

Supporting Statement for Paperwork Reduction Act Submissions
for Migratory Bird Harvest Surveys - Migratory Bird Hunter Survey

The following information is provided as part of a request for renewal of OMB's approval for information collections under OMB control number 1018-0015. This information collection approval request combines three surveys (the Waterfowl Hunter Survey, the Migratory Bird Hunter Survey, and the Parts Collection Survey) and their associated forms because the surveys are interrelated and/or dependent upon each other. This request includes a separate supporting statement for each of those three surveys, accompanied by a single set of attachments that includes a table summarizing the burden for all forms associated with control number 1018-0015. This supporting statement addresses the Migratory Bird Hunter Survey.

A. Justification

1. Under the Migratory Bird Treaty Act (16 U.S.C. 703-711) (Attachment 1) the Secretary of Interior has responsibility for setting appropriate regulations for the hunting of migratory birds, with due regard for maintaining such populations at healthy levels. The Fish and Wildlife Act of 1956 (16 U.S.C. 742a-742j) (Attachment 2) more specifically authorizes collection of such information as is necessary to determine appropriate hunting regulations. Information required for effectively governing harvests of migratory birds includes not only knowledge of the harvest's magnitude but also information of the species, age, and sex composition within that harvest, including the geographic and chronologic distribution of these components as they relate to various hunting regulations.

The Waterfowl Hunter Survey, which has been conducted annually since 1952, requests purchasers of Federal Duck Stamps at sample Post Offices to complete and return a postcard with their name and address. Hunters that return completed postcards constitute the sample for the Waterfowl Hunter Survey, and are sent a questionnaire at the end of the hunting season. A study of nonresponse (Attachment 3) found that only 24% of these people were given a postcard for their name and address, and that 54% of those who received the cards returned them. Combined with a 65% response rate to the questionnaire, there was only an 8% overall response rate. This response rate is clearly unacceptable, and the Fish and Wildlife Service (Service) has made improvements specified in an agreement with the Office of Management and Budget (OMB). However, there were still two unresolved problems: (1) we could not obtain information from the 46% of the people who received postcards, but did not return the postcards with their names and addresses. Without this information, we could not contact these people. And (2) the survey did not provide adequate estimates of the harvest of migratory birds other than waterfowl, because people who hunt those species are not required to purchase a Federal Duck Stamp. Requiring all migratory bird hunters to provide their names and addresses would solve both problems by providing a list of migratory bird hunters.

In response to concerns expressed by OMB about the low response rates, the Service requested and received approval for an amendment to the current Waterfowl Hunter Survey (OMB No. 1018-0015) to begin phasing in an improved survey, the Migratory Bird Hunter Survey. That survey includes other migratory birds that were not previously surveyed. Hunter names and

addresses come from a required Migratory Bird Harvest Information Program instead of from voluntary cards distributed to a sample of Federal Duck Stamp purchasers. The Service published a Final Rule in the Federal Register on March 19, 1993 that established the Migratory Bird Harvest Information Program (Attachment 4). This rule was updated on September 1, 1998 (Attachment 5), by which time all States had entered the program. The rule requires all licensed migratory bird hunters in each State to annually provide their name and address to the State hunting licensing authority. States are required to forward that information to the Service, thereby providing the Service with a sample frame that consists of all licensed migratory bird hunters. The Service began phasing in the Migratory Bird Harvest Information Program with three volunteer States in 1992 (California, Missouri, and South Dakota), and all States except Hawaii have participated in this program since 1998.

To maintain comparability among estimates, both the Waterfowl Hunter Survey and the new Migratory Bird Hunter Survey should be run concurrently for at least three years before the Waterfowl Hunter Survey is discontinued. Continuity is especially important for this survey because migratory bird management decisions are based on changes from previous years. During 1998, the first year in which we conducted the Migratory Bird Hunter Survey nationwide, many States experienced difficulties in getting the required name and address data to us in a timely manner. As a result, the 1998 Migratory Bird Hunter Survey results were not reliable enough to use for comparison with the 1998 Waterfowl Hunter Survey results. Therefore, we are requesting approval to conduct the Waterfowl Hunter Survey for one more year (2001) before discontinuing that survey. This will provide us with the minimum of three reliable years of overlap that we need to compare the results of the two surveys.

