

## SUPPORTING STATEMENT

### SOCIOECONOMICS OF USERS AND NON-USERS OF GRAYS REEF NATIONAL MARINE SANCTUARY Reinstatement with Change

OMB CONTROL No. 0648-0625

#### A. JUSTIFICATION

**1. Explain the circumstances that make the collection of information necessary.**

This request is for a reinstatement with changes to OMB Control No. 0648-0625 for replication of the surveys of users and non-users of Gray's Reef National Marine Sanctuary (GRNMS).

The National Marine Sanctuaries Act (16 USC 1431, et seq.) (NMSA) authorizes the use of research and monitoring within National Marine Sanctuaries (NMS). In 1981, the GRNMS was added to the system of NMS.

The NMSA specifies that each NMS should revise their management plans on a five-year cycle. The GRNMS last revised their plan in 2013 and has begun the management plan review process. The NMSA also allows for the creation of Sanctuary Advisory Councils (SACs). SACs are comprised of representatives of all NMS stakeholders. Management Plan Review (MPR) is a public process and the SACs, along with a series of public meetings, are used to help scope out issues in revising the management plans and regulations. SAC Working Groups are often used to evaluate management or regulatory alternatives. In the last MPR for the GRNMS, two major issues emerged; prohibition of spear fishing and establishment of a research-only area. The spear fishing regulation was published in the Federal Register February 19, 2010 (FR/Vol. 75, No. 33, 7361-7367) and went into effect March 22, 2010. The "research only area" was established and was published in the Federal Register October 14, 2011 (FR/Vol. 76, No. 199, 63824-63833) and went into effect November 28, 2011.

In the current MPR, there is a need to report on subsequent changes in use in GRNMS after implementation of the research only area and the attitudes and perceptions of users and non-users on the establishment of the research-only area in the GRNMS and establishment off the Georgia coast of research only areas outside GRNMS. In addition, potential expansion of the GRNMS is being considered by GRNMS management, so attitudes of users and non-users of potential expansion of GRNMS boundaries will also be addressed.

To address each one these issues, the GRNMS Management and SAC or SAC Working Group is provided a socioeconomic panel to develop information and tools to assess the socioeconomic impacts of management strategies and regulatory alternatives. Dr. Vernon R. (Bob) Leeworthy, the Office of the National Marine Sanctuaries (ONMS) Chief Economist, leads the socioeconomic panel, which can include other social scientists from other agencies or from universities. The information and tools developed in this process also provide the necessary

information for meeting agency requirements for socioeconomic impact analyses under the National Environmental Policy Act (NEPA), Executive Order 12086 (Regulatory Impact Review) and an Initial and Final Regulatory Flexibility Analyses (impacts on small entities, primarily small businesses).

The proposed effort by ONMS and GRNMS is part of the socioeconomic monitoring to test whether projected socioeconomic impacts of regulations actually occur and to inform an adaptive management process in review of management plan strategies and regulations. The surveys proposed here are designed to address changes in the knowledge, attitudes and perceptions of both Grays Reef Users and Non-users as to the GRNMS's management strategies and regulations. In the National Marine Sanctuaries Act, ONMS has a mandate to balance both conservation (direct uses of Sanctuary resources) and preservation (non-use or passive economic use i.e. people have value for simply knowing the resources are protected in a certain condition even though they do not directly use it).

**2. Explain how, by whom, how frequently, and for what purpose the information will be used. If the information collected will be disseminated to the public or used to support information that will be disseminated to the public, then explain how the collection complies with all applicable Information Quality Guidelines.**

## **How and Purpose**

This information request involves compiling socioeconomic information for users and non-users of GRNMS. Users include those who access GRNMS via private household boats and for-hire recreational dive operations and for-hire recreational fishing operations (charter and party/head boat operations). Non-users will include random sample of Georgia households stratified between coastal and non-coastal counties. Socioeconomic information includes socioeconomic/demographic profiles (e.g. age, race/ethnicity, income, and household/family size), costs-and-earnings of business operation, spatial use patterns, and knowledge, attitudes, and perceptions (KAP) of GRNMS existing and proposed management strategies and regulations.

The purpose of the information collection is to obtain the necessary information to monitor and assess the socioeconomic impacts of management strategies and regulations and inform the adaptive management process in revising management strategies and regulations. In addition, information is obtained to support education & outreach efforts to better understand GRNMS stakeholders and to communicate effectively with them.

## **USERS VIA PRIVATE HOUSEHOLD BOATS**

For the users that access GRNMS via private household boats, the survey includes information that can be described in eight separate sections or modules of questions. To reduce respondent burden and increase response rates to the survey, the survey has been divided into two versions

of the questionnaire that will be implemented to the same sample of users, but spaced over a two-

year period.

Version 1 of the survey includes sections 2, 3, 4, 5, 6 and 8, while Version 2 includes sections 1, 3, 4, 5, 7 and 8 (See Table 1). Table 1 also includes the estimated time for completion of each section/module of questions in each version and the total estimated time of completion for each version of the survey questionnaire. Within each version of the questionnaires, the section numbers do not correspond to those in Table 1 as they are organized numerically in a continuous manner for clarity. Section descriptions are used as headings for each section within the survey questionnaires.

