#### SUPPORTING STATEMENT MARINE RECREATIONAL INFORMATION PROGRAM OMB CONTROL NO. xxxx-xxxx

## A. JUSTIFICATION

This request is for a new information collection.

#### 1. <u>Explain the circumstances that make the collection of information necessary.</u>

Collection of recreational fisheries catch and effort data is necessary to fulfill statutory requirements of Section 303 of the <u>Magnuson-Stevens Fishery Conservation and Management</u> <u>Act</u> (16 U.S.C. 1852 <u>et</u>. <u>seq</u>.) and to comply with <u>Executive Order 12962</u> on Recreational Fisheries. Section 303 (a) of the Magnuson-Stevens Act 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, recreational fishing effort data (number of fishing trips) have been collected through the Coastal Household Telephone Survey (CHTS), a list-assisted, random digit dial telephone survey of coastal county households (OMB Control No. 0648-0052). In recent years, the efficiency and effectiveness of RDD surveys in general, and the CHTS specifically, have been questioned due to declining rates of coverage and response. To address concerns about the CHTS, the National Marine Fisheries Service (NMFS) commissioned a review of the survey by the National Research Council (NRC) of the National Academies of Science. The NRC Review concluded that existing recreational fishing surveys suffer from inefficiency, potential bias due to under-coverage, and potential bias due to nonresponse (NRC, 2006).

Specific recommendations and conclusions from the NRC Review include the following:

- "Future telephone surveys should be based on a universal sampling frame";
- "Offsite sampling methods that rely on telephone interviews are complicated by the increasing use of cell phones";
- "The existing random digit dial (RDD) survey suffers in efficiency";
- "The existing random digit dial (RDD) survey may allow bias in estimation from its restriction to coastal counties only";
- "Dual-frame procedures should be used whenever possible to reduce sample bias".

NMFS has addressed these concerns by implementing the Marine Recreational Information Program (MRIP) and developing and testing alternative survey designs. Over the past several years, under OMB Control No. 0648-0052, NMFS has sequentially tested several alternatives to the CHTS with a goal of replacing the CHTS with a more accurate and efficient survey of recreational fishing activity. The various designs that have been studied through MRIP pilot studies are described below. More detailed descriptions of the data collection designs and comparisons of estimates and metrics of survey quality, such as response rates and coverage rates, are documented elsewhere (Brick et al., 2012).

#### **Angler License Directory Telephone Survey**

As noted by the NRC, a more efficient approach for surveying anglers is to sample directly from a "universal sampling frame" of licensed saltwater anglers. Working collaboratively with the Gulf States Marine Fisheries Commissions, the Gulf Coast states, and the North Carolina Division of Marine Fisheries, MRIP has designed and tested Angler License Directory Telephone Surveys (ALDS), which sample from state databases of licensed anglers. The ALDS was implemented as a pilot project in Florida, Alabama, Mississippi and Louisiana in 2007 and expanded to North Carolina in 2008. Currently, the survey is being administered in LA and NC.

As predicted, the ALDS is more efficient than the CHTS at identifying anglers – in a recent reference wave, 46% of ALDS respondents reported fishing, while only 6.5% of CHTS respondents reported fishing during the same wave. However, state license databases are not comprehensive - exemptions to state licensing requirements and unlicensed fishing activity, as well as incomplete and inaccurate contact information for individuals included on the sample frames, result in gaps in the coverage of the survey. Subsequent studies (Brick et al., 2012) have suggested that undercoverage due to unlicensed fishing activity may be as high as 70% in some states for certain types of fishing activity, and that as many as 20% of frame entries may be unreachable due to "bad" (missing, nonworking, wrong number) telephone numbers. In addition, response rates for the ALDS are only marginally higher than CHTS response rates. Consequently, MRIP has explored alternative data collection designs that provide greater coverage and are less susceptible to survey error.

