

Supporting Statement A

Social Science Assessment and Geographic Analysis of Marine Recreational Uses and Visitor Attitudes at Dry Tortugas National Park and Biscayne National Park

OMB Control Number 1024- NEW

General Instructions

A completed Supporting Statement A must accompany each request for approval of a collection of information. The Supporting Statement must be prepared in the format described below, and must contain the information specified below. If an item is not applicable, provide a brief explanation. When the question “Does this ICR contain surveys, censuses, or employ statistical methods?” is checked "Yes," then a Supporting Statement B must be completed. OMB reserves the right to require the submission of additional information with respect to any request for approval.

Specific Instructions

A. Justification

- 1. Explain the circumstances that make the collection of information necessary. Identify any legal or administrative requirements that necessitate the collection.**

From the Organic Act of 1916 to enabling legislation for specific parks, the National Park Service (NPS) has received a viable Congressional mandate for collecting information to assist in the management of national parks, monuments, and historic sites. Specifically, 16 U.S.C. 1 through 4 (NPS Organic Act of 1916) requires that the NPS preserve national parks for the use and enjoyment of present and future generations. Part 245 of the Department of the Interior Manual delegates to the Director of the NPS the Secretary of the Interior’s authority to supervise, manage, and operate the National Park System. The National Parks Omnibus Management Act of 1998 (Public Law 105-391, §202; 16 U.S.C. 5932) requires that units of the NPS be enhanced by the availability and utilization of a broad program of the highest quality science and information. Information on visitor uses, attitudes and satisfaction with park resources enables NPS to evaluate visitor enjoyment and measure effectiveness in achieving statutory mandates. The NPS *Management Policies 2006*, Section 8.11.1, further states that the NPS will facilitate social science studies that support the NPS mission by providing an understanding of park visitors and human interactions with park resources.

The National Park Service is developing a visitor-focused program to reduce recreational impacts on marine resource at Dry Tortugas National Park (DRTO) and Biscayne National Park (BISC). The program management at these ocean units aims to remove and mitigate degradation of ocean resources by enabling visitors to avoid boat grounding, anchor damage, fishing violations, wildlife disturbance, invasive species introduction, pollution and other impacts from boating, fishing, scuba diving, snorkeling and kayaking. Coral reefs, seagrass beds, fish, birds, marine mammals and other sensitive habitats and wildlife are particularly vulnerable to damage or disturbance. However, most visitors will use marine resources responsibly if provided appropriate information and navigational tools to encourage safe and environmentally sound behavior. DRTO has adopted various anchoring or fishing prohibitions to accomplish its statutory mandate to “protect and interpret a pristine subtropical marine ecosystem” (16 USC §1 410xx-1). BISC also is developing a Mooring Buoy Plan, Fisheries Management Plan and amendments to the Park General Management Plan, all in furtherance of its mandate “to

preserve and protect for the education, inspiration, recreation, and enjoyment of present and future generations a rare combination of terrestrial, marine, and amphibious life” (16 USC §1410gg). Information is missing on local recreational use patterns and visitors’ knowledge and attitudes that are critically necessary to inform these park management, education and enforcement efforts. This project aims, through a primary data collection, to fill this identified information gap to enable the sound management of each park unit.

2. Indicate how, by whom, and for what purpose the information is to be used. Except for a new collection, indicate the actual use the agency has made of the information received from the current collection. Be specific. If this collection is a form or a questionnaire, every question needs to be justified.

This information collection fully supports the management needs at DRTO and BISC to address marine recreational impacts on sensitive habitats and marine resources. Additional strategies are needed on how to reduce impacts through education and outreach, navigational aids, and enhanced compliance with rules and regulations. The information from this study will be used by park managers and planners to inform the development of a visitor-focused program aimed at reducing recreational impacts on marine resources and to provide information for effective educational and outreach programs. The project will use a series of surveys to assess visitor attitudes, perceptions and beliefs concerning marine resources and provide a geospatial assessment of geographic locations of visitor uses at DRTO and BISC. At the end of the study, reports will be provided to the park managers and planners at both sites. The reports will be used to describe levels and patterns of recreational uses in these parks and to propose strategies needed develop and evaluate communication efforts.

