SUPPORTING STATEMENT
U.S. Department of Commerce
National Oceanic & Atmospheric Administration
Marine Recreational Information Program Fishing Effort Survey
OMB Control No. 0648-0652

A. JUSTIFICATION

This request is for revision and extension of a currently approved collection, to implement the Marine Recreational Information Program (MRIP) Fishing Effort Survey (FES) in Puerto Rico, Hawaii, and states along the Atlantic Coast and Gulf of Mexico.

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

Collection of recreational fisheries catch and effort data is necessary to fulfill statutory requirements of Section 303 of the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1852 et. seq.) and to comply with Executive Order 12962 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.

The MRIP Fishing Effort Survey (FES) is a cross-sectional, self-administered, household mail survey. The FES utilizes address-based samples (ABS) within coastal states to collect information about recent recreational saltwater fishing activity. The sample frame is derived from the United States Postal Service Computerized Delivery Sequence File (CDS). Because recreational saltwater fishing is a relatively rare activity, the ABS frame is supplemented by matching addresses on the CDS to lists of licensed saltwater anglers in each state. Augmenting the ABS sample frame with fishing license information creates additional strata (license matched and unmatched) and allows households with and without licensed anglers to be sampled at different rates. This is an efficient and economical approach for collecting recreational fishing effort information.

This request is to implement the FES in Hawaii and the states along the Atlantic Coast and Gulf of Mexico. The FES will be conducted for five, two-month reference waves (March/April – November/December) in the states along the Atlantic Coast, with the exception of North Carolina and Florida. In Hawaii, North Carolina and the Gulf States, the FES will be conducted for six reference waves (January/February – November/December). These specific reference periods encompass the majority of annual recreational saltwater fishing activity within the study area. Prior surveys indicated recreational fishing outside these periods was uncommon, contributed a very small percentage of annual fishing effort and fishery landings, and would be disproportionately expensive to sample. 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”.

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.

The FES estimates marine recreational fishing effort (i.e. number of fishing days) for two-month reference waves. Recreational fishing catch and effort data are used on an ongoing basis by NOAA Fisheries, 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 catch and effort are required for the development of regional management policies and plans.

FES Development

Historically, recreational fishing effort data were collected through the Coastal Household Telephone Survey (CHTS), a list-assisted, random-digit-dial (RDD) telephone survey (OMB Control No. 0648-0052). Beginning in 2007, MRIP initiated a series of field tests (conducted under OMB Control Nos. 0648-0052 and 0648-0652) to develop an alternative household survey design that addressed growing challenges of RDD surveys (Andrews et al., 2010, Brick et al., 2012a, Brick et al., 2012b, Andrews et al., 2013, Andrews et al., 2014, Brick et al., 2016). These field tests culminated in the current FES design, which was implemented in 2015.

FES Weather and Outdoor Activity Survey

The FES utilizes the Weather and Outdoor Activity Survey instrument, which collects both fishing and non-fishing information. Testing of the FES design suggested that this instrument resulted in higher response rates and more representative samples of the general population than a fishing-specific instrument. Results from this pilot test are described in Appendix 2. All respondent contact materials, including the Weather and Outdoor Activity Survey questionnaire, are provided in Appendix 1. 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,
b) Total number of household residents,
c) Type of household telephone service is used to assess gains in coverage over random digit dial telephone surveys and compare FES samples to other national population surveys,
d) The type of household unit (rented or owned) is used to assess the representativeness of survey samples and can be used for nonresponse weighting adjustment and/or post-stratification,
e) Demographic information of household residents, including gender, age and ethnicity is used to assess the representativeness of survey samples and can be used for nonresponse weighting adjustment and/or post-stratification of estimates,

f) Questions about fishing activity in the past 12 months and 2 months are used to screen for recent fishing activity, assist with recall, and estimate the number of private boat and shore trips during the different reference periods.

