



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

Southeast Regional Office
263 13th Avenue South
St. Petersburg, Florida 33701-5505
(727) 824-5305; FAX (727) 824-5308
<http://sero.nmfs.noaa.gov>

JUL 21 2010

F/SER24:SB
SER10-086

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JUL 26 2010

South Atlantic
Fishery Mgmt. Council

Mr. Robert Mahood
South Atlantic Fishery Management Council
4055 Faber Place Drive, Suite 201
Charleston, SC 29405

1305
Dear Mr. Mahood:

Enclosed is a request from the Gulf and South Atlantic Fisheries Foundation, Inc. (Foundation) to obtain an exempted fishing permit (EFP) for a 24-month period beginning September 2010. If issued, the EFP would exempt, with certain conditions, personnel from the Gulf and South Atlantic Fisheries Foundation, Inc. from regulations found at 50 CFR 622, including but not limited to 622.32(c) (limited harvest species), 622.35(j) (seasonal grouper closure), 622.35(l) (seasonal red snapper closure), and 622.36 (seasonal possession closures), 622.37 (size limits), 622.38 (landing fish intact), and 622.44 (trip limits) as they affect the commercial snapper and grouper fishery in the South Atlantic Region. If issued, the EFP would allow continued data collections on snapper and grouper taken during standard commercial fishing operations in South Atlantic federal waters. The study would augment the current pool of data available to stock assessment scientists for "data poor" species by characterizing catch and discard mortality within the South Atlantic commercial hook-and-line snapper-grouper fishery. Most specimens would be examined onboard. Legal specimens would become part of the vessel's commercial catch, and regulatory discards would be returned to the water. However, the applicant requests to retain some specimens (both legal and regulatory discard) outside of the allowable commercial harvest for either extended onboard examination or later shoreside analyses.

The sampling program would take approximately 500 individuals (fish and invertebrates), where possession and retention is otherwise restricted or prohibited by regulations, for scientific research activities during the project. Sampling will occur year round. This retention is expected to have minimal effects on the snapper and grouper stocks in the South Atlantic. The data collection effort would not alter the manner in which the fishery is conducted, and would collect information based on long-standing fishing procedures. The collections would not further impact habitat or non-target species over what has been considered in other stock assessments or environmental evaluations. The estimated 500 individuals to be retained represent a small fraction of the average annual landings, and the impacts of the proposed collection on fish stock status would be negligible.



Similarly, the limited sampling program and associated sampling methodology listed in the EFP is not expected to impact marine mammals or threatened or endangered species in any manner that has not been considered in the most recent consultations under the Endangered Species Act for the existing fishery management plan. The consultations specifically address the impacts associated with EFPs. The consultations consider fishing activities authorized under an EFP within the scope of the review, if those activities do not significantly increase the overall fishing effort within the fishery, and fishing is conducted by commercial or research vessels, using similar or identical fishing methods to those employed in the fishery.

For your review, please also find enclosed a draft EFP, including EFP conditions, for this proposed activity. Please schedule a review of the EFP application by the South Atlantic Fishery Management Council at the next meeting. If you need additional information, please contact Steve Branstetter on my staff by calling (727) 551-5796.

Sincerely,

A handwritten signature in black ink, appearing to read 'R E Crabtree', written over a horizontal line.

Roy E. Crabtree, Ph.D.
Regional Administrator

Enclosure

cc: Judy Jamison, Foundation

Gulf & South Atlantic Fisheries Foundation, Inc.

July 1, 2010

Dr. Roy E. Crabtree
Regional Administrator
National Marine Fisheries Service
263 13th Avenue South
St. Petersburg, FL 33701

RE: Request for Exempted Fishing Permit

Dear Dr. Crabtree:

There are large variance and error estimates surrounding the stock assessment results for various South Atlantic snapper and grouper species. To augment the current pool of data available to stock assessment scientists for "data poor" species, the Foundation has been approved for a project to continue the placement of fishery observers aboard commercial bandit rig fishing vessels (vertical hook-and-line) to characterize catch and discard mortality within the South Atlantic snapper-grouper fishery. While aboard a cooperating vessel, the fishery observer will collect data outlined within the Protocols for Bandit Reel Characterization (Southeast Fisheries Science Center, Galveston Laboratory).

To allow adequate time for the fishery observer to collect, enumerate, weigh, and identify all samples/species brought aboard a cooperating fishing vessel, the Foundation is requesting an Exempted Fishing Permit from the National Marine Fisheries Service (NMFS). After all necessary data are collected and recorded, legal-sized fish will become part of the commercial catch and regulatory discard will be returned to the water. However, to verify that species are correctly identified, we request authorization to retain limited numbers of marine species (vertebrates and invertebrates) until further processing can be conducted (e.g., until more accurate/extensive literature can be referenced or experts can be successfully contacted). The number of specimens that may be acquired on any given trip is highly variable, however, we anticipate approximately 500 sub-legal and legal fish could be retained for continued onboard examination or returned to shore for lab analysis throughout the course of the study. No species retained for scientific purposes will be sold commercially.

The Foundation's expected award will be effective August 1, 2010 and a one-year no cost

Dr. Roy Crabtree

July 1, 2010

Exempted Fishing Permit Request

Page Two

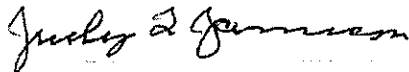
extension is anticipated. One hundred (100) at-sea days have been anticipated for this study. Current Foundation contracted observers, Regional Coordinators and authorized personnel include: Mark Bane, Gary Graham, Frank Helies, Lindsey Parker, and Daniel Parshley. Additional observers will be contracted during the course of this project.

Please note that contracted personnel may handle threatened and endangered sea turtles encountered during normal fishing operations. Foundation observers are considered NMFS-designated agents while conducting work under a NMFS funded research grant and as such, are authorized to handle sea turtles encountered during the course of this study. There would not be any impacts to marine mammals or endangered species that have not been considered in the Biological Opinions for the South Atlantic Fishery Management Council's Snapper Grouper Fishery Management Plan.

Results of tests conducted will be provided in the final report for the awarded project.

Thanks for your assistance. Should you need any further information, please don't hesitate to contact us.

Regards,



Judy L. Jamison
Executive Director

Attachments: Proposal - Statement of Work

Cc: Robert Mahood (w/attachments)
Board of Trustees

ROUTING

EXEC. DIR.
 PROGRAM DIR.
 PROGRAM SPEC.
 GRANT SPEC.
 ADMIN. ASST
 FILE



UNITED STATES DEPARTMENT OF COMMERCE
 National Oceanic and Atmospheric Administration
 NATIONAL MARINE FISHERIES SERVICE

NOAA - NMFS
 263 13th Avenue South
 St. Petersburg, FL 33701-5505

March 05, 2010 F/SER1:EFR
 10CRP005

Judy L. Jamison
 Gulf and South Atlantic Fisheries Foundation
 5401 W. Kennedy Blvd., Suite 997
 Tampa, FL 33609

RECEIVED
 3/4/2010

Dear Ms. Jamison:

I am pleased to advise you that your proposal entitled, "Continuation of the Catch Characterization and Discards with the Snapper-Grouper Vertical Hook-and-Line Fishery of the South Atlantic United States," submitted to the National Marine Fisheries Service under the Unallied Management (UM) Program, has been recommended for funding.

Your proposal must still be reviewed by the NOAA Grants Management Division, the Office of General Counsel, the Office of the Inspector General, and the Department of Commerce Financial Assistance Review Board. You should NOT initiate work on this proposal in expectation of receiving Federal funding until you receive written authorization from the NOAA Grants Management Division. Any costs incurred prior to the issuance of the award document are incurred at your own risk.

You may be contacted in the near future to participate in negotiations to determine the conditions under which the award will be made.

Thank you for your interest in the UM Program.

