U.S. Fish & Wildlife Service

Migratory bird hunting activity and harvest during the 2016-17 and 2017-18 hunting seasons

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Hunter setting decoys.
USFWS/Milton Friend

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Abstract: National surveys of migratory bird hunters were conducted during the 2017 and 2018 hunting seasons. Hunters of the following types of migratory birds were surveyed: waterfowl (family Anatidae), doves (mourning [*Zenaida macroura*] and white-winged [*Z. asiatica*]), band-tailed pigeon (*Patagioenas fasciata*), American woodcock (*Scolopax minor*), Wilson's snipe (*Gallinago delicata*), American coot (*Fulica americana*), gallinules (common gallinule [*Gallinula galeata*] and purple gallinule [*Pophyrio martinica*]), and rails (king rail [*Rallus elegans*], clapper rail [*R. longirostris*], Virginia rail [*R. limicola*], and sora [*Coturnicops noveboracensis*]). Over 1 million waterfowl hunters harvested 11,600,600 (±5%) ducks and 3,266,900 (±5%) geese in the 2016 hunting season, and over 1 million waterfowl hunters harvested 12,115,800 (±4%) ducks and 3,602,500 (±5%) geese in the 2017 season. Mallard (*Anas platyrhynchos*), green-winged teal (*A. crecca*), gadwall (*A. strepera*), wood duck (*Aix sponsa*), and blue-winged/cinnamon teal (*A. discors* and *A. cyanoptera*) were the most-harvested duck species in the U.S., and Canada goose (*Branta canadensis*) was the predominant goose species in the goose harvest. Approximately 837,800 dove hunters harvested 13,502,000 (±8%) mourning doves in 2016 and 709,000 hunters harvested 11,561,100 (±6%) in 2017. Woodcock hunters numbered about 104,800 in 2016 and 103,300 in 2017, and harvested 202,300 (±16%) in 2016, and 203,500 (±17%) in 2017. About 17,300 people hunted snipe in 2016 and 22,500 in 2017, and they harvested 118,400 (±55%) and 42,400 (±57%) snipe in 2016 and 2017, respectively. Coot hunters (about 21,800 in 2016 and 20,900 in 2017) harvested 138,200 (±61%) coots in 2016 and 117,100 (±62%) in 2017. Gallinule hunters (about 1,300 in 2016 and 5,400 in 2017) harvested 10,000 (±184%) in 2016 and 12,600 (±108%) in 2017. Approximately 1,300 rail hunters harvested 14,500 (±41%) rails in 2016 and 2,600 rail hunters harvested 14,600 (±48%) rails in 2017.

Introduction

In the 1952-53 hunting season, the U.S. Fish and Wildlife Service (FWS) began conducting a survey of Federal Duck Stamp purchasers to estimate waterfowl hunter activity and harvest in the United States. That survey was conducted annually through the 2001-02 hunting season, after which it was replaced by a new migratory game bird harvest survey system. In 1992, the FWS and State Fish and Wildlife Agencies (States) established the Migratory Bird Harvest Information Program (HIP), which was fully operational nationwide by 1999 (Elden et al. 2002). This cooperative State-Federal program requires licensed migratory game bird hunters to register annually in each state in which they hunt. Each State is responsible for collecting the name, address, and date of birth from each migratory bird hunter, asking each of them a series of general screening questions about their hunting success the previous year, and sending this information to the FWS. The States are also responsible for providing migratory bird hunters with proof of compliance to carry while they are hunting. The FWS is responsible for using these data to conduct annual national migratory game bird hunter activity and harvest surveys.

This report presents hunter activity and harvest estimates from the HIP surveys for the 2016-17 and 2017-18 hunting seasons. These estimates are preliminary, pending (1) final counts of the number of HIP registrants in each State each season, and (2) complete audits of all survey response data.

HIP Survey Design and Methods

Sample Frame. The HIP sample frame consisted of people who identified themselves as potential migratory game bird hunters when they purchased State hunting licenses. The States forwarded the sample frame data to the FWS 2-3 times a month, starting in August and continuing through the end of their migratory bird hunting seasons. People who hunted migratory birds in more than one State had to comply with the HIP requirement in each state in which they hunted. Thus, the sample frame was specific to each State.

Stratification and Sample Selection. States asked each migratory bird hunter a series of short screening questions about the species they hunted and their hunting success the previous year. The list of species or species-groups (dependent on seasons in each State) included ducks, sea ducks, geese, brant, doves, band-tailed pigeons, woodcock, coots and/or snipe, rails and/or gallinules, and sandhill cranes. The FWS used this prior-year information as a predictor of their current year hunting activity and success to assign each hunter to a success/activity stratum for each of the 10 species or species-groups based on his or her answers to the screening questions. From each State list the FWS selected stratified samples for each species or species-group, sampling the small group of active/very successful hunters at a high rate, the larger group of less successful hunters at a lower rate, and the very large group of hunters who rarely if ever hunt the species or species-group at a very low rate. The FWS conducted 5 separate harvest surveys to estimate hunter activity and harvest of: (1) waterfowl (ducks, sea ducks, geese, and brant), (2) doves and band-tailed pigeons, (3) woodcock, (4) snipe, rails, gallinules, and coots, and (5) sandhill cranes.

Survey Methodology. Contact before or early in the hunting season, and a daily hunting diary format, were used in an effort to reduce memory and prestige bias, both of which result in overestimation (Atwood 1956). Hunters selected for the surveys were asked to record the date of each hunt, the State and county where they hunted, and how many birds of various species or species-groups they personally bagged that day. As a check on recording and for hunters who forgot to record their daily hunting information throughout the season, or did not receive the form until after the hunting season began, space was provided on the form to record season totals. Hunter response was voluntary.

Soon after the initial batch of names and addresses was received from a State, stratified samples were selected according to predetermined sampling rates. All surveys were conducted using Dillman's Total Design Method for mail surveys (Dillman 1978, Dillman 1991) to maximize survey response and ensure quality and timely responses. A survey packet including a cover letter and a survey form for recording daily hunting activity was sent to each selected hunter within one to two weeks after his/her name was received. The sample selection and initial mailing process continued with each subsequent batch of names and addresses (roughly twice per month), with the last initial mailing occurring on or shortly after the date the season closed in the state. Postcards were sent at the close of the season reminding sampled hunters to return their completed survey forms and thanking them for their help. About 3 weeks after this mailing, a follow-up packet with an additional form was sent to each hunter who had not yet responded. Finally, 3-4 weeks later, an additional follow-up packet was sent to the remaining non-respondents.

Analysis. Standard analyses for stratified samples (Cochran 1977, Steele and Torrie 1980) were used to obtain estimates of harvest and hunter activity for each state and species or species-group combination. The proportion of respondents who hunted (active hunters), their average days hunted and their average seasonal harvest were calculated and the corresponding totals estimated (active hunters, days hunted, birds bagged) at the State level. Variance estimates for these parameters were also calculated and converted to 95% confidence intervals. The number of days afield and the number of birds harvested were also estimated at the management unit and national levels, along with their corresponding 95% confidence intervals. However, the total number of active hunters (and any averages per active hunter) could not be estimated at the management unit or national levels because some people hunted migratory birds in more than one state. To calculate total numbers at larger geographic scales, we summed the number of active hunters in each state. This may overestimate the total number of active hunters because hunters are required to register for HIP in each state in which they hunt migratory birds.

Parts Collection Surveys

The FWS has conducted a cooperative Waterfowl Parts Survey annually to estimate the species, age, and sex composition of the duck harvest since 1961, and the species and age composition of the goose harvest since 1962. Hunters who agreed to participate in this survey were provided with large, postage-paid "wing envelopes" and were asked to send us a wing from each duck, brant, and coot they shot and the tail feathers and primary feather tips from each goose they shot throughout the hunting season. They were also asked to report the Sate, county, and date of harvest for each specimen they submitted. After the waterfowl hunting seasons ended, FWS and State biologists examined the specimens to determine the species, age, and sex of the birds.

Species composition estimates derived from the Waterfowl Parts Survey were combined with harvest estimates from the HIP waterfowl survey to calculate species-specific duck and goose harvest estimates. Similarly, date information provided by Waterfowl Parts Survey participants was combined with HIP survey results to estimate special September season duck and goose harvests. Estimates of the number of immatures per adult in the harvest (age ratio), and the number of males per female (sex ratio) were calculated for each species and state. Because sampling intensity varied among States, State ratios were weighted by harvest estimates from the HIP waterfowl survey to obtain flyway and U.S. ratios.

The FWS has conducted a Woodcock Wing Survey annually since 1977, primarily to estimate the age and sex composition of the woodcock harvest. Age and sex ratio estimates obtained from the woodcock wings collected in 1963-2016 were reported in "American woodcock population status, 2018" (Seamans and Rau 2018). This survey was expanded in 1997 to include rail wings to determine the species composition of the rail harvest, and band-tailed pigeon wings to obtain age ratio estimates.

Beginning in 2007, the FWS has performed a national Mourning Dove Parts Collection Survey to determine an index of recruitment. Selected hunters were asked to send in a wing from mourning doves harvested during the first two hunts of the season. Pooled age ratios from 2007-2017 were reported in "Mourning Dove population status, 2018" (Seamans 2018).

Survey Results

Waterfowl Hunter Activity and Harvest (Tables 1-7, Figures 1-3). HIP waterfowl harvest survey sample sizes and response rates were 101,283 hunters and 30%, respectively, for 2016-17, and 104,820 hunters and 31% for the 2017-18 survey. Species-specific estimates for ducks and geese (Table 1A-E) are presented by flyway. We were unable to split the estimates for Colorado, Montana, New Mexico, and Wyoming into their Central and Pacific Flyway portions for this report, so we arbitrarily assigned all of Colorado, Montana, New Mexico, and Wyoming to the Central Flyway. However, the Waterfowl Parts Collection Survey enabled us to provide Flyway-specific point estimates of duck and goose harvest for those four States (Table 2).

Sea duck hunter activity and harvest were estimated separately from other ducks for states that had special sea duck seasons or regulations (Table 3). Likewise, brant hunter activity and harvest along the Atlantic and Pacific coasts were estimated separately and reported in Table 4. Sea duck and brant harvest estimates are also shown in the species-specific waterfowl estimates in Table 1, but the estimates of sea ducks and brant days afield and active hunters shown in Tables 3 and 4 are not included in the estimates of duck and goose days afield or active duck and goose hunters shown in Table 1.

Estimates for special September duck seasons are given in Table 5, and Table 6 shows estimates of Canada goose harvest during special resident goose seasons compared to regular season harvest. Table 7 summarizes the waterfowl harvest in Canada; those data were provided by the Canadian Wildlife Service, which conducts annual surveys similar to those conducted in the U.S.

Long-term trends of duck harvest, and goose harvest since 1961, are shown in Figures 1-2. The curves are locally weighted regression (lowess) lines (Cleveland and Devlin 1988) that fit a pattern to the majority of the estimates and identify points that deviate from that pattern. These figures show one lowess line and point estimates for the Federal Duck Stamp-based survey's estimates from 1961-2001 and a separate lowess line and point estimates for the HIP survey estimates for 1999-present.

Waterfowl Age and Sex Ratios (Tables 8-12, Figures 3-6). The 2016-17 Waterfowl Parts Survey collected 75,474 duck wings and 14,047 goose tails and primary tips from 4,323 hunters; the 2017-18 sample consisted of 86,151 duck wings and 19,985 goose tails and primary wing tips from 4,870 hunters. State-specific mallard age ratios and flyway-level age ratios for other ducks species are reported in Tables 8 and 9, respectively, followed by State-specific mallard sex ratios (Table 10) and flyway-level sex ratios for other duck species (Table 11). Table 12 gives age ratios for geese. Figures 3-6 show the long-term trends in age ratios of mallards (Figure 3), northern pintails (Figure 4), American black ducks and wood ducks (Figure 5) and lesser scaup (Figure 6).

Dove and Band-tailed Pigeon Hunter Activity and Harvest (Tables 13-15). The dove and band-tailed pigeon estimates were based on samples of 44,897 hunters in 2016-17 (39% response rate) and 43,881 hunters in 2017-18 (39% response rate). Estimated numbers of active hunters, days

afield, harvest and birds harvested per hunter are given in Table 13 for mourning doves, Table 14 for white-winged doves and Table 15 for band-tailed pigeons.

Woodcock Hunter Activity and Harvest (Table 16). Results of the HIP woodcock harvest survey are presented in Table 16. The 2016-17 survey had a sample size of 19,301 hunters and a 46% response rate; the 2017-18 survey sample size and response rate were 19,123 hunters and 45%, respectively.

Snipe, Coot, Gallinule, and Rail Hunter Activity and Harvest (Tables 17-21). The sample for the 2016-17 snipe, coot, gallinule, and rail harvest survey was 25,083 hunters (39% response rate) and 24,976 hunters (41% response rate) for the 2017-18 survey. Tables 17-20 give the estimates for Wilson's snipe (Table 17), American coot (Table 18), gallinules (Table 19; all species combined) and rails (Table 20; all species combined).

We believe that the number of rail wings collected each year is too small to provide reliable annual species composition estimates, even at the flyway and national levels. Therefore, we used 5-year running averages to obtain species-specific rail harvest estimates (Table 21). The 2016-17 estimates are based on the species composition of 2,171 rail wings collected from 110 hunters during the period 2012-2016, and the 2017-18 estimates are based on 1,840 rail wings collected from 109 hunters during the period 2013-2017.

Alaska Sandhill Crane Hunter Activity and Harvest Estimates. The estimates presented below were derived from surveys of 759 (2016-17, 46% response rate) and 457 (2017-18, 42% response rate) Alaska migratory bird hunters. For Alaska's 2016 season, we estimated that 1,100 active sandhill crane hunters spent 4,100 days hunting cranes and harvested 1,555 birds. In 2017, an estimated 917 active hunters spent 2,213 days hunting cranes and harvested 973 birds.

Mid-continent sandhill crane hunting activity and harvest in the Central Flyway states are estimated in a separate annual survey. Results of that survey for the 2016 and 2017 seasons were reported in "Status and harvests of sandhill cranes: Mid-continent, Rocky Mountain, Lower Colorado River Valley and Eastern populations" (Dubovsky 2018).

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Table 1A. Preliminary estimates of waterfowl harvest and hunter activity in the Atlantic Flyway during the 2016 and 2017 hunting seasons.

	Connecticut		Delaware		Florida	
Duck Species Composition	2016	2017	2016	2017	2016	2017
Mallard	5,521	4,932	9,899	9,307	550	115
Domestic Mallard	39	93	0	132	220	115
Black Duck	1,197	1,613	6,320	7,194	110	0
Mallard x Black Hybrid	0	93	76	198	0	0
Mottled Duck	0	0	0	0	7,369	7,140
Gadwall	154	620	1,599	990	1,650	691
Wigeon	0	186	685	462	2,970	2,534
Green-winged Teal	270	248	6,320	4,488	14,958	4,722
Blue-winged/Cinnamon Teal	0	62	0	528	42,894	45,144
Northern Shoveler	0	0	990	990	5,609	3,455
Northern Pintail	0	0	381	990	4,399	691
Wood Duck	2,934	2,296	3,198	1,254	9,129	24,875
Redhead	0	0	0	264	5,719	2,649
Canvasback	0	0	0	0	550	0
Greater Scaup	0	558	0	132	0	230
Lesser Scaup	39	0	76	66	2,420	10,941
Ring-necked Duck	39	186	761	132	54,993	32,822
Goldeneyes	154	62	76	66	0	115
Bufflehead	1,042	1,241	6,548	5,874	1,760	2,188
Ruddy Duck	0	0	76	0	1,210	230
Long-tailed Duck	3,298	2,158	1,062	0	110	0
Eiders	450	480	0	0	0	0
Scoters	300	480	1,417	223	770	0
Hooded Merganser	540	496	533	792	660	806
Other Mergansers	1,158	279	0	924	110	0
Other Ducks	0	0	0	0	7,369	3,800
Total Duck Harvest	17,100±30%	16,100±42%	40,000±18%	35,000±18%	165,500±22%	143,300±14%
Total Active Duck Hunters[a]	2,000±23%	1,700±34%	4,200±11%	3,300±13%	15,000±20%	14,700±20%
Total Duck Hunter Days Afield[a]	11,800±26%	9,500±35%	29,500±18%	23,200±17%	77,100±20%	73,000±18%
Seasonal Duck Harvest Per Hunter[a]	6.6±38%	7.8±54%	8.9±22%	10.5±22%	11.0±30%	9.7±24%
Goose Species Composition						
Canada Goose	12,469	9,157	13,543	24,648	0	2,080
Snow Goose	0	59	5,389	1,579	3,378	0
Blue Goose	0	29	0	175	0	0
Ross' Goose	0	0	0	0	0	0
White-fronted Goose	0	0	0	0	0	0
Brant	290	1,763	397	256	0	0
Other Geese	0	29	0	0	0	0
Total Goose Harvest	12,800±33%	11,000±40%	19,300±21%	26,700±27%	3,400±84%	2,100±96%
Total Active Goose Hunters[b]	1,600±25%	2,500±29%	3,700±13%	3,500±12%	1,300±61%	1,800±52%
Total Goose Hunter Days Afield[b]	9,600±28%	11,500±34%	19,300±17%	22,800±19%	6,000±83%	6,900±75%
Seasonal Goose Harvest Per Hunter[b]	8.0±42%	3.7±49%	5.2±25%	7.6±30%	2.6±104%	1.1±109%
Active Waterfowl Hunters[c]	2,600±19%	2,800±29%	5,700±9%	4,700±10%	15,000±20%	14,700±20%
Sample Sizes						
DuckWings	366	444	521	534	1,505	1,244
GooseTails	365	323	269	307	1	0

Table 1A. Preliminary estimates of waterfowl harvest and hunter activity in the Atlantic Flyway during the 2016 and 2017 hunting seasons.

	Georgia		Maine		Maryland	
Duck Species Composition	2016	2017	2016	2017	2016	2017
Mallard	12,915	3,887	8,018	9,651	38,588	35,870
Domestic Mallard	0	0	0	0	315	453
Black Duck	0	0	2,687	2,923	6,501	10,326
Mallard x Black Hybrid	0	0	85	160	0	91
Mottled Duck	0	243	0	0	0	0
Gadwall	3,655	5,102	0	0	5,558	3,533
Wigeon	487	486	85	40	3,146	2,083
Green-winged Teal	16,571	5,587	1,919	1,642	3,565	7,609
Blue-winged/Cinnamon Teal	5,117	3,644	171	40	839	1,268
Northern Shoveler	1,218	3,644	0	80	839	1,540
Northern Pintail	1,462	0	128	240	2,936	1,630
Wood Duck	70,669	123,897	5,459	6,488	9,752	8,334
Redhead	731	1,458	0	0	2,621	1,630
Canvasback	731	729	0	0	1,887	4,982
Greater Scaup	244	0	43	0	1,573	5,344
Lesser Scaup	487	2,186	85	0	3,251	8,243
Ring-necked Duck	15,840	21,135	810	160	1,678	906
Goldeneyes	0	0	597	601	419	453
Bufflehead	731	0	2,474	1,522	9,437	8,605
Ruddy Duck	3,412	0	0	0	734	1,630
Long-tailed Duck	487	0	759	1,706	6,892	3,735
Eiders	0	0	1,822	5,688	0	0
Scoters	244	0	1,063	1,258	11,372	9,240
Hooded Merganser	4,874	3,401	597	641	1,468	1,449
Other Mergansers	0	0	640	441	315	1,359
Other Ducks	0	0	0	0	0	0
Total Duck Harvest	139,900±15%	175,400±19%	27,400±39%	33,300±18%	113,700±13%	120,300±13%
Total Active Duck Hunters[a]	19,000±15%	20,700±15%	4,000±17%	4,700±13%	16,800±9%	15,900±10%
Total Duck Hunter Days Afield[a]	92,400±16%	115,200±17%	20,100±29%	21,800±15%	77,800±13%	72,000±12%
Seasonal Duck Harvest Per Hunter[a]	7.4±21%	8.5±24%	5.9±42%	5.3±22%	5.7±16%	6.7±17%
Goose Species Composition						
Canada Goose	61,806	25,337	11,444	15,246	153,911	178,497
Snow Goose	966	0	0	0	3,271	6,801
Blue Goose	966	0	0	0	344	257
Ross' Goose	0	0	0	0	0	0
White-fronted Goose	0	0	0	0	0	0
Brant	0	0	0	0	236	0
Other Geese	0	0	0	0	0	0
Total Goose Harvest	63,700±41%	25,300±35%	11,400±30%	15,200±22%	157,800±13%	185,600±13%
Total Active Goose Hunters[b]	13,400±19%	7,900±23%	2,800±22%	3,500±16%	25,800±6%	24,500±6%
Total Goose Hunter Days Afield[b]	69,800±26%	46,100±41%	16,700±44%	14,600±21%	131,900±10%	127,800±11%
Seasonal Goose Harvest Per Hunter[b]	4.8±45%	3.2±42%	4.0±37%	4.4±27%	6.1±14%	7.6±14%
Active Waterfowl Hunters[c]	19,500±15%	20,900±15%	5,000±16%	6,700±11%	32,800±5%	32,200±5%
Sample Sizes						
DuckWings	574	722	582	663	963	1,251
GooseTails	66	50	215	325	916	1,447

Table 1A. Preliminary estimates of waterfowl harvest and hunter activity in the Atlantic Flyway during the 2016 and 2017 hunting seasons.

	Massachusetts		New Hampshire		New Jersey	
Duck Species Composition	2016	2017	2016	2017	2016	2017
Mallard	6,269	4,178	2,403	3,626	11,701	11,323
Domestic Mallard	0	0	0	0	123	235
Black Duck	2,101	2,289	846	648	9,863	9,739
Mallard x Black Hybrid	200	94	0	0	61	117
Mottled Duck	0	0	0	0	0	0
Gadwall	133	0	0	0	1,164	587
Wigeon	33	0	0	86	184	293
Green-winged Teal	367	755	271	475	4,901	3,520
Blue-winged/Cinnamon Teal	33	0	68	0	184	0
Northern Shoveler	33	0	0	0	674	352
Northern Pintail	33	24	0	86	245	59
Wood Duck	4,468	3,115	3,791	4,662	8,332	3,755
Redhead	0	0	0	0	61	59
Canvasback	0	0	0	0	0	0
Greater Scaup	33	47	0	0	919	821
Lesser Scaup	0	71	0	0	551	704
Ring-necked Duck	33	0	0	86	735	1,349
Goldeneyes	67	189	68	43	184	59
Bufflehead	1,434	1,487	0	86	15,683	15,078
Ruddy Duck	0	0	0	0	306	59
Long-tailed Duck	2,123	1,815	100	0	3,604	1,291
Eiders	4,034	4,698	0	0	0	646
Scoters	2,548	2,029	134	0	3,111	5,165
Hooded Merganser	267	283	203	302	2,328	2,757
Other Mergansers	333	354	102	0	1,593	1,467
Other Ducks	0	0	0	0	0	0
Total Duck Harvest	24,500±25%	21,400±35%	8,000±31%	10,100±28%	66,500±27%	59,400±24%
Total Active Duck Hunters[a]	3,700±27%	2,900±24%	1,700±20%	2,400±19%	5,900±14%	6,200±10%
Total Duck Hunter Days Afield[a]	20,700±31%	15,400±29%	10,700±38%	13,100±21%	39,400±19%	30,600±14%
Seasonal Duck Harvest Per Hunter[a]	4.3±37%	4.4±43%	4.7±37%	4.2±34%	10.1±30%	8.4±26%
Goose Species Composition						
Canada Goose	11,594	8,546	4,746	5,670	30,647	26,598
Snow Goose	0	0	0	0	2,757	1,517
Blue Goose	0	0	0	0	79	0
Ross' Goose	0	0	0	0	0	0
White-fronted Goose	0	0	0	0	0	0
Brant	991	777	49	53	2,538	5,202
Other Geese	0	0	0	0	0	0
Total Goose Harvest	12,600±42%	9,300±33%	4,800±38%	5,700±29%	36,000±27%	33,300±24%
Total Active Goose Hunters[b]	3,600±27%	2,500±25%	1,200±24%	1,600±22%	4,300±16%	4,300±13%
Total Goose Hunter Days Afield[b]	18,100±31%	13,200±32%	6,900±34%	9,700±29%	25,800±23%	20,900±20%
Seasonal Goose Harvest Per Hunter[b]	3.2±50%	3.4±42%	4.0±45%	3.5±37%	7.7±31%	6.6±27%
Active Waterfowl Hunters[c]	5,100±23%	4,300±20%	1,900±19%	2,700±18%	7,500±11%	7,800±8%
Sample Sizes						
DuckWings	557	626	236	234	1,001	903
GooseTails	162	272	43	67	474	370

Table 1A. Preliminary estimates of waterfowl harvest and hunter activity in the Atlantic Flyway during the 2016 and 2017 hunting seasons.

	New York		North Carolina		Pennsylvania	
Duck Species Composition	2016	2017	2016	2017	2016	2017
Mallard	61,265	78,548	60,235	35,209	29,757	19,421
Domestic Mallard	405	147	239	141	234	83
Black Duck	11,483	18,848	7,888	13,239	2,726	3,154
Mallard x Black Hybrid	473	660	478	282	156	415
Mottled Duck	0	0	0	0	0	0
Gadwall	2,769	2,494	48,045	27,181	2,103	1,162
Wigeon	5,404	5,647	39,918	12,112	234	0
Green-winged Teal	7,430	7,041	38,723	34,223	1,168	2,822
Blue-winged/Cinnamon Teal	405	440	6,693	6,197	156	747
Northern Shoveler	743	587	13,386	10,704	156	83
Northern Pintail	3,512	3,374	9,322	5,633	156	498
Wood Duck	19,589	20,169	141,745	117,457	17,527	19,587
Redhead	2,702	3,887	7,171	11,971	156	332
Canvasback	135	220	478	1,690	0	166
Greater Scaup	2,567	2,934	2,390	5,070	1,792	1,162
Lesser Scaup	1,351	1,834	11,951	16,196	1,091	2,324
Ring-necked Duck	2,297	733	35,137	17,041	389	249
Goldeneyes	6,147	5,647	478	0	389	1,245
Bufflehead	6,822	6,234	24,620	9,999	1,714	3,901
Ruddy Duck	68	220	2,390	6,197	389	581
Long-tailed Duck	10,083	8,202	239	141	0	166
Eiders	0	73	0	0	0	0
Scoters	4,683	2,734	3,107	2,394	78	83
Hooded Merganser	1,486	2,200	16,732	11,830	935	1,494
Other Mergansers	4,526	3,740	1,195	986	3,739	3,071
Other Ducks	68	73	0	0	0	0
Total Duck Harvest	156,400±17%	176,700±17%	472,600±36%	345,900±24%	65,000±25%	62,700±39%
Total Active Duck Hunters[a]	17,600±10%	17,400±13%	31,500±19%	26,100±16%	20,000±21%	12,000±25%
Total Duck Hunter Days Afield[a]	104,000±18%	98,700±13%	242,100±34%	175,700±28%	86,900±27%	59,100±29%
Seasonal Duck Harvest Per Hunter[a]	8.2±19%	9.7±22%	15.0±41%	13.3±28%	3.3±33%	5.2±46%
Goose Species Composition						
Canada Goose	146,415	107,061	51,848	41,407	100,053	78,959
Snow Goose	3,389	2,943	358	254	3,701	1,689
Blue Goose	0	0	0	508	0	89
Ross' Goose	0	0	0	254	0	0
White-fronted Goose	0	87	0	0	0	0
Brant	5,304	7,232	1,261	1,167	255	0
Other Geese	0	0	0	0	128	89
Total Goose Harvest	155,100±22%	117,300±21%	53,500±31%	43,600±34%	104,100±23%	80,800±19%
Total Active Goose Hunters[b]	17,200±9%	14,700±12%	22,900±24%	17,800±21%	23,600±17%	17,600±20%
Total Goose Hunter Days Afield[b]	98,100±15%	84,600±18%	79,100±31%	70,400±42%	115,700±23%	77,800±18%
Seasonal Goose Harvest Per Hunter[b]	8.7±24%	7.5±25%	2.3±39%	2.4±40%	4.4±28%	4.6±28%
Active Waterfowl Hunters[c]	24,200±8%	22,700±10%	32,100±18%	28,500±16%	36,300±15%	27,300±18%
Sample Sizes						
DuckWings	2,195	2,340	1,977	2,456	835	756
GooseTails	960	1,327	148	169	816	909

Table 1A. Preliminary estimates of waterfowl harvest and hunter activity in the Atlantic Flyway during the 2016 and 2017 hunting seasons.

