



U.S. Fish & Wildlife Service

Migratory bird hunting activity and harvest during the 2018–19 and 2019–20 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 2018 and 2019 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 [*Porphyrrio 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 10,326,900 ($\pm 5\%$) ducks and 2,444,200 ($\pm 6\%$) geese in the 2018 season, and about 1 million waterfowl hunters harvested 9,720,800 ($\pm 5\%$) ducks and 2,691,900 ($\pm 5\%$) geese in the 2019 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 694,300 hunters harvested 10,374,500 ($\pm 8\%$) mourning doves in 2018 and 662,900 hunters harvested 9,983,500 ($\pm 7\%$) in 2019. Woodcock hunters numbered about 87,800 in 2018 and 78,000 in 2019, and harvested 180,200 ($\pm 19\%$) in 2018, and 171,300 ($\pm 22\%$) in 2019. About 23,400 people hunted snipe in 2018 and 21,300 in 2019, and they harvested 83,600 ($\pm 121\%$) and 92,700 ($\pm 60\%$) snipe in 2018 and 2019, respectively. Coot hunters (about 10,800 in 2018 and 27,800 in 2019) harvested 83,600 ($\pm 69\%$) coots in 2018 and 242,600 ($\pm 74\%$) in 2019. Gallinule hunters (about 2,100 in 2018 and 2,200 in 2019) harvested 2,400 ($\pm 138\%$) in 2018 and 19,700 ($\pm 103\%$) in 2019. Approximately 5,100 rail hunters harvested 14,600 ($\pm 83\%$) rails in 2018 and 6,900 rail hunters harvested 29,800 ($\pm 53\%$) rails in 2019.

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 his/her 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 2018-19 and 2019-20 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 (or, for permit species such as band-tailed pigeons or cranes, they are asked if they intend to hunt them in the current season). The list of species or species-groups involved (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 whenever possible 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 state, 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 1963-2019 were reported in “American woodcock population status, 2020” (Seamans and Rau 2020). 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 2008-2019 were reported in “Mourning Dove population status, 2020” (Seamans 2020).

Survey Results

Waterfowl Hunter Activity and Harvest (Tables 1-7, Figures 1-3). HIP waterfowl harvest survey sample sizes and response rates were 102,764 hunters and 17%, respectively, for 2018-19, and 88,495 hunters and 33% for the 2019-20 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 2018-19 Waterfowl Parts Collection Survey collected 81,729 duck wings and 15,085 goose tails and primary tips from 4,736 hunters; the 2019-20 sample consisted of 85,740 duck wings and 15,862 goose tails and primary wing tips from 4,572 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 42,851 hunters in 2018-19 (23% response rate) and 42,961 hunters in 2019-20 (40% 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 2018-19 survey had a sample size of 18,502 hunters and a 26% response rate; the 2019-20 survey sample size and response rate were 12,589 hunters and 47%.

Snipe, Coot, Gallinule, and Rail Hunter Activity and Harvest (Tables 17-21). The sample for the 2018-19 snipe, coot, gallinule, and rail harvest survey was 29,012 hunters (20% response rate) and 27,226 hunters (41% response rate) for the 2019-20 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 2018-19 estimates are based on the species composition of 1,763 rail wings collected from 113 hunters during the period 2014-2018, and the 2019-20 estimates are based on 1,452 rail wings collected from 110 hunters during the period 2015-2019.

Alaska Sandhill Crane Hunter Activity and Harvest Estimates. The estimates presented below were derived from surveys of 710 (2018-19, 34% response rate) and 527 (2019-20, 50% response rate) Alaska migratory bird hunters. For Alaska's 2018 season, we estimated that 1,249 active sandhill crane hunters spent 3,545 days hunting cranes and harvested 860 birds. In 2019, an estimated 799 active hunters spent 7,748 days hunting cranes and harvested 799 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 2018 and 2019 seasons were reported in "Status and harvests of sandhill cranes: Mid-continent, Rocky Mountain, Lower Colorado River Valley and Eastern populations" (Dubovsky 2020).

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Table 1A. Preliminary estimates of waterfowl harvest and hunter activity in the Atlantic Flyway during the 2018 and 2019 hunting seasons.

Duck Species Composition	Connecticut		Delaware		Florida	
	2018	2019	2018	2019	2018	2019
Mallard	6,006	3,434	8,157	8,698	179	75
Domestic Mallard	0	0	151	91	0	151
Black Duck	1,303	1,200	4,154	3,262	0	0
Mallard x Black Hybrid	113	41	76	272	0	75
Mottled Duck	0	0	0	0	9,932	7,460
Gadwall	113	248	1,662	1,993	537	603
Wigeon	57	0	302	91	3,311	2,110
Green-winged Teal	283	124	2,341	4,077	3,311	2,261
Blue-winged/Cinnamon Teal	57	0	151	0	47,783	54,855
Northern Shoveler	0	0	1,359	1,540	3,221	1,808
Northern Pintail	57	0	755	997	716	1,055
Wood Duck	2,550	2,276	1,208	1,359	20,670	12,357
Redhead	0	0	0	0	2,505	1,884
Canvasback	0	0	0	91	358	226
Greater Scaup	227	497	76	0	358	75
Lesser Scaup	0	41	227	0	2,953	2,110
Ring-necked Duck	397	83	680	0	35,077	35,189
Goldeneyes	113	41	151	0	179	75
Bufflehead	1,643	869	2,794	1,178	1,969	2,863
Ruddy Duck	0	0	302	0	537	754
Long-tailed Duck	1,253	3,140	1,366	142	0	0
Eiders	114	95	0	0	0	0
Scoters	684	0	2,049	2,268	179	226
Hooded Merganser	567	331	680	272	626	904
Other Mergansers	850	414	227	0	89	226
Other Ducks	0	0	0	0	8,322	8,590
Total Duck Harvest	16,400±32%	12,800±32%	28,900±28%	26,300±25%	142,800±21%	135,900±14%
Total Active Duck Hunters ^a	1,500±28%	1,900±33%	3,200±18%	3,200±13%	15,500±30%	14,000±19%
Total Duck Hunter Days Afield ^a	12,500±35%	10,300±28%	21,300±22%	18,800±20%	80,300±25%	71,200±17%
Seasonal Duck Harvest Per Hunter ^a	9.3±43%	5.0±46%	7.9±33%	7.5±28%	9.2±37%	9.7±24%
Goose Species Composition						
Canada Goose	8,073	9,203	8,384	7,894	0	3,677
Snow Goose	0	0	519	236	0	1,839
Blue Goose	0	0	0	118	0	0
Ross' Goose	0	0	0	0	0	0
White-fronted Goose	37	0	0	0	0	0
Brant	807	836	588	395	0	0
Other Geese	0	0	0	0	0	0
Total Goose Harvest	8,900±41%	10,000±30%	9,500±30%	8,600±33%	0±%	5,500±140%
Total Active Goose Hunters ^b	1,700±34%	1,700±27%	2,700±20%	2,300±15%	300±196%	900±73%
Total Goose Hunter Days Afield ^b	11,100±41%	10,800±31%	13,800±25%	7,800±20%	600±196%	2,200±92%
Seasonal Goose Harvest Per Hunter ^b	4.7±53%	5.3±40%	3.4±36%	3.6±36%	.0±%	6.1±158%
Active Waterfowl Hunters ^c	2,600±27%	2,500±28%	4,200±16%	3,900±11%	15,500±30%	14,100±19%
Sample Sizes						
DuckWings	271	266	347	298	1,596	1,804
GooseTails	233	201	130	77	3	3

Table 1A. Preliminary estimates of waterfowl harvest and hunter activity in the Atlantic Flyway during the 2018 and 2019 hunting seasons.

Duck Species Composition	Georgia		Maine		Maryland	
	2018	2019	2018	2019	2018	2019
Mallard	3,076	6,659	11,844	6,324	36,070	33,242
Domestic Mallard	0	202	0	31	287	451
Black Duck	0	0	5,620	2,724	7,463	8,677
Mallard x Black Hybrid	0	0	60	94	287	225
Mottled Duck	0	0	0	0	0	0
Gadwall	615	2,220	0	0	5,454	2,141
Wigeon	820	202	181	250	2,583	1,127
Green-winged Teal	1,846	1,009	1,148	1,941	7,271	4,057
Blue-winged/Cinnamon Teal	3,691	10,695	0	219	287	1,014
Northern Shoveler	820	202	0	63	1,722	338
Northern Pintail	0	0	423	94	1,435	225
Wood Duck	82,433	72,446	3,686	4,602	10,142	8,001
Redhead	2,461	1,009	0	0	1,914	2,704
Canvasback	820	0	0	0	13,012	789
Greater Scaup	205	0	60	31	14,925	5,409
Lesser Scaup	3,281	1,009	0	31	9,472	5,183
Ring-necked Duck	11,278	10,695	846	877	1,052	451
Goldeneyes	615	0	725	376	96	338
Bufflehead	3,486	202	2,719	689	14,447	12,959
Ruddy Duck	205	605	60	0	1,148	676
Long-tailed Duck	0	0	2,640	1,321	6,749	6,885
Eiders	0	0	7,290	1,674	198	0
Scoters	0	0	880	1,057	20,246	22,466
Hooded Merganser	3,281	3,229	604	407	1,722	338
Other Mergansers	0	0	725	250	96	225
Other Ducks	0	0	0	0	0	0
Total Duck Harvest	118,900±23%	110,400±16%	39,500±23%	23,100±20%	158,100±23%	117,900±16%
Total Active Duck Hunters^a	14,900±22%	15,600±18%	5,000±17%	4,100±13%	19,000±11%	15,800±10%
Total Duck Hunter Days Afield^a	69,600±20%	87,100±21%	22,600±20%	19,900±18%	82,700±23%	65,800±12%
Seasonal Duck Harvest Per Hunter^a	8.0±32%	7.1±24%	5.7±29%	4.6±24%	6.9±26%	5.6±19%
Goose Species Composition						
Canada Goose	12,801	21,332	11,397	7,214	90,855	45,452
Snow Goose	0	0	0	0	3,273	1,680
Blue Goose	0	0	0	0	131	1,383
Ross' Goose	0	0	0	0	0	0
White-fronted Goose	0	0	0	0	0	0
Brant	0	0	0	0	0	218
Other Geese	0	0	0	0	0	99
Total Goose Harvest	12,800±54%	21,300±35%	11,400±40%	7,200±26%	94,300±16%	48,800±16%
Total Active Goose Hunters^b	6,000±39%	7,900±24%	2,500±25%	2,600±17%	20,700±9%	16,100±9%
Total Goose Hunter Days Afield^b	23,000±44%	44,300±45%	14,800±40%	11,200±29%	96,000±13%	69,700±12%
Seasonal Goose Harvest Per Hunter^b	2.1±67%	2.7±43%	4.5±47%	2.8±31%	4.6±19%	3.0±18%
Active Waterfowl Hunters^c	15,200±22%	16,100±18%	6,100±15%	4,700±12%	31,900±6%	26,900±6%
Sample Sizes						
DuckWings	580	547	561	653	1,505	867
GooseTails	45	122	261	299	720	495

Table 1A. Preliminary estimates of waterfowl harvest and hunter activity in the Atlantic Flyway during the 2018 and 2019 hunting seasons.

Duck Species Composition	Massachusetts		New Hampshire		New Jersey	
	2018	2019	2018	2019	2018	2019
Mallard	7,186	4,974	5,527	3,366	6,431	5,329
Domestic Mallard	0	61	0	0	61	0
Black Duck	3,721	3,009	960	766	8,391	5,179
Mallard x Black Hybrid	0	61	0	82	184	150
Mottled Duck	0	0	0	0	0	0
Gadwall	0	0	0	0	490	225
Wigeon	171	61	0	0	306	225
Green-winged Teal	770	737	576	192	2,450	826
Blue-winged/Cinnamon Teal	0	0	38	0	0	0
Northern Shoveler	0	0	0	0	0	0
Northern Pintail	0	61	0	0	368	0
Wood Duck	5,004	3,623	5,451	3,694	3,920	5,480
Redhead	0	0	0	0	0	0
Canvasback	0	0	0	0	245	0
Greater Scaup	0	246	0	0	1,041	1,351
Lesser Scaup	0	184	0	0	368	525
Ring-necked Duck	0	184	230	27	245	300
Goldeneyes	128	307	38	0	245	0
Bufflehead	1,198	3,991	38	82	21,683	14,712
Ruddy Duck	0	0	0	0	490	0
Long-tailed Duck	598	1,562	0	9	885	1,228
Eiders	2,991	5,355	53	44	118	0
Scoters	2,222	4,463	210	202	3,601	8,289
Hooded Merganser	599	307	269	219	2,205	525
Other Mergansers	813	675	230	55	1,041	300
Other Ducks	0	0	0	0	0	0
Total Duck Harvest	25,400±52%	29,900±35%	13,600±50%	8,700±23%	54,800±20%	44,600±19%
Total Active Duck Hunters ^a	3,400±37%	2,900±33%	1,600±28%	1,700±25%	6,300±13%	5,800±10%
Total Duck Hunter Days Afield ^a	18,500±44%	15,500±25%	11,800±33%	11,400±24%	34,000±17%	26,600±16%
Seasonal Duck Harvest Per Hunter ^a	5.8±64%	6.3±48%	8.5±57%	4.9±34%	8.0±24%	6.1±22%
Goose Species Composition						
Canada Goose	17,325	8,747	3,226	4,424	19,257	13,642
Snow Goose	0	0	0	0	822	162
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	376	534	0	0	8,967	3,664
Other Geese	0	0	0	0	0	0
Total Goose Harvest	17,700±52%	9,300±45%	3,200±48%	4,400±49%	29,000±27%	17,500±27%
Total Active Goose Hunters ^b	3,700±31%	3,600±26%	1,100±38%	1,400±27%	4,300±18%	3,600±15%
Total Goose Hunter Days Afield ^b	14,300±38%	21,100±32%	8,200±51%	9,400±39%	20,200±23%	13,000±23%
Seasonal Goose Harvest Per Hunter ^b	4.6±60%	2.4±52%	2.8±61%	3.2±56%	4.7±32%	3.9±31%
Active Waterfowl Hunters ^c	5,800±27%	4,700±28%	2,100±29%	2,000±24%	7,800±11%	7,100±9%
Sample Sizes						
DuckWings	526	352	353	339	897	499
GooseTails	191	154	71	94	281	213

Table 1A. Preliminary estimates of waterfowl harvest and hunter activity in the Atlantic Flyway during the 2018 and 2019 hunting seasons.

Duck Species Composition	New York		North Carolina		Pennsylvania	
	2018	2019	2018	2019	2018	2019
Mallard	50,121	51,576	51,584	25,829	26,319	22,159
Domestic Mallard	118	120	445	861	99	205
Black Duck	12,986	12,969	12,896	3,788	4,337	3,898
Mallard x Black Hybrid	176	179	445	344	197	103
Mottled Duck	0	0	0	0	0	0
Gadwall	1,528	2,331	32,462	11,193	493	410
Wigeon	3,232	3,705	35,797	9,471	394	103
Green-winged Teal	5,817	7,949	49,138	14,981	3,647	1,744
Blue-winged/Cinnamon Teal	353	418	7,115	5,682	0	616
Northern Shoveler	235	538	9,338	1,894	0	0
Northern Pintail	1,175	1,972	10,005	2,755	296	205
Wood Duck	18,803	26,296	116,508	100,561	17,940	23,184
Redhead	6,933	2,092	10,228	11,020	0	0
Canvasback	1,351	120	1,334	0	0	205
Greater Scaup	3,290	2,988	5,781	2,239	789	923
Lesser Scaup	1,234	1,255	21,790	3,099	1,183	1,026
Ring-necked Duck	1,234	2,211	37,798	5,682	493	616
Goldeneyes	3,702	6,335	667	0	197	923
Bufflehead	7,169	5,618	36,909	12,915	3,253	3,385
Ruddy Duck	59	60	7,560	1,550	1,084	0
Long-tailed Duck	10,515	11,058	0	0	197	0
Eiders	4,918	0	0	0	0	0
Scoters	2,200	3,744	13,341	2,583	99	0
Hooded Merganser	2,057	2,092	13,563	15,325	690	718
Other Mergansers	3,290	5,797	1,334	861	1,971	1,949
Other Ducks	0	0	222	0	0	0
Total Duck Harvest	142,500±17%	151,400±22%	476,300±27%	232,600±20%	63,700±24%	62,400±29%
Total Active Duck Hunters^a	19,500±11%	16,100±13%	41,000±25%	29,200±17%	22,400±26%	13,900±30%
Total Duck Hunter Days Afield^a	97,800±16%	92,600±15%	229,300±27%	172,400±22%	100,600±44%	66,800±27%
Seasonal Duck Harvest Per Hunter^a	6.6±21%	8.8±26%	11.6±36%	8.0±26%	2.8±35%	4.5±42%
Goose Species Composition						
Canada Goose	66,556	88,941	35,388	47,516	89,280	95,991
Snow Goose	917	8,135	0	0	1,216	2,743
Blue Goose	0	310	0	0	0	457
Ross' Goose	0	0	0	0	0	0
White-fronted Goose	0	0	0	0	0	152
Brant	10,631	5,179	5,746	2,717	0	0
Other Geese	0	0	0	0	0	0
Total Goose Harvest	78,100±21%	102,600±23%	41,100±48%	50,200±65%	90,500±29%	99,300±32%
Total Active Goose Hunters^b	12,700±13%	11,200±12%	17,900±36%	17,100±22%	19,500±25%	18,600±19%
Total Goose Hunter Days Afield^b	60,400±19%	61,300±24%	61,000±39%	58,700±28%	100,300±25%	91,100±21%
Seasonal Goose Harvest Per Hunter^b	5.3±25%	8.7±26%	2.0±60%	2.8±68%	4.6±38%	5.3±37%
Active Waterfowl Hunters^c	22,900±9%	18,900±11%	41,400±24%	29,500±17%	34,400±20%	21,300±25%
Sample Sizes						
DuckWings	2,240	2,381	2,142	1,351	646	608
GooseTails	1,076	1,324	110	42	893	652

Table 1A. Preliminary estimates of waterfowl harvest and hunter activity in the Atlantic Flyway during the 2018 and 2019 hunting seasons.

