

**National Park Service  
U.S. Department of the Interior**



**Social Science Program**

**Expedited Approval for NPS-Sponsored Public Surveys**

1. **Project Title:** Everglades National Park Angler Study and Snake Bight Pole and Troll Zone Visitor Use Survey **Submission Date** 10-28-2011

2. **Abstract:** Everglades National Park will conduct a fisheries-dependent angler study to define the population status of the Park's target gamefish, and to identify visitor experiences in the newly designated "Snake Bight Pole and Troll Zone" of Florida Bay. Combustion motor use is now prohibited within the zone. The zone is intended to enhance a range of visitor experiences, including shallow-water fishing, canoeing, and kayaking while protecting fragile seagrass beds. Fisheries technicians will interview individual anglers, measure fish, count boat trailers in the Park boat-ramp parking lots, and ask questions regarding angler experience in using the Snake Bight Pole and Troll Zone. This study will provide data on effort, catch, harvest, and size distribution of targeted gamefish species in the Park, and visitor perceptions about fishing within the zone. These data will guide park management decisions regarding park-specific fisheries regulations and management of the Snake Bight Pole and Troll Zone.

(not to exceed 150 words)

3. **Principal Investigator Contact Information**

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## Project Information

5. **Park(s) For Which Research is to be Conducted:** Everglades National Park

6. **Survey Dates:** 11/14/2011 to 11/14/2014

7. **Type of Information Collection Instrument (Check ALL that Apply)**

Mail-Back Questionnaire       On-Site Questionnaire       Face-to-Face Interview       Telephone Survey       Focus Groups

Other (explain)

8. **Survey Justification:** *Social science research in support of park planning and management is mandated in the NPS Management Policies 2006 (Section 8.11.1, "Social Science Studies"). The NPS pursues a policy that facilitates social science studies in support of the NPS mission to protect resources and enhance the enjoyment of present and future generations (National Park Service Act of 1916, 38 Stat 535, 16 USC 1, et seq.). NPS policy mandates that social science research will be used to provide an understanding of park visitors, the non-visiting public, gateway communities and regions, and human interactions with park resources. Such studies are needed to provide a scientific basis for park planning, development.*

NPS goals and management objectives are based on the preservation of diversity and ecological integrity of fish populations. This Angler Study will be established to monitor the fishing activity and the harvest of gamefish in Everglades National Park (EVER). The objectives of this marine fisheries monitoring program are to determine catch rates, relative abundance, age structure, and estimated total catch and harvest of gamefish and to monitor the boating and fishing activity. The data collected during this study will be used to monitor the abundance and distribution of the marine fish species and provide park managers with information needed to assess local fish populations.

This study will provide fishery resource managers with information that will help define the population status of gamefish within the park. On-site surveys will be used to collect information from individual anglers at the Flamingo and Everglades City/Chokoloskee boat ramps. Park managers will use the data to understand more about the catch, harvest, size and distribution of several important gamefish species within the Park. The data will also allow the principal investigator to estimate the fishing quality and recreational pressure caused by fishing activities within the park. The trailer count information will help estimate the possible carrying capacity of fishing boats on the water on a daily basis.

One of the main objectives of the Snake Bight Pole and Troll Zone is to enhance shallow-water fishing opportunities. A survey of the area's use by fishermen and their perceptions, along with additional monitoring by park staff, will aid in determining the effectiveness of the zone and whether the

objectives (protecting seagrass and wildlife habitat, and enhancing visitor experiences) have been met.

**9. Survey Methodology:**  
**(Use as much space as needed; if necessary include additional explanation on a separate page.)**

**(a) Respondent Universe:**

This study is only interested in interviewing recreational anglers and pleasure boaters (and not other anglers that use an Everglades National Park (EVER) professional guide for their trip). The respondents will be recreational anglers and pleasure boaters that are over 16 years old.

**(b) Sampling Plan/Procedures:**

Two surveys will be used to collect information. One survey will be used to collect fishing parameters at both Flamingo and Everglades City/Chokoloskee, and the other survey will be used to collect visitor use information from visitors using the Snake Bight Pole and Troll Zone. There will be two survey site locations: Flamingo and Everglades City/Chokoloskee. The sites were chosen because they are the most representative areas in or near the park to conduct the interviews.

The surveyor will begin the process by asking the captain of each boat if they would like to participate in an on-site survey. Only one individual per boat (16 years or older) will be selected to take the survey. The interviewer will also determine if the respondent was fishing in the newly designated Snake Bight Pole and Troll Zone or in the other areas in EVER. If the respondent was fishing in the Snake Bight Pole and Troll Zone they will receive the survey for that area - otherwise they will be asked to respond to the second version of the survey.

The methods used will be the same as those used to collect recreational fishing and boating activity data designed by Higman (1967), Davis and Thue (1979), and Tilmant et al (1986). Every third party will be selected to be interviewed at boat launch sites upon the completion of their fishing trip.

