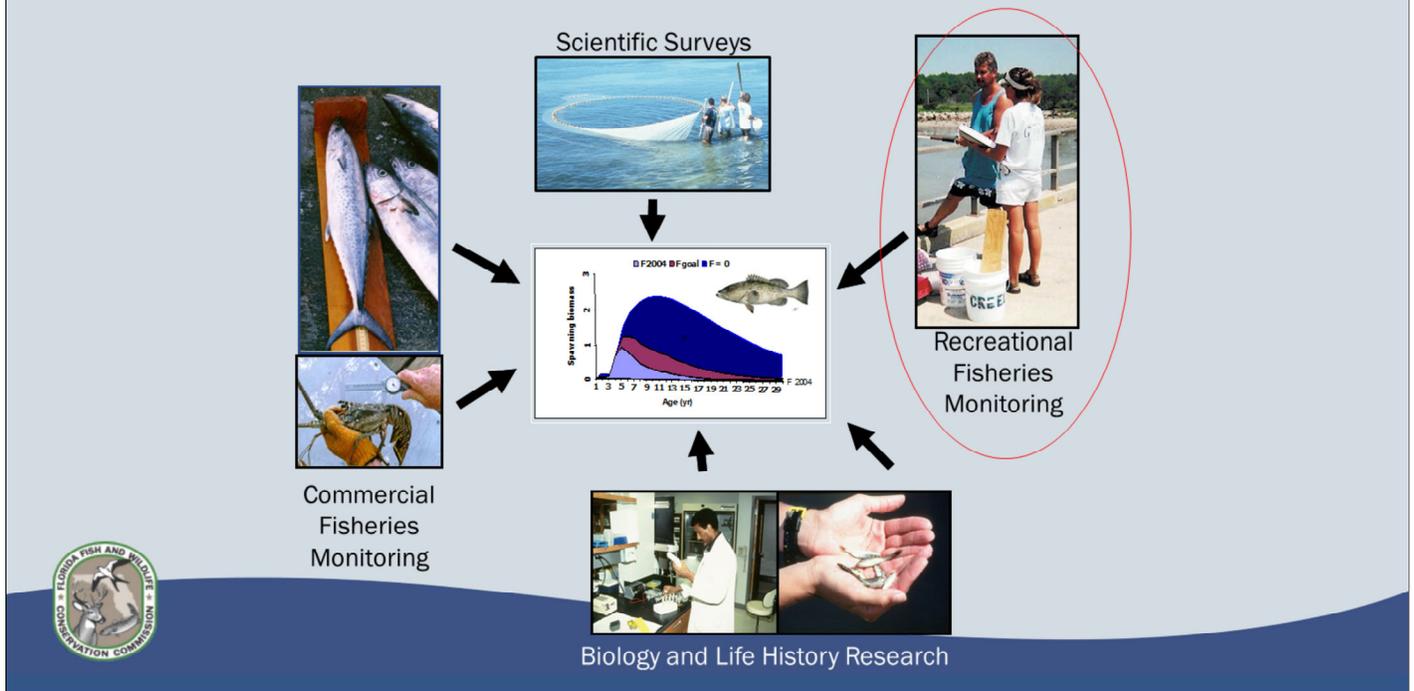
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Report date: December 7, 2018

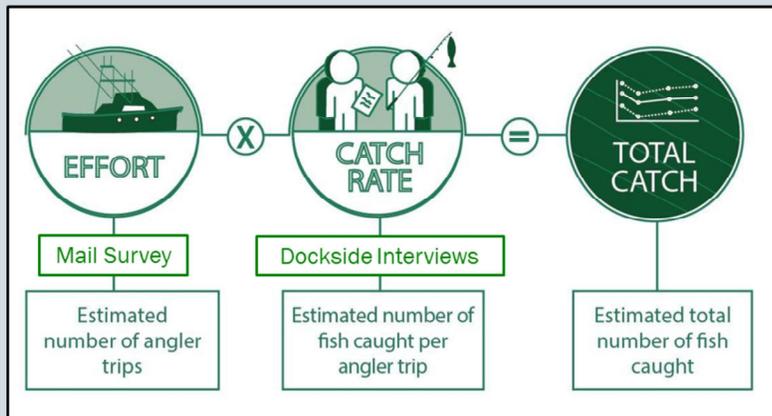
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Stock Assessment – Data Integration



A complete stock assessment contains a vast array of information on both the fish population and the fishery itself. The assessment process integrates multiple types of fisheries data to evaluate the status of fisheries stocks. Recreational fisheries data is an important component of this process.

