

**1 Supporting Statement B for  
Paperwork Reduction Act Submission  
OMB Control Number 1018-0088**

**National Survey of Fishing,  
Hunting, and Wildlife-Associated Recreation (FHWAR)**

- 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 government units, households, or persons) in the universe covered by the collection and in the corresponding sample are to be provided in tabular form for the universe as a whole and for each of the strata in the proposed sample. Indicate expected response rates for the collection as a whole. If the collection had been conducted previously, include the actual response rate achieved during the last collection.**

An estimated 90.1 million people 16 years old and older participated in fishing, hunting, and wildlife watching in the United States in 2011. Of that total, 37.4 million were sportspersons, of which 33.1 million fished and 13.7 million hunted. Almost 72 million were wildlife watchers who fed, observed, and photographed wildlife. The Census Bureau has designed and plans to conduct a survey of a sample of potential sportspersons and wildlife watchers to update the FHWAR in 2016. The survey content and methodology will be similar to that used for the previous five surveys with an additional pre-screening operation to obtain phone numbers from potential sportspersons and wildlife watchers.

The pre-screening sample for the 2016 FHWAR will include approximately 23,000 housing units. It will consist of addresses selected from the January 2015 MAF (Master Address File). The MAF coverage includes all 50 States and the District of Columbia. The pre-screener operation will obtain telephone numbers, basic demographic characteristics of residents of the selected address, potential household participation in angling, hunting, wildlife watching activities, and participation in target shooting and archery activities. This data will be used to follow-up with a more in-depth screening interview of households where participation or planned participation in fishing, hunting, target shooting, archery, or wildlife-watching activities was reported. The pre-screener interview consists of a self-response web interview or paper questionnaire.

The next phase of the 2016 FHWAR consists of a detailed screening interview. The FHWAR screener interview for households where a telephone number was submitted through the pre-screener operation will be attempted by the field representatives working out of the Census Bureau's three telephone centers. Cases where no telephone number was submitted or no pre-screener interview was completed will be subsampled and interviewed by field representatives through personal visits working out of the Census Bureau's 6 regional areas. Using computer assisted technology, Census Bureau field representatives will obtain more detailed demographic characteristics of the residents of the sample address and participation in fishing, hunting, and wildlife-watching activities of the U.S. civilian non-institutional population age 6 years and older and military personnel not residing in barracks. Paper questionnaires are not used for this operation due to the size of the questionnaire and the complexity of the skip patterns.

Two independent detail samples will be chosen from the FHWAR screening sample. They will consist of sportspersons and wildlife watchers. The Census Bureau will select the detail

samples based on information reported during the screening phase. The Census Bureau will assign every person 16 years of age and older in the screening sample to a sportsperson stratum based on past participation and the likelihood they will participate in hunting or fishing activities in 2016. The likelihood is based on a scale of 1 to 5, where 1 is Very Unlikely and 5 is Very Likely. Four sportspersons categories are defined from the likelihood and past participation:

- (a) Active—a person who had already participated in hunting or fishing in 2016 at the time of the screener interview.
- (b) Likely—a person who had not participated in 2016 at the time of the screener, but had participated in 2015 OR was likely to participate in 2016 (Likelihood scale equals 4 or 5).
- (c) Inactive—a person who had not participated in 2015 or 2016 AND was somewhat unlikely to participate in 2016 (Likelihood scale equals 2 or 3).
- (d) Nonparticipant—a person who had not participated in 2015 or 2016 AND was very unlikely to participate in 2016 (Likelihood scale equals 1).

The active, likely, and inactive groups will be eligible for interviews in the sportsperson detail sample.

Likewise, the Census Bureau will assign every person 16 years of age and older in the screening sample to a wildlife-watching stratum based on time devoted to and amount of money spent on wildlife-watching activities in the past and the likelihood they will participate in wildlife-watching activities in 2016. The likelihood is based on a scale of 1 to 5, where 1 is Very Unlikely and 5 is Very Likely. Five wildlife-watching categories are defined from the likelihood and past participation:

- (a) Active—a person who had already participated in 2016 at the time of the screening interview.
- (b) Avid—a person who had not yet participated in 2016, but had taken trips to participate in wildlife-watching activities in 2015 for 21 or more days or had spent \$300 or more.
- (c) Average—a person who had not yet participated in 2016, but had taken trips to wildlife watch in 2015 for less than 21 days and had spent less than \$300 OR had not participated in wildlife-watching activities in 2015 or 2016 but was likely to in the remainder of 2016 (Likelihood scale equals 4 or 5).
- (d) Infrequent—a person who had not participated in 2015 or 2016 AND was somewhat unlikely to participate in the remainder of 2016 (Likelihood scale equal 2 or 3).
- (e) Nonparticipant—a person who had not participated in 2015 or 2016 AND was very unlikely to participate during the remainder of 2016 (Likelihood equals 1).