#### **Dual-Frame Telephone Survey**

As noted above, the CHTS and the ALDS, considered individually, do not provide complete coverage of the angler population; the CHTS excludes residents of non-coastal counties and households without landline telephone service, and the ALDS excludes unlicensed anglers. To compensate for potential sources of coverage error in the CHTS and ALDS, MRIP developed an estimation design that integrates CHTS and ALDS sampling in a dual-frame design (Lai and Andrews, 2008). The union of the CHTS and ALDS sample frames defines three domains; 1) anglers who can only be sampled from the CHTS frame (unlicensed anglers who reside in coastal counties and have a landline telephone); 2) anglers who can only be sampled from the ALDS frame (licensed anglers who reside outside of the coverage area of the CHTS or reside within the coverage area of the CHTS but don't have a landline telephone); and, 3) anglers who can be sampled from both the CHTS and ALDS frames (licensed anglers who reside in coastal counties and have a landline telephone). A fourth domain includes anglers who cannot be sampled by either the CHTS or ALDS (unlicensed anglers without landline telephones within the CHTS).

The dual-frame telephone survey design has greater coverage than either the CHTS or the ALDS independently. However, exclusions from the union of the CHTS and ALDS sample frames create a potentially significant coverage gap – for example, an estimated 38% of fishing trips in NC are taken by anglers who are not included on either the CHTS or ALDS frames (Andrews et al., 2010). In addition, partitioning anglers into the appropriate domains, and subsequently adjusting sample weights, is based upon survey respondents' willingness and ability to classify themselves as licensed or unlicensed anglers. This is an unreliable approach for defining dual-frame domains (Andrews et al. 2010) and subsequently calculating unbiased survey weights.

Finally, the dual-frame telephone survey approach is susceptible to nonresponse error due to the low response rates of the component surveys.

#### **Dual-Frame Mail Survey**

An alternative to the dual-frame telephone survey is to identify and contact anglers through a dual-frame mail survey design. MRIP initially tested the feasibility of a dual-frame mail survey design in NC in 2009, and conducted a follow-up study aimed at enhancing response rates and response times in NC and LA in 2010.

The specific details of the dual-frame mail survey design are described elsewhere (Andrews et al. 2010). Briefly, anglers are sampled from both state databases of licensed saltwater anglers and residential address frames maintained and made commercially available by the United States Postal Service. To address concerns about coverage, all addresses within the study states are included in the ABS sample frame (i.e. the sample was not limited to coastal counties). Domains defined by the union of the component sample frames are determined by matching the address-based sample (ABS) to the license databases by address and/or telephone number (for the cases in which a telephone number can be located through a commercial service for the ABS sample).

Sampling from the license frame is conducted in a single phase; sampled anglers are mailed a brief questionnaire that asks respondents to report the number of days fished from the shore and from a boat during a two-month reference wave. The ABS sampling is conducted in two phases; residential addresses are sampled and mailed a screening questionnaire to identify individuals who fished during the previous twelve months, and anglers identified in the screening phase are sent a second-phase questionnaire that is identical to the license sample questionnaire.

Results of the pilot studies were encouraging; sampling from the ABS frame provides nearly complete coverage of the population (Iannacchione, 2011), and response rates to the mail surveys were considerably higher than either the ALDS or CHTS (Andrews et al., 2010, Brick et al., 2012), minimizing the potential for nonresponse error. In addition, matching the ABS sample to license frames a priori by address and/or telephone number provides a more accurate means for defining domain membership that is not susceptible to recall error or inaccurate reporting. Frame matching also provides supplemental information for assessing nonresponse error for the ABS sample, and subsequently defining nonresponse weighting adjustment cells.

The dual-frame mail survey design provides many benefits over telephone survey approaches and addresses many of the concerns identified by the NRC. However, frame matching is not 100% accurate, resulting in misclassification of domain membership for some sample units; generally frame units that could have been sampled from both frames are excluded from the overlapping domain due to a failure to match. Subsequently, dual-frame weights are not downweighted appropriately, resulting in an overestimation of fishing effort (Brick et al., 2012). In addition, there are concerns that a mail survey design cannot satisfy customer needs for timely estimates, although comparisons between early mail survey returns and later survey returns show little difference in terms of fishing activity, suggesting that preliminary effort estimates could be produced within the timeframe required by customers.