Section 1 obtains information on user’s opinions about ocean & coastal resources protection. Section 2 obtains information on user’s attitudes about GRNMS’s current management strategies and regulations. Section 3 obtains information on what sources of information users’ use and trust for issues related to ocean & coastal resources and GRNMS and ways users prefer to receive information about GRNMS. Section 4 obtains information on users perceptions of the status and condition of resources in GRNMS. Section 5 obtains information on the recreation activities and use of ocean & coastal resources in and around Georgia and in the GRNMS. Section 6 obtains information on user’s main or primary activity in ocean & coastal areas and information to classify users according to how specialized they are in their activities. Section 7 obtains information on the ways users’ value ocean & coastal resources/marine environment. Finally, Section 8 obtains information on socioeconomic/demographic information of users.

Table 1. Information and Survey Times for Different Versions of User and Nonuser Surveys

Section	Section Description	Users		Nonusers	
		Version 1 (Minutes)	Version 2 (Minutes)	Version 1 (Minutes)	Version 2 (Minutes)
1	Opinions about Ocean & Coastal Resources Protection and Management		20		20
2	Attitudes about GRNMS Current Management Strategies and Regulations	15		15	
3	Sources of Information on Ocean & Coastal Resources and GRNMS	5	5	5	2
4	Status and Conditions of the Resources in GRNMS	2	2		
5	Activities in Ocean & Coastal Areas in and around Georgia and in the GRNMS	6	6	3	3
6	Activity Specialization	5			
7	Ways you Value Ocean & Coastal Resources/ Marine Environment		2		2
8	Information about Yourself	3	3	3	3
All		<b>36</b>	<b>38</b>	<b>26</b>	<b>30</b>

*Graphical, Visual and Symbolic Language Design.* Throughout the questionnaires for users and non users, which are self-administered mail surveys, we have followed design principles found in Morrison et al (2010), Dillman et al (2005), Christian and Dillman (2004), Redline et al

(2001) and Stern et al (2007). For questions using five-point Likert scale type responses, we used the polar point method of labeling responses as found in Christian and Dillman (2004, figure 2, pg. 73) and in Stern et al (2007, page 126).

**Section 1: Opinions about Ocean & Coastal Resources Protection and Management.** This section contains 13 questions. First a definition of ocean & coastal areas is provided along with a map of coastal and ocean areas in Georgia and GRNMS. Questions 1 and 2 focus on user's greatest concerns about the health of ocean & coastal resources both in and around Georgia (Question 1) and in the GRNMS (Question 2). There are 15 items (labeled a to o) in each question where users are asked to score on a scale of one (1) to five (5) with 1=No Concern to 5=Maximum Concern. The questions used here have been adapted from the "Ocean Project" using the polar point concern scale, except that we have changed to the use of a five point Likert scale versus the 0 to 100 scale with a number response used by the "Ocean Project" based on the findings from Christian and Dillman (2004) and Stern et al (2007). **Change in these questions was the addition of another element "Human produced noise (from human activities)", which is an emerging issue in National Marine Sanctuaries.**

Questions 3 and 4 are general questions about the support for ocean & coastal protection both in and around Georgia and outside GRNMS (Question 3 and in GRNMS (Question 4). Again, a 1 to 5 scale is used with 1=No Support and 5=Maximum support. This question sets the stage for pursuing more specific forms of protection in questions 5 through 11.

Questions 5 through 11 addresses more specific forms of management strategies and regulations. Each type of management strategy or regulation is preceded by a short description of the problem or context and a definition of the management strategy or regulation using bulleted sentences. Support for the general management strategy of marine zoning is asked in Question 5 with a simple yes/no response. A skip pattern is employed here so users that do not support the general management strategy are not asked about specific forms of the marine zoning strategy. For those who answer "yes" to Question 5, Questions 6 through 9 are asked, while for those who say "no", they are asked to skip to question 12.

Questions 6 and 7 address the marine zoning strategy of "marine reserves" or "no-take areas". Question 6 does this for areas in Georgia outside GRNMS, while Question 7 asks this for areas inside GRNMS. A definition of marine reserves is first provided using six bulleted sentences, then, Questions 6 and 7 ask users to score their support for the use of marine reserves in Georgia ocean & coastal areas outside GRNMS and inside GRNMS. Again the scale used is 1 to 5 with 1=No Support and 5=Maximum support.

Question 8 is a follow on to Question 7 to ask about users opinions on the amount of displacement, which they find acceptable for activities that would be displaced by marine reserves/no-take areas. Even though in our experience users understand the term "displacement", we have replaced it with the simple term "impact" with bulleted information using the terms social and economic impacts. Users are first reminded of the activities that involve taking of resources will be impacted and that the amount of potential impact would be based on the size of the area placed in marine reserve/no-take status. Users are asked to provide the percent of acceptable impact on each of nine activities (labeled a to i) potentially impacted by

the marine reserves zoning strategy.