	Rhode Island		South Carolina		Vermont	
Duck Species Composition	2016	2017	2016	2017	2016	2017
Mallard	919	2,365	16,336	13,251	7,357	9,303
Domestic Mallard	0	0	684	530	50	0
Black Duck	362	1,475	941	424	801	2,340
Mallard x Black Hybrid	0	28	0	0	100	0
Mottled Duck	0	0	1,112	212	0	0
Gadwall	56	362	8,895	9,858	50	114
Wigeon	28	139	770	1,590	100	57
Green-winged Teal	84	167	14,454	22,685	2,252	742
Blue-winged/Cinnamon Teal	0	0	5,474	9,328	150	57
Northern Shoveler	0	28	2,651	4,028	0	114
Northern Pintail	84	0	1,197	1,166	150	342
Wood Duck	306	779	70,046	89,468	3,353	4,851
Redhead	0	0	257	530	50	0
Canvasback	0	0	86	212	0	0
Greater Scaup	56	139	342	318	0	0
Lesser Scaup	28	28	1,026	4,240	100	171
Ring-necked Duck	0	28	16,592	20,035	200	285
Goldeneyes	0	0	0	0	1,702	970
Bufflehead	1,559	445	1,539	6,466	300	57
Ruddy Duck	0	0	428	1,060	50	0
Long-tailed Duck	0	135	0	0	0	57
Eiders	221	1,415	86	0	0	0
Scoters	299	67	2,309	0	250	114
Hooded Merganser	362	334	3,934	2,650	150	114
Other Mergansers	362	1,085	171	1,060	450	171
Other Ducks	0	0	0	0	0	0
Total Duck Harvest	4,700±33%	9,000±47%	149,300±20%	189,100±36%	17,600±17%	19,900±40%
Total Active Duck Hunters[a]	500±18%	800±19%	17,500±22%	18,700±24%	3,400±15%	2,500±22%
Total Duck Hunter Days Afield[a]	3,700±22%	4,900±26%	91,200±24%	88,800±24%	16,900±18%	15,300±27%
Seasonal Duck Harvest Per Hunter[a]	8.1±37%	9.8±51%	8.5±29%	10.1±43%	5.2±22%	7.9±46%
Goose Species Composition						
Canada Goose	2,934	8,056	15,769	15,083	8,804	15,905
Snow Goose	18	82	0	628	0	0
Blue Goose	0	0	0	0	0	0
Ross' Goose	0	0	0	0	0	0
White-fronted Goose	0	0	0	0	0	0
Brant	507	853	0	0	62	57
Other Geese	0	0	0	0	0	0
Total Goose Harvest	3,500±39%	9,000±44%	15,800±39%	15,700±70%	8,900±28%	16,000±58%
Total Active Goose Hunters[b]	500±20%	700±21%	6,400±32%	4,800±39%	2,100±20%	2,700±27%
Total Goose Hunter Days Afield[b]	2,900±27%	5,000±30%	23,000±54%	13,000±42%	9,900±28%	12,800±28%
Seasonal Goose Harvest Per Hunter[b]	6.3±44%	11.1±49%	2.4±50%	3.3±80%	4.3±34%	5.9±64%
Active Waterfowl Hunters[c]	700±14%	1,000±15%	19,100±22%	19,200±23%	3,800±14%	3,400±21%
Sample Sizes						
DuckWings	191	290	1,746	1,784	352	348
GooseTails	190	312	26	25	144	280

Table 1A. Preliminary estimates of waterfowl harvest and hunter activity in the Atlantic Flyway during the 2016 and 2017 hunting seasons.

	Virginia		West Virginia		Flyway Total	
Duck Species Composition	2016	2017	2016	2017	2016	2017
Mallard	39,272	43,229	2,356	2,161	313,362	286,376
Domestic Mallard	184	351	40	46	2,532	2,326
Black Duck	6,822	11,247	220	299	60,868	85,758
Mallard x Black Hybrid	184	234	0	0	1,814	2,372
Mottled Duck	0	0	0	0	8,481	7,595
Gadwall	16,133	11,832	60	92	92,024	64,618
Wigeon	1,383	703	20	23	55,446	26,442
Green-winged Teal	2,581	4,452	100	69	115,934	101,247
Blue-winged/Cinnamon Teal	1,106	234	0	23	63,290	67,713
Northern Shoveler	3,964	703	20	0	30,283	26,307
Northern Pintail	1,383	1,523	20	23	25,409	16,280
Wood Duck	16,501	22,025	1,517	1,241	388,317	454,253
Redhead	277	937	0	92	19,745	23,809
Canvasback	645	2,695	0	0	4,512	10,693
Greater Scaup	553	1,992	0	0	10,511	18,748
Lesser Scaup	1,475	3,397	0	23	23,931	50,424
Ring-necked Duck	7,006	9,724	20	69	136,531	104,941
Goldeneyes	369	117	0	115	10,650	9,682
Bufflehead	12,261	14,527	240	161	88,166	77,872
Ruddy Duck	0	937	0	69	9,063	10,983
Long-tailed Duck	3,094	5,455	0	0	31,853	24,862
Eiders	0	381	0	0	6,612	13,381
Scoters	7,427	9,268	0	23	39,110	33,078
Hooded Merganser	3,227	3,280	20	230	38,316	33,061
Other Mergansers	922	703	100	161	15,715	15,801
Other Ducks	0	0	0	0	7,437	3,874
Total Duck Harvest	126,800±20%	149,900±19%	4,700±26%	4,900±24%	1,599,900±12%	1,572,500±8%
Total Active Duck Hunters[a]	13,200±14%	17,500±17%	800±22%	1,000±23%	176,900	168,600
Total Duck Hunter Days Afield[a]	78,200±16%	91,100±19%	4,200±25%	4,800±25%	1,006,600±10%	912,300±7%
Seasonal Duck Harvest Per Hunter[a]	8.8±25%	7.7±26%	5.8±35%	4.9±33%		
Goose Species Composition						
Canada Goose	84,361	60,007	3,912	5,527	714,254	627,784
Snow Goose	944	0	0	0	24,171	15,553
Blue Goose	0	0	0	0	1,389	1,058
Ross' Goose	0	0	0	0	0	254
White-fronted Goose	0	580	0	60	0	726
Brant	2,187	541	0	0	14,078	17,901
Other Geese	0	0	0	0	128	118
Total Goose Harvest	87,500±41%	61,100±20%	3,900±28%	5,600±41%	754,000±9%	663,400±7%
Total Active Goose Hunters[b]	17,500±21%	12,800±20%	900±23%	1,000±23%	148,800	124,300
Total Goose Hunter Days Afield[b]	98,100±31%	52,600±19%	5,300±26%	5,400±28%	736,200±8%	595,300±8%
Seasonal Goose Harvest Per Hunter[b]	4.9±46%	4.7±28%	4.3±36%	5.6±47%		
Active Waterfowl Hunters[c]	15,000±14%	22,700±15%	900±22%	1,300±20%	227,300	222,900
Sample Sizes						
DuckWings	1,295	1,192	237	214	15,133	16,001
GooseTails	284	419	108	187	5,187	6,789

Table 1B. Preliminary estimates of waterfowl harvest and hunter activity in the Mississippi Flyway during the 2016 and 2017 hunting seasons.

	Alabama		Arkansas		Illinois	
Duck Species Composition	2016	2017	2016	2017	2016	2017
Mallard	14,242	14,099	621,200	427,479	140,137	115,685
Domestic Mallard	0	0	0	0	0	160
Black Duck	0	371	0	270	1,649	959
Mallard x Black Hybrid	185	0	260	0	206	0
Mottled Duck	0	0	0	0	0	0
Gadwall	26,449	17,810	170,459	181,126	27,203	24,128
Wigeon	740	1,484	21,340	21,293	2,885	4,634
Green-winged Teal	4,624	16,326	163,172	175,466	23,700	31,797
Blue-winged/Cinnamon Teal	0	1,484	3,643	7,547	7,007	18,216
Northern Shoveler	1,850	4,452	49,967	69,000	14,220	22,849
Northern Pintail	555	1,113	14,313	22,371	7,213	8,309
Wood Duck	25,154	60,479	68,704	70,618	42,041	14,061
Redhead	370	1,855	1,041	270	2,473	3,196
Canvasback	1,480	2,226	4,164	3,773	7,625	5,592
Greater Scaup	0	1,484	520	270	1,855	1,118
Lesser Scaup	185	17,439	1,822	4,582	9,686	23,808
Ring-necked Duck	9,988	22,633	12,231	15,633	14,220	11,824
Goldeneyes	925	371	0	539	1,649	1,278
Bufflehead	2,404	8,905	1,041	2,426	1,855	13,582
Ruddy Duck	185	371	0	539	824	799
Long-tailed Duck	0	0	0	270	206	320
Eiders	0	0	0	0	0	0
Scoters	0	0	0	0	412	160
Hooded Merganser	5,179	2,226	5,725	2,695	2,885	2,716
Other Mergansers	370	371	0	0	824	479
Other Ducks	0	0	0	539	206	0
Total Duck Harvest	94,900±43%	175,500±25%	1,139,600±13%	1,006,700±11%	311,000±18%	305,700±17%
Total Active Duck Hunters[a]	9,400±26%	15,600±21%	53,900±10%	52,100±11%	27,100±12%	24,100±13%
Total Duck Hunter Days Afield[a]	48,300±40%	80,100±22%	423,100±12%	370,200±14%	213,600±15%	209,700±15%
Seasonal Duck Harvest Per Hunter[a]	10.1±50%	11.3±33%	21.1±17%	19.3±15%	11.5±22%	12.7±22%
Goose Species Composition						
Canada Goose	6,199	22,186	6,291	6,111	96,586	130,871
Snow Goose	0	0	39,321	49,498	6,364	11,363
Blue Goose	0	0	18,874	26,277	4,118	2,743
Ross' Goose	0	0	4,194	17,111	3,369	1,959
White-fronted Goose	0	0	70,777	89,831	2,995	4,702
Brant	0	0	0	0	0	0
Other Geese	0	0	0	0	0	0
Total Goose Harvest	6,200±62%	22,200±80%	139,500±26%	188,800±21%	113,400±25%	151,600±32%
Total Active Goose Hunters[b]	3,200±51%	4,600±42%	20,800±14%	28,400±13%	22,600±13%	21,700±14%
Total Goose Hunter Days Afield[b]	24,200±76%	17,900±51%	132,100±20%	116,000±17%	161,300±16%	176,800±19%
Seasonal Goose Harvest Per Hunter[b]	1.9±81%	4.8±90%	6.7±29%	6.7±25%	5.0±29%	7.0±35%
Active Waterfowl Hunters[c]	9,500±25%	15,900±21%	55,200±10%	52,200±11%	31,900±11%	29,000±12%
Sample Sizes						
DuckWings	513	473	4,379	3,735	1,509	1,913
GooseTails	33	30	266	309	303	387

Table 1B. Preliminary estimates of waterfowl harvest and hunter activity in the Mississippi Flyway during the 2016 and 2017 hunting seasons.

	Indiana		Iowa		Kentucky	
Duck Species Composition	2016	2017	2016	2017	2016	2017
Mallard	47,705	45,269	51,465	44,263	57,855	76,376
Domestic Mallard	276	404	0	0	0	0
Black Duck	1,103	1,415	0	171	3,945	4,444
Mallard x Black Hybrid	0	0	0	0	263	0
Mottled Duck	0	0	0	0	0	0
Gadwall	9,376	9,903	11,634	10,938	22,353	16,942
Wigeon	1,655	1,617	2,169	4,272	3,156	3,333
Green-winged Teal	3,861	3,638	23,268	21,021	5,522	833
Blue-winged/Cinnamon Teal	0	3,436	18,338	37,427	263	1,111
Northern Shoveler	3,309	3,233	3,352	3,247	4,997	7,499
Northern Pintail	276	1,415	3,944	5,298	0	1,666
Wood Duck	9,100	9,094	11,634	23,584	7,100	9,721
Redhead	1,379	202	1,577	0	0	1,944
Canvasback	1,655	202	2,761	342	263	555
Greater Scaup	827	1,213	0	0	789	1,389
Lesser Scaup	552	404	2,169	1,538	4,997	5,555
Ring-necked Duck	4,964	3,638	3,352	2,222	4,471	3,333
Goldeneyes	552	2,021	1,972	171	7,100	3,888
Bufflehead	0	1,617	197	854	1,315	555
Ruddy Duck	552	0	0	171	0	278
Long-tailed Duck	0	0	0	0	0	0
Eiders	0	0	0	0	0	0
Scoters	0	202	0	0	263	278
Hooded Merganser	552	2,021	197	513	2,630	4,721
Other Mergansers	0	0	394	0	789	0
Other Ducks	0	0	197	0	0	0
Total Duck Harvest	87,700±24%	90,900±14%	138,600±19%	156,000±21%	128,100±14%	144,400±10%
Total Active Duck Hunters[a]	10,000±15%	10,500±14%	13,500±18%	13,400±18%	9,700±17%	10,100±16%
Total Duck Hunter Days Afield[a]	73,400±17%	64,100±15%	105,400±16%	99,200±25%	71,700±12%	78,400±14%
Seasonal Duck Harvest Per Hunter[a]	8.8±28%	8.7±20%	10.3±26%	11.6±27%	13.2±22%	14.3±19%
Goose Species Composition						
Canada Goose	55,571	43,965	56,895	59,641	15,946	38,931
Snow Goose	1,010	1,570	590	0	0	0
Blue Goose	1,010	0	590	0	0	0
Ross' Goose	0	314	884	0	664	0
White-fronted Goose	4,042	1,256	1,474	0	10,630	0
Brant	0	0	0	0	0	0
Other Geese	0	0	0	0	0	0
Total Goose Harvest	61,600±23%	47,100±17%	60,400±26%	59,600±28%	27,200±15%	38,900±14%
Total Active Goose Hunters[b]	9,300±13%	10,500±14%	11,400±20%	13,200±20%	7,800±11%	8,900±11%
Total Goose Hunter Days Afield[b]	83,300±20%	59,300±17%	100,200±25%	75,100±25%	56,000±16%	70,300±14%
Seasonal Goose Harvest Per Hunter[b]	6.6±26%	4.5±22%	5.3±33%	4.5±34%	3.5±19%	4.4±18%
Active Waterfowl Hunters[c]	11,000±13%	12,400±13%	15,000±17%	15,700±17%	10,800±17%	11,100±16%
Sample Sizes						
DuckWings	318	450	703	913	487	520
GooseTails	122	150	205	182	41	30

Table 1B. Preliminary estimates of waterfowl harvest and hunter activity in the Mississippi Flyway during the 2016 and 2017 hunting seasons.

	Louisiana		Michigan		Minnesota	
Duck Species Composition	2016	2017	2016	2017	2016	2017
Mallard	70,266	86,315	145,299	116,186	135,643	159,718
Domestic Mallard	414	0	0	154	0	0
Black Duck	0	133	9,011	4,303	0	308
Mallard x Black Hybrid	0	0	282	307	0	0
Mottled Duck	10,906	9,149	0	0	0	0
Gadwall	207,072	167,990	6,758	6,762	8,198	29,543
Wigeon	16,152	30,230	6,195	5,994	13,788	11,386
Green-winged Teal	203,207	215,457	19,148	19,672	37,637	60,317
Blue-winged/Cinnamon Teal	102,156	221,026	2,534	3,227	73,039	78,166
Northern Shoveler	48,317	55,953	3,661	1,691	6,335	11,079
Northern Pintail	27,195	31,689	5,350	5,994	9,316	13,541
Wood Duck	84,071	81,277	65,047	44,108	115,520	116,326
Redhead	8,421	6,895	19,430	15,830	13,788	21,234
Canvasback	11,872	9,679	1,971	768	7,080	6,155
Greater Scaup	414	2,784	9,011	6,608	373	2,462
Lesser Scaup	11,320	89,630	10,700	8,760	7,080	8,617
Ring-necked Duck	42,657	60,461	13,798	13,524	62,604	80,321
Goldeneyes	138	133	2,816	2,766	4,099	6,770
Bufflehead	966	2,254	19,993	24,282	17,887	12,925
Ruddy Duck	1,242	398	10,982	1,229	0	615
Long-tailed Duck	0	0	845	7,838	0	0
Eiders	0	0	0	0	0	0
Scoters	138	133	2,816	768	0	1,231
Hooded Merganser	8,283	6,895	3,097	5,072	8,571	8,309
Other Mergansers	276	133	2,534	1,691	0	923
Other Ducks	1,519	5,304	0	0	0	0
Total Duck Harvest	857,000±20%	1,083,900±18%	361,300±23%	297,500±17%	521,000±14%	629,900±15%
Total Active Duck Hunters[a]	49,900±12%	46,900±12%	38,200±15%	33,200±12%	60,600±10%	64,800±10%
Total Duck Hunter Days Afield[a]	289,900±17%	324,100±14%	248,800±16%	201,000±14%	336,600±13%	369,700±13%
Seasonal Duck Harvest Per Hunter[a]	17.2±24%	23.1±21%	9.5±27%	9.0±21%	8.6±18%	9.7±18%
Goose Species Composition						
Canada Goose	2,393	420	167,751	180,296	175,759	212,160
Snow Goose	12,761	10,085	0	241	0	0
Blue Goose	13,558	8,404	0	0	0	0
Ross' Goose	2,393	1,681	0	0	0	0
White-fronted Goose	68,590	54,628	0	0	1,986	0
Brant	0	0	0	0	0	0
Other Geese	0	0	0	0	0	0
Total Goose Harvest	99,700±55%	75,200±52%	167,800±19%	180,500±19%	177,700±25%	212,200±16%
Total Active Goose Hunters[b]	13,600±18%	15,500±17%	39,700±14%	34,500±13%	42,000±11%	52,200±10%
Total Goose Hunter Days Afield[b]	74,100±32%	74,700±24%	263,400±20%	209,500±16%	214,900±15%	291,800±15%
Seasonal Goose Harvest Per Hunter[b]	7.3±58%	4.9±54%	4.2±24%	5.2±23%	4.2±27%	4.1±19%
Active Waterfowl Hunters[c]	50,800±12%	47,400±12%	43,600±14%	42,900±11%	65,900±10%	72,900±10%
Sample Sizes						
DuckWings	6,208	8,175	1,283	1,936	1,398	2,047
GooseTails	125	179	312	748	179	361

Table 1B. Preliminary estimates of waterfowl harvest and hunter activity in the Mississippi Flyway during the 2016 and 2017 hunting seasons.

	Mississippi		Missouri		Ohio	
Duck Species Composition	2016	2017	2016	2017	2016	2017
Mallard	66,842	61,215	230,782	244,342	56,661	43,104
Domestic Mallard	0	0	0	0	174	200
Black Duck	0	0	0	0	3,998	2,594
Mallard x Black Hybrid	0	0	0	0	174	0
Mottled Duck	0	0	0	0	0	0
Gadwall	45,224	50,561	71,559	58,067	6,257	2,694
Wigeon	2,485	4,735	5,982	9,506	1,564	898
Green-winged Teal	50,939	50,899	51,080	63,719	2,259	7,284
Blue-winged/Cinnamon Teal	0	338	16,567	23,124	695	2,894
Northern Shoveler	17,145	31,284	30,602	17,214	869	399
Northern Pintail	5,964	5,242	14,726	20,811	1,564	2,993
Wood Duck	20,376	41,937	17,027	15,416	10,255	15,366
Redhead	1,988	0	2,761	2,826	348	499
Canvasback	248	338	920	1,028	174	299
Greater Scaup	248	169	0	771	1,564	1,996
Lesser Scaup	497	1,860	920	8,479	1,912	1,796
Ring-necked Duck	4,473	8,793	6,443	15,159	1,043	1,497
Goldeneyes	248	169	460	0	1,043	2,694
Bufflehead	0	338	460	771	521	1,098
Ruddy Duck	994	338	0	0	695	0
Long-tailed Duck	0	0	0	0	0	0
Eiders	0	0	0	0	0	0
Scoters	0	0	0	0	174	0
Hooded Merganser	248	1,015	1,611	2,826	1,217	599
Other Mergansers	0	0	460	0	6,083	5,188
Other Ducks	0	0	0	0	0	0
Total Duck Harvest	217,900±17%	259,200±15%	452,400±32%	484,100±18%	99,200±19%	94,100±22%
Total Active Duck Hunters[a]	13,700±19%	12,700±18%	30,800±13%	38,800±11%	13,200±19%	11,100±24%
Total Duck Hunter Days Afield[a]	88,200±20%	86,700±15%	220,200±22%	219,300±15%	96,200±19%	73,000±22%
Seasonal Duck Harvest Per Hunter[a]	15.9±26%	20.3±24%	14.7±35%	12.5±21%	7.5±27%	8.5±32%
Goose Species Composition						
Canada Goose	3,866	0	70,685	97,127	84,403	59,499
Snow Goose	3,663	6,387	3,029	9,868	0	301
Blue Goose	6,104	2,839	1,683	2,597	0	301
Ross' Goose	1,017	1,065	2,020	2,597	0	150
White-fronted Goose	14,447	22,001	1,010	5,713	265	150
Brant	0	0	0	0	0	0
Other Geese	0	0	0	0	0	0
Total Goose Harvest	29,100±52%	32,300±30%	78,400±23%	117,900±35%	84,700±24%	60,400±25%
Total Active Goose Hunters[b]	7,000±26%	8,500±25%	16,500±16%	14,100±17%	13,100±19%	13,000±22%
Total Goose Hunter Days Afield[b]	36,700±36%	37,000±33%	85,400±20%	81,600±24%	110,600±20%	76,100±21%
Seasonal Goose Harvest Per Hunter[b]	4.2±59%	3.8±39%	4.8±28%	8.3±39%	6.5±31%	4.6±33%
Active Waterfowl Hunters[c]	13,700±19%	12,800±18%	35,300±12%	40,800±11%	17,100±18%	15,700±20%
Sample Sizes						
DuckWings	877	1,533	1,966	1,884	571	943
GooseTails	143	91	233	227	319	402

Table 1B. Preliminary estimates of waterfowl harvest and hunter activity in the Mississippi Flyway during the 2016 and 2017 hunting seasons.

	Tennessee		Wisconsin		Flyway Total	
Duck Species Composition	2016	2017	2016	2017	2016	2017
Mallard	88,111	89,458	99,972	119,962	1,826,180	1,643,472
Domestic Mallard	323	267	0	0	1,186	1,184
Black Duck	4,196	1,869	2,058	1,020	25,959	17,855
Mallard x Black Hybrid	0	0	294	170	1,664	477
Mottled Duck	0	0	0	0	10,906	9,149
Gadwall	33,889	26,170	15,878	20,900	662,309	623,532
Wigeon	4,518	2,937	9,115	5,947	91,744	108,267
Green-winged Teal	15,169	19,761	23,817	31,435	627,404	717,625
Blue-winged/Cinnamon Teal	3,550	2,136	27,639	39,251	255,431	439,383
Northern Shoveler	3,873	5,608	5,293	3,738	193,789	237,247
Northern Pintail	4,518	5,875	6,469	8,326	101,403	134,643
Wood Duck	10,651	20,028	95,855	88,527	582,535	610,542
Redhead	2,259	1,068	4,705	1,529	60,539	57,348
Canvasback	323	6,409	4,705	2,719	45,240	40,087
Greater Scaup	1,614	0	17,348	8,666	34,564	28,929
Lesser Scaup	1,291	801	14,114	12,234	67,244	185,503
Ring-necked Duck	1,614	8,812	6,469	20,050	188,325	267,900
Goldeneyes	2,582	534	9,703	10,535	33,287	31,870
Bufflehead	3,227	9,346	5,881	17,332	55,748	96,285
Ruddy Duck	0	534	0	1,869	15,474	7,142
Long-tailed Duck	0	0	9,703	4,758	10,754	13,185
Eiders	0	0	0	0	0	0
Scoters	0	0	2,352	680	6,155	3,451
Hooded Merganser	6,778	4,273	3,234	3,908	50,207	47,789
Other Mergansers	0	1,335	882	1,020	12,613	11,140
Other Ducks	0	0	0	0	1,922	5,843
Total Duck Harvest	188,500±39%	207,200±21%	365,500±12%	404,600±13%	4,962,600±6%	5,339,800±5%
Total Active Duck Hunters[a]	11,600±31%	13,100±20%	55,000±14%	44,100±13%	396,700	390,500
Total Duck Hunter Days Afield[a]	85,600±29%	82,600±18%	346,100±14%	286,400±12%	2,647,200±5%	2,544,600±5%
Seasonal Duck Harvest Per Hunter[a]	16.3±50%	15.8±29%	6.6±18%	9.2±19%		
Goose Species Composition						
Canada Goose	8,002	22,426	96,382	135,776	846,729	1,009,409
Snow Goose	8,002	1,557	0	0	74,740	90,872
Blue Goose	0	311	0	0	45,938	43,472
Ross' Goose	0	0	0	271	14,542	25,147
White-fronted Goose	20,006	2,803	0	0	196,222	181,084
Brant	0	0	0	0	0	0
Other Geese	0	0	0	0	0	0
Total Goose Harvest	36,000±49%	27,100±38%	96,400±20%	136,000±18%	1,178,200±9%	1,350,000±8%
Total Active Goose Hunters[b]	9,000±36%	8,100±25%	44,400±12%	38,400±10%	260,400	271,700
Total Goose Hunter Days Afield[b]	63,600±44%	64,900±45%	328,700±20%	238,900±14%	1,734,700±7%	1,590,000±6%
Seasonal Goose Harvest Per Hunter[b]	4.0±60%	3.3±46%	2.2±23%	3.5±20%		
Active Waterfowl Hunters[c]	12,400±31%	14,000±20%	61,900±13%	54,200±13%	434,200	437,100
Sample Sizes						
DuckWings	584	776	1,243	2,381	22,039	27,679
GooseTails	9	87	205	502	2,495	3,685

Table 1C. Preliminary estimates of waterfowl harvest and hunter activity in the Central Flyway during the 2016 and 2017 hunting seasons.

