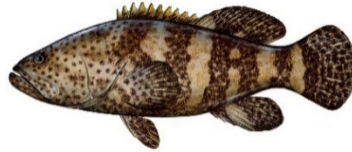


Goliath Grouper Workshop Clicker Sessions and Online Survey – Summary of Responses

February 27, 2018



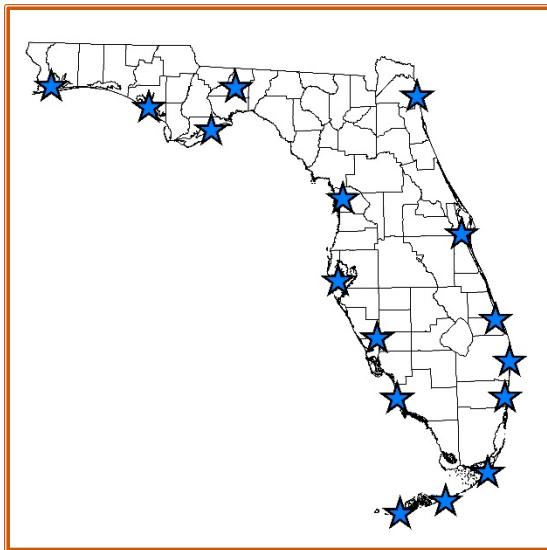
After reviewing the status and management of goliath grouper at the February 2017 Florida Fish and Wildlife Conservation Commission (FWC) meeting, Commissioners directed staff to gather public input on future management of the species. Between July 31, 2017, and Oct. 25, 2017, FWC staff held 16 in-person goliath grouper public workshops. Stakeholders were also given the opportunity to attend an on-demand virtual workshop and answer a survey online. The online survey closed Dec. 1, 2017.

At each workshop, staff gave a presentation about goliath grouper, including information on stock status and options for future management. After the presentation, attendees were given the opportunity to ask questions. Following questions and answers, FWC staff collected public input about goliath grouper management using an interactive question-response system known as clickers.

The questions in the clicker session and online survey explored stakeholder values, beliefs, and concerns relating to goliath grouper, and also solicited input on administration and regulations for potential limited harvest. The questions were in multiple-choice format, with two to five possible responses for each question. Participants were not required to respond to every question and, in most

cases, were given the opportunity to state their opposition to goliath grouper harvest when responding to each question if they felt other answers were not acceptable.

The presentation and questions were the same for the in-person clicker session and online survey.



2017 Goliath Grouper Public Workshop Locations

Workshops were held in Pensacola, Panama City, Carrabelle, Tallahassee, Crystal River, Pinellas Park, Port Charlotte, Naples, Key West, Marathon, Key Largo, Lake Worth, Davie, Stuart, Titusville, and Jacksonville.

Approximately 520 people attended the public workshops in-person and the virtual workshop was viewed almost 1,100 times (as of Feb. 27, 2018). Approximately 470 people participated in the clicker sessions at in person workshops and the online survey was completed 340 times (online survey closed Dec. 1, 2017). Participants

were a diverse group of stakeholders including recreational hook-and-line anglers, recreational spearfishers, for-hire captains, commercial fishermen, recreational divers (non-harvesters), and concerned citizens. This document summarizes all stakeholder responses gathered through the clicker session and online survey.

The majority of people who participated in the clicker session or took the online survey self-identified as private recreational fishers (both hook-and-line and spearfishers) or divers (non-harvesters). Concerned citizens and for-hire captains were also represented. Few commercial harvesters participated in the clicker session or online survey. About 40 people did not self-identify as belonging to any of these categories. This summary groups respondents into two larger categories: fishers and

non-fishers. Fishers include people who self-identified as private recreational fishers, for-hire captains, or commercial harvesters. Non-fishers include people who self-identified as divers (non-harvesters) or concerned citizens.

FISHERS

Interest, Value, and Perception of Goliath Grouper

Fishers expressed interest in goliath grouper for various reasons, but they were most likely to say they were interested in goliath grouper because it is important that people have the opportunity to harvest them. Some fishers said that it was important for people to have the opportunity to target goliath grouper for catch-and-release fishing or that people have the opportunity to see them on dive trips. Other fishers expressed interest because they feel it is important that goliath grouper be protected from harvest.

Fishers' reasons for being interested in goliath grouper may be linked to how they value or perceive goliath grouper. They were likely to report that they perceive goliath grouper as a recreational fishing opportunity for either harvest or catch-and-release. Some fishers see goliath grouper as nuisance, while others value it as an important part of the ecosystem. Fishers were less likely to identify goliath grouper as a priority viewing opportunity for recreational dive trips and least likely to perceive them as a commercial harvest opportunity.