Questions 9 through 11 address the marine zoning concept of “research only areas”. First, a definition is provided of “research only areas” to describe what activities are and are not allowed and the general purpose of “research only areas” using four bulleted sentences. Questions 9 and 10 ask users to rate their support for this type of management strategy using the 1 to 5 scale for use of “research only areas” in Georgia ocean & coastal areas outside GRNMS (Question 9) and inside GRNMS (Question 10). Question 11 follows up on Question 10 what percent of impact is acceptable to them on each of 11 activities (labeled a to k) that will be potentially impacted by ‘research only areas’. **A change was required here because the research only area in GRNMS was established in 2011. Original questions 10 and 11 asked about research only areas in general, now the question asks specifically about the research only area established in the GRNMS.**

Question 12 and 13 focus on a management strategy currently being used and expanded upon under the new Ocean Action Plan called ecosystem-based management. There are two forms of ecosystem-based management evaluated here. One form of ecosystem-based management is more limited and restricted to fishery management. The other is called full ecosystem-based management and involves the balancing of all human uses incorporating humans fully into the ecosystem. Question 12 addresses the change in fishery management from single species management to multiple species management. Users are asked to rate their support for the fishery management change from species specific to the ecosystem-based multiple species management using the 1 to 5 scale with 1=No support and 5=Maximum Support. Question 13 does the same thing for the full ecosystem-based management approach.

**Section 2: Attitudes about GRNMS Current Management Strategies and Regulations.** The questions are the same as used in 2010-2011 with some minor changes.

This section contains 17 questions or 17 items to be scored.. All questions (items) in this section use a five-point Likert scale on agreement with statements about GRNMS management strategies and regulations, the processes used to create the strategies and regulations, and the enforcement of regulations. The five point scale is on the agreement scale with 1=Strongly Agree and 5=Strongly Disagree. A Don’t Know (DK) response is also allowed and is placed to the right of the five point scale.

**Section 3: Sources of Information on Ocean & Coastal Resources and GRNMS.** This section contains five questions. The first two questions are about information sources used and level of trust of those sources. The third question asks about respondent’s preferences on how they like to receive information. We pursue both formal and informal sources of information. The next two questions are knowledge related questions as to knowledge of management/regulatory agencies and level of familiarity with GRNMS regulations. All information in this section is designed to assist in the GRNMS education and outreach program.

The second question in this section asks users to rate each source they use (determined in the first question in this section) as to their level of trust. Our research in other National Marine Sanctuaries finds that the most used sources are not always the most trusted. Level of trust is

rated on a five-point Likert scale where 1=No Trust at All to 5=Completely Trust. The third question that asks for user's preferences for how they would like to receive information and users are asked to check all that apply. **A couple of changes were made to this section. The use of social media has evolved since 2010-2011. We added specific new sources of information breaking out GRNMS's Facebook Page and Twitter Feed and then created an Other Social Media source for all other forms of social media. We also added Social Media as an item in Q. 20 that addresses how people prefer to receive information.**

The fourth question in this section asks users if they know who sets policy/management for National Marine Sanctuaries and for fisheries in ocean and coastal areas. Users are asked to name the agencies. Question five in this section simply asks users their familiarity with GRNMS regulations. Respondents are asked to check only one from the choices of "Very familiar", "Somewhat familiar", and "I am not familiar with any of the rules or regulations". **Here we made a minor change by adding in parentheses "Federal waters" to item b. For Ocean areas of Georgia.**

**Section 4: Status and Conditions of the Resources in GRNMS.** Again, the questions are the same as used in 2010-2011 with minor changes.

There is one question with 14 items (labeled a to n) in this section with the items corresponding to eleven different resources. Users are asked to rate conditions on a five-point Likert scale where 1=Getting better to 5=Getting worse. A "Don't Know" response is also allowed for and is provided to the right of the five-point scale for each item. **Here we added three new items and divided them into "RESOURCES" (11 items) and "PRESSURES" (3 items). The three new items are the "PRESSURES". L. Underwater human produced noise from human activities, m. Ocean Acidification (ph. level harms shellfish and corals), and n. Climate Change. PRESSURES are an important issue in ONMS Condition Reports that evaluate the status and trends of the conditions of sanctuary resources using the integrated conceptual model "Driving forces-Pressures-State-Ecosystem Services-Response (DPSER) Model". DPSER is also the standard model used by NOAA in integrated ecosystem assessments.**

**Section 5: Activities in Ocean & Coastal Area in and around Georgia and in GRNMS.** In this section, we focus on the recreation activities users engage in both in the ocean & coastal areas off Georgia and in GRNMS. The list of recreation activities was expanded to include activities that do not take place in GRNMS, but which take place in Georgia. We obtain information on activities done inside both GRNMS and Georgia in general to assess the extent of substitution between Georgia in general and GRNMS. In addition, this type of information has been used to explain people's attitudes and preferences for ocean and coastal resource protection.

There are six questions in this section. The first question asks about which activities people engage in both ocean & coastal waters off Georgia and in GRNMS. Simple check boxes are used for eight specified activity types known to be done both off Georgia and in GRNMS. For an additional seven activities that take place off Georgia, but not in GRNMS, we provide check boxes only for Georgia. The second question addresses intensity of use asking for the number of days by type of activity for 2010. Days in Georgia and days in GRNMS are asked. A special

instruction in bold type is provided explaining that “if all days were in GRNMS, then code all your days in Georgia and GRNMS. **Here we added two new activities that have emerged since 2010-2011 in importance off the Georgia coast: Kayaking and Paddle Boarding. However, these activities are not done in GRNMS and are marked as not relevant for days of activity in GRNMS.**

The third question asks for further breakdowns of the days of activities in GRNMS by type of boat access (e.g. private, charter or party). Even though the survey is of those whom we know accessed the GRNMS via private household boat, there is the possibility that some of these users also access the GRNMS via other boat modes. **In this question asking about days of activity by boat mode of access, we eliminated the Party Boat Mode, since no known Party boats take people out to GRNMS.**

The fourth question asks for how many people are usually with the respondent when they are out on their private boat. Currently we have estimates of the total number of private boats that access GRNMS, but we have to use estimates from other surveys off Georgia for the average number of people aboard private household boats. We will be able to test if our estimate is significantly different and if it significantly alters our estimates of total activity.