	Colorado		Kansas		Nebraska	
Duck Species Composition	2016	2017	2016	2017	2016	2017
Mallard	49,905	49,339	95,977	65,323	78,575	62,861
Domestic Mallard	0	0	0	0	0	132
Black Duck	0	0	0	0	0	0
Mallard x Black Hybrid	0	0	0	0	0	0
Mottled Duck	0	0	0	0	0	0
Gadwall	9,173	13,167	13,962	19,380	8,446	14,425
Wigeon	6,374	11,865	3,755	7,185	7,088	7,543
Green-winged Teal	9,639	6,366	19,712	19,947	18,550	20,645
Blue-winged/Cinnamon Teal	4,198	2,894	27,573	16,354	14,177	17,204
Northern Shoveler	311	723	3,285	7,468	2,262	2,779
Northern Pintail	777	723	5,280	4,160	2,111	3,970
Wood Duck	777	1,736	1,643	1,607	3,167	2,779
Redhead	777	1,447	2,112	2,836	1,357	2,250
Canvasback	311	0	704	851	452	397
Greater Scaup	0	0	0	95	0	0
Lesser Scaup	311	723	587	1,229	302	132
Ring-necked Duck	2,177	2,170	2,699	4,727	1,961	1,323
Goldeneyes	1,555	1,302	352	1,891	754	662
Bufflehead	0	289	117	756	603	0
Ruddy Duck	466	0	117	189	0	0
Long-tailed Duck	0	0	0	0	0	0
Eiders	0	0	0	0	0	0
Scoters	0	0	0	0	0	0
Hooded Merganser	155	0	1,173	1,796	0	265
Other Mergansers	0	145	117	284	0	132
Other Ducks	0	145	0	0	0	0
Total Duck Harvest	86,900±18%	93,000±17%	179,200±22%	156,100±39%	139,800±21%	137,500±16%
Total Active Duck Hunters[a]	10,300±17%	11,700±14%	14,000±20%	17,900±27%	12,300±14%	10,700±15%
Total Duck Hunter Days Afield[a]	60,600±18%	60,200±16%	87,300±19%	66,100±38%	81,300±16%	84,900±16%
Seasonal Duck Harvest Per Hunter[a]	8.4±25%	8.0±22%	12.8±30%	8.7±48%	11.3±25%	12.9±22%
Goose Species Composition						
Canada Goose	99,221	104,263	96,863	95,786	115,371	138,904
Snow Goose	10,366	17,541	9,609	9,253	8,049	2,277
Blue Goose	2,116	1,639	3,075	3,501	2,981	683
Ross' Goose	2,539	3,771	1,538	1,501	1,192	455
White-fronted Goose	635	492	16,913	4,752	894	911
Brant	0	0	0	0	0	0
Other Geese	0	0	0	0	0	0
Total Goose Harvest	114,900±19%	127,700±17%	128,000±23%	114,800±47%	128,500±18%	143,200±26%
Total Active Goose Hunters[b]	15,200±16%	14,000±13%	15,100±20%	12,300±33%	13,100±11%	13,000±11%
Total Goose Hunter Days Afield[b]	85,700±21%	74,600±15%	95,000±23%	57,900±40%	96,900±13%	108,400±17%
Seasonal Goose Harvest Per Hunter[b]	7.6±25%	9.1±22%	8.5±30%	9.3±58%	9.8±21%	11.0±29%
Active Waterfowl Hunters[c]	19,600±14%	19,500±12%	16,400±19%	22,200±24%	17,500±11%	16,200±13%
Sample Sizes						
DuckWings	559	643	1,527	1,651	927	1,039
GooseTails	543	779	333	459	431	629

Table 1C. Preliminary estimates of waterfowl harvest and hunter activity in the Central Flyway during the 2016 and 2017 hunting seasons.

	New Mexico		North Dakota		Oklahoma	
Duck Species Composition	2016	2017	2016	2017	2016	2017
Mallard	7,513	15,945	163,808	171,745	131,316	79,361
Domestic Mallard	0	0	0	0	0	0
Black Duck	0	0	0	0	0	0
Mallard x Black Hybrid	0	0	0	0	0	0
Mottled Duck	0	0	0	0	0	0
Gadwall	1,337	3,283	70,781	58,766	39,696	39,612
Wigeon	2,487	11,138	21,056	19,982	11,892	10,618
Green-winged Teal	1,230	4,103	28,194	30,437	28,642	33,759
Blue-winged/Cinnamon Teal	107	586	38,067	39,711	9,547	2,722
Northern Shoveler	1,283	2,228	26,290	19,645	6,365	4,764
Northern Pintail	1,203	3,048	20,461	16,525	11,892	8,440
Wood Duck	241	469	2,260	2,782	3,852	4,492
Redhead	160	234	18,558	14,839	2,177	1,361
Canvasback	107	117	7,851	7,504	1,842	681
Greater Scaup	0	0	238	169	167	0
Lesser Scaup	80	234	19,509	21,415	1,005	1,089
Ring-necked Duck	134	703	8,446	8,769	7,705	9,120
Goldeneyes	0	0	357	590	335	136
Bufflehead	160	234	8,803	10,455	502	136
Ruddy Duck	27	117	1,428	1,265	0	0
Long-tailed Duck	0	0	0	0	0	0
Eiders	0	0	0	0	0	0
Scoters	0	0	0	169	0	0
Hooded Merganser	0	0	1,071	1,602	670	953
Other Mergansers	321	0	0	0	0	0
Other Ducks	27	117	119	0	0	136
Total Duck Harvest	16,400±42%	42,600±106%	437,300±9%	426,400±21%	257,600±32%	197,400±25%
Total Active Duck Hunters[a]	4,200±61%	3,000±59%	33,500±8%	29,400±7%	19,400±18%	15,800±15%
Total Duck Hunter Days Afield[a]	11,000±48%	17,700±79%	159,500±8%	143,500±14%	123,700±29%	82,600±27%
Seasonal Duck Harvest Per Hunter[a]	3.9±74%	14.1±121%	13.1±12%	14.5±22%	13.3±37%	12.5±30%
Goose Species Composition						
Canada Goose	1,734	1,986	128,915	176,541	45,060	56,660
Snow Goose	228	64	26,073	21,338	1,492	590
Blue Goose	0	0	19,865	15,273	0	0
Ross' Goose	137	0	3,518	3,481	895	0
White-fronted Goose	0	0	1,448	2,920	1,790	3,541
Brant	0	0	0	0	0	0
Other Geese	0	0	0	898	0	0
Total Goose Harvest	2,100±64%	2,100±54%	179,800±15%	220,500±14%	49,200±54%	60,800±35%
Total Active Goose Hunters[b]	1,800±74%	1,600±75%	25,000±7%	26,700±7%	7,700±35%	7,900±22%
Total Goose Hunter Days Afield[b]	6,100±86%	6,200±83%	125,200±12%	118,200±9%	50,400±52%	27,000±32%
Seasonal Goose Harvest Per Hunter[b]	1.2±98%	1.3±92%	7.2±17%	8.2±16%	6.4±64%	7.7±42%
Active Waterfowl Hunters[c]	5,500±54%	4,700±52%	38,000±7%	35,300±7%	19,400±18%	16,900±14%
Sample Sizes						
DuckWings	614	363	3,676	5,057	1,538	1,450
GooseTails	46	96	869	1,963	165	103

Table 1C. Preliminary estimates of waterfowl harvest and hunter activity in the Central Flyway during the 2016 and 2017 hunting seasons.

	South Dakota		Texas		Wyoming	
Duck Species Composition	2016	2017	2016	2017	2016	2017
Mallard	48,402	44,934	118,750	96,236	16,245	20,411
Domestic Mallard	0	0	0	0	0	0
Black Duck	0	0	0	0	0	0
Mallard x Black Hybrid	0	0	0	0	0	0
Mottled Duck	0	0	4,374	4,919	0	0
Gadwall	9,539	19,639	195,378	160,607	1,509	4,795
Wigeon	5,676	6,038	67,718	76,775	2,013	5,617
Green-winged Teal	15,609	21,990	170,753	226,475	3,199	4,521
Blue-winged/Cinnamon Teal	17,422	8,644	265,040	233,960	1,294	2,192
Northern Shoveler	5,203	7,945	59,780	64,585	180	411
Northern Pintail	2,601	4,068	63,830	60,949	395	411
Wood Duck	3,547	1,907	68,852	94,097	539	342
Redhead	2,050	3,051	59,942	58,383	180	411
Canvasback	1,419	1,716	11,988	16,895	0	68
Greater Scaup	79	127	648	1,283	0	0
Lesser Scaup	4,336	2,669	13,284	44,910	0	137
Ring-necked Duck	2,286	2,669	42,283	45,766	144	0
Goldeneyes	158	127	1,620	1,925	611	1,507
Bufflehead	6,228	3,178	4,374	6,202	0	137
Ruddy Duck	236	127	2,268	1,711	0	137
Long-tailed Duck	0	0	0	214	0	0
Eiders	0	0	0	0	0	0
Scoters	0	0	162	0	0	0
Hooded Merganser	79	445	7,290	3,208	36	0
Other Mergansers	0	191	972	2,352	36	411
Other Ducks	0	0	3,078	3,636	0	0
Total Duck Harvest	124,900±35%	129,500±18%	1,162,400±36%	1,205,100±26%	26,400±25%	41,500±25%
Total Active Duck Hunters[a]	10,600±21%	12,700±18%	79,900±20%	86,200±20%	3,100±20%	4,100±21%
Total Duck Hunter Days Afield[a]	48,100±25%	52,800±16%	385,800±29%	391,800±17%	13,100±19%	21,800±29%
Seasonal Duck Harvest Per Hunter[a]	11.7±41%	10.2±25%	14.5±41%	14.0±32%	8.5±32%	10.1±32%
Goose Species Composition						
Canada Goose	70,156	85,181	28,793	30,767	25,018	35,396
Snow Goose	7,890	20,123	79,356	105,909	62	218
Blue Goose	5,331	12,104	18,259	17,750	0	0
Ross' Goose	853	3,480	19,663	34,317	0	0
White-fronted Goose	2,772	4,085	50,563	43,192	62	0
Brant	0	0	0	0	0	0
Other Geese	213	0	702	0	0	0
Total Goose Harvest	87,200±26%	125,000±24%	197,300±26%	231,900±36%	25,100±18%	35,600±33%
Total Active Goose Hunters[b]	12,800±16%	15,200±13%	45,700±18%	48,200±17%	3,900±16%	4,200±18%
Total Goose Hunter Days Afield[b]	57,600±20%	77,700±19%	143,500±27%	141,100±24%	16,800±18%	23,200±26%
Seasonal Goose Harvest Per Hunter[b]	6.8±30%	8.2±28%	4.3±32%	4.8±40%	6.5±24%	8.5±37%
Active Waterfowl Hunters[c]	16,300±18%	18,200±15%	83,900±20%	93,600±19%	6,200±10%	5,800±15%
Sample Sizes						
DuckWings	1,584	2,037	7,175	5,635	734	606
GooseTails	409	826	281	392	407	653

Table 1C. Preliminary estimates of waterfowl harvest and hunter activity in the Central Flyway during the 2016 and 2017 hunting seasons.

	Flyway Total	
Duck Species Composition	2016	2017
Mallard	710,491	606,155
Domestic Mallard	0	132
Black Duck	0	0
Mallard x Black Hybrid	0	0
Mottled Duck	4,374	4,919
Gadwall	349,821	333,673
Wigeon	128,058	156,760
Green-winged Teal	295,527	368,244
Blue-winged/Cinnamon Teal	377,424	324,268
Northern Shoveler	104,959	110,548
Northern Pintail	108,552	102,294
Wood Duck	84,879	110,212
Redhead	87,313	84,812
Canvasback	24,675	28,229
Greater Scaup	1,132	1,673
Lesser Scaup	39,414	72,540
Ring-necked Duck	67,834	75,248
Goldeneyes	5,741	8,140
Bufflehead	20,788	21,388
Ruddy Duck	4,543	3,546
Long-tailed Duck	0	214
Eiders	0	0
Scoters	162	169
Hooded Merganser	10,474	8,268
Other Mergansers	1,446	3,515
Other Ducks	3,224	4,034
Total Duck Harvest	2,430,800±18%	2,429,000±14%
Total Active Duck Hunters[a]	187,400	191,400
Total Duck Hunter Days Afield[a]	970,500±12%	921,400±9%
Seasonal Duck Harvest Per Hunter[a]		
Goose Species Composition		
Canada Goose	611,131	725,483
Snow Goose	143,125	177,314
Blue Goose	51,626	50,951
Ross' Goose	30,335	47,005
White-fronted Goose	75,077	59,893
Brant	0	0
Other Geese	916	898
Total Goose Harvest	912,200±9%	1,061,500±11%
Total Active Goose Hunters[b]	140,300	143,100
Total Goose Hunter Days Afield[b]	677,200±9%	634,200±8%
Seasonal Goose Harvest Per Hunter[b]		
Active Waterfowl Hunters[c]	222,800	232,500
Sample Sizes		
DuckWings	18,334	18,481
GooseTails	3,484	5,900

Table 1D. Preliminary estimates of waterfowl harvest and hunter activity in the Pacific Flyway during the 2016 and 2017 hunting seasons.

	Arizona		California		Idaho	
Duck Species Composition	2016	2017	2016	2017	2016	2017
Mallard	6,113	2,350	143,560	209,323	187,753	137,089
Domestic Mallard	41	21	340	851	715	447
Black Duck	0	0	0	0	0	0
Mallard x Black Hybrid	0	0	0	0	0	0
Mottled Duck	0	0	0	0	0	0
Gadwall	2,148	1,355	71,186	112,490	13,942	18,850
Wigeon	2,189	2,795	159,700	186,178	22,164	27,269
Green-winged Teal	5,535	2,032	381,752	356,700	22,021	13,038
Blue-winged/Cinnamon Teal	1,611	699	33,639	45,098	429	745
Northern Shoveler	1,652	635	139,313	169,330	2,073	3,204
Northern Pintail	413	296	135,575	119,467	5,362	2,310
Wood Duck	124	0	11,893	23,825	4,075	5,886
Redhead	702	466	4,077	8,339	643	1,341
Canvasback	83	85	17,669	15,657	143	149
Greater Scaup	0	0	2,209	511	214	0
Lesser Scaup	289	106	13,422	5,956	286	1,192
Ring-necked Duck	2,933	1,228	14,271	23,315	2,288	3,278
Goldeneyes	785	212	6,456	6,297	3,789	12,517
Bufflehead	537	254	14,951	16,337	500	3,427
Ruddy Duck	785	85	1,699	2,893	429	149
Long-tailed Duck	0	0	0	0	0	0
Eiders	0	0	0	0	0	0
Scoters	0	21	591	792	71	75
Hooded Merganser	248	42	680	1,532	500	373
Other Mergansers	207	0	1,189	681	500	298
Other Ducks	454	254	170	0	71	0
Total Duck Harvest	26,800±20%	12,900±26%	1,154,300±14%	1,305,600±15%	268,000±27%	231,600±42%
Total Active Duck Hunters[a]	3,900±20%	2,100±20%	47,100±13%	56,100±13%	15,500±17%	17,700±23%
Total Duck Hunter Days Afield[a]	17,400±21%	8,600±22%	370,800±12%	443,900±13%	93,100±26%	98,800±25%
Seasonal Duck Harvest Per Hunter[a]	6.9±28%	6.3±33%	24.5±19%	23.2±20%	17.3±31%	13.1±47%
Goose Species Composition						
Canada Goose	1,823	1,624	41,280	52,876	71,015	66,012
Snow Goose	911	191	56,979	91,487	315	689
Blue Goose	0	0	291	380	0	0
Ross' Goose	684	0	6,977	25,107	0	413
White-fronted Goose	0	0	34,885	64,098	551	551
Brant	0	0	4,786	3,176	0	0
Other Geese	0	0	0	1,902	0	0
Total Goose Harvest	3,400±47%	1,800±45%	145,200±20%	239,000±16%	71,900±23%	67,700±32%
Total Active Goose Hunters[b]	2,300±28%	1,200±29%	30,900±12%	43,900±11%	11,200±17%	15,800±23%
Total Goose Hunter Days Afield[b]	8,300±36%	4,400±35%	194,000±14%	268,200±15%	63,900±24%	60,800±25%
Seasonal Goose Harvest Per Hunter[b]	1.5±55%	1.5±54%	4.5±24%	5.4±20%	6.4±29%	4.3±40%
Active Waterfowl Hunters[c]	3,900±20%	2,200±19%	49,000±13%	59,300±13%	19,300±15%	20,400±21%
Sample Sizes						
DuckWings	650	611	6,794	7,674	3,748	3,109
GooseTails	15	19	579	1,280	914	491

Table 1D. Preliminary estimates of waterfowl harvest and hunter activity in the Pacific Flyway during the 2016 and 2017 hunting seasons.

	Montana		Nevada		Oregon	
Duck Species Composition	2016	2017	2016	2017	2016	2017
Mallard	105,776	74,656	13,155	9,582	119,827	183,971
Domestic Mallard	0	0	0	0	0	134
Black Duck	0	0	0	0	0	0
Mallard x Black Hybrid	0	0	0	0	0	0
Mottled Duck	0	0	0	0	0	0
Gadwall	6,571	5,111	4,096	6,538	9,725	14,928
Wigeon	9,135	9,636	3,173	3,148	49,385	96,155
Green-winged Teal	7,693	5,279	3,635	4,359	51,753	70,334
Blue-winged/Cinnamon Teal	3,045	2,346	808	1,142	0	1,210
Northern Shoveler	3,366	1,005	2,019	2,041	11,162	16,272
Northern Pintail	1,763	1,341	1,039	830	43,127	41,286
Wood Duck	962	1,173	0	208	6,089	11,565
Redhead	1,122	754	519	865	254	807
Canvasback	321	335	519	761	1,353	1,479
Greater Scaup	0	84	0	0	3,213	10,086
Lesser Scaup	1,282	670	0	138	2,537	7,262
Ring-necked Duck	1,603	670	808	208	6,089	11,431
Goldeneyes	3,846	3,603	288	138	2,621	941
Bufflehead	801	168	692	104	5,919	6,186
Ruddy Duck	160	0	1,269	138	254	807
Long-tailed Duck	0	0	0	0	0	0
Eiders	0	0	0	0	0	0
Scoters	0	0	0	35	191	62
Hooded Merganser	160	0	173	104	1,015	1,614
Other Mergansers	481	503	231	104	1,184	1,210
Other Ducks	0	0	0	0	0	134
Total Duck Harvest	148,100±27%	107,300±18%	32,400±24%	30,400±30%	315,700±16%	477,900±32%
Total Active Duck Hunters[a]	12,300±13%	12,400±14%	2,700±25%	2,600±37%	18,700±12%	26,800±18%
Total Duck Hunter Days Afield[a]	68,200±26%	57,500±16%	13,900±24%	14,600±28%	123,200±16%	200,300±28%
Seasonal Duck Harvest Per Hunter[a]	12.1±30%	8.6±22%	12.2±35%	11.7±48%	16.9±20%	17.9±37%
Goose Species Composition						
Canada Goose	41,536	55,852	4,159	4,636	40,448	46,220
Snow Goose	387	707	221	109	9,406	4,464
Blue Goose	129	0	0	0	0	0
Ross' Goose	129	0	0	55	314	394
White-fronted Goose	0	141	44	55	6,271	4,727
Brant	0	0	0	0	215	0
Other Geese	0	0	0	0	0	0
Total Goose Harvest	42,200±41%	56,700±18%	4,400±41%	4,900±51%	56,700±20%	55,800±32%
Total Active Goose Hunters[b]	8,100±16%	9,700±14%	1,600±32%	2,400±34%	10,500±13%	13,300±22%
Total Goose Hunter Days Afield[b]	36,300±22%	50,300±22%	8,600±39%	13,000±62%	52,100±22%	55,900±29%
Seasonal Goose Harvest Per Hunter[b]	5.2±44%	5.9±23%	2.7±53%	2.0±61%	5.4±24%	4.2±39%
Active Waterfowl Hunters[c]	13,500±12%	16,300±10%	2,900±25%	2,700±36%	21,000±11%	27,800±17%
Sample Sizes						
DuckWings	924	1,281	562	880	3,740	3,567
GooseTails	327	401	100	89	544	426

Table 1D. Preliminary estimates of waterfowl harvest and hunter activity in the Pacific Flyway during the 2016 and 2017 hunting seasons.

	Utah		Washington		Flyway Total	
Duck Species Composition	2016	2017	2016	2017	2016	2017
Mallard	63,221	70,062	196,142	181,372	835,548	868,405
Domestic Mallard	392	195	0	79	1,488	1,728
Black Duck	0	0	0	0	0	0
Mallard x Black Hybrid	0	0	0	0	0	0
Mottled Duck	0	0	0	0	0	0
Gadwall	30,827	29,901	10,203	8,671	148,697	197,842
Wigeon	31,219	26,383	60,800	42,643	337,766	394,206
Green-winged Teal	12,670	51,594	51,847	30,583	536,906	533,919
Blue-winged/Cinnamon Teal	6,270	7,524	0	158	45,802	58,921
Northern Shoveler	5,878	11,726	9,370	6,385	174,834	210,598
Northern Pintail	14,891	18,761	26,652	15,843	228,823	200,135
Wood Duck	261	586	1,249	2,128	24,653	45,372
Redhead	3,396	1,173	2,707	1,182	13,421	14,926
Canvasback	2,874	2,150	3,540	394	26,501	21,010
Greater Scaup	0	195	12,077	6,306	17,713	17,182
Lesser Scaup	784	977	14,575	5,439	33,175	21,741
Ring-necked Duck	2,743	1,270	18,531	10,405	49,265	51,805
Goldeneyes	1,567	684	408	2,658	19,762	27,050
Bufflehead	653	489	9,578	10,878	33,632	37,842
Ruddy Duck	1,176	782	208	79	5,980	4,933
Long-tailed Duck	0	0	0	55	0	55
Eiders	0	0	0	0	0	0
Scoters	0	0	292	1,495	1,146	2,480
Hooded Merganser	131	293	833	1,261	3,740	5,218
Other Mergansers	653	977	1,666	631	6,111	4,403
Other Ducks	0	0	0	79	696	467
Total Duck Harvest	179,600±23%	225,700±16%	420,700±19%	328,700±8%	2,545,700±8%	2,720,200±10%
Total Active Duck Hunters[a]	16,200±16%	16,300±23%	21,500±10%	20,800±5%	137,800	154,700
Total Duck Hunter Days Afield[a]	85,300±20%	102,700±28%	138,500±15%	123,400±7%	910,400±7%	1,049,800±8%
Seasonal Duck Harvest Per Hunter[a]	11.1±28%	13.9±27%	19.9±21%	15.6±10%		
Goose Species Composition						
Canada Goose	23,421	24,178	53,253	46,804	276,935	298,201
Snow Goose	0	1,867	11,486	16,218	79,705	115,733
Blue Goose	0	0	0	109	420	489
Ross' Goose	0	934	522	1,197	8,625	28,099
White-fronted Goose	0	0	1,044	218	42,795	69,790
Brant	0	0	1,221	562	6,222	3,737
Other Geese	0	0	0	0	0	1,902
Total Goose Harvest	23,400±30%	27,000±28%	67,500±15%	65,100±16%	414,700±10%	518,000±10%
Total Active Goose Hunters[b]	9,200±15%	9,200±19%	11,300±10%	11,200±6%	85,100	106,600
Total Goose Hunter Days Afield[b]	49,400±28%	47,900±28%	50,900±15%	58,300±11%	463,500±8%	558,800±9%
Seasonal Goose Harvest Per Hunter[b]	2.5±33%	2.9±34%	5.9±18%	5.8±17%		
Active Waterfowl Hunters[c]	18,000±14%	17,200±22%	24,600±9%	22,400±5%	152,200	168,200
Sample Sizes						
DuckWings	1,375	2,310	2,053	4,193	19,846	23,625
GooseTails	142	289	256	597	2,877	3,592

Table 1E. Preliminary estimates of waterfowl harvest and hunter activity in Alaska and the United States during the 2016 and 2017 hunting seasons.

	Alaska		United States Total	
Duck Species Composition	2016	2017	2016	2017
Mallard	33,144	21,152	3,718,726	3,425,560
Domestic Mallard	0	0	5,207	5,370
Black Duck	0	0	86,827	103,613
Mallard x Black Hybrid	0	0	3,478	2,850
Mottled Duck	0	0	23,761	21,662
Gadwall	467	522	1,253,318	1,220,188
Wigeon	8,403	6,528	621,417	692,204
Green-winged Teal	3,268	5,223	1,579,038	1,726,257
Blue-winged/Cinnamon Teal	0	0	741,947	890,285
Northern Shoveler	0	1,045	503,865	585,745
Northern Pintail	3,268	3,525	467,454	456,878
Wood Duck	0	0	1,080,384	1,220,379
Redhead	0	0	181,018	180,895
Canvasback	0	0	100,929	100,019
Greater Scaup	934	1,436	64,854	67,969
Lesser Scaup	0	653	163,764	330,861
Ring-necked Duck	0	0	441,955	499,893
Goldeneyes	2,801	3,003	72,241	79,744
Bufflehead	467	1,567	198,801	234,954
Ruddy Duck	0	0	35,060	26,604
Long-tailed Duck	985	1,666	43,591	39,982
Eiders	985	0	7,597	13,381
Scoters	985	5,831	47,558	45,009
Hooded Merganser	0	0	102,737	94,336
Other Mergansers	0	0	35,886	34,859
Other Ducks	5,907	2,083	19,185	16,300
Total Duck Harvest	61,600±20%	54,200±18%	11,600,600±5%	12,115,800±4%
Total Active Duck Hunters[a]	5,300±11%	4,500±11%	904,100	909,800
Total Duck Hunter Days Afield[a]	22,600±18%	18,800±15%	5,557,400±4%	5,446,900±3%
Seasonal Duck Harvest Per Hunter[a]	9.9±22%	9.8±21%		
Goose Species Composition				
Canada Goose	5,920	5,069	2,454,968	2,665,947
Snow Goose	0	0	321,741	399,472
Blue Goose	0	0	99,373	95,971
Ross' Goose	0	0	53,502	100,506
White-fronted Goose	0	724	314,095	312,217
Brant	1,875	3,863	22,175	25,502
Other Geese	0	0	1,043	2,919
Total Goose Harvest	7,800±36%	9,700±46%	3,266,900±5%	3,602,500±5%
Total Active Goose Hunters[b]	1,900±21%	1,800±22%	636,600	647,500
Total Goose Hunter Days Afield[b]	9,700±29%	7,600±29%	3,621,300±4%	3,386,000±4%
Seasonal Goose Harvest Per Hunter[b]	3.1±42%	3.3±51%		
Active Waterfowl Hunters[c]	6,000±9%	5,000±10%	1,042,500	1,065,800
Sample Sizes				
DuckWings	122	365	75,474	86,151
GooseTails	4	19	14,047	19,985

[a] Duck hunter statistics do not include sea duck hunter statistics for states with special sea duck seasons or sea duck permits: Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, Virginia, California, Oregon, Washington, and Alaska. (Refer to Table 3.)

[b] Goose hunter statistics do not include brant hunter statistics for coastal states with brant seasons: Connecticut, Delaware, Maryland, Massachusetts, New Jersey, New York, North Carolina, Rhode Island, Virginia, California, Oregon, Washington, and Alaska. (Refer to Table 4.)

[c] Hunter number estimates at the flyway and national levels may be biased high because the HIP sample frames are state-specific; therefore hunters are counted twice if they hunt in more than one state. Variance inestimable.

Table 2. Flyway-specific point estimates of duck and goose harvest in Colorado, Montana, New Mexico, and Wyoming during the 2016 and 2017 hunting seasons.