Where and How Fishers Interact with Goliath Grouper

Fishers who participated at in-person workshops or took the online survey reported interacting with goliath grouper throughout the state. More respondents reported interacting with goliath grouper from Crystal River through Collier County, followed by Miami to Cape Canaveral, and Florida Keys/Everglades National Park/Florida Bay. Few fishers reported interacting with goliath grouper from Pensacola to Crystal River and north of Cape Canaveral. These trends in interaction locations may be reflective of workshop attendance.

Fishers who reported directly interacting with goliath grouper were most likely to say their most common interactions involve trying to keep goliath from taking fish off their line. Other common interactions are targeting them for catch-and-release fishing and taking dive trips to view them. Fishers who reported most frequently interacting with goliath grouper for targeted catch-and-release fishing were most likely to report these interactions occur from Crystal River through Cape Canaveral. Fishers who most often interact with goliath grouper on dive trips were more likely to report most commonly interacting with goliath grouper between Miami and Cape Canaveral. Some fishers reported that they do not interact with goliath grouper.

Effects of Maintaining the Closure and of Opening the Fishery

The clicker session and online survey included a series of questions to gauge respondents' opinions as to how keeping the fishery closed to harvest or opening the fishery would affect (1) goliath grouper abundance; (2) scientific data/understanding; (3) anglers' satisfaction relative to goliath grouper; (4) divers' satisfaction relative to goliath grouper; and (5) commercial fishermen's satisfaction relative to goliath grouper.

Fishers were likely to say that maintaining the current goliath grouper closure would have positive effects on goliath grouper abundance and, divergently, were somewhat likely to say it would have a negative effect on goliath grouper abundance. Some fishers reported they did not know how

maintaining the closure would affect goliath grouper abundance. They had divided opinions on how maintaining the closure would affect diver satisfaction relative to the species. They were likely to say that maintaining the closure would negatively affect scientific understanding of goliath grouper and very likely to say it would negatively affect recreational angler satisfaction relative to goliath grouper. Regarding commercial fishermen's satisfaction relative to goliath grouper, fishers were most likely to say maintaining a closure would have negative effects and were somewhat likely to say they did not know the effects.

When asked about the effects of opening goliath grouper to harvest, fishers were most likely to say it would have no effect on goliath grouper abundance or that it would negatively affect abundance. They were somewhat likely to say harvest would have a positive effect on goliath grouper abundance. Fishers were very likely to say that opening the fishery would have positive effects on scientific understanding of the species, angler satisfaction, and commercial satisfaction. Although, they were somewhat likely to say they did not know how it would affect commercial satisfaction relative to goliath grouper. Regarding how opening the fishery would affect diver satisfaction relative to goliath grouper, fishers were most likely to say the effect would be positive, and were equally somewhat likely to say the effects would be negative or there would be no effect.

When asked, fishers were most likely to identify increased reef health by reducing predation by goliath grouper as the greatest potential benefit of allowing goliath grouper harvest. They were somewhat likely to say the greatest benefit of allowing harvest would be increased scientific data and understanding. When asked about their greatest concern for allowing harvest, fishers were most likely to say they did not have any concerns. Those who identified concerns were likely to say they were troubled that too few anglers would have the opportunity to harvest. Fishers were less likely to say that negative impacts to the goliath grouper population or that harvest would not provide adequate data for assessing the population were their greatest concerns.

Harvest and Conditions for Harvest

Fishers were most likely to say harvest of goliath grouper should be allowed, which aligns with their stated interest in the species being that they think people should have the ability to harvest the fish. When asked why they, as an individual, want to harvest a goliath grouper, fishers were most likely to report that they wanted to reduce the species density on the reef. They were somewhat likely to say they wanted to eat goliath grouper or that they were not personally interested in harvesting a goliath. They were least likely to say that they were personally interested in harvesting goliath grouper out of principle (meaning, they did not like the idea of not being allowed to harvest a particular species) or out of a desire to catch a very large fish.

When fishers were asked which condition was most important to garner their support for limited harvest of goliath grouper, their most likely response was a condition that harvesters be required to report data about their catch. They were also likely to say it would be most important that science show that harvest could be sustainable. Less likely responses were conditions of increased monitoring and assessment of population status and revenues from harvest going to goliath conservation, or that there was no condition under which they would support harvest.

Harvest Administration

Participants were asked several questions about how they would like harvest to be administered (i.e., permit fees, reporting requirements, harvest tags) if limited harvest of goliath grouper was allowed.

Some participants did not provide comments on the details of harvest administration and preferred to respond with either a no response or to state that they opposed harvest. The summary and analyses below are limited to those who gave specific feedback on harvest administration.

Permit Fees

Fishers were most likely to agree with charging an additional permit fee beyond any applicable saltwater license fees for the ability to harvest a goliath grouper, similar to the snook or spiny lobster permit. They were somewhat likely to oppose an additional permit fee.