2. This information collection is used by both Federal and State authorities to monitor the effects of various hunting regulations on the harvest of individual migratory bird species. The information is particularly useful in evaluating the effects of changes in daily bag limits, hunting season length, and hunting season dates on harvest. Information obtained also gives the Service a great deal of insight into the status of the many species involved. If this information were not collected, the Service's ability to promulgate regulations allowing controlled hunting of migratory birds would be greatly weakened. The information is also used by private conservation and hunting organizations that are concerned with the welfare of our migratory bird resource.

The Migratory Bird Hunter Survey is based on the Migratory Bird Harvest Information Program, under which each State annually provides a list of all migratory bird hunters licensed by the State. Randomly selected migratory bird hunters are sent either a waterfowl questionnaire (form 3-2056J, Attachment 8), a dove and band-tailed pigeon questionnaire (form 3-2056K, Attachment 9), a woodcock questionnaire (form 3-2056L, Attachment 10), or a snipe, rail, gallinule, and coot questionnaire (form 3-2056M, Attachment 11) and are asked to report their harvest of those species. The resulting estimates of harvest per hunter are combined with the complete list of migratory bird hunters to provide estimates of the total harvest of those species. This survey will replace the Waterfowl Hunter Survey after

it has been fully implemented in all States and comparisons of results with Waterfowl Hunter Survey results have been completed. Combined with the results of the Parts Collection Survey, which estimates the species composition of the duck and goose harvest, these harvest estimates enable the Service to evaluate the effects of season length, season dates, and bag limits on the harvest of each species, and thus help determine appropriate hunting regulations.

3. Of the total number of annual responses, most (3,600,000) are actually responses collected by the State wildlife agencies, which forward the responses (hunters' names and addresses) to the Service for use in national harvest surveys. Of those responses, about 2,500,000 were collected electronically by the States in 1999, either on line, through electronic licensing systems, or by telephone. The proportion of electronic responses increases each year as more States implement electronic data collection methods. The remaining responses are from randomly selected migratory bird hunters who are asked to voluntarily participate in a season-long survey. If we put the season-long survey forms on line, we might receive responses from people who were not randomly selected for the survey. This would invalidate (i.e., bias) our survey results and complicate our efforts to obtain reliable harvest information to use in setting migratory bird hunting regulations.

4. Many State wildlife agencies collect some information on migratory bird harvest within their State, and a number of State hunter surveys have been examined. State information is generally collected secondarily in harvest surveys of non-migratory game and is not adequate for Federal regulatory responsibilities because: (1) it is often insufficiently detailed or imprecise, or has inherent weaknesses in sampling design resulting in serious biases; (2) comparable information is not available from all States because survey methodologies vary among States; (3) many State survey results are not available in time to be useful for promulgating regulations; and (4) some States do not conduct hunting surveys or maintain lists of hunter names and addresses. Some States eliminated migratory birds from their harvest surveys when we began conducting the Migratory Bird Hunter Survey, thus duplication of effort between State and Federal surveys has been reduced since implementation of the Migratory Bird Harvest Information Program.

5. This information collection involves only individual migratory bird hunters.

6. If this information was not collected, the Service's ability to promulgate regulations allowing controlled hunting of migratory game birds would be greatly weakened. The health and well being of migratory bird populations demand that harvests be commensurate with population size. If these surveys were not conducted, the lack of accurate assessment of migratory bird harvests would logically dictate restrictive hunting regulations, with a loss in hunting recreation due to only vague knowledge of the effects of hunting on migratory game bird populations and fear of possible overharvest.

If the surveys were conducted less frequently than yearly intervals, it would be impossible to adequately monitor the status of migratory birds which can change substantially between years

as a result of droughts, floods, freezes, or other conditions. Estimates are required for annually promulgating hunting regulations.

7. There are no special circumstances that require information to be collected in this manner.
8. Solicitation of comments on this information collection was published on April 12, 2001, in the Federal Register, Vol. 66, No. 71, pages 18973-18974 (Attachment 16). No comments were received in response to this notice.