	2016		2017	
	Central Flyway	Pacific Flyway	Central Flyway	Pacific Flyway
Duck Harvest				
Colorado	77,600	9,300	78,400	14,600
Montana	26,000	122,100	24,000	83,300
New Mexico	15,000	1,400	42,300	200
Wyoming	18,800	7,600	30,900	10,600
Goose Harvest				
Colorado	108,700	6,100	118,700	9,000
Montana	24,800	17,400	36,600	20,100
New Mexico	2,100	0	1,100	900
Wyoming	24,500	600	35,100	500

Table 3. Preliminary estimates of sea duck harvest and hunter activity for states with special sea duck seasons or sea duck permits during the 2016 and 2017 hunting seasons. [1]

	Sea Duck Harvest [2]		Active Sea Duck Hunters [3]		Sea Duck Hunter Days Afield		Seasonal Harvest Per Hunter	
	2016	2017	2016	2017	2016	2017	2016	2017
Connecticut	4,000 ± 76%	3,100 ± 103%	400 ± 56%	900 ± 54%	3,100 ± 72%	3,000 ± 77%	9.0 ± 94%	3.5 ± 116%
Delaware	2,500 ± 55%	200 ± 96%	300 ± 48%	100 ± 84%	1,400 ± 53%	600 ± 141%	7.2 ± 73%	1.8 ± 128%
Maine	3,600 ± 70%	8,500 ± 43%	600 ± 54%	1,300 ± 35%	1,500 ± 66%	3,100 ± 35%	5.9 ± 88%	6.6 ± 55%
Maryland	18,300 ± 27%	13,000 ± 23%	3,200 ± 19%	3,100 ± 21%	6,800 ± 25%	6,800 ± 35%	5.7 ± 33%	4.2 ± 31%
Massachusetts	8,700 ± 59%	8,500 ± 47%	1,200 ± 48%	1,400 ± 38%	3,300 ± 47%	3,500 ± 49%	7.2 ± 76%	6.0 ± 61%
New Hampshire	200 ± 98%	700 ± 84%	100 ± 76%	100 ± 72%	400 ± 87%	400 ± 96%	1.4 ± 124%	5.4 ± 110%
New Jersey	6,700 ± 48%	7,100 ± 51%	1,200 ± 37%	1,200 ± 28%	5,000 ± 57%	4,300 ± 38%	5.6 ± 60%	5.9 ± 58%
New York	11,300 ± 58%	8,600 ± 61%	1,400 ± 36%	1,400 ± 47%	7,800 ± 51%	6,400 ± 68%	7.8 ± 68%	6.1 ± 77%
Rhode Island	500 ± 54%	1,600 ± 69%	100 ± 47%	200 ± 50%	500 ± 56%	700 ± 56%	4.0 ± 72%	8.1 ± 85%
Virginia	10,500 ± 78%	14,900 ± 64%	1,800 ± 54%	2,300 ± 43%	8,200 ± 69%	9,400 ± 56%	5.7 ± 95%	6.4 ± 77%
Atlantic Flyway Total	66,300 ± 21%	66,300 ± 20%	10,600	12,100	38,000 ± 22%	38,200 ± 21%		
California	600 ± 82%	800 ± 73%	100 ± 46%	100 ± 41%	300 ± 71%	300 ± 58%	6.4 ± 94%	6.1 ± 83%
Oregon	200 ± 54%	100 ± 140%	100 ± 41%	100 ± 85%	200 ± 62%	100 ± 97%	3.0 ± 68%	1.0 ± 164%
Washington	700 ± 55%	4,200 ± 46%	100 ± 24%	1,000 ± 25%	500 ± 44%	3,500 ± 38%	6.6 ± 60%	4.2 ± 52%
Pacific Flyway Total	1,500 ± 42%	5,100 ± 40%	300	1,200	900 ± 34%	4,000 ± 34%		
Alaska	8,900 ± 36%	9,600 ± 38%	1,400 ± 26%	1,600 ± 22%	4,600 ± 31%	5,700 ± 32%	6.2 ± 45%	6.0 ± 44%
United States Total	76,600 ± 18%	81,000 ± 17%	12,300	14,900	43,500 ± 19%	47,900 ± 18%		

[1] Variance estimates are presented as the 95% confidence interval as a percent of the point estimate.

[2] Sea ducks include long-tailed ducks, eiders, and scoters in the Atlantic Flyway; long-tailed ducks, scoters, and harlequin ducks in California and Oregon; long-tailed ducks, scoters, harlequin ducks, and goldeneyes in Washington; and long-tailed ducks, eiders, scoters, harlequin ducks, and mergansers in Alaska.

[3] Hunter number estimates at the management unit and national levels may be biased high, because the HIP sample frames are state specific; therefore hunters are counted more than once if they hunt in >1 state. Variance inestimable.

Table 4. Preliminary estimates of brant harvest and hunter activity for states with special sea duck seasons or sea duck permits during the 2016 and 2017 hunting seasons. [1]

	Brant Harvest		Active Brant Hunters [2]		Brant Hunter Days Afield		Seasonal Harvest Per Hunter	
	2016	2017	2016	2017	2016	2017	2016	2017
Connecticut	300 ± 105%	1,800 ± 92%	200 ± 86%	900 ± 64%	500 ± 97%	2,600 ± 80%	1.6 ± 136%	2.0 ± 112%
Delaware	400 ± 62%	300 ± 92%	200 ± 54%	100 ± 71%	500 ± 54%	400 ± 78%	1.7 ± 82%	2.1 ± 116%
Maine	0	0	0	0	0	0	0	0
Maryland	200 ± 109%	0	200 ± 78%	0	400 ± 84%	0	1.0 ± 134%	0
Massachusetts	1,000 ± 84%	800 ± 64%	600 ± 65%	500 ± 60%	1,400 ± 64%	1,400 ± 84%	1.5 ± 106%	1.6 ± 88%
New Hampshire	<50 ± 192%	100 ± 192%	<50 ± 192%	<50 ± 192%	200 ± 192%	<50 ± 192%	2.0 ± 271%	2.0 ± 272%
New Jersey	2,500 ± 34%	5,200 ± 29%	1,500 ± 29%	1,600 ± 22%	6,000 ± 42%	5,400 ± 25%	1.6 ± 45%	3.3 ± 36%
New York	5,300 ± 47%	6,800 ± 45%	1,100 ± 36%	1,700 ± 43%	6,500 ± 41%	8,800 ± 42%	4.7 ± 59%	4.0 ± 62%
North Carolina	1,300 ± 126%	1,200 ± 100%	1,300 ± 90%	900 ± 82%	2,700 ± 95%	1,200 ± 88%	0.9 ± 155%	1.3 ± 129%
Rhode Island	500 ± 56%	900 ± 125%	200 ± 62%	300 ± 98%	500 ± 44%	1,100 ± 94%	3.1 ± 84%	3.3 ± 159%
Virginia	2,200 ± 78%	500 ± 73%	800 ± 67%	700 ± 63%	2,500 ± 77%	1,600 ± 58%	2.7 ± 103%	0.8 ± 96%
Atlantic Flyway Total	13,800 ± 27%	17,400 ± 24%	6,300	6,600	21,300 ± 24%	22,500 ± 22%		
California	4,800 ± 79%	3,200 ± 73%	1,200 ± 62%	900 ± 71%	3,100 ± 67%	2,300 ± 63%	4.2 ± 100%	3.5 ± 102%
Oregon	200 ± 196%	0	100 ± 139%	<50 ± 108%	200 ± 146%	<50 ± 116%	2.0 ± 240%	0
Washington	1,200 ± 104%	300 ± 62%	400 ± 62%	200 ± 44%	800 ± 82%	300 ± 49%	3.0 ± 121%	1.8 ± 76%
Pacific Flyway Total	6,200 ± 64%	3,500 ± 66%	1,700	1,100	4,200 ± 54%	2,700 ± 54%		
Alaska	1,900 ± 48%	3,900 ± 64%	400 ± 41%	400 ± 36%	1,500 ± 44%	1,800 ± 51%	4.9 ± 63%	10.7 ± 73%
United States Total	21,900 ± 25%	24,800 ± 22%	8,300	8,100	27,000 ± 21%	27,000 ± 19%		

[1] Variance estimates are presented as the 95% confidence interval as a percent of the point estimate.

[2] Hunter number estimates at the management unit and national levels may be biased high, because the HIP sample frames are state specific; therefore hunters are counted more than once if they hunt in >1 state. Variance inestimable.

Table 5. Preliminary harvest estimates for special September teal and teal/wood duck seasons during the 2016 and 2017 hunting seasons.

	Harvest										Number of wings received	
	Green-winged teal		Blue-winged teal		Wood ducks		Other ducks		Total duck harvest			
State	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017
September Teal Seasons												
Delaware	305	0	0	66	0	0	0	0	305	66	4	1
Georgia	0	0	4,143	2,672	0	0	0	0	4,143	2,672	17	11
Maryland	105	272	419	91	0	0	0	0	524	362	5	4
North Carolina	0	282	956	1,127	0	0	0	0	956	1,408	4	10
South Carolina	0	106	2,053	3,286	0	0	0	0	2,053	3,392	24	32
Virginia	0	117	369	0	0	0	92	0	461	117	5	1
Atlantic Flyway Total	409	777	7,940	7,242	0	0	92	0	8,441	8,018	59	59
Alabama	0	0	0	0	0	0	0	0	0	0	0	0
Arkansas	0	809	2,863	6,738	0	0	0	0	2,863	7,547	11	28
Illinois	206	2,397	6,389	15,020	0	0	0	0	6,595	17,417	32	109
Indiana	0	202	0	2,829	0	0	0	0	0	3,031	0	15
Iowa	789	1,196	394	16,235	197	0	0	0	1,380	17,432	7	102
Louisiana	0	3,182	26,505	92,149	0	0	0	133	26,505	95,464	192	720
Michigan	0	1,998	0	1,537	0	768	0	615	0	4,918	0	32
Mississippi	0	0	0	0	0	0	0	0	0	0	0	0
Missouri	690	1,285	13,345	21,068	0	0	0	0	14,036	22,353	61	87
Ohio	0	599	0	2,395	0	0	0	0	0	2,993	0	30
Wisconsin	0	1,869	1,470	11,215	0	170	0	0	1,470	13,254	5	78
Mississippi Flyway Total	1,685	13,536	50,966	169,187	197	938	0	747	52,849	184,409	308	1,201
Colorado	933	1,158	2,798	1,447	0	0	0	0	3,731	2,604	24	18
Kansas	3,168	4,821	22,880	13,329	0	95	0	0	26,048	18,245	222	193
Nebraska	1,508	4,764	11,311	12,969	0	0	0	0	12,819	17,733	85	134
New Mexico	80	117	0	234	0	0	0	0	80	352	3	3
Oklahoma	167	272	8,375	2,586	167	0	0	136	8,710	2,995	52	22
Texas	4,374	16,681	197,484	169,161	0	0	162	0	202,020	185,842	1,247	869
Central Flyway Total	10,231	27,813	242,848	199,728	167	95	162	136	253,408	227,772	1,633	1,239
Season Type Total	12,325	42,126	301,754	376,156	365	1,033	254	883	314,698	420,199	2,000	2,499
September Teal/Wood Duck Seasons												
Florida	0	0	10,229	4,261	1,430	1,036	0	0	11,658	5,298	106	46
Kentucky	0	0	263	1,111	1,578	5,277	0	0	1,841	6,388	7	23
Tennessee	323	0	3,550	2,136	3,873	3,204	0	0	7,746	5,341	24	20
Season Type Total	323	0	14,042	7,508	6,881	9,518	0	0	21,245	17,026	137	89
U.S. Total	12,648	42,126	315,796	383,665	7,245	10,551	254	883	335,943	437,225	2,137	2,588

Table 6. Preliminary estimates of the number of Canada geese harvested during the special September, regular, and special late seasons during the 2016 and 2017 hunting seasons.

	September		Regular		Late		Total	
State / Flyway	2016	2017	2016	2017	2016	2017	2016	2017
Connecticut	1,600	1,000	10,800	7,700	0	500	12,500	9,200
Delaware	300	2,800	13,300	21,800	0	0	13,500	24,600
Georgia	12,600	10,100	49,300	15,200	0	0	61,800	25,300
Maine	2,700	6,400	8,700	8,900	0	0	11,400	15,200
Maryland	1,000	6,900	152,900	171,600	0	0	153,900	178,500
Massachusetts	1,000	1,300	10,400	5,900	0	1,400	11,400	8,500
New Hampshire	0	1,000	4,700	4,600	0	0	4,700	5,700
New Jersey	2,700	4,600	28,000	20,000	0	2,000	30,600	26,600
New York	29,800	44,600	116,600	62,500	0	0	146,400	107,100
North Carolina	0	10,900	51,800	30,500	0	0	51,800	41,400
Pennsylvania	6,000	11,100	94,100	67,800	0	0	100,100	79,000
Rhode Island	300	400	2,600	7,500	0	100	2,900	8,100
South Carolina	1,800	5,000	13,900	10,100	0	0	15,800	15,100
Vermont	2,100	7,000	6,700	8,900	0	0	8,800	15,900
Virginia	900	5,500	83,400	27,700	0	26,800	84,400	60,000
West Virginia	0	900	3,900	4,700	0	0	3,900	5,500
Atlantic Flyway Total[1]	62,900	119,700	651,200	477,300	0	30,800	714,100	627,800
North Dakota	22,600	49,600	106,400	126,900	0	0	129,000	176,500
Oklahoma	3,900	1,800	41,200	54,900	0	0	45,100	56,700
South Dakota	15,800	21,600	54,400	63,500	0	0	70,200	85,200
Texas	0	600	28,800	30,200	0	0	28,800	30,800
Central Flyway Total[1]	42,300	73,600	586,600	677,900	0	0	628,800	751,500
Colorado	0	0	6,100	8,900	0	0	6,100	8,900
Idaho	2,000	1,000	69,000	65,000	0	0	71,000	66,000
Oregon	5,000	3,000	35,400	43,200	0	0	40,400	46,200
Washington	7,300	6,000	45,900	40,800	0	0	53,300	46,800
Wyoming	200	200	400	300	0	0	600	500
Pacific Flyway Total[1]	14,500	10,200	244,600	262,000	0	0	259,200	272,200
United States Total[1]	119,700	203,500	2,335,100	2,431,700	0	30,800	2,454,800	2,666,000

[1] Flyway and U.S. totals include all states' harvest.

Table 7. Waterfowl harvest estimates in Canada during the 2016 and 2017 hunting seasons (estimates courtesy of the Canadian Wildlife Service).

	Newfoundland		Prince Edward Isl.		Nova Scotia		New Brunswick		Quebec		Ontario		Manitoba	
Duck Species Composition	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017
Mallard	0	334	1,358	1,292	6,564	4,829	6,712	5,456	47,530	50,497	77,234	83,591	64,567	36,119
Black Duck	6,144	7,138	6,390	3,147	17,627	12,637	9,700	5,773	16,961	19,567	9,088	8,813	234	0
Gadwall	0	0	47	68	0	0	46	195	735	1,539	7,102	4,253	7,645	3,684
Wigeon	0	0	47	65	38	301	406	640	1,793	1,262	5,469	6,171	4,615	2,644
Green-winged Teal	2,270	0	1,010	258	1,281	2,718	3,452	3,522	15,462	13,221	9,168	11,155	8,620	4,892
Blue-winged/Cinnamon Teal	0	0	0	0	199	0	277	261	751	277	1,180	2,146	8,495	12,459
Northern Shoveler	0	0	0	0	0	0	328	178	828	571	752	1,154	3,432	4,545
Northern Pintail	430	437	0	0	287	0	162	209	2,780	1,437	2,861	4,224	7,469	3,428
Wood Duck	0	0	0	65	450	39	2,413	2,388	23,017	24,050	58,830	60,338	3,179	2,554
Redhead	0	0	0	0	0	0	0	0	226	82	5,550	6,759	5,831	3,208
Canvasback	0	0	0	0	0	0	0	0	0	0	3,826	1,109	1,585	6,033
Greater Scaup	0	0	0	0	0	172	34	140	1,518	820	6,065	3,633	0	0
Lesser Scaup	0	0	0	0	0	0	106	108	995	1,080	6,277	5,176	5,458	3,750
Ring-necked Duck	2,741	4,744	0	65	200	30	1,599	845	3,435	4,761	10,332	8,629	2,645	2,111
Goldeneyes	879	3,028	0	0	49	992	1,270	1,002	1,312	1,118	3,827	4,290	1,278	1,002
Bufflehead	0	254	0	0	319	533	91	254	303	189	8,470	8,572	2,042	1,016
Ruddy Duck	0	0	0	0	0	0	0	0	0	0	2,409	1,066	595	223
Long-tailed Duck	0	637	0	0	650	339	0	77	220	958	745	483	0	0
Eiders	9,131	7,872	0	0	846	508	180	641	2,189	2,201	0	0	0	0
Scoters	0	0	0	0	592	2,959	182	103	3,407	2,583	120	922	0	0
Hooded Merganser	159	0	0	0	328	1,113	276	437	2,269	2,080	2,437	4,881	577	293
Other Mergansers	735	3,027	0	0	433	876	0	100	1,411	1,217	1,109	2,999	0	0
Other Ducks	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Duck Harvest	22,489	27,471	8,852	4,960	29,863	28,046	27,234	22,329	127,142	129,510	222,851	230,364	128,267	87,961
Goose Species Composition														
Canada Goose	2,891	6,422	12,622	9,509	12,762	11,548	15,900	9,116	108,405	146,868	188,339	198,638	89,060	70,493
Snow Goose	0	0	0	0	0	0	0	0	52,118	59,708	0	1,322	4,244	2,795
Blue Goose	0	0	0	0	0	0	0	0	287	537	0	945	7,594	10,262
Ross's Goose	0	0	0	0	0	0	0	0	0	0	0	0	5,357	768
White-fronted Goose	0	0	0	0	0	0	0	0	254	0	233	0	0	0
Brant	0	0	0	0	0	0	0	0	0	0	508	0	0	0
Total Goose Harvest	2,891	6,422	12,622	9,509	12,762	11,548	15,900	9,116	161,064	207,113	189,080	200,905	106,255	84,318
Migratory Bird Permits Sold	14,695	13,825	1,681	1,213	5,109	4,726	5,686	5,077	30,902	30,414	58,105	53,232	11,721	8,165

Table 7 (continued). Waterfowl harvest estimates in Canada during the 2016 and 2017 hunting seasons (estimates courtesy of the Canadian Wildlife Service).

	Saskatchewan		Alberta		British Columbia		Nunavut		Northwest Terr.		Yukon Territory		Canada Total	
Duck Species Composition	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017
Mallard	159,158	133,725	83,694	89,114	23,686	25,962	0	0	0	658	0	0	470,503	431,577
Black Duck	0	0	0	0	0	0	0	0	0	0	0	0	66,144	57,075
Gadwall	25,707	15,200	23,378	20,006	929	326	0	0	0	0	0	0	63,589	45,271
Wigeon	14,329	7,741	14,606	11,218	8,104	4,634	0	0	0	0	0	0	49,443	34,531
Green-winged Teal	21,295	4,977	4,186	3,862	2,293	2,500	0	0	0	0	0	0	69,037	47,106
Blue-winged/Cinnamon Teal	15,217	19,148	8,578	10,020	0	49	0	0	0	0	0	0	34,719	44,360
Northern Shoveler	13,360	8,395	6,693	5,522	981	394	0	0	0	0	0	0	26,374	20,759
Northern Pintail	11,869	28,390	7,920	13,135	2,492	2,092	0	0	0	0	0	0	36,270	53,352
Wood Duck	621	680	200	0	0	0	0	0	0	0	0	0	88,710	90,114
Redhead	3,144	326	2,271	5,647	0	0	0	0	0	0	0	0	17,022	16,022
Canvasback	2,527	530	1,203	1,811	0	21	0	0	0	0	0	0	9,141	9,504
Greater Scaup	0	0	0	0	0	0	0	0	0	0	0	0	7,617	4,765
Lesser Scaup	3,016	443	5,760	2,694	244	89	0	0	0	0	0	0	21,856	13,340
Ring-necked Duck	2,370	928	1,212	570	187	244	0	0	0	0	0	0	24,721	22,927
Goldeneyes	270	0	1,004	2,298	84	21	0	0	0	0	0	0	9,973	13,013
Bufflehead	1,525	444	1,892	4,204	809	710	0	0	0	0	0	0	15,451	15,922
Ruddy Duck	653	0	170	0	0	0	0	0	0	0	0	0	3,827	1,289
Long-tailed Duck	0	0	0	0	0	0	0	0	0	0	0	0	1,615	2,494
Eiders	0	0	0	0	0	0	0	0	0	0	0	0	12,346	11,222
Scoters	0	0	0	0	0	75	0	0	0	0	0	0	4,301	6,642
Hooded Merganser	0	0	1,397	793	0	112	0	0	0	0	0	0	7,699	9,709
Other Mergansers	0	0	0	0	0	0	0	0	0	0	0	0	3,728	8,219
Other Ducks	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Duck Harvest	275,061	220,927	162,164	170,894	40,163	37,229	0	0	0	0	0	0	1,044,086	959,213
Goose Species Composition														
Canada Goose	201,289	208,946	121,081	158,552	11,739	14,207	0	0	0	0	0	0	764,088	834,299
Snow Goose	32,366	37,637	7,804	19,987	1,399	979	0	0	0	0	0	0	97,931	122,428
Blue Goose	17,739	16,865	1,741	921	393	62	0	0	0	0	0	0	27,754	29,592
Ross's Goose	14,803	35,452	3,552	4,996	0	282	0	0	0	0	0	0	23,712	41,498
White-fronted Goose	32,304	45,104	33,435	30,993	299	787	0	0	0	0	0	0	66,525	76,884
Brant	0	0	0	0	0	0	0	0	0	0	0	0	508	0
Total Goose Harvest	298,501	344,004	167,613	215,449	13,830	16,317	0	0	0	0	0	0	980,518	1,104,701
Migratory Bird Permits Sold	20,756	19,862	25,394	24,261	7,076	6,883	69	49	329	284	286	297	181,908	168,934

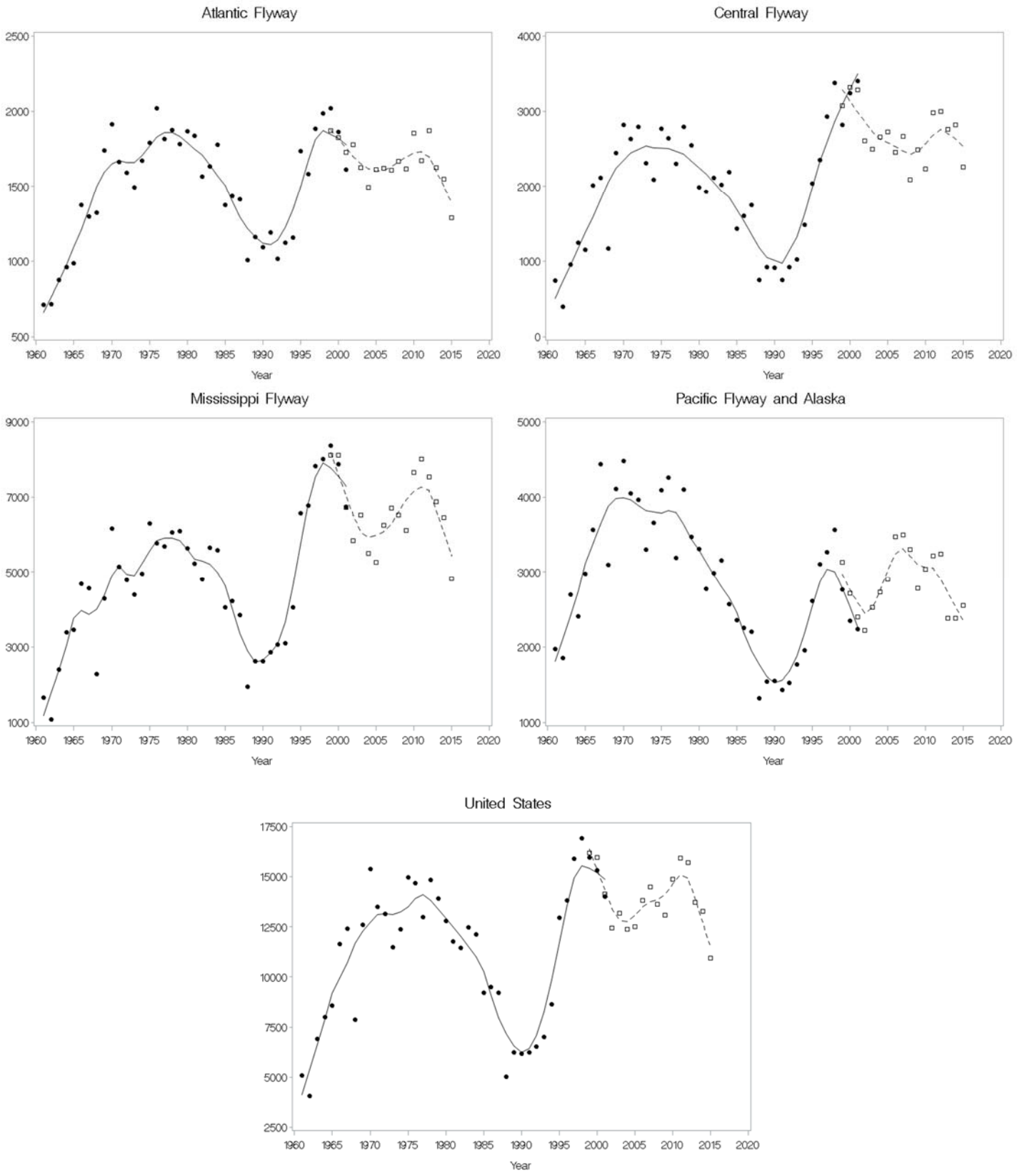

Figure 1. Number of ducks harvested (in thousands) by hunters in the United States, 1961-2017. (Federal Duck Stamp Survey – circles and solid line; HIP survey – squares and dashed line.)

