SUPPORTING STATEMENT
EXPENDITURE SURVEY OF HIGHLY MIGRATORY SPECIES
TOURNAMENTS AND PARTICIPANTS
OMB CONTROL NO. 0648-XXXX

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.

The potential respondent universe consists of highly migratory species (HMS) fishing tournaments held in state and federal waters of the Atlantic, Gulf of Mexico, U. S. Caribbean, and Hawaii. The sample frame will be based on a list of registered HMS tournaments. Since 1999, Federal regulations have required that tournament registration with NMFS take place at least four weeks prior to the commencement of tournament fishing activities. Between 2004 and 2014, an average of 260 Atlantic HMS tournaments have been registered each year with a range of 218 to 296 tournaments registered per year. Additionally, approximately 40 tournaments are held each year in Hawaii each year. We will survey both tournament organizers and participants. All tournament organizers will be asked to participate in the survey, and we anticipate a 75% response rate for this group. We will sample tournament participants by using a stratified random sample of registered tournaments by region. Fifty percent of tournaments held in North Atlantic (Maine to Virginia), South Atlantic (North Carolina to east Florida), the Gulf of Mexico (west Florida to Texas), U.S. Caribbean, and Hawaii will be randomly selected for electronic distribution of surveys to tournament participants. Based on historic reporting in the last 10 years, we estimate an average of 50 participants per tournament, and a 40% response rate matching the response rates of HMS Angling Permit holders surveyed in the 2011 and 2014 Marine Recreational Fishing Expenditure Surveys. Expected sample sizes for organizers and participants are listed in Table 1.

Table 1. Estimated sample sizes for tournament organizers and participants by region.

Column A. Respondent	Column B. Number of Tournaments	Column C. Number of Tournaments Selected for Reporting	Column D. Number of tournament participants	Column E. Maximum anticipated response rate	Column F. Expected number of respondents (Column D * RR%)
Organizers	300	300		75	225
Participants					
North Atlantic	66	33	1,650	40	660
South Atlantic	88	44	2,200	40	880
Gulf of Mexico	88	44	2,200	40	880
U.S. Caribbean	24	12	600	40	240
Hawaii	40	20	1000	40	400

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.

Given the manageable number of tournaments held each year, we will endeavor to conduct a full census of tournament operators and their costs and earnings. However, we realize on a practical level that full participation is unlikely, and based on our discussions with tournament organizers we expect approximately 75% will be willing to participate. Tournament operators will be notified of the study following their registration, and will be emailed a link to the web-based cost and earnings survey approximately two weeks following completion of the tournament.

We will randomly sample 50% of tournaments in each region to ensure we collect data from a representative distribution of tournaments. We will use a sequential sampling approach as tournaments are registered throughout the year. We will determine at random whether to sample the first or second tournament registered in each region for 2016, and will then sample every other tournament registered in the region for the rest of the year. At the time tournament operators are notified about the study, they will also be notified if their participants were also selected for reporting. If so, they will be sent fliers prior to the tournament to distribute to their participants that will explain the purpose of the study, and provide tournament participants with a link where they can complete the web survey. Tournament organizers will also be sent an pre-

drafted notice to send to their participants a week following the tournament to encourage and remind them to complete the survey.

Following Equation 1 (Yamane 1967), approximately 286 observations are required to represent the true value for a population of 1,000, assuming a +/- 5% precision rate,

$$\textit{Equation 1.} \quad n = \frac{N}{1 + N(e)^2}$$

$$\textit{Equation 1, Example.} \quad 286 = \frac{1,000}{1 + 1,000(0.05)^2}$$

where n is the sample size, N is the population size, and e is the level of precision required. The equation assumes a confidence interval of 95% and maximum variability in the sample (.50). An observation unit is an individual respondent.

Our target participant sample sizes for most regions exceed the 286 respondent threshold for several reasons. First, we cannot be assured that all tournaments will agree to distribute information on the expenditure survey to their participants. Second, if a larger sample size is achieved, it may allow for conducting separate analyses per region for tournaments targeting different categories of HMS (e.g. tuna, billfish, or sharks). Having separate estimates of tournament expenditures by HMS category could be very helpful for management purposes.

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.

Web survey implementation will follow protocols for web-based surveys described in 'The Tailored Design Method' (Dillman 2000). Protocols include 3-4 point of contact by email or phone with approximately 1 week between contacts: (1) a pre-notice letter informing the respondent that they have been selected to receive a survey within the next two weeks accompanied by a sheet of frequently asked questions (FAQ); (2) a cover letter describing the importance of filling out the survey completely and the survey questionnaire; (3) a web page thanking respondents who submitted their survey and an email reminding respondents to complete their survey and return it if they have not already done so; (4) a possible final mailing including a cover letter and survey instrument. The tailored design method is designed to maximize response rates, and components of the design have been scientifically tested and determined to increase response rates for mail surveys (Dillman 2000).

To test for any potential nonresponse bias, we will compare the respondents of the HMS tournament operator survey to the data the agency collects via the Atlantic HMS Tournament Registration form. We will compare respondents to non-respondents by tournament type, size, and geography, and make any weighting adjustments if necessary. As for the participant survey, we will compare the demographic data that is collected in Section D of that form to responses

from the 2011 Angler Expenditure Survey. In addition, we will study variations across the survey waves to determine if there are any significant differences between initial survey respondents and respondents from later follow up survey waves. We will adjust weightings to address any issues that are detected during testing and note any issues in the final reported results.

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.

The survey instruments have been designed with input from the operators of several tournaments conducted in 2015. Members of the National Marine Fisheries Service Atlantic HMS Management Division attended six tournaments during the summer and fall of 2015. At these tournaments, staff gave short presentations on the planned HMS tournament survey during the tournaments captain's meetings and Agency staff was available to answer questions and receive feedback during the tournaments. The feedback and observations made during these tournament site visits led to changes in the survey forms to address charitable contributions made by tournaments, the team nature of participant expenses, and how some teams receive sponsorships to participate in tournaments.

NMFS conducted a breakout session at the September 9, 2015, Atlantic HMS Advisory Panel Meeting specifically to discuss the expenditure survey of Atlantic HMS tournaments and participants. Draft samples of both surveys were provided to participants of the breakout session to review. Members of the Advisory Panel provided general support for the study. They encouraged us to provide respondents with information as to why this study is important for tournament operators and participants. In addition, we received feedback on the appropriate cost categories to include in the survey. In addition to the feedback received at the meeting, we received two written comments.

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.

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References

Dillman, D. 2000. Mail and Internet Surveys. The Tailored Design Method. John Wiley and Sons, Inc., New York, New York.

Yamane, Taro. 1967. Statistics, An Introductory Analysis, 2nd Ed., New York: Harper and Row.