Duck Species Composition	Rhode Island		South Carolina		Vermont	
	2018	2019	2018	2019	2018	2019
Mallard	2,505	829	13,997	12,077	8,226	6,127
Domestic Mallard	0	0	0	853	0	0
Black Duck	1,318	863	1,105	995	1,645	1,340
Mallard x Black Hybrid	66	17	0	0	0	0
Mottled Duck	0	0	1,228	1,279	0	0
Gadwall	66	68	8,963	6,252	94	0
Wigeon	593	85	1,719	710	94	287
Green-winged Teal	132	271	18,539	11,367	893	1,627
Blue-winged/Cinnamon Teal	0	0	8,594	8,525	0	96
Northern Shoveler	0	0	3,069	3,552	0	0
Northern Pintail	0	34	1,596	426	141	96
Wood Duck	791	338	59,793	67,206	3,384	5,170
Redhead	0	0	982	426	0	0
Canvasback	0	0	859	0	0	0
Greater Scaup	396	237	491	0	47	96
Lesser Scaup	0	17	2,578	426	141	144
Ring-necked Duck	0	0	23,696	13,498	188	287
Goldeneyes	132	271	123	0	940	1,723
Bufflehead	264	1,066	3,929	568	235	96
Ruddy Duck	0	0	737	0	0	0
Long-tailed Duck	0	24	0	0	0	0
Eiders	1,224	830	0	0	0	0
Scoters	952	1,245	737	426	47	0
Hooded Merganser	264	237	2,947	2,273	282	287
Other Mergansers	66	491	368	284	141	814
Other Ducks	0	0	123	0	0	0
Total Duck Harvest	8,800±36%	6,900±24%	156,200±39%	131,100±29%	16,500±27%	18,200±36%
Total Active Duck Hunters ^a	1,200±24%	800±14%	16,900±29%	18,300±25%	2,100±13%	3,000±18%
Total Duck Hunter Days Afield ^a	6,700±24%	5,000±21%	81,000±24%	87,600±31%	13,300±21%	15,700±32%
Seasonal Duck Harvest Per Hunter ^a	5.5±43%	6.0±28%	9.2±49%	7.2±38%	7.8±30%	6.1±41%
Goose Species Composition						
Canada Goose	7,514	2,119	6,706	12,743	7,377	5,573
Snow Goose	0	13	0	0	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	516	410	0	0	49	0
Other Geese	0	0	0	0	0	0
Total Goose Harvest	8,000±65%	2,500±31%	6,700±59%	12,700±53%	7,400±42%	5,600±28%
Total Active Goose Hunters ^b	1,200±29%	700±17%	4,500±49%	4,000±35%	1,500±19%	1,800±22%
Total Goose Hunter Days Afield ^b	7,900±40%	3,800±24%	14,700±60%	15,000±54%	7,600±30%	8,300±30%
Seasonal Goose Harvest Per Hunter ^b	6.2±72%	3.3±35%	1.5±77%	3.2±63%	5.1±46%	3.0±36%
Active Waterfowl Hunters ^c	1,900±18%	1,100±11%	19,700±29%	18,300±25%	2,500±12%	3,500±17%
Sample Sizes						
DuckWings	116	371	1,272	923	351	380
GooseTails	94	215	40	41	151	218

Table 1A. Preliminary estimates of waterfowl harvest and hunter activity in the Atlantic Flyway during the 2018 and 2019 hunting seasons.

Duck Species Composition	Virginia		West Virginia		Flyway Total	
	2018	2019	2018	2019	2018	2019
Mallard	37,881	29,032	2,012	2,523	277,119	222,255
Domestic Mallard	143	298	18	0	1,321	3,322
Black Duck	5,718	10,273	165	374	71,781	59,316
Mallard x Black Hybrid	715	447	0	19	2,319	2,110
Mottled Duck	0	0	0	0	11,160	8,738
Gadwall	9,720	14,293	18	150	62,214	42,126
Wigeon	2,001	1,191	18	37	51,581	19,655
Green-winged Teal	5,575	5,658	55	75	103,792	58,893
Blue-winged/Cinnamon Teal	2,573	298	0	19	70,642	82,437
Northern Shoveler	858	149	18	19	20,642	10,103
Northern Pintail	572	1,042	0	0	17,539	8,963
Wood Duck	18,583	26,352	1,189	1,364	372,055	364,310
Redhead	858	0	37	0	25,917	19,136
Canvasback	2,716	149	37	0	20,733	1,579
Greater Scaup	1,287	0	0	0	28,972	14,091
Lesser Scaup	1,858	596	0	0	45,084	15,647
Ring-necked Duck	9,863	3,722	18	19	123,096	73,841
Goldeneyes	1,144	0	0	0	9,195	10,390
Bufflehead	19,298	12,804	0	0	121,033	73,997
Ruddy Duck	572	596	0	0	12,754	4,240
Long-tailed Duck	0	2,069	0	0	24,203	27,439
Eiders	742	0	0	0	17,648	7,998
Scoters	19,289	10,347	0	0	66,734	57,316
Hooded Merganser	1,144	4,020	18	37	31,516	31,522
Other Mergansers	572	1,191	37	75	11,851	13,608
Other Ducks	0	0	0	0	8,667	8,590
Total Duck Harvest	143,700±22%	124,500±29%	3,600±34%	4,700±32%	1,609,600±10%	1,241,600±7%
Total Active Duck Hunters^a	19,600±22%	16,400±21%	1,100±34%	1,100±25%	194,100	160,600
Total Duck Hunter Days Afield^a	90,300±25%	70,000±19%	5,200±35%	5,300±30%	977,400±9%	829,000±7%
Seasonal Duck Harvest Per Hunter^a	6.3±32%	6.9±35%	3.3±48%	4.2±41%		
Goose Species Composition						
Canada Goose	31,427	30,819	2,818	3,305	418,386	408,592
Snow Goose	88	0	0	0	6,834	14,807
Blue Goose	0	0	0	16	131	2,284
Ross' Goose	0	0	0	0	0	0
White-fronted Goose	0	0	0	0	37	152
Brant	1,878	2,176	0	0	29,558	16,129
Other Geese	0	0	0	0	0	99
Total Goose Harvest	33,400±26%	33,000±37%	2,800±36%	3,300±29%	454,900±10%	442,100±13%
Total Active Goose Hunters^b	13,400±28%	11,800±20%	1,000±35%	1,100±24%	114,800	103,100
Total Goose Hunter Days Afield^b	54,700±27%	46,600±27%	5,000±39%	5,800±32%	513,500±9%	465,300±9%
Seasonal Goose Harvest Per Hunter^b	2.4±38%	2.6±42%	2.9±50%	2.9±37%		
Active Waterfowl Hunters^c	23,400±20%	17,700±20%	1,500±29%	1,300±24%	238,900	193,600
Sample Sizes						
DuckWings	892	777	199	252	14,494	12,668
GooseTails	386	300	174	211	4,859	4,661

Table 1B. Preliminary estimates of waterfowl harvest and hunter activity in the Mississippi Flyway during the 2018 and 2019 hunting seasons.

Duck Species Composition	Alabama		Arkansas		Illinois	
	2018	2019	2018	2019	2018	2019
Mallard	8,071	9,043	477,817	509,879	81,946	136,364
Domestic Mallard	0	0	0	0	0	0
Black Duck	245	0	0	219	1,193	2,622
Mallard x Black Hybrid	0	0	0	0	0	0
Mottled Duck	0	0	0	0	0	0
Gadwall	10,761	11,681	159,878	213,397	12,332	26,552
Wigeon	489	377	10,122	14,868	1,856	4,261
Green-winged Teal	2,690	1,696	154,947	169,668	10,873	16,882
Blue-winged/Cinnamon Teal	5,870	5,275	24,916	12,025	20,023	34,583
Northern Shoveler	734	188	52,428	55,754	4,376	8,851
Northern Pintail	489	565	20,244	18,803	2,785	5,900
Wood Duck	28,369	29,390	79,939	65,375	11,138	28,355
Redhead	3,913	188	1,817	2,186	2,785	3,278
Canvasback	489	1,319	1,038	0	2,652	3,606
Greater Scaup	2,690	0	1,557	219	2,387	2,458
Lesser Scaup	1,957	377	3,115	1,531	6,232	8,523
Ring-necked Duck	15,163	1,884	13,756	18,585	4,906	11,801
Goldeneyes	2,201	0	0	219	5,304	5,900
Bufflehead	10,027	4,710	2,855	1,749	4,376	14,423
Ruddy Duck	978	0	0	1,531	265	6,556
Long-tailed Duck	0	0	0	0	0	0
Eiders	0	0	0	0	0	0
Scoters	1,223	0	0	0	0	983
Hooded Merganser	1,223	2,449	1,817	4,810	265	4,589
Other Mergansers	0	188	0	0	1,061	1,475
Other Ducks	0	0	0	219	0	0
Total Duck Harvest	97,600±33%	69,300±44%	1,006,200±25%	1,091,000±12%	176,800±29%	328,000±83%
Total Active Duck Hunters^a	12,700±32%	10,600±29%	60,700±15%	75,400±10%	22,700±18%	21,800±15%
Total Duck Hunter Days Afield^a	70,500±29%	53,000±35%	500,900±26%	496,800±17%	151,500±19%	176,400±27%
Seasonal Duck Harvest Per Hunter^a	7.7±46%	6.5±52%	16.6±29%	14.5±16%	7.8±34%	15.0±85%
Goose Species Composition						
Canada Goose	15,062	2,897	20,181	10,326	62,843	96,995
Snow Goose	0	0	24,356	19,275	703	694
Blue Goose	0	0	9,046	8,261	938	347
Ross' Goose	0	0	3,479	6,884	0	174
White-fronted Goose	0	0	69,588	83,986	3,752	6,767
Brant	0	0	0	0	0	0
Other Geese	0	0	0	0	0	0
Total Goose Harvest	15,100±149%	2,900±77%	126,700±42%	128,700±19%	68,200±29%	105,000±45%
Total Active Goose Hunters^b	3,300±69%	2,200±70%	26,500±19%	30,700±14%	15,600±21%	16,700±17%
Total Goose Hunter Days Afield^b	30,300±80%	11,400±91%	138,900±28%	127,000±19%	118,700±25%	128,200±22%
Seasonal Goose Harvest Per Hunter^b	4.6±164%	1.3±104%	4.8±46%	4.2±24%	4.4±36%	6.3±48%
Active Waterfowl Hunters^c	13,400±32%	10,600±29%	61,900±15%	77,500±10%	27,400±17%	25,500±14%
Sample Sizes						
DuckWings	399	368	3,877	4,990	1,333	2,001
GooseTails	28	26	182	374	291	605

Table 1B. Preliminary estimates of waterfowl harvest and hunter activity in the Mississippi Flyway during the 2018 and 2019 hunting seasons.

Duck Species Composition	Indiana		Iowa		Kentucky	
	2018	2019	2018	2019	2018	2019
Mallard	47,689	39,655	53,898	33,461	70,510	52,686
Domestic Mallard	0	0	0	112	265	0
Black Duck	1,484	935	180	224	2,121	489
Mallard x Black Hybrid	0	0	0	0	265	163
Mottled Duck	0	0	0	0	0	0
Gadwall	3,340	9,079	8,652	8,281	9,808	5,383
Wigeon	557	534	4,326	3,245	265	1,142
Green-winged Teal	1,670	2,003	18,026	13,093	3,446	3,099
Blue-winged/Cinnamon Teal	2,412	9,079	47,589	26,746	1,060	816
Northern Shoveler	1,856	1,869	4,687	4,253	265	1,468
Northern Pintail	371	935	4,507	2,350	1,856	1,794
Wood Duck	10,577	9,880	16,944	22,829	8,482	7,014
Redhead	742	1,602	1,622	1,455	2,121	0
Canvasback	0	668	3,064	1,455	265	0
Greater Scaup	186	801	541	0	265	489
Lesser Scaup	371	801	721	1,007	3,446	489
Ring-necked Duck	371	1,202	5,408	5,372	1,060	2,447
Goldeneyes	557	668	901	1,007	1,060	489
Bufflehead	1,484	935	3,425	1,902	1,060	326
Ruddy Duck	0	0	541	224	0	0
Long-tailed Duck	0	0	0	112	0	0
Eiders	0	134	0	0	0	0
Scoters	0	134	361	0	0	0
Hooded Merganser	186	401	721	224	1,325	4,241
Other Mergansers	928	0	0	224	0	0
Other Ducks	186	134	0	0	0	0
Total Duck Harvest	75,000±24%	81,400±18%	176,100±29%	127,600±19%	108,900±21%	82,500±16%
Total Active Duck Hunters^a	9,300±21%	10,900±15%	16,200±25%	10,300±12%	11,400±27%	7,400±29%
Total Duck Hunter Days Afield^a	64,900±19%	71,600±22%	97,800±23%	77,000±17%	99,400±29%	56,600±19%
Seasonal Duck Harvest Per Hunter^a	8.1±32%	7.5±23%	10.9±38%	12.4±23%	9.6±34%	11.2±34%
Goose Species Composition						
Canada Goose	40,847	45,721	46,092	52,644	22,037	21,233
Snow Goose	0	0	223	0	0	0
Blue Goose	368	269	0	172	0	0
Ross' Goose	0	0	0	172	0	0
White-fronted Goose	0	1,883	668	172	0	582
Brant	0	0	0	0	0	0
Other Geese	0	0	0	0	0	0
Total Goose Harvest	41,200±36%	47,900±20%	47,000±28%	53,200±25%	22,000±28%	21,800±18%
Total Active Goose Hunters^b	7,000±27%	10,500±14%	11,000±31%	8,200±15%	7,300±21%	6,700±15%
Total Goose Hunter Days Afield^b	59,600±30%	63,800±19%	75,100±34%	58,500±21%	49,400±22%	50,200±20%
Seasonal Goose Harvest Per Hunter^b	5.9±45%	4.5±25%	4.3±42%	6.5±29%	3.0±35%	3.2±23%
Active Waterfowl Hunters^c	9,800±21%	13,200±14%	16,700±24%	12,100±11%	13,700±26%	8,100±30%
Sample Sizes						
DuckWings	404	610	977	1,140	411	506
GooseTails	112	178	211	309	63	75

Table 1B. Preliminary estimates of waterfowl harvest and hunter activity in the Mississippi Flyway during the 2018 and 2019 hunting seasons.

Duck Species Composition	Louisiana		Michigan		Minnesota	
	2018	2019	2018	2019	2018	2019
Mallard	23,391	20,743	102,877	97,578	105,149	98,723
Domestic Mallard	0	0	279	0	212	0
Black Duck	0	329	6,273	10,214	212	636
Mallard x Black Hybrid	87	0	279	547	0	0
Mottled Duck	11,259	9,439	0	0	0	0
Gadwall	96,530	119,961	3,903	3,830	22,471	29,447
Wigeon	10,037	6,805	4,461	6,384	10,812	11,652
Green-winged Teal	96,617	113,705	13,243	6,748	37,947	22,668
Blue-winged/Cinnamon Teal	160,941	152,448	3,067	1,824	61,479	64,191
Northern Shoveler	21,994	23,926	836	1,459	5,724	6,356
Northern Pintail	10,823	7,793	3,485	3,648	5,300	5,084
Wood Duck	20,860	49,499	28,716	36,843	85,010	80,716
Redhead	3,229	7,683	12,128	8,937	13,144	11,016
Canvasback	2,007	3,622	1,673	2,006	6,148	4,661
Greater Scaup	2,618	768	4,461	7,478	3,180	1,271
Lesser Scaup	21,645	22,170	6,970	5,289	10,812	6,356
Ring-necked Duck	13,528	19,646	9,340	6,566	81,618	66,945
Goldeneyes	436	0	4,182	5,654	5,936	5,508
Bufflehead	3,404	2,634	23,140	17,509	16,960	16,313
Ruddy Duck	349	1,098	836	1,277	848	847
Long-tailed Duck	0	110	3,346	6,019	0	0
Eiders	0	0	0	0	0	0
Scoters	87	0	1,394	1,094	424	0
Hooded Merganser	3,753	2,415	4,043	4,195	8,904	11,228
Other Mergansers	175	0	697	182	212	1,483
Other Ducks	2,007	7,573	0	0	0	0
Total Duck Harvest	505,800±32%	572,400±20%	239,600±20%	235,300±14%	482,500±16%	445,100±15%
Total Active Duck Hunters^a	36,300±17%	50,000±14%	33,200±22%	33,000±16%	53,200±15%	50,900±13%
Total Duck Hunter Days Afield^a	222,200±32%	287,100±23%	165,500±18%	164,100±14%	264,900±15%	263,500±12%
Seasonal Duck Harvest Per Hunter^a	13.9±37%	11.5±24%	7.2±30%	7.1±21%	9.1±22%	8.8±20%
Goose Species Composition						
Canada Goose	150	0	93,764	152,987	143,863	199,768
Snow Goose	2,554	8,116	135	0	375	0
Blue Goose	3,005	5,411	0	0	0	0
Ross' Goose	0	676	0	0	0	0
White-fronted Goose	16,375	37,198	0	0	0	428
Brant	0	0	0	0	0	0
Other Geese	0	0	0	0	0	0
Total Goose Harvest	22,100±40%	51,400±44%	93,900±26%	153,000±20%	144,200±26%	200,200±29%
Total Active Goose Hunters^b	12,400±27%	12,600±21%	31,800±22%	31,000±15%	43,200±17%	40,000±12%
Total Goose Hunter Days Afield^b	43,900±60%	54,900±32%	163,000±27%	191,200±35%	215,800±21%	203,200±20%
Seasonal Goose Harvest Per Hunter^b	1.8±48%	4.1±49%	3.0±35%	4.9±25%	3.3±31%	5.0±32%
Active Waterfowl Hunters^c	37,100±17%	50,100±14%	35,300±21%	38,400±15%	59,000±14%	57,700±13%
Sample Sizes						
DuckWings	5,795	5,215	1,719	1,290	2,276	2,101
GooseTails	147	76	697	418	385	468

Table 1B. Preliminary estimates of waterfowl harvest and hunter activity in the Mississippi Flyway during the 2018 and 2019 hunting seasons.