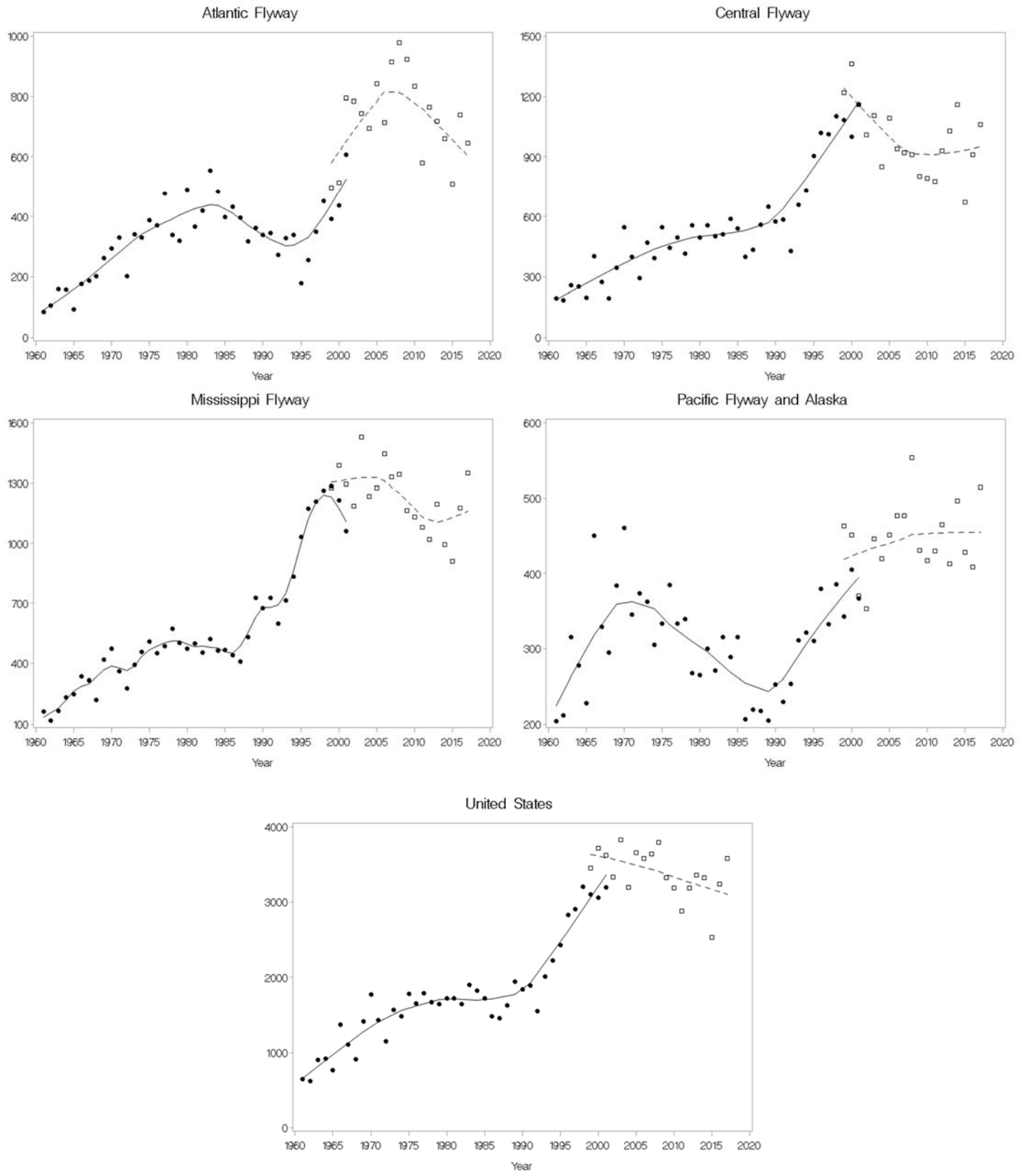

Figure 2. Number of geese harvested (in thousands) by hunters in the United States, 1961-2017. (Federal Duck Stamp Survey – circles and solid line; HIP survey – squares and dashed line).

Table 8. Preliminary weighted age ratios of mallards in state harvests during the 2013-2017 hunting seasons as determined from Waterfowl Parts Collection Survey.

	Immatures per adult [a]				
State and Flyway	2013	2014	2015	2016	2017
Connecticut	0.9	1.1	1.2	1.1	1.2
Delaware	2.0	1.8	1.5	1.1	1.1
Florida	-	-	-	-	-
Georgia	1.6	0.9	1.0	2.1	-
Maine	1.4	1.4	2.7	1.9	1.9
Maryland	1.1	1.2	1.4	1.4	1.2
Massachusetts	0.9	1.3	1.0	1.1	1.3
New Hampshire	2.3	1.6	2.2	1.5	1.6
New Jersey	0.6	0.9	0.8	0.7	0.9
New York	1.6	1.7	2.1	1.5	1.5
North Carolina	1.5	1.6	1.0	1.2	1.1
Pennsylvania	1.3	1.2	1.5	0.9	1.1
Rhode Island	1.2	0.9	0.9	1.2	1.2
South Carolina	2.3	0.9	2.2	2.4	1.5
Vermont	1.7	2.7	2.6	2.1	1.8
Virginia	1.1	1.0	0.9	0.8	0.8
West Virginia	0.7	0.6	0.4	0.8	0.6
Atlantic Flyway Total [b]	1.37	1.33	1.38	1.24	1.17
Alabama	1.0	1.1	1.1	1.4	0.5
Arkansas	0.8	1.1	0.7	0.7	0.5
Illinois	1.6	1.9	1.1	1.2	1.4
Indiana	1.7	1.8	1.4	0.9	0.7
Iowa	2.9	4.3	1.6	1.6	1.2
Kentucky	1.7	1.4	1.1	0.8	0.5
Louisiana	1.1	1.3	1.0	1.0	0.6
Michigan	1.4	2.0	2.8	2.1	1.3
Minnesota	3.5	5.4	4.4	4.2	2.5
Mississippi	0.6	0.9	0.7	0.9	0.5
Missouri	1.4	2.3	1.0	1.1	1.1
Ohio	1.2	1.5	1.7	1.4	1.1
Tennessee	0.9	1.3	0.9	0.7	0.4
Wisconsin	2.6	2.6	2.6	2.3	2.5
Mississippi Flyway Total [b]	1.31	1.66	1.19	1.09	0.92

Table 8 (continued). Preliminary weighted age ratios of mallards in state harvests during the 2013-2017 hunting seasons as determined from Waterfowl Parts Collection Survey.

	Immatures per adult [a]				
State and Flyway	2013	2014	2015	2016	2017
Colorado	1.0	1.1	0.7	0.7	0.9
Kansas	0.9	1.1	0.5	0.6	0.5
Montana	1.6	1.3	0.8	0.6	0.6
Nebraska	1.1	1.5	1.2	0.8	0.9
New Mexico	1.2	1.9	1.7	1.1	1.1
North Dakota	2.6	3.2	2.2	1.7	1.8
Oklahoma	0.6	0.7	0.5	0.4	0.5
South Dakota	1.9	2.3	1.7	1.8	1.3
Texas	0.8	1.0	0.5	0.5	0.4
Wyoming	0.8	0.8	0.6	0.7	1.2
Central Flyway Total [b]	1.19	1.43	0.97	0.78	0.85
Arizona	1.3	1.6	1.4	1.5	1.2
California	1.4	1.3	1.5	2.2	2.3
Colorado	1.6	2.9	1.5	-	3.5
Idaho	1.0	1.1	0.9	1.0	1.0
Montana	1.2	0.9	1.2	0.6	0.9
Nevada	1.3	1.7	1.1	2.5	2.5
New Mexico	0.9	1.8	-	1.5	-
Oregon	1.3	1.5	1.5	1.7	2.0
Utah	1.2	1.7	1.3	1.4	1.3
Washington	1.6	1.2	1.1	1.1	1.5
Wyoming	4.6	3.9	2.5	2.0	1.7
Pacific Flyway Total [b]	1.24	1.25	1.21	1.25	1.56
Alaska	2.4	3.7	2.5	1.4	2.9
U.S. Total [b]	1.28	1.50	1.16	1.07	1.06

[a] Ratio not shown if based on a sample of less than 20 wings.

[b] In estimating Flyway and U.S. ratios, the ratio for each state was weighed in proportion to the estimated harvest in that state as determined from the Harvest Information Program Waterfowl Harvest Survey.

Table 9. Preliminary weighted age ratios of ducks harvested during the 2013-2017 hunting seasons, by species and flyway.

	Immatures per adult [a, b]				
Species and Flyway	2013	2014	2015	2016	2017
Mallard					
Atlantic	1.37	1.33	1.38	1.24	1.17
Mississippi	1.31	1.66	1.19	1.09	0.92
Central	1.19	1.43	0.97	0.78	0.85
Pacific	1.24	1.25	1.21	1.25	1.56
U.S. Total	1.28	1.50	1.16	1.07	1.06
Black duck					
Atlantic	1.43	1.07	1.17	1.40	0.97
Mississippi	2.00	1.30	3.94	1.60	1.28
U.S. Total	1.56	1.12	1.55	1.46	1.02
Mottled duck					
Atlantic	2.45	1.12	1.95	1.19	2.42
Mississippi	2.80	0.94	1.56	1.82	0.97
Central	--	2.71	2.21	2.38	0.77
U.S. Total	2.46	1.09	1.80	1.63	1.24
Gadwall					
Atlantic	1.48	1.68	1.09	1.28	0.81
Mississippi	1.25	1.32	1.03	1.02	0.79
Central	1.25	1.29	1.26	0.94	1.00
Pacific	1.14	1.32	1.00	0.97	1.54
U.S. Total	1.25	1.33	1.09	1.01	0.94
American wigeon					
Atlantic	1.03	0.68	0.93	0.50	1.09
Mississippi	1.27	1.70	2.37	1.72	1.54
Central	0.84	0.95	1.14	0.67	0.89
Pacific	1.52	1.58	1.27	0.95	1.22
U.S. Total	1.24	1.35	1.31	0.93	1.19
Green-winged teal					
Atlantic	1.77	1.68	1.66	1.70	1.52
Mississippi	1.80	1.48	1.63	1.58	1.50
Central	1.71	1.53	1.53	1.20	1.59
Pacific	1.35	1.30	1.27	0.90	1.09
U.S. Total	1.66	1.46	1.49	1.24	1.38
Blue-winged/Cinnamon teal					
Atlantic	0.98	0.85	1.18	0.93	1.57
Mississippi	1.49	1.16	1.28	1.27	1.75
Central	2.19	1.46	1.43	0.95	1.18
Pacific	1.68	1.19	0.74	0.83	1.09
U.S. Total	1.62	1.24	1.30	1.04	1.45

Table 9 (continued). Preliminary weighted age ratios of ducks harvested during the 2013-2017 hunting seasons, by species and flyway.

	Immatures per adult [a, b]				
Species and Flyway	2013	2014	2015	2016	2017
Northern shoveler					
Atlantic	1.84	1.22	1.02	1.46	0.95
Mississippi	1.69	1.61	1.06	0.96	1.06
Central	2.38	1.83	1.44	0.92	1.32
Pacific	1.29	1.34	0.79	0.68	1.16
U.S. Total	1.67	1.54	0.95	0.87	1.14
Northern pintail					
Atlantic	1.18	1.08	0.68	1.35	1.31
Mississippi	1.71	1.11	0.88	1.29	1.30
Central	1.06	1.13	0.98	0.73	0.86
Pacific	0.98	1.10	0.70	0.77	0.88
U.S. Total	1.21	1.12	0.79	0.88	1.01
Wood duck					
Atlantic	1.45	1.33	1.32	1.37	1.36
Mississippi	1.45	2.04	1.74	1.29	1.19
Central	1.11	1.13	2.34	0.87	1.63
Pacific	1.23	1.96	2.18	1.70	2.71
U.S. Total	1.43	1.69	1.61	1.29	1.32
Redhead					
Atlantic	1.46	1.94	0.83	0.72	0.76
Mississippi	2.92	2.88	2.00	1.12	1.23
Central	2.25	3.19	1.33	0.68	1.43
Pacific	1.82	1.39	0.51	0.73	1.67
U.S. Total	2.32	2.80	1.38	0.81	1.27
Canvasback					
Atlantic	0.80	1.72	--	0.32	0.36
Mississippi	1.20	2.70	1.47	1.02	0.83
Central	1.19	2.10	1.48	0.74	0.73
Pacific	1.57	1.68	0.90	1.03	1.70
U.S. Total	1.24	2.17	1.18	0.90	0.85
Greater scaup					
Atlantic	1.85	1.15	1.69	2.71	1.21
Mississippi	1.09	1.53	2.21	3.31	2.31
Central	--	--	1.28	--	--
Pacific	1.53	1.21	1.32	0.92	1.19
U.S. Total	1.38	1.45	1.82	2.15	1.50

Table 9 (continued). Preliminary weighted age ratios of ducks harvested during the 2013-2017 hunting seasons, by species and flyway.

	Immatures per adult [a, b]				
Species and Flyway	2013	2014	2015	2016	2017
Lesser scaup					
Atlantic	0.58	0.83	0.88	1.18	0.91
Mississippi	1.15	0.86	0.88	1.33	1.06
Central	2.22	0.78	0.83	1.12	1.01
Pacific	1.41	1.82	1.47	1.14	1.82
U.S. Total	1.14	0.91	0.93	1.21	1.06
Ring-necked duck					
Atlantic	1.86	1.59	2.27	1.33	2.03
Mississippi	2.21	2.40	2.09	2.47	1.93
Central	1.49	1.24	1.14	1.57	1.48
Pacific	1.61	2.14	2.17	1.27	2.38
U.S. Total	1.93	1.91	1.97	1.74	1.92
Common goldeneye					
Atlantic	0.74	0.88	0.70	0.72	0.61
Mississippi	1.26	1.41	1.44	1.00	0.83
Central	1.23	0.81	1.71	1.75	0.81
Pacific	1.03	0.81	1.46	1.43	0.56
U.S. Total	1.09	1.02	1.37	1.04	0.69
Bufflehead					
Atlantic	1.21	1.15	1.01	1.24	0.89
Mississippi	0.80	2.05	0.99	0.92	0.96
Central	0.62	0.76	1.18	0.81	0.70
Pacific	0.73	1.10	1.18	0.62	1.44
U.S. Total	0.90	1.33	1.06	0.98	0.97
Ruddy duck					
Atlantic	1.50	2.36	2.27	1.34	0.77
Mississippi	2.51	1.22	--	1.81	1.66
Central	2.57	2.07	0.92	3.24	1.42
Pacific	1.62	1.43	1.28	3.21	1.23
U.S. Total	1.84	1.64	1.56	1.95	1.12
Hooded merganser					
Atlantic	0.73	1.29	0.73	1.03	0.78
Mississippi	1.22	2.18	1.76	1.35	0.98
Central	0.65	1.59	0.86	0.61	0.51
Pacific	0.95	1.20	1.98	1.38	1.18
U.S. Total	0.92	1.74	1.20	1.12	0.87

Table 9 (continued). Preliminary weighted age ratios of ducks harvested during the 2013-2017 hunting seasons, by species and flyway.

	Immatures per adult [a, b]				
Species and Flyway	2013	2014	2015	2016	2017
Common merganser					
Atlantic	1.28	1.33	1.88	1.59	0.88
Mississippi	2.26	1.31	--	--	0.52
Central	--	--	--	--	--
Pacific	0.90	1.06	0.63	0.79	1.11
U.S. Total	1.31	1.28	1.10	1.11	0.78
Red-breasted merganser					
Atlantic	1.38	2.76	0.92	1.28	1.06
Mississippi	1.92	1.69	0.41	1.09	0.71
U.S. Total	1.72	1.96	0.57	1.15	0.96
Long-tailed duck					
Atlantic	1.52	0.40	0.16	0.59	0.70
Mississippi	0.64	--	0.27	0.52	1.62
U.S. Total	1.05	0.61	0.20	0.61	0.87
Common eider					
Atlantic	0.18	0.29	0.08	0.39	0.22
U.S. Total	0.18	0.31	0.08	0.39	0.22
Black scoter					
Atlantic	1.27	0.30	0.72	0.82	1.11
U.S. Total	1.32	0.56	0.71	0.89	1.05
White-winged scoter					
Atlantic	2.07	0.40	0.37	2.26	2.40
Pacific	--	--	--	--	--
U.S. Total	2.20	1.95	0.94	2.16	2.28
Surf scoter					
Atlantic	0.47	0.31	0.47	0.47	0.46
Pacific	0.49	0.79	0.67	0.63	2.10
U.S. Total	0.53	0.52	0.56	0.64	0.46

[a] Ratio not shown if based on a sample of less than 20 wings.

[b] In estimating Flyway and U.S. ratios, the ratio for each state was weighed in proportion to the estimated harvest in that state as determined from the Harvest Information Program Waterfowl Harvest Survey.

Table 10. Preliminary weighted sex ratios of mallards in state harvests during the 2013-2017 hunting seasons as determined from Waterfowl Parts Collection Survey.

	Males per female [a]				
State and Flyway	2013	2014	2015	2016	2017
Connecticut	2.2	1.8	2.4	1.9	2.2
Delaware	1.8	1.6	2.0	1.3	1.8
Florida	-	-	-	-	-
Georgia	1.9	2.1	1.7	1.1	-
Maine	1.7	1.4	1.6	1.5	1.6
Maryland	2.5	1.6	2.5	1.8	2.3
Massachusetts	1.9	2.1	2.6	1.7	2.1
New Hampshire	1.5	1.4	1.1	1.4	1.7
New Jersey	1.6	1.6	2.1	2.9	1.9
New York	1.9	1.8	1.7	2.1	2.1
North Carolina	1.4	1.2	2.2	1.7	1.9
Pennsylvania	2.1	1.8	2.0	2.1	2.0
Rhode Island	2.2	1.2	2.0	2.3	2.0
South Carolina	2.1	2.5	1.7	1.5	1.2
Vermont	1.7	1.7	1.1	2.0	2.0
Virginia	1.6	1.6	2.0	1.9	1.9
West Virginia	2.1	1.9	2.5	2.5	2.7
Atlantic Flyway Total [b]	1.87	1.67	1.95	1.83	1.98
Alabama	2.9	1.7	1.9	1.5	2.2
Arkansas	2.6	2.2	2.8	2.9	3.1
Illinois	2.5	1.8	2.7	2.5	1.9
Indiana	2.0	2.3	2.7	2.7	2.2
Iowa	2.6	2.0	2.8	2.3	1.9
Kentucky	1.9	2.3	3.0	2.9	3.0
Louisiana	1.5	1.8	2.5	2.2	2.2
Michigan	2.5	1.4	1.5	1.4	1.6
Minnesota	1.4	1.3	1.5	1.2	1.9
Mississippi	3.0	3.3	4.3	2.7	3.6
Missouri	2.6	2.7	3.4	3.1	3.2
Ohio	3.0	2.8	2.5	2.4	2.8
Tennessee	2.2	2.3	2.6	2.6	3.2
Wisconsin	2.1	1.8	1.6	2.2	1.8
Mississippi Flyway Total [b]	2.26	2.04	2.47	2.38	2.47

Table 10 (continued). Preliminary weighted sex ratios of mallards in state harvests during the 2013-2017 hunting seasons as determined from Waterfowl Parts Collection Survey.

	Males per female [a]				
State and Flyway	2013	2014	2015	2016	2017
Colorado	3.2	3.8	2.4	3.0	3.5
Kansas	4.7	5.5	5.3	6.6	4.4
Montana	4.9	3.7	5.2	7.3	2.7
Nebraska	4.3	4.2	4.9	5.3	4.1
New Mexico	3.8	2.1	3.1	2.2	3.9
North Dakota	2.2	2.3	2.5	2.4	2.4
Oklahoma	3.7	3.6	3.7	3.4	3.1
South Dakota	3.1	4.0	3.5	4.3	4.4
Texas	1.8	1.7	4.1	3.7	4.1
Wyoming	2.5	3.5	5.0	6.6	3.7
Central Flyway Total [b]	3.03	3.12	3.55	3.64	3.29
Arizona	1.6	1.7	1.7	1.2	2.0
California	2.5	2.5	1.9	2.1	2.4
Colorado	2.6	2.2	1.7	.	2.3
Idaho	2.9	2.9	2.9	2.7	2.9
Montana	2.7	2.8	3.4	4.2	3.1
Nevada	1.4	1.8	1.5	1.7	1.5
New Mexico	1.4	2.3	.	5.3	.
Oregon	2.3	2.4	2.8	2.3	1.9
Utah	2.1	1.7	2.3	2.6	2.6
Washington	1.9	2.2	2.7	2.4	3.2
Wyoming	2.1	1.5	2.0	1.3	2.9
Pacific Flyway Total [b]	2.38	2.39	2.60	2.50	2.53
Alaska	1.3	1.2	1.4	1.4	1.5
U.S. Total [b]	2.37	2.25	2.63	2.52	2.55

[a] Ratio not shown if based on a sample of less than 20 wings.

[b] In estimating Flyway and U.S. ratios, the ratio for each state was weighed in proportion to the estimated harvest in that state as determined from the Harvest Information Program Waterfowl Harvest Survey.

Table 11. Preliminary weighted sex ratios of ducks harvested during the 2013-2017 hunting seasons, by species and flyway.

	Males per female [a]				
Species and Flyway	2013	2014	2015	2016	2017
Mallard					
Atlantic	1.87	1.67	1.95	1.83	1.98
Mississippi	2.26	2.04	2.47	2.38	2.47
Central	3.03	3.12	3.55	3.64	3.29
Pacific	2.38	2.39	2.60	2.50	2.53
U.S. Total	2.37	2.25	2.63	2.52	2.55
Black duck					
Atlantic	1.01	1.10	1.11	1.05	1.12
Mississippi	1.32	1.00	1.21	0.59	1.06
U.S. Total	1.08	1.08	1.14	0.89	1.11
Mottled duck					
Atlantic	1.34	1.09	0.95	1.12	1.17
Mississippi	1.38	1.07	0.53	1.72	1.30
Central	--	0.63	0.99	1.70	1.30
U.S. Total	1.31	1.01	0.74	1.47	1.25
Gadwall					
Atlantic	1.90	2.17	1.61	2.23	1.65
Mississippi	1.47	1.68	1.87	1.76	1.96
Central	1.64	1.67	1.48	1.71	1.79
Pacific	1.66	1.78	1.62	1.63	1.73
U.S. Total	1.55	1.71	1.69	1.76	1.86
American wigeon					
Atlantic	1.88	2.43	1.96	2.11	1.78
Mississippi	1.42	1.19	1.41	1.67	1.41
Central	1.94	1.73	1.79	1.70	1.58
Pacific	1.54	1.58	1.52	1.66	1.56
U.S. Total	1.63	1.57	1.57	1.69	1.54
Green-winged teal					
Atlantic	1.21	1.39	1.55	1.35	1.45
Mississippi	1.66	1.89	1.78	1.90	1.80
Central	1.73	1.96	2.06	1.87	1.94
Pacific	1.69	1.84	1.85	1.76	1.92
U.S. Total	1.64	1.84	1.83	1.80	1.83
Blue-winged/Cinnamon teal					
Atlantic	1.51	1.66	1.15	1.71	1.44
Mississippi	1.68	1.79	1.39	1.06	1.20
Central	1.47	1.63	1.28	1.68	1.66
Pacific	1.26	1.22	1.20	1.83	1.30
U.S. Total	1.60	1.70	1.32	1.43	1.38

Table 11 (continued). Preliminary weighted sex ratios of ducks harvested during the 2013-2017 hunting seasons, by species and flyway.

	Males per female [a]				
Species and Flyway	2013	2014	2015	2016	2017
Northern shoveler					
Atlantic	1.44	1.84	1.86	1.20	1.56
Mississippi	1.62	1.67	1.70	1.62	1.85
Central	1.30	1.74	1.50	1.50	1.41
Pacific	1.43	1.55	1.70	1.97	1.84
U.S. Total	1.47	1.66	1.67	1.67	1.73
Northern pintail					
Atlantic	2.36	2.02	1.87	1.55	1.45
Mississippi	2.19	2.12	2.35	2.15	1.92
Central	2.12	2.34	2.24	2.49	1.91
Pacific	2.47	2.45	2.93	3.10	2.96
U.S. Total	2.25	2.30	2.58	2.53	2.24
Wood duck					
Atlantic	1.91	1.91	1.97	1.96	1.91
Mississippi	1.93	1.81	1.72	1.91	1.73
Central	2.20	2.27	1.87	2.18	1.88
Pacific	1.58	2.09	1.64	2.06	1.44
U.S. Total	1.92	1.87	1.80	1.95	1.80
Redhead					
Atlantic	1.79	1.21	1.30	1.84	1.65
Mississippi	1.69	1.50	1.38	1.31	1.97
Central	1.62	1.61	1.94	1.52	1.23
Pacific	1.57	1.83	2.15	1.78	1.68
U.S. Total	1.66	1.54	1.64	1.49	1.51
Canvasback					
Atlantic	1.37	0.71	--	0.61	0.78
Mississippi	1.22	1.32	1.14	1.54	1.84
Central	1.42	1.49	1.19	1.05	1.28
Pacific	1.15	1.02	1.23	1.25	1.15
U.S. Total	1.25	1.25	1.19	1.27	1.36
Greater scaup					
Atlantic	1.41	0.92	0.77	1.12	1.56
Mississippi	0.94	0.97	1.97	1.16	1.24
Central	--	--	0.73	--	--
Pacific	1.98	1.30	2.14	1.34	1.74
U.S. Total	1.15	1.07	1.62	1.24	1.51

Table 11 (continued). Preliminary weighted sex ratios of ducks harvested during the 2013-2017 hunting seasons, by species and flyway.

	Males per female [a]				
Species and Flyway	2013	2014	2015	2016	2017
Lesser scaup					
Atlantic	2.87	2.66	2.15	1.78	2.32
Mississippi	1.35	2.18	2.32	2.21	2.23
Central	1.84	1.88	1.79	1.26	2.20
Pacific	1.38	1.38	1.40	1.52	1.20
U.S. Total	1.70	2.05	2.04	1.72	2.13
Ring-necked duck					
Atlantic	1.65	1.35	1.18	1.39	1.45
Mississippi	1.64	1.58	1.86	2.15	2.03
Central	2.24	1.98	2.42	2.31	1.95
Pacific	1.56	1.76	1.47	1.74	1.65
U.S. Total	1.70	1.60	1.61	1.84	1.83
Common goldeneye					
Atlantic	2.24	0.88	0.87	1.32	1.28
Mississippi	0.73	1.27	1.05	1.23	1.25
Central	1.35	1.32	0.87	1.53	1.43
Pacific	1.78	1.66	1.68	1.14	1.75
U.S. Total	1.33	1.37	1.24	1.26	1.43
Bufflehead					
Atlantic	1.67	1.76	1.86	1.22	2.09
Mississippi	1.62	1.33	1.12	1.38	1.46
Central	2.25	1.42	1.25	1.25	1.36
Pacific	1.21	1.47	0.96	1.44	1.31
U.S. Total	1.60	1.51	1.31	1.31	1.61
Hooded merganser					
Atlantic	2.07	3.37	1.64	2.97	2.24
Mississippi	3.03	2.25	2.62	2.06	1.81
Central	1.24	2.44	3.16	2.14	3.27
Pacific	--	4.19	--	--	1.89
U.S. Total	2.20	2.63	2.17	2.37	2.07
Common merganser					
Atlantic	0.86	0.86	0.73	1.10	1.57
Mississippi	--	0.81	--	--	0.91
Central	--	--	--	--	--
Pacific	0.82	0.65	1.75	0.63	0.99
U.S. Total	0.81	0.76	0.65	0.82	1.19

[a] Ratio not shown if based on a sample of less than 20 wings.

[b] In estimating Flyway and U.S. ratios, the ratio for each state was weighed in proportion to the estimated harvest in that state as determined from the Harvest Information Program Waterfowl Harvest Survey.

Table 12. Preliminary weighted age ratios of geese harvested during the 2013-2017 hunting seasons, by species and flyway.

	Immatures per adult [a, b]				
Species and Flyway	2013	2014	2015	2016	2017
Canada goose					
Atlantic	0.47	0.35	0.41	0.44	0.50
Mississippi	0.39	0.38	0.47	0.42	0.41
Central	0.36	0.49	0.38	0.44	0.49
Pacific	0.60	0.59	0.47	0.71	0.51
U.S. Total	0.42	0.43	0.43	0.46	0.46
Snow goose					
Atlantic	0.50	1.06	0.77	0.58	1.41
Mississippi	0.99	0.46	0.31	0.38	0.77
Central	0.23	0.41	0.28	0.54	0.56
Pacific	0.35	0.49	0.78	0.77	0.81
U.S. Total	0.43	0.47	0.44	0.55	0.69
Blue goose					
Mississippi	0.64	0.40	0.20	0.40	1.24
Central	0.46	0.79	0.31	0.65	0.79
U.S. Total	0.56	0.61	0.27	0.51	0.98
Ross' goose					
Mississippi	--	2.39	--	0.88	1.48
Central	1.06	0.67	0.61	1.07	0.79
Pacific	0.36	0.32	0.69	0.77	0.86
U.S. Total	0.79	0.74	0.68	0.96	0.96
Greater white-fronted goose					
Mississippi	0.48	0.52	0.78	0.71	0.64
Central	0.76	0.67	0.69	0.39	0.56
Pacific	0.43	0.52	1.05	0.75	0.29
U.S. Total	0.53	0.58	0.83	0.62	0.53
Brant					
Atlantic	0.05	0.26	0.10	0.86	0.35
Pacific	0.12	0.53	0.26	0.55	0.25
U.S. Total	0.08	0.30	0.20	0.91	0.34

[a] Ratio not shown if based on a sample of less than 20 wings.

