

# Cooperative Research Program

2006 ANNUAL REPORT

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## PREFACE

Cooperative research programs allow scientists and fishermen to bring valuable tools and experience to the objectives of a research project. Scientists realize that fishermen have knowledge, skills, and vessels that would not otherwise be available for research. Participating fishermen recognize that the information collected will not be used in management decisions unless it is scientifically credible. The interaction between fishermen and scientists not only improves the design and implementation of research studies, but also improves the knowledge and acceptance of scientific results that are produced by such studies. Working together, fishermen and scientists can improve our understanding of the complex interactions between fishery resources and fishing practices.

The intent of the cooperative research program in the Southeast Region is to utilize the collective experience of fishermen and scientists to produce the best advice to fishery managers based on fishing experience and sound scientific research procedures. The Cooperative Research Program (CRP) focuses upon critical management needs that have been identified by managers and the National Marine Fisheries Service (NMFS) 2001 Strategic Plan for Fisheries Research.<sup>1</sup> Goals one, two, and five are particularly important. As with the Marine Fisheries Initiative (MARFIN), CRP is coordinated with other programs to provide regional assessments of fishery resources. The cooperative research program provides the necessary programmatic integration through cooperative planning, accomplishment of program activities, and sharing of results.

The cooperative research program was created to utilize the total spectrum of knowledge concerning the marine fishery resources of the Southeast Region. The results of this program will result in improved management and acceptance of management decisions in the southeast. Results will be disseminated and made available to managers in a timely manner. The initial focus of the program includes research on life history studies of important commercial and recreational species, release mortality of red drum as influenced by hook type, characterization of the commercial catch of snapper-grouper in the south Atlantic, description and characterization of the pelagic longline fishery for highly migratory species, and fishers views in the Caribbean concerning vessel capacity and effort reduction programs. Subsequently, research directions have expanded to include bycatch reduction methodology for sea turtles and other species, development of electronic logbook systems, distributional patterns and life history characteristics of various billfish species, and cooperative shark research.

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<sup>1</sup>NMFS Strategic Research Goals:

1. Provide scientifically sound information and data to support fishery conservation and management.
2. Through conservation engineering research contribute to efforts to reduce bycatch and adverse effects on EFH, promote efficient harvest of target species, and to improve data from fishery surveys.
3. Through economic and ecological research on marine communities and ecosystems, provide scientific data and information to increase long-term economic and social benefits to the Nation from living marine resources.
4. Improve the fishery information system.
5. Improve the effectiveness of external partnerships with fishers, managers, scientists, conservationists, and other interested groups.

## HISTORY OF THE COOPERATIVE RESEARCH PROGRAM

The CRP is a competitive Federal assistance program that funds projects seeking to increase and improve the working relationship between researchers from NMFS, state fishery agencies, universities, and fishermen. Congress has initiated the cooperative research funding to assist the NMFS to improve the confidence that both commercial and recreational fishermen have in the data and analyses performed in support of fisheries management. The authorizing statute for this program is 15 U.S.C. 713c-3(d).

The CRP has as its principal goal to provide a means of involving commercial and recreational fishermen in the collection of fundamental fisheries information to support the development and evaluation of management and regulatory options.

Funding for the program began in the northeast and was extended to the southeast in FY 2001 with an initial funding level of \$2.5M for the southeastern component of the CRP. Because of the long history of cooperative research efforts between the Gulf & South Atlantic Fisheries Foundation, Inc. (Foundation) and the Southeast Fisheries Science Center (SEFSC), the SEFSC funded a project to the Foundation to hold a cooperative research constituency workshop in Tampa, Florida, on April 17-18, 2002. The purpose of the workshop was to establish objectives and research priorities for the southeastern CRP. The results of that meeting were presented in the 2003 CRP Annual Report.

As a result of the 2002 workshop, the focus of work during Fiscal Years 2002 and 2003 were as follows:

1. Cooperative research on development of gear modifications and fishing practices to reduce turtle takes in U.S. Atlantic pelagic longline fisheries.
2. Cooperative research with the Foundation on Bycatch Reduction Device (BRD) effectiveness and on the effectiveness of high opening Turtle Excluder Devices.
3. Cooperative research to obtain reef fish biological samples from the Gulf of Mexico.
4. Cooperative research with the Southeast Area Monitoring and Assessment Program.
5. Cooperative statistics data collection.
6. Cooperative research on age structure of adult red drum in the Gulf of Mexico.
7. Cooperative shark research.
8. Cooperative research on essential habitat requirements for blue and white marlin and associated species.
9. Cooperative research on characterization of shrimp and reef fishery bycatch.
10. Cooperative research to collect biological specimens from sea bass in the South Atlantic Fishery Management Council's region of concern.
11. Cooperative archival tagging of bluefin tuna.

It should be noted that because of time constraints, most of the initial work was done via contracts. In FY 2003, the SEFSC, recognizing the need to fully involve all participants, announced a call for proposals for funding under the Southeast Cooperative Research Program. In 2005, the third competitive cycle was completed. Appendix 3a describes pending CRP projects (funded but not yet completed) and the specific priority(ies) in the solicitation to which the project responds. Appendix 3b describes the completed CRP projects (closed) and the specific priority(ies) in the solicitation to which the project responds.

The following list represents funding in the Southeast from the start of the CRP program through the current year:

\*Fiscal Year 2001 - \$2,500,000

\*Fiscal Year 2002 - \$3,000,000

\*Fiscal Year 2003 - \$3,000,000

\*Fiscal Year 2004 - \$3,250,000

\*Fiscal Year 2005 - \$3,250,000

\*Fiscal Year 2006 - \$3,000,000

## COOPERATIVE RESEARCH PROGRAM ORGANIZATION AND ADMINISTRATION

The cooperative research program is sponsored by the Southeast Fisheries Science Center, assisted by the State/Federal Liaison Branch located in the Southeast Regional Office. Appendix 1 lists the State/Federal Liaison Branch personnel.

Each year a solicitation for proposals is published in the Federal Register. Applications must be received by the State/Federal Liaison Branch no later than 60 days after the solicitation notice has been published. Applications received after that time will not be considered for funding. The earliest award date is about 210 days after the publication date of the notice. Applicants must have an NMFS partner; address one of the funding priorities for federally managed species; and include a budget, statement of work, milestones, and identify the principal investigator. Deficiencies in the application can be corrected prior to the submission deadline. After the deadline, the application must remain as submitted. Applications under this program are subject to the provisions of Executive Order 12372, "Intergovernmental Review of Federal Programs."

Applications will be evaluated by a minimum of three fishery experts to determine their technical merit. The reviewers will provide individual evaluations of the proposals. During the competition process, reviewers provide comments and assign scores to the applications based on the following criteria that are published in the solicitation notice:

1. Importance/relevance and applicability of proposed project to the program goals (40%): This criterion ascertains whether there is intrinsic value in the proposed work and/or relevance to NOAA, federal, regional, state, or local activities. For this competition, this includes: Does the proposal assist industry? Does the proposal address issues that are important to regional fishery management?

2. Technical/scientific merit (40%): This criterion assesses whether the approach is technically sound and/or innovative, if the methods are appropriate, and whether there are clear project goals and objectives. For this competition, this includes: Does the proposal have a clearly stated goal(s) with associated objectives that meet the needs outlined in the project narrative? Does the proposal clearly identify and describe, in the project outline and statement of work, scientific methodologies and analytical procedures that will adequately address project goals and objectives? Do the principal investigators provide a realistic timetable to enable full accomplishment of all aspects of the research?

3. Overall qualifications of applicants (0%): This criterion ascertains whether the applicant possesses the necessary education, experience, training, facilities, and administrative resources to accomplish the project. This program does not use this criterion.

4. Project costs (20%): This criterion evaluates the budget to determine if it is realistic and commensurate with the project needs and time-frame. For this competition, this includes: How effective are the proposed methods in enabling the principal investigators to maintain stewardship of the project performance, finances, cooperative relationships, and reporting requirements? Does the budget appropriately allocate and justify costs?

5. Outreach and education (0%): This criterion assesses whether the project provides a focused and effective education and outreach strategy regarding NOAA's mission to protect the Nation's natural resources. This program does not use this criterion.

The technical review begins the selection process. The individual reviews are collated to produce a weighted average score for each project. Then, the projects are ranked in descending order by their final technical score. In FY 2006, a cutoff score of 70% was used and those projects that scored below the cutoff were eliminated from further consideration.

The applications at or above the cutoff score were presented to a panel of non-NOAA fishery experts known as the CRP panel (Panel). Each member of the Panel individually considered if needs of the Agency were addressed in each proposal, if the project assisted industry, and if the project addressed issues that were important to regional fisheries management. Individuals on the Panel commented and rated each of the proposals as either "Recommended for Funding" or "Not Recommended for Funding." No consensus advice was given by the Panel. The Program Manager ranked the proposals in the order of preferred funding based on the number of Panel members recommending the proposal for funding.

The ranked proposals were provided to the SEFSC Director (Director), who is the selecting official, in the order of preferred funding, based on the number of Panel members recommending the proposal for funding. If there are ties in the rankings, those ties were distinguished by the peer review score. The Director also received the Panel members' individual comments. The Director, in consultation with the Assistant Administrator for Fisheries, selected proposals after considering the technical reviews and the selection factors listed below. The Director may negotiate the funding level of the proposal. The Director makes final recommendations for award to the Grants Officer who is authorized to obligate funds.

Selection Factors - The merit review ratings shall provide a rank order to the Director for final funding recommendations. The Director shall award in the rank order unless the proposal is justified to be selected out of rank order based on the factors below. The Director will justify in writing any such selection.

- Availability of funding
- Balance/distribution of funds
- Geographically
- By type of institutions
- By type of partners
- By research areas
- By project types
- Duplication of other projects
- Program priorities and policy factors
- Applicant's prior award performance
- Partnerships with/Participation of targeted groups

Successful applications generally are recommended within 210 days from the date of publication of the solicitation notice. The earliest start date of awards average 90 days after each project is selected and after all NMFS/applicant negotiations of cooperative activities have been completed. The earliest start date of awards is about 300 days after the date of publication of the notice. Applicants should consider the selection and processing time in developing requested start dates for their applications. Unsuccessful applications will be returned to the applicant.

The exact amount of funds awarded, the final scope of activities, the project duration, and specific NMFS cooperative involvement with the activities of each project are determined in pre-award negotiations between the applicant and the NMFS Program Officer.

