

**Supporting Statement B for  
Paperwork Reduction Act Submission**

**OMB Control Number 1018-NEW  
National Mourning Dove Hunter Attitude Survey on Nontoxic Shot**

- 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.**

This is a one-time data collection. The universe for sampling is approximately 1,000,000 individuals who obtain an annual Harvest Information Program (HIP) certification and identified themselves as mourning dove hunters (OMB Control Number 1018-0023). The sampling universe will be stratified by State and we will be taking a sample of 1,100 individuals per State. This will allow meaningful inferences to be generated at the State level. Pertinent sampling characteristics from the 2009/2010 hunting season are listed by State in Table 1.

Since this is a new information collection, we do not have direct estimates of response rates for this survey. However, since the sampling frame and survey methodology are similar to the Dove Harvest Survey (OMB Control Number 1018-0023, Form 3-165E), we are probably correct in assuming the response rates will be similar. In 2009, the unweighted response rate for the dove harvest survey was 53 percent, and the weighted response rate was 54 percent (OMB Control Number 1018-0023). Anticipated State specific rates are listed in Table 1.

Table 1. Potential sample universe for the Mourning Hunter Attitude Survey on Nontoxic Shot Form 3-2386. Response rates are based on the 2009 Dove Harvest Survey (OMB Control Number 1018-0023).

| State/<br>Management Unit | 2009 Active<br>Hunters | Anticipated<br>Sample | Anticipated<br>Sampling Rate | Anticipated<br>Response Rate | Anticipated<br>Responses |
|---------------------------|------------------------|-----------------------|------------------------------|------------------------------|--------------------------|
| AL                        | 61,800                 | 1,100                 | 0.02                         | 0.47                         | 500                      |
| DE                        | 1,800                  | 1,100                 | 0.61                         | 0.54                         | 600                      |
| FL                        | 18,100                 | 1,100                 | 0.06                         | 0.43                         | 500                      |
| GA                        | 48,500                 | 1,100                 | 0.02                         | 0.41                         | 500                      |
| IL                        | 28,400                 | 1,100                 | 0.04                         | 0.63                         | 700                      |
| IN                        | 13,200                 | 1,100                 | 0.08                         | 0.59                         | 600                      |
| KY                        | 21,400                 | 1,100                 | 0.05                         | 0.59                         | 700                      |
| LA                        | 25,000                 | 1,100                 | 0.04                         | 0.50                         | 500                      |
| MD                        | 9,100                  | 1,100                 | 0.12                         | 0.51                         | 600                      |
| MS                        | 19,800                 | 1,100                 | 0.06                         | 0.46                         | 500                      |
| NC                        | 40,300                 | 1,100                 | 0.03                         | 0.57                         | 600                      |
| OH                        | 16,700                 | 1,100                 | 0.07                         | 0.48                         | 500                      |
| PA                        | 18,100                 | 1,100                 | 0.06                         | 0.59                         | 700                      |

|                         |         |        |      |      |        |
|-------------------------|---------|--------|------|------|--------|
| RI                      | 100     | 100    | 1.00 | 0.70 | 70     |
| SC                      | 42,600  | 1,100  | 0.03 | 0.49 | 500    |
| TN                      | 41,100  | 1,100  | 0.03 | 0.46 | 500    |
| VA                      | 20,900  | 1,100  | 0.05 | 0.58 | 600    |
| WV                      | 1,300   | 1,100  | 0.85 | 0.56 | 600    |
| WI                      | 9,500   | 1,100  | 0.12 | 0.66 | 700    |
| Eastern Management Unit | 437,700 | 19,900 | 0.05 |      | 10,470 |
| AR                      | 22,400  | 1,100  | 0.05 | 0.44 | 500    |
| CO                      | 20,300  | 1,100  | 0.05 | 0.56 | 600    |
| KS                      | 29,400  | 1,100  | 0.04 | 0.56 | 600    |
| MN                      | 6,800   | 1,100  | 0.16 | 0.66 | 700    |
| MO                      | 21,500  | 1,100  | 0.05 | 0.53 | 600    |
| MT                      | 2,500   | 1,100  | 0.44 | 0.67 | 700    |
| NE                      | 16,000  | 1,100  | 0.07 | 0.63 | 700    |
| NM                      | 7,800   | 1,100  | 0.14 | 0.57 | 600    |
| ND                      | 2,800   | 1,100  | 0.39 | 0.67 | 700    |
| OK                      | 18,600  | 1,100  | 0.06 | 0.54 | 600    |
| SD                      | 6,500   | 1,100  | 0.17 | 0.63 | 700    |
| TX                      | 236,600 | 1,100  | 0.00 | 0.43 | 500    |
| WY                      | 2,300   | 1,100  | 0.48 | 0.63 | 700    |
| Central Management Unit | 393,500 | 14,300 | 0.04 |      | 8,200  |
| AZ                      | 37,200  | 1,100  | 0.03 | 0.49 | 500    |
| CA                      | 67,200  | 1,100  | 0.02 | 0.59 | 600    |
| ID                      | 10,600  | 1,100  | 0.10 | 0.61 | 700    |
| NV                      | 4,600   | 1,100  | 0.24 | 0.69 | 800    |
| OR                      | 4,300   | 1,100  | 0.26 | 0.68 | 700    |
| UT                      | 15,200  | 1,100  | 0.07 | 0.62 | 700    |
| WA                      | 4,200   | 1,100  | 0.26 | 0.72 | 800    |
| Western Management Unit | 143,300 | 7,700  | 0.05 | 0.63 | 4,800  |
| United States           | 974,500 | 41,900 | 0.04 |      | 23,470 |