[b] In estimating Flyway and U.S. ratios, the ratio for each state was weighed in proportion to the estimated harvest in that state as determined from the Harvest Information Program Waterfowl Harvest Survey.

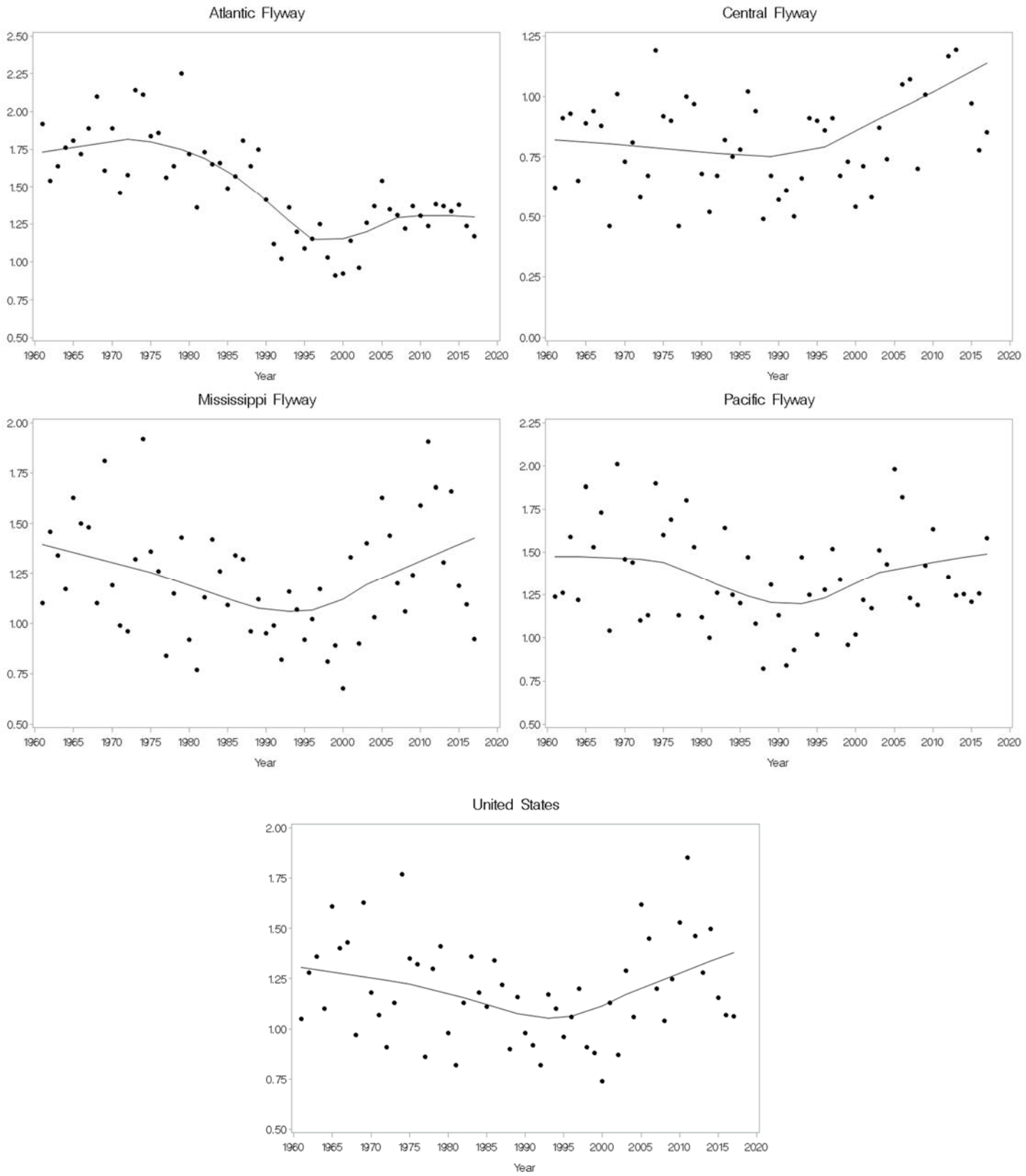

Figure 3. Age ratios of mallards harvested in the United States, 1961-2017.

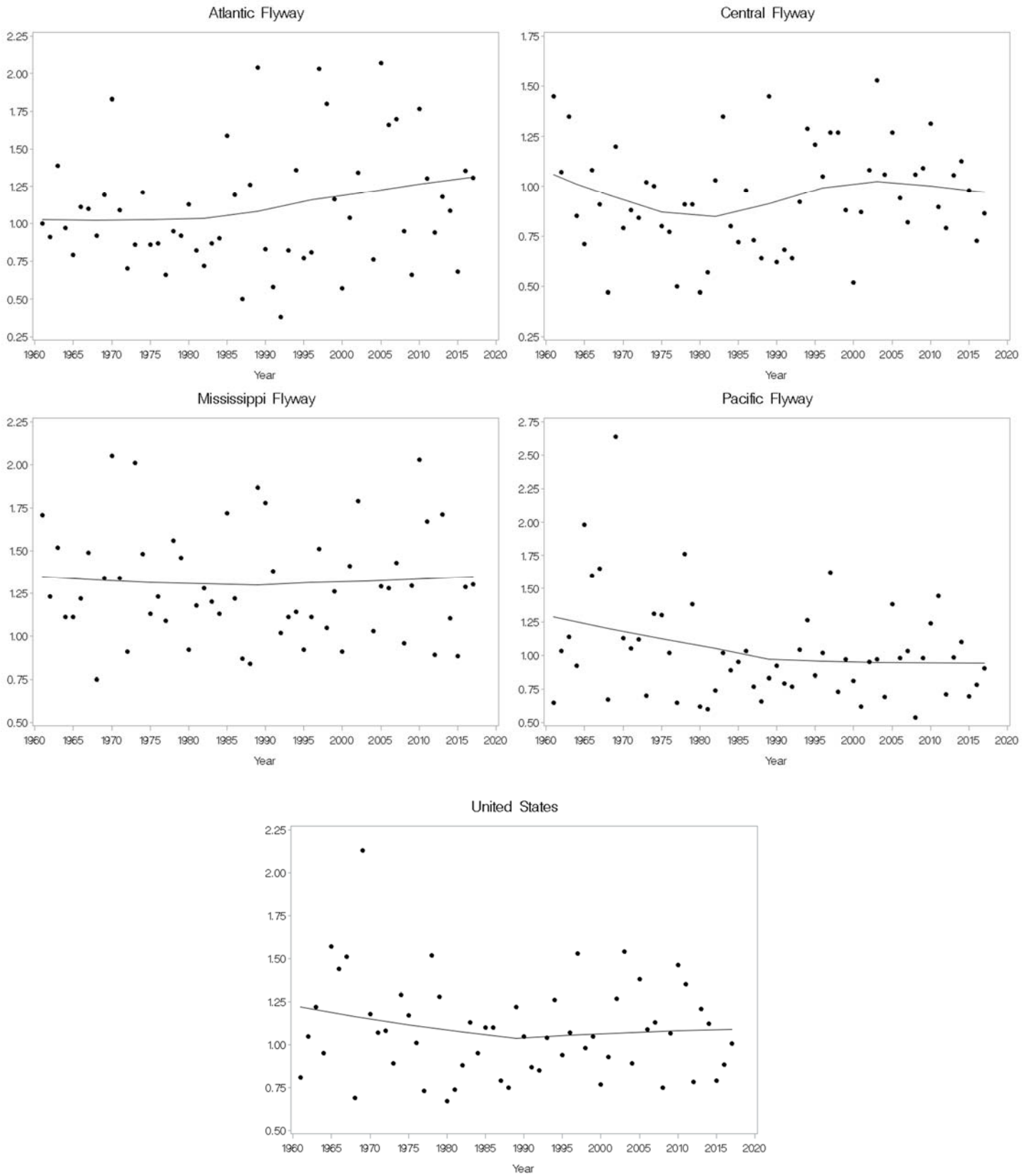

Figure 4. Age ratios of northern pintails harvested in the United States, 1961-2017.

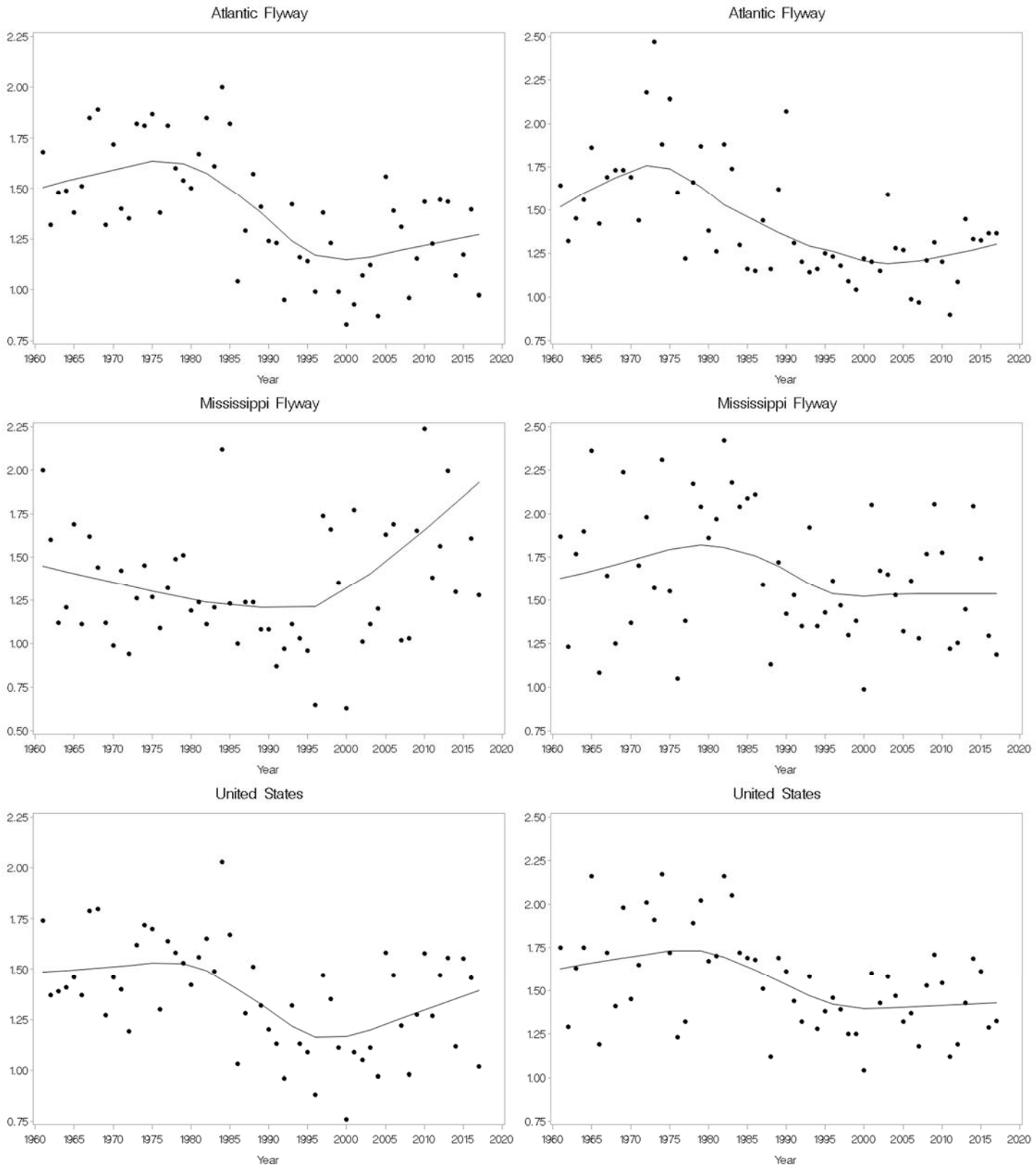

Figure 5. Age ratios of American black ducks (left column) and wood ducks (right column) harvested in the United States, 1961-2017.

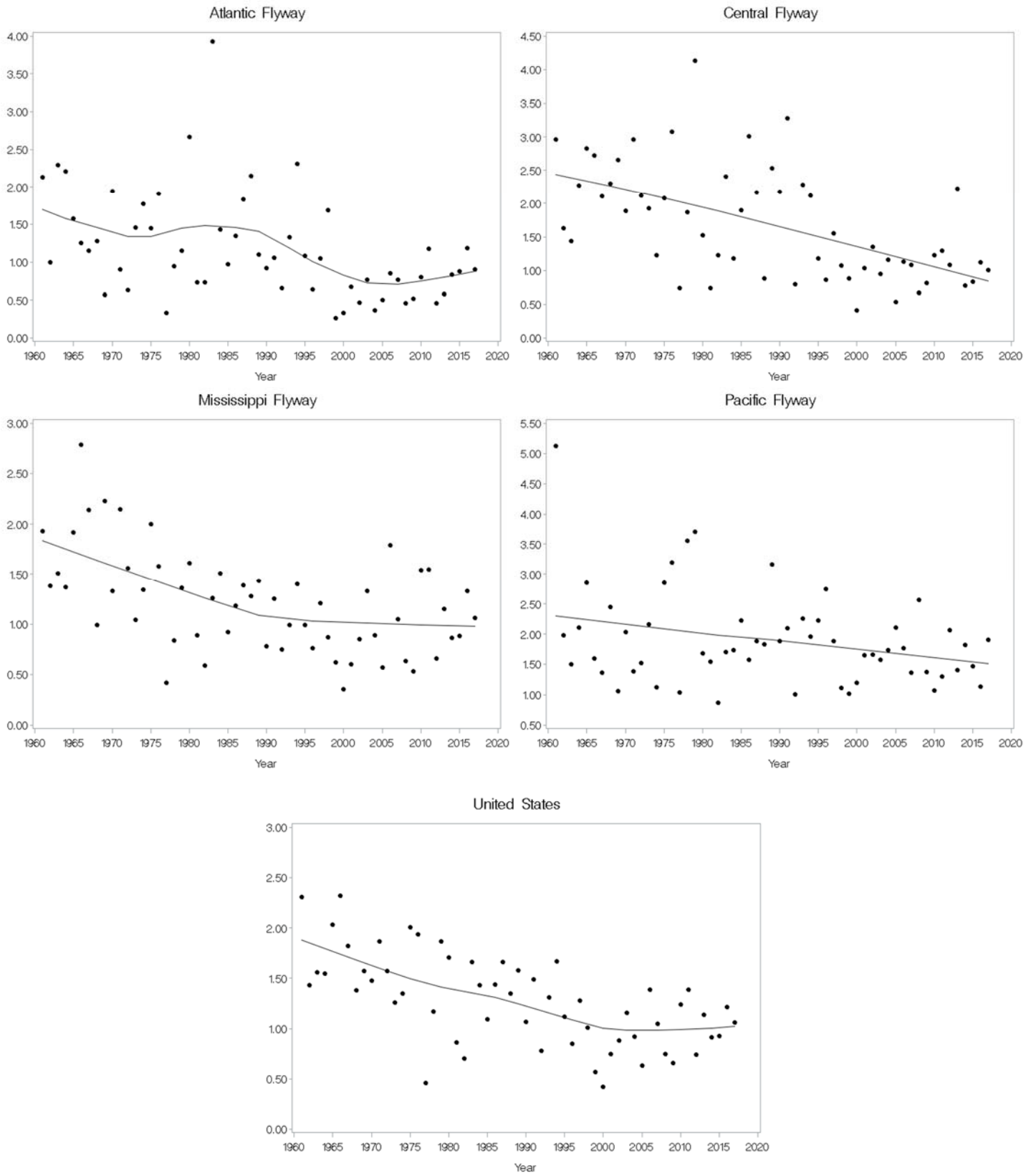

Figure 6. Age ratios of lesser scaup harvested in the United States, 1961-2017.

Table 13. Preliminary estimates of mourning dove harvest and hunter activity during the 2016 and 2017 hunting seasons. [1]

	Mourning Dove Harvest		Active Hunters [2]		Mourning Dove Days Afield		Seasonal Harvest Per Hunter	
	2016	2017	2016	2017	2016	2017	2016	2017
Alabama	396,000 ± 21%	483,600 ± 30%	31,400 ± 14%	27,600 ± 14%	65,400 ± 17%	64,900 ± 27%	12.6 ± 25%	17.5 ± 34%
Delaware	20,100 ± 35%	19,600 ± 36%	1,600 ± 27%	1,600 ± 30%	3,200 ± 27%	4,100 ± 49%	12.3 ± 44%	12.5 ± 47%
Florida	88,200 ± 43%	119,100 ± 77%	7,600 ± 37%	6,500 ± 47%	18,100 ± 33%	27,000 ± 80%	11.6 ± 57%	18.3 ± 91%
Georgia	701,600 ± 15%	963,500 ± 20%	44,600 ± 12%	43,500 ± 12%	105,700 ± 16%	121,600 ± 18%	15.7 ± 19%	22.2 ± 24%
Illinois	316,600 ± 30%	344,900 ± 29%	15,700 ± 20%	17,100 ± 20%	45,500 ± 26%	52,500 ± 25%	20.1 ± 37%	20.1 ± 36%
Indiana	115,200 ± 38%	122,100 ± 20%	6,700 ± 26%	10,300 ± 23%	23,300 ± 32%	25,300 ± 23%	17.1 ± 46%	11.9 ± 31%
Kentucky	305,400 ± 53%	254,700 ± 18%	14,200 ± 23%	11,900 ± 29%	47,300 ± 49%	30,900 ± 27%	21.5 ± 58%	21.4 ± 34%
Louisiana	184,600 ± 47%	141,900 ± 32%	13,700 ± 33%	15,800 ± 32%	25,000 ± 36%	30,800 ± 33%	13.5 ± 57%	9.0 ± 45%
Maryland	65,100 ± 22%	67,500 ± 28%	5,200 ± 24%	5,400 ± 24%	14,600 ± 22%	11,600 ± 26%	12.5 ± 32%	12.5 ± 37%
Mississippi	225,100 ± 19%	316,500 ± 25%	13,800 ± 17%	13,600 ± 18%	31,700 ± 21%	35,700 ± 22%	16.3 ± 26%	23.3 ± 30%
North Carolina	662,300 ± 30%	531,300 ± 24%	46,800 ± 20%	43,300 ± 21%	113,700 ± 24%	96,600 ± 22%	14.1 ± 36%	12.3 ± 32%
Ohio	149,100 ± 35%	67,200 ± 43%	10,700 ± 23%	5,900 ± 30%	34,800 ± 28%	16,000 ± 39%	13.9 ± 42%	11.4 ± 53%
Pennsylvania	142,900 ± 37%	96,400 ± 26%	14,200 ± 29%	10,900 ± 30%	50,100 ± 35%	43,600 ± 35%	10.1 ± 47%	8.9 ± 40%
Rhode Island	1,300 ± 131%	800 ± 194%	200 ± 67%	200 ± 117%	600 ± 93%	500 ± 122%	6.0 ± 147%	4.0 ± 226%
South Carolina	555,200 ± 37%	606,200 ± 28%	29,900 ± 22%	28,900 ± 22%	90,400 ± 31%	90,000 ± 32%	18.6 ± 43%	20.9 ± 36%
Tennessee	408,500 ± 37%	334,800 ± 39%	25,200 ± 22%	19,400 ± 25%	59,400 ± 30%	44,300 ± 30%	16.2 ± 43%	17.3 ± 46%
Virginia	208,600 ± 35%	262,600 ± 19%	15,300 ± 23%	17,900 ± 16%	40,700 ± 33%	39,900 ± 16%	13.7 ± 42%	14.7 ± 25%
West Virginia	14,900 ± 77%	9,800 ± 26%	1,100 ± 27%	1,000 ± 23%	3,100 ± 39%	2,600 ± 39%	14.0 ± 82%	10.2 ± 34%
Wisconsin	45,500 ± 30%	40,800 ± 37%	5,100 ± 33%	5,500 ± 31%	17,000 ± 34%	20,500 ± 34%	8.9 ± 45%	7.5 ± 48%
Eastern Unit Total	4,606,000 ± 9%	4,783,300 ± 8%	303,100	286,200	789,600 ± 8%	758,500 ± 8%		
Arkansas	258,200 ± 29%	287,100 ± 35%	16,300 ± 28%	16,200 ± 29%	36,200 ± 27%	35,500 ± 30%	15.9 ± 41%	17.7 ± 45%
Colorado	141,200 ± 20%	117,600 ± 25%	13,100 ± 18%	11,300 ± 19%	29,700 ± 19%	24,100 ± 20%	10.8 ± 27%	10.4 ± 31%
Iowa	128,100 ± 19%	134,900 ± 16%	9,700 ± 15%	11,200 ± 13%	25,300 ± 17%	28,300 ± 17%	13.2 ± 24%	12.0 ± 21%
Kansas	427,600 ± 18%	290,600 ± 34%	28,600 ± 12%	21,800 ± 24%	77,200 ± 17%	58,300 ± 35%	14.9 ± 22%	13.3 ± 41%
Minnesota	96,700 ± 79%	39,100 ± 30%	6,500 ± 58%	6,800 ± 63%	18,000 ± 55%	16,200 ± 45%	15.0 ± 98%	5.7 ± 70%
Missouri	321,600 ± 20%	367,200 ± 18%	25,200 ± 14%	27,400 ± 13%	65,100 ± 21%	65,700 ± 16%	12.8 ± 24%	13.4 ± 22%
Montana	16,000 ± 53%	8,900 ± 45%	1,900 ± 44%	1,300 ± 57%	3,500 ± 43%	2,200 ± 63%	8.6 ± 69%	7.1 ± 73%
Nebraska	132,000 ± 22%	177,900 ± 16%	9,700 ± 19%	12,300 ± 16%	24,500 ± 18%	31,000 ± 15%	13.7 ± 29%	14.5 ± 23%
New Mexico	47,900 ± 26%	73,900 ± 51%	4,400 ± 18%	5,500 ± 57%	12,800 ± 33%	16,500 ± 70%	10.8 ± 31%	13.5 ± 77%

[1] Variance estimates are presented as the 95% confidence interval as a percent of the point estimate.

[2] Hunter number estimates at the management unit and national levels may be biased high, because the HIP sample frames are state specific; therefore hunters are counted more than once if they hunt in >1 state. Variance inestimable.

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Table 13 (continued). Preliminary estimates of mourning dove harvest and hunter activity during the 2016 and 2017 hunting seasons. [1]

	Mourning Dove Harvest		Active Hunters [2]		Mourning Dove Days Afield		Seasonal Harvest Per Hunter	
	2016	2017	2016	2017	2016	2017	2016	2017
North Dakota	76,900 ± 30%	59,400 ± 26%	5,300 ± 24%	4,100 ± 26%	15,800 ± 35%	11,400 ± 31%	14.5 ± 39%	14.7 ± 36%
Oklahoma	400,400 ± 28%	315,600 ± 29%	23,800 ± 14%	17,500 ± 16%	58,500 ± 21%	45,600 ± 24%	16.8 ± 32%	18.1 ± 34%
South Dakota	112,400 ± 46%	111,600 ± 31%	5,600 ± 22%	5,700 ± 22%	17,100 ± 33%	18,400 ± 26%	20.1 ± 51%	19.5 ± 38%
Texas	5,155,300 ± 19%	3,469,500 ± 14%	278,700 ± 13%	190,500 ± 13%	956,800 ± 18%	703,300 ± 17%	18.5 ± 23%	18.2 ± 19%
Wyoming	20,100 ± 40%	9,400 ± 57%	1,700 ± 27%	700 ± 42%	3,700 ± 36%	2,200 ± 84%	11.5 ± 48%	13.1 ± 71%
Central Unit Total	7,334,600 ± 14%	5,462,800 ± 10%	430,400	332,200	1,344,400 ± 13%	1,058,800 ± 11%		
Arizona	395,800 ± 12%	350,700 ± 11%	21,900 ± 6%	18,600 ± 5%	62,700 ± 9%	52,400 ± 8%	18.1 ± 13%	18.8 ± 12%
California	900,200 ± 15%	766,900 ± 12%	57,100 ± 10%	50,100 ± 9%	163,300 ± 16%	125,700 ± 13%	15.8 ± 18%	15.3 ± 15%
Idaho	108,900 ± 33%	108,500 ± 42%	7,300 ± 29%	6,900 ± 26%	25,300 ± 38%	22,700 ± 39%	15.0 ± 44%	15.7 ± 49%
Nevada	32,100 ± 33%	16,000 ± 32%	3,200 ± 23%	2,700 ± 25%	7,600 ± 28%	6,200 ± 44%	10.1 ± 40%	6.0 ± 40%
Oregon	27,200 ± 40%	19,700 ± 47%	4,300 ± 35%	2,800 ± 54%	8,800 ± 31%	8,500 ± 63%	6.3 ± 53%	7.1 ± 72%
Utah	36,100 ± 32%	29,600 ± 55%	6,000 ± 26%	6,800 ± 32%	15,300 ± 38%	15,000 ± 46%	6.0 ± 41%	4.3 ± 64%
Washington	61,100 ± 30%	23,700 ± 80%	4,600 ± 23%	2,700 ± 42%	12,800 ± 30%	4,700 ± 44%	13.4 ± 38%	8.7 ± 91%
Western Unit Total	1,561,400 ± 10%	1,315,000 ± 9%	104,300	90,600	295,900 ± 10%	235,100 ± 9%		
United States Total	13,502,000 ± 8%	11,561,100 ± 6%	837,800	709,000	2,429,800 ± 8%	2,052,400 ± 7%		

[1] Variance estimates are presented as the 95% confidence interval as a percent of the point estimate.

[2] Hunter number estimates at the management unit and national levels may be biased high, because the HIP sample frames are state specific; therefore hunters are counted more than once if they hunt in >1 state. Variance inestimable.