In addition to the quantitative survey effort in both parks a geospatial assessment will be conducted in BISC. Survey data will be collected through mail and Internet surveys; and the geospatial data be collected on-site through the use of small GPS units.

SURVEYS

A random sample of visitors will be contacted on-site, and those agreeing to participate in the study will be asked to complete a brief contact sheet. The contact sheets will be used to request name, address and/or email address, as well as to record gender and age of each potential respondent. A questionnaire will be sent to the selected individuals within one month of being contacted either by mail or Internet (the visitor will be given the option of receiving a mail or internet version of the survey). To maximize response rates for the survey, Tailored Design Method (Dillman, 2009) will be used. Because the visitors to BISC and DRTO comprise a number of recreational groups with different experiences and expectations, multiple versions of the survey instrument have been developed. A core set of identical questions will be used throughout each of the surveys. However, some questions will be unique based on primary recreational activity and location (see table A1 below).

Table A1. Questions Included in All Surveys

	Survey	Park Use History	Activity Information and History	Activity Locations, Use Substitution	Personal, crowding norms	Performance/ Satisfaction, Expectations	Perceptions of Resource Conditions	Cultural and Historical Resources	Perceptions of Marine Reserves/ Management Tools	Demographics
BISC	Snorkeling/ SCUBA Diving Survey	Q1-7	Q8-22	Q23-27	Q28-39	Q40-41	Q42-49			Q50-55
	Fishing Survey	Q1-7	Q8-25	Q26-29	Q30-33, 36-38	Q34-35, 39-42	Q43-49		Q50-53	Q54-60
	Marine Reserve Survey	Q1-7	Q8-9	Q20-29			Q10-14		Q15-19	Q30-39
DRTO	Private Boat Survey	Q1-5	Q6-7, 15-19	Q20-23	Q24-28		Q8-12, 29-33		Q13-14	Q34-42
	Ferry Boat Survey	Q1-4	Q5-8				Q9-10	Q11-16	Q17-18	Q19-25

Each category of questions is based on specific social theories. Explanations of these theories and examples of OMB-approved projects that employed similar questions are included in Part B (Q 4). Justifications for the specific questions are as follows:

Park Use History

These questions will provide information about the respondents. We will use this data to compare the different user populations (e.g., the frequency of participation) relating the patterns of responses to the dependent variables.

Activity Information and History

The questions in this category will be used to provide information about the respondents' level of specialization and how central this specific activity is to their recreational life. The questions will provide ways of categorizing respondents and analyzing data across these categorization levels. Users of different specialization levels have been shown to hold differing values and, therefore, these questions will provide information on social science research topics such as predicted compliance and support of rules and regulations. These questions will be used to gather information regarding the use of different habitat types found within the management areas and how central the Park is to respondents' recreational opportunities. Asking about types and frequency of mediated interaction will allow expectations to be determined as well as reveal possible outlet sources for the Park's outreach and education material.

Activity Locations, Use Substitution

One key component of the overall project is to describe geographic patterns of recreational use. Questions in this category will be linked to the geospatial assessment component of this study. These questions will allow social use patterns to be overlaid on biophysical data layers allowing a better understanding of use motivations. Determining if there are alternative zones that provide the same experience within the Park will help provide information on possible sources of conflict that may arise if a marine reserve is established within Park boundaries.

Personal, Crowding Norms

Managers are interested in understanding the levels of use acceptability and perceived crowding of recreational users in the Parks. These questions have been designed to gather information on crowding norms and personal norms of recreational users in order to provide managers with a clear understanding of possible conflicts. This information will help managers understand the effects of crowding and the limits of the social carrying capacity in their Park.

Performance/Satisfaction, Expectations

These questions are included to assess visitor motivations, expectations and satisfaction levels with their recreation experience in Biscayne National Park. This information will help resource managers assess visitor knowledge and will provide a baseline of socially acceptable recreational conditions within the park.

Knowledge and Perceptions of Resource Conditions

These questions will be used to measure recreational users' environmental knowledge of resources within the boundaries of both management areas. They will also measure user perceptions of marine resources. These data will provide management with information on what the public is looking for when assessing resource conditions and acceptability. These data can also be used to help modify outreach and education material based on actual knowledge levels ensuring a more efficient and effective approach.