We know that many fishing tournaments take place in GRNMS. The fifth question asks respondents if they participate in fishing tournaments in GRNMS. Check boxes are used for three possible responses “Yes”, “No”, and “Don’t fish”. When combined with the answer to the first two questions in this section, this question obtains information on how many of those who fish in tournaments access the GRNMS via private household boats.

The sixth and final question in this section will allow us to understand GRNMS users as to what factors influence their choice of GRNMS over other sites. Again, adds further information to help assess the issue of substitution. Ten factors (labeled a to j) are listed and respondents are asked to answer each item by circling the appropriate response from the choice of “Yes”, “Somewhat”, or “Not at all”. **For this question, we added “Regulations” to the list of items.**

**Section 6: Activity Specialization.** The literature in Human Dimensions of resource management has found that classifying users according to their main or primary activity and how specialized they are in that activity is a good predictor of how different groups respond to management strategies, rules and regulations. These questions were asked in the 2010-2011 survey and will be repeated in the current application.

This section includes eight questions. The answers to any one question alone have very little meaning. The use of the answers to all the questions in this section is used to classify users, by main or primary activity, according to their level of specialization in the activity.

The first question in this section identifies the “main” or “primary” activity of the respondent in coastal & ocean areas off the coast of Georgia, including activities in the GRNMS. The next four questions have listed responses with check boxes next to each response and the respondent is asked to check one box for each question. The next question asks for a dollar amount response on what it would cost to replace their current equipment used in their main or primary activity.

The seventh question in this section asks again about use of information obtained on their primary activity. Eleven sources of information are listed and the respondent is asked to rate the level of use on a five point scale with 1=No Use to 5=A lot of Use. The eighth and final question in this section provides a list of reasons why people engage in recreation activities. Twelve reasons are listed (labeled a to l) and respondents are asked how important each of these reasons are for participating in their primary activity. A five point scale is used with 1=Not at all important to 5=Extremely important.

**Section 7: Ways Users Value Oceans & Coastal Resources/Marine Environment.** This is not an attempt to derive dollar values of users' economic value for ocean & coastal resources, but instead simply addresses people's relative preferences for different goods and services derived from ocean & coastal resources and what actions users would take to ensure ocean & coastal resources would be sustainable so future generations could enjoy them.

There are just two questions in this section. The first question asks users to score their value for each of the ten uses of ocean & coastal resources on a scale of 1 to 5 where 1=no value to 5=maximum value. The second question identifies nine actions and a place for other (specify) which users might take and ask them to score them on a scale of 1 to 5 with 1="Would not do" to 5="Would do the Maximum.

**Section 8: Information about the User:** In this final section of the survey, we ask for socioeconomic/demographic information and for questions commonly asked in the U.S. Census of population, we use consistent response categories so that general comparisons can be made between general Georgia residents and GRNMS users. From past research, we know that these individual characteristics are statistically significant factors in explaining activity participation and use or in knowledge, attitudes and perceptions.

There are 13 questions in this section. Questions include socioeconomic/demographic characteristics such as ethnicity, race, sex, age, level of education, household income, household size, household type, employment status, and occupation. Additional information is asked on boat ownership and memberships in groups or clubs. Place of residence is not needed since this information is already available through users known mail address, which will be used to create data base variables on zip code, city and county of residence.

For one item (employment status), we depart from that used in the U.S. Bureau of Census, "the American Community Survey". We do not have the same objective as that intended for by the Census in achieving consistent estimates for calculating unemployment rates. Our categories are consistent with other research we have done relating categories to explaining different behaviors. Here we use the "check all that apply" format to our categories, since people can be classified in multiple categories.

## **NON-USERS OF GRNMS FROM GEORGIA'S GENERAL POPULATION**

For the non-users of GRNMS from the general population of Georgia, the survey is divided into two versions to reduce burden on respondents with the objective of keeping surveys within an



estimated time of completion of 30 minutes. Since subject matter will be of less salience to non-users, we have designed the survey to meet the requirement of taking, on average, 30 minutes of less to complete. Version 1 includes sections (discussed above for users) 2, 3, 5 & 8 and is estimated to take 26 minutes to complete. Version 2 includes sections 1, 3, 5, 7 & 8 and is estimated to take 30 minutes to complete. It is important to note that for non users sections 4 and 6 as we did with users since non users would not be expected to know the status of conditions of GRNMS (section 4) or would we need section 6 (Activity Specialization) to help us predict how they would respond to regulations in the GRNMS. Eliminating these two sections allows us to minimize burden and increase response rates. In addition, sections 3 (Sources of Information) and section 5 (Activities in Ocean & Coastal Areas in and around Georgia and in the GRNMS) are shortened for non users. We expect non-users will use much fewer sources of information and thus will not have to rate many for trust of the sources and since they do not use GRNMS, section 5 is much shorter. See Table 1 for the sections included in each version and the estimated times for completion of the survey by respondents.