The active, avid, average, and infrequent groups will be eligible for interviews in the wildlife-watching detail sample.

The following table shows the expected 2016 FHWAR response rates for the screening and detail samples:

2016 FHWAR Expected Response Rates				
	Pre-screener (households)	Screener (households)	Sportspersons (persons)	Wildlife Watchers (persons)
Total Assigned Cases	23,000	8,000	5,168	4,299
B&C Noninterviews	2,760	600	88	69
Total Eligible Cases	20,240	7,400	5,080	4,230
Type A Noninterviews - Number	14,168	740	1,168	931
- Percent	70.0	10.0	23.0	22.0
Interviews - Number	6,072	6,660	3,912	3,300
- Percent	30.0	90.0	77	78

**Note:** The definitions and calculations are the standard ones used for the Census Bureau surveys:

- Type A Noninterviews: No one home; temporarily absent; or refused.
- Type B Noninterviews: Temporarily occupied by persons with usual residence elsewhere; vacant; converted to temporary business or storage; merged (units combined into one); unoccupied tent site or trailer site; or unfit or to be demolished.
- Type C Noninterviews: Demolished; converted to permanent business or storage; house or trailer moved; condemned and unoccupied unit.

Type B and C noninterviews are excluded from the response rate calculation.

The response rate is calculated as follows:  $\text{Response rate} = \text{Interviews} / (\text{Interviews} + \text{Type A noninterviews})$ . Please note, the sportspersons and wildlife watchers response rates are calculated using only Interview 3. If a respondent participates in either Interview 1 or Interview 2 but becomes a nonparticipant for Interview 3, the entire case is considered a noninterview for response rate purposes. The burden estimates provided in Supporting Statement A include the responses for these types of cases as well as cases where the respondent participated in Interview 1 or Interview 2 and in Interview 3. A record is needed from each respondent of their entire calendar year's activity. Interview 3 is the final interview, which finishes the year's worth of interviewing. If the respondent doesn't answer the Wave 3 questions, the observation must be discarded because the full year's worth of data is not available for that respondent. If the respondent doesn't answer Interview 1 and/or Interview 2's questions, the reference period for the interview is lengthened and the data collected in Interview 3 is sufficient. For the purpose of calculating the response rate, it doesn't matter if we get Interview 1 and/or Interview 2 responses. It is required that we get Interview 3 responses, which are therefore the basis for the response rate calculation.

In wave 1, the Census Bureau will interview all sportspersons who have participated in fishing/hunting in 2016. Those people who have not participated so far in 2016, but MAY participate in hunting/fishing in 2016, are eligible for the wave 2 and wave 3 interviews. The Census Bureau will subsample from the people identified in the screener interview as eligible to

determine the sample for waves 2 and 3. The expected sample size for the sportsperson detail interview (for all waves) is 5,168. Of that starting sample size, 4,085 respondents are estimated to complete either the wave 1 or wave 2 interview (1,505 + 2,580) and 3,912 will complete the wave 3 interview alone or in addition to a wave 1 or wave 2 interview. Approximately 17 percent of the starting sample of 5,168 is preselected for a quality control reinterview. Depending on the outcome of the case, the reinterview can include verification of the household roster or verification that certain categories of questions were asked or verification of the outcome of the case.

In wave 1, the Census Bureau will subsample wildlife watchers who have participated in wildlife watching activities in 2016. Those people who participated but were not subsampled for Wave 1 AND those who had not participated at the time of the screener interview but MAY participate in wildlife watching in 2016, are eligible for the wave 2 and wave 3 interviews. The Census Bureau will subsample from the people identified in the screener interview as eligible to determine the sample for waves 2 and 3. The expected sample size for the wildlife-watching detail sample is 4,299. Of that starting sample size, 3,397 respondents are estimated to complete either the wave 1 or wave 2 interview (1,252 + 2,146) and 3,300 will complete the wave 3 interview alone or in addition to a wave 1 or wave 2 interview. Approximately 17 percent of the starting sample of 4,299 is preselected for a quality control reinterview. Depending on the outcome of the case, the reinterview can include verification of the household roster or verification that certain categories of questions were asked or verification of the outcome of the case.

The 2011 FHWAR interview response rate for the screening sample of households was 77 percent; 69 percent for the sportspersons detailed sample; and 67 percent for the wildlife-watcher detailed sample.