*Will have start date
 of 8/1/10 per
 Bob Sadler - Program
 Officer*

Sincerely,

Ellie F. Roche

Ellie F. Roche

Chief, State/Federal Liaison Branch

Phone: (727) 824-5324

Email: Ellie.Roche@noaa.gov



COOPERATIVE RESEARCH PROGRAM PROJECT SUMMARY

Project Title: Continuation of the Catch Characterization and Discards within the Snapper-Grouper Vertical Hook-and-Line Fishery of the South Atlantic United States

Project Status/Duration: Sept. 1, 2010 – Aug. 31, 2011 New X Con't__ Project Period: 12 Months

Name, Address, and Telephone Number of Applicant:

Gulf & South Atlantic Fisheries Foundation, Inc
Lincoln Center, Suite 740
5401 W. Kennedy Blvd.
Tampa, Florida 33609-2447
(813) 286-8390

Principal Investigator(s) and Brief Statement of Qualifications:

Ms. Judy Jamison; Over 29 years administrative and grants management experience.
Mr. Frank Helies; Experience in biological and oceanographic research.

Project Objective:

(1) Continue an observer program within the snapper-grouper vertical hook-and-line fishery of the South Atlantic United States; (2) Utilize previously trained, or contract and train a fishery observer to collect critical stock assessment data to quantify total catch, effort, and discards within the fishery; (3) With assistance of the South Atlantic Sustainable Fisheries Association, Inc. and other associations, actively solicit the participation of cooperating vessels and disseminate the results of data collected during the program; and (4) Compare trends in bycatch and assemblage structure across time and space with a bycatch model to identify when and where bycatch is greatest and least for select species.

Specific Priority(ies) in Solicitation to Which Project Responds:

1. Commercial Finfish; a. Projects to characterize the total catch (from all fleets affecting the stocks), including catch composition and disposition of the catch; b. Projects focusing on the composition and disposition of bycatch and discards such as to determining the effects on discard rates of increasing size limits or reducing possession limits.

Summary of Work:

Many species within the snapper-grouper fishery management unit are data poor. As a result, many of the species specific stock assessments have a high level of uncertainty associated with the models, including catch characterization, effort, and quantity of discards. To enhance the universe of data that are available to stock assessment scientists, we propose to continue a fishery observer program within the snapper-grouper vertical hook-and-line (bandit rig) fishery of the South Atlantic United States. Through cooperation of Foundation Coordinators, we will solicit the participation of the commercial fishing industry to voluntarily assist in the performance of this project. An observer will be placed onboard cooperating vessels to collect a variety of data quantifying the participation, gear, effort, catch, and discards within the fishery. The intent of this project is not to form a standalone dataset, but to augment currently available datasets. As such, most data analyses will be descriptive (proportional catch, discards, etc.), although some statistical tests will be conducted, particularly through the use of a bycatch assemblage model. With the information derived from this project, the South Atlantic Fishery Management Council and NOAA Fisheries can better assess the impact of current effort and discards on the data-poor snapper-grouper fishery.

Project Funding:	Federal	\$ 250,082
	Non-Federal	\$ 0
	Total	\$ 250,082

Project Title:

Continuation of the Catch Characterization and Discards within the Snapper Grouper Vertical Hook-and-Line Fishery of the South Atlantic United States

Applicants Name:

Gulf & South Atlantic Fisheries Foundation, Inc.
Ms. Judy Jamison, Executive Director

Lincoln Center, Suite 740
5401 W. Kennedy Blvd.
Tampa, Florida 33609-2447
(813) 286-8390

Proposed Budget period:

September 1, 2010 – August 31, 2011

Project Goals and Objectives:

1. Continue the observer program within the snapper-grouper vertical hook-and-line fishery of the South Atlantic United States;
2. Utilize previously trained, or contract and train a fishery observer to collect critical stock assessment data to quantify total catch, effort, and discards within the fishery;
3. With assistance of the South Atlantic Sustainable Fisheries Association, Inc., continue to actively solicit the participation of cooperating vessels to ensure a sufficient sample of vessels is included in the study, and disseminate the results of data collected subsequent to the program completion; and
4. Compare trends in bycatch and assemblage structure across time and space with a bycatch model to identify when and where bycatch is greatest and least for select species.

Identification of the Problem:

The snapper-grouper fishery within the South Atlantic United States is comprised of 73 different species, including fishes within the Lutjanidae, Serranidae, Malacanthidae, Carangidae, and Sparidae families (SAFMC, 2006). Many of the species are data poor. As a result, some species specific stock assessment models have a high level of uncertainty, lacking accurate inputs for catch characterization, effort, and quantity of discards. Also, although many snapper-grouper species exhibit spawning migration patterns (Boardman and Weiler, 1979; Robins and Ray, 1986; Cueller *et al.*, 1996; Reilinger, 1999), snapper-grouper typically display localized movement patterns, thus making reef fish especially prone to localized fishing pressures (Claro

and Lindeman, 2003). Effectively managing this complex fishery is important, yet very challenging, as seen over the past three decades.

This fishery is managed by the South Atlantic Fishery Management Council (SAFMC) under the Snapper-Grouper Fishery Management Plan (FMP), a multi-species plan. The first FMP for the fishery of the South Atlantic Region was prepared by the SAFMC in 1983 (SAFMC, 2006). Since the drafting and implementation of the original FMP, subsequent amendments have increased size limits, decreased the total allowable catch, limited commercial fishing gear, required logbooks, and limited fisher access to prevent overfishing and help rebuild stocks (SAFMC, 2006). Unfortunately, some stocks within the snapper-grouper complex are still considered overfished and overfishing is occurring. As a result, the Council reduced the quotas for several species (SAFMC, 2006; 2008) and enacted further harvest restrictions, such as spawning season closures (SAFMC, 2007).

Some of the most stringent management measures for the snapper-grouper fleet have been laid down recently. The SAFMC finalized regulatory measures for snapper-grouper species through Amendment 13c (Federal Register, 2006; SAFMC, 2006), Amendment 15B (SAFMC, 2007; Federal Register, 2009b) and Amendment 16 (SAFMC, 2008; Federal Register, 2009a) to the Snapper Grouper Fishery Management Plan, all within the last three years. Amendment 16 imposes a reduced quota for several major species and institutes a 4 month spawning season closure for all shallow water grouper species from January through April. Coupled with the proposed red snapper interim rule, which closes the red snapper fishery for 180 days with a possible extension of 186 days, and the measures included in the working draft of Amendment 17, further financial burden will soon be placed on the industry (SAFMC, 2009). It remains critical that stock assessments contain the best possible data, for both the benefit of the fish stocks and the fishing public.

Collection of discard rates was a priority research item identified in recent stock assessments (SEDAR, 2008). In fact, fishery dependent observer data collection was identified as a crucial program for collecting important information on discards and other fishery characteristics, and was recommended to be continued and expanded throughout the South Atlantic (SEDAR, 2008). In 2006, the Foundation was funded to conduct a pilot study to characterize the catch and fate of discards within the Snapper-Grouper vertical hook-and-line fishery of the South Atlantic (NA06NMF4540059). The project proved highly successful with cooperation from the snapper-grouper fleet throughout the South Atlantic. A total of 200 sea days were logged on-board 24 different vessels from North Carolina, South Carolina, Georgia and Florida's northeast coast. A presentation of the results was made to the SAFMC at their June 2008 meeting. In addition, data from the project were reviewed during the data workshop for vermilion snapper in SEDAR-17 (SEDAR, 2008). A continuation of that project was funded at a reduced rate through the Cooperative Research Program in 2008, allowing for an additional 100 sea days for data collection (NA08NMF4540399). Unfortunately, the reduced number of sea days limited the temporal coverage of the expansive fishing area in the South Atlantic. In order to meet the need for increased data in the snapper-grouper fishery, the Foundation is submitting this proposal for continued funding of this important data collection project to ensure more inclusive coverage of the South Atlantic vertical hook-and-line fishery. A continuation of this project will allow

mangers to see the true extent of the redirection of fishing effort due to the shallow water grouper and red snapper closures.