Duck Species Composition	Mississippi		Missouri		Ohio	
	2018	2019	2018	2019	2018	2019
Mallard	35,961	63,400	172,749	161,320	39,145	47,360
Domestic Mallard	0	0	0	0	437	544
Black Duck	0	144	0	0	2,619	3,266
Mallard x Black Hybrid	0	0	0	0	146	272
Mottled Duck	0	144	0	0	0	0
Gadwall	23,702	41,930	36,527	24,526	2,910	2,994
Wigeon	654	2,450	3,438	4,722	873	1,361
Green-winged Teal	32,529	33,141	40,179	21,479	5,530	6,532
Blue-winged/Cinnamon Teal	5,231	8,645	18,693	12,187	3,347	4,899
Northern Shoveler	15,365	11,383	10,528	16,452	873	1,089
Northern Pintail	4,413	6,772	6,876	11,882	437	1,089
Wood Duck	23,375	21,181	9,454	7,464	11,496	29,940
Redhead	1,471	865	1,074	1,219	873	1,089
Canvasback	490	144	1,074	305	437	0
Greater Scaup	327	0	215	305	1,601	544
Lesser Scaup	327	288	2,793	914	1,310	817
Ring-necked Duck	4,577	8,213	5,801	7,312	2,037	2,450
Goldeneyes	0	0	1,504	762	2,037	544
Bufflehead	327	144	1,504	152	2,328	2,994
Ruddy Duck	0	0	215	152	437	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	327	2,305	1,504	2,437	873	1,633
Other Mergansers	0	0	0	0	1,601	3,266
Other Ducks	0	0	0	0	0	0
Total Duck Harvest	149,100±32%	201,100±21%	314,100±20%	273,600±18%	81,300±30%	112,700±40%
Total Active Duck Hunters^a	12,000±22%	14,200±20%	35,100±18%	26,600±15%	15,300±31%	15,100±27%
Total Duck Hunter Days Afield^a	77,900±18%	86,900±18%	256,100±30%	158,200±17%	81,200±26%	95,000±55%
Seasonal Duck Harvest Per Hunter^a	12.5±39%	14.2±29%	9.0±27%	10.3±23%	5.3±43%	7.4±49%
Goose Species Composition						
Canada Goose	488	1,449	43,957	40,026	38,665	36,171
Snow Goose	326	1,449	8,658	1,712	0	0
Blue Goose	326	0	3,330	2,354	0	0
Ross' Goose	0	1,449	333	428	0	0
White-fronted Goose	13,835	17,392	4,329	4,709	133	0
Brant	0	0	0	0	0	0
Other Geese	0	0	0	0	0	0
Total Goose Harvest	15,000±60%	21,700±52%	60,600±65%	49,200±29%	38,800±39%	36,200±35%
Total Active Goose Hunters^b	4,900±43%	5,900±29%	12,400±25%	11,200±21%	14,000±27%	12,200±25%
Total Goose Hunter Days Afield^b	23,700±68%	22,500±36%	65,900±32%	50,600±23%	75,800±34%	50,300±30%
Seasonal Goose Harvest Per Hunter^b	3.0±73%	3.7±60%	4.9±70%	4.4±36%	2.8±48%	3.0±43%
Active Waterfowl Hunters^c	12,000±22%	14,200±20%	38,900±17%	27,800±15%	18,800±27%	16,600±25%
Sample Sizes						
DuckWings	912	1,396	1,462	1,796	559	414
GooseTails	92	15	182	230	291	299

Table 1B. Preliminary estimates of waterfowl harvest and hunter activity in the Mississippi Flyway during the 2018 and 2019 hunting seasons.

Duck Species Composition	Tennessee		Wisconsin		Flyway Total	
	2018	2019	2018	2019	2018	2019
Mallard	90,517	85,268	97,631	99,458	1,407,353	1,454,937
Domestic Mallard	0	0	205	183	1,397	839
Black Duck	1,091	0	614	1,280	16,032	20,357
Mallard x Black Hybrid	0	0	409	0	1,186	982
Mottled Duck	0	0	0	0	11,259	9,583
Gadwall	16,359	24,825	14,123	15,175	421,296	537,060
Wigeon	7,634	3,238	9,824	8,776	65,348	69,814
Green-winged Teal	13,087	6,476	21,900	18,100	452,685	435,290
Blue-winged/Cinnamon Teal	5,453	16,730	39,912	33,640	399,992	383,088
Northern Shoveler	3,272	2,698	4,298	6,216	127,236	141,962
Northern Pintail	3,272	4,317	4,094	3,657	68,949	74,589
Wood Duck	18,540	19,968	54,853	79,712	407,754	488,166
Redhead	8,725	1,079	6,550	11,701	60,193	52,298
Canvasback	3,272	2,698	7,982	9,507	30,592	29,990
Greater Scaup	3,272	540	12,076	8,227	35,375	23,101
Lesser Scaup	10,906	4,317	15,965	22,122	86,568	75,001
Ring-necked Duck	5,453	7,555	19,649	14,626	182,667	174,603
Goldeneyes	2,181	1,619	18,421	5,485	44,721	27,855
Bufflehead	3,272	2,698	24,357	17,003	98,519	83,493
Ruddy Duck	0	1,079	2,251	2,742	6,721	15,506
Long-tailed Duck	0	0	819	1,645	4,164	7,886
Eiders	0	0	0	0	0	134
Scoters	0	0	2,251	914	5,740	3,125
Hooded Merganser	3,272	1,619	5,526	4,022	33,738	46,569
Other Mergansers	0	0	2,661	1,097	7,334	7,916
Other Ducks	0	0	0	0	2,193	7,925
Total Duck Harvest	199,600±42%	186,700±19%	366,400±21%	365,300±24%	3,979,000±9%	4,172,100±9%
Total Active Duck Hunters^a	22,100±29%	16,900±24%	47,600±19%	43,100±17%	387,700	386,100
Total Duck Hunter Days Afield^a	112,800±31%	107,600±21%	287,000±26%	254,500±17%	2,452,800±8%	2,348,200±6%
Seasonal Duck Harvest Per Hunter^a	9.0±51%	11.0±30%	7.7±28%	8.5±30%		
Goose Species Composition						
Canada Goose	18,529	20,240	128,553	130,156	675,034	810,614
Snow Goose	0	653	0	233	37,329	32,133
Blue Goose	0	0	0	233	17,013	17,047
Ross' Goose	0	0	0	0	3,812	9,783
White-fronted Goose	2,059	0	0	467	110,739	153,583
Brant	0	0	0	0	0	0
Other Geese	0	0	0	0	0	0
Total Goose Harvest	20,600±41%	20,900±34%	128,600±26%	131,100±15%	843,900±11%	1,023,200±9%
Total Active Goose Hunters^b	8,000±39%	9,100±24%	36,000±16%	36,700±10%	233,500	233,800
Total Goose Hunter Days Afield^b	52,500±58%	53,500±33%	221,600±19%	225,900±15%	1,334,300±9%	1,291,100±8%
Seasonal Goose Harvest Per Hunter^b	2.6±57%	2.3±42%	3.6±30%	3.6±19%		
Active Waterfowl Hunters^c	22,500±28%	18,700±23%	61,000±18%	47,600±17%	427,400	418,100
Sample Sizes						
DuckWings	183	346	1,790	1,998	22,097	24,171
GooseTails	10	32	430	562	3,121	3,667

Table 1C. Preliminary estimates of waterfowl harvest and hunter activity in the Central Flyway during the 2018 and 2019 hunting seasons.

Duck Species Composition	Colorado		Kansas		Nebraska	
	2018	2019	2018	2019	2018	2019
Mallard	46,053	42,809	72,553	67,012	50,582	54,848
Domestic Mallard	0	0	0	0	0	76
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	7,001	11,234	14,722	17,826	5,850	7,803
Wigeon	13,691	6,504	4,880	5,600	4,230	4,284
Green-winged Teal	4,512	6,031	21,310	18,200	20,251	22,872
Blue-winged/Cinnamon Teal	7,312	2,838	38,554	20,440	29,161	42,379
Northern Shoveler	622	1,064	4,474	8,213	3,420	5,202
Northern Pintail	467	828	3,335	3,453	2,970	2,907
Wood Duck	1,400	828	1,464	2,053	3,060	2,524
Redhead	1,867	473	2,603	4,200	1,080	4,131
Canvasback	778	473	569	560	90	382
Greater Scaup	0	0	163	0	90	0
Lesser Scaup	467	355	732	933	270	382
Ring-necked Duck	1,089	1,301	1,789	2,893	2,430	1,912
Goldeneyes	2,178	710	2,521	1,493	270	688
Bufflehead	467	591	1,464	2,800	360	153
Ruddy Duck	0	0	569	373	0	688
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	0	0	2,115	280	180	76
Other Mergansers	311	118	732	0	0	0
Other Ducks	0	118	0	0	0	0
Total Duck Harvest	88,200±18%	76,300±20%	174,600±37%	156,300±41%	124,300±18%	151,300±15%
Total Active Duck Hunters^a	11,900±18%	11,200±18%	18,100±34%	13,800±23%	11,700±19%	12,100±17%
Total Duck Hunter Days Afield^a	59,200±17%	55,000±24%	74,900±41%	66,000±33%	79,000±19%	87,300±17%
Seasonal Duck Harvest Per Hunter^a	7.4±26%	6.8±27%	9.7±50%	11.3±47%	10.6±26%	12.5±23%
Goose Species Composition						
Canada Goose	75,831	66,587	50,579	50,037	99,129	104,059
Snow Goose	1,559	2,239	8,917	11,081	214	668
Blue Goose	195	149	2,631	1,558	0	334
Ross' Goose	390	149	1,316	2,943	0	0
White-fronted Goose	0	0	2,339	5,194	855	668
Brant	0	0	0	0	0	0
Other Geese	0	0	0	0	0	0
Total Goose Harvest	78,000±20%	69,100±19%	65,800±61%	70,800±45%	100,200±23%	105,700±18%
Total Active Goose Hunters^b	12,500±19%	13,300±17%	13,700±43%	9,600±29%	11,100±15%	11,800±12%
Total Goose Hunter Days Afield^b	70,100±18%	71,500±25%	48,500±46%	39,700±42%	98,000±22%	90,000±16%
Seasonal Goose Harvest Per Hunter^b	6.2±27%	5.2±26%	4.8±75%	7.3±54%	9.0±27%	9.0±22%
Active Waterfowl Hunters^c	19,700±15%	19,000±15%	20,700±33%	16,600±21%	15,000±17%	17,200±14%
Sample Sizes						
DuckWings	567	645	2,146	1,675	1,381	1,978
GooseTails	400	463	450	409	469	633

Table 1C. Preliminary estimates of waterfowl harvest and hunter activity in the Central Flyway during the 2018 and 2019 hunting seasons.

Duck Species Composition	New Mexico		North Dakota		Oklahoma	
	2018	2019	2018	2019	2018	2019
Mallard	12,382	17,817	157,338	104,946	118,270	113,463
Domestic Mallard	0	0	87	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	3,457	4,809	75,234	70,395	42,655	54,908
Wigeon	7,317	6,687	22,961	19,559	13,043	19,198
Green-winged Teal	3,216	5,817	41,835	23,350	18,331	32,445
Blue-winged/Cinnamon Teal	3,055	1,466	37,051	45,925	1,410	6,335
Northern Shoveler	2,010	1,511	29,485	29,381	2,644	9,791
Northern Pintail	402	1,511	19,656	14,561	3,701	5,952
Wood Duck	1,206	641	2,522	3,619	4,054	6,911
Redhead	643	595	25,310	29,468	1,058	3,648
Canvasback	241	229	7,828	10,339	705	1,152
Greater Scaup	0	0	87	86	353	0
Lesser Scaup	80	275	25,136	29,209	881	1,536
Ring-necked Duck	965	687	11,916	10,426	7,579	19,390
Goldeneyes	884	92	1,392	1,034	353	192
Bufflehead	724	1,695	9,828	8,702	705	576
Ruddy Duck	0	229	1,740	4,653	176	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	0	0	1,218	1,206	2,115	192
Other Mergansers	161	0	87	0	0	0
Other Ducks	884	595	87	86	0	0
Total Duck Harvest	37,600±103%	44,700±120%	470,800±14%	406,900±15%	218,000±25%	275,700±14%
Total Active Duck Hunters^a	3,300±74%	3,700±72%	33,800±11%	30,500±10%	20,000±21%	20,900±11%
Total Duck Hunter Days Afield^a	24,200±108%	16,800±87%	160,400±13%	135,100±12%	98,300±31%	106,200±12%
Seasonal Duck Harvest Per Hunter^a	11.5±127%	12.1±140%	14.0±18%	13.3±18%	10.9±33%	13.2±18%
Goose Species Composition						
Canada Goose	9,749	5,058	109,091	123,793	35,890	58,493
Snow Goose	0	120	14,160	15,384	2,036	2,949
Blue Goose	0	0	10,712	11,221	255	492
Ross' Goose	464	0	1,478	4,887	509	1,966
White-fronted Goose	0	0	3,078	4,344	509	983
Brant	0	0	0	0	0	0
Other Geese	0	0	0	0	0	0
Total Goose Harvest	10,200±130%	5,200±60%	138,500±34%	159,600±21%	39,200±39%	64,900±23%
Total Active Goose Hunters^b	3,200±73%	3,200±55%	23,300±10%	22,100±8%	9,000±30%	12,100±15%
Total Goose Hunter Days Afield^b	9,500±85%	13,700±84%	104,400±13%	88,400±11%	26,000±34%	43,900±25%
Seasonal Goose Harvest Per Hunter^b	3.2±149%	1.6±82%	6.0±36%	7.2±22%	4.4±49%	5.4±28%
Active Waterfowl Hunters^c	6,000±61%	3,800±71%	36,400±11%	34,400±9%	21,200±20%	21,400±11%
Sample Sizes						
DuckWings	468	975	5,413	4,723	1,237	1,436
GooseTails	22	43	1,125	882	154	132

Table 1C. Preliminary estimates of waterfowl harvest and hunter activity in the Central Flyway during the 2018 and 2019 hunting seasons.

Duck Species Composition	South Dakota		Texas		Wyoming	
	2018	2019	2018	2019	2018	2019
Mallard	50,841	60,185	103,378	47,491	19,371	12,471
Domestic Mallard	0	0	0	0	0	0
Black Duck	0	85	349	0	0	0
Mallard x Black Hybrid	0	0	0	0	0	0
Mottled Duck	0	0	1,921	4,215	0	0
Gadwall	24,185	22,303	147,034	144,861	2,636	3,395
Wigeon	6,532	8,513	42,434	44,962	3,065	2,570
Green-winged Teal	16,417	13,620	132,017	125,190	2,391	1,460
Blue-winged/Cinnamon Teal	8,827	20,771	298,958	153,713	2,268	1,618
Northern Shoveler	8,473	15,919	34,750	56,905	368	444
Northern Pintail	3,972	8,513	27,765	34,424	429	286
Wood Duck	3,531	4,597	52,562	46,929	245	349
Redhead	7,150	12,343	25,670	44,119	184	254
Canvasback	1,501	2,894	4,540	3,934	0	127
Greater Scaup	88	170	1,572	3,794	0	32
Lesser Scaup	3,884	5,533	12,398	26,977	61	127
Ring-necked Duck	4,060	4,597	58,325	36,531	245	159
Goldeneyes	353	426	524	1,124	1,410	1,142
Bufflehead	10,327	4,341	4,540	7,868	184	190
Ruddy Duck	883	2,639	1,397	1,827	61	159
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	1,059	426	4,016	141	0	0
Other Mergansers	177	0	699	984	123	0
Other Ducks	0	255	1,048	1,827	0	0
Total Duck Harvest	152,300±25%	188,100±44%	955,900±23%	787,800±13%	33,000±20%	24,800±19%
Total Active Duck Hunters^a	15,600±21%	14,000±23%	74,300±29%	69,000±24%	3,700±19%	2,700±19%
Total Duck Hunter Days Afield^a	61,800±20%	74,900±41%	358,200±28%	332,600±21%	15,600±18%	11,100±17%
Seasonal Duck Harvest Per Hunter^a	9.8±32%	13.5±50%	12.9±37%	11.4±28%	9.0±27%	9.1±27%
Goose Species Composition						
Canada Goose	61,810	54,214	71,297	57,618	20,311	22,453
Snow Goose	7,053	9,670	26,736	43,213	0	295
Blue Goose	2,413	5,707	6,932	22,407	0	0
Ross' Goose	186	2,853	10,893	12,004	0	148
White-fronted Goose	3,341	2,378	33,668	38,412	0	0
Brant	0	0	0	0	0	0
Other Geese	0	793	0	0	0	0
Total Goose Harvest	74,800±42%	75,600±36%	149,500±40%	173,700±29%	20,300±24%	22,900±29%
Total Active Goose Hunters^b	14,300±19%	11,400±17%	43,600±28%	39,200±19%	3,700±18%	3,300±14%
Total Goose Hunter Days Afield^b	69,100±29%	46,600±21%	166,600±50%	111,800±27%	14,800±19%	15,600±21%
Seasonal Goose Harvest Per Hunter^b	5.2±46%	6.7±40%	3.4±49%	4.4±35%	5.4±30%	7.0±32%
Active Waterfowl Hunters^c	18,800±18%	15,600±22%	99,900±28%	79,100±24%	6,000±11%	5,600±10%
Sample Sizes						
DuckWings	1,725	2,210	5,474	5,607	539	781
GooseTails	403	477	151	217	449	155

Table 1C. Preliminary estimates of waterfowl harvest and hunter activity in the Central Flyway during the 2018 and 2019 hunting seasons.

Duck Species Composition	Flyway Total	
	2018	2019
Mallard	630,768	521,041
Domestic Mallard	87	76
Black Duck	349	85
Mallard x Black Hybrid	0	0
Mottled Duck	1,921	4,215
Gadwall	322,774	337,535
Wigeon	118,154	117,877
Green-winged Teal	260,280	248,986
Blue-winged/Cinnamon Teal	426,597	295,485
Northern Shoveler	86,246	128,431
Northern Pintail	62,698	72,434
Wood Duck	70,045	68,452
Redhead	65,564	99,230
Canvasback	16,252	20,091
Greater Scaup	2,352	4,082
Lesser Scaup	43,910	65,328
Ring-necked Duck	88,398	77,897
Goldeneyes	9,885	6,901
Bufflehead	28,599	26,917
Ruddy Duck	4,826	10,568
Long-tailed Duck	0	0
Eiders	0	0
Scoters	0	0
Hooded Merganser	10,703	2,321
Other Mergansers	2,289	1,102
Other Ducks	2,019	2,882
Total Duck Harvest	2,254,700±11%	2,111,900±8%
Total Active Duck Hunters^a	192,300	177,800
Total Duck Hunter Days Afield^a	931,400±13%	885,100±10%
Seasonal Duck Harvest Per Hunter^a		
<hr/>		
Goose Species Composition		
Canada Goose	533,686	542,312
Snow Goose	60,676	85,620
Blue Goose	23,137	41,868
Ross' Goose	15,235	24,950
White-fronted Goose	43,790	51,979
Brant	0	0
Other Geese	0	793
Total Goose Harvest	676,500±14%	747,500±11%
Total Active Goose Hunters^b	134,400	126,000
Total Goose Hunter Days Afield^b	607,100±16%	521,100±9%
Seasonal Goose Harvest Per Hunter^b		
<hr/>		
Active Waterfowl Hunters^c	243,700	212,800
<hr/>		
Sample Sizes		
DuckWings	18,950	20,030
GooseTails	3,623	3,411

Table 1D. Preliminary estimates of waterfowl harvest and hunter activity in the Pacific Flyway during the 2018 and 2019 hunting seasons.