Each successful applicant must submit a final report within 90 days after completion of the project to the NMFS Program Officer. The final report must describe the project and include an evaluation of the work performed, and the results and benefits in sufficient detail to enable NMFS to assess the success of the completed project. Also, all data collected as part of the project must be submitted to the SEFSC partner. Project data must be edited and verified as accurate by the applicant prior to being submitted to the SEFSC. Data must be submitted in the agreed-upon format and medium.

## FISCAL YEAR 2006 PROGRAM HIGHLIGHTS

### FY 2004, FY 2005, and FY 2006 Projects

Due to the destructive storms that hit the Southeastern United States and the Gulf of Mexico in 2005, numerous projects were impacted directly and indirectly from the storms. This caused impacts to resource availability and staff workload that continues to affect the progress of a few projects even in FY 2006. We continue to accommodate the needs of researchers to minimize disruption to their work.

The CRP projects that are still active (pending) are described in Appendix 3a. The CRP projects that are completed (closed) are described in Appendix 3b. Those Appendices list the specific priority(ies) in the solicitation to which each project responds.

## Appendix 1. NMFS Southeast Region State/Federal Liaison Branch Staff

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Appendix 2. Federal Funding Opportunity for the FY 2007  
Cooperative Research Program

## **COOPERATIVE RESEARCH PROGRAM (CRP) FY 2006 FEDERAL FUNDING OPPORTUNITY**

### **Overview Information**

**Federal Agency:** National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce

**Funding Opportunity:** Cooperative Research Program, Research and Development Projects in the Gulf of Mexico and off the U.S. South Atlantic Coastal States

**Announcement Type:** Notice of solicitation for applications

**Catalog of Federal Domestic Assistance Number:** 11.454 Unallied Management Projects

**Dates:** We must receive your application by close of business (5 p.m. eastern daylight time) on August 29, 2005. Applications will be date stamped to show date and time received. Applications received after that time will not be considered for funding. The earliest start date of awards (1st of a month) is about 215 days after the date of publication of this notice.

**Addresses:** You can obtain an application package from, and send your completed application(s) to: National Marine Fisheries Service, State/Federal Liaison Branch, 263 13<sup>th</sup> Ave South, St. Petersburg, FL 33701. You may also obtain the application package from the CRP homepage at: <http://sero.nmfs.noaa.gov/grants/csp.htm>.

For Further Information Contact: Ellie Francisco Roche, Chief, State/Federal Liaison Branch, (727)570-5324.

### **Executive Summary**

Subject to the availability of funds, NMFS (hereafter referred to as “we” or “us”) announces the availability of Federal assistance under the Cooperative Research Program (CRP) Grant Program. This announcement provides guidelines, evaluation criteria, and selection procedures for the program.

The CRP program provides financial assistance for projects that seek to increase and improve the working relationship between researchers from the NMFS, state fishery agencies, universities, and fishermen. The program is a means of involving commercial and recreational fishermen in the collection of fundamental fisheries information. Collection efforts support the development and evaluation of management and regulatory options.

## Full Text of Announcement

### I. Funding Opportunity Description

The CRP is a competitive Federal assistance program that funds projects seeking to increase and improve the working relationship between researchers from the NMFS, state fishery agencies, universities, and fishermen. Congress has initiated the cooperative research funding to assist the NMFS to improve the confidence that both commercial and recreational fishermen have in the data and analyses performed in support of fisheries management. The authorizing statute for the Cooperative Research Program is 15 U.S.C. 713c-3(d).

The CRP has as its principal goal to provide a means of involving commercial and recreational fishermen in the collection of fundamental fisheries information to support the development and evaluation of management and regulatory options.

You are encouraged to address one of the priority areas listed below as they pertain to Federally managed species or species relevant to Federal fisheries management plans, but proposals in other areas will be considered. If you select more than one priority, you should list first on your application the priority that most closely reflects the objectives of your proposal. Projects should focus on the greatest probability of collecting data that aids in recovering, maintaining, or improving the status of stocks upon which fisheries depend; improving the understanding of factors affecting recruitment success and long-term sustainability of fisheries; and/or generating increased values and opportunities for fisheries.

Projects are evaluated as to the likelihood of achieving these objectives, with consideration of the magnitude of the eventual economic or social benefits that may be realized.

#### A. Commercial Finfish:

There are several priorities within this general category that pertain to the collection of catch, effort, size frequency, bycatch, and detailed data on fishing area by vessels in the commercial fisheries for finfish species.

1. Characterize the total catch (from all fleets affecting the stocks), including catch composition and disposition of the catch.
  - (a) Projects are needed to collect detailed information on the composition and disposition of bycatch and discards.
  - (b) Investigations are needed to determine more efficient methods to record catches accurately on a real-time basis during fishing operations (*e.g.* electronic logbooks).
  - (c) Projects are needed to develop methods to increase the amount of at-sea observations utilizing imaging systems.
  - (d) Projects are needed to utilize fully scientific observers on-board vessels as a means of collecting detailed catch, effort and disposition data. In cases where vessel space does not permit adding an observer, it may be possible to designate the captain or a crew member to record these data. Projects must specify the type

of training and equipment that is required to assure that reliable data are collected.

- (e) Data collection projects are needed to determine the effects on discard rates of increasing size limits or reducing possession limits. If discard mortality rates are high, changes in size or bag limits may unintentionally lessen conservation benefits. Discard mortality rates currently used in assessments are generally based on small numbers of observations or are unknown. Research is needed to improve estimates of discard mortality rates and must account for the effects of fish size, gear, area, season and depth of fishing.
- (f) Data collection projects are needed to improve life history information on commercial finfish species. Improved information about the age-structure of the catch (both retained and discarded), based on otolith or other hard-part aging techniques, will provide insight on a stock's resilience to fishing. Improved information on the reproductive characteristics of the stock will provide information to refine estimates of long-term biological productivity of the stock.

2. Monitoring stock abundance through study-fleet applications. This type of cooperative research requires long-term commitment in terms of funding and application.

- (a) One objective is to develop a consistent sampling methodology that will permit monitoring of the relative abundance of a fishery resource over time. An initial step for such a project is to develop sampling designs and protocols for sampling fleet catches to estimate relative abundance, including standardization of fishing power of individual vessels.
- (b) Projects are needed to develop methods to determine appropriate sampling designs and pilot studies to estimate recruitment to selected fisheries. An example is the development of a recruitment index for Young-of-the-Year gag or red grouper in the Gulf of Mexico.

3. Projects are needed to develop and test gear and fishing strategies designed to reduce or eliminate unintended catch.

4. Fishing Capacity Investigations: There appears to be a wide disparity between the current capacity of regional fishing fleets and the productivity of regional stocks. Cooperative research to optimize the capacity of regional fishing fleets is needed. A number of possibilities ranging from Individual Quota Systems to Vessel Capacity Control programs should be considered. It is likely that regional/fishery differences may require different approaches.

5. Monitor the effects of closed Marine Protected Areas: Research is needed to measure the response of marine resources to creation or expansion of Marine Protected Areas (MPAs). Projects should utilize fishermen's knowledge of critical habitat of harvested species. An example is the large MPA designed to protect small swordfish and other highly migratory species off the US southeastern coast.

- (a) Projects are needed to assess the impacts of time/area closures in the Southeast Region that have been designated to protect finfish spawning aggregations and/or concentrations of sub-legal fish.
- (b) Projects are needed to collect fine-scale catch-effort data to define the spatial and temporal dimensions of MPAs.

## **B. Caribbean Fisheries:**

### 1. Habitat and fisheries:

- (a) Research and data are needed to estimate the social and economic impacts that are associated with MPA closures. Currently the Caribbean has five seasonal closures in the exclusive economic zone (EEZ) for spawning aggregations of fish and one no-take zone consisting of an annual closure. The size of these areas is small compared to MPAs established on the mainland, but constitute a significant portion of the fishing grounds in the Caribbean. Although research has been conducted on the biological impacts of several no-take zones, little, if any, research has been done to estimate the impacts of closures on fishing communities.
- (b) Projects are needed also to investigate the biological and socioeconomic effects of alternating either temporal or spatial closures of MPAs.
- (c) Cooperative projects between scientists and industry members are needed to enhance studies of the effectiveness of MPAs. Industry members can provide useful information concerning siting of MPAs, especially relating to spawning aggregations and nursery grounds of juvenile fishes. In addition, mark and recapture experiments can employ industry members, especially concerning recovery of tags.

### 2. Corals:

- (a) Research is needed to determine the impact on coral reefs from commercial fishing operations. Industry participation is needed to determine the impacts of gear on coral reefs.
- (b) Research is needed to determine the impacts on coral reefs from recreational fishing activities. Information on recreational fishing activities is sparse and there are approximately 60,000 recreational vessels in the Caribbean. Research should focus on diving, recreational boating, and anchoring on coral reefs.

## **C. Recreational and Charter Fishery:**

### 1. Socioeconomic research:

- (a) Research is needed to determine the number of recreational fishermen and related trips.
- (b) Data needs to be collected to identify the socioeconomic characteristics of the recreational and charter boat industries.
- (c) In addition to data collection activities, research is needed to determine the economic benefits and costs associated with recreational fishing.

### 2. Research on Management Alternatives: Investigations should include benefits and costs to the stocks, as well as socioeconomic benefits/costs to participants in the fishery.

- (a) Research is needed to determine the effects of seasonal closures and MPAs on the recreational and charter boat industries.
- (b) Research is needed to determine the effects of seasonal closures and MPAs on spawning stocks and resulting recruitment.
- (c) Research is needed to determine the impacts of bag and size limits on species that are important to recreational and charter boat industries. Projects should emphasize the effects of alternative size limits.
- (d) Research is needed to determine discard mortality rates. At-sea observers on recreational and charter boat trips are one way to perform this type of research and should be considered.

3. **Catch/Effort Data:** Projects are needed to improve catch and effort data for private recreational fishermen. The projects should identify sample sizes, including number of intercept interviews and dock samples, required to achieve standard statistical levels of accuracy and precision.

4. **Habitat Research:**

- (a) Research is needed to evaluate the effectiveness of artificial reefs. Projects should examine the value of artificial reefs to fishing communities, and estimate associated economic impacts.
- (b) Research is needed to determine the impacts and effects of harmful algal blooms, such as red tide, on recreational and charter boat fisheries.
- (c) Investigations are needed to determine essential fishery habitat for certain species such as gag, goliath grouper, and sharks.

**D. Commercial Shrimp Harvest:**

1. **Social and economic impact of fluctuations in domestic shrimp values:**

- (a) Research is needed on the effects on the domestic shrimp fishery of shrimp imports from foreign countries.
- (b) Research is needed to determine the social and economic impacts of imports on fishermen and fishing communities. Research should include impacts on communities and the industry as a whole.