Stock assessments are a critical tool for evaluating and monitoring the status of fish stocks. Like all models, stock assessments have an associated level of uncertainty resulting from the use of inaccurate catch statistics, natural, environmental, and anthropogenic variability, and nuances and assumptions associated with individual model types (NMFS, 1999). This uncertainty (broad confidence intervals and biological reference points) was evident following the assessments of South Atlantic vermilion snapper stocks (SAFMC, 2006) and more recent update assessments on red snapper (SEDAR, 2009).

This information has troubled commercial snapper-grouper fishermen within the South Atlantic. For example, many of the fishermen participating in the snapper-grouper fishery were economically dependent on red porgy stocks. Based on the results of several stock assessments, successive iterations of the snapper-grouper FMP resulted in strict regulations regarding red porgy harvest. Finally, the fishery was closed (SAFMC, 2006). This resulted in a redirection of commercial fishing effort to other fisheries within the snapper-grouper complex. With data suggesting populations of many snapper-grouper stocks still in decline, many fishermen are concerned that the regulations governing the red porgy stock will be implemented within other species specific fisheries, thereby decimating the snapper-grouper commercial fishery within the South Atlantic. Contrary to what has been reported in many of the snapper-grouper stock assessments (particularly black sea bass, vermilion snapper, and red snapper), commercial fishermen have expressed that catches are larger than historic averages and that many large fish remain within the fishery. Nevertheless, the Council continues to reduce quotas for the most valuable species within the complex (SAFMC, 2006; 2007; 2008; 2009).

Although there are sustained data collection programs (fishery independent) within the South Atlantic United States, these programs are limited in the types of data (landings data via trip tickets and dealer invoices; length frequency data via port agents, etc.) or the amount of data (lack of funding for MARMAP cruises) they collect. Although data generated by the fishery independent programs are drastically needed for stock assessments, funding has limited spatiotemporal coverage within the South Atlantic and raised public criticism. Additionally, fishery dependent data collection that quantifies bycatch and discard fate is lacking.^{1,2} Although logbooks can report fishery dependent catches, and to a limited extent discards, these data cannot be independently verified, have been criticized as underreported, and only gather a limited amount of data needed by scientists (Lewison *et al.*, 2004). As a result, the South Atlantic Sustainable Fisheries Association, Inc. (SASFA), an industry group comprised of commercial snapper-grouper fishermen, has asked the Gulf & South Atlantic Fisheries Foundation, Inc. (Foundation) to continue the observer based program within the snapper-grouper fishery to increase the universe of fishery dependent data available to stock assessment scientists.

¹ Perot Systems implemented a limited one year program to test electronic logbooks on 7 snapper grouper vessels in the South Atlantic (Perot, 2006).

² North Carolina Sea Grant is scheduled to conduct a pilot program in the fishery, testing electronic video monitoring in conjunction with limited observer coverage (~30 days).

Project Impacts/Results or Benefits Expected:

Serving as the only regional research and development organization aimed at assisting the commercial fishing industries of the Gulf of Mexico and South Atlantic, the Foundation has developed a high level of credibility among the commercial fishing industry of the southeastern United States. The funding of this project will allow the Foundation to directly assist the commercial snapper-grouper fishing industry through (1) increased efforts to introduce cooperating industry members to fisheries management, (2) dissemination of project results to increase project awareness and illuminate the need for increased available data, and (3) allow direct participation of the industry in data collection for stock assessments.

Commercial fishermen are typically dubious of assisting in the collection of fisheries related data because they believe this information will be used to further restrict harvest within their fishery. Due to the limited amount of data available within the snapper-grouper complex, fishermen are becoming more aware that management regulations based on insufficient and incomplete datasets can have serious effects (e.g., stocks being considered overfished when they are healthy). As a result, industry members want to become more involved in cooperative research and fisheries management. By increasing industry participation, fishermen are cognizant of the methods used to collect data and are more trusting of the stock assessment results that utilized the data they help collect. This is no more apparent than in the shrimp fishery of the Gulf of Mexico. Shrimp fishing effort allocation by NMFS overestimated the magnitude of red snapper bycatch and the impact of the fishery on the red snapper stock. After the Foundation completed several projects, with the cooperation of industry, aimed at accurately recording effort in time and space (electronic logbooks), the 2004 stock assessment of red snapper (SEDAR-7) indicated that the directed red snapper fishery had the greatest impact on the stock resource and not shrimp trawl bycatch (although shrimp trawl bycatch is still considered a problem). Through dissemination of project results to industry, cooperation increased markedly during subsequent projects. These same results could be attained within the snapper-grouper fishery of the South Atlantic. For instance, if fishermen are aware of the specific use of the data they help collect and the effect of this data on management regulations, this increases their support of additional cooperative research and data collection projects both within the snapper-grouper and other fisheries.

Although the data collected during the performance of this project are fishery dependent, they will provide much needed data to stock assessment scientists. Collection of discard rates was a priority research item identified in recent stock assessments (SEDAR, 2007; 2009). Central to any stock assessment is knowing where effort is allocated and knowing the quantity of fish exploited. Although these data can be gained through trip ticket and landings information (gathered through dealer invoices, and other data collection programs administered through state and federal agencies), the data collected in this project can serve as a benchmark to compare and contrast the accuracy of historic data collection methods and increase the precision of collected data. Additionally, accurate estimates of spatiotemporal catch-per-unit-effort can be derived. This is even more evident as the fishery shifts effort due to added regulations. Because previous Foundation projects have collected data prior to and during management changes, potential shifts (like those seen in the red porgy fishery in years past) can be highlighted through additional sampling periods.

Perhaps the most important data collected during this project are those regarding discards and discard disposition. These data are not typically recorded by fishermen or logbooks [the pilot study using electronic logbooks in the South Atlantic attempted to quantify discards (Perot Systems, 2006)] and can have a significant impact on the stock status of a fishery. Inaccurate estimates of discard mortality can lead to an over- or under-estimate of the impact of fishing activity (either commercial or recreational) on the population, thereby leading to misinformation and false outputs by the stock assessment models. This information would only lead to inappropriate management actions and place additional burden on resource users within the fishery.

As fish stocks increase under new and sustained management regulations, there is an increased need to assess the effectiveness of management regulations. With the national programmatic goal of reducing bycatch mortality, an increase in the accuracy of reported discards can allow for a better analysis of management strategies. Recent concerns about the discard mortality associated with the snapper-grouper complex within the South Atlantic have led to a reevaluation of size limits and directly to the proposed red snapper closure. The latest stock assessment for South Atlantic red snapper determined the discard mortality of red snapper in the commercial fishery is 90%. Concerns have been raised as to the feasibility of size limits within a mid- to deep-water fishery, due to the physiological damage to the fish when brought to the surface (e.g., low probability of survival for fish harvested at deep depths). This is problematic considering the increasing biomass assumed to be acquired under increased management regulations. If a large proportion of undersized fish are harvested and discarded alive, then size limits are a feasible management option. But if undersized fish are discarded dead or post release mortality is high, then this severely impacts recruitment of fish into the commercial fishery and decreases future harvests. There is also an associated ecosystem impact on faunal assemblages with cascading effects within top-down and bottom-up controlled systems that impact both population and foodweb dynamics (Goni, 1998). By attempting to compute trends in bycatch based on species assemblages, there is the potential to gain a better understanding of when and where bycatch has the greatest impact on the snapper-grouper complex. With the information derived from this project, the data available for stock assessments will be expanded and the South Atlantic Fishery Management Council and NOAA Fisheries will be able to better assess the impact of discards on the snapper-grouper fishery.