## **2. Describe the procedures for the collection of information including:**

- \* Statistical methodology for stratification and sample selection,**
- \* Estimation procedure,**
- \* Degree of accuracy needed for the purpose described in the justification,**
- \* Unusual problems requiring specialized sampling procedures, and**
- \* Any use of periodic (less frequent than annual) data collection cycles to reduce burden.**

Data for the FHWAR pre-screener will be collected in January-February 2016. Data for the FHWAR sportsperson sample and wildlife-watching sample will be collected in three waves. The first wave will be conducted in April-June 2016; the second in September-October 2016; and the third, in January-February 2017. In the sportsperson sample, all persons who hunted or fished in 2016 by the time of the screening interview will be interviewed in the first wave. The remaining sportsperson sample will be interviewed in the second wave. Interviews for all sportsperson sample persons (both first and second waves) will be attempted in the third wave. In the wildlife-watching sample, a subsample of persons who participated in wildlife-watching activities in 2016 by the time of the screening interview will be interviewed in the first wave. The remaining wildlife watcher sample will be interviewed in the second wave. Interviews for all wildlife watcher sample persons (both first and second waves) will be attempted in the third wave.

The reference period will be the preceding 4 months for wave 1 and the preceding 8 months for wave 2. In wave 3, the reference period will be either 4 or 8 months depending on when the sample person was first interviewed. If no previous interview was conducted, the reference

period will cover the entire 2016 year. After the wave 3 interviews, the Census Bureau will have

collected data on each sample person's activities for the entire year of 2016.

The estimation procedure for the FHWAR screening and detail samples follows the usual statistical principles used for other surveys. The final weight for each case in the screening sample is the product of the inverse of the selection probability, a weight adjustment to account for noninterviews, and a second stage weighting factor to bring sample estimates into agreement with independent population controls by age, sex, and race.

The final weight for each case in the FHWAR detail samples is the product of the inverse of the selection probability, a weighting adjustment to account for noninterviews, and a ratio adjustment to bring the estimates of persons age 16 or older from the detail interviews into agreement with the same estimates from the screening sample, which was a much larger sample.

The Census Bureau estimates that the overall degree of accuracy of their collection methods will meet the Fish and Wildlife Service objective that the coefficient of variation on the estimated number of sportsmen age 16 and older to be approximately 8 percent.

The degree of accuracy is a result of the number and standard error of hunters interviewed. With this degree of accuracy for hunters, we will expect a coefficient of variation for anglers and wildlife watchers as 5% and 3%, respectively.

There are no unusual problems requiring specialized sampling. The data for this survey is collected approximately every 5 years to reduce respondent burden.

**3. Describe methods to maximize response rates and to deal with issues of non-response. The accuracy and reliability of information collected must be shown to be adequate for intended uses. For collections based on sampling, a special justification must be provided for any collection that will not yield "reliable" data that can be generalized to the universe studied.**

The Census Bureau Field Division staff will perform standard procedures to keep the non-interview rate at the lowest possible level. Telephone numbers submitted through the pre-screener operation will be forwarded to the telephone center staff. In addition, the address sample will be run through a telephone match program prior to the screening interview in an attempt to verify the current telephone number or locate a phone number. Interviewers will make multiple call attempts at various times of the day in an effort to reach every household in sample. The Census Bureau will attempt personal visit interviews for approximately 4,000 of the cases where phone numbers are not available.

In addition, the Census Bureau will follow respondents who move. Since respondents are interviewed up to three times to obtain a full year's data, new respondents cannot be substituted into the sample. Therefore, instead of losing sample persons, the Census Bureau will interview the respondents at their new phone number or residence to finish the interview. (The exception is if the respondent moves more than 50 miles outside of any sample area and a telephone number is not available.)

The estimation procedure includes a noninterview adjustment to adjust for those cases that the field staff cannot interview.

- 4. Describe any tests of procedures or methods to be undertaken. Testing is encouraged as an effective means of refining collections of information to minimize burden and improve utility. Tests must be approved if they call for answers to identical questions from 10 or more respondents. A proposed test or set of tests may be submitted for approval separately or in combination with the main collection of information.**

The Census Bureau is not testing new procedures or methods with this collection. All questions in the 2016 FHWAR have been fielded in a previous version of the survey. Four other questions were changed slightly or the answer categories were modified slightly. In order to comply with the Census Bureau's pretesting policy, the Census Bureau's Systems Research Division was asked to conduct cognitive testing of these questions.

- 5. Provide the name and telephone number of individuals consulted on 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.**

You may consult the following Census Bureau individuals for information regarding sample design and data collection:

<u>Sample Design:</u>	David Hornick	301-763-4183
	Thuy Trang Nguyen	301-763-4640
<u>Data Collection:</u>	Carolyn Pickering	301-763-3873
	Elke McLaren	301-763-0280