Surveys will be conducted every Saturday and Sunday, from 12:00pm - 6:00pm. Based on our experiences, Saturdays and Sundays are the busiest time of the week for anglers/boaters to visit the park. The surveys will be conducted during a six hour period that are considered as times with low to high boating traffic (including times when boaters are typically launching their boats and times after boaters normally return from their day on the water).

**(c) Instrument Administration:**

The survey will be administered via face-to-face interviews.

**Interview Protocol:**

The interviewer will make a brief introduction to approach anglers and invite them to participate in a face-to-face interview. Individuals who agree to participate will be informed about the survey and its subject matter. Participants will be informed that their names will not be recorded, so anonymity will be assured. Interviewers will ask to interview the captain of the boat. Interviewers will require that the captain is at least 16 years old.

Interviewers will note the location, date, the time of contact directly on each survey instrument. The number of people in the group, and any refusals to participate will be documented in the interviewer's log sheet.

Each interviewer will use the following text as a guide to conduct the on-site interviews.

**Interview Script:**

*Hello, my name is (\_\_\_\_\_). I am an employee (volunteer) here at Everglades National Park. I am conducting a survey of people fishing in the area. We are asking a few visitors for information about their fishing experiences within the Park and more specifically within the Snake Bight Pole and Troll Zone. There are also few questions on the survey that will help us understand your opinions about the zone. Have you been asked to participate in this study already today?*

➔ *If YES - thank them for their time*

➔ *If NO - continue*

*This study will help the park managers to monitor gamefish, to determine trends in the numbers of fish, and to assess the population status of local marine fishes. This survey is completely voluntary and your responses will remain anonymous. The survey will take approximately five minutes to complete. The information you provide us and your opinion is very important. Would you like to participate in our survey today?*

➔ *If NO- (soft refusal) ask them to answer the three non-response bias questions (listed below) and then thank them for their time.*

➔ *If NO- (hard refusal) end the contact and thank them for their time.*

➔ *If YES - continue with on-site survey*

**(d) Expected Response Rate/Confidence Levels:**

The expected response rate is 95 percent with 95 percent confidence intervals. Based on our previous experiences, we expect a response rate of 95 percent. Nearly everyone approached during the survey agreed to participate. In the past we have had less than 5 percent of the visitors approached refused to take the survey.

	Number of Initial Contacts	Expected Response Rate	Expected Number of Responses	Margin of Error +/- %
Onsite Interviews	5,400	95%	5,130	+/- 5%

**(e) Strategies for dealing with potential non-response bias:**

During the initial contact, the interviewer will ask each visitor 3 questions taken from the survey. These questions will be used in a non-response bias analysis.

- 1) *How many hours were you recreating on the water today?*
- 2) *How many people did you have onboard your vessel?*
- 3) *Where is your primary residence*

Responses will be recorded on a log for every survey contact. Visitors may decline to give this basic information as well. If so, this information will be recorded on the log sheet. The results of the non-response bias check will be described in a report and the implications for park planning and management will be discussed.

**(f) Description of any pre-testing and peer review of the methods and/or instrument development**

This survey was peer-reviewed by social science researchers at the University of Idaho (Visitor Services Project). The comments received were implemented and the survey was revised based on their suggestions (i.e. removed redundancies, modified skip patterns, and provided a separate survey for the Snake Bight Pole and Troll Zone).

**10 Burden Estimates:** With an anticipated response rate of 95%, we plan to approach 5,400 individuals. We expect that the initial contact time will be at least one minute per person (5,400 x 1 minute = 90 hours). We expect that 270 (5%) people will refuse to participate in the onsite interview, for those individuals we will record their reason for refusal and ask them to answer 3 questions that will be used for the non-response check. This is estimated to take no more than 1 minute (270 x 1 = 5 hours) to complete each session.

For those who agree to participate (5,130) we expect that 100% will complete the survey. The time to complete the on-site interview is estimated to take 5 minutes (5,130 responses x 5 minutes = 428 hours). The total annual burden for this collection is estimated to be 523 hours.

Total Number of Initial Contacts	5,400	Estimated Time (mins.) to Complete Initial Contact	1	Estimated Burden Hours	90
Estimated number of refusals	270	On-site Refusal/ nonresponse	1	Estimated Burden Hours	5
Expected number of annual responses	5,130	Time to complete on-site interview	5	Estimated Burden Hours	428
				<b>Total Annual Burden</b>	<b>523</b>

11. **Reporting Plan:** Scientists at the South Florida Natural Resources Center will publish an annual report for the angler study and a briefing for park managers will be submitted for the Snake Bight Pole and Troll Zone.

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#### REFERENCES CITED

Davis, G.E. and E.B. Thue (1979). Fishery data management handbook. Rept T-546. Everglades National Park, SFRC, P.O. Box 278, Homestead, FL 33030.

Higman, H.B. (1967). Relationships between catch rates of sportfish and environmental conditions in Everglades National Park. Gulf. Carib. Fish. Inst. 19: 129-140.

Tilmant, J.T., E.S. Rutherford, R.H. Dawson, and E.B. Thue (1986). Impacts of gamefish harvest in Everglades National Park, Florida. Pro. Conf. Sci. Nat'l Parks. pp. 75-103.