Need for Federal Support:

This project will address several national priorities set forth by the Magnuson-Stevens Act, priorities outlined within the FY2010 Cooperative Research solicitation (e.g. Section 1. Commercial Finfish; a. Projects to characterize the total catch (from all fleets affecting the stocks), including catch composition and disposition of the catch; b. Projects focusing on the composition and disposition of bycatch and discards such as to determining the effects on discard rates of increasing size limits or reducing possession limits). Data collected in this study also coincides with the priorities outlined within the Cooperative Bycatch Plan for the Southeast United States (NOAA, 2004). Further, U.S. fisheries resources and marine ecosystems are a public commodity and, as such, are managed by the United States Government. The research outlined within this proposal has the potential of impacting the commercial fishing industry, state

and federal fisheries management agencies, seafood consumers, recreational anglers and the public-at-large. Given the extent of the benefits gained from this project by interest groups, it is fair and reasonable to ask for federal assistance to conduct this study.

Statement of Work

Proposed Budget period:

September 1, 2010 – August 31, 2011

Materials and Methods:

The Fishery, Vessel Selection, and Vessel Compensation

The average fishing vessel within the snapper-grouper fishery is between 20 and 44 feet in length and utilizes a variety of gears to harvest snapper-groupers, with 81% landed by vertical hook-and-line (SAFMC, 2008). From 2003-2007, an average of 890 out of 944 permitted vessels landed at least 1 pound of snapper-grouper species in the states of Florida, North Carolina, South Carolina and Georgia (SAFMC, 2009). The limited entry program (2 for 1) has steadily reduced the number of snapper-grouper permits from 1059 in 2003, to 877 in 2007. Coupled with rising fuel and trip costs, landings and effort have declined by a third since 1997, while dockside price for snapper and grouper has decreased (SAFMC, 2009).

The vertical hook-and-line gear most used by snapper-grouper fishermen are 'bandit rigs'. These devices are mounted on the gunwale of the vessel and consist of a davit and mechanically operated reel (electric or hydraulic), which sets and retrieves the fishing line. Vessels participating within the snapper-grouper fishery average 3-6 bandit reels per vessel (SAFMC, 2006). Anecdotal information relayed by industry indicates that ~40 boats account for the majority of commercial hook-and-line landings within the snapper-grouper fishery. This is supported by data from 2003-2007; on average only 27 boats landed more than 50,000 pounds of reef fish (SAFMC, 2009). Through the outreach efforts from past Foundation observer projects, the current list of participating vessels is thirty-eight, and includes a number of the aforementioned 'high liners'. Previous observer trips have shown that trip length is variable, however, the average trip from data collected so far is 7 days, therefore an "average" vessel will likely conduct ~29 trips per year. This equates to ~200 days fished per vessel per year (29 trips/year x 7 days/trip = 203 days/year). While the pilot project was funded for 200 days (which approximately covered a single vessel sampling year), with the expected reduction in fishing effort due to regulations within the fishery (reduced quotas and closures), we propose 100 at-sea days of observer coverage is needed to continue to accurately quantify the effort and catch for the snapper-grouper vertical hook-and-line fishery in South Atlantic.

The Foundation's South Atlantic Regional, Observer/Vessel, and Industry Cooperators will again actively solicit the cooperation of fishing vessels and captains willing to participate in the observer program. Only vessels with valid snapper-grouper permits (Permit 1 only, unlimited permit), exclusively fishing bandit reels, will be asked to participate in this program. Although vessel selection will be non-random (e.g., voluntary participation solicited by Coordinators), all

efforts will be made to increase the total number of vessels cooperating in the project, and the universe of vessels to which an observer can be assigned. Although previously, random vessel selection was attempted under the pilot program, it quickly became obvious because the list of cooperating vessels grew over time that each vessel did not have the same probability of being selected each time. In fact, by soliciting participation in the project and not mandating participation, the process cannot be random. Furthermore, to efficiently utilize observer and observer coordinator time, the selection of vessels will not be random but focus on ensuring adequate coverage of all areas and as many different vessels as possible. An ad-hoc selection of vessels from the total list, with full compliance, may cause no more error than a random selection with poor compliance (Volstad and Fogarty, 2006). Cooperating vessels carrying an observer will be asked to fish under "normal" conditions and will not be instructed on when, where, or how to fish. Previous projects have shown that by asking the vessel to fish "normally", the problem of "observer bias", which is a change in fishing behavior when an observer is aboard, is minimized or removed (Volstad and Fogarty, 2006). Also, because the project is voluntary and the boats are compensated for removing crew members to accommodate observers, the vessel has no real incentive to change fishing behavior.

Because crew size is dependent upon the number of bandit reels installed on the vessel, one crew member may be displaced to allow space for the fishery observer during a fishing trip. The Foundation will make available to cooperating fishing vessels funds that will cover or offset the costs associated with the displacement of the crewmember (e.g., equivalent daily catch) and the materials (food) associated with the performance of this project. Cooperating fishing vessels will be compensated \$500/day for each day a set is made and \$50/day for travel while not actively fishing. Additionally, vessel liability insurance will be secured and funded by the Foundation to protect the vessel in the event of a catastrophic incident resulting in injury.

Fishery Observers

All contracted fishery observers will have undergone specific and detailed training prior to their deployment on any commercial fishing vessel. It is the responsibility of the Observer/Vessel Coordinator to schedule and train all fishery observers. Training details all administrative and programmatic procedures necessary to conduct the proposed research and includes (but is not limited to): overview of the data collection protocols, review and identification of all fauna harvested during hook-and-line fishing, proper handling of sea turtles, description and measurements of fishing gear, and best practices while aboard a commercial fishing vessel (classroom and at-sea education). In addition, all observers and the Observer/Vessel Coordinator will undergo marine safety training that outlines procedures on how to respond properly and promptly to a variety of situations that could be encountered during fishing operations (e.g., man overboard drills, firefighting, radio communication, etc.). Each observer is also required to complete a First-Aid and CPR course. At the conclusion of observer training, individual observers will be outfitted with the necessary sampling (baskets, fish boards, etc.) and safety (personal EPIRBs, lifejackets, etc.) gears, and will be officially certified by the NMFS. Observers will be responsible for collecting and verifying all data collected during fishing operations and following all NMFS Observer Guidelines.

Data Collection

The purpose of this project is to quantify effort, total catch, and discards within the snapper-grouper vertical hook-and-line fishery of the South Atlantic United States. Sampling will occur year-round with effort proportionately distributed by season (weather dependent). Sampling methodologies are borrowed and modified from protocols already in existence (Gitschlag and Renaud, 1994; MRAG Americas, 1999), and have been fine tuned through the previous project periods. Only one fishery observer will be deployed per cooperating vessel to collect data. Where feasible, the fishery observer will solicit the assistance of the vessel crew to assist with data collection. This will include, but is not limited to, the verbal identification of fish caught, the condition of discarded fish, and method of release.

Prior to the collection of catch data, the observer will complete a Vessel Characterization / Trip Report form that will outline the specifics of the vessel and dates fished. This will include information such as vessel name, vessel length, vessel identification number, year of construction, hull material, gross tonnage, horsepower and number of engines, crew size (number of individuals fishing), vessel owner's name and address, captain's name and address, trip dates (departure and return), number of at-sea days, port of departure, and home port.

After this information has been collected, the observer will then number each of the bandit reel stations, starting with the forward starboard side and continuing clockwise, until all rigs have been numbered. These positions will remain constant for the entirety of the fishing trip. The observer will then fill out a Gear Specification form for each rig fished, and will include: means of line retrieval (manual, electric, hydraulic), mainline length and strength, leader length and strength, the number of hooks per rig, size and type of hook used (e.g., 5/0 circle hook, 2/0 J-hook, etc.), and amount and number of weights per line. This information will be assumed constant for the entire fishing trip or unless a variable is altered (e.g., new hook, line, or weight is added), at which time the observer will then fill out a new form specifying the time, date, and the alteration made to the fishing gear.