2. **Identifying Non-Trawlable Areas:** Research is needed to investigate how habitat enhancements of non-trawlable areas could benefit shrimp fisheries. For example, artificial reefs could be established in non-trawlable areas and the impacts on shrimp and finfish populations could be evaluated. Such research should determine if enhancements would increase habitat for juvenile and adult fish; i.e., red snapper.

3. **Quantification of Effort:** Research is needed to improve shrimp effort data. Projects need to consider recommendations derived from negotiations with the shrimp industry. Areas of concern are insurance for at-sea observers, acceptable gear, and protection of confidential data collected by the project.

4. Bycatch Reduction Device Testing Protocols: There is a need to develop more efficient methods to certify finfish bycatch reduction devices. Protocols should benefit both the resource and the shrimp industry.

5. Quantification of Bycatch Rates: Statistical research is needed to ensure that extrapolation of the results of individual trawl bycatch surveys to the fleet are statistically valid. The procedures should account for the total range of conditions found in all major fishing areas. The research should estimate the number of scientific fishery observers that should be employed to collect bycatch information for prevailing conditions and areas. The project should describe the statistical accuracy and precision of estimates for each major fishing area in addition to the total fishing area.

## **II. Award Information**

This document describes how you can apply for an award under the CRP Grant Program and how we determine which applications we will fund. We are soliciting applications for Federal assistance pursuant to 15 U.S.C. 713c -3(d). Proposals selected for funding through this solicitation will be implemented through a cooperative agreement.

NMFS is substantially involved as a partner in the cooperative research activities with the recipient. Substantial involvement includes planning, scheduling, conducting, and analyzing proposed project activities through semi-annual reports and frequent contact with the grantee to help solve technical problems/situations as they arise during performance of the award.

Funding Availability: Approximately \$2.0 million may be available in fiscal year (FY) 2006 for projects. The NMFS Southeast Regional Office anticipates that typical project awards will range from \$40,000 to \$475,000. The average award is \$190,000. Publication of this notice does not obligate NMFS to award any specific grant or cooperative agreement or any of the available funds. Project proposals accepted for funding will need to be completed within 24 months.

## **III. Eligibility Information**

Eligible applicants include: Institutions of higher education, other nonprofits, commercial organizations, state, local, and Indian tribal governments and individuals. Federal agencies or institutions are not eligible. Foreign governments, organizations under the jurisdiction of foreign governments, and international organizations are excluded for purposes of this solicitation since the objective of the CRP is to optimize research and development benefits from U.S. marine fishery resources.

Cost Sharing: Cost-sharing is not required for the Cooperative Research Program.

Other: Applicants who are not commercial or recreational fisherman must have commercial or recreational fishermen participating in their project. There must be a written agreement with a fisherman describing the involvement in the project activity.

All applicants must include a written agreement with a person employed by the National Marine Fisheries Service (NMFS), who will act as a partner in the proposed research project. The NMFS partner will assist the applicant to develop a design (statistical or analytical) for the project to assure that the outcome will provide suitable, scientific data and results to support needed fisheries management information.

#### **IV. Application and Submission Information**

Address to Request Application Package: Application packages are available through [grants.gov](http://grants.gov) Apply. You can download the Instructions and the application. NOAA forms 88-204 Project Summary and 88-205 Project Budget are accessible on the CRP homepage at <http://sero.nmfs.noaa.gov/grants/crp.htm> and are to be attached as optional documents with the grants.gov submission.

For applicants without internet access, hard copies of applications may be requested from and completed application sent to: National Marine Fisheries Service, State/Federal Liaison Branch, 263 13<sup>th</sup> Avenue South, St. Petersburg, FL 33701. You may also obtain the application package from the CRP homepage at: <http://sero.nmfs.noaa.gov/grants/crp.htm>

Content and form of Application Submission: Project applications must identify the principal participants, and include copies of any agreements describing the specific tasks to be performed by participants. Project applications should give a clear presentation of the proposed work, the methods for carrying out the project, its relevance to managing and enhancing the use of Gulf of Mexico and Atlantic fishery resources, and cost estimates as they relate to specific aspects of the project. Budgets must include a detailed breakdown, by category of expenditures, with appropriate justification for both the Federal and non-Federal shares. The budget must also include estimates of the time and cost for participation of the NMFS partner, separate from the Federal funds being requested.

Applications should exhibit familiarity with related work that is completed or ongoing. Proposals should state whether the research applies to the Gulf of Mexico, South Atlantic, or North Atlantic for highly migratory species or multiple areas. Successful applicants are required to collect and manage data in accordance with standardized procedures and format approved or specified by NMFS and to participate with NMFS in specific cooperative activities that are determined by consultations between NMFS and successful applicants before project grants are awarded. All data collected as part of an awarded grant must be provided to the National Marine Fisheries Service/Southeast Fisheries Science Center.

Submission Dates and Times: Applications must be received on or before 5PM EDT on August 29, 2005. Applications submitted through [www.grants.gov](http://www.grants.gov) will be accompanied by a date and time receipt indication on them. If an applicant does not have Internet access, hard copy proposals will be accepted and date recorded when they are received in the program office. Electronic or hard copies received after the deadline will not be considered and hard copy applications will be returned to the sender.

Intergovernmental Review: Applications under this program are subject to the provisions of Executive Order 12372, "Intergovernmental Review of Federal Programs."

Funding Restrictions: If you have a negotiated rate with a Federal agency, the total dollar amount of the indirect costs awarded under this program will not exceed the indirect cost rate negotiated and approved by a cognizant Federal agency prior to the proposed effective date of the award or 25 percent of the Federal share of the total proposed direct costs dollar amount in the application, whichever is less. A copy of the agreement with the Federal agency for the current negotiated indirect cost rate must be included with the application. If the applicant does not have a negotiated indirect cost rate agreement, then they may direct cost all charges, or submit a request to establish a rate.

Construction is not an allowable activity under this program. Therefore, applications will not be accepted for construction projects.

Other Submission Requirements: Applications should be submitted through [www.grants.gov](http://www.grants.gov). If an applicant does not have internet access, hard copies should be sent to the National Marine Fisheries Service, State/Federal Liaison Branch, 263 13<sup>th</sup> Avenue South, St. Petersburg, FL 33701.

## **V. Application Review Information**

When we receive applications, we will screen them to ensure that they were received by the deadline date (see Dates); include SF 424 authenticated by an authorized representative; were submitted by an eligible applicant, either a commercial or recreational fisherman or contains a written agreement with a commercial or recreational fisherman; includes a written agreement with a NMFS partner; address one of the funding priorities for federally managed species; and include a budget, statement of work, and milestones, and identify the principal investigator. We do not have to screen applications before the submission deadline in order to identify deficiencies that would cause your application to be rejected so that you would have an opportunity to correct them. However, should we do so and provide you information about deficiencies, or should you independently decide it is desirable to do so, you may correct any deficiencies in your application before the deadline. After the deadline, the application must remain as submitted; no changes can be made to it. If your application does not conform to these requirements and the deadline for submission has passed, the application will be returned without further consideration.

Evaluation Criteria: Applications responsive to this solicitation will be evaluated by three or more appropriate private and/or public sector experts to determine their technical merit. These reviewers will provide individual evaluations of the proposals. No consensus advice will be given. These reviewers provide comments and assign scores to the applications based on the following criteria, with the weights shown in parentheses:

1. Importance/relevance and applicability of proposed project to the program goals (40%): This criterion ascertains whether there is intrinsic value in the proposed work and/or relevance to NOAA, federal, regional, state, or local activities. For this competition, this includes: Does the proposal assist industry? Does the proposal address issues that are important to regional fishery management?

2. Technical/scientific merit (40%): This criterion assesses whether the approach is technically sound and/or innovative, if the methods are appropriate, and whether there are clear project goals and objectives. For this competition, this includes: Does the proposal have a clearly stated goal(s) with associated objectives that meet the needs outlined in the project narrative? Does the proposal clearly identify and describe, in the project outline and statement of work, scientific methodologies and analytical procedures that will adequately address project goals and objectives? Do the principal investigators provide a realistic timetable to enable full accomplishment of all aspects of the research?

3. Overall qualifications of applicants (0%): This criterion ascertains whether the applicant possesses the necessary education, experience, training, facilities, and administrative resources to accomplish the project. This program does not use this criterion.

4. Project costs (20%): This criterion evaluates the budget to determine if it is realistic and commensurate with the project needs and time-frame. For this competition, this includes: How effective are the proposed methods in enabling the principal investigators to maintain stewardship of the project performance, finances, cooperative relationships, and reporting requirements? Does the budget appropriately allocate and justify costs?

5. Outreach and education (0%): This criterion assesses whether the project provides a focused and effective education and outreach strategy regarding NOAA's mission to protect the Nation's natural resources. This program does not use this criterion.

Review and Selection Process - Following the technical review, we will determine the weighted score for each individual review and average the individual technical review scores to determine the final technical score for each application. Then, we will rank applications in descending order by their technical scores and determine a cutoff score that is based on the amount of funds available for awards. We will eliminate from further consideration those applications that score below the cutoff.

CRP Panel: Those applications at or above the cutoff technical evaluation score will be presented to a panel of non-NOAA fishery experts known as the CRP panel. Each member of the CRP Panel individually considers: if needs of the Agency are addressed in each proposal; if the project assists industry; and if the project addresses issues that are important to regional fisheries management. The individuals on the Panel provide comments and rate each of these proposals as either "Recommended for Funding" or "Not Recommended for Funding". No consensus advice will be given by the Panel. The Program Manager ranks the proposals in the order of preferred funding based on the number of Panel members recommending the proposal for funding. If there are ties in the rankings, those ties will be distinguished by the peer review score.

Selection Factors: The merit review ratings shall provide a rank order to the Selecting Official for final funding recommendations. The Selecting Official shall award in the rank order unless the proposal is justified to be selected out of rank order based on the following factors:

1. Availability of funding
2. Balance/distribution of funds
  - a. Geographically
  - b. By type of institutions
  - c. By type of partners
  - d. By research areas
  - e. By project types
3. Duplication of other projects funded or considered for funding by NOAA/federal agencies
4. Program priorities and policy factors
5. Applicant's prior award performance
6. Partnerships with/Participation of targeted groups
7. Adequacy of information necessary for NOAA staff to make a NEPA determination and draft necessary documentation before recommendations for funding are made to the Grants Officer.