State and private survey specialists and biometricians have reviewed the procedures for the Migratory Bird Hunter Survey, including:

Donald A. Dillman, WA State University	509/335-1511
Stephen L. Sheriff, MO Department of Conservation	314/882-9880
Vernon L. Wright, LA State University	504/388-8303
Kenneth H. Pollock, NC State University	919/737-2535

Additionally, meetings and workshops are held several times annually between Service and State personnel responsible for management of migratory birds, at which time problems and needs related to harvest surveys are discussed and acted upon. The Service has representatives to each of the four flyways (groups of States) to coordinate migratory bird management with State biologists. The representatives are:

Atlantic Flyway:	Jerome R. Serie	301/497-5851
Mississippi Flyway:	Kenneth E. Gamble	573/876-1915
Central Flyway:	David E. Sharp	303/275-2385
Pacific Flyway:	Robert E. Trost	503/231-6162

Immediately prior to the annual setting of migratory bird hunting regulations, public hearings are held at which individuals may comment on the regulations-setting procedures, including the conduct of harvest surveys. The Service has provided information to the public at the Outdoor Writers Association of America and Association for Conservation Information Meetings. Voluntary written comments and suggestions received from survey participants are noted and considered.

9. No payments or gifts are provided to respondents.
10. Each hunter contacted receives an assurance that the survey is conducted in accordance with the Privacy Act of 1974. Hunters are not asked to write their names on the questionnaires, and are assured that their names or identifications will not be associated with their questionnaires.
11. There are no questions of a sensitive nature.

12. Although State licensing authorities are collecting the name and address information needed to provide a sample frame of all licensed migratory bird hunters, that information collection is required by Federal regulation (see Attachments 4 and 5). Therefore, the reporting burden associated with that information collection is reported here. The Service estimates that the 49 States will collect the required information from approximately 3,600,000 individuals annually. States are using a variety of methods to collect the required information, and the amount of time required for an individual respondent to provide the information varies from less than 1 minute to up to 4 minutes, depending upon the method employed by the State. We estimate that the overall average time per response is 2 minutes. Thus, the total annual burden estimate for the Migratory Bird Harvest Information Program is 120,000 hours.

For the Migratory Bird Hunter Survey, the frequency of response for each form involved is once annually. Although many respondents report that they did not hunt for the species for which they are being surveyed, they still need about 2 minutes to read the instructions prior to responding. Therefore, each of the following form-specific burden estimates includes 2 minutes per respondent for reviewing instructions on the form. About 40,000 hunters respond to form 3-2056J (Attachment 8); the number of hunting trips reported ranges from zero to as many as 100, with an average of 3 trips reported per respondent. Recording and summarizing the trips requires an average of 1 minute per trip (3,333 total burden hours). About 30,000 hunters respond to form 3-2056K (Attachment 9), with the number of trips reported ranging from zero to about 30. The number of trips reported averages 2, and the time required to report and summarize the trips averages 1 minute per trip (2,000 total burden hours). About 10,000 respondents are expected annually for form 3-2056L (Attachment 10), with response burden averaging 1 minute per trip and respondents averaging 2 trips (667 total burden hours). About 10,000 respondents are also expected for form 3-2056M, with response burden again averaging 1 minute per trip and respondents expected to average 1 trip (500 total burden hours). The total annual burden estimate for all 4 forms used for this survey is 6,500 hours.

The total annual burden estimate for the Migratory Bird Harvest Information Program and the Migratory Bird Hunter Survey combined is 126,500 hours. Assuming an hourly cost of \$7.26, this will convert to \$918,390.00 total annual cost. See Attachment 17 for a table showing the burden calculations for all forms included in this approval request.

13. There is no non-hour cost burden to respondents.

14. The annual cost of these surveys to the Federal government is estimated as \$688,100. This estimate was derived from records of actual expenditures incurred in conducting these surveys in past years.

15. There are currently 131,992 burden hours in the OMB inventory for Migratory Bird Harvest Surveys (OMB No. 1018-0015). The increase of 6,925 hours is due to an increase in the estimated number of migratory bird hunters in the United States, from 3,300,000 to the

current estimate of 3,600,000. The current estimate is based on the number of migratory bird hunters identified through the Migratory Bird Harvest Information Program in 1999.