#### **Dual-Frame, Mixed-Mode Survey**

To further address concerns about timeliness, as well as explore differences between mail and telephone data collection modes, MRIP implemented a dual-frame, mixed-mode survey. The sampling design for the survey, which was implemented in January 2012 and will continue through December 2012, is nearly identical to the dual-frame mail survey – anglers are sampled from angler license frames and households are sampled from residential address frames. As with the dual-frame mail survey, the ABS sample is mailed a screening questionnaire to identify anglers. The methodology differs from the dual-frame mail survey in that anglers identified through household screening, as well as anglers sampled from the state license databases, are randomly allocated into telephone and mail treatment groups – anglers in the telephone treatment group are contacted and asked to provide information about recent recreational fishing trips through a telephone interview, and anglers in the mail treatment group are mailed a questionnaire that asks about recent recreational fishing activity.

Preliminary results demonstrate that after three weeks of data collection, response rates for the mail survey treatment equal or exceed response rates for the telephone treatment, which is fielded and completed during the first ten days following the end of the reference wave. In addition, preliminary estimates based upon early mail survey returns (mail surveys returned within three weeks after the conclusion of the reference wave) are not significantly different from final estimates, which include an additional nine weeks of data collection. This suggests that early mail survey returns can be used to produce preliminary effort estimates in a timeframe that is consistent with the current estimation schedule for the CHTS – estimates are available 45 days after the conclusion of each wave. The study will continue through 2012 and compare telephone and mail survey modes in terms of response rates, nonresponse error, data quality (e.g. item nonresponse, illogical responses, etc.) and timeliness.

#### Single Phase, Screening Dual-Frame Design with Screening Prior to Data Collection

#### **MRIP** Fishing Effort Survey

The dual-frame survey designs developed and tested by MRIP address the NRC's concerns about the CHTS. While a comprehensive, universal frame of anglers is not available, sampling from state databases of licensed saltwater anglers increases the efficiency of data collection. Supplementing license frame sampling with state-wide, address-based sampling compensates for coverage gaps in state license databases and subsequently provides nearly complete coverage of the population, including both residents of noncoastal counties and households without landline telephone service. In addition, response rates for the mail surveys are consistently higher than the CHTS, minimizing the potential for nonresponse error.

This request is to test an alternative design for collecting recreational fishing effort data that maintains design aspects from previous MRIP pilot studies, while eliminating bias resulting from errors in frame matching. The MRIP Fishing Effort Survey (MFES) includes three components; 1) a resident angler survey, which estimates fishing effort by residents of coastal states, 2) a nonresident angler survey, which estimates fishing effort by anglers who fish in a coastal state but reside in a different state, and 3) a nonresponse follow-up study to assess nonresponse error in the resident and nonresident angler surveys.

The Resident Angler Survey is a single-phase mail survey that utilizes a screening dual-frame design with screening occurring prior to data collection (Lohr, 2009). Specifically, an ABS sample within a coastal state is matched to that state's angler license database to identify addresses with (matched) and without (unmatched) licensed anglers. In this application, the license information is used to stratify the ABS sample into strata than 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. Because the matching is only used to determine the sampling rate, matching errors will only impact the efficiency of data collection; they will not result in biased estimates.

The Nonresident Angler Survey is a single-phase mail survey that samples directly from frames derived from state databases of licensed saltwater anglers. An address-based sampling approach would be especially inefficient for sampling nonresident anglers due to the low proportion of nonresident anglers among the general population.

The Nonresponse Follow-Up Study will be a more intensive effort to solicit a response from sample units that failed to respond to the Resident Angler Survey and the Nonresident Angler Survey. The study will utilize the same questionnaire as the initial surveys with a modified delivery mechanism.

The MFES will be tested in four states, Massachusetts, New York, North Carolina and Florida for eight, two-month reference waves, beginning with the September/October wave (wave 5) of 2012 and continuing through the November/December wave (wave 6) of 2013. These states provide representative geographic coverage of the Atlantic and Gulf coast states, as well as substantial variations in fishing activity, saltwater fishing licensure, demographic composition and population density. Similarly, the requested data collection period will cover seasonal differences in fishing activity and fishing regulations. The data collection design will be evaluated in terms of response rates, item nonresponse, coverage and efficiency. These measures will be compared to results from the ongoing CHTS, as well as results from previous pilot studies. In addition, state-level estimates of fishing incidence (percent of respondents that report fishing), participants (number of people participating in saltwater fishing) and total fishing effort (number of angler trips) will be compared to estimates generated from the CHTS. Differences (or similarities) in estimates will be explored in terms of the above measures of survey quality.

