

Supporting Statement B for Paperwork Reduction Act Submissions
North American Breeding Bird Survey
OMB Control Number: 1028-0079
Current Expiration Date: 7/31/2012
Terms of Clearance: None

B. 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.**

Statistical methods are not used in the selection of respondents. Qualified participants (i.e. individuals with the ability to identify all birds in an area by sight and vocalizations) are found via word-of-mouth and limited advertising. In 2010 for example, 1,925 individuals volunteered to participate and 1,633 individuals actually responded. They collected avian population data from 2,655 U.S. BBS routes.

- 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.**

Routes are established in each State using a stratified random design where degree blocks form the basic stratification unit. Within each degree block, route start points and directions are randomly chosen. Survey participants are not randomly chosen; only individuals skilled at vocal and aural bird identification may participate.

Fifty 3-minute point counts are conducted along each Breeding Bird Survey route. All birds seen within a 0.25-mile radius and all birds heard are identified as to species and counted. These counts provide an index of abundance that represents a portion of the individuals present at each stop. These indices are then analyzed to derive population trend estimates. Trend estimates are calculated using a Bayesian hierarchical model analytical procedure (Link, W.A., and J.R. Sauer. 2002. A Hierarchical Analysis of Population Change with Application to Cerulean Warblers. Ecology 83: 2832-2840; Sauer, J.R. and W.A. Link. 2011. Analysis of the North American Breeding Bird

Survey using Hierarchical Models. *The Auk* 128: 87-98.)

There can be substantial variation in the identification and counting skills of BBS participants. Observer bias is controlled for by using observers as co-variables within the analyses (Peterjohn, B.G., J.R. Sauer, and C.S. Robbins. 1995. Population trends from the North American Breeding Bird Survey. 1995. Pp. 3-39, *in Ecology and Management of Neotropical Birds*. Oxford University Press, Inc.).

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.**

Respondents voluntarily decide to participate and report; response rates remain relatively constant between years in the short run. However participation has increased over the last 45 years and regional population estimates are weighted by route density.

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.**

All new participants in the BBS are required to complete a BBS Methodology training program and successfully complete a 20-question review to help insure consistency in data collection practices. The 20 questions are randomly chosen from a set of 33 possible questions. The questions are attached (BBS Methodology Training Review Questions). There are four sections to the review. Five questions are asked in each section. The review is pass or fail. Participant may re-take review as necessary. Each new participant is required to pass the review prior to participating. The training and review takes approximately 30 minutes to complete. Approximately 150 participants complete the training and review each year.

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.**

Individuals involved with the data analysis, collection, and design.

- a. Keith Pardieck, USGS Patuxent Wildlife Research Center, 12100 Beech Forest Road, Laurel, MD 20708-4038; 301-497-5843
- b. John R. Sauer, USGS Patuxent Wildlife Research Center, 12100 Beech Forest Road, Laurel, MD 20708-4038; 301-497-5662 (Data analyst)
- c. David Ziolkowski, Jr., USGS Patuxent Wildlife Research Center, 12100 Beech Forest Road, Laurel, MD 20708-4038; 301-497-5753

BBS Methodology Training Review Questions:

T/F	The North American Breeding Bird Survey (BBS) is coordinated jointly by the USGS Patuxent Wildlife Research Center and the Canadian Wildlife Service.
MC	Which of the following are requirements for participation in the BBS? Choose all that apply.
MC	At what time of day should a BBS route begin?
T/F	BBS routes should be sampled once per year, primarily in June for most of the U.S. and Canada.
T/F	BBS routes may be conducted during heavy rains.
MC	How many point count stops comprise a Breeding Bird Survey route?
T/F	Ideally, point count stop locations should be spaced at 0.25-mile (400-m) intervals.
MC	When conducting a BBS route, when should weather conditions be recorded? Pick all that apply and then click submit.
MC	The North American Breeding Bird Survey began in what year?
MC	How long should a BBS point count last at each stop?
T/F	The observer should count all birds seen within a 0.25-mile radius of the point, except dependent young and adults known or strongly suspected to have been recorded at a previous stop.
T/F	The observer should count all birds heard regardless of distance, unless known or strongly suspected to have been recorded at a previous stop.
MC	An assistant may not help the observer with which one of the following BBS activities?
MC	Which methods of attracting birds are allowed while participating in the BBS?
T/F	Flocks too large to be counted during the allowed time period should be estimated.
T/F	Non-breeding species like migrants, vagrants, and injured birds should be recorded on the data sheets and their status indicated.
T/F	Written documentation should be supplied for any rare or unusual species detected on a route.
T/F	There is no need for a BBS participant to scout the route prior to conducting the survey.
T/F	Stop locations may be moved up to a 0.1 mile (160 m), forward or back, to avoid an unsafe stop location.
T/F	It is necessary to follow all local traffic regulations pertaining to the proper and safe parking of vehicles along roadsides when participating in the BBS program.
T/F	Once a route is established, point counts should be conducted at the same stop locations each year?
T/F	To assist in locating the same stops each year, written stop descriptions should be produced and updated as needed by the observer, and a copy submitted to the BBS office.
MC	How long are BBS routes under ideal conditions?
T/F	You should consult your local or national coordinator when route problems are encountered.
T/F	If stop locations are not currently identified on the map or in stop descriptions, you should use your odometer or a GPS unit to establish them.
T/F	It is okay to use a felt-tip marker to record data.
T/F	The Cover Sheet should always be completed and returned to the BBS office with the completed original data sheets.
T/F	If data are submitted via the Internet, the completed data sheets need not be mailed to the BBS office.
T/F	Once the data are processed, you should check the data report for errors and notify the BBS office of your findings.
T/F	You should always read and follow the "Instructions for Conducting the North American Breeding Bird Survey."
T/F	The BBS office encourages participants to submit data electronically.
T/F	Participants should keep a copy of their completed data sheets and mail the original data sheets to the BBS office.
T/F	If data are not submitted via the web, the scannable data sheets must be completed using Arabic numbers and submitted before 15 July.