16. Plans are to continue the Migratory Bird Hunter Survey on an ongoing annual basis.

Schedule for the Migratory Bird Hunter Survey

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|----------|---|
| Aug-Feb | Migratory bird hunter names and addresses are received from the States, either in the form of electronic databases or on paper forms from which the data are compiled in a database. |
| Sep-Feb | Sample migratory bird hunters are sent questionnaires asking them to keep track of their hunting trips throughout the hunting season and return the form when they have completed their hunting season. |
| Dec-Apr | Following a staggered schedule based on the close of the hunting season in each State, sample hunters who have not returned questionnaires are sent reminder letters and replacement questionnaire forms. |
| Apr-July | Response data are edited, compiled in a database, and analyzed. |
| July | The report must be prepared and distributed by late July, in time for the public hearing on hunting regulations for migratory game birds. |

17. Approval to not display the OMB approval expiration date is not requested.

18. There are no exceptions to the certification statement contained in Item 19 of OMB Form 83-I for the information being collected.

B. Collection of information employing statistical methods

1. The potential respondent universe is all licensed migratory bird hunters in the United States, about 3,600,000 individuals. The universe is stratified by: (1) State, and (2) hunters' hunting experience and success the previous season. A systematic sample is selected within each stratum from the names and addresses in the order in which they are received. Stratum-specific universe and sampling data for forms 3-2056J, 3-2056K, 3-2056L and 3-2056M are given in Tables 3-6. Response rates for all four form types are about 50%.

2. 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.

a. 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. Most of the name, address, and date of birth information collection is done by the State's hunting license vendors (agents) or by a State contractor.

b. State license agents or contractors ask each migratory game bird hunter to answer the following questions:

1) Do you plan to hunt migratory birds during [season]? [This screening question is needed only if a State asks all hunters to provide the above information. Only migratory bird hunters would be asked the following questions.]

2) How many of these birds did you bag last season in [State]?

	None	1-10	11+
Ducks	—	—	—
Geese	—	—	—
	None	1-30	31+
Doves	—	—	—
Woodcock	—	—	—

3) Did you hunt coots or snipe last season? Yes__ No__

4) Did you hunt rails or gallinules last season? Yes__ No__

5) Do you plan to hunt band-tailed pigeons this season? Yes__ No__

c. States are responsible for development of adequate control procedures to ensure that agents (1) account for all validated licenses; (2) promptly provide the State with names, addresses, and other information; (3) have a low proportion of incomplete or illegible information; and (4) return information from all migratory game bird hunters.

d. States provide the Service with migratory game bird hunters' names, addresses, birth dates, and their answers to the above questions in an acceptable form (electronic data, or machine-scannable paper form) within 30 days of issuance. The information is needed in time for the Service to contact survey participants and ask them to keep records of their migratory game bird hunting throughout the hunting season.

e. To protect hunters' privacy, it is the policy of the Service to 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 each year's surveys and no permanent record of names and addresses is maintained by the Service.

f. States provide the Service with a report by April 15 each year of the total numbers of migratory bird hunters, by prior year success and species hunted strata. If that report is not complete, States provide the Service with a corrected report by April 15 the following year.

g. The Service selects samples for surveys of waterfowl hunters (Attachment 8), dove and band-tailed pigeon hunters (Attachment 9), woodcock hunters (Attachment 10), and snipe, rail, gallinule, and coot hunters (Attachment 11). Higher sampling rates are needed for successful hunters and for those who hunt less-frequently hunted species. Hunters are not asked to participate in more than one survey per State per year to minimize the burden on individual respondents.

h. Theoretically, there could be up to $(3)(3)(3)(3)(2)(2)(2) = 648$ strata in each State, defined by (maximum response to duck success) X (maximum response to goose success) X (maximum response to dove success) X (maximum response to woodcock success) X (whether or not coots or snipe were hunted) X (whether or not rails or gallinules were hunted) X (whether or not band-tailed pigeon hunting is planned). However, individual States do not allow hunting of all the species listed, therefore most States have fewer strata.

i. Samples are selected as the names are received in order that migratory bird hunters can be contacted and asked to keep records as soon as possible after hunting starts. A systematic sample is selected within each stratum, repeating every n_h^{th} hunter in stratum h , with (potentially) different sampling rates for each stratum. Sampling without replacement is used, with high priority strata being sampled before lower priority strata. Stratum priority is determined by: (1) biological need, and (2) desired precision levels for the estimates.

j. 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 is sent to a sample of the nonrespondents to the first wave using certified letters.