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.

Recreational fishing catch and effort data 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 Magnuson-Stevens Fishery Conservation and Management Act. Catch and effort statistics are fundamental for assessing the influence of fishing on any fish stock. Accurate estimates of the quantities taken, fishing effort, and both the seasonal and geographic distributions of the catch and effort are required for the development of regional management policies and plans.

Information collected through the MFES will be used to assess the effectiveness of the data collection design for collecting recreational fishing effort data and subsequently estimating recreational fishing participation and effort. The design will be assessed in terms of response rates, nonresponse error, coverage, unit nonresponse and efficiency. Survey measures will be compared to results from previous pilot studies, as well as the ongoing Coastal Household Telephone Survey. Results of the study will be used to inform decisions about the data collection design of future surveys of recreational fishing effort and participation.

We plan to evaluate two versions of the Resident Angler Survey questionnaire. The first version (Version 1) will be clearly identified as a recreational saltwater fishing survey. The second version (Version 2) will include 3 household-level questions about activities other than recreational saltwater fishing, such as visiting coastal areas and how the household accesses information about the weather. The intent of this evaluation is to maximize responses by both anglers and non-anglers and subsequently minimize the potential for nonresponse error. The questionnaires will be compared in terms of response rates and nonresponse error.

The Nonresident Angler Survey questionnaire will be identical to the Version 1 questionnaire of the Resident Angler Survey.

The questionnaire for the Nonresponse Follow-up Study will be the same as the original survey questionnaire.

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

- a) A screener question about recreational fishing activity during the previous 12 months is asked to identify eligible fishing households,
- b) Total number of household residents,
- c) Type of household telephone service is used to assess gains in coverage over the CHTS,
- d) The type of household unit (rented or owned) is used for nonresponse weighting adjustment and/or post-stratification,
- e) Demographic information of household residents, including gender, age and ethnicity is used for nonresponse weighting adjustment and/or post-stratification of estimates,
- f) Questions about fishing activity in the past 12 months, 8 months and 4 months are used to screen for recent fishing activity and assist with recall,

- g) The number of recreational fishing trips taken on privately owned boats, and number of shore fishing trips taken during the reference wave will be used to estimate fishing effort.
- h) Questions about weather and visitation to coastal areas are included to engage nonanglers and potentially reduce nonresponse bias (Version 2 only).

NOAA Fisheries 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 NOAA Fisheries decide to disseminate the information, it will be subject to the quality control measures and pre-dissemination review pursuant to <u>Section 515 of Public Law 106-554</u>.

### 3. <u>Describe whether, and to what extent, the collection of information involves the use</u> <u>of automated, electronic, mechanical, or other technological techniques or other forms</u> <u>of information technology</u>.

The surveys will be conducted by mail interviews. 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. Every five years, the Fish and Wildlife Service (FWS) of the U.S. Department of the Interior conducts the National Survey of Fishing, Hunting and Wildlife-Associated Recreation (OMB Control No. 1018-0088). This survey collects minimal information about annual recreational saltwater fishing activity within the context of additional recreation activities. That survey does not provide the spatial or temporal resolution needed by managers of fishery resources to monitor and manage recreational fisheries landings.

The MRIP Fishing Effort Survey will overlap with the Coastal Household Telephone Survey (OMB Control No. 0648-0052), which is a random-digit-dial survey that collects similar information. Ultimately, the MFES will replace the CHTS. The surveys will overlap for a period of one year to compare estimates.

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

No small businesses will be impacted by this revision.

### 6. <u>Describe the consequences to the Federal program or policy activities if the collection</u> <u>is not conducted or is conducted less frequently</u>.

If the survey is not conducted, NMFS will continue to rely upon the Coastal Household Telephone Survey to estimate recreational fishing effort (CHTS). The CHTS has been criticized for its lack of efficiency and susceptibility to bias resulting from nonresponse and undercoverage. If the survey were conducted less frequently, NMFS and state natural resource agencies would experience difficulty in effectively carrying out their responsibilities to meet statutory, administrative, and other obligations to end overfishing of marine fishery resources. An ongoing survey of recreational anglers is required to monitor changing conditions in the fishery and support modifications in fishery regulations both within fishing seasons and among fishing years. In addition, a continuous time series of data is scientifically essential to assess the impact of recreational fishing on fish stocks.

