

SUPPORTING STATEMENT
MARINE RECREATIONAL INFORMATION PROGRAM LONGITUDINAL SURVEY
OF RECREATIONAL FISHING PARTICIPATION
OMB CONTROL NO. 0648-XXXX

A. JUSTIFICATION

This request is for a new information collection.

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

Collection of recreational fisheries catch, effort and participation data is necessary to fulfill statutory requirements of Section 303 of the [Magnuson-Stevens Fishery Conservation and Management Act](#) (MSA)(16 U.S.C. 1852 *et. seq.*) and to comply with [Executive Order 12962](#) on Recreational Fisheries. Section 303 (a) of the MSA specifies data and analyses to be included in Fishery Management Plans (FMPs), as well as pertinent data that shall be submitted to the Secretary of Commerce under the plan.

Traditionally, the Marine Recreational Fisheries Statistics Survey (MRFSS) estimator of the number of anglers who participate in marine recreational fishing (participation) is derived from the estimate of total fishing days (effort), which is estimated from the Coastal Household Telephone Survey or CHTS (OMB Control No. 0648-0052) and of estimate of mean annual number of fishing days per angler (avidity), which is estimated from the Access Point Angler Intercept Survey or APAIS (previously OMB Control No. 0648-0052, currently OMB Control No. 0648-0659). The number of participants is obtained by dividing the estimate of effort by the estimated avidity.

A review of recreational fishing data collection methods by the National Research Council (NRC) of the National Academies of Science stressed the importance of testing the various assumptions that are made in the current estimation procedures used for the MRFSS. The NRC review concluded that “unknown biases in the estimators from these surveys arise from reliance on unverified assumptions,” and that “unless these assumptions are tested and the degree and direction of bias reliably estimated, the extent to which the biases affect final estimates will remain unknown.” The report also stated that “it is impossible to assess the adequacy of recreational fishing surveys, particularly those associated with the MRFSS, when potential biases exist” (NRC, 2006).

The National Marine Fisheries Service (NMFS) has addressed the concerns by implementing the Marine Recreational Information Program (MRIP) and developing and testing alternative survey designs. Over the past several years, under OMB Control Nos. 0648-0052, 0648-0652, and 0648-0659, NMFS has tested alternatives to the MRFSS Coastal Household Telephone Survey (CHTS) and Access Point Angler Intercept Survey (APAIS) with a goal of developing and implementing more accurate and efficient survey designs of recreational fishing activity.

The MRIP Fishing Effort Survey (MFES, OMB Control No. 0648-0652), which is being tested in MA, NY, NC and FL as an alternative to the CHTS, collects information that can be used to estimate participation. Specifically, the instrument asks respondents whether or not they

participated in recreational saltwater fishing during portions of the previous year¹. Recall error is a concern with this type of data collection, especially when the recall period is as long as one year (Chu et al. 1989, Chu et al. 1992) as is the case with APAIS and MFES. To minimize the potential for this type of measurement error, many surveys (e.g., the National Survey of Fishing, Hunting, and Wildlife-Associated Recreation by U.S. Fish and Wildlife Service, Survey of Income and Program Participation by the Census Bureau, Consumer Expenditure Survey by Bureau of Labor Statistics, and National Crime Victimization Survey by Bureau of Justice) ask respondents to report about behaviors for shorter recall periods, but go back to the same respondents repeatedly in a panel design (or longitudinal survey design). The repeated contacts over shorter intervals reduce potential errors in placing events in time, but may require greater costs.

A longitudinal study is being implemented to assess recall error in participation estimates derived from the MFES. The longitudinal survey is intended to produce a reliable estimate of fishing participation that can be used to assess the magnitude of error in the participation estimates obtained from the MFES and possibly to adjust for that bias. Thus, the overall approach for this methodological investigation involves conducting a longitudinal survey concurrently with the MFES. The longitudinal survey will provide a benchmark to assess the accuracy of participation estimates generated from the MFES, which is a relatively cost-effective method for collecting participation data. *This request is to conduct a longitudinal survey to collect recreational fishing participation data that enable us to assess the measurement errors associated with reporting participation.*

Longitudinal Survey

The MRIP Longitudinal Survey of Recreational Fishing Participation (MLSR) is a fixed panel, self-administered mail survey that will be conducted in North Carolina. North Carolina residents and anglers will be sampled from residential address frames (the United States Postal Service Computerized Delivery Sequence File (CDS)) and a frame derived from a database of anglers licensed to participate in saltwater fishing in North Carolina. Sampling from the two frames will be independent; residents of North Carolina will be sampled from the address frame, and non-resident anglers (individuals licensed to fish in North Carolina but residing in a different state) will be sampled from the state license frame.