For each species (eg., mourning dove) or species group (eg., geese), the number of active hunters, number of hunting days, and number of birds harvested are estimated from the questionnaires using a ratio estimate with the response per hunter and the number of migratory bird hunters reported, by stratum, by the States.

Target 95 % confidence intervals for harvest estimates at the management unit level (eg., Flyway) are as follows: ducks, $\pm 5\%$; geese, $\pm 5\%$; mourning doves, $\pm 5\%$; brant, woodcock, band-tailed pigeons, and white-winged doves, $\pm 10\%$; sea ducks, $\pm 25\%$; snipe, rails, gallinules, and coots, $\pm 50\%$. These target precision levels were deemed appropriate by the Federal and State biologists who are charged with managing those migratory bird species. Although estimates at the management unit level are not available yet, State-level estimates obtained from this survey to date suggest that these targets are readily attainable.

Surveys must be conducted annually because migratory bird harvests can change substantially between years depending on the size of the fall flight and hunting pressure. Estimates are required for annually promulgating hunting regulations.

3. The forms have been designed to be as attractive and as easy to use as possible, and the cover letters attempt to motivate the respondent and stress the importance of participation. There are two waves of reminders. The first wave consists of a reminder postcard to all sampled hunters, followed in about 2 weeks by a letter and an additional survey form sent by first class mail to those who have not responded yet. The second wave of reminders is sent about 3 weeks later to a 20% sample of the remaining nonrespondents, and consists of a certified letter and an additional survey form.

4. This request covers the last stage of the phase-in of the new Migratory Bird Hunter Survey. It continues to test the procedures that will replace the existing Waterfowl Hunter Survey.

5. The individual directly responsible for information collection and analysis is: Dr. Paul I. Padding, Chief, Section of Harvest Surveys, Division of Migratory Bird Management, Laurel, MD 20708-4028 (301/497-5980).

The following statisticians have reviewed the statistical design and analysis of these surveys:

Ms. Christine M. Bunck, Program Coordinator, Biomonitoring Environmental Status and Trends, 1849 C Street NW, Washington, D.C. 20240 (202/482-3972)

Mr. Grey W. Pendleton, Statistician (Biology), Biometrical Group, Patuxent Environmental Science Center, Laurel, MD (301/497-5632)

Dr. Robert E. Trost, Migratory Bird Management Office, U.S. Fish and Wildlife Service, 911 N.E. 11th Avenue, Portland, OR 97232-4181 (503/231-6162)

Dr. Paul H. Geissler, Biologist, National Ecological Surveys Team, Patuxent Environmental Science Center, Laurel, MD 20708 (301/497-5780)

Table 3. Potential respondent universe and number of hunters sampled, by stratum, for Form 3-2056J. Each hunter is assigned to both a "ducks bagged" and a "geese bagged" stratum.

