SUPPORTING STATEMENT B
FOR PAPERWORK REDUCTION ACT SUBMISSION

National Survey of Fishing,
Hunting, and Wildlife-Associated Recreation (FHWAR)
OMB Control Number 1018-0088

Collections of Information Employing Statistical Methods

The agency should be prepared to justify its decision not to use statistical methods in any case where such methods might reduce burden or improve accuracy of results. When the question "Does this ICR contain surveys, censuses, or employ statistical methods?" is checked "Yes," the following documentation should be included in Supporting Statement B to the extent that it applies to the methods proposed:

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 103.7 million people 16 years old and older participated in fishing, hunting, and/or wildlife watching in the United States in 2016 (see https://www.census.gov/content/dam/Census/library/visualizations/2016/demo/fhw16-qkfact.pdf).

The U.S. Census Bureau gathered data for the 2016 FHWAR. They found that 19,459 out of 22,725 households (85.6%) were deemed eligible for the survey after a pre-screener mailing.

The response rates for the 2016 FHWAR data collection effort conducted by the U.S. Census Bureau were as follows:

- Screening phase: 83%
- Detailed phase:
    - Fishing and hunting: 67%
    - Wildlife watching: 64%

NORC at the University of Chicago (NORC) has designed and plans to conduct a survey of a sample of potential anglers, hunters, and wildlife watchers to update the FHWAR in 2022. The survey content will be similar to that used for the previous five surveys. Key methodological differences for 2022 will include the elimination of in-person interviewing, increased use of online survey data collection, and a hybrid sampling approach that includes three different types of sample (described further below).

2022 FHWAR
For the 2022 FHWAR, NORC will rely on two probability-based samples, NORC's AmeriSpeak Panel and an address-based sample (ABS). The AmeriSpeak® Panel is a probability-based, mixed-mode panel with industry-leading population coverage and recruitment response rate. We complement the AmeriSpeak Panel with an address-based sample that invites respondents to answer the survey via either the web, phone, or a paper-and-pencil questionnaire. NORC will perform a statistical calibration process, named **TrueNorth**™, to combine the probability and nonprobability samples. This approach takes advantage of the rigor of probability-based samples and the cost-effectiveness of nonprobability samples. In the following sections we describe the probability and nonprobability samples in further detail.

Probability Samples
We will use two probability sample sources. First, about 245,000 households will be selected from an address-based sample (ABS) derived from the USPS frame of U.S. addresses. Second, about 30,000 households will be selected from the AmeriSpeak Panel, NORC's probability-based panel representative of households nationwide.

Nonprobability Sample
In addition to the two probability-based sample sources, we will use nonprobability sample to help derive estimates of freshwater and saltwater anglers for coastal states. The nonprobability sample members will come from vendors such as Dynata and Lucid, and they will complete a short online survey during Wave 3 that asks if they saltwater or freshwater fish and collects demographic information. In order to provide estimates with a coefficient of variation of 3 percent for freshwater and saltwater angling for each for 23 coastal states, we expect to conduct interviews with about 13,500 nonprobability sample members.

Data Collection Methodology
The screener operation will obtain email addresses; basic demographic characteristics of residents of the selected address or household; potential household participation in fishing, hunting, and wildlife watching activities; and participation in target shooting, motorized boating, and archery activities. The screener interview consists of a self-response web interview, a phone interview, or paper questionnaire. An adult ages 18 or over will complete the screener questionnaire.

The next phase of the 2022 FHWAR will be the detailed wave interviews on fishing, hunting, and wildlife watching. Three waves of data collection are planned. Household members ages 16 and over are eligible to complete the wave questionnaire.

