

**SUPPORTING STATEMENT B
FOR PAPERWORK REDUCTION ACT SUBMISSION**

**CENTRAL FLYWAY GOOSE HARVEST
OMB Control Number 1028-NEW**

Collections of Information Employing Statistical Methods

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.

All data are collected via an online/mobile friendly platform. We will use a voluntary sampling method available to the entire census of Central Flyway goose hunters to conduct our data collection. All goose hunters with valid HIP registration numbers, provided to State Wildlife Agencies in the Central Flyway, will be considered as the entire universe for this sample. Because we do not collect PII (such as email addresses), State agency partners will facilitate contacting goose hunters in their respective states. Each goose hunter with a valid email address, or by learning about the platform by other means (i.e., press releases, social media, etc.), will be given the same opportunity to participate in this study. Because we are primarily interested in evaluating the efficacy and participation in using the data platform, our sampling methods follow a census sampling strategy to allow any and all goose hunters to participate and not to solicit or sample specific cohorts of goose hunters as the base participants for the platform. The respondent universe for this collection will be voluntary contribution from any and all active goose hunters (hunters who purchased a license and HIP registration that identified as participating in goose hunting the previous year) in the Central Flyway states (CO, KS, MT, ND, NE, NM, OK, SD, TX, and WY). Harvest will be estimated for the total group of respondents. Harvest will be estimated in the same manner as approved Migratory Bird Hunter Survey (i.e., Diary survey) and Parts Collection Surveys (PCS; OMB Control Number 1018-0023) whereby species and age specific proportions of harvest are multiplied by the total number of geese harvested to estimate total harvest. Comparisons of estimated harvest with current surveys in place (Diary and PCS) will follow the sampling strategy in a post-hoc framework based on sampling strata of the Migratory Bird Harvest Information Program (HIP; OMB Control Number 1018-0023) of the Migratory Bird Hunter Survey and Parts Collection Surveys. The HIP survey asks a question regarding the previous year's harvest to stratify hunters into 4 strata; 1) did not hunt, 2) 0 geese harvested, 3) 1-10 geese harvested, and 4) >10 geese harvested (OMB Control Number 1018-0023). We ask the same HIP question (i.e., "how many geese did you harvest last year?") from the HIP survey regarding previous year's harvest to identify hunter strata in this platform post-hoc, and do not use HIP information as an invitational sampling strategy. There will be no attempts to generalize the results outside the scope of this study and this universe of respondents. Table 1 shows the state-specific and total respondent universe (N), response rates from current PCS surveys, and estimated response rates to this study based on PCS response rates, and an increased response rate to test the hypothesis that an online version of the survey reduces burden and increases participation. Our prediction is

that response rates, and therefore expected number of respondents will be greater than the PCS survey response rate, and less than or equal to the hypothesized increased response rate.

Table 1. Respondent universe and expected sample size

State	N*	State-specific Response Rate from PCS Survey	Estimated Respondents via PCS Response Rate	Hypothesized Respondents Assuming Increased Response Rate (2.2% increase)
CO	8,766	4.3%	381	571
KS	3,167	4.5%	142	211
MT	7,248	4.1%	299	456
ND	18,954	1.2%	225	635
NE	9,770	2.5%	247	459
NM	926	6.2%	58	78
OK	9,792	0.5%	44	256
SD	6,280	3.4%	213	349
TX	18,297	0.3%	56	452
WY	2,397	1.3%	32	84
Total	85,597		1697	3551

*HIP registered hunters by Central Flyway state for 2022-2023 Season that harvested ≥ 1 goose

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.**

Based on our estimations, we conservatively anticipate an average response rate of based on Central Flyway average response of 2.8% from the 2022-2023 PCS results, totaling approximately 1697 respondents. Because a hypothesis of the research objectives is that ease of use will be greater via this online platform than paper surveys, we hypothesized an increase in use and response rates compared to paper surveys, and we have reflected the hypothesized response rate in Table 1. In the PCS survey, the samples are randomly selected in proportion to the estimated harvest in each State. Target 95% confidence intervals for harvest estimates at the management unit level (e.g., Flyway) are $\pm 5\%$ for geese, deemed appropriate by the Federal and State biologists who are charged with managing those migratory bird species.

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 will collaborate with State agency partners to follow up initial messaging introducing the

survey platform with reminder emails to the respondent universe once prior to the hunting season of collection, and twice during the season to encourage continued use. Because hunting season timing varies latitudinally throughout the Central Flyway, the timing of reminder emails will be at approximately the one-quarter and one-half way point through each state's respective season. We will monitor participation by reviewing trends in data transmission from each state. Additionally, survey information on objectives of the research study, uses of the data (and non-uses, what we will not and do not do with harvest data), why the data are important, and contact information will be found on a "Survey Information" tab on the data collection platform. We also provide each hunter with their own personal harvest log of data they have entered throughout the season as an incentive to continue participation. The entire collection process is online and mobile friendly, reducing burden and increasing feasibility as compared to paper surveys currently in place which should reduce non-response bias. We will also include an "opt-out" option to understand if respondents cease to use the platform, which will allow insight into usability and efficacy.

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.

We plan to test online tool functionality and data acquisition with fewer than 9 respondents (migratory bird hunters) prior to data collection from the public. We will address any technical issues identified during testing prior to release to public.

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.

The individual directly responsible for information collection and analysis is: Dr. Jay VonBank, Research Ecologist, Wildlife and Ecosystems Branch, Northern Prairie Wildlife Research Center, USGS, Jamestown, North Dakota, 58401 (701-368-0177). Access to the database will also be granted to the developers of the database at Fort Collins Science Center, Fort Collins, CO, who are responsible for database and platform development and maintenance. The database and platform are housed at Fort Collins Science Center. The statistical design and analysis follows the methods of Migratory Bird Surveys, 50 CFR 20.20, OMB Control Number 1018-0023 for comparison purposes. The design and analyses have been approved by OMB and have been reviewed by statisticians during their submission.

The following research ecologists, research wildlife biologists, and biologists with statistical training have reviewed the statistical design and analysis of these surveys:

Dr. Mike Anteau, Chief of Wildlife and Ecosystems Branch, Northern Prairie Wildlife Research Center, USGS, Jamestown, North Dakota, 58401 (701) 368-9792.

Josh Dooley, Wildlife Biologist, USFWS Migratory Birds, Hillsboro, Oregon, 97003, (360) 604-2553.

Dr. Aaron Pearse, Research Wildlife Biologist, Northern Prairie Wildlife Research Center, USGS, Jamestown, ND, 58401, (701) 253-5509.