State	Hunters in universe						Hunters in sample					
	Ducks bagged			Geese bagged			Ducks bagged			Geese bagged		
	None	1-10	>10	None	1-10	>10	None	1-10	>10	None	1-10	>10
AL	85,294	5,123	3,076	91,594	1,508	391	632	45	234	783	11	117
AK	5,041	2,267	2,025	6,246	2,502	585	155	146	169	98	292	80
AZ	31,988	3,298	5,154	39,054	1,063	323	279	93	244	567	36	13
AR	90,948	19,921	36,263	125,030	11,668	10,434	769	521	1,814	1,992	443	669
CA	107,368	20,186	30,221	131,372	21,022	5,381	1,206	412	941	1,741	606	212
CO	37,582	7,658	3,060	38,590	7,665	2,045	326	205	151	395	197	90
CT	5,682	309	136	5,155	153	819	209	33	42	163	6	115
DE	5,473	2,038	1,426	7,959	619	359	186	190	333	472	119	118
FL	77,074	2,310	2,239	81,623	0	0	634	156	267	1,057	0	0
GA	92,643	5,442	2,997	98,849	1,947	286	715	179	186	964	93	23
ID	21,578	2,858	2,793	14,202	7,410	5,617	86	225	448	343	304	112
IL	48,174	11,585	9,375	56,114	10,973	2,047	421	298	432	696	343	112
IN	24,524	6,042	3,314	26,085	6,398	1,397	175	188	202	270	213	82
IA	14,448	9,185	6,652	18,116	10,463	1,706	321	277	343	289	509	143
KS	39,528	8,115	9,623	44,533	8,502	4,231	306	258	602	522	357	287
KY	12,817	1,285	1,191	13,486	1,308	499	81	40	154	195	41	39
LA	69,798	10,607	61,451	79,881	58,333	3,642	521	246	1,584	882	1,347	122
ME	58,831	6,497	1892	65,577	1,476	167	1,128	145	56	1,298	29	2
MD	16,619	4,540	3,572	20,173	3,212	1,346	617	407	524	335	709	504
MA	3,171	1,980	431	3,346	1,927	309	291	344	100	267	326	142
MI	73,760	19,738	10,177	79,058	19,618	4,999	665	502	486	855	549	249
MN	45,986	37,861	24,148	64,668	37,721	5,606	384	782	727	764	959	170
MS	44,913	5,682	6,195	54,511	1,777	502	280	144	287	615	76	20
MO	51,003	8,261	8,806	58,638	6,498	2,934	354	233	503	649	277	164
MT	9,553	3,348	3,103	11,565	3,558	881	67	95	175	143	147	47
NE	30,874	10,383	6,210	33,259	10,909	3,299	438	534	381	640	484	229
NV	6,941	1,678	1,804	9,101	1,099	223	106	96	139	245	71	25
NH	10,789	2,771	893	12,954	1,320	179	1,760	473	80	2,137	162	14
NJ	8,076	3,575	1,611	8,079	4,034	1,149	243	288	194	160	397	168
NM	13,809	658	337	14,349	355	100	326	69	44	384	39	16
NY	22,287	10,658	4,346	24,905	10,133	2,253	477	600	379	429	787	240
NC	165,661	32,191	11,224	197,823	9,717	1,536	357	375	237	452	395	122
ND	25,929	13,649	11,866	31,993	14,423	5,028	258	369	613	463	509	268
OH	87,927	16,861	6,927	91,679	15,714	4,322	617	522	406	803	481	261
OK	32,376	4,190	5,105	37,006	3,228	1,437	452	270	649	882	293	196
OR	35,753	8,173	12,733	40,507	11,037	5,115	811	351	933	613	883	599
PA	90,409	16,060	4,140	92,054	15,571	2,984	616	487	244	799	407	141
RI	1,103	799	320	1,283	779	160	87	413	183	129	394	160
SC	78,700	9,418	6,833	91,583	3,044	324	508	282	364	1,015	125	14
SD	24,744	10,888	10,196	27,010	14,194	4,624	253	305	502	360	453	247
TN	115,029	2,411	3,102	117,175	1,794	1,573	879	141	371	1,084	144	163
TX	668,643	48,273	46,445	717,243	29,426	16,692	2,696	1,017	1,428	3,851	705	585
UT	18,630	7,422	6,657	27,825	4,315	569	128	214	360	488	182	32
VT	5,671	1,093	694	6,704	608	146	112	87	142	233	78	30
VA	36,747	6,036	2,477	38,646	5,323	1,291	377	364	247	530	347	111
WA	21,791	9,350	15,386	33,485	9,475	3,567	148	181	945	539	436	299
WV	2,536	475	180	2,671	413	107	10	1	363	39	334	1
WI	104,815	41,483	16,122	136,333	25,366	721	742	865	628	1,620	584	31
WY	8,504	2,225	1,243	9,010	2,418	544	49	52	39	68	50	22
Totals	2,691,540	466,856	416,171	3,038,102	422,016	114,449	23,258	14,520	20,875	34,318	16,729	7,606

Table 4. Potential respondent universe and number of hunters sampled, by stratum, for Form 3-2056K.