Duck Species Composition	Arizona		California		Idaho	
	2018	2019	2018	2019	2018	2019
Mallard	4,175	3,883	144,472	147,680	172,946	100,751
Domestic Mallard	0	0	475	333	516	307
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	1,206	1,941	61,730	53,468	12,562	8,908
Wigeon	2,659	1,737	157,767	142,026	20,908	18,123
Green-winged Teal	1,917	4,530	316,959	288,875	17,295	10,444
Blue-winged/Cinnamon Teal	1,453	715	30,628	25,445	1,635	307
Northern Shoveler	1,082	920	141,504	122,651	2,495	922
Northern Pintail	309	409	138,774	99,535	4,732	2,150
Wood Duck	93	34	12,346	13,554	6,281	2,611
Redhead	216	511	7,241	6,735	688	1,382
Canvasback	93	0	14,958	12,390	344	0
Greater Scaup	0	0	356	582	344	0
Lesser Scaup	186	170	4,274	6,569	1,463	307
Ring-necked Duck	928	954	30,865	20,539	4,216	4,300
Goldeneyes	186	68	3,799	5,987	8,690	11,980
Bufflehead	93	375	12,583	11,059	3,098	922
Ruddy Duck	371	238	1,662	3,492	1,033	768
Long-tailed Duck	0	0	0	0	0	0
Eiders	0	0	0	0	0	0
Scoters	0	0	645	413	86	0
Hooded Merganser	124	0	1,306	748	688	614
Other Mergansers	155	34	950	83	258	461
Other Ducks	557	341	0	0	0	0
Total Duck Harvest	15,800±24%	16,900±55%	1,083,300±16%	962,200±12%	260,300±91%	165,300±34%
Total Active Duck Hunters^a	2,000±24%	1,900±20%	51,400±14%	45,500±13%	18,300±45%	18,800±26%
Total Duck Hunter Days Afield^a	8,800±23%	8,600±32%	370,000±11%	342,100±12%	95,000±64%	94,900±33%
Seasonal Duck Harvest Per Hunter^a	7.9±34%	9.0±58%	21.1±21%	21.1±18%	14.3±102%	8.8±42%
Goose Species Composition						
Canada Goose	816	2,365	83,139	59,936	42,049	69,814
Snow Goose	204	163	47,653	61,034	367	0
Blue Goose	0	0	406	686	0	0
Ross' Goose	102	489	8,922	12,207	0	0
White-fronted Goose	51	82	57,589	46,221	0	436
Brant	0	0	514	1,170	0	0
Other Geese	0	0	0	0	0	0
Total Goose Harvest	1,200±67%	3,100±124%	198,200±19%	181,300±15%	42,400±70%	70,300±48%
Total Active Goose Hunters^b	1,000±36%	700±34%	36,800±12%	32,400±10%	16,300±54%	11,700±34%
Total Goose Hunter Days Afield^b	3,900±42%	4,300±46%	245,900±15%	200,100±13%	53,400±93%	74,200±42%
Seasonal Goose Harvest Per Hunter^b	1.1±76%	4.5±129%	5.4±23%	5.6±18%	2.6±88%	6.0±59%
Active Waterfowl Hunters^c	2,200±23%	1,900±19%	53,500±14%	49,000±13%	21,500±41%	23,500±22%
Sample Sizes						
DuckWings	511	495	9,135	11,596	3,025	1,076
GooseTails	23	38	993	1,325	462	161

Table 1D. Preliminary estimates of waterfowl harvest and hunter activity in the Pacific Flyway during the 2018 and 2019 hunting seasons.

Duck Species Composition	Montana		Nevada		Oregon	
	2018	2019	2018	2019	2018 ^d	2019
Mallard	109,744	63,247	19,429	13,252	102,696	97,820
Domestic Mallard	0	0	0	0	243	113
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	7,093	8,596	5,858	6,092	9,307	11,782
Wigeon	11,376	8,415	4,004	3,099	56,163	62,363
Green-winged Teal	12,447	5,248	6,822	8,550	52,764	42,311
Blue-winged/Cinnamon Teal	7,762	3,800	1,186	1,336	809	736
Northern Shoveler	3,078	3,257	2,150	2,886	15,133	14,557
Northern Pintail	3,212	633	890	2,191	35,284	22,997
Wood Duck	937	1,719	297	374	5,665	5,154
Redhead	1,338	995	2,002	1,710	162	793
Canvasback	402	90	1,112	1,122	1,376	1,643
Greater Scaup	268	0	0	0	6,960	5,721
Lesser Scaup	1,740	1,176	297	107	6,474	7,363
Ring-necked Duck	1,205	1,176	74	641	5,260	5,608
Goldeneyes	7,495	4,796	0	160	1,214	2,492
Bufflehead	535	452	667	374	4,937	3,455
Ruddy Duck	402	271	1,335	214	243	283
Long-tailed Duck	0	0	0	0	0	0
Eiders	0	0	0	0	0	0
Scoters	134	0	0	0	332	181
Hooded Merganser	535	543	148	107	1,214	1,303
Other Mergansers	0	181	0	53	405	510
Other Ducks	134	0	0	0	81	0
Total Duck Harvest	169,800±29%	104,600±25%	46,300±49%	42,300±32%	306,700±16%	287,200±17%
Total Active Duck Hunters^a	14,600±14%	12,900±16%	3,400±35%	3,900±28%	20,400±11%	18,300±10%
Total Duck Hunter Days Afield^a	72,400±23%	48,400±18%	21,100±45%	20,300±33%	121,100±13%	125,400±20%
Seasonal Duck Harvest Per Hunter^a	11.6±33%	8.1±29%	13.7±60%	10.8±43%	15.0±20%	15.7±20%
Goose Species Composition						
Canada Goose	52,400	63,734	2,475	6,625	52,223	41,229
Snow Goose	547	440	99	138	3,606	5,746
Blue Goose	109	0	0	0	134	0
Ross' Goose	0	0	0	0	668	711
White-fronted Goose	0	220	0	0	4,408	7,819
Brant	0	0	0	0	0	196
Other Geese	0	0	0	0	0	0
Total Goose Harvest	53,100±24%	64,400±21%	2,600±58%	6,800±74%	61,000±17%	55,700±26%
Total Active Goose Hunters^b	9,500±18%	10,600±13%	900±63%	2,400±40%	10,800±14%	8,900±11%
Total Goose Hunter Days Afield^b	40,400±20%	42,500±16%	2,800±52%	12,000±44%	52,900±16%	46,400±17%
Seasonal Goose Harvest Per Hunter^b	5.6±30%	6.1±25%	2.9±85%	2.8±84%	5.6±22%	6.3±29%
Active Waterfowl Hunters^c	18,900±10%	16,700±12%	3,400±35%	4,600±28%	29,300±8%	19,800±10%
Sample Sizes						
DuckWings	1,269	1,156	624	791	3,796	5,077
GooseTails	485	586	78	49	457	938

Table 1D. Preliminary estimates of waterfowl harvest and hunter activity in the Pacific Flyway during the 2018 and 2019 hunting seasons.

Duck Species Composition	Utah		Washington		Flyway Total	
	2018	2019	2018 ^d	2019	2018 ^d	2019
Mallard	60,853	60,212	203,685	190,913	817,998	677,758
Domestic Mallard	163	436	78	0	1,475	1,189
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	17,329	28,544	10,921	11,032	126,006	130,362
Wigeon	14,888	21,499	60,692	65,980	328,458	323,241
Green-winged Teal	26,278	23,823	43,920	37,452	478,401	421,232
Blue-winged/Cinnamon Teal	8,380	8,425	312	281	52,165	41,046
Northern Shoveler	12,610	15,543	6,241	7,940	184,294	168,675
Northern Pintail	14,644	10,169	25,977	20,447	223,822	158,530
Wood Duck	325	145	1,092	2,319	27,036	25,911
Redhead	2,115	3,051	1,872	2,951	15,636	18,129
Canvasback	2,603	2,833	1,170	3,162	22,058	21,240
Greater Scaup	0	73	1,872	3,865	9,800	10,240
Lesser Scaup	4,800	3,777	2,730	4,638	21,963	24,108
Ring-necked Duck	2,522	1,453	7,177	12,999	52,247	47,670
Goldeneyes	5,207	4,648	961	1,171	27,551	31,302
Bufflehead	3,173	2,469	5,539	5,692	30,625	24,798
Ruddy Duck	1,953	2,978	0	0	6,997	8,245
Long-tailed Duck	0	0	0	25	0	25
Eiders	0	0	0	0	0	0
Scoters	0	73	838	738	2,035	1,405
Hooded Merganser	81	218	936	1,686	5,033	5,220
Other Mergansers	1,139	581	546	773	3,452	2,676
Other Ducks	81	0	78	96	931	436
Total Duck Harvest	179,100±17%	190,900±16%	376,600±11%	374,200±13%	2,438,000±11%	2,143,400±7%
Total Active Duck Hunters^a	13,800±18%	15,600±16%	24,600±7%	24,400±6%	163,200	141,300
Total Duck Hunter Days Afield^a	81,900±20%	110,000±27%	170,800±10%	168,400±12%	1,112,600±8%	918,000±7%
Seasonal Duck Harvest Per Hunter^a	13.0±25%	12.2±23%	15.2±13%	15.2±14%		
Goose Species Composition						
Canada Goose	15,165	15,403	47,832	43,282	296,098	302,390
Snow Goose	1,606	2,827	30,668	22,605	84,749	92,952
Blue Goose	0	0	229	701	877	1,387
Ross' Goose	268	975	1,945	1,840	11,905	16,222
White-fronted Goose	0	0	1,488	263	63,535	55,041
Brant	0	0	787	457	1,301	1,823
Other Geese	0	0	114	0	114	0
Total Goose Harvest	17,000±29%	19,200±24%	83,100±28%	69,100±16%	458,600±14%	469,800±11%
Total Active Goose Hunters^b	7,900±20%	8,900±15%	14,700±9%	12,400±8%	104,300	88,000
Total Goose Hunter Days Afield^b	37,300±26%	42,800±21%	82,200±15%	67,100±14%	566,900±12%	489,300±9%
Seasonal Goose Harvest Per Hunter^b	2.2±35%	2.2±28%	5.6±30%	5.5±18%		
Active Waterfowl Hunters^c	14,600±18%	18,000±14%	34,600±5%	26,500±5%	178,100	160,100
Sample Sizes						
DuckWings	2,202	2,629	4,878	5,374	25,440	28,194
GooseTails	191	197	724	788	3,413	4,082

Table 1E. Preliminary estimates of waterfowl harvest and hunter activity in Alaska and the United States during the 2018 and 2019 hunting seasons.

Duck Species Composition	Alaska		United States Total	
	2018	2019	2018 ^d	2019
Mallard	14,830	20,079	3,148,069	2,896,071
Domestic Mallard	0	0	4,280	5,427
Black Duck	0	0	88,163	79,759
Mallard x Black Hybrid	0	0	3,505	3,092
Mottled Duck	0	0	24,340	22,537
Gadwall	684	1,016	932,975	1,048,098
Wigeon	9,811	5,703	573,352	536,291
Green-winged Teal	5,191	5,703	1,300,349	1,170,105
Blue-winged/Cinnamon Teal	57	0	949,454	802,057
Northern Shoveler	1,825	1,484	420,243	450,656
Northern Pintail	4,734	3,203	377,743	317,720
Wood Duck	0	0	876,889	946,838
Redhead	0	0	167,310	188,793
Canvasback	0	0	89,634	72,900
Greater Scaup	285	859	76,784	52,374
Lesser Scaup	171	391	197,696	180,474
Ring-necked Duck	0	78	446,408	374,088
Goldeneyes	1,483	4,453	92,835	80,902
Bufflehead	856	1,641	279,631	210,846
Ruddy Duck	0	0	31,298	38,559
Long-tailed Duck	120	934	28,487	36,284
Eiders	478	0	18,127	8,131
Scoters	3,586	4,004	78,095	65,850
Hooded Merganser	0	78	80,990	85,709
Other Mergansers	120	934	25,045	26,236
Other Ducks	1,435	1,135	15,244	20,968
Total Duck Harvest	45,700±30%	51,700±27%	10,326,900±5%	9,720,800±5%
Total Active Duck Hunters^a	4,200±17%	4,000±14%	941,500	869,900
Total Duck Hunter Days Afield^a	17,300±22%	22,000±25%	5,491,500±5%	5,002,200±4%
Seasonal Duck Harvest Per Hunter^a	9.4±34%	11.2±31%		
Goose Species Composition				
Canada Goose	5,002	6,588	1,928,206	2,070,496
Snow Goose	0	0	189,588	225,513
Blue Goose	0	0	41,158	62,586
Ross' Goose	0	0	30,952	50,955
White-fronted Goose	1,819	0	219,919	260,754
Brant	3,381	2,757	34,239	20,709
Other Geese	0	0	114	891
Total Goose Harvest	10,200±43%	9,300±48%	2,444,200±6%	2,691,900±5%
Total Active Goose Hunters^b	1,900±27%	1,600±24%	588,900	552,400
Total Goose Hunter Days Afield^b	8,900±32%	13,800±55%	3,030,800±6%	2,780,600±5%
Seasonal Goose Harvest Per Hunter^b	3.6±51%	4.1±54%		
Active Waterfowl Hunters^c	4,800±15%	4,900±12%	1,092,900	989,500
Sample Sizes				
DuckWings	748	677	81,729	85,740
GooseTails	69	41	15,085	15,862

^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.

^d Total duck and total goose estimates from 2018 were revised for this report to reflect corrected stratification information for Oregon and Washington. These revisions affected the 2018 species-specific duck and goose estimates for these states, as well as the Pacific Flyway and United States totals.

Table 2. Flyway-specific point estimates of duck and goose harvest in Colorado, Montana, New Mexico, and Wyoming during the 2018 and 2019 hunting seasons.

	2018		2019	
	Central Flyway	Pacific Flyway	Central Flyway	Pacific Flyway
Duck Harvest				
Colorado	74,700	13,500	67,600	8,600
Montana	57,000	112,800	32,800	71,800
New Mexico	34,900	2,700	39,300	5,400
Wyoming	23,400	9,700	17,300	7,500
Goose Harvest				
Colorado	70,800	7,200	64,500	4,600
Montana	38,100	15,000	46,700	17,700
New Mexico	8,400	1,900	1,600	3,600
Wyoming	19,100	1,200	19,400	3,500

Table 3. Preliminary estimates of sea duck harvest and hunter activity for states with special sea duck seasons or sea duck permits during the 2018 and 2019 hunting seasons.¹

	<u>Sea Duck Harvest</u> ²		<u>Active Sea Duck Hunters</u> ³		<u>Sea Duck Hunter Days Afield</u>		<u>Seasonal Harvest Per Hunter</u>	
	2018	2019	2018	2019	2018	2019	2018	2019
Connecticut	2,100 ± 83%	3,200 ± 70%	500 ± 65%	600 ± 47%	2,600 ± 78%	1,700 ± 55%	3.8 ± 105%	5.0 ± 84%
Delaware	3,400 ± 92%	2,400 ± 91%	400 ± 58%	400 ± 46%	1,800 ± 63%	1,100 ± 67%	8.4 ± 109%	6.8 ± 102%
Maine	10,800 ± 68%	4,100 ± 64%	1,300 ± 51%	900 ± 47%	4,300 ± 63%	1,800 ± 47%	8.3 ± 85%	4.6 ± 80%
Maryland	27,200 ± 28%	29,400 ± 20%	4,900 ± 20%	6,400 ± 15%	14,500 ± 44%	13,700 ± 19%	5.6 ± 35%	4.6 ± 25%
Massachusetts	5,800 ± 84%	11,400 ± 53%	900 ± 66%	1,700 ± 48%	2,300 ± 64%	4,800 ± 48%	6.5 ± 107%	6.7 ± 72%
New Hampshire	300 ± 82%	300 ± 87%	100 ± 106%	<50 ± 73%	300 ± 77%	100 ± 82%	2.1 ± 134%	9.2 ± 114%
New Jersey	4,500 ± 58%	9,500 ± 32%	1,100 ± 41%	1,700 ± 24%	2,800 ± 45%	5,300 ± 35%	4.1 ± 71%	5.5 ± 40%
New York	14,800 ± 55%	10,600 ± 52%	2,400 ± 33%	1,500 ± 34%	11,900 ± 47%	5,100 ± 42%	6.2 ± 65%	6.9 ± 62%
Rhode Island	2,200 ± 52%	2,100 ± 27%	500 ± 41%	400 ± 24%	2,000 ± 50%	1,100 ± 25%	4.4 ± 67%	4.7 ± 36%
Virginia	20,000 ± 79%	12,400 ± 57%	3,400 ± 49%	2,500 ± 42%	9,800 ± 87%	6,000 ± 45%	5.9 ± 93%	4.9 ± 71%
Atlantic Flyway Total	91,000 ± 24%	85,300 ± 16%	15,500	16,200	52,300 ± 24%	40,900 ± 13%		
California	600 ± 117%	400 ± 45%	100 ± 71%	100 ± 34%	200 ± 94%	200 ± 48%	11.5 ± 137%	4.3 ± 57%
Oregon	300 ± 67%	200 ± 57%	100 ± 38%	100 ± 39%	200 ± 50%	300 ± 81%	3.3 ± 77%	2.4 ± 69%
Washington	1,800 ± 34%	2,000 ± 26%	500 ± 21%	600 ± 16%	1,700 ± 29%	2,000 ± 26%	3.6 ± 40%	3.1 ± 30%
Pacific Flyway Total	2,800 ± 36%	2,600 ± 21%	700	800	2,100 ± 27%	2,500 ± 23%		
Alaska	5,700 ± 47%	7,000 ± 35%	1,300 ± 35%	1,500 ± 29%	4,400 ± 41%	5,400 ± 43%	4.4 ± 59%	4.8 ± 46%
United States Total	99,600 ± 22%	94,900 ± 14%	17,500	18,500	58,900 ± 22%	48,800 ± 12%		