FES 2020 Experiments

Nonresponse follow-up survey

A 2017 review of MRIP by the National Academies of Sciences, Engineering and Medicine recommended that NOAA Fisheries conduct annual studies to evaluate nonresponse. A previous Nonresponse Follow-up Study (NRFU), administered during FES field testing in 2012-2013, found no significant differences in fishing activity between FES and NRFU samples. Results from the 2012-2013 nonresponse study are provided in Appendix 3. We plan to repeat the NRFU in the states where the FES was initially tested, MA, NY, NC and FL during the 2020 FES administration to re-evaluate nonresponse bias. The NRFU will be administered during the wave 3 (May/June) and wave 4 (July/August) FES administrations.

All households that did not respond to the FES will be included in the NRFU sample. Based upon anticipated 2020 FES sample sizes and historical response rates, we estimate a total NRFU sample of 14,376 addresses. Data collection will be initiated six weeks after the final FES contact with the delivery an advanced letter via regular first-class mail. Five days later, a survey packet, including a cover letter, questionnaire, post-paid return envelope and a $5.00 cash incentive will be delivered via FedEx. The NRFU will utilize the FES, Weather and Outdoor Activity Survey instrument. All other NRFU mail survey materials are provided in Appendix 1. With 80 percent power and a significance level of 0.05, the NRFU sample size will allow a minimum detectible difference in fishing prevalence between the base FES sample and NRFU sample of approximately 2 percentage points.

Recreational Saltwater Boat Fishing Survey

The FES, Weather and Outdoor Activity Survey instrument collects general information about recreational fishing activity, including the number of shore and private boat fishing trips taken by household members during two-month reference waves. A Recreational Saltwater Boat Fishing Survey (RBFS) will be field tested during the 2020-2022 FES to collect more detailed information about boat fishing activities. Specifically, the RBFS will quantify different types of boat fishing activity (e.g. powerboat, canoe, kayak, sailboat, personal watercraft, pontoon boat, rowboat), fishing areas (inland waters, state ocean waters, federal ocean waters), and fishing access point characteristics (personal residence or dock, private community marina or dock, commercial marina or public boat ramp). RBFS mail survey materials are provided in Appendix 1. Specific data elements that will be collected in the questionnaire include:

a) Household demographic questions, including type of telephone service, tenure, number of household members, and presence/absence of seniors and minors will be used for weighting adjustments and to characterize boat fishing households with respect to demographic characteristics,
b) Questions about fishing activity in the past 12 months and 2 months will be used to screen for recent fishing activity and assist with recall,
c) Demographic information of boat anglers, including gender, age and ethnicity will be used to characterize boat anglers and will be compared to FES estimates to ensure that

samples are properly weighted and representative of all boat anglers,

d) Questions about fishing area, type of fishing boat and fishing access characteristics will be used to evaluate coverage error in the MRIP Access Point Angler Intercept Survey (APAIS, 0648-0659), which is a complementary shoreside survey conducted at publicly accessible fishing locations.

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. The data collected by the MFES 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 will be automatically captured through optical character recognition (OCR), which will greatly increase the accuracy and efficiency of data collection.

A "web push" design that encouraged response to the FES through an online instrument before providing a paper instrument was tested in 2018-2019. The web-push design resulted in response rates that were 7-11 percentage points lower than FES response rates. In addition to increasing the risk for nonresponse bias, lower response rates would increase data collection costs by approximately 15% on a per-complete basis. The web-push and FES designs were approximately equal in terms of data editing rates, while the web-push design had a longer median response time than the FES. At present, the current FES design is more cost effective and provides more timely survey results than the web-push design. Consequently, it is unlikely that NOAA will transition to a web-pus design within the next three years.

4. Describe efforts to identify duplication.

NOAA Fisheries 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.

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 revision. Individuals or households are the respondents.

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

If the survey was not conducted or was conducted less frequently, NOAA Fisheries 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. 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 October 4, 2019 (84 FR 53104) 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. MRIP staff members maintain regular communication with customers, through workshops, workgroup meetings and one-on-one consultations. Most recently, MRIP staff participated in an August 2019 workshop hosted by the South Atlantic Fishery Management Council, Scientific and Statistical Committee (SSC). MRIP staff provided a detailed overview of the FES design and responded to questions from committee members.