Table 14. Preliminary estimates of white-winged dove harvest and hunter activity during the 2016 and 2017 hunting seasons. [1]

	White-winged Dove Harvest		Active Hunters [2]		White-winged Dove Days Afield		Seasonal Harvest Per Hunter	
	2016	2017	2016	2017	2016	2017	2016	2017
Alabama	3,200 ± 98%	9,800 ± 115%	600 ± 79%	1,100 ± 93%	1,100 ± 89%	10,700 ± 125%	5.3 ± 126%	8.8 ± 148%
Delaware	0	0	0	0	0	0	0	0
Florida	2,600 ± 140%	4,200 ± 102%	900 ± 136%	1,300 ± 133%	2,500 ± 148%	4,100 ± 130%	2.9 ± 195%	3.2 ± 168%
Georgia	900 ± 166%	600 ± 112%	300 ± 138%	700 ± 82%	600 ± 138%	3,200 ± 110%	3.0 ± 216%	0.9 ± 138%
Louisiana	8,600 ± 92%	9,200 ± 118%	2,300 ± 88%	1,500 ± 110%	6,800 ± 96%	2,500 ± 106%	3.8 ± 128%	6.2 ± 161%
Maryland	0	0	0	0	0	0	0	0
Mississippi	700 ± 173%	800 ± 156%	200 ± 154%	700 ± 110%	1,000 ± 158%	1,000 ± 124%	4.2 ± 232%	1.2 ± 191%
North Carolina	800 ± 117%	600 ± 195%	500 ± 112%	1,300 ± 153%	800 ± 117%	3,900 ± 153%	1.7 ± 162%	0.5 ± 248%
Pennsylvania	0	0	0	0	0	0	0	0
Rhode Island	0	0	0	0	0	0	0	0
South Carolina	0	0	0	0	0	0	0	0
Virginia	0	0	0	0	0	0	0	0
Eastern Unit Total	16,900 ± 57%	25,200 ± 65%	4,700	6,600	12,800 ± 61%	25,400 ± 64%		
Colorado	2,300 ± 97%	1,800 ± 77%	400 ± 61%	2,100 ± 52%	1,300 ± 81%	3,500 ± 47%	5.6 ± 115%	0.8 ± 93%
Kansas	300 ± 153%	200 ± 196%	100 ± 137%	1,400 ± 110%	400 ± 145%	2,100 ± 102%	2.0 ± 206%	0.2 ± 225%
New Mexico	35,600 ± 45%	22,400 ± 35%	2,700 ± 23%	3,100 ± 74%	9,800 ± 42%	7,900 ± 42%	12.9 ± 50%	7.2 ± 82%
Oklahoma	10,700 ± 77%	13,300 ± 97%	2,500 ± 60%	2,600 ± 58%	5,700 ± 65%	9,300 ± 80%	4.3 ± 98%	5.1 ± 113%
Texas	1,469,700 ± 23%	1,252,800 ± 20%	137,500 ± 18%	118,300 ± 17%	522,100 ± 31%	407,400 ± 20%	10.7 ± 29%	10.6 ± 27%
Central Unit Total	1,518,600 ± 22%	1,290,500 ± 20%	143,300	127,500	539,400 ± 30%	430,200 ± 19%		
Arizona	69,000 ± 17%	62,100 ± 14%	13,200 ± 9%	11,200 ± 7%	37,300 ± 13%	30,000 ± 10%	5.2 ± 20%	5.5 ± 16%
California	62,300 ± 55%	47,000 ± 27%	13,900 ± 26%	12,500 ± 22%	34,900 ± 32%	31,400 ± 23%	4.5 ± 61%	3.8 ± 35%
Nevada	200 ± 107%	200 ± 131%	100 ± 139%	200 ± 96%	500 ± 130%	600 ± 95%	1.7 ± 175%	1.0 ± 162%
Utah	200 ± 183%	100 ± 192%	200 ± 183%	400 ± 156%	200 ± 183%	1,800 ± 179%	1.0 ± 259%	0.3 ± 248%
Western Unit Total	131,700 ± 27%	109,400 ± 14%	27,500	24,400	72,900 ± 17%	63,800 ± 13%		
United States Total	1,667,100 ± 20%	1,425,000 ± 18%	175,600	158,400	625,100 ± 26%	519,500 ± 16%		

[1] Variance estimates are presented as the 95% confidence interval as a percent of the point estimate.

[2] Hunter number estimates at the management unit and national levels may be biased high, because the HIP sample frames are state specific; therefore hunters are counted more than once if they hunt in >1 state. Variance inestimable.

Table 15. Preliminary estimates of band-tailed pigeon harvest and hunter activity during the 2016 and 2017 hunting seasons. [1]

	Band-tailed Pigeon Harvest		Active Hunters [2]		Band-tailed Pigeon Days Afield		Seasonal Harvest Per Hunter	
	2016	2017	2016	2017	2016	2017	2016	2017
Arizona	500 ± 69%	100 ± 72%	100 ± 56%	100 ± 47%	400 ± 71%	100 ± 52%	3.7 ± 89%	1.0 ± 86%
Colorado	200 ± 174%	<50 ± 64%	100 ± 108%	<50 ± 29%	100 ± 140%	100 ± 33%	3.7 ± 205%	0.9 ± 70%
New Mexico	200 ± 81%	200 ± 68%	100 ± 69%	100 ± 24%	100 ± 81%	300 ± 41%	3.1 ± 106%	1.6 ± 72%
Utah	200 ± 191%	0	<50 ± 191%	<50 ± 66%	100 ± 191%	<50 ± 78%	11.0 ± 271%	0
Interior Total	1,100 ± 62%	300 ± 46%	300	200	800 ± 55%	500 ± 28%		
California	4,400 ± 65%	5,600 ± 80%	2,900 ± 53%	2,500 ± 48%	5,200 ± 57%	5,600 ± 54%	1.5 ± 84%	2.2 ± 93%
Oregon	1,300 ± 37%	500 ± 54%	300 ± 21%	100 ± 27%	1,000 ± 32%	400 ± 36%	4.4 ± 42%	3.2 ± 60%
Washington	200 ± 61%	0	100 ± 39%	100 ± 195%	100 ± 51%	100 ± 195%	3.4 ± 72%	0
Pacific Coast Total	5,900 ± 49%	6,000 ± 74%	3,300	2,800	6,300 ± 47%	6,100 ± 50%		
United States Total	7,000 ± 43%	6,300 ± 71%	3,600	3,000	7,100 ± 42%	6,600 ± 46%		

[1] Variance estimates are presented as the 95% confidence interval as a percent of the point estimate.

[2] Hunter number estimates at the management unit and national levels may be biased high, because the HIP sample frames are state specific; therefore hunters are counted more than once if they hunt in >1 state. Variance inestimable.

Table 16. Preliminary estimates of American woodcock harvest and hunter activity during the 2016 and 2017 hunting seasons. [1]

	Woodcock Harvest		Active Woodcock Hunters [2]		Woodcock Hunter Days Afield		Seasonal Harvest Per Hunter	
	2016	2017	2016	2017	2016	2017	2016	2017
Connecticut	900 ± 58%	1,600 ± 69%	900 ± 29%	600 ± 33%	5,100 ± 40%	3,800 ± 44%	0.9 ± 64%	2.5 ± 76%
Delaware	400 ± 66%	200 ± 151%	200 ± 132%	200 ± 119%	800 ± 108%	700 ± 128%	2.7 ± 148%	1.0 ± 192%
Florida	<50 ± 194%	200 ± 151%	200 ± 91%	200 ± 92%	400 ± 103%	1,400 ± 132%	0.3 ± 214%	1.0 ± 177%
Georgia	500 ± 92%	1,400 ± 104%	2,000 ± 159%	3,600 ± 123%	4,200 ± 152%	9,500 ± 136%	0.3 ± 184%	0.4 ± 161%
Maine	6,700 ± 31%	17,300 ± 53%	3,200 ± 37%	5,000 ± 30%	10,600 ± 27%	22,600 ± 28%	2.1 ± 48%	3.4 ± 61%
Maryland	500 ± 51%	400 ± 59%	500 ± 144%	100 ± 31%	800 ± 95%	500 ± 43%	0.8 ± 153%	2.9 ± 67%
Massachusetts	2,600 ± 36%	1,900 ± 46%	1,300 ± 28%	1,200 ± 28%	7,000 ± 34%	5,900 ± 29%	1.9 ± 45%	1.5 ± 54%
New Hampshire	6,600 ± 55%	4,900 ± 44%	2,000 ± 33%	2,400 ± 31%	10,300 ± 38%	8,600 ± 29%	3.3 ± 64%	2.1 ± 54%
New Jersey	3,800 ± 86%	1,700 ± 50%	900 ± 52%	800 ± 51%	2,900 ± 49%	4,700 ± 85%	4.4 ± 100%	2.1 ± 71%
New York	4,800 ± 24%	6,100 ± 31%	3,200 ± 31%	3,300 ± 31%	13,900 ± 31%	15,100 ± 35%	1.5 ± 40%	1.8 ± 43%
North Carolina	4,300 ± 122%	6,700 ± 103%	2,600 ± 133%	1,200 ± 61%	5,600 ± 97%	5,800 ± 88%	1.7 ± 181%	5.6 ± 120%
Pennsylvania	3,900 ± 39%	8,200 ± 58%	6,300 ± 37%	5,200 ± 39%	18,200 ± 34%	20,700 ± 34%	0.6 ± 54%	1.6 ± 70%
Rhode Island	200 ± 68%	200 ± 171%	100 ± 92%	<50 ± 88%	300 ± 73%	300 ± 121%	2.5 ± 114%	4.3 ± 193%
South Carolina	1,200 ± 59%	4,700 ± 145%	200 ± 28%	1,400 ± 164%	1,100 ± 39%	4,500 ± 152%	5.6 ± 65%	3.4 ± 219%
Vermont	5,300 ± 59%	3,400 ± 33%	1,800 ± 25%	1,300 ± 30%	10,500 ± 38%	5,800 ± 28%	2.9 ± 64%	2.7 ± 44%
Virginia	1,900 ± 35%	3,400 ± 104%	700 ± 94%	1,700 ± 80%	2,600 ± 55%	4,500 ± 85%	2.6 ± 100%	2.0 ± 131%
West Virginia	700 ± 57%	500 ± 52%	400 ± 58%	400 ± 61%	1,600 ± 61%	800 ± 38%	1.9 ± 81%	1.2 ± 80%
Eastern Region Total	44,400 ± 19%	62,700 ± 24%	26,600	28,700	96,100 ± 14%	115,400 ± 18%		
Alabama	100 ± 190%	600 ± 90%	1,400 ± 194%	1,800 ± 183%	1,400 ± 182%	2,200 ± 149%	< 0.1 ± 271%	0.4 ± 204%
Arkansas	3,000 ± 125%	600 ± 194%	4,100 ± 110%	1,500 ± 182%	13,400 ± 157%	4,700 ± 178%	0.7 ± 166%	0.4 ± 266%
Illinois	1,600 ± 173%	400 ± 142%	1,500 ± 130%	100 ± 75%	13,200 ± 163%	300 ± 84%	1.1 ± 217%	3.0 ± 161%
Indiana	900 ± 43%	1,500 ± 142%	300 ± 105%	1,100 ± 70%	1,300 ± 80%	2,900 ± 68%	2.8 ± 113%	1.4 ± 158%
Iowa	2,900 ± 168%	1,900 ± 179%	500 ± 163%	1,000 ± 116%	1,800 ± 141%	2,400 ± 111%	5.8 ± 234%	1.8 ± 214%
Kansas	0	100 ± 120%	400 ± 196%	<50 ± 74%	400 ± 196%	100 ± 80%	0	4.0 ± 141%
Kentucky	2,400 ± 159%	900 ± 68%	1,100 ± 179%	100 ± 31%	1,500 ± 128%	800 ± 40%	2.3 ± 239%	7.1 ± 75%
Louisiana	1,800 ± 116%	9,900 ± 181%	900 ± 155%	3,500 ± 81%	4,600 ± 135%	14,500 ± 96%	1.9 ± 193%	2.8 ± 199%
Michigan	64,900 ± 26%	66,100 ± 31%	24,100 ± 19%	24,100 ± 18%	107,100 ± 21%	122,800 ± 24%	2.7 ± 32%	2.7 ± 36%
Minnesota	25,900 ± 36%	26,700 ± 37%	13,500 ± 34%	11,900 ± 35%	46,000 ± 35%	45,700 ± 35%	1.9 ± 49%	2.2 ± 51%
Mississippi	<50 ± 188%	400 ± 123%	600 ± 192%	1,600 ± 132%	1,300 ± 194%	2,400 ± 135%	< 0.1 ± 269%	0.2 ± 180%

[1] Variance estimates are presented as the 95% confidence interval as a percent of the point estimate.

[2] Hunter number estimates at the management unit and national levels may be biased high, because the HIP sample frames are state specific; therefore hunters are counted more than once if they hunt in >1 state. Variance inestimable.

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Table 16 (continued). Preliminary estimates of American woodcock harvest and hunter activity during the 2016 and 2017 hunting seasons. [1]

	Woodcock Harvest		Active Woodcock Hunters [2]		Woodcock Hunter Days Afield		Seasonal Harvest Per Hunter	
	2016	2017	2016	2017	2016	2017	2016	2017
Missouri	3,400 ± 162%	200 ± 64%	2,200 ± 105%	900 ± 170%	6,200 ± 120%	1,300 ± 115%	1.5 ± 194%	0.2 ± 182%
Nebraska	600 ± 196%	0	600 ± 196%	<50 ± %	600 ± 196%	100 ± 0%	1.0 ± 277%	0
Ohio	3,200 ± 81%	400 ± 90%	2,600 ± 68%	1,900 ± 84%	8,200 ± 88%	5,000 ± 71%	1.3 ± 106%	0.2 ± 123%
Oklahoma	0	0	0	0	0	0	0	0
Tennessee	0	100 ± 193%	1,400 ± 191%	1,300 ± 187%	9,800 ± 194%	2,600 ± 183%	0	< 0.1 ± 268%
Texas	12,100 ± 181%	0	11,300 ± 136%	12,100 ± 138%	28,400 ± 139%	12,100 ± 138%	1.1 ± 226%	0
Wisconsin	35,100 ± 25%	31,100 ± 29%	11,700 ± 28%	11,700 ± 29%	55,100 ± 32%	52,400 ± 29%	3.0 ± 38%	2.7 ± 41%
Central Region Total	158,000 ± 20%	140,900 ± 22%	78,200	74,600	300,200 ± 21%	272,400 ± 16%		
United States Total	202,300 ± 16%	203,500 ± 17%	104,800	103,300	396,300 ± 16%	387,700 ± 13%		

[1] Variance estimates are presented as the 95% confidence interval as a percent of the point estimate.

[2] Hunter number estimates at the management unit and national levels may be biased high, because the HIP sample frames are state specific; therefore hunters are counted more than once if they hunt in >1 state. Variance inestimable.

Table 17. Preliminary estimates of snipe harvest and hunter activity during the 2016 and 2017 hunting seasons. [1]

	Snipe Harvest		Active Snipe Hunters [2]		Snipe Hunter Days Afield		Seasonal Harvest Per Hunter	
	2016	2017	2016	2017	2016	2017	2016	2017
Connecticut	200 ± 187%	<50 ± 164%	100 ± 184%	100 ± 181%	300 ± 171%	200 ± 186%	2.9 ± 262%	0.5 ± 245%
Delaware	0	<50 ± 180%	0	<50 ± 180%	0	<50 ± 180%	0	1.0 ± 255%
Florida	63,000 ± 83%	14,300 ± 88%	3,900 ± 80%	2,100 ± 87%	15,500 ± 101%	4,800 ± 92%	16.3 ± 115%	6.7 ± 124%
Georgia	800 ± 115%	0	200 ± 110%	0	800 ± 138%	0	4.3 ± 159%	0
Maine	0	100 ± 193%	0	600 ± 162%	0	1,400 ± 144%	0	0.2 ± 252%
Maryland	100 ± 188%	0	<50 ± 188%	0	<50 ± 188%	0	5.0 ± 266%	0
Massachusetts	0	100 ± 174%	100 ± 108%	<50 ± 121%	600 ± 137%	<50 ± 136%	0	12.5 ± 212%
New Hampshire	<50 ± 186%	300 ± 127%	<50 ± 120%	200 ± 107%	<50 ± 140%	800 ± 124%	0.5 ± 222%	1.4 ± 166%
New Jersey	0	0	<50 ± 189%	100 ± 195%	<50 ± 189%	100 ± 195%	0	0
New York	400 ± 146%	600 ± 116%	300 ± 166%	100 ± 77%	400 ± 130%	400 ± 96%	1.3 ± 221%	4.5 ± 139%
North Carolina	0	0	500 ± 196%	0	1,100 ± 196%	0	0	0
Pennsylvania	2,800 ± 196%	11,000 ± 177%	900 ± 196%	2,200 ± 138%	1,900 ± 196%	8,800 ± 142%	3.0 ± 277%	5.0 ± 224%
Rhode Island	0	0	<50 ± 187%	0	<50 ± 187%	0	0	0
South Carolina	1,700 ± 156%	1,600 ± 144%	800 ± 167%	100 ± 77%	900 ± 147%	400 ± 98%	2.2 ± 228%	12.2 ± 164%
Vermont	0	100 ± 122%	0	<50 ± 65%	0	100 ± 82%	0	5.2 ± 138%
Virginia	100 ± 120%	<50 ± 186%	400 ± 127%	200 ± 176%	400 ± 113%	800 ± 181%	0.2 ± 175%	< 0.1 ± 256%
West Virginia	<50 ± 183%	200 ± 183%	<50 ± 183%	100 ± 123%	100 ± 183%	200 ± 114%	2.0 ± 259%	3.3 ± 220%
Atlantic Flyway Total	69,100 ± 76%	28,500 ± 82%	7,300	5,900	22,100 ± 74%	17,900 ± 75%		
Alabama	500 ± 195%	200 ± 195%	100 ± 195%	100 ± 195%	100 ± 195%	200 ± 195%	5.0 ± 276%	2.0 ± 276%
Arkansas	0	200 ± 194%	0	100 ± 194%	0	100 ± 194%	0	3.0 ± 275%
Illinois	0	800 ± 195%	0	1,000 ± 181%	0	2,100 ± 169%	0	0.8 ± 266%
Indiana	100 ± 77%	200 ± 94%	400 ± 180%	100 ± 45%	1,300 ± 176%	200 ± 53%	0.3 ± 196%	3.2 ± 104%
Iowa	10,000 ± 148%	100 ± 116%	1,600 ± 108%	500 ± 182%	4,800 ± 121%	1,600 ± 179%	6.2 ± 184%	0.2 ± 216%
Kentucky	0	0	0	0	0	0	0	0
Louisiana	12,600 ± 195%	600 ± 138%	100 ± 195%	800 ± 157%	1,600 ± 195%	800 ± 157%	100.0 ± 276%	0.7 ± 209%
Michigan	200 ± 195%	900 ± 152%	100 ± 195%	1,300 ± 163%	300 ± 195%	1,400 ± 152%	2.0 ± 276%	0.7 ± 223%
Minnesota	700 ± 113%	100 ± 195%	300 ± 96%	900 ± 147%	900 ± 118%	3,200 ± 171%	2.0 ± 149%	< 0.1 ± 244%
Mississippi	2,000 ± 196%	0	1,000 ± 196%	300 ± 196%	1,000 ± 196%	300 ± 196%	2.0 ± 277%	0
Missouri	0	700 ± 195%	0	100 ± 195%	0	100 ± 195%	0	9.0 ± 275%

[1] Variance estimates are presented as the 95% confidence interval as a percent of the point estimate.

[2] Hunter number estimates at the management unit and national levels may be biased high, because the HIP sample frames are state specific; therefore hunters are counted more than once if they hunt in >1 state. Variance inestimable.

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Table 17 (continued). Preliminary estimates of snipe harvest and hunter activity during the 2016 and 2017 hunting seasons. [1]

	Snipe Harvest		Active Snipe Hunters [2]		Snipe Hunter Days Afield		Seasonal Harvest Per Hunter	
	2016	2017	2016	2017	2016	2017	2016	2017
Ohio	0	900 ± 177%	100 ± 195%	200 ± 127%	100 ± 195%	900 ± 177%	0	6.0 ± 218%
Tennessee	0	0	0	2,400 ± 196%	0	2,400 ± 196%	0	0
Wisconsin	0	1,100 ± 196%	1,200 ± 196%	1,100 ± 196%	2,500 ± 196%	1,100 ± 196%	0	1.0 ± 277%
Mississippi Flyway Total	26,200 ± 111%	5,700 ± 66%	5,000	8,700	12,700 ± 70%	14,400 ± 65%		
Colorado	1,000 ± 196%	500 ± 145%	300 ± 196%	400 ± 160%	300 ± 196%	500 ± 145%	3.0 ± 277%	1.2 ± 216%
Kansas	12,300 ± 196%	0	500 ± 196%	0	1,800 ± 196%	0	27.0 ± 277%	0
Nebraska	0	400 ± 196%	100 ± 195%	400 ± 196%	100 ± 195%	400 ± 196%	0	1.0 ± 277%
New Mexico	<50 ± 182%	0	<50 ± 182%	<50 ± 180%	<50 ± 182%	<50 ± 180%	1.0 ± 257%	0
North Dakota	2,100 ± 116%	1,500 ± 174%	1,200 ± 129%	900 ± 129%	1,900 ± 124%	1,900 ± 127%	1.8 ± 173%	1.6 ± 217%
Oklahoma	1,700 ± 196%	1,300 ± 196%	800 ± 196%	1,700 ± 142%	2,500 ± 196%	3,700 ± 166%	2.0 ± 277%	0.8 ± 242%
South Dakota	300 ± 187%	100 ± 178%	300 ± 190%	<50 ± 124%	1,500 ± 190%	<50 ± 127%	1.0 ± 266%	4.5 ± 217%
Texas	1,200 ± 109%	0	300 ± 86%	0	400 ± 92%	0	4.5 ± 139%	0
Wyoming	100 ± 95%	300 ± 104%	<50 ± 63%	200 ± 121%	100 ± 70%	800 ± 147%	2.0 ± 114%	1.3 ± 160%
Central Flyway Total	18,500 ± 132%	4,000 ± 94%	3,500	3,600	8,600 ± 83%	7,300 ± 93%		
Arizona	100 ± 194%	<50 ± 193%	100 ± 194%	1,200 ± 186%	100 ± 194%	3,600 ± 188%	1.0 ± 275%	< 0.1 ± 268%
California	3,700 ± 166%	2,600 ± 91%	800 ± 155%	1,500 ± 101%	1,200 ± 112%	3,600 ± 113%	4.7 ± 227%	1.7 ± 137%
Idaho	0	0	0	0	0	0	0	0
Montana	100 ± 130%	200 ± 134%	<50 ± 90%	100 ± 72%	200 ± 152%	100 ± 92%	1.5 ± 158%	3.5 ± 153%
Nevada	200 ± 192%	200 ± 183%	200 ± 134%	100 ± 173%	400 ± 139%	100 ± 137%	1.5 ± 234%	1.9 ± 252%
Oregon	0	600 ± 195%	100 ± 135%	1,000 ± 181%	200 ± 152%	1,500 ± 142%	0	0.6 ± 266%
Utah	200 ± 196%	400 ± 138%	200 ± 196%	300 ± 153%	200 ± 196%	300 ± 140%	1.0 ± 277%	1.5 ± 206%
Washington	300 ± 80%	300 ± 96%	100 ± 46%	100 ± 46%	200 ± 58%	200 ± 51%	2.7 ± 92%	2.2 ± 106%
Pacific Flyway Total	4,600 ± 136%	4,300 ± 64%	1,500	4,300	2,500 ± 64%	9,400 ± 87%		
Alaska	0	0	0	0	0	0	0	0
United States Total	118,400 ± 55%	42,400 ± 57%	17,300	22,500	45,800 ± 44%	49,100 ± 40%		

[1] Variance estimates are presented as the 95% confidence interval as a percent of the point estimate.

[2] Hunter number estimates at the management unit and national levels may be biased high, because the HIP sample frames are state specific; therefore hunters are counted more than once if they hunt in >1 state. Variance inestimable.

Table 18. Preliminary estimates of coot harvest and hunter activity during the 2016 and 2017 hunting seasons. [1]

	Coot Harvest		Active Coot Hunters [2]		Coot Hunter Days Afield		Seasonal Harvest Per Hunter	
	2016	2017	2016	2017	2016	2017	2016	2017
Connecticut	100 ± 146%	<50 ± 164%	100 ± 184%	<50 ± 164%	200 ± 141%	100 ± 164%	1.3 ± 235%	5.0 ± 232%
Delaware	100 ± 161%	300 ± 195%	<50 ± 85%	100 ± 195%	<50 ± 109%	100 ± 195%	5.0 ± 182%	4.0 ± 275%
Florida	4,200 ± 125%	2,600 ± 158%	1,400 ± 158%	300 ± 110%	2,500 ± 174%	300 ± 110%	3.0 ± 202%	8.3 ± 192%
Georgia	36,900 ± 195%	1,900 ± 168%	1,500 ± 179%	200 ± 110%	4,300 ± 184%	300 ± 114%	24.8 ± 265%	9.3 ± 200%
Maine	0	0	0	0	0	0	0	0
Maryland	<50 ± 188%	0	<50 ± 188%	0	<50 ± 188%	0	1.0 ± 266%	0
Massachusetts	200 ± 194%	<50 ± 174%	<50 ± 194%	<50 ± 174%	100 ± 194%	<50 ± 174%	5.0 ± 274%	2.0 ± 246%
New Hampshire	0	100 ± 195%	0	100 ± 195%	0	700 ± 195%	0	1.0 ± 275%
New Jersey	0	0	0	0	0	0	0	0
New York	600 ± 148%	100 ± 192%	100 ± 95%	300 ± 168%	200 ± 112%	400 ± 142%	6.8 ± 176%	0.4 ± 255%
North Carolina	0	8,800 ± 196%	0	600 ± 196%	0	1,800 ± 196%	0	15.0 ± 277%
Pennsylvania	<50 ± 192%	0	1,000 ± 186%	0	1,000 ± 178%	0	< 0.1 ± 268%	0
Rhode Island	0	0	0	0	0	0	0	0
South Carolina	0	2,600 ± 192%	0	800 ± 183%	0	1,900 ± 157%	0	3.3 ± 266%
Vermont	300 ± 191%	<50 ± 103%	100 ± 183%	100 ± 170%	1,200 ± 194%	200 ± 129%	2.9 ± 265%	0.3 ± 198%
Virginia	500 ± 104%	200 ± 136%	400 ± 118%	<50 ± 105%	1,500 ± 107%	200 ± 114%	1.3 ± 157%	5.7 ± 172%
West Virginia	100 ± 183%	<50 ± 183%	<50 ± 123%	100 ± 123%	200 ± 174%	200 ± 129%	7.0 ± 220%	0.3 ± 220%
Atlantic Flyway Total	43,100 ± 167%	16,700 ± 112%	4,600	2,600	11,200 ± 87%	6,200 ± 78%		
Alabama	3,200 ± 196%	0	1,600 ± 196%	1,700 ± 196%	18,900 ± 196%	1,700 ± 196%	2.0 ± 277%	0
Arkansas	0	100 ± 194%	0	100 ± 194%	0	100 ± 194%	0	1.0 ± 275%
Illinois	200 ± 195%	1,200 ± 195%	200 ± 195%	100 ± 195%	2,800 ± 195%	100 ± 195%	1.0 ± 276%	15.0 ± 275%
Indiana	800 ± 66%	6,000 ± 193%	100 ± 34%	900 ± 130%	500 ± 81%	3,300 ± 127%	10.6 ± 74%	6.7 ± 233%
Iowa	500 ± 124%	300 ± 104%	100 ± 49%	500 ± 178%	200 ± 80%	1,700 ± 167%	6.4 ± 133%	0.6 ± 207%
Kentucky	0	0	0	0	0	0	0	0
Louisiana	25,200 ± 119%	29,200 ± 98%	2,800 ± 98%	3,600 ± 76%	4,300 ± 88%	28,300 ± 117%	9.2 ± 154%	8.0 ± 124%
Michigan	100 ± 195%	200 ± 195%	100 ± 195%	200 ± 134%	300 ± 195%	600 ± 137%	1.0 ± 276%	1.0 ± 237%
Minnesota	18,700 ± 123%	4,900 ± 117%	2,900 ± 87%	1,700 ± 113%	8,800 ± 94%	3,200 ± 105%	6.4 ± 151%	2.8 ± 163%
Mississippi	6,100 ± 196%	0	1,000 ± 196%	0	2,000 ± 196%	0	6.0 ± 277%	0
Missouri	0	100 ± 195%	0	100 ± 195%	0	100 ± 195%	0	1.0 ± 275%

[1] Variance estimates are presented as the 95% confidence interval as a percent of the point estimate.