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 2018 and 2019 hunting seasons. ¹

	Brant Harvest		Active Brant Hunters ²		Brant Hunter Days Afield		Seasonal Harvest Per Hunter	
	2018	2019	2018	2019	2018	2019	2018	2019
Connecticut	800 ± 122%	800 ± 81%	200 ± 68%	200 ± 79%	900 ± 84%	600 ± 78%	3.7 ± 139%	3.9 ± 113%
Delaware	600 ± 84%	400 ± 64%	300 ± 66%	200 ± 49%	1,000 ± 72%	500 ± 48%	2.3 ± 107%	2.1 ± 80%
Maine	0	0	0	0	0	0	0	0
Maryland	0	100 ± 137%	0	200 ± 91%	0	200 ± 91%	0	0.6 ± 164%
Massachusetts	400 ± 96%	500 ± 95%	300 ± 106%	400 ± 92%	800 ± 101%	1,100 ± 90%	1.2 ± 143%	1.4 ± 132%
New Hampshire	0	0	0	0	0	0	0	0
New Jersey	9,000 ± 29%	3,700 ± 26%	2,300 ± 28%	1,600 ± 22%	9,500 ± 36%	4,700 ± 27%	4.0 ± 40%	2.3 ± 34%
New York	10,300 ± 58%	5,200 ± 54%	1,800 ± 36%	1,300 ± 35%	10,300 ± 45%	5,900 ± 46%	5.6 ± 69%	4.1 ± 65%
North Carolina	5,700 ± 123%	2,700 ± 90%	2,500 ± 89%	1,700 ± 60%	6,300 ± 113%	3,700 ± 74%	2.3 ± 152%	1.6 ± 108%
Rhode Island	500 ± 55%	400 ± 53%	100 ± 30%	300 ± 38%	900 ± 54%	800 ± 44%	5.3 ± 63%	1.5 ± 65%
Virginia	1,800 ± 43%	2,200 ± 70%	700 ± 36%	900 ± 57%	1,900 ± 45%	1,700 ± 57%	2.5 ± 56%	2.3 ± 90%
Atlantic Flyway Total	29,100 ± 33%	16,000 ± 26%	8,200	6,700	31,600 ± 30%	19,200 ± 23%		
California	500 ± 60%	1,200 ± 91%	200 ± 34%	500 ± 75%	600 ± 54%	1,600 ± 75%	2.5 ± 68%	2.6 ± 118%
Oregon	0	0	100 ± 183%	<50 ± 196%	100 ± 183%	<50 ± 196%	0	0
Washington	800 ± 48%	200 ± 67%	400 ± 35%	200 ± 54%	800 ± 41%	500 ± 104%	1.8 ± 59%	1.0 ± 86%
Pacific Flyway Total	1,700 ± 43%	1,400 ± 79%	900	600	1,900 ± 40%	2,100 ± 62%		
Alaska	3,400 ± 51%	2,800 ± 39%	500 ± 46%	300 ± 30%	2,700 ± 47%	1,700 ± 43%	6.4 ± 69%	8.1 ± 49%
United States Total	34,200 ± 29%	20,100 ± 22%	9,600	7,700	36,100 ± 26%	22,900 ± 20%		

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 2018 and 2019 hunting seasons.

State	Harvest										Number of	
	Green-winged teal		Blue-winged teal		Wood ducks		Other ducks		Total duck harvest		wings received	
	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019
September Teal Seasons												
Delaware	151	272	76	0	0	0	0	0	227	272	3	3
Georgia	0	0	1,846	10,494	0	0	0	0	1,846	10,494	9	52
Maryland	1,148	113	0	451	0	0	0	0	1,148	563	12	5
North Carolina	222	0	3,113	1,378	0	0	0	0	3,335	1,378	15	8
South Carolina	0	142	3,069	3,410	0	0	0	0	3,069	3,552	25	25
Virginia	1,001	0	2,001	0	0	0	0	0	3,002	0	21	0
Atlantic Flyway Total	2,522	527	10,105	15,732	0	0	0	0	12,627	16,258	85	93
Alabama	0	0	5,625	4,898	0	0	0	0	5,625	4,898	23	26
Arkansas	779	1,312	21,802	10,932	0	0	0	0	22,580	12,244	87	56
Illinois	1,459	656	18,962	29,830	133	164	0	0	20,553	30,649	155	187
Indiana	371	134	2,412	8,011	0	0	0	0	2,783	8,145	15	61
Iowa	1,082	1,007	32,086	12,534	0	0	0	0	33,168	13,541	184	121
Louisiana	349	439	86,231	61,682	0	0	175	110	86,755	62,230	994	567
Michigan	2,230	912	2,370	912	0	0	0	0	4,600	1,824	33	10
Mississippi	0	0	3,923	7,060	0	0	0	0	3,923	7,060	24	49
Missouri	645	0	17,189	11,120	215	0	0	0	18,048	11,120	84	73
Ohio	873	1,633	3,347	4,627	0	0	0	0	4,220	6,260	29	23
Wisconsin	1,228	2,377	12,895	14,809	0	0	0	0	14,123	17,186	69	94
Mississippi Flyway Total	9,015	8,469	206,841	166,415	347	164	175	110	216,379	175,158	1,697	1,267
Colorado	467	0	933	473	0	0	0	0	1,400	473	9	4
Kansas	3,091	2,240	33,918	18,666	0	0	0	0	37,009	20,906	455	224
Nebraska	1,980	2,754	20,071	32,511	0	0	0	0	22,051	35,265	245	461
New Mexico	241	366	2,251	824	0	0	0	0	2,493	1,191	31	26
Oklahoma	0	0	1,410	6,335	0	0	0	0	1,410	6,335	8	33
Texas	6,636	1,686	180,388	104,396	0	0	175	0	187,198	106,082	1,072	755
Central Flyway Total	12,415	7,046	238,971	163,206	0	0	175	0	251,561	170,252	1,820	1,503
Season Type Total	23,952	16,042	455,917	345,353	347	164	349	110	480,566	361,668	3,602	2,863
September Teal/Wood Duck Seasons												
Florida	0	0	8,411	9,570	1,521	754	0	0	9,932	10,323	111	137
Kentucky	0	0	1,060	816	4,771	4,078	0	0	5,832	4,893	22	30
Tennessee	0	0	5,453	16,190	6,543	4,317	0	0	11,996	20,508	11	38
Season Type Total	0	0	14,924	26,575	12,836	9,149	0	0	27,760	35,724	144	205
United States Total	23,952	16,042	470,842	371,928	13,183	9,313	349	110	508,326	397,392	3,746	3,068

Table 6. Preliminary estimates of the number of Canada geese harvested during the special September, regular, and special late seasons during the 2018 and 2019 hunting seasons.

State / Flyway	September		Regular		Late		Total	
	2018	2019	2018	2019	2018	2019	2018	2019
Connecticut	1,900	1,500	6,100	7,700	0	0	8,100	9,200
Delaware	1,400	1,100	7,000	6,800	0	0	8,400	7,900
Georgia	2,600	5,200	10,200	16,100	0	0	12,800	21,300
Maine	6,100	4,100	5,300	3,100	0	0	11,400	7,200
Maryland	6,000	6,100	84,800	39,300	0	0	90,900	45,500
Massachusetts	3,200	3,200	14,100	5,500	0	0	17,300	8,700
New Hampshire	1,000	600	2,200	3,800	0	0	3,200	4,400
New Jersey	6,300	3,100	10,600	10,600	2,300	0	19,300	13,600
New York	37,500	51,900	29,000	37,000	0	0	66,600	88,900
North Carolina	6,100	12,700	29,300	34,800	0	0	35,400	47,500
Pennsylvania	0	24,400	89,300	71,600	0	0	89,300	96,000
Rhode Island	500	100	7,000	2,000	0	0	7,500	2,100
South Carolina	3,500	3,700	3,200	9,000	0	0	6,700	12,700
Vermont	3,500	2,800	3,800	2,700	0	0	7,400	5,600
Virginia	5,600	6,300	25,800	24,500	0	0	31,400	30,800
West Virginia	500	800	2,300	2,500	0	0	2,800	3,300
Atlantic Flyway Total ¹	85,800	127,700	330,300	280,900	2,300	0	418,400	408,600
North Dakota	21,200	18,600	87,900	105,200	0	0	109,100	123,800
Oklahoma	0	0	35,900	58,500	0	0	35,900	58,500
South Dakota	21,000	13,000	40,800	41,200	0	0	61,800	54,200
Texas	1,000	4,000	70,300	53,600	0	0	71,300	57,600
Central Flyway Total ¹	43,100	35,600	517,900	541,300	0	0	561,100	576,900
Colorado	1,000	400	6,200	4,200	0	0	7,200	4,600
Idaho	0	0	42,000	69,800	0	0	42,000	69,800
Oregon	2,800	2,400	66,500	38,900	0	0	69,400	41,200
Washington	9,100	1,600	59,100	41,700	0	0	68,200	43,300
Wyoming	900	700	300	2,800	0	0	1,200	3,500
Pacific Flyway Total ¹	13,900	5,100	292,400	262,700	0	0	306,200	267,800
United States Total	142,800	177,900	1,820,600	1,892,600	2,300	0	1,965,700	2,070,500

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

Table 7. Waterfowl harvest estimates in Canada during the 2018 and 2019 hunting seasons (estimates courtesy of the Canadian Wildlife Service).¹

Duck Species Composition	Newfoundland		Prince Edward Isl.		Nova Scotia		New Brunswick		Quebec		Ontario		Manitoba	
	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019
Mallard	329		1,019		3,487		6,282		42,549		82,967		37,245	
Black Duck	6,940		2,081		11,839		8,190		14,674		8,753		0	
Gadwall	0		1,054		0		46		2,351		2,650		3,694	
Wigeon	0		39		316		659		1,520		5,859		2,046	
Green-winged Teal	2,676		385		2,209		4,380		9,645		10,630		4,512	
Blue-winged/Cinnamon Teal	349		77		0		286		710		2,580		6,038	
Northern Shoveler	0		0		0		111		408		665		1,694	
Northern Pintail	349		0		442		302		2,482		2,993		2,648	
Wood Duck	0		0		897		4,464		12,933		47,331		390	
Redhead	0		0		0		0		97		7,228		6,169	
Canvasback	0		0		0		0		0		2,791		5,121	
Greater Scaup	0		0		680		178		304		5,915		2,464	
Lesser Scaup	0		0		0		70		411		5,745		10,559	
Ring-necked Duck	3,598		121		428		1,126		3,107		12,048		6,847	
Goldeneyes	1,950		0		484		1,120		1,273		10,665		569	
Bufflehead	0		0		725		1,241		617		12,389		3,748	
Ruddy Duck	0		0		0		0		0		76		0	
Long-tailed Duck	882		0		906		0		0		3,625		0	
Eiders	5,668		0		3,781		77		1,371		0		0	
Scoters	216		0		3,983		0		1,043		324		0	
Hooded Merganser	0		0		368		72		2,345		2,427		623	
Other Mergansers	2,363		0		1,002		137		983		1,779		0	
Other Ducks	0		0		0		0		0		0		0	
Total Duck Harvest	25,320		4,776		31,547		28,741		98,823		229,440		94,367	
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Goose Species Composition														
Canada Goose	3,902		12,899		12,787		15,480		118,570		193,852		63,259	
Snow Goose	0		1,049		0		0		19,548		1,029		7,403	
Blue Goose	0		0		0		0		0		899		3,518	
Ross's Goose	0		0		0		0		0		0		1,797	
White-fronted Goose	0		0		0		0		0		0		467	
Brant	0		0		0		0		0		0		0	
Total Goose Harvest	3,902		13,948		12,787		15,480		138,118		195,780		76,444	
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Migratory Bird Permits Sold	12,871		1,193		4,601		5,049		29,803		51,502		8,504	

Table 7 (continued). Waterfowl harvest estimates in Canada during the 2017 and 2018 hunting seasons (estimates courtesy of the Canadian Wildlife Service).¹

Duck Species Composition	Saskatchewan		Alberta		British Columbia		Nunavut		Northwest Terr.		Yukon Territory		Canada Total	
	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019
Mallard	168,068		83,522		25,204		0		0		168		450,840	
Black Duck	0		0		0		0		0		0		52,477	
Gadwall	13,703		11,455		900		0		0		0		35,853	
Wigeon	11,209		9,987		7,917		0		0		336		39,888	
Green-winged Teal	10,180		5,603		1,703		0		0		336		52,259	
Blue-winged/Cinnamon Teal	19,671		12,089		224		0		0		0		42,024	
Northern Shoveler	7,308		7,452		666		0		0		0		18,304	
Northern Pintail	15,714		9,429		1,986		0		0		168		36,513	
Wood Duck	0		344		261		0		0		0		66,620	
Redhead	2,615		10,852		0		0		0		0		26,961	
Canvasback	2,125		3,372		0		0		0		0		13,409	
Greater Scaup	457		1,457		72		0		0		0		11,527	
Lesser Scaup	1,571		10,268		486		0		0		0		29,110	
Ring-necked Duck	1,127		441		1,093		0		0		0		29,936	
Goldeneyes	1,063		3,589		245		0		0		0		20,958	
Bufflehead	2,582		3,229		486		0		0		336		25,353	
Ruddy Duck	0		710		85		0		0		0		871	
Long-tailed Duck	0		0		0		0		0		0		5,413	
Eiders	0		0		0		0		0		0		10,897	
Scoters	0		0		0		0		0		0		5,566	
Hooded Merganser	2,050		452		82		0		0		0		8,419	
Other Mergansers	0		0		0		0		0		0		6,264	
Other Ducks	0		0		0		0		0		0		0	
Total Duck Harvest	259,443		174,251		41,410		0		0		1,344		989,462	
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Goose Species Composition														
Canada Goose	152,697		134,376		13,486		0		0		0		721,308	
Snow Goose	37,691		24,518		1,634		0		0		0		92,872	
Blue Goose	15,724		1,871		0		0		0		0		22,012	
Ross's Goose	8,916		1,217		0		0		0		0		11,930	
White-fronted Goose	48,434		30,408		55		0		0		0		79,364	
Brant	0		0		0		0		0		0		0	
Total Goose Harvest	263,462		192,390		15,175		0		0		0		927,486	
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Migratory Bird Permits Sold	19,701		24,416		7,029		63		286		275		165,273	

¹ Note: 2019 estimates were not available at the time this report was released; this table will be updated when estimates are received.

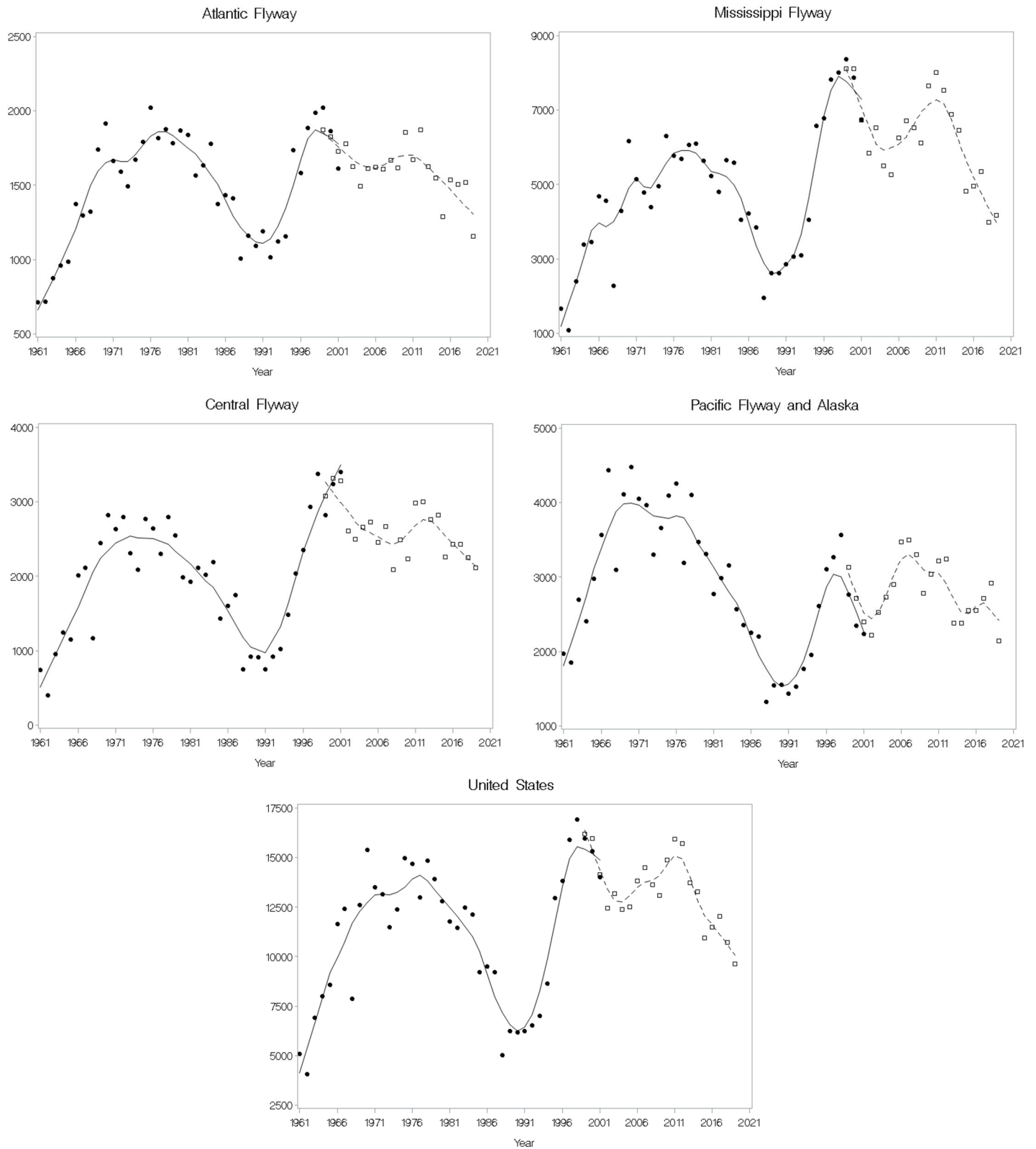


Figure 1. Number of ducks harvested (in thousands) by hunters in the United States, 1961-2019. (Federal Duck Stamp Survey – circles and solid line; HIP survey – squares and dashed line.)

