

**SUPPORTING STATEMENT
BOTTLENOSE DOLPHIN CONSERVATION OUTREACH SURVEY
OMB CONTROL NO. 0648-0594**

B. COLLECTIONS OF INFORMATION EMPLOYING STATISTICAL METHODS

1. Describe (including a numerical estimate) the potential respondent universe and any sampling or other respondent selection method to be used. Data on the number of entities (e.g. establishments, State and local governmental units, households, or persons) in the universe and the corresponding sample are to be provided in tabular form. The tabulation must also include expected response rates for the collection as a whole. If the collection has been conducted before, provide the actual response rate achieved.

This collection was previously conducted in Panama City, FL during 2010-2011. There were 465 completed surveys including 205 residents, 171 tourists, and 89 commercial businesses located in Panama City. The contractor who implemented the original survey in Panama City provided only the number of respondents by types as indicated above and not the response rates. However, we were able to determine an approximate 71% response rate for the commercial businesses based on 89 responses to the census of approximately 125 commercial businesses in Panama City. In addition, the contractor reported that approximately 70% of the visitors randomly approached and who provided a phone number so that an interview could be completed later, did follow through with an interview. However, we do not know the visitor response rate overall.

Although the geographic location for the next collection effort is currently unknown, it will be a coastal tourism city in the Southeast United States with similar human-dolphin interaction concerns. Therefore, we assume number of respondents for residents/tourists and the response rate for businesses will be similar to what was collected in Panama City, FL.

The potential respondent universe for the tourism/local resident survey is all local residents and tourists in the study area. A location with a potential respondent universe similar to that for the prior collection effort in Panama City, FL will be chosen. The number of residents in Panama City, FL is estimated at 36,807, according to the 2006 Census. Tourism is Bay County's largest industry. According to the Panama City Beach Convention and Visitors Bureau website, each year, Panama City Beach attracts an estimated 4.1 million leisure visitors and an additional 2.1 million visitors associated with business travel and special events. Therefore, the total potential respondent universe (Bay County residents, leisure visitors, and visitors traveling for purposes other than leisure) for the tourism/local resident survey is estimated to be about 6.3 million people.

Because the current geographic location of the study area is currently unknown, demographic information for this population is included to help us achieve the goal of ensuring our outreach messages are reaching target audiences and are comparable to prior collection efforts in Panama City, FL.

From the previous collection effort in Panama City, the demographic profiles of residents 18 and over visiting Panama City were as follows:

- (1) 97% live in the Panama City metro area year-round.
- (2) The average length of time living in Panama City is 28.32 years.
- (3) Employed status was described as full-time for 40% of residents; retired for 36%; and self-employed for 13%.
- (4) Household income was described as under \$25,000 for 24% of residents; between \$25,000-\$49,999 for 19%; and between \$50,000-\$74,999 for 18%.
- (5) The racial composition of residents was 82% White or Caucasian; 12% Black or African American; 2% Native American or Alaskan native or Aleutian; and 1% Asian.
- (6) English was the primary language for 97% of residents and Spanish for 1%.
- (7) The highest level of education attained for residents was some college or trade school but no degree for 28%; high school diploma or equivalent for 21%; and bachelor's degree for 17%.
- (8) The average age of residents was 54.57 years.

From the previous collection effort in Panama City, the demographic profiles of tourists visiting Panama City were as follows:

- (1) 40% of the visitors were from Alabama; 23% from Florida; 14% from Georgia; 5% from Indiana; and 2% from Kentucky.
- (2) Employment status was described as full-time for 36% of visitors; retired for 29%; and self-employed for 13%.
- (3) Household income was described as between \$50,000-\$74,999 for 22%; between \$25,000-\$49,000 for 15%; and \$75,000-\$99,999 for 10%.
- (4) The racial composition of visitors was 75% white or Caucasian; 13% Black or African American; 3% Native American or Alaskan native or Aleutian; and 1% Asian.
- (5) English was the primary language for 95% of households and Spanish for 1% of households.
- (6) The highest level of education attained for 26% of visitors was a bachelor's degree; high school diploma or equivalent for 18%; some college or trade school but no degree for 16%; and a graduate degree for 15%.
- (7) The average age of visitors was 54.23 years.
- (8) 64% were female and 36% male.
- (9) 88% indicated this was not their first visit to Panama City and 11% indicated that it was their first visit.
- (10) Average number of days spent in Panama City was 5.61.
- (11) 89% traveled by car, truck, or motorcycle; 9% by airline; 2% by bus; and 2% by RV
- (12) Average number of people in the traveling party was 4, with an average of 1 child under 17 years old.