The Selecting Official may negotiate the funding level of the proposal. The Selecting Official makes final recommendations for award to the Grants Officer who is authorized to obligate funds.

## **VI. Award Administration Information**

Award notices: Successful applications generally are recommended within 180 days from the date of publication of this notice. The earliest start date of awards average 90 days after each project is selected and after all NMFS/applicant negotiations of cooperative activities have been completed. The earliest start date of awards is about 250 days after the date of publication of this notice. Applicants should consider this selection and processing time in developing requested start dates for their application

The exact amount of funds awarded, the final scope of activities, the project duration, and specific NMFS cooperative involvement with the activities of each project are determined in pre-award negotiations between the applicant, the NOAA Grants Office and the NMFS Program Office. Projects must not be initiated by recipients until a signed award is received from the NOAA Grants Office.

Administrative and National Policy Requirements: This notice contains collection-of-information requirements subject to the Paperwork Reduction Act. The use of Standard Forms is identified in the Department of Commerce Pre-Award Notification Requirements. This program uses NOAA forms 88-204 and 88-205, OMB approval No. 0648-0135. The public reporting burden for the collection of information is estimated to average one hour for an application, one hour for a semi-annual report, and one hour for a final report. These estimates include the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding these burden estimates or any other aspect of this collection of information, including suggestions for reducing this burden to Scot Plank (see Contact).

Notwithstanding any other provisions of law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with a collection of information requirements subject to the Paperwork Reduction Act, unless that collection displays a currently valid OMB control number.

The Department of Commerce Pre-Award Notification Requirements for Grants and Cooperative Agreements: The Department of Commerce Pre-Award Notification Requirements for Grants and Cooperative Agreements contained in the Federal Register notice of December 30, 2004 (69 FR 78389) is applicable to this solicitation.

Limitation of Liability: In no event will NOAA or the Department of Commerce be responsible for proposal preparation costs if these programs fail to receive funding or are cancelled because of other agency priorities. Publication of this announcement does not oblige NOAA to award any specific project or to obligate any available funds.

National Environmental Policy Act (NEPA): NOAA must analyze the potential environmental impacts, as required by the National Environmental Policy Act, for applicant projects or proposals which are seeking NOAA federal funding opportunities. Detailed information on NOAA compliance with NEPA can be found at the following NOAA NEPA website: <http://www.nepa.noaa.gov/>; including our NOAA Administrative Order 216-6 for NEPA, [http://www.nepa.noaa.gov/NAO216\\_6\\_TOC.pdf](http://www.nepa.noaa.gov/NAO216_6_TOC.pdf); and the Council on Environmental Quality implementation regulations, [http://ceq.eh.doe.gov/nepa/regs/ceq/toc\\_ceq.htm](http://ceq.eh.doe.gov/nepa/regs/ceq/toc_ceq.htm). Consequently, as part of an applicant's package, and under their description of their program activities, applicants are required to provide detailed information on the activities to be conducted, locations, sites,

species and habitat to be affected, possible construction activities, and any environmental concerns that may exist (e.g., the use and disposal of hazardous or toxic chemicals, introduction of non-indigenous species, impacts to endangered and threatened species, aquaculture projects, and impacts to coral reef systems). In addition to providing specific information that will serve as the basis for any required impact analyses, applicants may also be requested to assist NOAA in drafting of an environmental assessment, if NOAA determines an assessment is required. Applicants will also be required to cooperate with NOAA in identifying feasible measures to reduce or avoid any identified adverse environmental impacts of their proposal. The failure to do so shall be grounds for not selecting an application. In some cases if additional information is required after an application is selected, funds can be withheld by the Grants Officer under a special award condition requiring the recipient to submit additional environmental compliance information sufficient to enable NOAA to make an assessment on any impacts that a project may have on the environment.

Reporting: If you are selected to receive a grant award for a project, you must:

- Submit semiannual project status reports on the use of funds and progress of the project to us within 30 days after the end of each six-month period. You will submit these reports to the individual identified as the NMFS Program Officer in the funding agreement.
- Submit a final report within 90 days after completion of each project to the NMFS Program Officer. The final report must describe the project and include an evaluation of the work you performed and the results and benefits in sufficient detail to enable us to assess the success of the completed project.
- Submit all data collected as part of the project to the NMFS partner. Project data must be edited and verified as accurate by the applicant prior to being submitted to the NMFS.
- In addition to the final report, we request that you submit any publications printed with grant funds (such as manuals, surveys, etc.) to the NMFS Program Office for dissemination to the public.

We are committed to using available technology to achieve the timely and wide distribution of final reports to those who would benefit from this information. Therefore, you are encouraged to submit final reports in electronic format, in accordance with the award terms and conditions for publication on the NMFS CRP Home Page. You may charge the costs associated with preparing and transmitting your final reports in electronic format to the grant award. Reports may also be submitted in hard copy.

## **VII. Agency Contact**

For questions regarding the application process, you may contact: Scot Plank, State/Federal Liaison Branch, (727) 824-5324, or [Scot.Plank@noaa.gov](mailto:Scot.Plank@noaa.gov).

## **VIII. Other Information**

We will award cooperative agreements for a maximum period of up to 24 months. The award period depends upon the duration of funding requested in the applications, the decision of the NMFS selecting official on the amount of funding, the results of post-selection negotiations between the applicant and NOAA officials, and pre-award review of the application by NOAA

and DOC officials. The earliest start date of awards (1st of a month) is about 215 days after the date of publication of this notice.

You must also be available to respond to questions during the review and evaluation of the proposal(s).

Letters of Acknowledgment and Permits for southeast research projects: Depending upon the scope of the research project, the principal investigator is encouraged to obtain a letter of acknowledgment (LOA) from the Sustainable Fisheries Division, if bona fide research vessels are being used; or a Scientific Research Permit (SRP) or Exempted Fishing Permit (EFP) if commercial or recreational fishing vessels are used as research platforms. The LOA acknowledges scientific research in the exclusive economic zone; whereas, the SRP/EFP provides necessary exemptions from otherwise applicable Federal management measures, such as minimum size limits, possession limits, or fishing during a closed season. If an Environmental Assessment is required, applicant should allow a minimum of 180 days prior to proposed activity.

If the research activity involves highly migratory species, an LOA/SRP/EFP request should be submitted to the Highly Migratory Species Management Division, 1315 East West Highway, Silver Spring, MD 20910. Telephone (301) 713-2347. Such requests for acknowledgments or authorizations should be submitted at least 90 days prior to the start of field work. If an environmental assessment is required, applicant should allow a minimum of 180 days prior to the proposed activity. Regulations governing the granting of LOAs and SRPs/EFPs are available on the Electronic Code of Federal Regulations website <http://ecfr.gpoaccess.gov> under 50 CFR 600.745 and 50 CFR 635.32. Applicants should note that additional consultations may be required under the Endangered Species Act if the conduct of the research activity is likely to result in interactions with protected species.

We are strongly committed to broadening the participation of Historically Black Colleges and Universities, Hispanic Serving Institutions, and Tribal Colleges and Universities in its educational and research programs. Department of Commerce (DOC)/NOAA's goals are to achieve full participation by Minority Serving Institutions (MSI) in order to advance the development of human potential, to strengthen the nation's capacity to provide high quality education, and to increase opportunities for MSIs to participate in and benefit from Federal financial assistance programs. DOC/NOAA encourages all applicants to include meaningful participation of MSIs.

If you are selected to receive a grant award for a project, you must:

- Manage the day-to-day operations of the project, be responsible for the performance of all activities for which funds are granted, and be responsible for the satisfaction of all administrative and managerial conditions imposed by the award.
- Keep records sufficient to document any costs incurred under the award, and allow access to these records for audit and examination by the Secretary of Commerce, the Comptroller General of the United States, or their authorized representatives, and submit financial status reports (SF 269) to NOAA Grants in accordance with the award conditions.

## Appendix 3a. Pending CRP Project Summaries

## CRP PROJECT SUMMARY

**Project Title:** Combining a Partnership among Researchers, Commercial, Recreational, and Recreational-for-Hire Fishers with a Cooperative Tagging Program to Elucidate the Life History and Habitat Utilization of the Selected Reef Fish and Coastal Pelagic Species in the Florida Keys

**Project Start Date:** June 1, 2004

**Name, Address, and Telephone Number of Applicant:**

Mote Marine Laboratory  
Sarasota, FL 34236  
(941) 388-4441

**Principal Investigator(s) and Brief Statement of Qualifications:**

Karen M. Burns is the Principal Investigator of nine MARFIN projects and Mote Marine Laboratory's Reef Fish and Coastal Pelagic Tagging Program.

**Project Goals and Objectives:** The major project goals and objectives regarding black grouper, red grouper, mutton snapper, greater amberjack, and cobia include: 1) develop a cooperative tagging program in the Florida Keys National Marine Sanctuary (FKNMS); 2) provide Keys stock data; 3) characterize essential fish habitat within the FKNMS; and 4) evaluate the influence of no-take zones with respect to spillover of those species. The study also will collect biological samples for obtaining black grouper life history information within the FKNMS.

**Specific Priorities(ies) in Solicitation to which Project Responds:**

This project responds directly to priority A (Commercial Finfish); 1; 2(e); and 2(f).

**Summary of Work:**

Mote Marine Laboratory personnel will collect up to 1,500 otoliths and up to 1,800 gonads to determine the age structure and reproductive status. The study will tag five species to determine their movement and rate of exploitation and analyze the survival rate of undersize fish. Habitat data will be entered in a WAAS-capable GPS. All data will be stored, manipulated, and analyzed within a geographical information system and provided to NMFS and the Councils.

**Project Funding**

Federal	\$191,160
Non-Federal	\$ 0
Total	\$191,160

**CRP PROJECT SUMMARY**

**Project Title:** Cooperative Hook and Line Sampling Project Identifying Catch Composition, Life History, and Bycatch of the Eastern Gulf of Mexico Deep Water Reef Fish Complex

**Project Start Date:** October 1, 2004

**Name, Address, and Telephone Number of Applicant:**

Fish Master Inc.  
1462 Xavier Ave.  
Ft. Myers, FL 33919  
(239) 437-1630

**Principal Investigator(s) and Brief Statement of Qualifications:**

Mr. Eric Schmidt, Member of the Gulf of Mexico Fishery Management Council Reef Fish Advisory Panel, has been collecting reef fish samples for NOAA Fisheries since 2001. He is a leader in commercial reef fish community with over 20 years of fishing experience in this area. SEFSC Partner: Dr. Gary Fitzhugh, Panama City Laboratory.