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

The collection is consistent with OMB guidelines.

8. <u>Provide information on the PRA Federal Register Notice that solicited public comments</u> 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 <u>Federal Register</u> Notice on what was intended to be a revision of OMB Control No. 0648-0052, with these surveys added, published on March 9, 2012 (77 FR 14348) solicited public comment on this revision. 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 maintain regular communication with customers, through workshops, workgroup meetings and one-on-one consultations, to ensure that needs for recreational fishing statistics are being met. For example, MRIP hosted a workshop in March 2011 with data customers (including recreational fishing groups) to discuss data collection alternatives and tradeoffs among alternatives for increasing the timeliness of recreational fishing catch and effort estimates. Outcomes of the workshop are summarized in a final workshop report (https://www.st.nmfs.noaa.gov/mdms/doc/32Recreational\_Data\_Timeliness\_FINAL\_Report.pdf)

## 9. <u>Explain any decisions to provide payments or gifts to respondents, other</u> <u>than remuneration of contractors or grantees</u>.

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.

This data collection will include an experiment to test the impact of small, prepaid cash incentives on survey response. During the first two waves of data collection, sampled addresses within each state will be randomly allocated to incentive treatment groups of \$1, \$2, and \$5, as well as a non-incentive control group. Incentives will be included only in initial survey mailings. Response rates and fishing incidence (percent of respondents reporting fishing) will be compared among treatment groups. Tables 1 and 2 provide the sample sizes for each treatment group, as well as the expected detectable differences in response rates and fishing incidence rates, respectively, between experimental treatments and the control group. Following the incentive experiment, the optimum incentive amount will be included in initial survey mailings for the subsequent six waves.

		_	

### Table 1. Expected detectable differences in response rates for incentive experiment

			Expected Detectable		
		Expected Response	Difference in Response		
Incentive Treatment	Sample Size	Rate	Rates **		
\$0 (Control)	8,972	35%			
\$1	8,972		2.08%		
\$2	8,972		2.08%		
\$5	8,972		2.10%		

\* Sample sizes have been adjusted to account for an estimated 10% ineligibility rate

\*\* The detectable difference is the difference between the control group and the experimental treatment group.

			Expected Detectable		
	Expected	Expected Fishing	Difference in Reported		
Incentive Treatment	Responses	Incidence	Fishing Incidence**		
\$0 (Control)	3,140	22%			
\$1	4,037		2.99%		
\$2	4,037		2.99%		
\$5	4,486		2.85%		

#### Table 2. Expected detectable differences in fishing incidence for incentive experiment

\*\* The detectable difference is the difference between the control group and the experimental treatment group.

We also propose to include a \$5.00 cash incentive in survey mailings for the nonresponse follow-up study, as described in Section B.3.

### 10. <u>Describe any assurance or confidentiality provided to respondents and the basis</u> 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 <u>NOAA Administrative Order 216-100</u>, 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 an 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. <u>Provide additional justification for any questions of a sensitive nature, such as</u> <u>sexual behavior and attitudes, religious beliefs, and other matters that are commonly</u> <u>considered private</u>.

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 numbers of respondents and responses are based on the results of previous MRIP pilot studies. The hourly rate of \$22.77 is based on the average for all civilian workers from the January 2011 National Compensation Survey

(<u>http://www.bls.gov/ncs/ocs/sp/nctb1477.pdf</u>). There are no other costs to respondents. There are also no recordkeeping requirements associated with MRIP Fishing Effort Survey. A total of 8,900 burden hours are anticipated, resulting in a labor cost to respondents of approximately \$202,653.