On the regional scale, fishers who reported most commonly interacting with goliath grouper in Florida Keys/Everglades National Park/Florida Bay were divided on fees.

Reporting Requirements

If harvest was allowed, fishers were very likely to support a requirement for harvesters to report data about their catches to support research. This would include reporting more than just location of fish harvest.

Tags

Fishers were very likely to support administering harvest through a tag system, similar to alligator, versus allowing harvest to be open-access. Fishers who interact with goliath grouper most frequently in the Florida Keys/Everglades National Park/Florida Bay through Cape Canaveral were divided on whether tags should be used to administer harvest.

Respondents were asked if the state should be divided up into regions with a limited number of tags for each region (i.e., regional tags). Fishers were divided about whether tags should be regional or be valid anywhere in the state.

Fishers were very likely to support distribution of tags through a lottery system that interested participants would have to enter. They were less likely to support tags being distributed via random draw of all saltwater license holders, or on a first-come, first-served basis, or by some other, unspecified means.

There was a wide array of opinions on charging money for individual tags, with support for all of the options presented: \$0, \$1-25, \$26-99, \$100-199, and \$200-300. Fishers were more likely to say some amount should be charged for a tag, compared to free tags; however, there was no clear indicator on which amount would be most supported.

Fishers held divided opinions on whether tag recipients should be allowed to transfer their tag to another person.

Harvest Regulations

The clicker session and online survey posed several questions to gather input on regulations for a potential limited harvest of goliath grouper. Respondents were asked to weigh-in on allowable fishing gear, size limits, spawning season regulations, and area management. Some participants did not provide comments on the details of harvest regulations and preferred to respond with either no response or to state that they opposed harvest. The summary and analyses below are limited to those who gave specific feedback on harvest regulations.

Allowable Gear

Fishers were divided as to whether only hook-and-line gear or both hook-and-line and spearfishing gear should be allowed for harvesting goliath grouper.

Size Limit

When asked for opinions about whether goliath grouper harvest should be managed with a size limit, fishers were most likely to support a slot limit, where only fish within a defined size range could be harvested. They were somewhat likely to support a minimum size limit only and less likely to support no size limit. Fishers were least likely to support a maximum size limit only.

Area Management and Seasons

The clicker session and online survey included questions about area management, dive viewing areas, spawning sites, and fishing seasons.

Stakeholders were asked if they would be more supportive of limited harvest that allows goliath grouper harvest from any area open to reef fish fishing or of limited harvest on a regional basis. Fishers were more likely to support allowing harvest from all areas open to reef fish fishing. They were somewhat likely to support limiting harvest on a regional basis.

Goliath grouper are known to form spawning aggregations at predictable locations. Several of these spawning aggregation sites are also popular with divers who wish to see goliath grouper. Stakeholders were asked if they would be more supportive of limited harvest that allows goliath grouper harvest from any area open to reef fish fishing or of limited harvest that does not allow harvest at spawning aggregation areas. Fishers were most likely to support prohibiting harvest at spawning aggregation sites and somewhat likely to support allowing harvest from all areas open to reef fish fishing. Fishers who reported most frequently interacting with goliath grouper in the Florida Keys/Everglades National Park/Florida Bay were most likely to support prohibiting harvest at spawning aggregation sites.

In line with comments about prohibiting harvest from spawning aggregation sites, fishers were very likely to support prohibiting harvest during spawning months if harvest was allowed.

NON-FISHERS

Interest, Value, and Perception of Goliath Grouper

Non-fishers expressed interest in goliath grouper for one of two reasons. They were most likely to say they were interested in goliath grouper to protect them from harvest. They were somewhat likely to say they were interested in them because it was important for people to have the opportunity to see them on dive trips.

Non-fishers' reasons for being interested in goliath grouper may be linked to how they value or perceive goliath grouper. They were very likely to report that they perceive goliath grouper as an important part of the ecosystem. They were somewhat likely to value goliath grouper as a priority viewing opportunity for recreational dive trips.

Where and How Non-fishers Interact with Goliath Grouper

Non-fishers who participated at in-person workshops or took the online survey reported interacting with goliath grouper throughout the state. More respondents reported interacting with goliath grouper from Miami to Cape Canaveral, followed by Florida Keys/Everglades National Park/Florida Bay.

Few non-fishers reported interacting with goliath grouper north of these regions. These trends in interactions may be reflective of workshop attendance.

Non-fishers who reported directly interacting with goliath grouper were most likely to say their most common interactions occurred when diving, which goes along with where they report their most frequent interactions.

Effects of Maintaining the Closure and of Opening the Fishery

The clicker session and online survey included a series of questions to gauge respondents' opinions as to how keeping the fishery closed to harvest or opening the fishery would affect (1) goliath grouper abundance; (2) scientific data/understanding; (3) anglers' satisfaction relative to goliath grouper; (4) divers' satisfaction relative to goliath grouper; and (5) commercial fishermen's satisfaction relative to goliath grouper.