State	Hunters in universe					Hunters in sample				
	Doves bagged			Hunt pigeons		Doves bagged			Hunt pigeons	
	None	1-30	>30	No	Yes	None	1-30	>30	No	Yes
AL	62,859	22,117	8,517			429	602	379		
AZ	21,936	13,941	4,563	32,401	8,039	170	440	219	673	156
AR	106,413	25,474	15,245			698	836	749		
CA	95,716	50,695	11,364	146,763	11,012	752	737	492	1,351	630
CO	37,082	10,379	839	44,578	3,722	337	317	35	513	176
DE	5,486	2,862	589			47	164	48		
FL	73,405	5,694	2,524			665	428	282		
GA	61,689	39,151	242			529	1,433	11		
ID	18,296	8,837	96			158	409	9		
IL	45,992	19,551	3,591			276	584	188		
IN	23,628	8,609	1,643			134	325	150		
KS	25,401	21,005	10,860			143	651	528		
KY	10,023	3,584	1,686			96	4	0		
LA	94,919	15,973	30,964			314	269	894		
MD	18,073	5,203	1,455			105	189	127		
MS	32,786	18,321	5,683			216	544	243		
MO	49,464	13,319	5,287			312	402	235		
MT	14,888	890	226			76	30	19		
NE	29,351	15,345	2,771			296	589	146		
NV	7,714	2,516	193			83	118	23		
NM	13,069	1,484	251	14,364	440	177	77	43	187	110
NC	117,795	88,576	2,705			218	819	46		
ND	45,072	5,328	1,044			297	210	102		
OH	86,976	20,859	3,880			548	605	168		
OK	22,732	13,587	5,352			324	990	639		
OR	52,498	3,378	783	47,182	9,477	978	209	66	503	750
PA	78,485	27,231	4,893			589	854	234		
RI	1,821	364	37			4	5	1		
SC	54,440	28,578	11,933			398	881	551		
SD	34,587	9,370	1,871			197	349	175		
TN	105,593	10,156	4,793			446	324	313		
TX	463,628	186,866	112,867			2,255	1,818	2,184		
UT	24,968	7,246	495	27,284	5,425	1,591	646	66	377	1,926
VA	25,480	17,343	2,437			182	535	112		
WA	41,723	3,908	896			241	107	21		
WV	2,324	696	171			4	11	102		
WY	10,069	1,622	281			38	80	22		
Totals	2,016,381	730,058	263,027	312,572	38,115	14,323	17,591	9,622	3,604	3,748

Table 5. Potential respondent universe and numbers of hunters sampled, by woodcock hunting success stratum, for Form 3-2056L.

State	Hunters in universe			Hunters in sample		
	None	1-30	>30	None	1-30	>30
AL	92,792	701	0	34	948	0
AR	145,116	2,016	0	280	222	0
CT	5,787	311	29	15	36	5
DE	8,778	159	0	19	17	0
FL	81,623	0	0	177	0	0
GA	101,043	39	0	278	4	0
IL	68,567	529	38	142	60	4
IN	33,172	681	27	74	83	3
IA	30,285	0	0	272	0	0
KS	57,120	146	0	124	13	0
KY	15,097	196	0	31	15	0
LA	140,039	1,611	206	288	44	21
ME	63,282	3,486	452	1,858	2,346	226
MD	24,143	588	0	58	72	0
MA	4,888	671	23	11	29	5
MI	90,259	12,159	1,257	278	537	126
MN	96,340	10,675	980	217	375	98
MS	56,501	289	0	126	57	0
MO	67,275	795	0	140	91	0
NE	47,255	212	0	148	34	0
NH	11,801	2,267	385	7	344	77
NJ	12,650	561	51	28	24	5
NY	34,736	2,471	84	88	107	16
NC	188,117	20,959	0	172	379	0
OH	105,916	5,433	366	219	210	37
OK	41,057	614	0	211	151	0
PA	103,578	6,879	152	168	206	30
RI	2,029	193	0	10	66	0
SC	93,823	1,128	0	213	133	0
TN	119,110	1,432	0	263	104	0
TX	763,357	4	0	374	0	0
VT	6,503	769	186	12	60	37
VA	44,541	719	0	98	82	0
WV	3,049	142	0	6	0	0
WI	148,444	12,913	1,063	487	465	106
Totals	2,908,073	91,748	5,299	6,926	7,314	796