An adult will be interviewed in sampled households up to three times over a year (four-month reference waves), beginning with the last week of the May-August wave of 2013 (wave A) and continuing through the January-April wave of 2014 (wave C). The initial mail questionnaire will have questions that ask the total number of trips taken during the previous 12 months by fishing mode (shore or boat). The instrument will also have questions that can be used to classify the adults into one of 3 categories of anglers: *current* – have participated in the last 4 months; *likely* – have not participated in the last 4 months, but have in the last 12 months or are likely to do so in the next 12 months; and, *unlikely* – have not participated and unlikely to participate in the next 12 months. Following the initial survey, we plan to survey the current and likely participants two more times at 4 month intervals and include questions about trips they took since the previous interview. We plan to sub-sample unlikely participants during the second wave, and re-interview all of the unlikely participants during the final wave.

Residential addresses within North Carolina will be selected from the CDS (address-based

¹ The primary purpose of the MFES is to estimate fishing effort (number of angler trips) during two-month reference waves.

sample or ABS), and the sample will be augmented by matching addresses to the North Carolina database of licensed saltwater anglers. This effectively stratifies ABS sample into strata (matched and unmatched) that can be sampled at different rates. For example, the matched stratum, which is expected to be more productive in terms of identifying anglers, can be sampled at a higher rate than the unmatched strata. This type of stratification is expected to improve the efficiency of data collection and maintain the coverage of the ABS frame, two concerns identified by the NRC Review.

Nonresident anglers will be sampled in a single phase from the North Carolina database of licensed saltwater anglers. An ABS approach would be especially inefficient for sampling nonresident anglers due to the low proportion of nonresident anglers among the general population.

This information collection will fulfill statutory requirements of Section 401 of the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act. Section 401 (g) requires that the Secretary of Commerce, “establish a program to improve the quality and accuracy of information generated by the Marine Recreational Fishery Statistics Survey”. MSA further specifies that future surveys should, “target anglers registered or licensed at the State or Federal level to collect participation and effort data”, and that the program, “to the maximum extent feasible implement the recommendations of the National Research Council [(NRC)]”.

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.

Marine recreational participation estimates are used on an ongoing basis by NMFS, regional fishery management councils, interstate marine fisheries commissions and state natural resource agencies in developing, implementing and monitoring fishery management programs, per statutory requirements of the MSA. Participation statistics are fundamental for assessing the influence of human dimension on any fish stock and assessing the economic impact of recreational fisheries.

Information collected through the MLSR will be used to assess the effectiveness of the MFES for collecting recreational fishing participation data and subsequently the properties of recreational fishing participation estimates obtained from the MFES.

The questionnaires for the resident and non-resident samples will be the same. The questionnaire for each wave will be slightly different. The initial wave (wave A) questionnaire will include questions that identify individual members within the household (name, age and gender). This information will be pre-filled in the wave B and C questionnaires to ensure that the same household members will be responding across the waves and will be identified correctly. The wave C questionnaire will collect additional demographic information (race and ethnicity). These questions are included in the wave C questionnaire because only individuals that participate in all waves of the survey will be included in the analysis. Limiting these questions to the final wave will minimize burden by limiting the number of individuals that receive the full suite of questions.