At each station that is fished (specifically every anchored spot), the observer will fill out a Station sheet. This will record information about the time spent on station (measured from the time the first rig is set to the last rig retrieved), latitude and longitude of station, depth fished, structure fished, approximate speed of line retrieval (measured in m/s), number of sets sampled / not sampled, number of hooks sampled / not sampled, time of day, sea state, gear type, bait type, and presence of predators.

While on-site and actively fishing, the observer will complete a Catch Characterization form. This form will record the total catch brought aboard the vessel and general information regarding fishing practices. Sets are defined as one deployment and retrieval of a reel. Each set may consist of more than one fish due to the particular rig utilized (ie. multiple hooks per rig). The reel will be randomly chosen by the observer to decrease the likelihood of side or gear bias. After a set is sampled, a new reel will be randomly selected. The next random reel could be a repeat of the previous set. For each reel/set that is sampled, the following information will be recorded: station number, reel number, gear type, species identification (genus and species), length of fish sampled (TL, FL, SL, measured in mm), weight of fish sampled (if possible),

retention (harvested or bait) or discard of individuals, and discard condition. The condition of fish brought onboard or released will be categorized as follows: Live – normal appearance; Live – stomach protruding; Live – eyes protruding; Live – combination of stomach and eyes protruding; Dead on arrival; Not Determined. To quantify discard fate, the observer will be tasked with recording the fate of all sampled fish. An extra column on the datasheet will allow fate of individual fish to be recorded as: Fish kept; Fish kept as bait; Discarded alive or Discarded dead. Also, a note will be made if the air bladder of a discarded fish is punctured prior to release (important to note with possible upcoming venting regulations). All animals brought aboard at a sampled reel will be quickly dehooked, measured, and released (if under-sized or out of season per fishermen discretion). Efforts will be made to minimize the physical impact to the harvested fish while collecting all necessary data in a timely manner. If a reel comes up empty, the set will be labeled as “no catch” and counts as a sampled set.

Because commercial fishing practices on individual vessels are variable, in the event that an observer cannot sample the total catch brought aboard by all bandit reels (e.g., too many reels per vessel to allow the observer to accurately record all necessary data), the observer will subsample the total catch by focusing efforts on individual reels chosen at random. Even if a reel is not “sampled” (data collected on caught fish), all sets will be accounted for as effort data and will be labeled as an “unsampled” set. This becomes necessary when a vessel encounters a big bite and all of the reels are catching multiple fish.

Data Review, Entry and Analysis

As stated above, the Observer will be tasked with collecting all data. At the end of each fished station, the observer and vessel captain will verify the accuracy of the collected data by signature. At the conclusion of a fishing trip, the observer will thoroughly review all data sheets and verify that all data are legible and accurate. The Observer/Vessel Coordinator will then debrief the observer and verify that all data sheets are legible and accurately/completely filled out. At this time, the Observer/Vessel Coordinator will also inquire into any problems encountered during the trip that could have increased variance within the collected data. If any abnormal problems were encountered, the Observer/Vessel Coordinator will consult with the Foundation’s Program Director to discuss the experimental design and proper procedures necessary to alleviate the problem.

After the Observer/Vessel Coordinator has thoroughly reviewed the data, he will make copies of the original data. He will keep all photocopies and forward the original data to the contracted Data Manager. The Data Manager will then review the data and enter it into a relational database that will be easily accessible to Foundation Contractors and NMFS. After all data have been entered and backed-up, the data (both electronic and hard copies) will be archived at the Foundation’s office in Tampa, FL where it will be available for use by interested parties.

The dataset created during the performance of this award is not intended to be considered a standalone, but is meant to augment existing datasets and assist scientists in the development of formal stock assessments for the snapper-grouper complex. As a result, the majority of data analyses for this project will be descriptive and include, but not limited to: number of trips sampled, number of vessels sampled, average number of sets per station, species specific CPUE, species specific length-frequency distribution, mean depth per trip and station, the ratio of

retained vs. discarded catch, distribution of effort, proportional discard mortality rate, and proportional condition of catch by depth.

Quantifying effort associated with this fishery is somewhat tedious. The issue stems from how bandit reels are fished at each set. A single reel may be baited, retrieved, the catch removed and reset many times during the total fishing time at a station. Most reels fish two or more hooks and these hooks may be sampled multiple times from one reel per station. The nature of this fishing routine can be accounted for if we can assume that each set lasted the same amount of time; therefore, if total fishing time was one hour and six sets were made from one reel, then fishing time for each set (and the number of hooks from each set) was 10 minutes. Time to fishing depth, time for retrieval, and time per set were not recorded so effort will be biased high, but we consider this bias consistent and miniscule. The following information will be recorded by the observers which we will use to estimate hook hours (HH):

$$HH = \frac{FT}{TS} \times HS \quad (1)$$

$$TS = \frac{SS}{RS} \quad (2)$$

where, FT=total fishing time (or the difference between the time fishing ended and started at a station), TS=number of times during the FT the reels were set, HS=total number of hooks sampled at a station (note the same hook was usually sampled more than once per station owing to the multiple sets), SS=sets sampled, and RS=number of reels being sampled.

Catch per unit effort will be reported as individuals per 1,000 HH, which will be estimated for each set and averaged for each species over the entire season. For the five most frequently caught bycatch species, CPUE will be predicted for each quarter of the year (e.g., Jan-Mar = Quarter 1) and statistical zone combination. Some quarter-statistical zone combinations will not be sampled or sampled minimally and generalized linear modeling is typically used for estimating CPUE of missing cells. The raw counts of individuals will be Poisson distributed and may be overdispersed with numerous zeroes. In addition, the effort that produced each sample (i.e., HH) will vary and must be accounted for. Often researchers will divide the count of individuals by the corresponding effort for a given sample to render counts per effort. Though this metric appears to be on the continuous scale because decimal values are present, this designation is artificial and the data should not be treated as such (Power and Moser, 1999). Varying effort is more appropriately incorporated as an offset (termed varying element size by Power and Moser, 1999) to the λ parameter that defines the Poisson distribution from which the data were produced. If the data were generated from a compounded Poisson (i.e., the data came from several Poisson distributions unbeknownst to the sampler) then overdispersion will occur, as is often the case with catch data. The negative binomial is a discrete probability distribution that is recognized as a suitable descriptor of catch count data (Power and Moser, 1999). We will portray the predicted CPUE (i.e., the λ parameter) of select individual species through a global linear log link function to the negative binomial distribution. All computations will be conducted using the GENMOD procedure in SAS Version 9.1.3 Software (SAS Institute Inc.,

2003). The GENMOD procedure estimates the regression parameters to maximize the negative binomial log-likelihood.

Certain species tend to occur with each other, and these correlations are what characterize assemblage structures. As such, bycatch of any particular species will be more likely to occur with the catch of some species more than others owing in part to these species associations in addition relative gear selectivity. We can take advantage of these correlations when estimating bycatch for the entire fishery by generating multivariate models that quantify species associations and use these parameters in the bycatch estimation model as covariates. A suite of ordination techniques (e.g., detrended correspondence analysis [DCA] and canonical correspondence analysis [CCA]) are available to describe assemblage structure and quantify species correlations. A criticism of this approach may be that parameterization is difficult and time consuming, but we counter that accurate estimation of bycatch is paramount in this particular fishery management environment. Furthermore, bycatch estimates through species associations will be no more complex than the already highly sophisticated statistical age-structured models into which bycatch estimates feed. The alternative is to simply report bycatch on a per effort basis or as a percentage of total catch with no regard for the species that comprise the total catch. Stratification by time and area may reduce bias in the latter approach, but we suspect that time and area will only be serving as proxies for assemblage structure, which tends to vary over time and space. Trends in bycatch and assemblage structure (as indexed with bandit reel gear) will be compared across time and space with the bycatch model to identify when and where bycatch is greatest and least for select species.