Cultural and Historical Resources

These questions have been designed to determine the importance of the role that cultural resources play in attracting visitors to the Dry Tortugas National Park and are specific to this park.

Perceptions of Marine Reserves/Management Tools

These questions will help determine any misconceptions about the role the marine reserves has in protecting the natural resources. Public perception of marine reserves as a management tool must be understood. The responses can help determine the role that outreach and education may have in reducing any possible conflict as well as gauge existing knowledge.

Willingness to Pay (DRTO Ferry Boat Survey - only)

The willingness to pay question, is specific to DRTO, and will be used to help determine respondent's interest in contributing to historical preservation and interpretive services at Fort Jefferson.

Demographics

These questions provide general information about the respondent sample and the typical user, can be used when contextualizing and grouping the data.

GEOSPATIAL DATA COLLECTION

Geospatial data will be collected from a random sample of BISC park users and used in conjunction with existing biophysical data layers of the BISC. These data will help to discern recreation use patterns throughout the Park and how those patterns change over time. A small spatial data logger will be used to monitor trip behaviors (route, stop times, speed and direction). This method will reduce errors in visitor recollection.

- 3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses, and the basis for the decision for adopting this means of collection. Also describe any consideration of using information technology to reduce burden and specifically how this collection meets GPEA requirements.**

Visitor contact information will be collected on-site. The surveys will be conducted through a mixed mode approach utilizing the mail system and the Internet. Providing the option to complete an on-line survey will assist in reducing the overall cost and provides respondents with greater flexibility and choice. A recent research project conducted by the University of Massachusetts, in conjunction with Restore Americas Estuaries¹ suggest that there are no significant differences between response rates and biases when traditional mail surveys were compared to Internet surveys. Both mail and Internet survey methods will be used to ensure full representation of individuals without Internet access. Data collected on-site using visitor contact sheets will be entered into a respondent database by project researchers. This database will be used for this project and then destroyed once the project is complete in order to ensure anonymity.

The Internet component of this data collection will use a hosting service provided by SurveyMonkey™. This hosting service allows a specific and personalized link to be generated for each individual email address provided. This ensures single-use participation and that forwarding the link is impossible. These added measures allow potential biases to be reduced.

A small spatial data logger (Super Trackstick™) will be used to collect information for the GIS-based assessment of visitors use patterns. This electronic method will automate the new use patterns that will be mapped over existing resource data layers.

- 4. Describe efforts to identify duplication. Show specifically why any similar information already available cannot be used or modified for use for the purposes described in Item 2 above.**

Although a visitor services survey was conducted in Biscayne National Park and the Dry Tortugas National Park in 2000 (Simmons and Littlejohn 2001; Ault et al, 2003) additional research has been requested by park managers. Up-to-date data are needed to address issues related to use visitor patterns and perceptions in both recreational areas. Additionally, this is the first known attempt to collect spatial data to depict user patterns throughout these parks. We will use existing park specific thematic coverage and data layers generated by the Biogeography Program of NOAA and

¹ Loomis, D. K., Poole, B., & Paterson, S. 2009. Using Onsite and Internet Surveys to Assess the Social Impacts of Coastal Restoration. . In L. Pendleton (Ed.), Linking Coastal Habitat & People: Restore America's Estuaries.

NPS to ensure that no replication of effort is made. This additional geospatial data will provide information needed to assess user impacts and suggest possible mitigation measures in areas influenced by recreational users.

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

The method of information collection is not predicted to impact small businesses or other small entities.

6. Describe the consequence to Federal program or policy activities if the collection is not conducted or is conducted less frequently, as well as any technical or legal obstacles to reducing burden.

Biscayne National Park and the Dry Tortugas National Park contain significant natural and marine recreational resources. To carry out management objectives, it is necessary that managers have information about desired future conditions so that they can make informed management decisions, develop a comprehensive management plans, and protect important natural and recreational resources. The visitor estimations for BISC and DTRO in 2009 were 437,735 and 52,011 respectively. Considering these numbers, on-site managers wanted to know more about the significant resource and social impacts caused by visitor use. This one-time study will evaluate visitor satisfaction, perception and the quality of the visitor experience in a management area that is challenged with protecting natural resources in the face of increasing visitor use. .