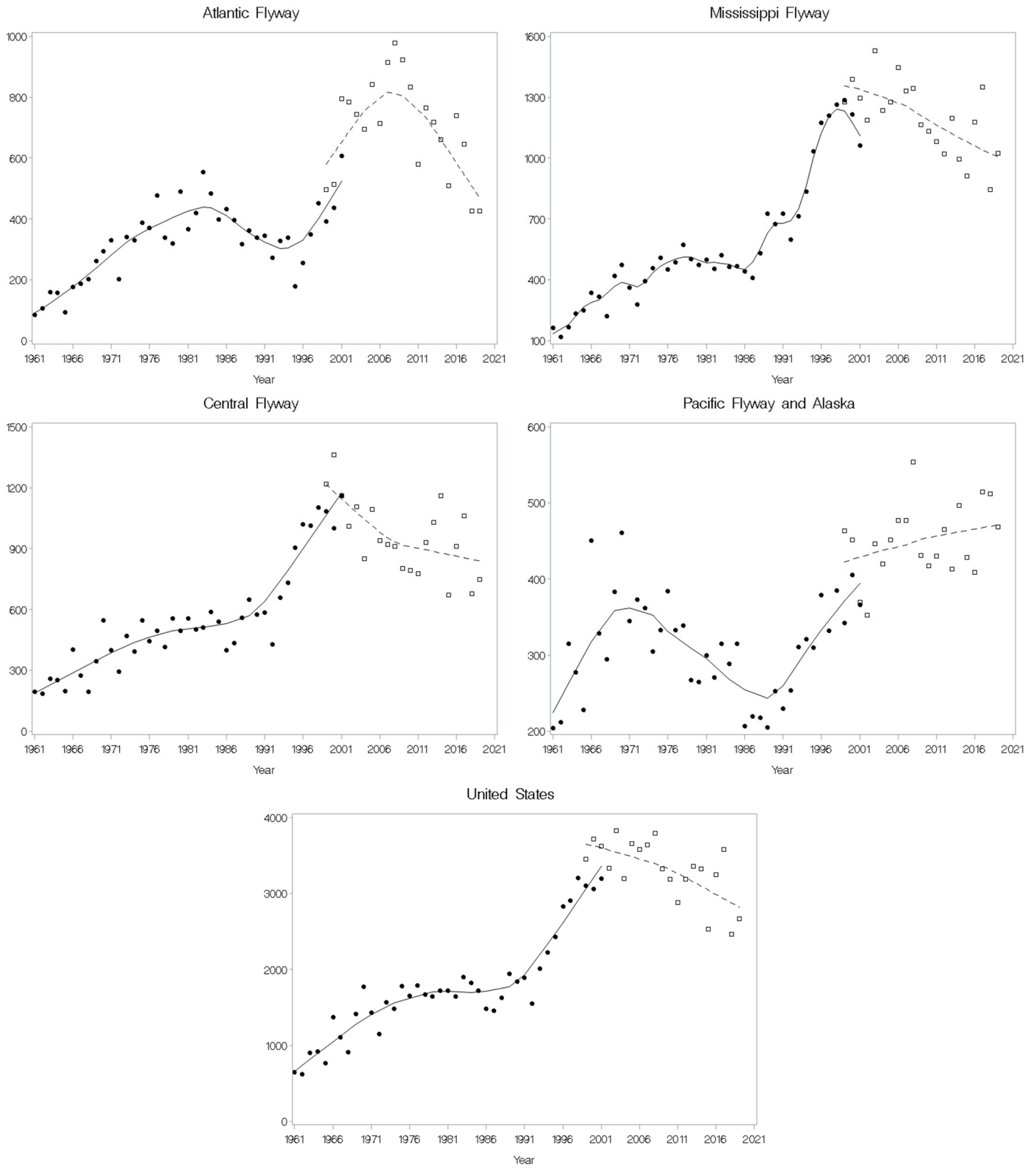


Figure 2. Number of geese harvested (in thousands) by hunters in the United States, 1961-2019. (Federal Duck Stamp Survey – circles and solid line; HIP survey – squares and dashed line).

Table 8. Preliminary weighted age ratios of mallards in state harvests during the 2015-2019 hunting seasons as determined from the Waterfowl Parts Collection Survey.

State and Flyway	Immatures per adult ^a				
	2015	2016	2017	2018	2019
Connecticut	1.2	1.1	1.2	1.0	1.2
Delaware	1.5	1.1	1.1	1.5	2.8
Florida	---	---	---	---	---
Georgia	1.0	2.1	---	---	0.5
Maine	2.7	1.9	1.9	1.6	1.6
Maryland	1.4	1.4	1.2	1.1	1.1
Massachusetts	1.0	1.1	1.3	1.3	1.0
New Hampshire	2.2	1.5	1.6	2.3	2.4
New Jersey	0.8	0.7	0.9	1.2	1.4
New York	2.1	1.5	1.5	1.6	1.7
North Carolina	1.0	1.2	1.1	0.8	0.8
Pennsylvania	1.5	0.9	1.1	1.0	1.2
Rhode Island	0.9	1.2	1.2	0.9	1.5
South Carolina	2.2	2.4	1.5	1.2	1.2
Vermont	2.6	2.1	1.8	1.6	1.3
Virginia	0.9	0.8	0.8	0.8	0.8
West Virginia	0.4	0.8	0.6	0.8	0.8
Atlantic Flyway Total ^b	1.38	1.24	1.17	1.12	1.19
Alabama	1.1	1.4	0.5	1.1	2.7
Arkansas	0.7	0.7	0.5	0.8	0.7
Illinois	1.1	1.2	1.4	1.3	1.3
Indiana	1.4	0.9	0.7	1.0	1.4
Iowa	1.6	1.6	1.2	2.0	2.0
Kentucky	1.1	0.8	0.5	0.7	1.0
Louisiana	1.0	1.0	0.6	0.7	0.6
Michigan	2.8	2.1	1.3	1.4	1.7
Minnesota	4.4	4.2	2.5	3.0	2.5
Mississippi	0.7	0.9	0.5	0.6	0.7
Missouri	1.0	1.1	1.1	1.2	1.0
Ohio	1.7	1.4	1.1	1.3	1.6
Tennessee	0.9	0.7	0.4	0.8	1.0
Wisconsin	2.6	2.3	2.5	2.2	2.2
Mississippi Flyway Total ^b	1.19	1.09	0.92	1.07	1.05

Table 8 (continued). Preliminary weighted age ratios of mallards in state harvests during the 2015-2019 hunting seasons as determined from Waterfowl Parts Collection Survey.

State and Flyway	Immatures per adult ^a				
	2015	2016	2017	2018	2019
Colorado	0.7	0.7	0.9	0.7	0.9
Kansas	0.5	0.6	0.5	0.6	0.5
Montana	0.8	0.6	0.6	1.1	1.1
Nebraska	1.2	0.8	0.9	0.9	1.1
New Mexico	1.7	1.1	1.1	0.7	2.3
North Dakota	2.2	1.7	1.8	2.2	1.6
Oklahoma	0.5	0.4	0.5	0.4	0.5
South Dakota	1.7	1.8	1.3	1.6	2.0
Texas	0.5	0.5	0.4	0.6	0.7
Wyoming	0.6	0.7	1.2	0.8	0.6
Central Flyway Total ^b	0.97	0.78	0.85	0.90	0.92
Arizona	1.4	1.5	1.2	0.8	1.0
California	1.5	2.2	2.3	1.3	1.7
Colorado	1.5	---	3.5	1.4	6.8
Idaho	0.9	1.0	1.0	0.7	0.8
Montana	1.2	0.6	0.9	0.8	0.9
Nevada	1.1	2.5	2.5	1.6	1.6
New Mexico	---	1.5	---	---	1.1
Oregon	1.5	1.7	2.0	1.0	1.1
Utah	1.3	1.4	1.3	0.9	1.1
Washington	1.1	1.1	1.5	0.9	1.0
Wyoming	2.5	2.0	1.7	1.5	2.4
Pacific Flyway Total ^b	1.21	1.25	1.56	0.94	1.13
Alaska	2.5	1.4	2.9	1.7	4.7
U.S. Total ^b	1.16	1.07	1.06	1.00	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 2015-2019 hunting seasons, by species and flyway.

Species and Flyway	Immatures per adult ^{a, b}				
	2015	2016	2017	2018	2019
Mallard					
Atlantic	1.38	1.24	1.17	1.12	1.19
Mississippi	1.19	1.09	0.92	1.07	1.05
Central	0.97	0.78	0.85	0.90	0.92
Pacific	1.21	1.25	1.56	0.94	1.13
U.S. Total	1.16	1.07	1.06	1.00	1.06
Black duck					
Atlantic	1.17	1.40	0.97	1.13	1.71
Mississippi	3.94	1.60	1.28	0.99	1.76
U.S. Total	1.55	1.46	1.02	1.11	1.72
Mottled duck					
Atlantic	1.95	1.19	2.42	1.91	2.90
Mississippi	1.56	1.82	0.97	2.49	1.06
Central	2.21	2.38	0.77	---	1.64
U.S. Total	1.80	1.63	1.24	2.00	1.65
Gadwall					
Atlantic	1.09	1.28	0.81	0.92	0.71
Mississippi	1.03	1.02	0.79	1.10	1.05
Central	1.26	0.94	1.00	1.10	1.25
Pacific	1.00	0.97	1.54	1.05	1.45
U.S. Total	1.09	1.01	0.94	1.08	1.14
American wigeon					
Atlantic	0.93	0.50	1.09	0.60	1.07
Mississippi	2.37	1.72	1.54	1.97	1.46
Central	1.14	0.67	0.89	0.97	1.15
Pacific	1.27	0.95	1.22	1.16	1.21
U.S. Total	1.31	0.93	1.19	1.12	1.24
Green-winged teal					
Atlantic	1.66	1.70	1.52	1.42	1.78
Mississippi	1.63	1.58	1.50	1.01	1.30
Central	1.53	1.20	1.59	1.36	1.81
Pacific	1.27	0.90	1.09	0.75	1.10
U.S. Total	1.49	1.24	1.38	0.99	1.34
Blue-winged/Cinnamon teal					
Atlantic	1.18	0.93	1.57	0.94	1.31
Mississippi	1.28	1.27	1.75	1.76	1.36
Central	1.43	0.95	1.18	1.59	1.74
Pacific	0.74	0.83	1.09	1.28	0.81
U.S. Total	1.30	1.04	1.45	1.57	1.44

Table 9 (continued). Preliminary weighted age ratios of ducks harvested during the 2015-2019 hunting seasons, by species and flyway.

Species and Flyway	Immatures per adult ^{a, b}				
	2015	2016	2017	2018	2019
Northern shoveler					
Atlantic	1.02	1.46	0.95	1.27	0.82
Mississippi	1.06	0.96	1.06	1.17	1.48
Central	1.44	0.92	1.32	1.71	2.64
Pacific	0.79	0.69	1.16	0.92	0.99
U.S. Total	0.95	0.87	1.14	1.14	1.46
Northern pintail					
Atlantic	0.68	1.35	1.31	0.40	1.56
Mississippi	0.88	1.29	1.30	0.89	1.29
Central	0.98	0.73	0.86	1.02	1.38
Pacific	0.70	0.77	0.88	0.62	0.99
U.S. Total	0.79	0.88	1.01	0.72	1.17
Wood duck					
Atlantic	1.32	1.37	1.36	1.38	1.41
Mississippi	1.74	1.29	1.19	1.34	1.45
Central	2.34	0.87	1.63	1.33	1.74
Pacific	2.18	1.70	2.71	1.99	1.53
U.S. Total	1.61	1.29	1.32	1.37	1.46
Redhead					
Atlantic	0.83	0.72	0.76	0.48	0.77
Mississippi	2.00	1.12	1.23	1.08	1.83
Central	1.33	0.68	1.43	1.79	1.81
Pacific	0.51	0.72	1.67	1.27	3.05
U.S. Total	1.38	0.81	1.27	1.17	1.73
Canvasback					
Atlantic	---	0.32	0.36	0.18	---
Mississippi	1.47	1.02	0.83	1.04	1.42
Central	1.48	0.74	0.73	0.95	1.22
Pacific	0.90	1.03	1.70	1.04	1.23
U.S. Total	1.18	0.90	0.85	0.73	1.30
Greater scaup					
Atlantic	1.69	2.71	1.21	0.37	0.96
Mississippi	2.21	3.31	2.31	1.44	2.39
Central	1.28	---	---	---	0.70
Pacific	1.32	0.91	1.19	1.44	1.86
U.S. Total	1.82	2.14	1.50	0.88	1.59

Table 9 (continued). Preliminary weighted age ratios of ducks harvested during the 2015-2019 hunting seasons, by species and flyway.

Species and Flyway	Immatures per adult ^{a, b}				
	2015	2016	2017	2018	2019
Lesser scaup					
Atlantic	0.88	1.18	0.91	0.39	0.90
Mississippi	0.88	1.33	1.06	0.52	1.18
Central	0.83	1.12	1.01	0.85	0.89
Pacific	1.47	1.14	1.81	1.52	2.71
U.S. Total	0.93	1.21	1.06	0.62	1.16
Ring-necked duck					
Atlantic	2.27	1.33	2.03	1.33	1.56
Mississippi	2.09	2.47	1.93	1.69	1.47
Central	1.14	1.57	1.48	0.97	1.19
Pacific	2.17	1.27	2.38	1.54	2.93
U.S. Total	1.97	1.74	1.92	1.39	1.55
Common goldeneye					
Atlantic	0.70	0.72	0.61	0.82	0.89
Mississippi	1.44	1.00	0.83	0.92	1.51
Central	1.71	1.75	0.81	0.77	0.95
Pacific	1.46	1.46	0.56	0.94	1.26
U.S. Total	1.37	1.04	0.69	0.90	1.25
Bufflehead					
Atlantic	1.01	1.24	0.89	1.10	1.04
Mississippi	0.99	0.92	0.96	1.16	1.14
Central	1.18	0.81	0.70	0.87	0.95
Pacific	1.18	0.62	1.44	1.26	1.34
U.S. Total	1.06	0.98	0.97	1.11	1.10
Ruddy duck					
Atlantic	2.27	1.34	0.77	0.67	2.99
Mississippi	---	1.81	1.66	5.23	5.00
Central	0.92	3.24	1.42	1.48	3.25
Pacific	1.28	3.21	1.23	2.42	2.48
U.S. Total	1.56	1.95	1.12	1.45	3.56
Hooded merganser					
Atlantic	0.73	1.03	0.78	0.87	1.07
Mississippi	1.76	1.35	0.98	1.04	1.38
Central	0.86	0.61	0.51	1.09	0.43
Pacific	1.98	1.38	1.18	0.88	1.94
U.S. Total	1.20	1.12	0.87	0.96	1.24

Table 9 (continued). Preliminary weighted age ratios of ducks harvested during the 2015-2019 hunting seasons, by species and flyway.

Species and Flyway	Immatures per adult ^{a, b}				
	2015	2016	2017	2018	2019
Common merganser					
Atlantic	1.88	1.59	0.88	1.46	1.22
Mississippi	---	---	0.52	---	1.34
Central	---	---	---	---	---
Pacific	0.63	0.79	1.11	0.73	1.12
U.S. Total	1.10	1.11	0.78	0.85	1.19
Red-breasted merganser					
Atlantic	0.92	1.28	1.06	0.45	1.10
Mississippi	0.41	1.09	0.71	1.33	---
U.S. Total	0.57	1.15	0.96	0.70	0.79
Long-tailed duck					
Atlantic	0.16	0.59	0.70	0.41	0.30
Mississippi	0.27	0.52	1.62	1.13	1.64
U.S. Total	0.20	0.61	0.87	0.48	0.46
Common eider					
Atlantic	0.08	0.39	0.22	0.69	0.29
U.S. Total	0.08	0.39	0.22	0.69	0.31
Black scoter					
Atlantic	0.72	0.82	1.11	0.29	0.25
U.S. Total	0.71	0.89	1.05	0.31	0.26
White-winged scoter					
Atlantic	0.37	2.26	2.40	---	0.60
Pacific	---	---	---	9.35	---
U.S. Total	0.94	3.29	2.44	2.97	0.87
Surf scoter					
Atlantic	0.47	0.47	0.46	0.17	0.71
Pacific	0.67	1.29	2.05	0.78	0.50
U.S. Total	0.56	0.66	0.44	0.20	0.68

^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 2015-2019 hunting seasons as determined from Waterfowl Parts Collection Survey.

State and Flyway	Males per female ^a				
	2015	2016	2017	2018	2019
Connecticut	2.4	1.9	2.2	2.2	1.4
Delaware	2.0	1.3	1.8	1.9	1.0
Florida	---	---	---	---	---
Georgia	1.7	1.1	---	---	1.4
Maine	1.6	1.5	1.6	2.0	2.4
Maryland	2.5	1.8	2.3	1.9	1.8
Massachusetts	2.6	1.7	2.1	2.1	2.1
New Hampshire	1.1	1.4	1.7	1.4	1.5
New Jersey	2.1	2.9	1.9	2.0	1.6
New York	1.7	2.1	2.1	2.3	2.1
North Carolina	2.2	1.7	1.9	2.2	2.1
Pennsylvania	2.0	2.1	2.0	2.1	1.9
Rhode Island	2.0	2.3	2.0	1.3	2.1
South Carolina	1.7	1.5	1.2	2.1	1.7
Vermont	1.1	2.0	2.0	2.2	1.6
Virginia	2.0	1.9	1.9	2.0	2.0
West Virginia	2.5	2.5	2.7	2.3	2.8
Atlantic Flyway Total ^b	1.95	1.83	1.98	2.06	1.85
Alabama	1.9	1.5	2.2	3.7	2.4
Arkansas	2.8	2.9	3.1	3.6	3.9
Illinois	2.7	2.5	1.9	2.2	2.2
Indiana	2.7	2.7	2.2	1.8	2.3
Iowa	2.8	2.3	1.9	2.4	2.5
Kentucky	3.0	2.9	3.0	2.1	2.2
Louisiana	2.5	2.2	2.2	3.4	4.5
Michigan	1.5	1.4	1.6	1.6	1.8
Minnesota	1.5	1.2	1.9	1.6	1.5
Mississippi	4.3	2.7	3.6	4.9	3.5
Missouri	3.4	3.1	3.2	3.2	4.0
Ohio	2.5	2.4	2.8	2.4	2.0
Tennessee	2.6	2.6	3.2	2.0	3.0
Wisconsin	1.6	2.2	1.8	2.0	2.2
Mississippi Flyway Total ^b	2.47	2.38	2.47	2.59	2.82

Table 10 (continued). Preliminary weighted sex ratios of mallards in state harvests during the 2015-2019 hunting seasons as determined from Waterfowl Parts Collection Survey.