Either total length or fork length will be recorded for individuals from randomly selected reels. As minimum length regulations are given in total length, fork lengths will be converted to total lengths with species specific equations taken from the literature. We will then summarize the percent of individuals below the minimum length regulation for all fates of catch (kept, kept for bait, and discarded) and generate length frequency distributions for the most frequent bycatch species.

Participation by Persons or Groups Other Than Applicant:

A project of this magnitude and importance requires the cooperation and active participation of many organizations and individuals. The Foundation has chosen to sole-source contract with several persons in conjunction with this project. The essential personnel needed to complete the project objects are:

Mr. Lindsey Parker, South Atlantic Regional Coordinator, UGA Marine Extension

Mr. Daniel Parshley, Observer/Vessel Coordinator

Mr. Phil Diller, Data Manager

LGL Ecological Research Associates, Dr. Scott Raborn, Data Analyst

1 Fishery Observer (To be contracted from those below or TBA)

Mr. Robert Timmeney

Mr. Mark Marhefka, Industry Cooperator; Commercial Fisherman; Interim Director-South Atlantic Sustainable Fisheries Association, Inc.

Mr. Robert Jones, Industry Cooperator, Executive Director of Southeastern Fisheries Association, Inc.

Dr. Jack McGovern, Fishery Biologist, NMFS Cooperator, NMFS Southeast Regional Office

Many of the above individuals have been associated with other, similar Foundation research programs and projects. Their continued involvement will provide stability and allow for a smooth progression into this project from both a management and performance perspective.

Through years of experience, the Foundation has found that working closely with Marine Extension Service personnel (Mr. Lindsey Parker) is an efficient way to achieve rapid communication and cooperation with local fishermen. The Regional Coordinator will act, in cooperation with the Industry and Observer/Vessel Coordinators, as a liaison between the Foundation and vessel owners, relaying information about the project goals and securing vessel participation.

The Observer/Vessel Coordinator will assist the Program Director, Program Specialist, Regional Coordinator, and Industry Coordinator in their day-to-day activities and will coordinate all field efforts through constant communication with Foundation staff and contractors. The Observer/Vessel Coordinator will recruit and train an observer and coordinate field sampling efforts. He will also contact and establish a good working relationship with various cooperating vessel owners, captains and crew, and provide this information to fishery observers. Prior to the deployment of a fishery observer, the Observer/Vessel Coordinator will review with each observer all established protocols on how and what data to collect while onboard a participating vessel. He will also provide all necessary sampling and safety equipment and is responsible for reviewing all data for completeness prior to data entry.

Observer collected data for this project will be electronically entered by a Foundation contracted Data Manager. The Data Manager is responsible for checking and transferring all raw data into a manageable computer database for data archive. A copy of all observer collected data will be made available to the respective NOAA Fisheries division for archive. Once the data are ready, they will then be forwarded to the Data Analyst (LGL Ecological Research Associates, Inc.) and Foundation Program Director.

The contracted Data Analyst will conduct all statistical tests on observer-collected data with overview and direction from the Foundation's Program Director. Statistical tests will be varied, but will mostly focus on describing the fishery to include fishing effort, total catch characterization, and discard fate. The Foundation will rely on the analytical and scientific skills of the Data Analyst to assist in any ancillary statistical tests (i.e., descriptive statistics,

spatiotemporal effort, Bayesian tests, etc.) that could be completed during the performance of this award.

Only an observer that has undergone rigorous NMFS certification training will be contracted by the Foundation. This training will include safety training, sea turtle handling training, onboard practices to avoid interference with the participating vessel captain and crew, data collection protocols (both classroom and at-sea training), and administrative protocols. It is the job of the Observer to collect and proof all collected data for completeness and accuracy before being debriefed by the Foundation Observer/Vessel Coordinator. The Foundation currently has a contracted observer working on complementary projects. Because this individual possesses the skills needed to fulfill the position and has proved himself under field conditions, the contracted observer position will be offered to this individual. If additional observers are needed to collect data, a competitive solicitation process will be conducted by the Foundation.

The Industry Cooperators will work with the Regional and Observer/Vessel Coordinators to assist in securing and increasing vessel participation for this project. Mr. Mark Marhefka is the owner and operator of a commercial bandit reel vessel that targets snapper-grouper within the South Atlantic and has agreed to be an Industry Cooperator on this project. He is well respected within the fishery, holds an Advisory Panel seat on the South Atlantic Fishery Management Council, and is widely known. Also, acting as Interim Director of the South Atlantic Sustainable Fishery Association, he has increased awareness within the snapper-grouper commercial fishery for the need to collect more accurate data that can be utilized by stock assessment scientists. His history within the fishery and knowledge of the management process will increase the universe of vessels participating in the performance of this award. Mr. Robert Jones, Executive Director of Southeastern Fisheries Association, represents an organization with a broad constituency that includes a significant number of industry members.

All data will be gathered through the cooperation and direct participation of the commercial snapper-grouper fishing industry of the South Atlantic region. Without the cooperation of industry, this project would not be possible. The use of fishing vessels as research platforms, not only reduces the costs associated with this project, but ensures that industry is aware of the research and allows them to be involved in all steps of the scientific and management process. By allowing fishermen to actively participate in the collection of data, they will be more trusting of the results generated from this research and will be more willing to assist in future research.

The Foundation has historically worked cooperatively with NOAA/NMFS staff and personnel in the performance of research projects. Dr. Jack McGovern (NMFS Southeast Regional Office) has agreed to be this project's NOAA Fisheries Cooperator. Dr. McGovern will confirm that all data are collected in a scientifically rigorous manor and will provide feedback on the performance of this project. He will also provide limited input on data analyses conducted by the Data Analyst. The Program Director will keep Dr. McGovern apprised of the performance of this project and provide regular updates on any and all progress and/or problems that may occur.

Project Personnel and Management:

Principal Investigators:

Ms. Judy Jamison, Executive Director
Mr. Frank Helies, Program Director

Foundation Staff:

Ms. Gwen Hughes, Program Specialist
Ms. Charlotte Irsch, Grants/Contracts Specialist
Administrative Assistant

Overall project quality control and assurance will be assumed by the Gulf & South Atlantic Fisheries Foundation, Inc. through its office in Tampa, FL. Foundation personnel will each spend 15% of their time over the course of the 12-month project period in the performance of this award. A project of this magnitude is time consuming and requires the direct and constant attention of each Foundation employee. Qualifications of the Principal Investigators are highlighted in the attached resumes.

The Foundation's Executive Director, Ms. Judy Jamison, has ultimate responsibility for all Foundation administrative and programmatic activities, with oversight by the Foundation's Board of Trustees. She ensures timely progress of activities to meet project objectives and confirms compliance of all activities with NOAA/NMFS.

The Foundation's Program Director, Mr. Frank Helies, has overall responsibility for all technical aspects of Foundation projects and coordinates performance activities of all project personnel, including contractors. He confirms and evaluates the effectiveness of projects and subcontracts and ascertains timeframe and funding limitations for the project. Should alterations to the described experimental design or data collection protocols be necessary, he confirms that all data are collected in a scientifically rigorous manner to ensure the usefulness of all collected data. Additionally, he coordinates all analytical efforts, prepares all progress and final reports concerning project performance, and drafts the Foundation's quarterly newsletter.

The Grant/Contracts Specialist, Ms. Charlotte Irsch, is responsible for maintaining general financial accounting of all Foundation funds including all Cooperative Agreements and contracts, as well as communicating with NOAA Grants Management personnel, and assisting auditors in their reviews. She conducts/documents internal and program (single and desk) audits, prepares backup documentation for fiscal audits, and drafts award extension requests (if applicable). Ms. Irsch provides the Executive and Program Directors with projected budgets concerning program performance and ensures that these budgets adhere to the proposed project budget. Finally, she prepares the annual administrative budget, NOAA Financial Reports, and confirms compliance of all activities with NOAA/NMFS and OMB guidelines.