7. Explain any special circumstances that would cause an information collection to be conducted in a manner:

- * **requiring respondents to report information to the agency more often than quarterly;**
- * **requiring respondents to prepare a written response to a collection of information in fewer than 30 days after receipt of it;**
- * **requiring respondents to submit more than an original and two copies of any document;**
- * **requiring respondents to retain records, other than health, medical, government contract, grant-in-aid, or tax records, for more than three years;**
- * **in connection with a statistical survey, that is not designed to produce valid and reliable results that can be generalized to the universe of study;**
- * **requiring the use of a statistical data classification that has not been reviewed and approved by OMB;**
- * **that includes a pledge of confidentiality that is not supported by authority established in statute or regulation, that is not supported by disclosure and data security policies that are consistent with the pledge, or which unnecessarily impedes sharing of data with other agencies for compatible confidential use; or**
- * **requiring respondents to submit proprietary trade secrets, or other confidential information unless the agency can demonstrate that it has instituted procedures to protect the information's confidentiality to the extent permitted by law.**

No special circumstances exist.

8. If applicable, provide a copy and identify the date and page number of publication in the Federal Register of the agency's notice, required by 5 CFR 1320.8(d), soliciting comments

on the information collection prior to submission to OMB. Summarize public comments received in response to that notice [and in response to the PRA statement associated with the collection over the past three years] and describe actions taken by the agency in response to these comments. Specifically address comments received on cost and hour burden.

Describe 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.

Consultation with representatives of those from whom information is to be obtained or those who must compile records should occur at least once every 3 years — even if the collection of information activity is the same as in prior periods. There may be circumstances that may preclude consultation in a specific situation. These circumstances should be explained.

On May 6, 2009, we published a 60-day Federal Register notice (74 FR 20973) stating that we intended to request OMB approval of our information collection associated with Social Science Assessment and Geographic Analysis of Marine Recreational Uses and Visitor Attitudes at Dry Tortugas National Park and Biscayne National Park. In this notice, we solicited public comment for 60 days ending July 6, 2009. We received one comment from an individual regarding this notice. This commenter objected to boaters using the area for recreation purposes. However, in our response, we noted that legislation creating this and other parks of the National Park system specifically allows for this and other public uses. The commenter also suggested that a survey about the recreational habits of citizens is unnecessary. While the survey mentioned by the commenter (The National Fishing and Hunting Survey) may be useful for tracking national recreational trends, information about appropriate use levels and specific indicators of quality at Biscayne National Park can only be obtained from the proposed survey.

The quantitative survey instruments were informed by research activities conducted by the University of Massachusetts for the Florida Reef Resilience Program during the entire year of 2007 as well as the NOAA led Socioeconomic Research and Monitoring Program in Florida Keys National Marine Sanctuary: Recreation/Tourism in the Florida Keys: A 10-year Replication project (OMB Control Number 0648-0572). These projects not only provided a source of pre-tested questions but also allowed estimates of burden hours to complete this survey to be calculated. Dry Tortugas National Park and Biscayne National Park manager and planners were involved in identifying the types of information needed for planning and management in both areas. Additionally, prior research, drawn from a wide array of social science literature, and discussions with park management was used to inform the design and format the questionnaires.

All the questions included in this collection were derived and designed in conjunction with NPS staff (Table A2) in order to maximize data utility and instrument validity. The geospatial assessment will help discover heavily utilized areas within BISC as well as highlight possible areas where user group conflicts may occur.

Table A2. National Park Staff Consulted During Survey Instrument Design.

Name	Location/Agency Unit	Phone Number
Elsa M. Alvear, Chief of Resource Management,	NPS - Biscayne National Park	(305) 230-1144 ext. 3007
Susan Gonshor, Chief of Interpretation	NPS - Biscayne National Park	(305) 230-1144 ext. 3019
David Hallac, Chief, Biological Resources Branch	NPS - Everglades and Dry Tortugas National Parks	(305) 224-4239
Kirsten Leong, Human Dimensions of Biological Resource Management	NPS - Biological Resource Management Division	(970) 267-2191
Vanessa McDonough, Fishery and Wildlife Biologist	NPS - Biscayne National Park	(305) 230-1144 ext 3112
Myrna Palfrey-Perez, Assistant Superintendent	NPS - Biscayne National Park	(305) 230-1144 ext 3004
Ben Ruttenberg, Marine Ecologist	NPS - South Florida/ Caribbean Network	(305) 252-0347
Chris Ziegler, Lead Interpretive Ranger	NPS - Dry Tortugas National Park	(305) 242-7700