Additionally, the MRIP Executive Steering Committee (ESC), which includes senior managers from NOAA Fisheries, the Executive Directors of the Interstate Marine Fisheries Commissions, and a representative from the Marine Fisheries Advisory Committee, provides general oversight of MRIP and ensures that the program satisfies Federal, state and stakeholder needs for recreational fishing statistics. The ESC meets annually to review program activities, strategically

allocate funds to addresses data needs and approve research priorities. The ESC most recently met in April 2019.

Finally, MRIP Regional Implementation Teams, representing state natural resource agencies, interstate marine fisheries commissions and regional fishery management councils, develop Regional Implementation Plans and convene annually to identify specific needs for recreational fisheries statistics, including needs for survey coverage, resolution, precision and timeliness of survey estimates. The Implementation Teams most recently met in April 2019.

Recent comments and questions resulting from these forums include the following:

- Current sampling levels are adequate to produce precise annual, regional catch estimates for many state managed species.
- MRIP should consider conducting annual nonresponse studies.
  Response: We completely agree with this comment and plan to conduct regular nonresponse bias studies.
- MRIP should consider providing an electronic reporting option for the FES.
  Response: We completely agree with this comment and have conducted a field test to evaluate the feasibility of a web push design.
- The SSC agrees that the FES design is an improvement over the CHTS and considers it Best Scientific Information Available.

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 initial two waves of the 2012-2013 FES pilot study (OMB Control No. 0648-0652) included an experiment to test the impact of cash incentives on response rates, survey measures and cost (see Appendix 2 for details). Three levels of incentives, $1.00, $2.00 and $5.00, and a zero dollar control were tested. Incentives were included in the initial survey mailing for each wave.

Table 1 provides the response rates, total number of completed surveys and relative cost per completed survey for each incentive treatment. The probability that a household responded increased significantly with increasing incentive amounts, and differences in response propensity among incentive treatments were highly significant ($p<0.0001$). However, while the $5.00 incentive resulted in the highest response rate, the $1.00 and $2.00 treatments were the most efficient in terms of cost; including a $1.00 or $2.00 cash incentive lowered the cost per completed survey by approximately 20%. Appendix 2 provides additional details about the incentive testing.

The cost per completed survey is slightly higher for a $2.00 incentive than a $1.00 incentive. However, the $2.00 incentive results in significantly higher response probabilities that will reduce the risk of nonresponse bias. In addition, testing demonstrated that the incentive amount was more important for those households that were less likely to be interested in the survey topic – larger incentives resulted in higher response rates (Appendix 2). In contrast, the incentive amount was less important for households that were more likely to be interested in the survey topic. In a survey about birding, Groves et al. (2006) observed that a $2.00 prepaid incentive reduced differential response between birders and non-birders. In the FES, differential response between households that do and do not fish will result in biased estimates of fishing activity. As in the birding survey, a prepaid cash incentive is likely to reduce differential response between households with and without anglers. In addition, results from incentive testing suggest that a larger incentive will reduce differential reporting to greater extent than a smaller incentive because larger incentives have a greater impact on households that are less likely to be interested in the survey topic. Considering the potential risks of associated with lower response rates, as well as the similar costs per completed survey between a $1.00 and $2.00 incentive, the FES will include a $2.00 cash incentive in the initial survey mailings.

Table 1. Response rates, number of completed surveys and relative data collection costs for each incentive treatment tested during the first two waves of the MFES.

Incentive Amount	Response Rate	Completed Surveys	Relative Cost per Complete[1]
$0.00	22.6	2,154	1
$1.00	32.2	3,065	0.78
$2.00	36.0	3,415	0.80
$5.00	40.8	3,807	1.15

[1] Data collection costs include costs associated with printing survey materials, assembling survey packets, postage, receipting and processing completed surveys, and incentives. The relative cost per complete survey set the $0.00 incentive's cost to 1; the other incentives' costs were calculated relative to the $0.00 incentive's cost. These are relative values and not true costs.