Table 6. Potential respondent universe and number of hunters sampled, by stratum, for Form 3-2056M. Each hunter is assigned to both a "hunt coots/snipe" and a "hunt rails/gallinules" stratum.

State	Hunters in universe				Hunters in sample			
	Hunt coots/snipe		Hunt rails/gallinules		Hunt coots/snipe		Hunt rails/gallinules	
	No	Yes	No	Yes	No	Yes	No	Yes
AL	90,324	3,169	90,268	3,225	576	262	435	403
AK	8,831	502	9,333	0	28	37	65	0
AZ	40,197	243	40,252	188	172	45	171	46
AR	143,001	4,131	145,118	2,014	314	320	377	257
CA	147,694	10,081	154,992	2,783	216	314	365	165
CO	47,156	1,144	47,751	549	101	77	113	65
CT	5,830	297	6,123	4	12	17	28	1
DE	8,757	180	8,865	72	101	48	112	37
FL	79,193	2,430	78,784	2,839	490	562	325	727
GA	100,307	775	101,064	18	217	46	261	2
ID	24,054	3,175	27,229	0	53	14	67	0
IL	68,309	825	68,870	264	132	49	152	29
IN	33,100	780	33,653	227	69	50	91	28
IA	28,827	1,458	29,709	576	69	112	105	76
KS	56,501	765	56,795	471	207	123	230	100
KY	15,135	158	15,267	26	23	80	99	4
LA	140,919	937	134,183	7,673	403	24	166	261
ME	55,567	11,653	55,560	11,660	7,926	115	7,945	96
MD	23,985	746	24,167	564	91	72	120	43
MA	5,387	195	5,461	121	68	74	70	72
MI	95,558	8,117	95,558	8,117	155	900	155	900
MN	78,967	29,028	83,416	24,579	135	893	162	866
MS	56,180	610	56,534	256	181	12	182	11
MO	67,449	621	68,070	0	122	27	149	0
MT	15,653	351	16,004	0	46	131	177	0
NE	46,797	670	47,238	229	163	138	259	42
NV	10,227	196	10,367	56	41	47	69	19
NH	13,577	876	14,453	0	55	133	188	0
NJ	12,971	291	12,842	420	95	56	61	90
NM	14,753	51	14,778	26	66	9	70	5
NY	35,889	1,402	36,645	646	80	106	112	74
NC	205,480	3,596	207,743	1,333	197	53	218	32
ND	50,525	919	51,443	1	87	23	110	0
OH	103,289	8,426	104,471	7,244	244	1,033	289	988
OK	37,425	4,246	37,470	4,201	233	948	207	974
OR	56,658	1	56,659	0	109	0	109	0
PA	109,924	685	110,609	0	304	50	321	33
RI	1,831	391	1,848	374	16	155	16	155
SC	89,839	5,112	89,918	5,033	166	319	155	330
SD	43,702	2,126	45,828	0	82	106	188	0
TN	63,150	57,392	63,377	57,165	194	171	201	164
TX	745,257	18,104	751,548	11,813	633	587	666	554
UT	31,804	905	32,709	0	122	89	211	0
VT	5,047	2,411	7,458	0	40	267	307	0
VA	44,239	1,021	44,567	693	124	70	118	76
WA	45,084	1,443	46,527	0	710	0	710	0
WV	3,148	43	3,178	13	31	3	23	11
WI	155,834	6,586	159,035	3,385	256	232	304	184
WY	11,787	185	11,936	36	27	14	36	5
Totals	3,375,118	199,449	3,415,673	158,894	15,982	9,013	17,070	7,925