Marine Recreational Information Program – MRIP



- MRIP – Federal survey conducted by FWC with NOAA-NMFS funding and coordination
- Used to estimate recreational fishing harvest and effort in saltwater fisheries throughout FL and most of the southeast US
- Two main components:
 - Mail survey: effort
 - Dockside survey: catch rate



Recreational harvest is estimated using statistical sampling in two surveys: 1) random selection of access point sites (places where people return to after fishing) where FWC staff interview anglers in person, and 2) a mail survey that gathers information on number of fishing trips taken, and mode of fishing (shore, private/rental boat or charter). The sampling strategy for the access point survey uses weights to sample areas of heavy fishing more frequently.

Recreational Fisheries Data Collection Challenges

- MRIP – a general survey covering very large inshore and offshore fisheries
 - Florida has 2.4 million saltwater anglers; 30 million fishing trips annually
 - FWC conducts 30,000 angler interviews annually
- Offshore reef fish trips currently being under-sampled
 - MRIP considered sufficient for inshore fisheries (e.g., spotted seatrout, red drum) but not as effective for offshore reef fish such as snappers and groupers
- FWC developed the Gulf Reef Fish Survey (GRFS) to fill this data gap and address concerns with reef fish management



Recreational saltwater anglers take 30 million fishing trips per year in Florida contributing more than \$8.4 billion to the state's economy. Timely and accurate data are critical for managing the dozens of fish species that make up this valuable economic engine. A federal program called the Marine Recreational Information Program (MRIP) provides data on recreational catch and effort of saltwater fish. However, because MRIP is a broad program covering dozens of species—for both inshore and offshore fisheries—it lacks the resolution needed to provide accurate recreational fisheries estimates for reef fish species such as red snapper, gag and red groupers, gray triggerfish, etc.

In Florida, the Gulf Reef Fish Survey and similar programs provide data enhancements specifically for reef fish. These programs work in concert to provide accurate and precise data for management of inshore and offshore recreational fisheries. Such data are critical to accurate stock assessments and successful management, particularly for stocks that are managed under a federal quota.

Gulf Reef Fish Survey – GRFS

- Supplements MRIP to provide more accurate and reliable recreational data
- Registration mandatory for private recreational anglers who possess or harvest 10 species of reef fish from a boat in Gulf waters
- FWC surveys GRFS anglers about their reef fish trips
 - Dockside surveys at marinas, boat ramps and other access points
 - Dedicated mail survey for reef fish anglers to estimate effort
- Widely recognized as a success. NOAA Fisheries certification expected soon
- Allowed for FWC to manage Gulf red snapper under EFP for 2018 and 2019
- GRFS funding (\$2 million annually) and FWC rule expire June 30, 2020
 - GRFS-like data collection system would support FWC management of recreational red snapper in state and federal waters



The Gulf Reef Fish Survey (GRFS) is a data collection tool that was implemented by FWC as a five-year pilot program in 2015. Recreational anglers that fish for or harvest 10 reef fish species (red snapper, gag grouper, greater amberjack, lesser amberjack, banded rudderfish, almaco jack, red grouper, black grouper, vermilion snapper, and gray triggerfish) from a vessel in the Gulf of Mexico are required to sign up for GRFS. FWC then targets GRFS anglers for surveys regarding their fishing activity for Gulf reef fish.

GRFS supplements the Marine Recreational Information Program (MRIP) and has improved recreational fisheries data collected for Gulf reef fish. GRFS was favorably-reviewed by a national panel of survey experts and is expected to receive certification by NOAA Fisheries for use as the primary source of recreational fisheries data for Florida Gulf reef fish, which will allow for improved stock assessments and management of these species.