The tourist/local resident survey will be conducted over the course of approximately nine days per year, and will be stratified by season (low, medium and peak season), type of day of the week (weekday and weekend), and time of day (morning and afternoon). Table 1 tabulates the anticipated aggregate number of completed surveys, based on an anticipated response rate of 75%. Table 2 tabulates the estimated number of completed surveys by stratified samples.

Table 1: Intercept Surveys for Tourists/Local Residents and Anticipated Number of Completions

Approximate Number of Tourists/Local Residents Approached	Anticipated Response Rate	Number Surveys Completed
500	75%	375

Table 2: Anticipated Number of Completions by Subgroup

	Approximate Number of Completed Surveys (Total and by Subgroups)	Approximate Proportion of Total Completed Surveys
Total	375	
Stratification		
<i>Morning</i>	188	1/2
<i>Afternoon</i>	188	1/2
<i>Weekday</i>	125	1/3
<i>Weekend</i>	250	2/3
<i>Low season</i>	75	1/5
<i>Medium-peak season</i>	150	2/5
<i>Peak season</i>	150	2/5

For the collection as a whole, a response rate (i.e., number of those approached who comply) in the range of 70-80% is anticipated, based on reference materials and recent examples of intercept surveys, as well as the calculated response rate for businesses in Panama City from the previous collection. A publication on survey design reports that in-person surveys have typical response rates of about 70%-75%, and in-person surveys tend to have somewhat higher response rates than telephone surveys (Kalton (1983)). In addition, a committee formed to evaluate the pros and cons of face-to-face interview versus phone interviews for the American National Election Studies, indicated that in-person surveys tend to have a response rate that is about 15% higher than telephone surveys (NESACSM, 1999). In the Panama City visitor survey, as was stated earlier, there was approximately a 70% response rate to the telephone survey option, but that was from visitors who initially agreed to be interviewed but could not completed the survey at that time.

A few of the following examples of more recent intercept surveys demonstrate the estimated response rate for this study is in line with other intercept studies:

A study commissioned by the Oregon Department of Transportation and carried out as intercept surveys to collect truck data using a roadside intercept survey method at an interstate highway weigh station, a Port of Portland marine terminal, and a private freight warehouse/distribution center, all in the Portland, OR metro area in 2003. The response rate for those who were asked to participate was 95% at the highway weigh station, 93% at the Port of Portland and 100% at the Distribution Center. This survey, designed to be two minutes in length, was much shorter than ours.

McCluskey, et al (2005) carried out a study in 2003 using an intercept survey approach at conventional supermarkets and natural foods markets in order to determine what attributes consumers consider when making beef purchases, with a special focus on attributes that may lead to the purchase of grass-fed beef. The response rate for this was approximately 50%.

Shivlani, et al (2008) completed a recent study to determine knowledge, attitudes and perceptions of Florida Keys National Marine Sanctuary management strategies among stakeholders. The stakeholder groups, mode, and response rates were commercial fishermen (86.2%) through intercept surveys, diver operators (77.5%) through either phone or intercept surveys, and members of a specific environmental group (11.6%) through mail survey.

Miller, et al (1997) conducted a street-intercept survey to assess the feasibility of street-intercept surveys versus random digit-dial telephone surveys in terms of its use in reaching population segments in urban areas that were considered difficult to reach, for example urban areas with high rates of crime. The street-intercept survey was carried in 1992, and again in 1993. It asked for demographic information and health related questions. In 1992, the survey consisted of 64 items and took about 10 to 15 minutes to complete. The 1993 version consisted of 91 items and took about 15 to 20 minutes to complete. The authors provided the response rate only for the 1993 survey, which was 80.2%.

A census approach, rather than a sampling approach, will be used for the commercial business survey. We will attempt to find, and provide a survey to, all businesses in the water-based recreation industry operating in the vicinity of the study area. These businesses include diveshops, snorkel, canoe rental, boat rental, jetski, cruise and commercial tour operations, fishing charters/headboats, etc. We expect the number of businesses within these categories to number approximately 125. This expectation is based on a search of the yellow pages online conducted for survey collection in Panama City Florida, which yielded the following numbers of each type of business: tours and charters (63), diving tours (7), recreational trips and guides (4), fishing boat charters, tours, and rental (2), raft trips and tours (1), personal watercraft sales and rental (2), boat and yacht charters, rental and leasing (4), diving equipment and supplies (19). Our plan is to locate relevant businesses through a local telephone directory and through online searches, as well as actually visiting locations near the marinas and beaches of the study area in order to find businesses operating in a tourism-related industry that are unlisted.

The response rate for businesses is anticipated to be about 70-80% , based on the achieved rate of 71% for the Panama City businesses. Table 2 shows the tabulated anticipated number of completions based on the expected response rate and total number of existing businesses.