## **FOR-HIRE RECREATIONAL DIVING OPERATIONS**

The questionnaire for the for-hire recreational diving operations is divided into two parts. Part 1 obtains basic socioeconomic/demographic information, costs-and-earnings, and spatial distribution of use. Part 2 obtains knowledge, attitudes and perceptions of existing and proposed management strategies and regulations. Past research and advice from members of the SAC representing the dive industry informed us that dive operations also take people out for recreational fishing and wildlife observation tours (e.g. whale watching, bird watching, etc.). The questionnaire was modified to account for this practice.

The survey is administered in the office of the business establishment or home if it is a home based business by a team contracted by NOAA. Part 1 of the survey is largely a records-based approach where the business operation provides records from which the team fills in the questionnaire. Part 2 of the survey includes attitudes and perceptions and the team usually reads the questions to the respondent and codes the responses. The respondent is provided a copy of the questionnaire to see the codes for the proper response.

***Part 1: General Information, Economic Information and Person-days and Trip Costs.*** The questions are similar to those approved under OMB Control Number 0648-0534, for the Florida Keys National Marine Sanctuary (FKNMS) and OMB Control Number 0648-0597, for the for-hire diving and fishing operations in the Northwest Gulf of Mexico in support of the Flower Gardens Bank National Marine Sanctuary (FGBNMS). The questions have been slightly modified to fit the GRNMS. **There are no changes from 2010-2011 survey.**

*General Information:* This section obtains information to develop socioeconomic/demographic profiles and support analyses of socioeconomic impacts.

*Economic Information:* This section addresses costs-and-earnings of the dive operation. This section was designed to conform to other studies being conducted on the economics of the Gulf of Mexico and South Atlantic recreational for-hire fishing operations, but modified to take into account the differences for diving and wildlife observation activities (see answer to Question 4

below on Duplication of Effort). Questions 14 thru 17 focus on the operations capacity for number of passengers on all their vessels, by type of activity. Question 18 asks for the number of employees by classification (e.g. full, part-time, or seasonal). Questions 19 and 20 focus on the replacement value of current equipment and gear and the balance of any loans for vessels and equipment. This information will help assess the return on capital and equity. Question 21 focuses on other overhead expenses, while Question 22 addresses trip related expenses. Questions 21 and 22 ask for annual expenses for the past year. This is the recommendation of NOAA Fisheries economists doing similar work on for-hire recreational fishing operations in the Gulf of Mexico and South Atlantic, so we are maintaining consistency of information collection across different efforts.

Questions 23 and 24 focus on total dive operation revenues for the past year and the distribution by major spatial units inside an outside GRNMS. This information will establish dependency on the different areas for dive operation revenues.

*Person-days and Trip Costs:* Question 25 provides control totals for each major area by type of activity. Person-days are the best measurement of use for recreational activities. A definition is provided which says a person-day is one person doing an activity for a whole day or any part of the day. This measurement corresponds generally to what the operations record in their logbooks as the number of passengers taken to a specific location on a specific day. There is some potential for double counting across activities, so totals across activities is asked and it is not required that the sum by activity equal the total.

Question 26 provides detailed costs per day of operation by type of activity. This information will provide the basis of estimating the economic impacts on a dive operation from different management strategies or regulations that affect the amount of activity.

Question 27 takes a different approach in obtaining detailed spatial resolution of “expected person-days”. The purpose of this information is to assess the potential impacts of boundary expansion of research only areas or other kind of zoning regulation. This is by its nature forward looking, thus past spatial distribution of effort may not be good representation of future impact. Dive owners/operators will be asked to provide the percent distribution of where they expect to undertake their future effort by type of activity at spatial resolutions of 1-minute-by-1-minute of one nautical square mile grid cells. Detailed maps will be provided with NOAA Nautical chart layers with latitude and longitude lines and key reference point such as different weather buoys and the key bottom bank structures and depth contours. The person-day totals provided in Question 25 will provide the information to weight percentage distributions across dive operations when extrapolating to population totals by spatial unit.

***Part 2: Knowledge, Attitudes & Perceptions of Sanctuary Management Strategies and Regulations.*** The questions are similar to those submitted under OMB Control Number 0648-0534, Expiration Date: 7/31/2009, which is focused on a 10-year replication for three user groups; commercial fishermen, dive shop owners/operators, and members of local environmental groups in the Florida Keys National Marine Sanctuary (FKNMS) and OMB Control Number 0648-0597, Expiration Date: 11/30/2012 for the for-hire diving and fishing operations in the Northwest Gulf of Mexico in support of the Flower Gardens Bank National Marine Sanctuary

(FGBNMS). . The questions have been modified to the issues in the GRNMS, but follow the same general format. **There are no changes from the 2010-2011 application.**

This module contains 27 questions.

## **FOR-HIRE RECREATIONAL FISHING OPERATIONS**

As with the for-hire recreational diving operations, the questionnaire for the for-hire recreational fishing operations is divided into two parts. Part 1 obtains basic socioeconomic/demographic information, costs-and-earnings, and spatial distribution of use. Part 2 obtains knowledge, attitudes and perceptions of existing and proposed management strategies and regulations.