Separate detail samples for fishing, hunting, and wildlife watching will be chosen from the FHWAR screening sample. Each sample will include household members who do as well as do not participate in the stated activities, as shown in the exhibit below. NORC will identify and interview all persons reported in the screener to have participated in fishing or hunting already in 2022, or who indicate that they are likely to do so during the remainder 2022. For wildlife watching, due to the higher percentage of the population that participates in this activity, a sample of wildlife watchers identified in screening will be asked to complete a wave questionnaire. If a sample member is reported in the screener to participate in more than one activity, that person will be assigned to one of the three groups, with preference for the group(s) that are hardest to fill based on participation rates.

Table 1 indicates sample sources for the screener questionnaire as well as the distribution of sample by participation in fishing, hunting, and wildlife watching, across wave questionnaires for the ABS sample.

Table 1: Samples for Screener and Detailed Wave Questionnaires	
Screener	- AmeriSpeak - Nonprobability - Addressed based sample
Fishing	- Fishing only - Fishing and hunting - Fishing, hunting, and wildlife watching - Hunting and wildlife - Hunting only - Wildlife watching only - Non-participant
Hunting	- Hunting only - Fishing and hunting - Fishing, hunting, and wildlife watching - Fishing and wildlife watching - Fishing only - Wildlife watching only - Non-participant
Wildlife watching	- Wildlife watching only - Wildlife watching and hunting - Fishing and wildlife watching - Hunting and fishing - Fishing only - Hunting only - Non-participant

Table 2 shows the expected response rates and completed cases for the screener and each detailed wave for the ABS sample.

Table 2: Sample Size, Expected Response Rates, and Completed Interviews by Wave for ABS Sample				
Screener	Screener sample size = 245,000 Expected RR = 20.3% Expected completes = 50,000 households Target 97,000 HH members within the 50,000 HHs for wave questionnaires. Among these are non-participants (who do not fish, hunt, or watch wildlife) who will be invited to participate in Wave 3 only.			
	Fishing	Hunting	Wildlife Watching	
Wave 1	Wave 1 nonrespondents will be invited to participate in Wave 3.			*Total*
Starting sample *Expected RR* *Expected completes*	19,511 61.0% 11,901	15,923 61.0% 9,712	34,309 61.0% 20,927	69,743 61.0% 42,540
Wave 2	Wave 2 nonrespondents will be invited to participate in Wave 3.			*Total*
Starting sample *Expected RR* *Expected completes*	11,901 66.6% 7,922	9,712 66.6% 6,465	20,927 66.6% 13,931	42,540 66.6% 28,318
Wave 3	Sample for Wave 3 includes: • Respondents from Wave 2 • Nonrespondents from Wave 2 • Nonrespondents from Wave 1 • Non-participants selected from Screener			*Total*
Starting sample *Expected RR* *Expected completes*	35,705 40.0% 14,282	41,623 40.0% 16,649	47,758 40.0% 19,103	125,086 40.0% 50,034

Note: Totals expected completes across fishing, hunting and wildlife watching may not equal the total for the wave due to rounding.

Table 3 shows the expected response rates and completed cases for the screener and each detailed wave for the AmeriSpeak sample.

Table 3: Sample Size, Expected Response Rates, and Completed Interviews by Wave for AmeriSpeak Sample				
Screener	Screener sample size = 30,000 Expected RR = 33.3% Expected completes = 10,000 households Target 19,000 HH members within the 10,000 HHs for wave questionnaires. Among these are non-participants (who do not fish, hunt, or watch wildlife) who will be invited to participate in Wave 3 only.			
	Fishing	Hunting	Wildlife Watching	
Wave 1	Wave 1 nonrespondents will be invited to participate in Wave 2.			*Total*
Starting sample *Expected RR* *Expected completes*	3,822 61.0% 2,331	3,119 61.0% 1,903	6,720 61.0% 4,099	13,661 61.0% 8,333
Wave 2	Wave 2 nonrespondents will be invited to participate in Wave 3.			*Total*
Starting sample *Expected RR* *Expected completes*	3,822 61.0% 2,331	3,119 61.0% 1,903	6,720 61.0% 4,099	13,661 61.0% 8,333
Wave 3	Sample for Wave 3 includes: • Respondents from Wave 2 • Nonrespondents from Wave 2 • Nonrespondents from Wave 1 • Non-participants selected from Screener			*Total*
Starting sample *Expected RR* *Expected completes*	5,315 50.0% 2,658	4,338 50.0% 2,169	9,347 50.0% 4,673	19,000 50.0% 9,500

Note: Totals expected completes across fishing, hunting and wildlife watching may not equal the total for the wave due to rounding.