State and Flyway	Males per female ^a				
	2015	2016	2017	2018	2019
Colorado	2.4	3.0	3.5	3.9	2.7
Kansas	5.3	6.6	4.4	5.4	6.7
Montana	5.2	7.3	2.7	2.3	4.9
Nebraska	4.9	5.3	4.1	4.5	4.5
New Mexico	3.1	2.2	3.9	1.5	2.2
North Dakota	2.5	2.4	2.4	2.3	2.4
Oklahoma	3.7	3.4	3.1	5.0	4.0
South Dakota	3.5	4.3	4.4	5.8	4.1
Texas	4.1	3.7	4.1	4.1	3.6
Wyoming	5.0	6.6	3.7	3.4	4.5
Central Flyway Total ^b	3.55	3.64	3.29	3.58	3.65
Arizona	1.7	1.2	2.0	2.0	2.2
California	1.9	2.1	2.4	2.6	2.6
Colorado	1.7	---	2.3	1.7	1.9
Idaho	2.9	2.7	2.9	3.2	2.8
Montana	3.4	4.2	3.1	2.5	3.8
Nevada	1.5	1.7	1.5	1.7	1.6
New Mexico	---	5.3	---	---	1.8
Oregon	2.8	2.3	1.9	1.9	2.1
Utah	2.3	2.6	2.6	2.3	2.1
Washington	2.7	2.4	3.2	2.7	2.3
Wyoming	2.0	1.3	2.9	2.4	1.8
Pacific Flyway Total ^b	2.60	2.50	2.53	2.56	2.44
Alaska	1.4	1.4	1.5	1.6	1.4
U.S. Total ^b	2.63	2.52	2.55	2.68	2.74

^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 2015-2019 hunting seasons, by species and flyway.

Species and Flyway	Males per female ^a				
	2015	2016	2017	2018	2019
Mallard					
Atlantic	1.95	1.83	1.98	2.06	1.85
Mississippi	2.47	2.38	2.47	2.59	2.82
Central	3.55	3.64	3.29	3.58	3.65
Pacific	2.60	2.50	2.53	2.56	2.44
U.S. Total	2.63	2.52	2.55	2.68	2.74
Black duck					
Atlantic	1.11	1.05	1.12	1.04	1.01
Mississippi	1.21	0.59	1.06	1.15	0.71
U.S. Total	1.14	0.89	1.11	1.05	0.93
Mottled duck					
Atlantic	0.95	1.12	1.17	1.32	0.70
Mississippi	0.53	1.72	1.30	0.90	1.25
Central	0.99	1.70	1.30	---	1.64
U.S. Total	0.74	1.47	1.25	1.10	1.04
Gadwall					
Atlantic	1.61	2.23	1.65	2.31	2.30
Mississippi	1.87	1.76	1.96	1.70	1.81
Central	1.48	1.71	1.79	1.73	1.65
Pacific	1.62	1.63	1.73	1.67	1.70
U.S. Total	1.69	1.76	1.86	1.74	1.76
American wigeon					
Atlantic	1.96	2.11	1.78	1.71	2.58
Mississippi	1.41	1.67	1.41	1.36	1.24
Central	1.79	1.70	1.58	1.80	1.82
Pacific	1.52	1.66	1.56	1.54	1.55
U.S. Total	1.57	1.69	1.54	1.56	1.57
Green-winged teal					
Atlantic	1.55	1.35	1.45	1.27	1.21
Mississippi	1.78	1.90	1.80	1.89	1.88
Central	2.06	1.87	1.94	1.72	1.87
Pacific	1.85	1.76	1.92	1.82	1.91
U.S. Total	1.83	1.80	1.83	1.76	1.83
Blue-winged/Cinnamon teal					
Atlantic	1.15	1.71	1.44	1.40	1.31
Mississippi	1.39	1.06	1.20	1.30	1.40
Central	1.28	1.68	1.66	1.55	1.37
Pacific	1.20	1.83	1.30	0.97	1.41
U.S. Total	1.32	1.43	1.38	1.39	1.38

Table 11 (continued). Preliminary weighted sex ratios of ducks harvested during the 2015-2019 hunting seasons, by species and flyway.

Species and Flyway	Males per female ^a				
	2015	2016	2017	2018	2019
Northern shoveler					
Atlantic	1.86	1.20	1.56	1.33	1.40
Mississippi	1.70	1.62	1.85	1.92	1.68
Central	1.50	1.50	1.41	1.37	1.31
Pacific	1.70	1.97	1.84	1.76	1.79
U.S. Total	1.67	1.67	1.73	1.69	1.58
Northern pintail					
Atlantic	1.87	1.55	1.45	2.43	2.18
Mississippi	2.35	2.15	1.92	2.40	2.50
Central	2.24	2.49	1.91	2.08	2.05
Pacific	2.93	3.09	2.96	3.06	3.28
U.S. Total	2.58	2.53	2.24	2.66	2.67
Wood duck					
Atlantic	1.97	1.96	1.91	1.95	2.11
Mississippi	1.72	1.91	1.73	2.02	2.00
Central	1.87	2.18	1.88	2.62	2.38
Pacific	1.64	2.06	1.44	1.49	2.41
U.S. Total	1.80	1.95	1.80	2.01	2.08
Redhead					
Atlantic	1.30	1.84	1.65	1.58	1.42
Mississippi	1.38	1.31	1.97	1.85	1.37
Central	1.94	1.52	1.23	1.43	1.60
Pacific	2.15	1.78	1.67	1.72	1.45
U.S. Total	1.64	1.49	1.51	1.62	1.50
Canvasback					
Atlantic	---	0.61	0.78	1.44	---
Mississippi	1.14	1.54	1.84	2.09	1.66
Central	1.19	1.05	1.28	1.33	1.25
Pacific	1.23	1.25	1.15	1.18	1.63
U.S. Total	1.19	1.27	1.36	1.52	1.50
Greater scaup					
Atlantic	0.77	1.12	1.56	1.18	1.24
Mississippi	1.97	1.16	1.24	1.42	1.26
Central	0.73	---	---	---	2.00
Pacific	2.14	1.34	1.74	2.28	1.43
U.S. Total	1.62	1.24	1.51	1.40	1.31

Table 11 (continued). Preliminary weighted sex ratios of ducks harvested during the 2015-2019 hunting seasons, by species and flyway.

Species and Flyway	Males per female ^a				
	2015	2016	2017	2018	2019
Lesser scaup					
Atlantic	2.15	1.78	2.32	4.43	2.00
Mississippi	2.32	2.21	2.23	2.28	1.78
Central	1.79	1.26	2.20	1.74	2.37
Pacific	1.40	1.52	1.20	1.49	1.15
U.S. Total	2.04	1.72	2.13	2.31	1.86
Ring-necked duck					
Atlantic	1.18	1.39	1.45	1.76	1.47
Mississippi	1.86	2.15	2.03	1.70	2.00
Central	2.42	2.31	1.95	1.62	2.24
Pacific	1.47	1.74	1.65	1.27	2.20
U.S. Total	1.61	1.84	1.83	1.64	1.95
Common goldeneye					
Atlantic	0.87	1.32	1.28	0.82	1.52
Mississippi	1.05	1.23	1.25	1.46	1.41
Central	0.87	1.53	1.43	1.88	0.90
Pacific	1.68	1.22	1.79	1.24	2.01
U.S. Total	1.24	1.29	1.44	1.34	1.57
Bufflehead					
Atlantic	1.86	1.22	2.09	1.38	1.81
Mississippi	1.12	1.38	1.46	1.26	1.23
Central	1.25	1.25	1.36	1.61	1.47
Pacific	0.96	1.44	1.31	1.27	1.33
U.S. Total	1.31	1.31	1.61	1.34	1.46
Hooded merganser					
Atlantic	1.64	2.97	2.24	1.54	2.46
Mississippi	2.62	2.06	1.81	1.81	2.21
Central	3.16	2.14	3.27	2.24	---
Pacific	---	---	1.88	1.48	3.16
U.S. Total	2.17	2.37	2.07	1.72	2.37
Common merganser					
Atlantic	0.73	1.10	1.57	1.23	0.75
Mississippi	---	---	0.91	---	0.78
Central	---	---	---	---	---
Pacific	1.75	0.63	0.99	1.16	0.84
U.S. Total	0.65	0.82	1.19	1.04	0.78

^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 2015-2019 hunting seasons, by species and flyway.

Species and Flyway	Immatures per adult ^{a, b}				
	2015	2016	2017	2018	2019
Canada goose					
Atlantic	0.41	0.44	0.50	0.24	0.41
Mississippi	0.47	0.42	0.41	0.32	0.36
Central	0.38	0.44	0.49	0.28	0.35
Pacific	0.47	0.71	0.51	0.39	0.35
U.S. Total	0.43	0.46	0.46	0.30	0.37
Snow goose					
Atlantic	0.77	0.58	1.41	0.05	0.50
Mississippi	0.31	0.38	0.77	0.19	0.46
Central	0.28	0.54	0.56	0.08	0.36
Pacific	0.78	0.77	0.81	0.39	0.87
U.S. Total	0.44	0.55	0.69	0.22	0.56
Blue goose					
Mississippi	0.20	0.40	1.24	0.23	0.20
Central	0.31	0.65	0.79	0.06	0.82
U.S. Total	0.27	0.51	0.98	0.13	0.65
Ross' goose					
Mississippi	---	0.88	1.48	---	1.25
Central	0.61	1.07	0.79	0.11	0.97
Pacific	0.69	0.77	0.86	0.29	0.71
U.S. Total	0.68	0.96	0.96	0.16	0.92
Greater white-fronted goose					
Mississippi	0.78	0.71	0.64	0.24	0.63
Central	0.69	0.39	0.56	0.29	0.56
Pacific	1.05	0.75	0.29	0.44	0.55
U.S. Total	0.83	0.62	0.53	0.31	0.60
Brant					
Atlantic	0.10	0.86	0.35	0.02	0.20
Pacific	0.26	0.55	0.25	1.12	---
U.S. Total	0.20	0.91	0.34	0.07	0.29

^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.

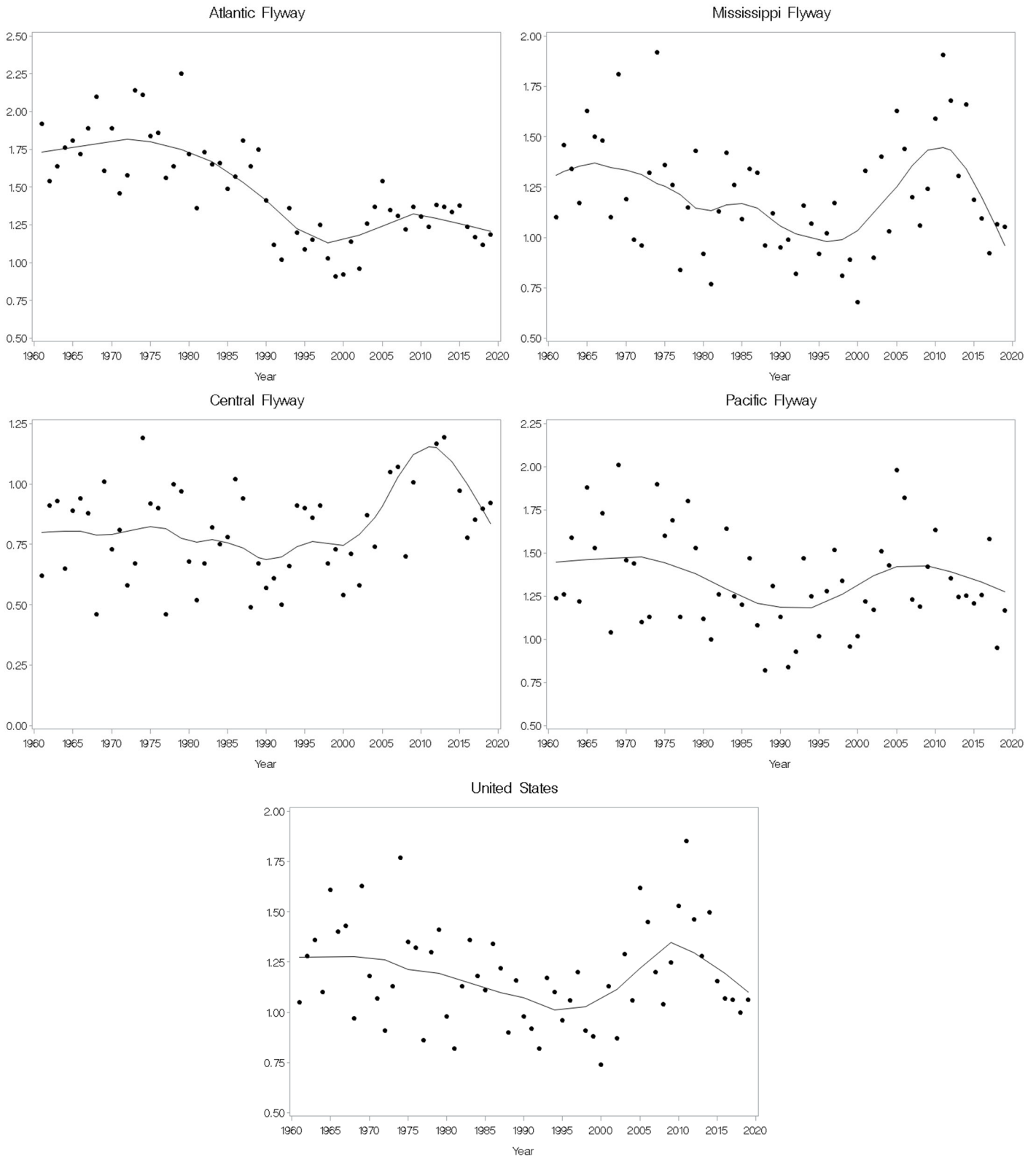


Figure 3. Age ratios of mallards harvested in the United States, 1961-2019.

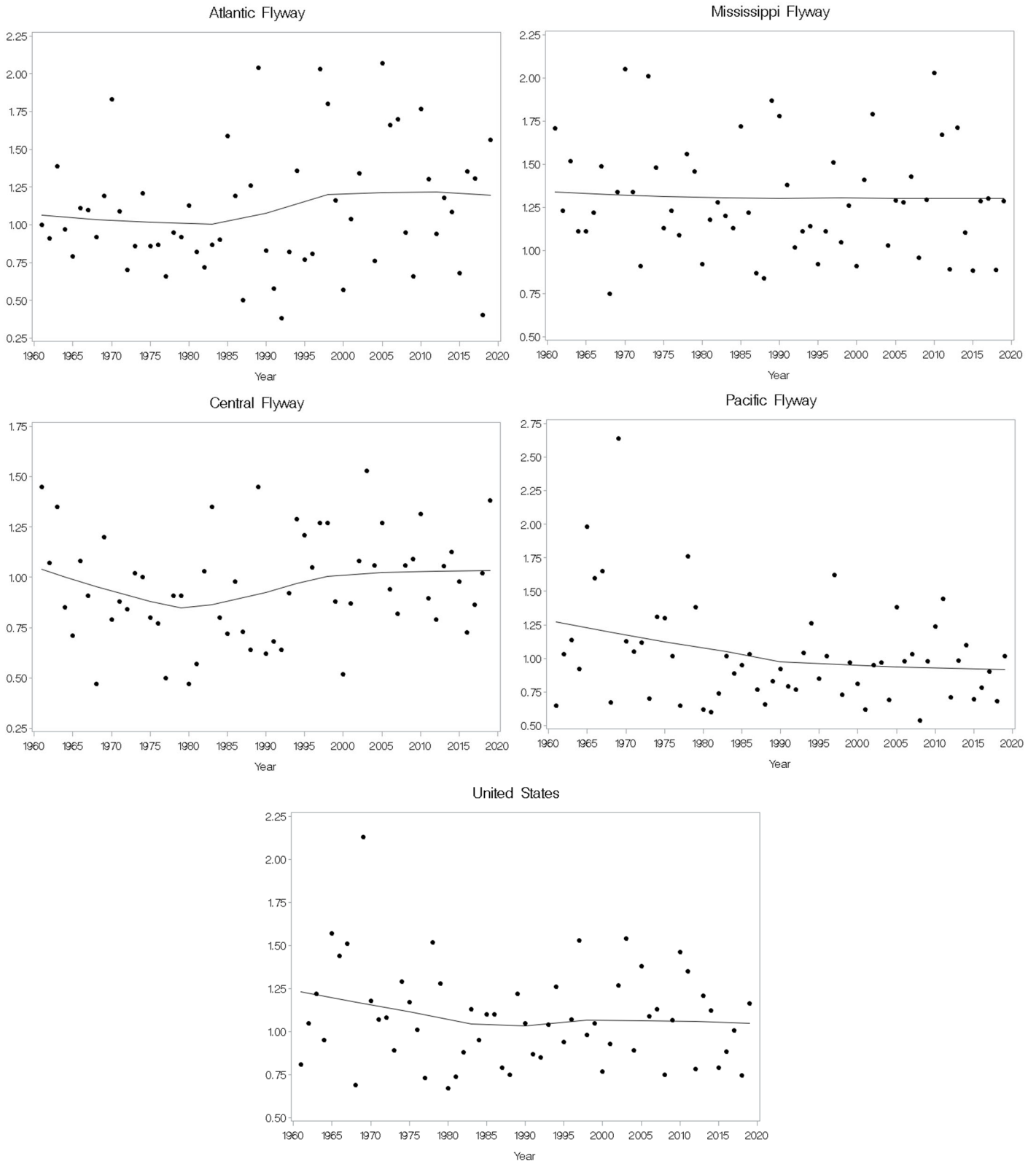


Figure 4. Age ratios of northern pintails harvested in the United States, 1961-2019.