***Part 1: General Information, Economic Information, and Person-days and Trip Costs.*** The questions are similar as those approved under OMB Control Number 0648-0534, for the Florida Keys National Marine Sanctuary (FKNMS) and OMB Control Number 0648-0597, for the for-hire diving and fishing operations in the Northwest Gulf of Mexico in support of the Flower Gardens Bank National Marine Sanctuary (FGBNMS). The questions have been slightly modified to fit the GRNMS. **There are no changes from the 2010-2011 application.**

*General Information:* This section obtains information to develop socioeconomic/demographic profiles and support analyses of socioeconomic impacts. Information in this section is the same as in the for-hire diving operations questionnaire with slight modifications for the for-hire recreational fishing operations.

*Economic Information:* This section addresses costs-and-earnings of the fishing operation. Again, this section is similar to that for the for-hire diving operations with only slight modifications.

*Person-days and Trip Costs:* Questions 23 and 24 provide control totals for each major area, and again this section is similar to that used for the for-hire diving operations with slight modifications.

***Part 2: Knowledge, Attitudes & Perceptions of Sanctuary Management Strategies and Regulations.*** The questions are similar to those submitted under OMB Control Number 0648-0534, Expiration Date: 7/31/2009, which is focused on a 10-year replication for three user groups; commercial fishermen, dive shop owners/operators, and members of local environmental groups in the Florida Keys National Marine Sanctuary (FKNMS) and OMB Control Number 0648-0597, Expiration Date: 11/30/2012 for the for-hire diving and fishing operations in the Northwest Gulf of Mexico in support of the Flower Gardens Bank National Marine Sanctuary (FGBNMS). . The questions have been modified to the issues in the GRNMS, but follow the same general format. **There are no changes from the 2010-2011 application.**

This module contains the same 27 questions used for the for-hire diving operations. Question 15 was modified to focus on charter/party boat (for-hire fishing) operators.

## **By Whom**

At this time we have not selected a contractor to implement the survey. Dr. Vernon R. (Bob) Leeworthy is the Chief Economist for the Office of National Marine Sanctuaries (ONMS) and will lead the overall effort. Bob will be the Contracting Officer's Technical Representative (COTR) on any contract to implement the survey. Bob and ONMS Senior Economist, Danielle Schwarzmann (under contract through the National Marine Sanctuary Foundation), will develop geographic information system (GIS) tools and socioeconomic models for estimating socioeconomic impacts of management strategies and regulatory alternatives.

## **How Frequently**

This is the second application of this submission. We expect this will be replicated/updated every five to 10 years depending on management plan reviews and condition reports. However, it is ONMS policy to work with NMS stakeholders in designing socioeconomic research and monitoring programs, which would determine whether and how often to replicate measurements.

## ***How Collection Complies with NOAA Information Quality Guidelines***

**Utility:** Completing this information collection will give GRNMS stakeholders fair representation in the design of management strategies and regulations by providing information to support the assessment of socioeconomic impacts of management strategy and regulatory alternatives.

Education and outreach is an important management tool in the GRNMS. The information provided in this project will be an overwhelming boon to the Education and Outreach Program of the GRNMS. Knowledge of who are the users of the GRNMS, their knowledge, attitudes and perceptions of Sanctuary management strategies and regulations and, how users get their information are important in designing effective education and outreach efforts.

**Integrity:** Procedures have been established to protect the proprietary information provided by all respondents to all surveys. All personal identification information is removed from all databases to be sent to NOAA or distributed to the public. Each individual is assigned a database identification number in the database so the data from different portions of the survey can be linked for analysis. Release of proprietary information is further protected by the Freedom of Information Act (5 USC 522 (b) (4)) concerning trade secrets or proprietary information, such as commercial business and financial records.

All project reports are converted to Read-Only in portable document format (pdf) before being placed on the NOAA Web site for public dissemination.

**Objectivity:** All analyses and reports developed in this project will be peer reviewed before release to the public. This is the NOAA standard for socioeconomic information under the Information Quality Act. All survey modules of questions included in this project have all been

through peer review as well. Most of the survey questions have been tested and analyzed in previous applications. New modules of questions have been peer reviewed.

As explained in the preceding paragraphs, the information gathered has utility. NOAA will retain control over the information and safeguard it from improper access, modification, and destruction, consistent with NOAA standards for confidentiality, privacy, and electronic information. See response to Question 10 of this Supporting Statement for more information on confidentiality and privacy. The information collection is designed to yield data that meet all applicable information quality guidelines. Prior to dissemination, the information will be subjected to quality control measures and a pre-dissemination review pursuant to Section 515 of Public Law 106-554.

**3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological techniques or other forms of information technology.**

No automated, electronic, mechanical, or other technological or other forms of information technology are being used. All surveys are conducted by mail or face-to-face and recorded on paper forms.

**4. Describe efforts to identify duplication.**

In March 2009, an Economic Workshop, organized by the Gulf States Marine Fisheries Commission, was held in New Orleans, Louisiana. The purpose of the workshop was to assemble all researchers currently planning economic or socioeconomic studies on Gulf of Mexico commercial and recreational fisheries and share details of each proposed research design to avoid duplication of effort and consistency across applications. Further consultation with economists at NOAA's Fisheries Service, Southeast Fishery Science Center, which oversees all socioeconomic work in the fisheries for the Southeast Atlantic and Gulf of Mexico were made to ensure consistency and avoidance of duplication. It was determined that the proposed work here is unique and a valuable addition. Further, efforts are made in this submission to achieve consistency in measurement of similar information (i.e. costs-and-earnings categories for commercial and recreational fishing operations). This will allow for direct comparisons across similar populations throughout the South Atlantic and Gulf of Mexico.