**Project Goals and Objectives:** The primary goals of the project are to collect aging and reproductive materials from deep-water reef fish and to make discard and bycatch observations.

**Specific Priority(ies) in Solicitation to which Project Responds:**

This project responds directly to priority A (Commercial Finfish); 2(a) Projects are needed to collect detailed information on the composition and disposition of bycatch and discards; 2(d) Projects are needed to fully utilize scientific observers on-board vessels as a means of collecting detailed catch, effort and disposition data; and 2(f) Data collection projects are needed to help improve the information on life history and biological investigations on commercial finfish.

**Summary of Work:**

The project will conduct eight ten-day trips to collect samples and information from a traditional fishing area for deep-water species of the reef fish complex. Otoliths and gonads will be collected, processed, and given to the NMFS Panama City Laboratory. Standard, catch, discard, and bycatch information will be given to the NMFS and the Gulf of Mexico Fishery Management Council for use in assessments and development of fishery regulations.

**Project Funding:**

Federal	\$47,753
Non-Federal	\$ 0
Total	\$47,753

**CRP PROJECT SUMMARY**

**Project Title:** Evaluation of Pelagic Long-line Bycatch Reduction Technology in the Gulf of Mexico, Florida East Coast, South Atlantic Bight, Mid-Atlantic Bight, and North East Coastal management areas

**Project Start Date:** January 1, 2005

**Name, Address, and Telephone Number of Applicant:**

Fisheries Research Institute  
P.O. Box 398  
910 Bayview Avenue  
Barnegat Light, New Jersey 08006  
(609) 361-9229

**Principal Investigator and Brief Statement of Qualifications:**

Terri Lee Beiderman has extensive experience working with the pelagic long-line fishery.

**Project Goal and Objectives:** The goal of the project is to conduct research to develop and evaluate the efficacy of new technologies and changes in fishing practices to reduce the incidental take of endangered and threatened sea turtle species, and the incidental bycatch of white marlin, blue marlin, sailfish, bluefin tuna, marine mammals, and undersize swordfish by pelagic long-line gear. Also, the effectiveness of line cutters and de-hookers for releasing bycatch species will be evaluated. Information gained from the project will be provided to fishermen and fishery managers to reduce the bycatch of the pelagic long-line fishery.

**Specific Priority(ies) in Solicitation to which Project Responds:**

This project responds directly to priority A (Commercial Finfish); 4 Projects to develop and test gear and fishing strategy modifications to reduce or eliminate unintended catch.

**CRP PROJECT SUMMARY (CON'T)**

**Summary of Work:**

The project will collect bycatch reduction data while testing various methods to avoid and reduce bycatch associated with the pelagic long-line fishery. The project will vary baits, hook types, and depths of fishing to determine methods to reduce bycatch of sea turtles, marine mammals, sailfish, white and blue marlins, bluefin tuna, and undersized swordfish. Research will be conducted in three regions; namely, south of Cape Hatteras, north of Cape Hatteras, and in the Gulf of Mexico. Two vessels will operate in each region.

**Project Funding:**

Federal	\$477,900
Non-Federal	\$ 0
Total	\$477,900

## CRP PROJECT SUMMARY

**Project Title:** Investigating Gag Recruitment Processes Using Otolith Chemical and Genetic Markers

**Project Start Date:** June 1, 2004

**Name, Address, and Telephone Number of Applicant:**

Florida State University  
Dept. of Biological Science  
97 S. Woodward Ave., 3<sup>rd</sup> Floor  
Tallahassee, FL 32306-4166  
(850) 644-2019

**Principal Investigator(s) and Brief Statement of Qualifications:**

Dr. Felicia Coleman and Dr. Chris Koenig have studied and published extensively on gag and the reef fish fishery. They have over 50 years of experience and are well qualified to complete the project. Dr. David Secor has expertise in marine fisheries ecology and otolith microconstituent analysis.

**Project Goal and Objectives:**

The primary goal is to determine the most significant source areas (essential seagrass habitat) for juvenile recruits to the adult gag fishery. A secondary goal is to investigate patterns of genetic diversity in juvenile cohorts to detail recruitment processes. Objectives include: 1) evaluate the relative contribution of juvenile nursery areas to the adult population using chemical signatures in otoliths; 2) evaluate regional levels of parentage and relatedness of juvenile cohorts using microsatellite marks; and 3) progress toward development of a predictive juvenile index of abundance of gag off the west coast of Florida.

**Specific Priority(ies) in Solicitation to which Project Responds:**

This project responds directly to A (Commercial Finfish); 2(f) improve life history information and biological investigations on commercial finfish species; especially about the age-structure of the catch based on otolith or other hard-part age readings; improve information on the reproductive characteristics of the stock to provide a basis for refining estimates of long-term potential productivity of the stock; and C (Recreational and Charter Fishery) 4(c) investigations of essential fisheries habitat for gag.

**CRP PROJECT SUMMARY (CON'T)**

**Summary of Work:**

The project will determine the most significant source areas for juvenile recruits to the adult gag fishery. Patterns of genetic relatedness and parentage in juveniles will be examined to add to a time-series data set that can be used to develop a fisheries-oriented model of juvenile abundance. Otoliths will be examined using inductively-coupled plasma mass spectrometry to determine origin of juveniles. Information from the project will be used to begin development of a model to estimate recruitment of juvenile gag and to determine the utility of marine protected areas.

**Project Funding:**

Federal	\$300,000
Non-Federal	\$ 0
Total	\$300,000

**CRP PROJECT SUMMARY**

**Project Title:** Cooperative Project Sampling of the Vertical Line Fishery Sampling Reproductive and Hard Part Tissues of Vermilion Snapper and Red Grouper in the Eastern Gulf of Mexico

**Project Start Date:** January 1, 2006

**Name, Address, and Telephone Number of Applicant:**

Fish Master Inc.  
1462 Xavier Ave.  
Ft. Meyers, FL 33919  
(239) 437-1630

**Principal Investigator(s) and Brief Statement of Qualifications:**

Mr. Eric Schmidt is an experienced commercial fisherman, who has been collecting biological samples for several years for the NMFS Panama City Laboratory. He has been trained in NMFS protocol for collecting and storing data for later analysis by NMFS personnel.

**Project Goal and Objectives:**

The primary goal is to collect life history information on red grouper and vermilion snapper. The project will focus on collecting reproductive samples from red grouper and age samples from vermilion snapper. The samples will be taken from the central and southwestern shelf of west Florida, which will complement samples from other areas. Information on habitat will be collected to compare possible differences in life history parameters among different habitat types.

**Specific Priority(ies) in Solicitation to which Project Responds:**

This project responds directly to priority A (Commercial Finfish); 1(f).

**Summary of Work:**

The project will conduct 14 eight-day trips over 18 months to collect gonads and otoliths from red grouper and vermilion snapper. Samples, including length and weight of individual fish, will be collected according to NMFS protocol and delivered to NMFS for analyses. Specific sites will be sampled to allow NMFS scientists to identify potential differences between growth and reproductive rates among the selected sites.

**Project Funding:**

Federal	\$121,352
Non-Federal	\$ 0
Total	\$121,352

**NA05NMF4540040**

**CRP PROJECT SUMMARY**

**Project Title:** Integrating Life History, Mating System, Fishing Effects, and Habitat of Hogfish, *Lachnolaimus maximus*, a Harem Spawning Reef Fish in the Southeast U.S.

**Project Start Date:** July 1, 2005

**Name, Address, and Telephone Number of Applicant:**

Florida Fish and Wildlife Conservation Commission  
100 Eighth Avenue SE  
St. Petersburg, FL 33701-5020  
(727) 896-8626

**Principal Investigator(s) and Brief Statement of Qualifications:**

Ms. Angela Collins has experience in fisheries research in the Gulf of Mexico including work on the life history of hogfish.

**Project Goals and Objectives:**

The general goal is to describe mating systems and habitat associations, and to estimate life history parameters relevant for a hogfish stock assessment. Objectives include: 1) characterize size and sex structure, spawning and non-spawning behaviors, and spatial and temporal variations in habitat associations; 2) produce age-length keys, growth models, and mortality rate estimates using validated aging methods; 3) describe reproductive biology; and 4) synthesize fisheries information and life history parameters for Florida's hogfish population with other regions.

**Specific Priority(ies) in Solicitation to which Project Responds:**

This project responds directly to priority A (Commercial Finfish); 1(f).

**Summary of Work:**

This project will involve commercial and recreational fishermen to collect fundamental fisheries information on hogfish. The principal investigator will work with fishermen to obtain reproductive and aging materials for analyses, to then be used to estimate growth, mortality, and reproductive parameters. In addition, divers will observe spawning harems to note behavior and determine the habitat associated with spawning. This will be used to define essential fish habitat for hogfish spawning sites. Information will be made available for a hogfish stock assessment.

**Project Funding:**

Federal	\$169,388
Non-Federal	\$ 0
Total	\$169,388

**CRP PROJECT SUMMARY**

**Project Title:** The Capture Depth, Time, and Hooked Survival Rate for Bottom Long-line Caught Large Coastal Sharks

**Project Start Date:** May 1, 2005

**Name, Address, and Telephone Number of Applicant:**

Mr. George H. Burgess and Ms. Alexia C. Morgan  
Florida Museum of Natural History  
University of Florida  
Gainesville, FL 32611  
(352) 392-2360

**Principal Investigator(s) and Brief Statement of Qualifications:**

Mr. Burgess has over 30 years of experience with marine fisheries and has published extensively on sharks and shark fisheries. Currently, he is the Director, Florida Program for Shark Research. Ms. Alexia Morgan is a research biologist who has been the coordinator for the Commercial Shark Observer Fishery Observer Program for over 5 years.

**Project Goal and Objectives:**

The goal of this project is to work with commercial bottom long-line shark fishers to collect more detailed data pertaining to the relationship between soak time and capture depth on fishing mortality and catch per unit effort of individual shark species and shark species aggregates. Objectives include: 1) determine what length of time the fishing gear is in the water prior to a shark biting and being hooked and at what point during the fishing process, i.e., deployment, fishing or retrieval, individual sharks are hooked; 2) obtain more accurate data pertaining to the length of time individual shark species remain alive after being hooked on bottom long-line fishery gangions; and 3) using depth stratified sampling, record the accurate depths of capture of sharks and provide a description of the depth range and catch per unit effort by depth for up to 25 species of sharks. Fishers will use gear and fishing techniques currently employed in the large coastal shark fishery.

**Specific Priority(ies) in Solicitation to which Project Responds:**

This project responds directly to priority A (Commercial Finfish); 3 Projects are needed to develop and test gear and fishing strategies designed to reduce or eliminate unintended catch.