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

No personally identifiable information will be collected through the survey. Responses will only be associated with a unique, randomly assigned identification code. Any public release of survey data will be without identification as to its source or in aggregate statistical form. All survey data will be stored on secured, password protected servers, and all transfer of survey data will utilize secure file transfer protocols.

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 annual response burden per survey activity and the total estimated annual response burden are shown in Table 2. The expected number of respondents and responses are based upon anticipated sample sizes and historical FES response rates. The hourly rate of $25.22 is based upon the average for all civilian workers from the March 2019 National Compensation Survey (https://www.bls.gov/news.release/ecec.t02.htm). There are no other costs to respondents, and there are no recordkeeping requirements associated with MRIP Fishing Effort Survey. A total of 9,687 annual burden hours is anticipated, resulting in an annual cost to respondents of approximately $244,306.

Table 2. Estimated annual response burden

Survey Activity	Estimated time (minutes)	Sampled Addresses	Anticipated Response Rate	Estimated Number of Respondents	Estimated Number of Responses	Total Time (hours)
Weather and Outdoor Activity Survey	5	342,975[2]	34.13%	110,000	110,000	9,167
Nonresponse Follow-up Study[3]	5	4,792[4]	30%	1,438	1,438	120
	7	10,417[6]	35.03%	3,430	3,430	400

[2] Based upon 2018 FES results, approximately 6% of addresses will be returned by USPS as invalid reducing the eligible sample size to 322,261 addresses. Calculations of number of respondents are based upon 322,261 addresses.
[3] The Nonresposne Follow-Up Study will be administered during a single year. The number of sampled addresses, respondents, responses and burden hours have been annualized across the three years covered by this approval.
[4] Addresses will not be sampled for the NRFU. The sample will consist of a sub-set of addresses that did not respond to the FES.

Study Total	**114,868**	**114,868**	**9,687**

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. Envelopes with prepaid postage will be included in the questionnaire mailing.

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

Annual cost to the Federal government is approximately $2,671,655: $2,468,655 in data collection costs and $203,000 in professional staff salaries.

Cost Descriptions	Grade/Step	Loaded Salary and/or Cost	% of Effort	Fringe (if Applicable)	Total Cost to Government
Federal Salaries					
Fishery Biologist	ZP4/03	153,000	100		$ 153,000
Survey 'Statistician	ZP4/01	100,000	50		$ 50,000
Operations & Maintenance					
Data collection costs		2,468,655			$ 2,468,655
Labor		394,985			
Non-Labor		2,073,670			
Travel					
Other Costs:					
TOTAL					$ 2,671,655

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

This requested revision results in a net increase of 5,263 respondents and responses and a decrease of 8,613 hours.

[5] The Recreational Saltwater Boat Fishing Survey will be administered during a single year. The number of sampled addresses, respondents, responses and burden hours have been annualized across the three years covered by this approval.

[6] Based upon 2018 FES results, approximately 6% of addresses will be returned by USPS as invalid reducing the eligible sample size to 9,792 addresses. Calculations of number of respondents are based upon 9,792 addresses.

Program Change: Including the Nonresponse Follow-up Survey results in an annual increase of 1,438 respondents and responses and 120 hours. Including the Recreational Saltwater Boat Fishing Survey results in an annual increase of 3,430 respondents and responses and 400 hours.

Adjustments: Previously, the estimated response time for the Weather and Outdoor Activity Survey was 10 minutes per response, which was a conservative estimate based upon practice administrations. In 2018-2019 MRIP tested a web instrument that was designed to be as similar as possible to the paper Weather and Outdoor Activity Survey instrument. The average response time for the web instrument was approximately 5 minutes. Adjusting the average response time from 10 minutes to 5 minutes results in a decrease of 9,166 hours.

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.noaa.gov/recreational-fisheries/index. Data from this survey may support research and analyses to be presented at appropriate professional meetings (e.g. American Fisheries Society, Joint Statistical Meetings) and may be submitted for publication in appropriate statistical or fisheries peer-reviewed journals. Summary marine recreational fishery catch statistics produced using data from this survey are included in the annual publication by NOAA Fisheries, Fisheries of the United States.

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.

References

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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.