Non-fishers were very likely to say that maintaining the current goliath grouper closure would have positive effects on goliath grouper abundance and diver satisfaction relative to goliath grouper. Non-fishers were likely to say that maintaining the closure would have a positive effect on scientific understanding of the species, and somewhat likely to say it would have no effect. They were likely to say that maintaining the closure would have no effect on recreational angler or commercial harvester satisfaction relative to goliath grouper.

When asked about the effects of opening goliath grouper to harvest, non-fishers were very likely to say it would negatively affect goliath grouper abundance and diver satisfaction relative to goliath grouper. They were somewhat likely to say harvest would have either no effect or a negative effect on scientific understanding of the species. Non-fishers were divided on whether opening the fishery would have no effect, a positive effect, or an unknown effect on angler satisfaction. They were likely to say opening the fishery would have no effect on commercial harvester satisfaction relative to the species.

When asked, non-fishers were very likely to say there would be no benefit to allowing goliath grouper harvest. When asked about their greatest concern for allowing harvest, non-fishers were most likely to say they were concerned that any amount of harvest would negatively impact the goliath grouper population. They were somewhat likely to say their greatest concern was that harvest would disrupt the ecosystem.

Harvest and Conditions for Harvest

Non-fishers were very likely to say harvest of goliath grouper should not be allowed, which aligns with their stated interest that the species be protected from harvest and that it is important for dive viewing. Non-fishers were very likely to say there is no condition under which they would support limited harvest. However, a few said the most important condition to gain their support for allowing harvest would be that science shows it could be sustainable.

Harvest Administration

Participants were asked several questions about how they would like harvest to be administered (i.e., fees, reporting requirements, harvest tags) if limited harvest of goliath grouper was allowed. Only a small number of non-fishers provided comments on the details of harvest administration, with the majority preferring to respond with either a no response or opposition to harvest. The summary and analyses below are limited to those who gave specific feedback on harvest administration.

Fees

Non-fishers were very likely to agree with charging an additional fee beyond any applicable saltwater license fees for the ability to harvest a goliath grouper, similar to the snook or spiny lobster permit.

Reporting Requirements

If harvest was allowed, non-fishers were very likely to support a requirement for harvesters to report data about their catches to support research. This would include reporting more than just location of fish harvest.

Tags

If harvest were allowed, non-fishers were very likely to support administering harvest through a tag system, similar to alligator, versus allowing harvest to be open-access.

Respondents were asked if the state should be divided up into regions with a limited number of tags for each region (i.e., regional tags). Non-fishers were very likely to support regional tags if harvest were allowed.

Non-fishers were very likely to support distribution of tags through a lottery system that interested participants would have to enter if harvest were allowed. They were less likely to support tags being distributed via random draw of all saltwater license holders, or by some other means, or on a first-come, first-served basis.

Non-fishers were very likely to support charging \$200-300 for an individual tag.

Non-fishers were very likely to oppose allowing tag recipients the ability to transfer their tag to another person.

Harvest Regulations

The clicker session and online survey posed several questions to gather input on regulations for a potential limited harvest of goliath grouper. Respondents were asked to weigh-in on allowable fishing gear, size limits, spawning season regulations, and area management. Only a small number of non-fishers provided comments on the details of harvest regulations, with the majority preferring to respond with either no response or opposition to harvest. The summary and analyses below are limited to those who gave specific feedback on harvest regulations.

Allowable Gear

Non-fishers were divided as to whether only hook-and-line gear or both hook-and-line and spearfishing gear should be allowed for harvesting goliath grouper.

Size Limit

When asked for opinions about whether goliath grouper harvest should be managed with a size limit, non-fishers were most likely to support a slot limit, where only fish within a defined size range could be harvested.

Area Management and Seasons

The clicker session and online survey included questions about area management, dive viewing areas, spawning sites, and fishing seasons.

Respondents were asked if they would be more supportive of limited harvest that allows goliath grouper harvest from any area open to reef fish fishing or of limited harvest on a regional basis. Non-fishers were very likely to support limiting harvest on a regional basis if harvest was allowed.

Goliath grouper are known to form spawning aggregations at predictable locations. Several of these spawning aggregation sites are also popular with divers who wish to see goliath grouper. Respondents were asked if they would be more supportive of limited harvest that allows goliath grouper harvest from any area open to reef fish fishing or of limited harvest that does not allow harvest at spawning aggregation areas. Non-fishers were very likely to support prohibiting harvest at spawning aggregation sites if harvest was allowed. In line with comments about prohibiting harvest from spawning aggregation sites, non-fishers were very likely to support prohibiting harvest during spawning months if harvest was allowed.