Bob Leeworthy has also conducted a literature review to determine if and to what extent existing information might meet the needs for the GRNMS. The main thrust of this effort is to establish baselines for future monitoring efforts. Each user group was consulted on each component of the information collection to ensure we were not duplicating efforts and that user group members would comply with the information request.

Duke University (Bird et al 2001) conducted an analysis of recreational fishers' activities and attitudes in a survey implemented in April 2001. The survey only included 60 members of the Southern Kingfish Association using a mail survey. The mail survey got a response rate of 91

percent. Although an important user group, this survey is limited in representation of the

population that accesses GRNMS via private household boats.

**5. If the collection of information involves small businesses or other small entities, describe the methods used to minimize burden.**

All the business entities in this information collection request can be classified as small businesses. Our approach is not to send out questionnaires to be filled out by these respondents. Instead, we send out an information collection team to the home or office of the business owner/operator and the information collection team works with the respondent to complete the information collection.

In arranging information collection interviews, our contractor (to be determined) contacts the business operation by mail (pre-notification letter), telephone and/or e-mail. The contractor explains the types of information we will be asking for in order for the respondent to prepare to make records available to the team. For cost-and-earnings, financial records will be needed. For spatial use information or catch information, access to logbooks will be requested. In past applications, business operations want us to send copies of the questionnaires to see what specifically we are asking for so they can assemble the necessary information for the collection team. Appointments are then made for the collection team (contractor) to visit the home or business to compile the information in our forms.

In 2015, we completed such an effort under OMB Control Number 0648-0597 for recreational for hire dive operations in the Northwest Gulf of Mexico in support of our Flower Gardens Bank National Marine Sanctuary. We got a 100% response rate and no item non-response. We have a tremendous amount of experience with these types of user groups and we know what kinds of records they keep. It is also important that representatives on our Sanctuary Advisory Council contact the groups they represent to tell them of the importance of our effort and encourage them to cooperate.

**6. Describe the consequences to the Federal program or policy activities if the collection is not conducted or is conducted less frequently.**

NOAA and the managers of the GRNMS, with the advice and consent from the GRNMS SAC, have agreed to build the necessary information and tools to allow for the assessment of socioeconomic impacts in the design of management strategies and regulations. The information collection proposed here is in response to the issues identified by the user groups as necessary elements of a socioeconomic impact analyses. The past management plan implementation is well underway and management plan review has begun in the GRNMS and the information collection proposed here is critical to meeting the needs of GRNMS stakeholders. In addition, many federal agencies that manage natural resources have been tasked by the National Academy of Sciences to adopt adaptive management practices. Adaptive management requires research and monitoring, both ecological and socioeconomic, to be able to assess what is happening to both the natural resources and the humans that depend upon those resources. The GRNMS has taken important steps along these lines and is living up to their compact with the stakeholders who are participating in the management plan implementation and revision process. Not completing these data collections would leave NOAA and the GRNMS in violation of these

agreements.

**7. Explain any special circumstances that require the collection to be conducted in a manner inconsistent with OMB guidelines.**

NA.

**8. Provide a copy of the PRA Federal Register Notice that solicited public comments on the information collection prior to this submission. Summarize the public comments received in response to that notice and describe the actions taken by the agency in response to those comments. Describe the efforts to consult with persons outside the agency to obtain their views on the availability of data, frequency of collection, the clarity of instructions and recordkeeping, disclosure, or reporting format (if any), and on the data elements to be recorded, disclosed, or reported.**

A Federal Register Notice published on April 12, 2017 (Vo. 82, No. 69, pg. 17639) solicited public comment on this collection. None was received.

**9. Explain any decisions to provide payments or gifts to respondents, other than remuneration of contractors or grantees.**

No payments or gifts are provided to respondents.

**10. Describe any assurance of confidentiality provided to respondents and the basis for assurance in statute, regulation, or agency policy**

As stated on the survey information for respondents, any identifying information (name, name of business, address and telephone number) will be viewed only by the contractor compiling the data, and will be destroyed by the contractor collecting the information at the end of the information collection. In addition, the Freedom of Information Act (5 USC 522(b)(4)) authorizes non-disclosure by a federal agency of trade secrets or proprietary information, such as commercial business and financial records. All other information will be available for distribution.

**11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private.**

No questions will be asked.

**12. Provide an estimate in hours of the burden of the collection of information.**

For users from private household boats, our source is a list of 500 users observed in the GRNMS by the Georgia Department of Natural Resources, which randomly boards boats in GRNMS, not necessarily in relation to violations of rules/regulations, and obtains boat registration numbers and names and addresses of the boat owners. Two versions of the questionnaire were designed

to minimize burden per respondent. Since the users are not likely to change significantly from year to year, we will have to survey the same users twice. The two versions will be implemented over a two-year period. We will send mail surveys to this list of users, with an expected response rate to be between 40 and 70 percent or 200 -350 completed interviews per version. We estimate Version 1 will require an estimated 36 minutes to complete for each respondent or a total burden hour requirement of between 120 to 210 hours, while Version 2 will require an estimated time per respondent of 38 minutes with a total burden hour requirement of 126.66 to 221.66 hours. When annualized over the three-year approval period, the estimates of burden hours are estimated at 40 to 70 hours for Version 1 and 42.22 to 73.89 hours for Version 2.