Table A3. List of Reviewers contacted outside of the agency to provide feedback

Dr Vernon Leeworthy	Chief Economist, NOAA/NOS/Office of National Marine Sanctuaries
Chris Bergh	Director, Florida Keys Office, The Nature Conservancy
Dr John Finn	Professor, Department of Environmental Conservation, University of Massachusetts

9. Explain any decision to provide any payment or gift to respondents, other than remuneration of contractors or grantees.

No payments or gifts will be provided to respondents.

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

We will not collect any personal identifying information. We will aggregate all information collected for statistical purposes only. Participants' names and addresses will be assigned an arbitrary number that will serve as the respondent ID number. The identification number will be on the questionnaire and respondents will be requested not to place their name or any personal identifiable information on the questionnaire. When a questionnaire is returned, the identification number will be used to record the return of the questionnaire and end the mailing of any further reminders. The identification number will be entered with the responses to the questionnaire in a separate data file. Once data collection is complete, the link between names/addresses and data will be destroyed. Data will be kept on the project manager's password-protected computer.

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. This justification should include the reasons why the agency considers the questions necessary, the specific uses to be made of the information, the explanation to be given to persons from whom the information is requested, and any steps to be taken to obtain their consent.

No questions of a sensitive nature will be asked.

12. Provide estimates of the hour burden of the collection of information. The statement should:

- * **Indicate the number of respondents, frequency of response, annual hour burden, and an explanation of how the burden was estimated. Unless directed to do so, agencies should not conduct special surveys to obtain information on which to base hour burden estimates. Consultation with a sample (fewer than 10) of potential respondents is desirable. If the hour burden on respondents is expected to vary widely because of differences in activity, size, or complexity, show the range of estimated hour burden, and explain the reasons for the variance. Generally, estimates should not include burden hours for customary and usual business practices.**
- * **If this request for approval covers more than one form, provide separate hour burden estimates for each form and aggregate the hour burdens.**
- * **Provide estimates of annualized cost to respondents for the hour burdens for collections of information, identifying and using appropriate wage rate categories. The cost of contracting out or paying outside parties for information collection activities should not be included here. Instead, this cost should be included under “Annual Cost to Federal Government.”**

We estimate the total hour burden for this collection to be 952 hours. The initial contact with visitors who refuse to take the survey will take approximately 1 minute at each location. The number of visitors who refuse will be recorded and used to calculate response rates. Visitors who agree to participate in the study will be asked to provide their name, address, and/or email address. Providing this information will take approximately 3 minutes at each location.

The time associated with the geospatial data collection will only be associated with the visitors at Biscayne National Park. The burden here is based upon the interception and instruction process as well as the length of time spent recreating within the boundaries of the park. The burden associated with the information/instruction aspect of this study is estimated to be 5 minutes per willing respondent. The burden is only that of the contact time there is no burden associated with the use of the instrument. The initial contact with visitors who refuse to participate in the geospatial data collection will take approximately 2 minute at each location.

We estimate the total dollar value of the annual burden hours for this collection to be \$28,628. The \$30.07 per hour is the average employer cost for private employee compensation. This wage figure included the multiplier for benefits and is based on the National Compensation Survey: Occupational Wages in the United States published by the Bureau of Labor Statistics (BLS) Occupation and Wages, (BLS news release USDL-11-0849) for Employer Costs for Employee Compensation—March 2011 (accessed on July 14, 2011 at <http://www.bls.gov/news.release/pdf/ecec.pdf>).