**CRP PROJECT SUMMARY (CON'T)**

**Summary of Work:**

Scientists will work with two commercial shark long-liners to obtain catch information. Hook timers will be used to identify how long individual sharks remain on the line after being caught on hooks. Time depth recorders will be used to record the depth at which the bottom long-line is fishing and will be used to indicate the total time between the setting and retrieval of the gear. Time and depth will be recorded at one-minute intervals. Information will be delivered to NMFS for analysis and use by fishery managers to develop strategies to minimize the catch of unwanted shark species. Also, information will be distributed to commercial fishermen to assist them in reducing catch of unwanted shark species.

**Project Funding:**

Federal	\$144,264
Non-Federal	\$ 0
Total	\$144,264

**CRP PROJECT SUMMARY**

**Project Title:** Cooperative Hook and Line Discard Mortality Study of Vermilion Snapper in the Northeastern Gulf of Mexico Commercial Fishery

**Project Start Date:** May, 1, 2005

**Name, Address, and Telephone Number of Applicant:**

Patzig Marine Services, Inc.  
34 Oregon Drive  
Fort Walton Beach, FL 32548  
(850) 244-4643

**Principal Investigator(s) and Brief Statement of Qualifications:**

Nicholas P. Patzig is an experienced captain who has participated in cooperative research with NMFS in the past.

**Project Goal and Objectives:**

The primary goal of the research is to collect discard mortality data, using: 1) swim bladder puncture at a 45 degree angle one to two inches back from the base of the pectoral fin; 2) swim bladder puncture with a fillet knife; and 3) no swim bladder puncture.

**Specific Priority(ies) in Solicitation to which Project Responds:**

This project responds directly to priority A (Commercial Finfish); 1 (e).

**Summary of Work:**

The project will collect data in traditional vermilion snapper fishing grounds during thirty fishing trips. Vermilion snapper will be measured, swim bladder punctured, and released into a holding pen for observation. Area fished, depth, type of sea bottom, latitude/longitude readings, date, and water temperatures will be recorded. Cameras will record and document the survival time of each tagged fish. Dead fish will be preserved for onshore analysis and live fish will be released. This will provide better information on discard mortality from hook and line gear. Survival rates from puncture of the swim bladder will be compared to determine ways to reduce mortality rates. Information will be used by managers to determine appropriate size limits for vermilion snapper. Also, information on procedures that reduce the discard mortality rate will be distributed.

**Project Funding:**

Federal	\$114,072
Non-Federal	\$ 0
Total	\$114,072

**CRP PROJECT SUMMARY**

**Project Title:** A Project to Augment the Data Collection and Development of an Electronic Logbook System (ELB) Used within the Gulf of Mexico Shrimp Fishery

**Project Start Date:** February 1, 2005

**Name, Address, and Telephone Number of Applicant:**

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

**Principal Investigator(s) and Brief Statement of Qualifications:**

Ms. Judy Jamison, with over 24 years of experience.

**Project Goal and Objectives:**

This project will: 1) complement the current ELB study with onboard observers to collect data on fishing effort, red snapper bycatch, and shrimp landings; 2) analyze all observer collected data to further ensure that ELB landings estimates are accurate; 3) determine the spatial-temporal abundance of juvenile red snapper, compute a total mortality (Z) estimate for shrimp-trawl red snapper bycatch, and conduct a formal cohort analysis (VPA) on all observer collected red snapper data; and 4) further develop the ELB system to be more robust and usable.

**Specific Priority(ies) in Solicitation to which Project Responds:**

This project responds directly to priority D (Commercial Shrimp Harvest); 3.

**Summary of Work:**

This project will complement an existing ELB project with contracted observers. Each observer will collect shrimp total shrimp landings (no subsample) and total red snapper bycatch data. All observers will be placed randomly on vessels cooperating in the ELB project. Data collected during the project will be used to conduct a formal cohort analysis (VPA) and compute mortality estimates for all Foundation collected red snapper data (both past and present). Results will be used to validate ELB landings estimates by region (statistical zone) and to assist fisheries managers in the assessment of the red snapper stock.

**Project Funding:**

Federal	\$368,284
Non-Federal	\$ 0
Total	\$368,284

## CRP PROJECT SUMMARY

**Project Title:** Population Abundance, Demographics and Predation Effects of Adult Goliath Grouper

**Project Start Date:** May 1, 2005

**Name, Address, and Telephone Number of Applicant:**

Dr. Felicia Coleman  
Department of Biological Science  
Florida State University  
Tallahassee, FL 32306-1100  
(850) 644-2019

**Principal Investigator(s) and Brief Statement of Qualifications:**

Dr. Felicia Coleman is the Principal Investigator of numerous reef fish and Gulf of Mexico MARFIN projects. She is an expert on fishery management practices and ecology of exploited species. Dr. Christopher Koenig has conducted many reef fish reproductive and recruitment studies. He has an extensive publication record and routinely provides management advice to both the South Atlantic and Gulf of Mexico Fishery Management Councils. Dr. Jeffrey Ueland is an expert in remote sensing, spatial analysis, and fisheries.

**Project Goals and Objectives:**

The overall goal of the project is to estimate the regional population size of goliath grouper in the southeastern United States, emphasizing those populations occurring on the West Florida Shelf, and the Atlantic coast of Florida. The objectives include: 1) determine the current distribution of goliath grouper throughout the historical range; 2) estimate regional abundance of goliath grouper in areas of historically high population density in coastal regions of Florida; 3) directly estimate size, age, and sex ratio structure of goliath grouper in each region; 4) determine the seasonal dietary composition of goliath grouper in each coastal region; and 5) classify, map, and structurally characterize adult goliath grouper habitat and describe associate species in primary study sites.

**Specific Priority(ies) in Solicitation to which Project Responds:**

This project responds directly to priority A (Commercial Finfish); 1(f); and C (Recreational and Charter Fishery) 4(c).

**CRP PROJECT SUMMARY (CON'T)**

**Summary of Work:**

Very little information exists concerning the abundance of goliath grouper either historically or today. This study will establish a benchmark of abundance and distribution of goliath grouper. This information will allow scientists to estimate a recovery time and to determine the potential effect of recovery of this top predator on prey species. Mark and recapture experiments will be used to estimate population size, and through non-extractive sampling to determine dietary composition of adults. The project will also identify precisely essential fish habitat for adults. Empirical information on spatial and temporal differences in diet will be used to develop a bioenergetics model. No fish will be killed during this two-year project.

**Project Funding:**

Federal	\$358,155
Non-Federal	\$ 0
Total	\$358,155

## CRP PROJECT SUMMARY

**Project Title:** A Pilot Project for Testing the Efficacy of Multiple Gear Sampling for Monitoring Abundance of Important Reef Fishes in the Eastern Gulf of Mexico

**Project Start Date:** March 1, 2006

**Name, Address, and Telephone Number of Applicant:**

Florida Fish and Wildlife Conservation Commission  
100 Eighth Avenue SE  
St. Petersburg, FL 33701  
(727) 896-8626

**Principal Investigator(s) and Brief Statement of Qualifications:**

Dr. Cameron Guenther is a specialist in multispecies assessment and modeling. Dr. Behzad Mahmoudi is a specialist in quantitative stock assessment and modeling.

**Project Goals and Objectives:**

The principle objective of this pilot study is to test and calibrate multiple sampling gears against one another in order to find the most effective gears for designing a long-term, multi-gear survey of reef fishes in the Eastern Gulf of Mexico. The researchers will test the gears ability to detect differences in abundance, as well as species and size composition in similar habitats and depths. A secondary objective is to investigate the habitat/fish relationship for commercially important species. The long term objective, which would commence upon completion of this pilot project and further funding, is to conduct a multi-year, multi-gear monitoring effort in order to develop a fisheries-independent database that can be used for reef fish stock assessment and management purposes.

**Specific Priority(ies) in Solicitation to which Project Responds:**

This project responds directly to priority A (Commercial Finfish); 1(f); 2(a); and C (Recreational and Charter Fishery); 2(a)(b)(c) 4(c).

**Summary of Work:**

The pilot project will be conducted on the west Florida shelf in the offshore waters off Tampa Bay. The researchers will select areas with a variety of different depth strata and habitat types. Parameters that would be measured during the pilot study include, species observed, relative abundances, estimates of absolute abundance, fish size, and fish age (if gear captures fish). Additionally, they will measure water quality parameters at each station. The data from each gear is necessary in order to calibrate future data collected during a large-scale, multi-gear survey. The researchers propose to test the efficiency of the three gears in different habitats and depth regions. Gear testing will occur during two intensive 10-day research cruises. These cruises will coincide with peak abundance periods for reef fishes on the shelf.

## NA06NMF4540058

### CRP PROJECT SUMMARY (CON'T)

The sampling design borrows from previous surveys conducted by MARMAP in the south Atlantic region. The researchers will utilize the three different gears in high and low relief habitat. Identification of sampling areas will be conducted prior to the onset of gear testing.

The results of this gear testing will facilitate a multi-year, multi-gear sampling design for long-term monitoring of fish species in the Eastern Gulf of Mexico. This long-term monitoring project will allow the researchers to collect fisheries-independent data that will greatly improve the agency's ability to conduct stock assessments and to develop ecosystem/multi-species based assessment approaches.

#### **Project Funding:**

Federal	\$304,061
Non-Federal	\$ 0
Total	\$304,061

## CRP PROJECT SUMMARY

**Project Title:** Catch characterization and discards within the snapper grouper vertical hook-and-line fishery of the south Atlantic United States

**Project Start Date:** June 1, 2006

**Name, Address, and Telephone Number of Applicant:**

Gulf and South Atlantic Fisheries Foundation  
Lincoln Center, Suite 740  
5401 West Kennedy Blvd.  
Tampa, FL 33609  
(813) 286-8390

**Principal Investigator(s) and Brief Statement of Qualifications:**

Ms. Judy Jamison, Executive Director, has over 25 years of administrative and grants management experience. Dr. Michael Jepson has over 20 years of experience in research on fishing communities and the social impacts of fishery policy.

**Project Goals and Objectives:** The objective of this project is to: 1) implement a pilot observer program within the snapper-grouper vertical hook-and-line fishery of the South Atlantic United States; 2) contract and train fishery observers to collect data to quantify total catch, effort, and discards (including fate) within the fishery; and 3) with the assistance of the South Atlantic Sustainable Fisheries Association, Inc., actively solicit the participation of cooperating vessels to ensure a random sample of vessels is included in the study, and disseminate the results of data collected during the pilot program.