NORC will use information obtained in the 2021 Pilot to estimate response rates to the screener and wave questionnaires and to estimate the percentage of the sample that will participate in fishing, hunting, and wildlife watching activities for the 2022 FHWAR.

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.

2022 FHWAR

Data for the FHWAR screener will be collected January through April, 2022. Data for fishing, hunting, and wildlife watching samples will be collected in three waves. The first wave will be conducted May 2022. The second wave will be conducted September 2022. The third wave will be conducted January 2023.

The reference period for some questions in the screener interview is fishing, hunting, and wildlife watching activities since January 1, 2022. Respondents will also answer several questions about participation in outdoor activities in 2021 and prior years.

The reference period for all detailed wave interviews is 2022. The reference period that a respondent would report on in the interview will range from several months to the entire year, depending on the date of the interview and whether the respondent completed earlier wave interviews. The Wave 1 interview will ask about activities since January 1, 2022. The Wave 2 interview will ask about activities since the Wave 1 interview. However, the Wave 3 interview will ask about activities since Wave 2, or activities for the entire year if the respondent had not responded to any prior wave interview requests. After the Wave 3 interview is conducted, NORC will have collected data on each sample person's activities for the entire year of 2022.

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 will include factors such as the product of the inverse of the selection probability, adjustments to account for noninterviews, and a weighting factor to bring sample estimates into agreement with independent population controls for factors such as age, sex, and race.

The final weight for each case in the FHWAR detail samples is the product of factors such as the inverse of the selection probability, adjustments 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.

NORC 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 hunters age 16 and older to be approximately 3 percent.

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.

NORC staff will perform standard procedures to keep response rates for the AmeriSpeak sample as high as possible level. NORC will make multiple attempts to contact respondents via email or USPS mail to ask for their participation. Respondents will receive materials that

explain the purpose of the survey, the importance of participation, what participation entails, and their rights as survey respondents. Respondents will be able to contact NORC to ask further questions prior to participation.

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.

Web Survey
In an effort to reduce survey costs, NORC will provide a web option for respondents to complete the Screener and detailed Wave questionnaires. The web instrument will contain edits on many variables and consistency checks on critical items to maximize quality of the data without unduly affecting the flow of the interview. This instrument will allow for backward data correction and will contain logic to ensure that the proper interview path is maintained. The new web option will be complemented by a mail (paper) survey and telephone interview option, as offered in past data collections. There will be no in-person interviewing for the 2022 FHWAR. NORC will evaluate the efficacy of the web survey by monitoring response rates and data quality across modes.

Hybrid Sample Design
In section 2 above, we describe NORC's hybrid sample design for the 2022 FHWAR.

Experiment with Post-Incentives
NORC proposes to do an experiment involving the offer of $5 and $10 post-incentives among ABS sample members within the 2022 FHWAR data collection effort. The experiment will allow us to examine the potential impact of offering a higher incentive ($10) on response propensity independent of sample characteristics (hard-to-reach or not). Households will be allocated into 4 groups:

- $5, not hard-to-reach
- $5, hard-to-reach
- $10, not hard-to-reach
- $10, hard-to-reach

Additional information about the use of incentives for the 2022 FHWAR is included in Supporting Statement A.

5. Provide the names and telephone numbers 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 NORC staff for information regarding sample design and data collection:

    Sample Design: David Sterrett, 312/357-7031
    Data Collection: Kate Bachtell, 312/882-1488