[2] Hunter number estimates at the management unit and national levels may be biased high, because the HIP sample frames are state specific; therefore hunters are counted more than once if they hunt in >1 state. Variance inestimable.

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Table 18 (continued). Preliminary estimates of coot harvest and hunter activity during the 2016 and 2017 hunting seasons. [1]

	Coot Harvest		Active Coot Hunters [2]		Coot Hunter Days Afield		Seasonal Harvest Per Hunter	
	2016	2017	2016	2017	2016	2017	2016	2017
Ohio	0	200 ± 195%	0	100 ± 195%	0	100 ± 195%	0	2.0 ± 275%
Tennessee	0	0	0	0	0	0	0	0
Wisconsin	4,900 ± 196%	33,800 ± 184%	1,200 ± 196%	2,100 ± 138%	1,200 ± 196%	4,200 ± 138%	4.0 ± 277%	16.0 ± 230%
Mississippi Flyway Total	59,600 ± 69%	75,900 ± 92%	9,900	11,100	39,200 ± 99%	43,200 ± 79%		
Colorado	3,200 ± 196%	3,600 ± 125%	400 ± 154%	1,000 ± 105%	1,000 ± 145%	1,900 ± 117%	7.5 ± 249%	3.5 ± 163%
Kansas	0	0	500 ± 196%	0	500 ± 196%	0	0	0
Nebraska	0	400 ± 196%	0	400 ± 196%	0	400 ± 196%	0	1.0 ± 277%
New Mexico	100 ± 91%	100 ± 113%	<50 ± 73%	<50 ± 90%	200 ± 132%	100 ± 104%	2.3 ± 117%	3.5 ± 144%
North Dakota	2,100 ± 79%	500 ± 64%	1,200 ± 124%	100 ± 38%	2,300 ± 106%	600 ± 76%	1.7 ± 147%	5.7 ± 74%
Oklahoma	0	0	0	0	0	0	0	0
South Dakota	0	400 ± 72%	0	100 ± 55%	0	200 ± 76%	0	7.3 ± 91%
Texas	6,300 ± 194%	800 ± 142%	100 ± 194%	100 ± 107%	400 ± 194%	1,200 ± 161%	99.0 ± 275%	7.0 ± 177%
Wyoming	400 ± 97%	300 ± 113%	<50 ± 55%	200 ± 157%	100 ± 94%	300 ± 108%	10.0 ± 112%	1.6 ± 193%
Central Flyway Total	12,200 ± 114%	6,000 ± 78%	2,300	1,900	4,500 ± 69%	4,800 ± 65%		
Arizona	900 ± 123%	0	200 ± 101%	0	200 ± 101%	0	5.0 ± 159%	0
California	8,900 ± 105%	10,300 ± 66%	1,500 ± 113%	2,600 ± 77%	2,300 ± 82%	13,100 ± 138%	5.7 ± 155%	4.0 ± 101%
Idaho	0	700 ± 147%	0	500 ± 180%	0	1,100 ± 180%	0	1.3 ± 232%
Montana	1,600 ± 176%	500 ± 180%	700 ± 191%	500 ± 180%	900 ± 160%	1,900 ± 191%	2.2 ± 260%	1.0 ± 255%
Nevada	1,500 ± 126%	1,800 ± 87%	100 ± 154%	200 ± 109%	200 ± 107%	500 ± 105%	15.1 ± 199%	9.0 ± 139%
Oregon	900 ± 163%	0	100 ± 135%	100 ± 195%	500 ± 156%	100 ± 195%	8.5 ± 212%	0
Utah	8,900 ± 57%	3,300 ± 76%	2,200 ± 56%	1,200 ± 64%	5,400 ± 58%	5,800 ± 102%	4.1 ± 80%	2.8 ± 99%
Washington	600 ± 75%	1,800 ± 67%	100 ± 45%	300 ± 32%	300 ± 67%	1,100 ± 59%	5.4 ± 87%	6.7 ± 74%
Pacific Flyway Total	23,200 ± 49%	18,400 ± 41%	5,000	5,300	9,700 ± 41%	23,400 ± 83%		
United States Total	138,200 ± 61%	117,100 ± 62%	21,800	20,900	64,500 ± 63%	77,700 ± 51%		

[1] Variance estimates are presented as the 95% confidence interval as a percent of the point estimate.

[2] Hunter number estimates at the management unit and national levels may be biased high, because the HIP sample frames are state specific; therefore hunters are counted more than once if they hunt in >1 state. Variance inestimable.

Table 19. Preliminary estimates of gallinule harvest and hunter activity during the 2016 and 2017 hunting seasons. [1]

	Gallinule Harvest		Active Gallinule Hunters [2]		Gallinule Hunter Days Afield		Seasonal Harvest Per Hunter	
	2016	2017	2016	2017	2016	2017	2016	2017
Delaware	0	0	0	0	0	0	0	0
Florida	9,400 ± 196%	0	900 ± 196%	0	1,900 ± 196%	0	10.0 ± 277%	0
Georgia	200 ± 193%	100 ± 193%	<50 ± 193%	<50 ± 193%	100 ± 193%	100 ± 193%	5.0 ± 273%	2.0 ± 273%
New Jersey	0	0	<50 ± 185%	0	<50 ± 185%	0	0	0
New York	0	500 ± 191%	0	<50 ± 191%	0	100 ± 191%	0	21.0 ± 271%
North Carolina	0	0	0	0	0	0	0	0
Pennsylvania	0	0	0	0	0	0	0	0
South Carolina	0	0	0	0	0	0	0	0
Virginia	200 ± 195%	0	200 ± 195%	0	200 ± 195%	0	1.0 ± 276%	0
West Virginia	0	0	0	0	0	0	0	0
Atlantic Flyway Total	9,700 ± 189%	500 ± 167%	1,200	100	2,200 ± 170%	200 ± 138%		
Alabama	0	0	0	0	0	0	0	0
Arkansas	0	0	0	0	0	0	0	0
Kentucky	0	0	0	0	0	0	0	0
Louisiana	0	6,500 ± 136%	0	2,000 ± 105%	0	10,700 ± 158%	0	3.3 ± 172%
Michigan	0	0	0	0	0	0	0	0
Minnesota	0	0	100 ± 195%	0	100 ± 195%	0	0	0
Mississippi	0	0	0	0	0	0	0	0
Ohio	0	0	0	0	0	0	0	0
Tennessee	0	0	0	0	0	0	0	0
Wisconsin	0	0	0	0	0	0	0	0
Mississippi Flyway Total	0	6,500 ± 136%	100	2,000	100 ± 195%	10,700 ± 158%		
New Mexico	0	0	0	0	0	0	0	0
Oklahoma	0	0	0	0	0	0	0	0
Texas	0	5,300 ± 196%	0	2,600 ± 196%	0	7,900 ± 196%	0	2.0 ± 277%
Central Flyway Total	0	5,300 ± 196%	0	2,600	0	7,900 ± 196%		

[1] Variance estimates are presented as the 95% confidence interval as a percent of the point estimate.

[2] Hunter number estimates at the management unit and national levels may be biased high, because the HIP sample frames are state specific; therefore hunters are counted more than once if they hunt in >1 state. Variance inestimable.

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Table 19 (continued). Preliminary estimates of gallinule harvest and hunter activity during the 2016 and 2017 hunting seasons. [1]

	Gallinule Harvest		Active Gallinule Hunters [2]		Gallinule Hunter Days Afield		Seasonal Harvest Per Hunter	
	2016	2017	2016	2017	2016	2017	2016	2017
Arizona	0	0	0	0	0	0	0	0
California	200 ± 133%	400 ± 186%	<50 ± 106%	700 ± 135%	100 ± 108%	1,700 ± 156%	6.0 ± 170%	0.5 ± 230%
Nevada	0	<50 ± 152%	0	100 ± 187%	0	400 ± 192%	0	< 0.1 ± 241%
Pacific Flyway Total	200 ± 133%	400 ± 183%	<50	800	100 ± 108%	2,200 ± 130%		
United States Total	10,000± 184%	12,600 ± 108%	1,300	5,400	2,400 ± 156%	21,000 ± 110%		

[1] Variance estimates are presented as the 95% confidence interval as a percent of the point estimate.

[2] Hunter number estimates at the management unit and national levels may be biased high, because the HIP sample frames are state specific; therefore hunters are counted more than once if they hunt in >1 state. Variance inestimable.

Table 20. Preliminary estimates of rail harvest and hunter activity during the 2016 and 2017 hunting seasons. [1]

	Rail Harvest		Active Rail Hunters [2]		Rail Hunter Days Afield		Seasonal Harvest Per Hunter	
	2016	2017	2016	2017	2016	2017	2016	2017
Connecticut	100 ± 141%	100 ± 114%	<50 ± 92%	100 ± 169%	100 ± 135%	200 ± 183%	8.3 ± 168%	2.4 ± 205%
Delaware	0	0	0	0	0	0	0	0
Florida	0	0	0	0	0	0	0	0
Georgia	3,400 ± 116%	900 ± 193%	100 ± 94%	<50 ± 193%	200 ± 105%	100 ± 193%	23.8 ± 149%	24.0 ± 273%
Maine	0	500 ± 184%	0	500 ± 184%	0	500 ± 184%	0	1.0 ± 260%
Maryland	<50 ± 186%	0	<50 ± 186%	0	<50 ± 186%	0	2.0 ± 264%	0
Massachusetts	<50 ± 194%	<50 ± 176%	<50 ± 178%	<50 ± 176%	200 ± 174%	<50 ± 176%	0.9 ± 263%	4.0 ± 250%
New Jersey	2,700 ± 54%	2,900 ± 84%	100 ± 42%	300 ± 101%	300 ± 61%	500 ± 101%	22.5 ± 68%	10.0 ± 131%
New York	0	0	0	<50 ± 191%	0	<50 ± 191%	0	0
North Carolina	0	0	0	0	0	0	0	0
Pennsylvania	0	0	0	0	0	0	0	0
Rhode Island	0	0	0	0	0	0	0	0
South Carolina	2,100 ± 130%	3,800 ± 88%	100 ± 104%	100 ± 74%	400 ± 129%	300 ± 79%	21.7 ± 167%	26.0 ± 115%
Virginia	3,800 ± 53%	3,600 ± 52%	300 ± 116%	400 ± 107%	500 ± 76%	1,500 ± 125%	11.9 ± 128%	10.2 ± 119%
West Virginia	0	0	<50 ± 183%	0	100 ± 183%	0	0	0
Atlantic Flyway Total	12,100 ± 44%	11,800 ± 42%	800	1,400	1,800 ± 46%	3,200 ± 70%		
Alabama	0	0	0	0	0	0	0	0
Arkansas	0	0	0	0	0	0	0	0
Illinois	0	0	0	0	0	0	0	0
Indiana	300 ± 193%	<50 ± 105%	300 ± 133%	<50 ± 53%	600 ± 132%	100 ± 58%	1.0 ± 235%	1.4 ± 117%
Iowa	500 ± 105%	2,700 ± 182%	100 ± 59%	400 ± 188%	100 ± 67%	1,300 ± 190%	8.4 ± 120%	6.2 ± 262%
Kentucky	0	0	0	0	0	0	0	0
Louisiana	0	100 ± 195%	0	700 ± 178%	0	900 ± 144%	0	< 0.1 ± 263%
Michigan	0	0	0	0	0	0	0	0
Minnesota	0	0	100 ± 137%	0	200 ± 145%	0	0	0
Mississippi	0	0	0	0	0	0	0	0

[1] Variance estimates are presented as the 95% confidence interval as a percent of the point estimate.

[2] Hunter number estimates at the management unit and national levels may be biased high, because the HIP sample frames are state specific; therefore hunters are counted more than once if they hunt in >1 state. Variance inestimable.

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Table 20 (continued). Preliminary estimates of rail harvest and hunter activity during the 2016 and 2017 hunting seasons. [1]

	Rail Harvest		Active Rail Hunters [2]		Rail Hunter Days Afield		Seasonal Harvest Per Hunter	
	2016	2017	2016	2017	2016	2017	2016	2017
Missouri	0	0	0	0	0	0	0	0
Ohio	400 ± 155%	0	100 ± 128%	0	300 ± 147%	0	5.0 ± 201%	0
Tennessee	0	0	0	0	0	0	0	0
Wisconsin	0	0	0	0	0	0	0	0
Mississippi Flyway Total	1,100 ± 84%	2,800 ± 176%	600	1,100	1,200 ± 78%	2,300 ± 123%		
Colorado	0	0	0	0	0	0	0	0
Kansas	0	0	0	0	0	0	0	0
Nebraska	0	0	0	0	0	0	0	0
New Mexico	0	0	0	0	0	0	0	0
Oklahoma	0	0	0	0	0	0	0	0
Texas	1,300 ± 192%	0	<50 ± 192%	0	100 ± 192%	0	50.0 ± 272%	0
Wyoming	0	0	<50 ± 175%	0	<50 ± 175%	0	0	0
Central Flyway Total	1,300 ± 192%	0	<50	0	100 ± 179%	0		
United States Total	14,500 ± 41%	14,600 ± 48%	1,300	2,600	3,200 ± 41%	5,500 ± 65%		

[1] Variance estimates are presented as the 95% confidence interval as a percent of the point estimate.

[2] Hunter number estimates at the management unit and national levels may be biased high, because the HIP sample frames are state specific; therefore hunters are counted more than once if they hunt in >1 state. Variance inestimable.

Table 21. Preliminary estimates of rail harvest during the 2016 and 2017 hunting seasons. Species-specific estimates were derived from 5-year running averages of species composition estimates from the Migratory Bird Wing Collection Survey.

	Sora		Virginia		Clapper		King	
Flyway	2016	2017	2016	2017	2016	2017	2016	2017
Atlantic	1,600	1,300	100	100	10,500	10,500	0	0
Mississippi	1,000	2,700	0	0	100	100	0	0
Central	1,100	0	200	0	0	0	0	0
U.S. Total	3,600	4,000	300	100	10,500	10,500	0	0

Appendix A. Names and affiliations of people who coordinate the Harvest Information Program or help provide hunter name and address data to the USFWS.

Michael Earls, Alabama Department of Conservation and Natural Resources
Robert Bowles, Alaska Department of Fish and Game
Johnathon O'Dell, Arizona Game and Fish Department
Susan Porter, Arkansas Game and Fish Commission
Tony Straw, California Department of Fish and Game
Ed Gorman, Colorado Parks and Wildlife
Min Huang, Connecticut Department of Environmental Protection
Justyn Foth, Delaware Department of Natural Resources and Environmental Control
Andrew Fanning, Florida Fish and Wildlife Conservation Commission
David Neyhart, Georgia Department of Natural Resources
Craig Weidmeier, Idaho Department of Fish and Game
Don Bricker, Illinois Department of Natural Resources
Al Schumacher, Indiana Department of Natural Resources
Aimee Wright, Iowa Department of Natural Resources
Mary Becker, Kansas Department of Wildlife, Parks, and Tourism
John Brunjes, Kentucky Department of Fish and Wildlife Resources
Michelle Rayburn, Louisiana Department of Wildlife and Fisheries
Bill Swan, Maine Department of Inland Fisheries and Wildlife
Brent Evans, Maryland Wildlife and Heritage Service
Rick Kennedy and H Heusmann, Massachusetts Division of Fisheries and Wildlife
Kristen Shuler, Michigan Department of Natural Resources
Margaret Dexter, Minnesota Department of Natural Resources
Jason Thompson, Mississippi Department of Wildlife, Fisheries and Parks
Julie Fleming, Missouri Department of Conservation
Hank Worsech, Montana Fish, Wildlife and Parks
Mark Vrtiska, Nebraska Game and Parks Commission
Paula Lannen, Nevada Department of Wildlife
Susan Perry, New Hampshire Fish and Game Department
Barbara Stoff, New Jersey Division of Fish and Wildlife
Mason Cline, New Mexico Department of Game and Fish
Vicky Wagenbaugh, New York Department of Environmental Conservation
Bobby Dunn, North Carolina Wildlife Resources Commission
Chad Parent, North Dakota Game and Fish Department
Andrew Burt, Ohio Department of Natural Resources
Rodney Derrick, Oklahoma Department of Wildlife Conservation
Brandon Reishus, Oregon Department of Fish and Wildlife
Terry Heckrote, Pennsylvania Game Commission
Ed Ferris, Rhode Island Division of Fish and Wildlife
Stephen Robinson, South Carolina Department of Natural Resources
Corey Huxoll, South Dakota Game, Fish, and Parks
Gary Clouse, Tennessee Wildlife Resources Agency
Kevin Kraai, Texas Parks and Wildlife Department
Heather Bernales, Utah Division of Wildlife Resources

Kris Nolan, Vermont Fish and Wildlife Department
Gary Costanzo, Virginia Department of Game and Inland Fisheries
Treg Christopher, Washington Department of Fish and Wildlife
Michael Peters, West Virginia Division of Natural Resources
Brian Dhuey, Wisconsin Department of Natural Resources
Matthew Barnes, Wyoming Game and Fish Department

Appendix B. Names and affiliations of waterfowl wingbee participants.

Atlantic Flyway Wingbee, Laurel, MD January 29 to February 2, 2018

V. Arillo, Maryland Natural Resources Police; J. Bennett, Maryland Department of Natural Resources - Wildlife and Heritage; R. Bessey, U.S. Fish and Wildlife Service; A. Bethea, U.S. Fish and Wildlife Service - DMBM/BHS; P. Bosco, U.S. Fish and Wildlife Service (retired); J. Burgess, Maryland Department of Natural Resources – Wildlife and Heritage; M. Cancellare, Delaware Division of Fish and Wildlife; L. Caplan, Maryland Department of Natural Resources – Wildlife and Heritage; S. Catino, U.S. Fish and Wildlife Service - DMBM/BHS; T. Ceaser, U.S. Fish and Wildlife Service; S. Chandler, U.S. Fish and Wildlife Service - DMBM/BHS; K. Fleming, U.S. Fish and Wildlife Service - DMBM/BHS; P. Garrettson, U.S. Fish and Wildlife Service – DMBM/BADS; M. Giles, Pennsylvania Game Commission; J. Hambrick, Maryland Natural Resources Police; K. Harvey, U.S. Fish and Wildlife Service Volunteer; L. Heckstall, U.S. Fish and Wildlife Service; T. Heim, Maryland Department of Natural Resources - Wildlife and Heritage; K. Hojnacki, U.S. Fish and Wildlife Service; V. Kauffman, U.S. Fish and Wildlife Service; J. Keeney, Maryland Natural Resources Police; J. Kane, U.S. Fish and Wildlife Service; W. Knepp, Pennsylvania Game Commission; C. Linton, Maryland Natural Resources Police; J. Malpass, U.S. Geological Survey - BBL; K. McCargo, North Carolina Wildlife Resources Commission; F. McGilvrey, U.S. Fish and Wildlife Service Volunteer; N. Millet, U.S. Fish and Wildlife Service; A. Neville, Virginia Department of Game and Inland Fisheries; A. Ocampo, New Jersey Division of Fish and Wildlife; P. Padding, U.S. Fish and Wildlife Service - DMBM/Atlantic Flyway Representative; J. Peregrim, Maryland Department of Natural Resources – Wildlife and Heritage; K. Quarles, Virginia Department of Game and Inland Fisheries; B. Raftovich, U.S. Fish and Wildlife Service - DMBM/BHS; W. Rhodes, U.S. Fish and Wildlife Service - DMBM/MBSB; T. Roberts, U.S. Fish and Wildlife Service - DMBM/Atlantic Flyway; J. Robinson, Maryland Natural Resources Police; B. Rosamond, U.S. Fish and Wildlife Service; L. Savoy, Biodiversity Research Institute; J. Stanton, U.S. Fish and Wildlife Service, J. Stempka, Pennsylvania Game Commission; E. Thompson, U.S. Fish and Wildlife Service; J. Tyler, U.S. Fish and Wildlife Service; J. Vance, West Virginia Department of Natural Resources; B. Welch, Florida Fish and Wildlife Commission.

Mississippi Flyway Wingbee, Carbondale, IL February 5 to February 09, 2018

C. Alger, U.S. Fish and Wildlife Service; K. Banning, U.S. Fish and Wildlife Service - AmeriCorps; J. Carbaugh, Arkansas Game and Fish Commission; S. Catino, U.S. Fish and Wildlife Service - DMBM/BMDM; S. Chandler, U.S. Fish and Wildlife Service - DMBM/BMDM; A. Cook, U.S. Fish and Wildlife Service - Detroit River International Wildlife Refuge; B. Davis, Minnesota Department of Natural Resources; K. Emerson, U.S. Fish and Wildlife Service; D. Fronczak, U.S. Fish and Wildlife Service - Mississippi Flyway; J. Hager, Kentucky Department of Fish and Wildlife Resources; J. Hanks, Louisiana Department of Wildlife and Fisheries; J. Hartleb, U.S. Fish and Wildlife Service - Crab Orchard Refuge; A. Hewitt, U.S. Fish and Wildlife Service; B. Kelly, Wisconsin Department of Natural Resources; G. Knutsen, U.S. Fish and Wildlife Service - Rydell/Glacial Ridge Refuges; A. Kulow, Iowa Department of Natural Resources; D. McClain, Ohio Division of Wildlife; T. McFadden, Michigan Department of Natural Resources; A. Merkel, Ohio Division of Wildlife; S. Miller, Louisiana Department of Wildlife and Fisheries; K. Moreau, Louisiana Department of Wildlife and Fisheries; S. Morrone, U.S. Fish and Wildlife Service; A. Novara, U.S. Fish and Wildlife Service (retired); P. Padding, US Fish and Wildlife Service - DMBM/Atlantic Flyway; A. Phillips, Illinois Department of Natural Resources; J. Poore, Tennessee Wildlife Resources Agency; D. Poppe, Michigan Department of Natural Resources; D. Rave, Minnesota Department of Natural Resources; N. Saake, Nevada Department of Wildlife; B. Stancombe, Indiana Department of Natural Resources; R. Stouder, Indiana Department of Natural Resources; M.

Turton, U.S. Fish and Wildlife Service; R. Vinson, U.S. Fish and Wildlife Refuge; M. Weegman, National Wild Turkey Federation; N. West, Ohio Division of Wildlife; J. Young, U.S. Fish and Wildlife Service.

Central Flyway Wingbee, Emporia, KS February 19 to 23, 2018

T. Bidrowski, Kansas Dept. of Wildlife Parks & Tourism; J. Black, Kansas Dept. of Wildlife, Parks & Tourism; D. Butler, Texas Parks & Wildlife Dept.; S. Catino, U.S. Fish & Wildlife Service; S. Chandler, U.S. Fish & Wildlife Service; M. Cline, New Mexico Dept Game & Fish; A. Dinges, North Dakota Game & Fish Dept; J. Dubovsky, U.S. Fish & Wildlife Service; C. Dunagan, Texas Parks & Wildlife Dept.; R. Ford, North Dakota Game & Fish Dept; A. Friesen, Kansas Dept. of Wildlife Parks & Tourism; J. Gammonley, Colorado Parks & Wildlife; M. Grovijahn, South Dakota Game Fish & Parks; K. Hand, Texas Parks & Wildlife Dept.; J. Hansen, Montana Fish Wildlife & Parks; J. Harbit, Kansas Dept of Wildlife Parks & Tourism; A. Hardin, Nebraska Game & Parks Commission; M. Haugen, Nebraska Game & Parks Commission; R. Hipp, Wyoming Game & Fish Department; N. Huck, Wyoming Game & Fish Department; D. Johnson, North Dakota Game & Fish Dept; K. Kersten, Kansas State University; K. Kraai, Texas Parks & Wildlife Dept.; K. Kriegel, Texas Parks & Wildlife Dept.; K. Kruse, U.S. Fish & Wildlife Service; J. Lang, Texas Parks & Wildlife Dept.; J. Lee, U.S. Fish & Wildlife Service; T. Liddick, U.S. Fish & Wildlife Service; E. Love, Texas Parks & Wildlife Dept.; B. Malanchuk, Kansas State University; E. Martinez, U.S. Fish & Wildlife Service; S. McDowell, Texas Parks & Wildlife Dept.; T. Menard, U.S. Fish & Wildlife Service; K. Mower, New Mexico Dept Game & Fish; R. Murano, South Dakota Game Fish & Parks; J. Neal, Oklahoma Dept. of Wildlife Conservation; D. Olson, U.S. Fish & Wildlife Service; M. Peek, Kansas Dept. of Wildlife Parks & Tourism; K. Prochasha, Nebraska Game & Parks Commission; J. Richardson, Oklahoma Dept. of Wildlife Conservation; P. Schmidt, U.S. Fish & Wildlife Service; T. Schmidt, U.S. Fish & Wildlife Service; J. Schoenfelder, U.S. Fish & Wildlife Service; K. Schoonover, Oklahoma Dept. of Wildlife Conservation; R. Schultheis, Kansas Dept. of Wildlife Parks & Tourism; S. Schultz, Nebraska Game & Parks Commission; R. Stutheit, Nebraska Game & Parks Commission; M. Szymanski, North Dakota Game & Fish Dept; P. Thorpe, U.S. Fish & Wildlife Service; C. Thorton, U.S. Fish & Wildlife Service; J. Timmons, Texas Parks & Wildlife Dept.; M. Vrtiska, Nebraska Game & Parks Commission; R. Warhurst, North Dakota Natural Resources Trust.

Pacific Flyway Wingbee, Anderson, CA February 26 to March 2, 2018

K. Armstrong, California Department of Fish and Wildlife; N. Balkow; C. Brady, California Waterfowl Association; C. Cain, U.S. Fish and Wildlife Service - DMBM/BHS; R. Cain, University of California – Davis; S. Catino, U.S. Fish and Wildlife Service - DMBM/BHS; S. Chandler, U.S. Fish and Wildlife Service - DMBM/BHS; J. Coslovich, California Waterfowl Association; S. Cordis, California Department of Fish and Wildlife; B. Daniels, U.S. Fish and Wildlife Service; M. D'Errico, Sacramento National Wildlife Refuge Complex; T. Dimarrio, Alaska Department of Fish and Game; S. Dougherty, Washington Department of Fish and Wildlife; J. Fidoria, Washington Department of Fish and Wildlife; G. Gerstenberg, California Department of Fish and Wildlife; B. Huber, California Waterfowl Association; K. Hughes; J. Laughlin, U.S. Department of Agriculture - APHIS/WS; S. Lynch, California Department of Fish and Wildlife; E. Monfort, Oregon Department of Fish and Wildlife; N. O'Connor, California Waterfowl Association; J. O'Dell, Arizona Game and Fish; W. Rhodes, U.S. Fish and Wildlife Service -DMBM/MBSB; O. Rocha, California Department of Fish and Wildlife; J. Russell, Oregon Department of Fish and Wildlife; N. Saake, Nevada Department of Wildlife (retired); J. Sands, U.S. Fish and Wildlife Service - Region 1; R. Shinn, California Department of Fish and Wildlife; B. Shults, U.S. Fish and Wildlife Service - Region 7/Migratory Birds; D. Skalos,

California Department of Fish and Wildlife; S. Smither, California Waterfowl Association; D. Speten, Oregon Department of Fish and Wildlife; N. Stohosky, Idaho Department of Fish and Game; T. Thornton, Oregon Department of Fish and Wildlife; D. Van de Riet, Idaho Department of Fish and Game; K. Walton, Oregon Department of Fish and Wildlife; C. Weinkauf, U.S. Fish and Wildlife Service; M. Wilson, Washington Department of Fish and Wildlife.

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