For non-users in the general population of the State of Georgia, we will randomly select 500 households from the U.S. Post Office database of deliverable household addresses and mail them the surveys. Samples will actually be purchased from either INFO USA or Survey Sampling, Inc., two firms that specialize in providing samples for mail surveys. As with the user's surveys, we will implement two versions of the non-user's survey to minimize burden per respondent. Unlike users, we will select separate samples of non-users for each survey version and implement both versions in year one. We expect a response rate between 40 and 70 percent yielding between 200 and 350 completed surveys for each version. For version 1, we estimate an average time per respondent to complete the survey of 26 minutes, while version 2 is estimated to take 30 minutes per respondent. Total burden hours for version 1 are estimated to be 86.66 to 151.66 hours, while version 2 is estimated at 100 to 175 hours. When annualized over the three-year approval period, the estimates for version 1 are 28.89 to 50.55 hours, while version 2 is estimated at 33.33 to 58.33 hours.

We estimate that there are approximately 20 to 30 for-hire recreational operations that take people out for fishing and diving. About a third accommodates both activities in GRNMS. This information was obtained through previous surveys. For the For-hire Recreational Diving Operations, we have identified a population of 10 operations through past research using telephone yellow pages, Georgia Sea Grant publications, and personal visits to coastal Georgia. We expect to get a 100% response rate or a census. The representative for the dive industry on the GRNMS SAC has assured us that all of their members are highly supportive of the effort and we should expect full cooperation. Again, we expect that, on average, the interview and compilation of information time will be three (3) hours, for a total of 30 hours.

For the For-hire Recreational Fishing Operations, we have identified an additional population of 30 operations. The number of for-hire recreational fishing operations, includes guides, which fluctuate from year-to-year. Again, we expect to get a 100% response rate or a census. The representatives for the recreational fishing industry have assured us that their members are highly supportive of the effort and we should expect full cooperation. Again, we expect that, on average, the interview and compilation of information time will be three (3) hours, for a total of 90 hours.

**The total burden hour estimate across all four groups is estimated to be between 532.32 and 878.32 hours. If this estimate is annualized over three years, the estimate is between 174.44 and 292.77 hours per year.**



Table 2. Estimate of Burden Hours		
	Total	Annualized <sup>1</sup>
Estimated Number of Respondents		
Users from private household boats		
Version 1	200 - 350	66.66 - 116.66
Version 2	200 - 350	66.66 - 116.67
Non users from Georgia's resident population		
Version 1	200 - 350	66.66 - 116.66
Version 2	200 - 350	66.66 - 116.67
For hire recreational diving operations	10	3.33
For hire recreational fishing operations	20 - 30	6.66 - 10.0
Total	830 - 1,440	276.66 - 480
Estimated time per Respondent		
Users from private household boats		
Version 1	36 minutes	
Version 2	38 minutes	
Non users from Georgia's resident population		
Version 1	26 minutes	
Version 2	30 minutes	
For hire recreational diving operations	3 hours	
For hire recreational fishing operations	3 hours	
Estimated Total Annual Burden Hours		
Users from private household boats		
Version 1	120 - 210	40 - 70
Version 2	126.66 - 221.66	42.22 - 73.89
Non users from Georgia's resident population		
Version 1	86.66 - 151.66	28.89 - 50.55
Version 2	100 - 175	33.33 - 58.33
For hire recreational diving operations	30	10
For hire recreational fishing operations	60 - 90	20 - 30
Total	523.32 - 878.32	174.44 - 292.77
1. Annualized by dividing total by three.		

**13. Provide an estimate of the total annual cost burden to the respondents or record-keepers resulting from the collection (excluding the value of the burden hours in Question 12 above).**

There will be no cost to respondents beyond burden hours.

**14. Provide estimates of annualized cost to the Federal government.**

Table 3. Total Project Cost to the Federal Government (Costs over three years):

---

Socioeconomics of Commercial Fishers and For-hire Recreational Diving and Fishing Operations in the Gray's Reef National Marine Sanctuary

Contracts for Data Collectors/Mail samples/Graphic Design.....\$30,000

NOAA Staff time in developing questionnaires, maps, contracts and tools:

a. Development and oversight.....\$42,000

1. ZP-04 Economist 300 hours \* \$80/hour..... \$24,000

2. ZP-04 Economist 300 hours \* \$62/hour..... \$18,600

b. Travel..... \$24,000

Total Cost to Federal Government.....\$96,600

---

Annualized Cost to Federal Government (Total Project Costs to the Federal government divided by three years): \$32,200.

**15. Explain the reasons for any program changes or adjustments reported.**

This collection was done in 2010 – 2011 and is being reinstated to inform management plan review and future GRNMS condition reports. Changes in some survey questions were adapted to take into account new developments and issues before GRNMS.

**16. For collections whose results will be published, outline the plans for tabulation and publication.**

All reports will be peer reviewed per the NOAA standard under the Information Quality Act and posted on the ONMS Socioeconomic web site:

<http://sanctuaries.noaa.gov/science/socioeconomic>. A new page(s) will be set up on this web site for the GRNMS.

All data and documentation will be put on CD-ROM and will be made available to the general public, subject to any masking of the data required to protect privacy.

**17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons why display would be inappropriate.**

NA.

**18. Explain each exception to the certification statement.**

NA.