Table A4. Estimate of Expected Burden Hours

Collection	Number of Responses	Completion Time (min)	Burden Hours
DRTO and BISC (combined)			
Initial Contact Time (refusal)*	519	1	9
Initial Contact Time (acceptance)*	4667	3	233
Subtotal	5,186		242
DRTO			
Ferry Boat Survey	833	10	139
Private Boat Survey*	167	20	56
Subtotal	1,000		195
BISC			
Fishing Survey	530	20	177
Snorkeling/Diving Survey	536	20	179
Marine Reserve Survey	434	20	145
Subtotal	1,500		501
Geospatial tracker			
Respondent	150	5	13
Non-respondent	30	2	1
Subtotal	180		140
TOTAL	7,866		952

*Contact details for private boaters will be collected using the permit system; therefore no-on-site contact will be made with these individuals.

Table 2: Estimated Dollar Value of Respondent Annual Burden Hours

Activity	Sector	Total Annual Number of Responses	Total Annual Burden Hours	Dollar Value of Burden Hours (Including Benefits)	Total Dollar Value of Annual Burden Hours
DRTO					
Ferry Boat Survey	Private Individuals	1,000	195	\$30.07	\$5,866
Private Boat					
BISC					
Fishing Survey	Private Individuals	1,500	501	\$30.07	\$15,065
Snorkeling/Diving Survey					
Marine Reserve Survey					
DRTO/ BISC					
Initial Contacts (acceptance and refusals)	Private Individuals	5,186	242	\$30.07	\$7,277
Geospatial tracker					
Respondent	Private Individuals	180	14	\$30.07	\$420
Non-respondent					
		0	0		0

13. Provide an estimate of the total annual [non-hour] cost burden to respondents or record keepers resulting from the collection of information. (Do not include the cost of any hour burden shown in items 12).

- * **The cost estimate should be split into two components: (a) a total capital and start-up cost component (annualized over its expected useful life) and (b) a total operation and maintenance and purchase of services component. The estimates should take into account costs associated with generating, maintaining, and disclosing or providing the information [including filing fees paid]. Include descriptions of methods used to estimate major cost factors including system and technology acquisition, expected useful life of capital equipment, the discount rate(s), and the time period over which costs will be incurred. Capital and start-up costs include, among other items, preparations for collecting information such as purchasing computers and software; monitoring, sampling, drilling and testing equipment; and record storage facilities.**
- * **If cost estimates are expected to vary widely, agencies should present ranges of cost burdens and explain the reasons for the variance. The cost of purchasing or contracting out information collection services should be a part of this cost burden estimate. In developing cost burden estimates, agencies may consult with a sample of respondents (fewer than 10), utilize the 60-day pre-OMB submission public comment process and use existing economic or regulatory impact analysis associated with the rulemaking containing the information collection, as appropriate.**
- * **Generally, estimates should not include purchases of equipment or services, or portions thereof, made: (1) prior to October 1, 1995, (2) to achieve regulatory compliance with requirements not associated with the information collection, (3) for reasons other than to provide information or keep records for the government, or (4) as part of customary and usual business or private practices.**

There are no non-hour costs to respondents.

14. Provide estimates of annualized cost to the Federal government. Also, provide a description of the method used to estimate cost, which should include quantification of hours, operational expenses (such as equipment, overhead, printing, and support staff), and any other expense that would not have been incurred without this collection of information.

The total estimated data collection cost to the Federal Government for this proposed collection is \$145,219. This includes Federal employee salaries and benefits (\$15,238). The table below shows Federal staff and grade levels performing various tasks associated with this information collection. We used the Office of Personnel Management Salary Table 2011-DCB² and MFL³ to determine the hourly rate. We multiplied the hourly rate by 1.5 to account for benefits (as implied by the previously referenced BLS news release)

This estimate also the indirect expenses associated with this collection (\$129,981). These costs include travel and all associated operating costs (questionnaire design, and review, field data collection, statistical analysis and reporting, including indirect costs) (see table A5 below).