The Program Specialist, Ms. Gwen Hughes, is responsible for tracking programmatic activities, securing federal and state collection and experimental permits, exempted fishing permits,

monitoring funding and distribution of funds. She is also responsible for generating supporting documentation to assist in any and all programmatic audits. Ms. Hughes is responsible for the coordination of all program related workshops and auditing and paying program related invoices. She processes requests for reimbursement to conform with federal guidelines and prepares and maintains all contracts, subcontracts, agreements and amendments. Additionally, she is responsible for securing vessel insurance and securing workers compensation certificates on all cooperators, if applicable.

The Administrative Assistant is responsible for receptionist/clerical duties, word processing, filing correspondence, dissemination of materials to industry (final reports, press releases, newsletter). She is also responsible for creating and organizing meeting files, processing invoices and maintaining cooperative program files.

Monitoring of Project Performance:

Given the current controversies and conflicts among various interest groups related to the programmatic concepts outlined here, there is a possibility that one (or more) of these groups will question the validity of the Foundation's findings. For internally conducted studies, Principal Investigators (PIs) will regularly communicate with Observer and Foundation Observer and Regional Coordinators concerning fieldwork. PIs also review data for completeness and accuracy. The Program Director will monitor the data management procedure to ensure that all data entry and analyses meet objectives outlined within the proposal. Additionally, the quality of data collected, and the procedures used to collect those data, will be assured through the use of highly qualified and knowledgeable observers who are experienced in this line of work.

Internal and external monitors will oversee the PIs' activities and responsibilities. The Foundation Board of Trustees (attachment), representing various commercial fishing and seafood interests throughout the southeastern United States, oversee the PIs' tasks and are kept aware of and critically review interim and final project reports. This program will be conducted as an award with NMFS and the timely completion of project objectives will be externally monitored by the Program Office of the NMFS Southeast Regional Office, NOAA Grants Management, and a NMFS Technical Monitor. Interim and final progress and financial reports concerning the program will be submitted to NOAA/NMFS, as required, to help the agency track the successful implementation, performance, and completion of the various tasks outlined in this proposal. During the period when analysis of the data is being conducted, the PIs and peer reviewers will discuss data, data analyses, and data interpretation. Only after the analyses have undergone rigorous evaluation will the final report be accepted and printed.

Dissemination of Results:

Information and results of this project will be disseminated through a public presentation convened in conjunction with a South Atlantic Fishery Management Council meeting (to be announced at a later date). By coordinating the public presentation in conjunction with the Council Meeting, we will maximize participation by commercial fishermen, fishery managers, and the concerned public. This public presentation will highlight the data collection methods for the project and the results derived from the analyses, with implications for data use during stock assessment. Not only will this presentation act as a forum to discuss the relevance of the project,

but will also provide insight into fisheries management and the science behind stock assessment analyses.

Additionally, cooperating fishing vessels will be provided with regular updates and a copy of the Foundation's final project report. Summary reports of the project's findings will also be published as part of the "Foundation Project Update" section of the "Gulf and South Atlantic News", a publication of the Gulf & South Atlantic Fisheries Foundation, Inc. This newsletter is distributed to over 300 organizations and individuals throughout the region. An electronic version of this newsletter (PDF) is also included in the regular updates to the Foundation's website (www.gulfsouthfoundation.org).

Copies of this project's final report will be published and distributed to various federal and state fishery agencies, university extension/Sea Grant offices, and industry associations. In addition, PDF copies of the final report will be made available for download from the Foundation's website.

Milestone Table:

Project Activities	2010				2011										
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Project Start-up Activities / Contract Negotiations	xx														
Project Coordination / Monitoring	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx			
Observer Training	xx	xx	xx												
Solicit Industry for Participation	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx					
Permit Applications and Renewals	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx					
Selection of Participating Vessels		xx	xx	xx	xx	xx	xx	xx	xx	xx					
Observer Data Collection			xx	xx	xx	xx	xx	xx	xx	xx					
Evaluation of Test Results / Data Analysis											xx	xx			
Progress Report Submission						xx						xx			
Financial Report Submission	xx						xx								xx
Dissemination of Results / Final Public Presentation											xx	xx			
Project Closeout & Final Report Preparation													xx	xx	xx
Final Report Submission															xx

Literature Cited:

- Boardman, C. and D. Weiler. 1979. Aspects of the life history of three deepwater snapper around Puerto Rico. Gulf & Caribbean Fisheries Institute. 32:158-172.
- Claro, R. and K.C. Lindeman. 2003. Spawning aggregation sites of snapper and grouper species (Lutjanidae and Serranidae) on the insular shelf of Cuba. Gulf and Caribbean Research. 14(2): 91-106.
- Cuellar, N., G.R. Sedberry, and D.M. Wyanski. 1996. Reproductive seasonality, maturation, fecundity, and spawning frequency of the vermilion snapper, *Rhomboplites aurorubens*, off the southeastern United States. Fishery Bulletin. 94:635-653.
- Federal Register. 2006. 71(183):55096-55106. September 21, 2006. Government Printing Office. Washington, D.C.
- Federal Register. 2009a. 74(123):30964-30973. September 21, 2006. Government Printing Office. Washington, D.C.
- Federal Register. 2009b. 74(124):31225-31235. September 21, 2006. Government Printing Office. Washington, D.C.
- Gitschlag, G.R. and M.L. Renaud. 1994. Field experiments on survival rates of caged and released red snapper. North American Journal of Fisheries Management. 14:131-136.
- Goni, R. 1998. Ecosystem effects of marine fisheries: an overview. Ocean and Coastal Management. 40: 37-64.
- Lewison, R.L., L.B. Crowder, A.J. Read, and S.A. Freeman. 2004. Understanding impacts of fisheries bycatch on marine megafauna. Trends in Ecology and Evolution. 19(11):589-604.
- MRAG Americas. 1999. NMFS response to the 1997 peer review of red snapper (*Lutjanus campechanus*) research and management in the Gulf of Mexico. National Marine Fisheries Service, St. Petersburg, FL. 146.
- National Marine Fisheries Service (NMFS). 1999. Ecosystem-based fishery management. A report to Congress by the Ecosystems Principles Advisory Panel. U.S. Department of Commerce, Silver Spring, M.D.
- National Oceanic and Atmospheric Administration (NOAA). 2004. Evaluating bycatch: A national approach to standardized bycatch monitoring programs. U.S. Department of Commerce, NOAA Technical Memorandum NMFS-F/SPO-66. October, 2004. 108p.
- Perot Systems. 2006. Assessing the Use of Electronic Logbook Reporting For the South Atlantic Snapper Grouper Fishery.