Table 2: Surveys for Commercial Businesses and Anticipated Number of Completions During Mid-Peak Season

Commercial Businesses	Total Number of Businesses is 125
75% response rate	94

2. Describe the procedures for the collection, including: the statistical methodology for stratification and sample selection; the estimation procedure; the degree of accuracy needed for the purpose described in the justification; any unusual problems requiring specialized sampling procedures; and any use of periodic (less frequent than annual) data collection cycles to reduce burden.

The purpose of this data collection is to evaluate the effectiveness of NMFS' outreach techniques and determine if there are more appropriate outreach tools to convey NMFS' Protect Dolphin conservation messages. There are several "hot-spot" areas throughout the Southeast United States for which illegal feeding and harassing of wild dolphins occurs, which are usually well-known tourist destinations. These activities mainly take place from commercial dolphin viewing tours, eco-tours, charter tours, and either rental platforms for recreational use by tourists or privately owned vessels/platforms by residents. Therefore, NMFS routinely places outreach materials at locations such as boat ramps; marinas where dolphin viewing and tours dock their vessels; beach-side hotels; etc.

The data collection for local residents and tourists will occur as an intercept survey. This data collection effort will occur at or near sites in the study area where visitor interactions with wild dolphins, such as dolphin-viewing or participating in water-sports in dolphin habitat, have been known or are likely to occur. We chose to target the data collection efforts to those respondents who are likely to participate in these water-related activities in order to ensure the survey results yield the intended results of evaluating NMFS' education and outreach efforts that are targeted to these audiences and in these locations.

We anticipate data collection to take place at the marinas or visitor centers, where the survey administrator will notify, after the completion of the previous survey, the n^{th} (or some set number) passerby that the individual had been randomly selected and to ask if this individual would be able to complete the survey. The data collector will also stress that because the respondent was randomly selected, it is important that this person participate and answer honestly so that the responses provided by him and other respondents are informative and useful. Data collection will occur primarily through in-person surveys provided by survey administrators. The survey administrators will be on hand to explain the survey, answer questions, and either collect the survey upon completion or provide a prepaid postage return envelope, if the respondent is unable to complete the survey until a later time.

Our primary goal is to obtain a general assessment of the level of knowledge and attitudes that visitors and residents have of issues related to dolphin conservation, therefore we do not need a high degree of accuracy in terms of targeting the respondents or with a large sample size. We are using a sample size for which we have the resources, given that our goal is to gain information of the effectiveness of various outreach tools. A sample size of 400 would achieve a 95% level of confidence and 5% margin of error. Our proposed sample size of 500 would slightly improve these margins of error.

We anticipate using a quota of intercepts, of roughly 100 approaches per day across several intercept locations. The tourist/local resident survey will be stratified by season (low, medium and peak season), type of day of the week (weekday and weekend), and time of day (morning and afternoon), as summarized in Table 1 (see the response to the previous question). However, we will not attempt to stratify sampling based on respondent characteristics. Summary statistics

and information (mainly frequencies/percentages of individual responses to particular questions and means/medians) will be calculated for survey responses. In addition, responses to questions will be used to estimate the likelihood of knowledge of issues concerning harassment of wild dolphins based on various characteristics and attributes of the respondent (for instance, demographic variables or past incidence of dolphin interactions)

The data collection for commercial businesses will also occur at or near locations where visitor interactions with wild dolphins have been known or are likely to occur. However, because the potential respondent universe for this survey is not large (estimated to be 100-150), we will attempt to census the entire universe of water-based businesses operating on or near the study area.

Survey administrators will visit all businesses that are identified as providing water-based recreation activities, during mid-peak season and non-peak times seasons and times. If the business owner or manager cannot complete the survey at the time s/he is contacted, but is willing to do so, the survey administrator will return at a mutually agreed-upon time. If the business owner or manager is not available, the survey administrator will return repeatedly until contact with the appropriate party is made.

For many of the questions, responses will primarily be reported as means (for quantitative answers) or frequencies (for categorical answers).

A few of the survey questions did contain a large list of outreach tools that were provided to aid recall. When evaluating the effectiveness of one tool over another, we will find natural aggregation of categories to condense the number of categories to 11 (including “other” and “cannot recall”). So as an example, consider the survey question which asks the respondent to check the box next to various categories of outreach tools. If one or more of the posted sign subcategories (located at docks, fishing piers, visitor centers, or other) is marked, any of those subcategories will be treated as a posted sign category. We will then evaluate the percentage of respondents who learned particular messages through a particular tool according to both the original categories as well as to the higher level of aggregation.

Both surveys will be a one-time data collection conducted over the course of a year, rather than a repeated collection.