**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.**

In accordance with 50 CFR 20.20, each State requires all migratory bird hunters to identify themselves as such, and to provide their name, address, and date of birth, as a condition for obtaining authorization to hunt migratory game birds in the State (OMB Control Number 1018-

0023). Collection of this information is done by the State's hunting license vendors (agents) or by a State contractor. State license agents or contractors ask each migratory game bird hunter to answer a series of questions that allows us to specifically identify Mourning Dove hunters from the entire list of migratory bird hunters.

To protect hunters' privacy, we use the names and addresses only for conducting hunter surveys and for no other purpose. All records of hunters' names and addresses are deleted after survey results are finalized. We do not maintain a permanent record of names and addresses.

Survey collaborators will select samples of mourning dove hunters for receipt of the Dove hunter questionnaire (Form 3-2386). In the United States, 39 States have legal mourning dove seasons. We intend to randomly select 1,100 mourning dove hunters from each State (with the exception of Rhode Island where only 100 estimated active mourning dove hunters reside) for a total of 41,900 selected hunters (Table 1.). Given our estimated response rate, this sample size should ensure target 95% confidence levels of +/- 10% at the State level, +/- 5% at the Dove Management Unit level, and < +/- 5% at the National level. These target precision levels were deemed appropriate by the Federal and State biologists who are collaborators in this effort. State biologists wanted to ensure that valid statistical inferences on the model parameters can be made at the State level.

Survey procedures are based on Dillman's Total Design Method (Dillman, 1978, Mail and Telephone Surveys, the Total Design Method, Wiley). This method has been shown to substantially reduce nonresponse in many situations.

Double sampling estimates (Hansen and Hurwitz, 1958, JASA) are used to account for nonresponse (see Groves, 1989, *Survey Errors and Survey Costs*, Wiley, pages 165-169; and Hansen, Hurwitz and Madow, 1953 *Sample Survey Methods and Theory*, Wiley, vol. 1, pages 468-475). Two response strata are defined by the respondents and nonrespondents to the first wave of reminder letters. A second wave of reminders and survey replacement forms is sent to all nonrespondents to the first wave of reminder letters. Additionally, a third wave of reminder letters and survey replacement forms is sent to all nonrespondents to the second wave of reminder letters.

We developed a *priori* models around demographic and experiential factors (Tables 1-3, Attachment A) (see supplementary documents) and ranked models using AIC<sub>c</sub>, which is a second order AIC (Akaike's Information Criterion). We will compute Akaike weights ( $w_i$ ), where a given  $w_i$  is considered the weight of evidence in for of model  $i$  being the best model given the set of models. All explanatory variables will be continuous or nominal categorical variables and analyzed using standard generalized linear model statistical techniques.

**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.**

We plan on using standard methods to encourage response to the National Mourning Dove Hunter Attitude Survey on Nontoxic Shot. These include a cover letter that is addressed to the individual hunter and signed by the major collaborators in this effort (Chief of Branch of Population and Habitat Assessment in the U.S. Fish and Wildlife Service, President of Association of Fish and Wildlife Agencies, and the President of the National Flyway Council.)

The letter explains why the information is important and includes a toll-free number to call and ask questions. The cover letters attempt to motivate the respondent and stress the importance of participation. The forms are clear and concise and have been designed to be as attractive and as easy to use as possible. Wording of questions was reviewed by Human Dimensions experts, and we beta tested drafts of the survey instrument. All forms are sent to hunters with pre-addressed, postage paid return envelopes. The survey uses three waves of reminder mailings to contact nonrespondents and encourage participation. The first wave includes a postcard and a letter sent by first class mail. Second and third waves of reminders and replacement forms will be sent to all nonrespondents, also by first class mail. As described in item 2, above, double sampling estimates are used to detect and, if necessary, account for nonresponse.

**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.**

No additional testing of procedures is planned.

**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.**

The individual directly responsible for information collection, analysis, and report writing from the Fish and Wildlife Service is:

Dr. Kenneth D. Richkus  
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The following statisticians and Human dimension specialist have reviewed the question wording, statistical design and analysis of these surveys:

|  |                |
|--|----------------|
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| Dr. Andy Raedecke, MO Department of Conservation | (573) 882-9909 |
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D.J. Case and Associates will conduct the survey and analyze the data:

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