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- Rielinger, D.M. 1999. Spawning Aggregations in the Gulf of Mexico, South Atlantic and Caribbean: A Source Document for Fisheries Management.
- Robins, C.R. and G.C. Ray. A field guide to Atlantic coast fishes of North America. Houghton Mifflin Co. Boston, MA. 354p.
- Sokal, R.R. and F.J. Rohlf. 1995. Biometry: the principles and practice of statistics in biological research. 3rd Edition. W. H. Freeman. New York, NY.
- Southeast Data, Assessment, and Review (SEDAR). 2007. Report of Stock Assessment. Vermilion Snapper. SEDAR Update Process #3. Assessment Workshop of April 2-4, 2007. NOAA Center for Coastal Fisheries and Habitat Research, Beaufort, North Carolina.
- Southeast Data, Assessment, and Review (SEDAR). 2008. Report of Stock Assessment. Vermilion Snapper. SEDAR 17. Data Workshop of May 19-23, 2008. South Atlantic Fishery Management Council, North Charleston, SC 29405..
- Southeast Data, Assessment, and Review (SEDAR). 2009. SEDAR 15 Stock Assessment Report 1 (SAR 1) South Atlantic Red Snapper. February 2008, Revised March 2009. South Atlantic Fishery Management Council, North Charleston, SC 29405..
- South Atlantic Fishery Management Council (SAFMC). 2006. Final Snapper Grouper Amendment 13C. South Atlantic Fishery Management Council, North Charleston, SC 29405.
- South Atlantic Fishery Management Council (SAFMC). 2007. Final Snapper Grouper Amendment 15B. South Atlantic Fishery Management Council, North Charleston, SC 29405.
- South Atlantic Fishery Management Council (SAFMC). 2008. Final Snapper Grouper Amendment 16 (Gag and Vermilion snapper) including a final environmental impact statement, initial regulatory flexibility analysis, final regulatory impact review, and final social impact assessment/fishery impact statement. South Atlantic Fishery Management Council, North Charleston, SC 29405.
- South Atlantic Fishery Management Council (SAFMC). 2009. First Briefing Book Draft, Snapper Grouper Amendment 17. South Atlantic Fishery Management Council, North Charleston, SC 29405.
- Volstad, J.H. and M. Fogarty. 2006. Report on the National Observer Program Vessel Selection Bias Workshop. Woods Hole, MA. May 17-19, 2006.

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F/SER24:SB
SER10-086

Ms. Judy Jamison
Gulf and South Atlantic Fisheries Foundation, Inc.
5401 West Kennedy Boulevard, Suite 740
Tampa, Florida 33609

Dear Ms. Jamison:

This Exempted Fishing Permit (EFP) is issued, with limited special conditions, under procedures established at 50 CFR 600.745(b). The EFP exempts the activities described herein for a 24-month period beginning September 2010. The EFP exempts, with certain conditions, personnel from the Gulf and South Atlantic Fisheries Foundation, Inc. from regulations found at 50 CFR 622, including but not limited to 622.32(c) (limited harvest species), 622.35(j) (seasonal grouper closure), 622.35(l) (red snapper closure), and 622.36 (seasonal closures for greater amberjack, mutton snapper, wreckfish and red porgy), 622.37 (size limits), 622.38 (landing fish intact), and 622.44 (trip limits) as they affect the commercial snapper and grouper fishery in the South Atlantic Region. The EFP authorizes personnel from the Gulf and South Atlantic Fisheries Foundation, Inc. (Foundation) to possess limited numbers of legal fish and marine resources as well as regulatory discards taken during the course of normal commercial snapper-grouper vertical hook-and-line fishing operations in South Atlantic federal waters as part of the Cooperative Research Program. The research is intended to characterize catch and discard mortality within the South Atlantic commercial hook-and-line snapper-grouper fishery.

The EFP applies to research activities conducted in federal waters off the east coast of Florida and federal waters off the coasts of Georgia, South Carolina, and North Carolina. Collecting efforts in state waters and protected areas must be authorized through appropriate government officials. NOAA Fisheries Service understands most specimens will be examined onboard, with legal specimens becoming part of the vessel's commercial catch and sub-legal sized fish or other forms of regulatory discards being returned to the water. As necessary, the EFP authorizes Foundation personnel to retain as many as 500 specimens (both legal and regulatory discard) outside of the allowable commercial harvest for either extended onboard examination or later shoreside analyses through September 30, 2012.

The permit is valid for Foundation-associated observers and fishing vessels identified on the enclosed list. A copy of the EFP and the enclosed list must be onboard and available for inspection. This list of approved vessels and personnel may be amended during the course of the EFP. Requests for such amendments must be provided at least 30 days before sampling begins.

Reporting and other requirements are included in the following conditions of this EFP:

1. The holders of this permit may not conduct research within marine protected areas, marine sanctuaries, special management zones, or over artificial reefs, without additional authorization.
2. The holders of this permit may not possess or retain Nassau or goliath grouper.
3. Foundation field personnel are considered designated agents of NOAA Fisheries Service while conducting work under a NOAA Fisheries Service-funded research grant, and as such, are authorized to handle sea turtles encountered during the course of this study. As outlined in the regulations at 50 CFR 222.310 and 50 CFR 223.206, an agent may aid and collect data from endangered or threatened sea turtles. Live turtles must be handled and resuscitation measures implemented according to procedures and requirements at 50 CFR 223.206(d)(1). Skin biopsy sampling is not allowed without separate authorization.
4. A report outlining the results of this study is due in accordance with the requirements of the Cooperative Agreement. The report should include a list of the species and their numbers retained under this EFP, as well as their final disposition. Please make a copy of this final report available to the Regional Administrator, NOAA Fisheries Service, 263 13th Avenue South, St. Petersburg, Florida, 33701.

Sincerely,

Roy E. Crabtree, Ph.D.
Regional Administrator

Enclosure

cc: F/EN4, SEFSC, SAFMC

**Snapper Grouper Bandit Reel Fishery – List of Personnel and Vessels associated with an
Exempted Fishing Permit to the Gulf and South Atlantic Fishery Foundation, Inc., as part of a
Cooperative Research Grant – Amended June 23, 2010**

<u>VESSEL NAME</u>	<u>OWNER/CAPTAIN</u>	<u>CG DOC #</u>
A Different Drummer	Allen Dale Tatum, NC	904429
Amy Marie	Mark Marhefka, SC	684458
Amy Michelle	Headley, Inc., NC	662419
Atlantic Runner	Lindon G. Mathis, NC	NC9221BA
Big Daddy	Robert Green, SC	613010
Bloody Mary	U.S. Inc., SC	675503
Can Do II	Clifford Scott, Jr., FL	625015
Canyon Runner	Charles M. Phillips	649713
Cap'n Boo	Herring Marine, Inc., NC	946409
Capt. Dennis	Capt. Dennis, Inc., SC	293094
Cash Flow III	Jack H. Cox, Jr., NC	NC9782WN
CJR	C&G of Murrells Inlet, Inc., SC	683938
Deep South	Strawberry, Inc., NC	NC3646DD
Denise Marie	Charles M. Phillips	950066
Double Trouble	Double Trouble, Inc. NC	NC7808BM
Ellen	Ellen, Inc., NC	983406
Endangered Species	Milton B. Mathis, NC	NC8029AR
F.E.H.	FEH Fishing, Inc., SC	946197
Gladiator	Matthew Ruby, SC	635623
Goodfoot	Richard F. Chesney, SC	577937
Gready Eady	Jimmie Millard Eady, III, NC	NC4909BF
Grouper Snooper	J & C Fishing, Inc., SC	654327
Gulfstream I	Southport Fishing Center, Inc, NC	1021546
Island Runner	Lindon G. Mathis, NC	661878
Jeanie III	Garris Enterprises, NC	982774
Kimberly L	Head East II Seafood, Inc., GA	663048
Lady Di	D & L Fishing, Inc., SC/DE	DL6337X
Lady Diane	Lady Diane, Inc., GA	651872
Mollie D	Steve Shelley, SC	614717
Mule Train	Donald R. Brown, FL	680763
Patsea	Best Atlantic Seafood Systems, SC	632082
Raw Bar	Kenneth and Randy Fex, NC	654199
Sea Dog	Charles Phillips, GA	674900
Sea Rider	D & L Fishing, Inc., SC	699833
Shelley	Dunnie G. Smith, NC	608083
Split Decision	Triple D, Inc., NC	983372
Triple D	Triple D, Inc., NC	NC6246BN
Warrior III	Matt Ruby & Jackie McGuin, SC	661287

Current Foundation Observers: Mark Bane

Current Foundation Coordinators: Francis Helies, Daniel Parshley, Lindsey Parker, Gary Graham