**Specific Priority(ies) in Solicitation to which Project Responds:**

This project responds directly to priority A (Commercial Finfish); 1(a); and 1(d).

**Summary of Work:** A planning meeting will first be convened to discuss and strategically plan all aspects of the proposed work. The researchers will focus their research on quantifying the snapper-grouper vertical hook-and-line fishery through an observer based program, thereby increasing coverage and the impact of the data collected.

The researchers will actively solicit the cooperation of fishing vessels and captains willing to participate in the observer program. Although vessel selection will be non-random (e.g., voluntary participation), 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. The project will quantify effort, total catch, and discard mortality within the snapper-grouper vertical hook-and-line fishery. Sampling will occur year-round with effort proportionately distributed by season. 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, gear used, and dates fished.

## NA06NMF4540059

### CRP PROJECT SUMMARY (CON'T)

While on-site and actively fishing, the observer will then complete a catch characterization form. After all data have been entered and backed-up, the data will be archived at the Foundation's office where it will be available for use by interested parties.

#### **Project Funding:**

Federal	\$394,252
Non-Federal	\$ 0
Total	\$394,252

**CRP PROJECT SUMMARY**

**Project Title:** A Cooperative Research Approach to Estimating Atlantic and Gulf of Mexico King Mackerel Stock Mixing and Populations Dynamics Parameters

**Project Start Date:** June 1, 2006

**Name, Address, and Telephone Number of Applicant:**

University of West Florida  
11000 University Parkway  
Pensacola, Florida 32514-5750  
(850) 857-6123

**Principal Investigator(s) and Brief Statement of Qualifications:**

Dr. Will Patterson has 12 years of experience on research on age and growth, population dynamics, fisheries ecology, and otolith microchemistry.

**Project Goals and Objectives:** The overall goal of this project is to address data needs essential for effective management of Gulf and Atlantic king mackerel migratory groups. This will be accomplished through cooperative research between the researcher, commercial fisherman, charter boat captains, and the NMFS Panama City Laboratory.

**Specific Priority(ies) in Solicitation to which Project Responds:**

This project responds directly to priority A (Commercial Finfish); 1(f).

**Summary of Work:** The research will: 1) estimate the temporal and spatial variability in stock mixing with natural tags derived from otolith shape and chemistry analyses, 2) estimate stock- and sex-specific von Bertalanffy growth parameters, and 3) provide gonad samples for ongoing research aimed at updating and more precisely estimating stock-specific age at maturity, batch fecundity, and annual fecundity functions. Results of this work will include mixing and biological parameter estimates critical to king mackerel management.

**Project Funding:**

Federal	\$304,036
Non-Federal	\$11,084
Total	\$315,120

## CRP PROJECT SUMMARY

**Project Title:** Populations structure and genetic demography of yellowtail, mutton, and lane snappers in the U.S. Caribbean fishery

**Project Start Date:** September 1, 2006

**Name, Address, and Telephone Number of Applicant:**

Texas A&M Research Foundation  
3578 TAMU  
College Station, TX 77843-3578  
(979) 847-8778

**Principal Investigator(s) and Brief Statement of Qualifications:**

Dr. John R. Gold has over 30 years experience in fish genetics. Dr. Eric Salliant has over 10 years of experience in molecular populations genetics of marine fishes.

**Project Goals and Objectives:**

The primary objectives are twofold: (i) to acquire molecular-genetic data from nuclear-encoded loci and mitochondrial DNA from three species of shallow-water snappers (yellowtail snapper; mutton snapper; and lane snapper) sampled from the U.S. Caribbean; and (ii) to develop for each species a rigorous, genetics-based model of populations structure and demography that includes genetic variation and distinctiveness, degrees(s) of population growth or decline, parameters and levels of migration (mixing), and (genetic) effective size. The overall objective is to provide critical data that can be applied (and updated periodically) to assessment and allocation of shallow-water snapper resources in waters of the U.S Caribbean.

**Specific Priority(ies) in Solicitation to which Project Responds:**

This project responds directly to priority A (Commercial Finfish); 1(f), (2,a), (3,a) and Priority C (Caribbean fisheries) (2).

**Summary of Work:** The researchers will (i) Acquire tissues from each snapper species at four localities in the U.S. Caribbean, one locality in the British Virgin Islands, and one locality in the Florida Keys; (ii) acquire genotypes at 12-15 microsatellites from 1,350 individuals and sequences of mitochondrial DNA from 450 individuals; (iii) execute data analysis to answer four questions: (a) are there multiple 'genetic' stocks of each species in U.S. Caribbean waters, and if so, what are their geographic boundaries? (b) What are the patterns and rates of migration between or among offshore sampling localities in each of the three species? (c) What are the demographic dynamics (population growth/decline and rate(s) of growth/decline) in any of the species at any of the sampling localities? And (d) What are the effective population sizes of each species at each sampling locality and do effective sizes differ among localities?

**NA06NMF4540061**

**CRP PROJECT SUMMARY (CON'T)**

**Project Funding:**

Federal	\$269,577
Non-Federal	\$45,113
Total	\$314,690

**CRP PROJECT SUMMARY**

**Project Title:** Shrimp Trawl Bycatch Reduction in the western Gulf of Mexico – Federal waters

**Project Start Date:** May 1, 2006

**Name, Address, and Telephone Number of Applicant:**

Harry Davis, Jr.  
209 Acorn Oak St.  
Somerville, Texas 77879  
(979) 596-3172

**Principal Investigator(s) and Brief Statement of Qualifications:**

Harry Davis, Jr. has over 50 years of shrimping experience, and developed a NMFS-certified bycatch reduction device, thereby receiving two NOAA Environmental Hero Awards.

**Project Goals and Objectives:** The objective is to design and test several net and bycatch reduction device configurations in the western Gulf of Mexico so as to reduce bycatch.

**Specific Priority(ies) in Solicitation to which Project Responds:**

This project responds directly to priority A (Commercial Finfish) (3).

**Summary of Work:** The researcher will design and test several net and bycatch reduction device configurations (two seam balloon; four seam; Davis experimental four seam flat; Davis pre-Turtle Excluder Device; and modified Jones-Davis) using comparative experimental methodology.

**Project Funding:**

Federal	\$25,832
Non-Federal	\$0
Total	\$25,832

## CRP PROJECT SUMMARY

**Project Title:** The Capture Depth, Time, and Hooked Survival Rate for Bottom Long-line Caught Large Coastal Sharks (Year 2 continuation)

**Project Start Date:** July 1, 2006

**Name, Address, and Telephone Number of Applicant:**

Mr. George H. Burgess and Ms. Alexia C. Morgan  
Florida Museum of Natural History  
University of Florida  
Gainesville, FL 32611  
(352) 392-2360

**Principal Investigator(s) and Brief Statement of Qualifications:**

Mr. Burgess has over 30 years of experience with marine fisheries and has published extensively on sharks and shark fisheries. Currently, he is the Director, Florida Program for Shark Research. Ms. Alexia Morgan is a research biologist who has been the coordinator for the Commercial Shark Observer Fishery Observer Program for over 5 years.

**Project Goal and Objectives:**

The goal of this work continuation is to work with commercial bottom long-line shark fishers to collect more detailed data pertaining to the relationship between soak time and capture depth on fishing mortality and catch per unit effort of individual shark species and shark species aggregates. Objectives continue to include: 1) to determine what length of time the fishing gear is in the water prior to a shark biting and being hooked and at what point during the fishing process, i.e. deployment, fishing or retrieval, individual sharks are hooked; 2) to obtain more accurate data pertaining to the length of time individual shark species remain alive after being hooked on bottom long-line fishery gangions; and 3) using depth stratified sampling, to record the accurate depths of capture of sharks and provide a description of the depth range and catch per unit effort by depth for up to 25 species of sharks. Fishers will use gear and fishing techniques currently employed in the large coastal shark fishery.

**Specific Priority(ies) in Solicitation to which Project Responds:**

This project responds directly to priority A (Commercial Finfish); 3 Projects are needed to develop and test gear and fishing strategies designed to reduce or eliminate unintended catch.

**Summary of Work:**

Scientists will continue to work with two commercial shark long-liners to obtain catch information. Hook timers will be used to identify how long individual sharks remain on the line after being caught on hooks. Time depth recorders will be used to record the depth at which the bottom long-line is fishing and will be used to indicate the total time between the setting and retrieval of the gear. Time and depth will be recorded at one-minute intervals. Information will

# NA05NMF4540041

## CRP PROJECT SUMMARY (CON'T)

be delivered to NMFS for analysis and use by fishery managers to develop strategies to minimize the catch of unwanted shark species. Also, information will be distributed to commercial fishermen to assist them in reducing catch of unwanted shark species.

### Project Funding:

Federal	\$97,686
Non-Federal	\$0
Total	\$97,686

## Appendix 3b. Completed CRP Project Summaries

# NA03NMF4540415

## CRP PROJECT SUMMARY

**Project Title:** Yellowedge Grouper Age, Growth, and Reproduction

**Project Start Date:** June 1, 2003

**Name, Address, and Telephone Number of Applicant:**

University of Southern Mississippi  
P.O. Box 5157  
Hattiesburg, MS 39406  
(228) 872-4267

**Principal Investigator(s) and Brief Statement of Qualifications:**

Bruce Comyns, Ph.D., with over 20 years of experience of life history studies of marine fishes.

**Project Goal and Objectives:** The goal of this project is to obtain a maximum of 60 yellowedge grouper each month for eighteen months utilizing commercial longline gear. Otoliths and gonads will be taken from each sampled fish, for reproductive and aging studies.

**Specific Priority(ies) in Solicitation to which Project Responds:**

This project responds directly to priority A (Commercial Finfish); 2(f).

**Summary of Work:**

Ken Daniels Jr., a commercial grouper fisherman from St. Petersburg, Florida, has agreed to collect yellowedge grouper biological samples. A maximum of 60 fish of varying sizes (30 fish < 650 mm TL and 30 fish > 650 mm TL) will be collected each month. Weight and length of each fish will be recorded and otoliths and gonads will be removed from each sampled fish. Histological techniques will be used to determine sexual stage for each fish, the gonadosomatic index and fecundity estimates including batch fecundity, spawning frequency, and annual fecundity. Otoliths will be sectioned and age estimates for each fish will be determined. Study results will be made available to NOAA Fisheries for the next yellowedge grouper stock assessment.