	Estimated					
		Expected	Number of	Estimated	Minutes	Total
		Response	Respondent	Number of	per	Time
Activity	Sample Size	Rate	S	Responses	Response	(Hours)
Study Total	121,266		53,400	53,400		8,900
Resident Angler						
Survey	112,026 <sup>1</sup>	48.3%	48,696	48,696	10	8,116
Nonresident						
Angler Survey	6,840 <sup>2</sup>	60%	4,104	4,104	10	684
Nonresponse						
Study	2,400	25%	600	600	10	100

## Table 2. Estimated response burden for the MRIP Fishing Effort Survey

#### <u>13. Provide an estimate of the total annual cost burden to the respondents or record-</u> <u>keepers resulting from the collection (excluding the value of the burden hours in Question</u> <u>12 above).</u>

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 \$2,200,000: \$2,000,000 in data collection costs and \$200,000 in professional staff, overhead and computing costs.

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

This is a new program

## 16. <u>For collections whose results will be published, outline the plans for tabulation and publication</u>.

Each year, NMFS administers recreational fishing surveys for six discrete, two-month reference waves, beginning with wave 1 (January/February) and continuing through wave 6 (November/December). The MRIP Fishing Effort Survey will be administered for eight successive waves, beginning with wave 5 (November/December), 2012 and continuing through wave 6, 2013.

All data collected and analyzed will be included in table format available on the Web page of

<sup>&</sup>lt;sup>1</sup> Approximately 10% of addresses will be returned as invalid reducing the final sample size to 100,823.

<sup>&</sup>lt;sup>2</sup> All individuals sampled from state license databases are assumed to be eligible.

the Fisheries Statistics Division, Office of Science and Technology, National Marine Fisheries Service. The Web site address is <u>http://www.st.nmfs.gov/st1/recreational</u>. Findings from the study will be presented at appropriate profession meetings (e.g. American Fisheries Society, Joint Statistical Meetings) and will be submitted for publication in appropriate statistical or fisheries peer-reviewed journals.

# 17. <u>If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons why display would be inappropriate</u>.

Not Applicable.

## 18. Explain each exception to the certification statement.

Not Applicable.

#### References

Andrews, W.R., J.M. Brick, N.M. Mathiowetz, and L. Stokes (2010). Pilot Test of a Dual Frame Two-Phase Mail Survey of Anglers in North Carolina. Retrieved from <u>http://www.countmyfish.noaa.gov/projects/downloads/Final\_Report%20NC%202009%20Dual</u> <u>%20Frame%20Two%20Phase%20Experiment.pdf</u>.

Brick, J.M., D. Williams, and J.M. Montaquila (2011). Address-Based Sampling for Subpopulation Surveys. Public Opinion Quarterly 75: 409-428.

Brick. J.M., W.R. Andrews, and N.M. Mathiowetz (2012). A Comparison of Recreational Fishing Effort Survey Designs. Retrieved from https://www.st.nmfs.noaa.gov/mdms/doc/08A\_Comparison\_of\_Fishing\_Effort\_Surveys\_Report\_FINAL.pdf.

Church, A.H. (1993). Estimating the Effect of Incentives on Mail Survey Response Rates: A Meta-Analysis. Public Opinion Quarterly 57:62–79.

Dillman, D.A., J.D. Smyth, and L.M. Christian (2009). *Internet, Mail, and Mixed-Mode Surveys: The Tailored Design Method*. New York: Wiley and Sons.

Groves, R., M. Couper, S. Presser, E. Singer, R. Tourangeau, G. Acosta, and Nelson, L. (2006). Experiments in Producing Nonresponse Bias. Public Opinion Quarterly 70: 720–736.

Iannacchione, V. (2011). The changing role of address-based sampling in survey research, Public Opinion Quarterly. 75: 556-575.

Lai, H-L, and R. Andrews (2008). Development of a Dual-Frame Methodology for Estimating Marine Recreational Fishing Effort. Retrieved from <u>http://www.ices.dk/products/CMdocs/CM-2008/K/K0608.pdf</u>.

Lohr, S. (2009). Multiple Frame Surveys. Chapter 4 in Pfeffermann, D. (Ed.) *Handbook of Statistics: Sample Surveys Design, Methods and Applications* (vol. 29A). Elsevier, Amsterdam.

National Research Council (2006). *Review of Recreational Fisheries Survey Methods*. Washington, D.C.: National Academies Press.

Trussell, N. and P.J. Lavrakas (2004). The influence of incremental increases in token cash incentives on mail survey response: Is there an optimal amount? Public Opinion Quarterly 68: 349-367.