GRFS has already allowed for management opportunities that otherwise would not be possible. For 2018 and 2019, FWC was granted a federal Exempted Fishing Permit (EFP) that allows FWC to manage recreational Gulf red snapper in both state and federal waters off Florida. A key component of this program is the enhanced recreational reef fish data provided through GRFS to monitor recreational red snapper harvest and project season lengths. Together, GRFS and the EFP made two important breakthroughs in red snapper management that have long been requested by anglers: 1) the end of extremely short federal fishing seasons and 2) state-controlled management that is tailored to local needs. In short, GRFS and the EFP test of state-led management of federal red snapper are widely viewed as a successes and models for future management.

GRFS is currently funded under a five-year grant and will expire in FWC rule on June 30, 2020.

GRFS Approach vs. Other States

- GRFS collects data year-round on multiple reef fish species, including red snapper
 - More precise data for assessment and management
 - Data on both harvest and discards
- Similar programs in MS and AL focus on red snapper and only collect data during the red snapper season
- Reporting of red snapper landings is mandatory in AL and MS, but compliance rate is low
- Florida has adopted a more collaborative approach in which fishers sign up to participate in the survey, but participation is voluntary

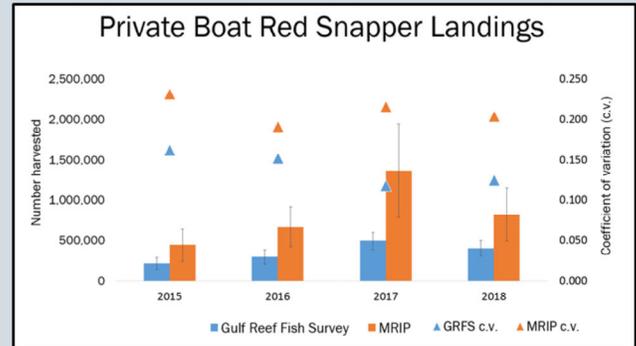


Through an effort coordinated by the Gulf States Marine Fisheries Commission and support from NOAA Fisheries, all five Gulf states developed pilot programs to test the effectiveness of more focused surveys for Gulf red snapper. FWC took advantage of this opportunity to develop a broader survey (the Gulf Reef Fish Survey, GRFS) that goes beyond just red snapper and provides better recreational fisheries data for 10 reef fish species. Therefore, this expanded program is providing better data for other important Gulf reef fisheries such as gag and red groupers, greater amberjack, gray triggerfish, etc. Also, because GRFS collects data year-round (i.e., not just during the red snapper season) and on both harvest and discards (fish that are not kept and thrown back in the water), it is more valuable for assessment and management of several reef fisheries.

Florida's cooperative approach provides anglers the opportunity to contribute to reef fish data collection by signing up for the Gulf Reef Fish Survey but participating in the actual survey (i.e., providing information on their fishing trips, harvest, and discards) is voluntary.

The Future of Florida Recreational Data Collection

- The combined MRIP and GRFS approaches have proven successful in generating high quality, precise estimates of recreational fisheries data
- FWC is exploring options to extend the survey capability provided by GRFS statewide
 - Expand the benefits of better data and management opportunities realized in the Gulf through GRFS to the Atlantic
- Expand use of innovative approaches such as angler reports through apps (e.g., iAngler)



GRFS provides much more precise estimates of recreational fisheries harvest (lower C.V. values)

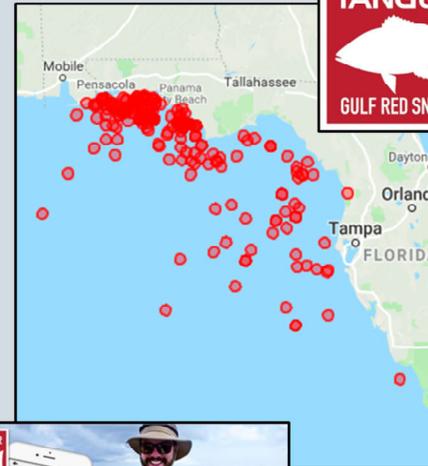


GRFS is widely recognized as a success and has allowed for management opportunities that otherwise would not be possible. A national panel of survey experts gave GRFS a favorable review, and NOAA Fisheries is expected to certify GRFS for use as the primary source of recreational fishing data for Gulf reef fish in Florida. GRFS data collection allowed FWC to manage Gulf red snapper in state and federal waters through an Exempted Fishing Permit in 2018 and 2019. However, GRFS authorization and funding expires June 30, 2020. If FWC is delegated authority to manage Gulf red snapper through state management starting in 2020, continuing the enhanced data collection enabled by GRFS will be critical.