**Project Funding:**

Federal	\$26,625
Non-Federal	\$ 4,004
Total	\$30,629

**CRP PROJECT SUMMARY**

**Project Title:** Cooperative Long-line Sampling of the West Florida Shelf Shallow Water Grouper Complex: Characterization of Life History, Undersized Bycatch and Targeted Habitat

**Project Start Date:** October 1, 2003

**Name, Address, and Telephone Number of Applicant:**

Mote Marine Laboratory  
1600 Ken Thompson Parkway  
Sarasota, FL 34236  
(941) 388-4441

**Principal Investigator(s) and Brief Statement of Qualifications:**

Karen M. Burns is the Principal Investigator of nine MARFIN projects, as well as Mote Marine Lab's Reef Fish and Coastal Pelagic Tagging Program. Dr. Bradley D. Robbins is the Manager of the Landscape Ecology Program within Mote Marine Laboratory's Center for Coastal Ecology. Industry Partner: Mr. Robert Spaeth, Industry spokesperson and vessel fleet owner who has 20 plus years experience. SEFSC Partner: Dr. Gary Fitzhugh, Panama City Laboratory.

**Project Goals and Objectives:**

Project goals include: Evaluate minimum size limits; develop estimates of discard mortality rates; obtain life history information; and provide data for stock assessments for red grouper, gag, and scamp (target species). Project objectives include: Provide target species bycatch information; obtain catch and release mortality rates relative to depth and gear; study movement and migration patterns; collect biological samples; collect swim bladder samples from long-line and fish trap catches; and characterize red grouper essential fish habitat.

**Specific Priority(ies) in Solicitation to which Project Responds:**

This project responds directly to priority A (Commercial Finfish); 2(a) and 2(f).

**Summary of Work:**

The proposal seeks to engage Madeira Beach fishers in the survey design, consultation and sample collection, refine estimates of release mortality specific to commonly used commercial gear, provide habitat characterization from the perspective of gag, scamp, and red grouper fishermen, and provide samples needed for assessments and used to characterize shallow water grouper age and reproduction. Data analysis and swim bladder processing will be conducted at Mote Marine Lab. Otoliths and gonads will be processed at NMFS Panama City. Habitat analyses will be conducted at Mote Marine Lab and sent to NMFS Panama City.

**Project Funding:**

Federal	\$349,971
Non-Federal	\$ 36,304
Total	\$386,275

**CRP PROJECT SUMMARY**

**Project Title:** Estimates of Catch-and-Release Mortality for Red Drum, *Sciaenops ocellatus*, in the Recreational Fishery of South Carolina

**Project Start Date:** October 1, 2003

**Name, Address, and Telephone Number of Applicant:**

South Carolina Department of Natural Resources  
Marine Resources Research Institute  
PO Box 12559  
Charleston, SC 29422-2559  
(843) 953-9232

**Principal Investigator(s) and Brief Statement of Qualifications:**

Charles A. Wenner, Ph.D., who has 30 years experience in fisheries including research surveys; age, growth, reproduction; former member of several ASMFC Technical Committees.

**Project Goals and Objectives:** The project will document the type of hook used by recreational anglers and the subsequent release mortality of adult and sub-adult red drum. Objectives include: document the type of recreational hook; determine the penetration site of the hook in sub-adults; determine the gear and site of hook penetration in the deep water fishery; and determine the site of hook penetration in sub-adult red drum and effect upon survival.

**Specific Priority(ies) in Solicitation to which Project Responds:**

This project responds directly to priority C (Recreational and Charter Fishery) 2(f).

**Summary of Work:**

This study addresses various aspects of catch and release mortality (discards). Logbooks kept by the guides will provide an estimate of penetration location with size and type of hook. The fishery-independent holding study will provide a comparison of catch and release mortality with hook type and penetration site (sub-adults), and test the assumption that there is little, if any, fishing mortality on released mature fish. The study will produce a variety of outreach materials to reduce catch and release mortality.

**Project Funding:**

Federal	\$90,000
Non-Federal	\$ 0
Total	\$90,000

**CRP PROJECT SUMMARY**

**Project Title:** Reproductive Aspects and Age and Growth of Two Deep Water Snappers: Queen Snapper and Wenchman at the West Coast of Puerto Rico

**Project Start Date:** July 1, 2004

**Name, Address, and Telephone Number of Applicant:**

Eugenio Pineiro  
P. O. Box 616  
Rincon, PR 00677  
(787) 312-1921

**Principal Investigator(s) and Brief Statement of Qualifications:**

Mr. Eugenio Pineiro has been a commercial fisher for over twenty years. He is a member of the Caribbean Fisheries Management Council and has been involved in marine conservation efforts for about fifteen years.

**Project Goal and Objectives:** The primary goal of the project is to obtain data on age and growth and reproductive potential of the wenchman and queen snapper in waters of Puerto Rico. Also, data on catch per unit effort will be determined for buoy fishing.

**Specific Priority(ies) in Solicitation to which Project Responds:**

This project responds to B (Caribbean Fisheries); 1 Habitat and fisheries.

**Summary of Work:**

Fish will be collected by the use of buoy gear. Gonads and reproductive materials will be collected from wenchman and queen snapper. Existing data for wenchman and queen snapper will be summarized and added to data collected by the project. Results of the study will be provided to NMFS and the Caribbean Fishery Management Council.

**Project Funding:**

Federal	\$74,110
Non-Federal	\$ 0
Total	\$74,110

**CRP PROJECT SUMMARY**

**Project Title:** Comparison of a Closed Marine Area to Similar Adjacent Habitats: Do Small Estuarine Reserves Impact Local Fisheries Dynamics?

**Project Start Date:** June 1, 2004

**Name, Address, and Telephone Number of Applicant:**

Florida Fish and Wildlife Conservation Commission  
100 Eighth Avenue SE  
St. Petersburg, FL 33701  
(727) 896-8626

**Principal Investigator(s) and Brief Statement of Qualifications:**

Mr. Richard Lehnert and Mr. Ed Sherwood are marine research scientists who have monitored juvenile and young-of-the-year fish assemblages in Tampa Bay, Florida.

**Project Goal and Objectives:** The goal of the project is to investigate species recruitment, richness, abundance, and movement of snook and red drum within a protected estuarine area and compare these parameters with a similar, adjacent habitat. Information from the project can be used to determine the utility of estuarine protected areas.

**Specific Priority(ies) in Solicitation to which Project Responds:**

This project responds directly to priority A (Commercial Finfish); 1 Monitor the effects of closed Marine Protected Areas.

**Summary of Work:**

Young-of-the-year (YOY) snook and red drum will be collected in the protected and unprotected areas for comparison purposes. The YOY fish will be tagged to determine abundance and movement of snook and red drum. Statistical tests will be conducted to determine if differences in size and abundance exist. Multi-variate species analysis will be performed to assess any differences in species assemblages between the protected and unprotected areas.

**Project Funding:**

Federal	\$143,370
Non-Federal	\$ 0
Total	\$143,370

**CRP PROJECT SUMMARY**

**Project Title:** A Pilot Program to Assess Methods of Collecting Bycatch, Discard, and Biological Data in the Commercial Fisheries of the U.S. Caribbean

**Project Start Date:** June 1, 2004

**Name, Address, and Telephone Number of Applicant:**

MRAG Americas Inc.  
Suite 212  
110 S. Hoover Blvd.  
Tampa, FL 33609  
(813) 639-9519

**Principal Investigator(s) and Brief Statement of Qualifications:**

Dr. Robert J. Trumble has over 35 years of experience in marine fishery science and management. He has extensive experience working with governmental agencies, fisheries groups, and national and international advisory groups. Dr. Graeme Parkes is an experienced fisheries resource management specialist.

**Project Goal and Objectives:**

The purpose of the project is to assess the potential for obtaining information on bycatch, discards, and biological data from the commercial fisheries of the U.S. Caribbean. The project will focus on methods for obtaining information on composition and disposition of bycatch and discards at sea, opportunities for collecting biological data at sea, and the use of captain or crew for collecting data if space or safety on vessels does not allow observers.

**Specific Priority(ies) in Solicitation to which Project Responds:**

This project responds to priority A (Commercial Finfish); 2(a, d and f).

**Summary of Work:**

Selected captains and crews will be trained in methods of collection of catch data. Logbooks will be developed. Observers will be trained and placed aboard selected vessels. All data will be given to MRAG for data entry and analysis. Biological samples will be collected. All information will be provided to NMFS and the Caribbean Fishery Management Council.

**Project Funding:**

Federal	\$95,580
Non-Federal	\$ 0
Total	\$95,580

## CRP PROJECT SUMMARY

**Project Title:** A Program to Assess Methods of Collecting Bycatch, Discard, and Biological Data in the Commercial Fisheries of St. Thomas, U.S. Caribbean

**Project Start Date:** April 1, 2005

**Name, Address, and Telephone Number of Applicant:**

MRAG Americas Inc.  
110 S. Hoover Blvd., Suite 212  
Tampa, FL 33609  
(813) 639-9519

**Principal Investigator(s) and Brief Statement of Qualifications:**

Dr. Robert J. Trumble has over 35 years of experience in marine fishery science and management. He has extensive experience working with governmental agencies, commercial and recreational fisheries groups, and national and international advisory groups.

**Project Goal and Objectives:**

The goal of the project is to assess the potential for obtaining information on bycatch, discards, and biological data from the commercial fisheries of the U.S. Caribbean. The project will focus on methods for obtaining information on composition and disposition of bycatch and discards at sea, opportunities for collecting information on composition and disposition of bycatch and discards, opportunities for collecting biological data from retained catch, and the use of captain or crew for collecting data if space or safety on vessels does not allow observers on board.

**Specific Priority(ies) in Solicitation to which Project Responds:**

This project responds directly to priority A (Commercial Finfish); 1(a) Projects are needed to collect detailed information on the composition and disposition of bycatch and discards; 1(d) Projects are needed to utilize fully scientific observers on-board vessels as a means of collecting detailed catch, effort and disposition data.

**Summary of Work:**

This project will work with commercial fishermen and the U.S. Virgin Islands Division of Fish and Wildlife to obtain information on composition and disposition of bycatch and discards at sea, opportunities for collecting biological data from retained catch (gonads and otoliths), and the use of captain or crew for collecting data if space or safety on vessels does not allow observers on board. Information obtained from the project, including recommendations concerning observer data collection procedures, will be provided to territorial and federal fishery managers for management of U.S. Caribbean fishery resources.

**NA05NMF4540042**

**CRP PROJECT SUMMARY (CON'T)**

**Project Funding:**

Federal	\$105,441
Non-Federal	\$ 0
Total	\$105,441