Specific data elements that will be collected in the questionnaire include:

- a) Questions about weather and visitation to coastal areas are included to engage non-anglers and potentially reduce nonresponse bias,
- b) A question about the likelihood of participating in recreational saltwater fishing during the next 12 months is included for classification of angler status,
- c) Type of household telephone service is used to assess gains in coverage over ongoing telephone surveys of recreational fishing activity,
- d) The type of household unit (rented or owned) is used for nonresponse weighting adjustment and/or post-stratification,
- e) Total number of household residents is used to assess the proportion of household members responded,
- f) Name of household members are used to ensure that the same household members will be responding across the waves and will be identified correctly,
- g) Demographic information of household residents, including gender, age (wave A only), race and ethnicity (wave C only) are used to ensure that the same household members will be responding across the waves and will be identified correctly and also used for nonresponse weighting adjustment and/or post-stratification of estimates,
- h) In waves B and C, a question that identifies household members who responded in wave A, but no longer reside in the household will be asked to monitor migration from the sample,
- i) The number of recreational fishing trips taken on privately owned boats and number of shore fishing trips taken during the past 12 months (asked in 4-month reference periods to assist recall) will be used to estimate participation and avidity.

NMFS 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. Although the information collected is not expected to be disseminated directly to the public, survey results will be used in scientific, technical and general information publications. Should NMFS decide to disseminate the information, it will be subject to the quality control measures and 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.

The surveys will be conducted by mail. Survey responses for mail surveys will be automatically captured through optical character recognition (OCR), which will greatly increase the accuracy and efficiency of data collection.

4. Describe efforts to identify duplication.

NMFS collaborates with state natural resource agencies and regional interstate fisheries commissions on the Atlantic and Gulf coasts to ensure that recreational fisheries data collections are not duplicative. The MFES (OMB Control No. 0648-0652), which is currently being tested, collects information that can be used to estimate annual participation. To assess the magnitude of error in the participation estimates obtained from the MFES and possibly to adjust for that

bias, it is ideal to conduct the MLSR concurrently with the MFES. Every five years, the Fish and Wildlife Service of the U.S. Department of the Interior conducts the National Survey of Fishing, Hunting, and Wildlife-Associated Recreation (FHWAR, OMB Control No. 1018-0088). This survey interviews respondents up to three times over a year and collects information about annual recreational saltwater fishing activity including participation within the context of additional recreation activities. The next FHWAR will not be conducted until 2016 and the MLSR will utilize the ABS and License frames for selecting units, will be done by mail and will be self-administered, differing from the FHWAR in those dimensions.

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

No small businesses will be impacted by this information collection.

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

The MFES is a cost effective alternative for collecting recreational fishing participation data. If the MLSR were not conducted, the effectiveness of the MFES for collecting such data and the bias in the participation estimates would be unknown. Consequently, the possibility of utilizing the MFES to obtain accurate and reliable participation estimates could not be evaluated.

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

The collection is consistent with OMB guidelines.

8. Provide information on 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 January 29, 2013 (78 FR 6070) solicited public comments. No comments were received.

MRIP is a collaborative effort among government agencies, independent scientists, recreational fishing groups and conservation organizations to ensure scientifically rigorous collection of appropriate information that meets manager and stakeholder needs. Subsequently, NMFS staff maintains regular communication with customers, through workshops, workgroup meetings and one-on-one consultations, to ensure that needs for recreational fishing statistics are being met. The project team for the MLSR includes expert consultants and representatives from the NOAA Fisheries Service, the U.S. Fish & Wildlife Service, the U.S. Census Bureau, and state natural resource agencies. In addition, the questionnaires for the MLSR are derived from the MFES questionnaires, which have been developed through field testing and cognitive interviews.

9. Explain any decisions to provide payments or gifts to respondents, other than

remuneration of contractors or grantees.

The benefits of prepaid cash incentives on improving survey response rates are well documented. Dillman (2009) describes a small, prepaid cash incentive as a “token of appreciation” that encourages response and brings attention to the survey request. In addition to improving response rates, incentives may reduce nonresponse bias by encouraging participation from individuals with little or no interest in the survey topic (Groves et al., 2006).

Church (1993) presents a meta-analysis of 38 experimental studies testing the impact of cash incentives on mail survey response rates. The incentives, which ranged from \$0.01 to \$5.00 increased response rates over control groups by an average of 19.1%.

More recently, Trussell and Lavrakas (2004) reported that providing an incentive of at least \$1.00 increased response rates and cooperation rates to the second phase of a two-phase, mixed-mode (RDD/mail diary) survey, and that incremental increases in incentive amounts up to \$10.00 increased response rates in a linear fashion. These conclusions were consistent even for individuals who initially refused to participate in the second phase of the study.