Table A5. Budget Breakdown of Project Expenses

² http://www.opm.gov/flsa/oca/11tables/pdf/dcb_h.pdf

³ http://www.opm.gov/flsa/oca/11tables/pdf/mfl_h.pdf

Position	Hourly Rate	Hourly Rate incl. benefits (1.5 x hourly pay rate)	Estimated time per task	Annual Cost
GS-13 Marine Management Specialist (Locality: DC)	\$49.77	\$74.65	140 hours	\$10,451
GS-12 Chief of Resources (Biscayne NP, Locality: Miami)	\$39.54	\$59.31	24 hours	\$1,423
GS-11 Fisheries Biologist (Biscayne NP, Locality: Miami)	\$32.98	\$49.47	28 hours	\$1,385
GS-11 Fisheries Biologist (Dry Tortugas NP, Locality: Miami)	\$32.98	\$49.47	40 hours	\$1,979
Subtotal				\$0

Indirect Expenses	
Contractor	\$27,656
Travel	\$35,678
Survey, Data Collection & Reporting	\$52,892
Equipment and Supplies	\$7,050
Student stipend & tuition	\$6,705
Subtotal	\$129,981
TOTAL	\$145,219

15. Explain the reasons for any program changes or adjustments in hour or cost burden.

This is a new collection.

16. For collections of information whose results will be published, outline plans for tabulation and publication. Address any complex analytical techniques that will be used. Provide the time schedule for the entire project, including beginning and ending dates of the collection of information, completion of report, publication dates, and other actions.

Individual park reports will be produced for each user group. The reports will be disseminated to park staff upon completion. Every effort will be made to publish the results of these studies in peer reviewed scientific journals upon the completion of project.

The target date to begin the on-site intercepts is April 1, 2012. Intercepts will take place during a one week period of each month for 7-months. Intercepts will be focusing on collecting names and addresses of individuals that are diving or fishing and that agree to complete the survey. A rolling survey method will be employed using Dillman's Tailored Design Method (2009) to ensure that possible respondents receive the survey instrument within 4 weeks of each "intercept wave" period. This will help to reduce recall bias amongst respondents and ensure on-going data collection. Interception data collection is scheduled to be complete by November 1, 2012 with the

final wave of survey to be mailed complete by December 15, 2012. Data analysis and preparation of the draft report will continue until July 1, 2013. Following feedback on the draft from the sponsoring agencies, the final report will be submitted by November 1, 2013. The time schedule for the project is summarized below (Table A6).

Table A6. Timeline for Project Completion

Task	2012			2013		
	Jan-May	Jun-Aug	Sep-Dec	Jan-May	Jun-Aug	Sep-Dec
1. Design survey instruments	Completed					
2. OMB submission	X					
3. Logistical scoping and finalization	X					
4. Interceptions (plus any contingency plans as needed)	X	X	X			
5. Mail surveys (plus returns)		X	X	X		
6. Spatial visitor pattern data			X	X		
7. Data entry				X		
8. Data analysis				X	X	
9. Draft report and peer review					X	
10. Final report						X

Survey Results Analysis

Data analysis of the survey results will be typical for this type of social science survey research including regression analyses and post-hoc tests including Tukey's Post Hoc- Analyses of these data will only use inferential statistics.

Geospatial Data Analysis

For each track, descriptive statistics will be calculated such as total distance traveled, average speed, central location (mean and harmonic mean), and dispersion (variance). Then portions of the track will be classified as to activity (stopped, trolling speed, high speed transit, etc.). It may be possible to cluster the speeds of each track automatically, or it may be necessary to pick arbitrary thresholds for various movement categories. With movement categorized, each movement class can then be compared to the physical habitat it occurs in. Then these habitat-activity relationships can be examined for classes of individuals. For example, some classes of individuals (i.e., divers) will transit over shallows or avoid them altogether, while other classes (bone fishermen) will be stopped over shallows. In addition to class differences, we can also look at whether other information in the questionnaires predicts habitat-activity relationships. For example, experienced divers may stop at deeper or more diverse coral reefs than inexperienced divers.

Statistical methods such as multivariate discriminate analysis or canonical correlation analysis may be used to help identify these relationships, with the questionnaire answers as the predictor set of

variables and the habitat-activity relationship as the response set of variables. Finally, there are some new state-based, hierarchical statistical models being used in habitat preference studies in ecology. These methods may be applicable in this case. For example, a state of interest that may affect the movement of fishermen is the catch probability of a fish in a certain area. We may be able to build a model that relates the variables that we have observed (location, speed, habitat type) to the unobserved state (probability of catching a fish).

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

We will display OMB's expiration date on the information collection instruments.

18. Explain each exception to the topics of the certification statement identified in "Certification for Paperwork Reduction Act Submissions".

We are requesting no exceptions to the certification statement

References:

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