3. Describe the methods used to maximize response rates and to deal with nonresponse. The accuracy and reliability of the information collected must be shown to be adequate for the intended uses. For collections based on sampling, a special justification must be provided if they will not yield "reliable" data that can be generalized to the universe studied.

Each of the two survey instruments, as well as the survey implementation, incorporates various elements to help increase response rates. The surveys, designed to be easily understood at a junior high school reading level, are respondent-friendly, with clear and easy-to-comprehend questions. To further aid in ease of reading and responding to questions, we incorporated suggested changes to simplify the language and visual presentation of the survey. The suggested changes were provided through several rounds of review by those who were mindful that the population of respondents were likely to have at least an 8th grade education. The survey topic

and related questions may also be interesting to respondents. Each survey makes ample use of listing options to allow the respondent to answer by checking the appropriate boxes, which may aid in recall. In addition, an in-person survey should increase response rate over other methods, such as mail or Internet surveys (Dillman (2000) and Kalton (1983)). For those randomly selected individuals who are unable to complete the survey at that time, but who are willing to be surveyed, telephone contact information will be requested and a telephone survey will be conducted.

In addition to the design of the survey itself, some measures will be taken in order to attempt to minimize the number of nonresponses through the interaction with the potential survey respondent. Survey administrators will briefly explain, to the randomly selected respondent, the value of the survey itself as well as the importance of having as high a response rate as possible in order to generate meaningful results. Reassuring respondents that their responses are completely anonymous should also help increase response rates. We will not collect personally identifying information from local residents/tourists. For the business survey, we will keep a separate list of the names and addresses of those businesses that had already completed a survey and those that declined, solely for tracking which businesses had already been contacted. This list will not be matched with the survey responses and will be destroyed at the end of the data collection effort.

Finally, we will not ask members of the business community to complete the survey during peak season. Businesses will be approached to complete the survey during medium-peak season, so as to enhance the likelihood that the employee or business owner will cooperate and complete the survey. In addition, visits will be repeated until contact is made with the appropriate person, which would be someone who has sufficient knowledge of the business to answer the survey questions. We will make efforts to provide respondents from the commercial sector to participate at their convenience, and if the survey could not be completed at that time, to set up a mutually convenient time.

In terms of evaluating non-response bias, we plan to ask those who decline to participate in the survey effort to answer two questions, in order to see if their answers to those questions differed significantly from those who choose to participate. The questions are taken from the surveys.

For those who decline to participate in the tourist/local resident survey, the two questions we intend to ask are:

- 1) How concerned are you, if at all, about protecting dolphins? (Same as Q1 on the tourist/local resident survey)
- 2) What is the highest level of education you have attained? (Same as Q32)

The same category choices from Q1 and Q32 in the main survey will also be provided on the non-response bias questionnaire.

For those who decline to participate in the commercial business survey, we intend to ask the following:

- 1) How concerned are you, if at all, about protecting dolphins? (Same as Q1 on the commercial business survey)
- 2) Which of the following best describes your business? (Same as Q9)

Again, these non-response questions will mirror their counterparts on the larger survey, so the response categories will be the same.

4. Describe any tests of procedures or methods to be undertaken. Tests are encouraged as effective means to refine collections, but if ten or more test respondents are involved OMB must give prior approval.

No formal tests were undertaken for the original survey, conducted in Panama City. Six NMFS employees and three non-Federal individuals reviewed the survey to provide feedback on the clarity of the survey. The survey design and implementation also benefited from reviews by several NMFS employees with expertise in survey design and implementation.

5. Provide the name and telephone number of individuals consulted on the statistical aspects of the design, and the name of the agency unit, contractor(s), grantee(s), or other person(s) who will actually collect and/or analyze the information for the agency.

The following individuals were consulted on the statistical aspect of the original survey design:

Michelle McGregor
National Marine Fisheries Service
Office of Protected Resources
301-713-2319

Daniel Lew
National Marine Fisheries Service
Alaska Fisheries Science Center
530-752-1746

Justin Hospital
National Marine Fisheries Service
Pacific Islands Science Center
808-983-5742

Kristy Wallmo
National Marine Fisheries Service
301-713-2328

The following individuals may analyze the information for the agency:

Stacey Horstman
Bottlenose Dolphin Conservation Program Coordinator
National Marine Fisheries Service,
Southeast Regional Office
727-824-5312

Laura Engleby
Marine Mammal Branch Chief
National Marine Fisheries Service,
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727-824-5312

Cheryl Bonnes
Outreach Specialist
National Marine Fisheries Service,
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NMFS plans to hire a professional survey research firm to administer the survey and analyze results, pending funding.

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