Similarly, Brick et al. (2011) concluded that a prepaid cash incentive of \$15.00 significantly increased response rates to the second phase of a national, two-phase mail survey, and that response rates for a \$5.00 incentive treatment, while not significantly different from either a control group or the \$15.00 experimental treatment, were in the expected direction. In addition, the effect of the incentives was most pronounced for the initial mailing, which could result in decreased costs for follow-up mailings.

The preliminary analysis of the MEFS incentive experiment that tests the incentive treatment groups of \$1, \$2, and \$5, as well as a non-incentive control group, also indicated a clear response propensity towards higher dollar amounts. There is less variation between the \$2 and \$5 amounts than between the other amounts (Table 1), indicating the \$2 incentive is probably a more cost effective approach. Prepaid cash incentives of \$2 will be included in the MSLR survey mailings for waves.

Table 1. Results from the preliminary analysis of MEFS incentive experiment.

Incentive Treatment	Sample Size	Number of Complete Samples
\$0 (Control)	5,132	1,160 (22.60%)
\$1	5,132	1,637 (31.90%)
\$2	5,132	1,873 (36.50%)
\$5	5,132	2,045 (39.85%)

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

As stated on the instruments, responses are kept confidential as required by section 402(b) of the Magnuson-Stevens and [NOAA Administrative Order 216-100](#), Confidentiality of Fisheries Statistics, and will not be released for public use except in aggregate statistical form without identification as to its source. Section 402(b) stipulates that data required to be submitted under any Fishery Management Plan (FMP) shall be confidential and shall not be released except to Federal employees and Council staff responsible for FMP monitoring and development or when

required under court order. Data such as personal addresses and phone numbers will remain confidential.

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 sensitive questions are asked.

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

The estimated response burden per survey activity and the total response burden are shown in Table 2. The expected number of respondents and number of responses are based on the results of previous MRIP pilot studies. A total of 1,594 (*rounded down to 1,593 in ROCIS*). burden hours are anticipated. An hourly rate of \$22.77 is based on the average for all civilian workers from the January 2011 National Compensation Survey (<http://www.bls.gov/ncs/ocs/sp/nctb1477.pdf>). There are no other costs to respondent. Labor costs to respondents will be approximately \$36,295.

Table 2. Estimated response burden for the MRIP Longitudinal Survey of Recreational Fishing Effort Participation.

Stratum	Sample Size	Expected Response Rate	Estimated Number of Respondents	Estimated Number of Responses ²	Minutes per Response	Total Time (Hours)
Study total	12,000		5,131	9,558		1,594
Resident angler ³	11,280 ⁴	48% ⁵	4,742 ⁶	8,733 ⁷	10	1,456
Nonresident angler	720 ⁸	60%	389	825	10	138

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).

These data collections will incur no cost burden on respondents beyond the costs of response time.

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

Annual cost to the Federal government is approximately \$234,298: \$184,298 in data collection costs and \$50,000 in professional staff, overhead and computing costs.

² Initial sample is re-contacted for the second and third waves and those classified as *unlikely* are sub-sampled for the second wave.

³ See Part B Table 1 for expected response rate, estimated number of respondents and estimated number of responses in each geographic and license stratum.

⁴ Approximately 10% of addresses will be returned as invalid reducing the final sample size to 10,152.

⁵ Average expected response rate across all geographic and license strata within resident angler stratum.

⁶ Sum of estimated numbers of respondents across all geographic and license strata within resident angler stratum.

⁷ Sum of estimated numbers of responses across all geographic and license strata within resident angler stratum.

⁸ Approximately 10% of addresses will be returned as invalid reducing the final sample size to 648.

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

This is a new program.

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

All data collected and analyzed will be included in table format available on the Web page of the Fisheries Statistics Division, Office of Science and Technology, National Marine Fisheries Service. The Web site address is <http://www.st.nmfs.gov/st1/recreational>. Findings from the study will be considered for presentation at appropriate professional meetings (e.g. American Fisheries Society, Joint Statistical Meetings) and submission for publication in appropriate statistical or fisheries peer-reviewed journals.

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.

Not Applicable.

18. Explain each exception to the certification statement.

Not Applicable.