In the future, FWC data enhancements could improve reef fish management through demonstrated programs similar to GRFS and other innovative approaches such as angler reports through apps. Because reef fish management problems are not limited to the Gulf (e.g., South Atlantic red snapper has been mostly closed since 2010 with occasional very short fishing seasons since then), FWC is exploring options to extend the survey capability provided by GRFS statewide. This statewide initiative would expand the benefits of better data and management opportunities realized in the Gulf through GRFS to the Atlantic.

App-based Recreational Data Collection

- FWC is testing the use of app-based fisheries data collection during 2018-2019 Gulf red snapper seasons
- Voluntary angler reports still require validation through GRFS but allow collection of real-time data on:
 - Location and depth fished
 - Numbers of fish kept and released
 - Release treatment:
 - 85% released directly
 - 3% released after venting
 - 2% released using decompression tool



Working with partners, FWC is using the 2018-2019 Gulf red snapper recreational fishing seasons to test the feasibility of using app-based angler reports as a way to collect scientifically valid recreational fisheries data that can be used for stock assessment and fisheries management.

App-based data collected from volunteer anglers (i.e., self-selected) still need to be validated by a statistically-designed survey (like GRFS) so the information can be extrapolated to the full universe of anglers. However, hard-to-obtain information that cannot be easily collected through standard surveys—such as more specific depths fished, the numbers of fish released at different locations, or the number of fish released after venting or with the use of decompression devices—can supplement the standard data collected through surveys and greatly improve the assessment and management of recreational fisheries.

Summary of Options Moving Forward

- Continue GRFS as currently set up (i.e., only in the Gulf of Mexico)
 - Positions Florida for management of recreational Gulf red snapper
 - Requires funding (\$2 million annually) beyond June 2020 (when NFWF grant ends)
- Develop GRFS-like statewide program (i.e., continue GRFS but also include Florida's Atlantic coast and the Florida Keys)
 - Positions Florida for management of recreational Gulf red snapper
 - Expands the benefits of better data and management opportunities to reef fisheries in other areas of the state (e.g., South Atlantic red snapper)
 - Requires total funding (\$3 million annually) for program expansion
- Either option to include expanded use of angler apps for recreational fisheries data collection



Moving forward options to be considered include:

- Continue the GRFS program to collect enhanced recreational fisheries reef fish data along Florida's Gulf coast (i.e., not including Florida's Atlantic coast and the Florida Keys). Continuation of GRFS is important to support future FWC management of the recreational component of Gulf red snapper in both state and federal waters off Florida. GRFS is currently funded under a five-year post-oil spill restoration National Fish and Wildlife Foundation (NFWF) grant and will expire in FWC rule on June 30, 2020. The GRFS program costs \$2 million annually and if this program is to be continued beyond June 2020 a different funding source will need to be identified.
- Continue GRFS but expand the program to also include reef fisheries along Florida's east coast and the Florida Keys. This option would still allow Florida's Gulf coast anglers to benefit from the enhanced data collection and associated management opportunities (including state management of the recreational component of Gulf red snapper), but also allow those benefits to be extended to anglers on Florida's Atlantic coast (where the recreational red snapper fishery has been either closed or had extremely short seasons, and a variety of reef fisheries in the Florida Keys). This expanded reef fish data collection program (i.e., including Florida's Gulf and Atlantic coasts plus the Florida Keys) is estimated to cost approximately \$3 million dollars.
- Either of the options above will include expanded use of electronic reporting and the use of anglers apps to supplement traditional recreational fisheries data collection.