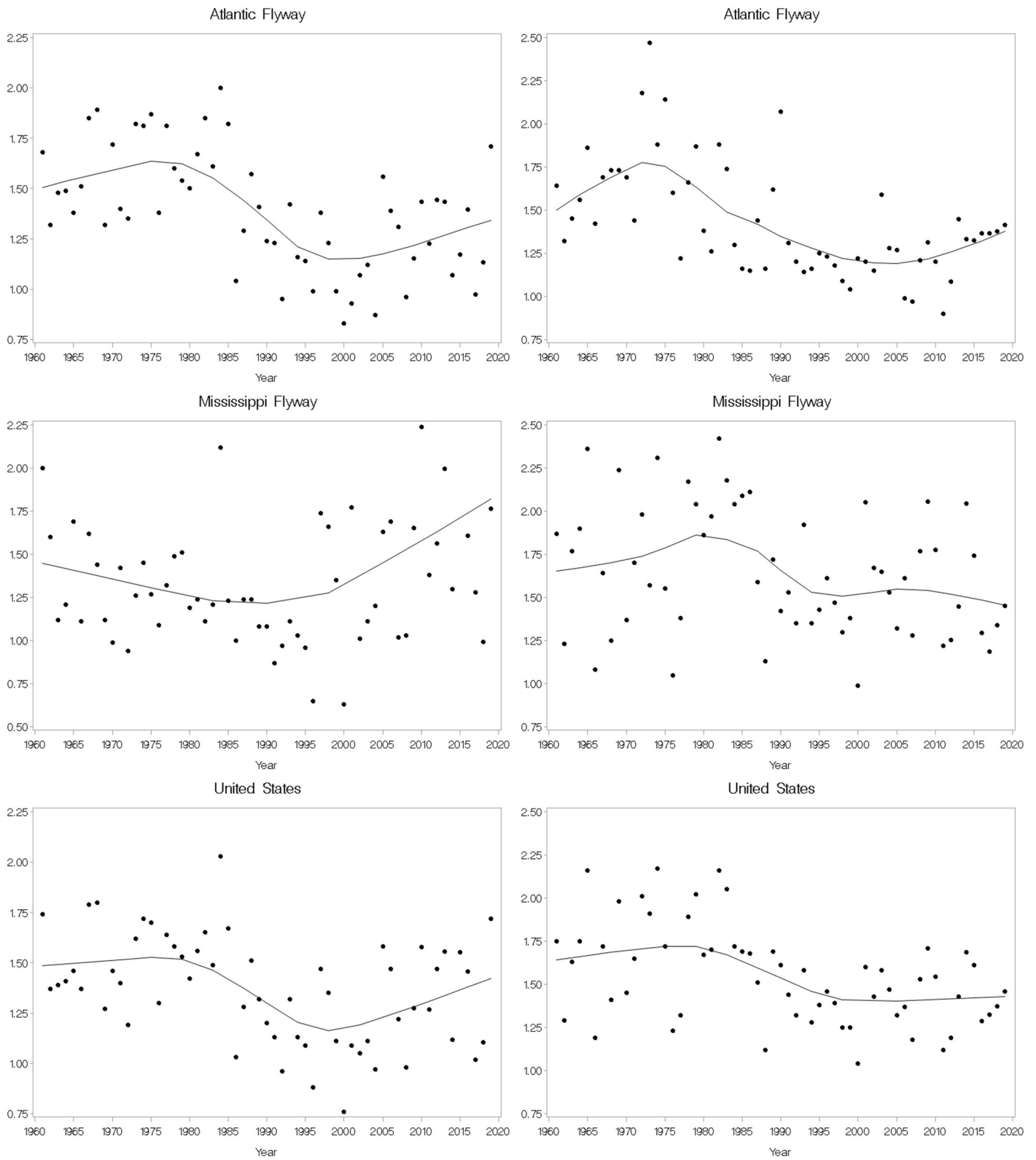


Figure 5. Age ratios of American black ducks (left column) and wood ducks (right column) harvested in the United States, 1961-2019.

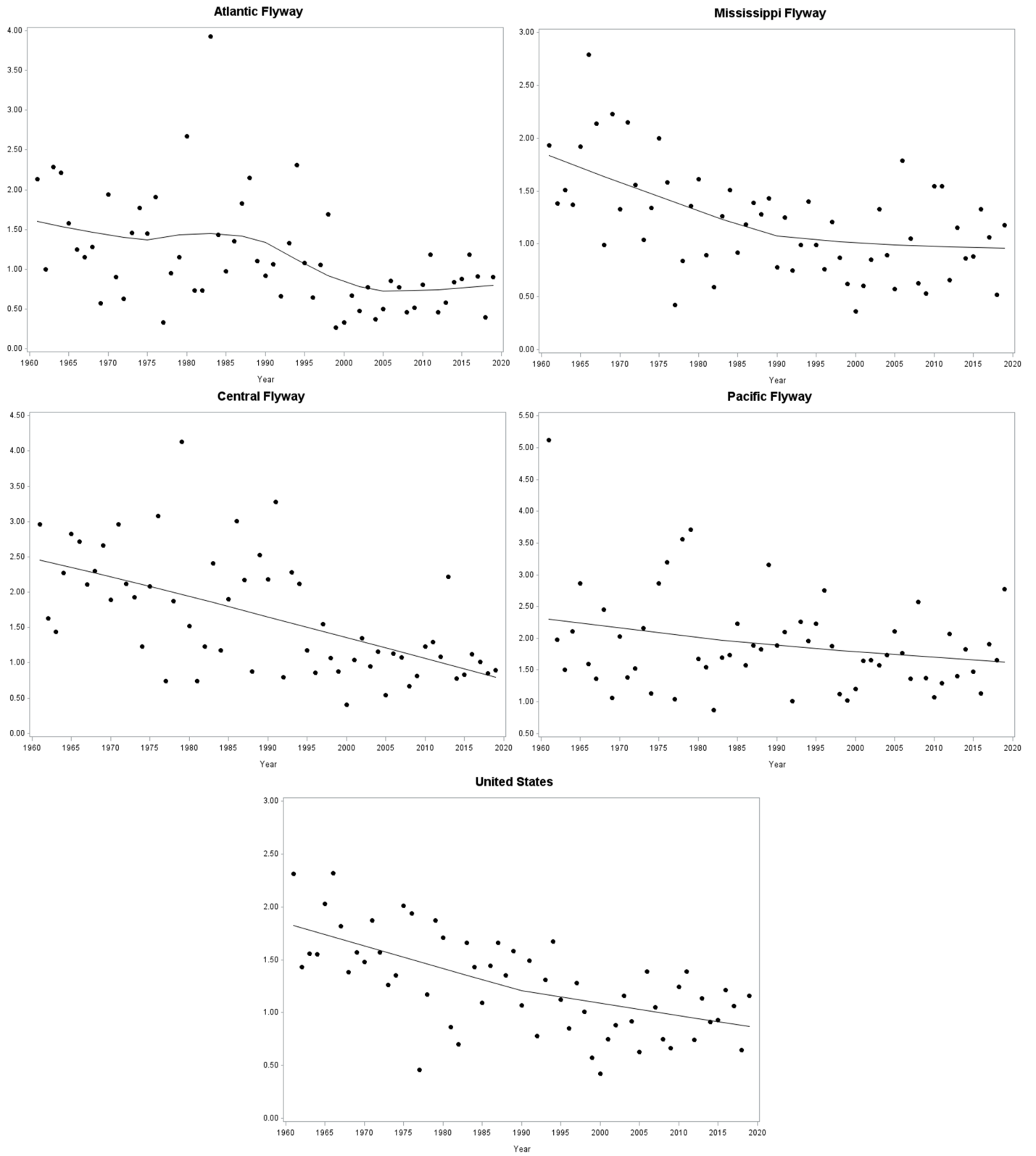


Figure 6. Age ratios of lesser scaup harvested in the United States, 1961-2019.

Table 13. Preliminary estimates of mourning dove harvest and hunter activity during the 2018 and 2019 hunting seasons.¹

	Mourning Dove Harvest		Active Hunters ²		Mourning Dove Days Afield		Seasonal Harvest Per Hunter	
	2018	2019	2018	2019	2018	2019	2018	2019
Alabama	415,700 ± 30%	512,800 ± 23%	30,400 ± 20%	28,600 ± 14%	58,800 ± 26%	61,700 ± 19%	13.7 ± 36%	17.9 ± 26%
Delaware	15,000 ± 73%	20,700 ± 35%	1,100 ± 45%	1,200 ± 28%	2,400 ± 70%	4,000 ± 32%	13.1 ± 86%	17.3 ± 45%
Florida	107,700 ± 46%	113,000 ± 43%	8,800 ± 60%	7,400 ± 42%	18,500 ± 43%	24,200 ± 39%	12.3 ± 76%	15.2 ± 60%
Georgia	679,700 ± 30%	713,600 ± 16%	32,400 ± 19%	33,400 ± 13%	84,800 ± 35%	93,300 ± 15%	21.0 ± 36%	21.3 ± 21%
Illinois	155,000 ± 49%	148,800 ± 29%	11,900 ± 28%	11,300 ± 22%	29,400 ± 43%	25,900 ± 26%	13.0 ± 56%	13.2 ± 36%
Indiana	110,800 ± 56%	112,600 ± 28%	7,400 ± 43%	8,600 ± 27%	15,900 ± 41%	21,100 ± 26%	14.9 ± 71%	13.1 ± 39%
Kentucky	245,400 ± 36%	223,300 ± 13%	15,000 ± 34%	11,200 ± 18%	35,800 ± 51%	32,800 ± 18%	16.3 ± 49%	19.9 ± 22%
Louisiana	133,200 ± 78%	63,800 ± 53%	8,000 ± 59%	6,100 ± 46%	22,000 ± 69%	11,200 ± 43%	16.7 ± 98%	10.5 ± 70%
Maryland	51,500 ± 34%	66,200 ± 27%	5,700 ± 32%	6,200 ± 27%	8,600 ± 28%	18,400 ± 55%	9.0 ± 46%	10.7 ± 38%
Mississippi	273,400 ± 30%	193,400 ± 21%	15,700 ± 21%	12,700 ± 19%	32,800 ± 24%	28,400 ± 24%	17.4 ± 37%	15.2 ± 28%
North Carolina	684,600 ± 64%	336,600 ± 20%	37,200 ± 33%	33,300 ± 22%	94,200 ± 54%	61,000 ± 20%	18.4 ± 72%	10.1 ± 30%
Ohio	169,100 ± 43%	93,000 ± 36%	12,800 ± 33%	10,200 ± 25%	36,300 ± 42%	25,000 ± 27%	13.2 ± 54%	9.1 ± 44%
Pennsylvania	88,900 ± 31%	98,500 ± 36%	9,500 ± 42%	12,200 ± 30%	25,800 ± 34%	75,400 ± 98%	9.4 ± 52%	8.1 ± 47%
Rhode Island	1,700 ± 98%	300 ± 64%	600 ± 63%	100 ± 64%	2,400 ± 89%	300 ± 74%	3.0 ± 116%	2.8 ± 91%
South Carolina	522,300 ± 50%	493,200 ± 32%	28,200 ± 30%	22,400 ± 22%	83,700 ± 37%	60,900 ± 26%	18.5 ± 58%	22.0 ± 39%
Tennessee	276,800 ± 41%	228,700 ± 23%	15,500 ± 38%	17,100 ± 23%	31,600 ± 39%	46,300 ± 40%	17.8 ± 56%	13.4 ± 32%
Virginia	205,200 ± 26%	186,000 ± 16%	16,000 ± 23%	13,600 ± 16%	33,800 ± 21%	33,600 ± 17%	12.8 ± 34%	13.7 ± 23%
West Virginia	13,700 ± 43%	10,900 ± 30%	1,400 ± 34%	1,100 ± 23%	3,800 ± 51%	2,700 ± 27%	9.6 ± 55%	9.5 ± 38%
Wisconsin	18,100 ± 68%	41,400 ± 46%	3,600 ± 56%	5,300 ± 37%	14,100 ± 66%	17,200 ± 52%	5.0 ± 88%	7.8 ± 59%
Eastern Unit Total	4,167,600 ± 15%	3,656,800 ± 7%	261,300	242,200	634,800 ± 12%	643,500 ± 13%		
Arkansas	170,600 ± 51%	328,100 ± 45%	12,400 ± 43%	14,200 ± 30%	24,500 ± 42%	37,500 ± 37%	13.8 ± 67%	23.0 ± 54%
Colorado	121,500 ± 28%	106,300 ± 17%	10,000 ± 23%	10,700 ± 15%	20,200 ± 26%	22,800 ± 17%	12.2 ± 36%	10.0 ± 23%
Iowa	107,800 ± 22%	29,900 ± 31%	9,000 ± 21%	3,600 ± 19%	23,500 ± 26%	11,000 ± 32%	12.0 ± 31%	8.2 ± 36%
Kansas	337,600 ± 44%	389,800 ± 32%	22,900 ± 35%	22,300 ± 17%	44,300 ± 34%	64,800 ± 26%	14.8 ± 56%	17.5 ± 36%
Minnesota	55,300 ± 50%	40,200 ± 58%	7,100 ± 69%	3,900 ± 69%	16,900 ± 64%	9,400 ± 49%	7.8 ± 85%	10.4 ± 90%
Missouri	309,400 ± 24%	268,000 ± 21%	26,000 ± 17%	21,100 ± 14%	48,300 ± 18%	47,100 ± 16%	11.9 ± 29%	12.7 ± 25%
Montana	9,800 ± 45%	16,600 ± 55%	1,200 ± 59%	1,600 ± 43%	3,500 ± 64%	3,600 ± 43%	8.0 ± 74%	10.1 ± 70%
Nebraska	189,100 ± 35%	137,700 ± 20%	11,600 ± 22%	10,700 ± 19%	33,700 ± 29%	24,500 ± 20%	16.3 ± 41%	12.8 ± 27%
New Mexico	126,900 ± 31%	125,400 ± 34%	9,900 ± 19%	8,300 ± 16%	28,200 ± 24%	28,800 ± 28%	12.8 ± 37%	15.0 ± 38%

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 2018 and 2019 hunting seasons.¹

	Mourning Dove Harvest		Active Hunters ²		Mourning Dove Days Afield		Seasonal Harvest Per Hunter	
	2018	2019	2018	2019	2018	2019	2018	2019
North Dakota	65,200 ± 45%	75,000 ± 51%	3,900 ± 32%	4,100 ± 26%	11,800 ± 47%	11,900 ± 34%	16.7 ± 55%	18.5 ± 57%
Oklahoma	181,300 ± 33%	247,900 ± 21%	13,600 ± 31%	14,800 ± 16%	29,200 ± 31%	38,000 ± 22%	13.4 ± 45%	16.7 ± 26%
South Dakota	69,400 ± 30%	103,300 ± 36%	4,900 ± 25%	4,700 ± 24%	11,500 ± 27%	15,500 ± 34%	14.1 ± 39%	22.0 ± 44%
Texas	2,990,400 ± 17%	3,385,000 ± 18%	199,100 ± 18%	216,300 ± 12%	553,200 ± 18%	669,000 ± 14%	15.0 ± 25%	15.7 ± 22%
Wyoming	14,800 ± 41%	13,200 ± 32%	1,400 ± 37%	1,300 ± 30%	3,200 ± 42%	2,800 ± 36%	10.8 ± 55%	10.5 ± 44%
Central Unit Total	4,749,100 ± 12%	5,266,400 ± 12%	332,900	337,700	852,100 ± 12%	986,800 ± 10%		
Arizona	352,700 ± 12%	235,400 ± 13%	19,000 ± 6%	13,100 ± 7%	55,100 ± 9%	36,500 ± 11%	18.6 ± 13%	17.9 ± 15%
California	892,600 ± 15%	641,600 ± 11%	52,500 ± 12%	44,500 ± 9%	129,400 ± 15%	112,000 ± 12%	17.0 ± 19%	14.4 ± 15%
Idaho	88,800 ± 61%	48,600 ± 63%	11,300 ± 40%	6,700 ± 43%	24,100 ± 51%	13,400 ± 48%	7.8 ± 72%	7.2 ± 77%
Nevada	21,400 ± 56%	25,300 ± 65%	2,700 ± 34%	3,000 ± 30%	6,200 ± 45%	6,200 ± 38%	7.9 ± 66%	8.5 ± 72%
Oregon	13,200 ± 58%	24,200 ± 64%	2,500 ± 47%	3,300 ± 37%	18,300 ± 136%	8,400 ± 41%	5.3 ± 75%	7.3 ± 73%
Utah	25,300 ± 37%	38,700 ± 32%	6,400 ± 27%	7,600 ± 20%	12,400 ± 41%	17,600 ± 28%	4.0 ± 46%	5.1 ± 38%
Washington	63,700 ± 32%	46,400 ± 30%	5,800 ± 25%	4,800 ± 20%	14,200 ± 31%	13,100 ± 31%	11.1 ± 40%	9.7 ± 36%
Western Unit Total	1,457,700 ± 10%	1,060,200 ± 8%	100,100	83,000	259,800 ± 14%	207,200 ± 8%		
United States Total	10,374,500 ± 8%	9,983,500 ± 7%	694,300	662,900	1,746,700 ± 8%	1,837,400 ± 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 2018 and 2019 hunting seasons.¹

	White-winged Dove Harvest		Active Hunters ²		White-winged Dove Days Afield		Seasonal Harvest Per Hunter	
	2018	2019	2018	2019	2018	2019	2018	2019
Alabama	3,900 ± 112%	3,300 ± 101%	1,400 ± 104%	1,200 ± 74%	1,800 ± 106%	1,400 ± 77%	2.7 ± 153%	2.7 ± 125%
Delaware	0	0	0	0	0	0	0	0
Florida	9,400 ± 175%	17,900 ± 170%	2,300 ± 135%	1,400 ± 106%	4,300 ± 90%	6,600 ± 112%	4.1 ± 221%	13.1 ± 201%
Georgia	200 ± 195%	2,900 ± 137%	200 ± 195%	1,000 ± 116%	2,500 ± 195%	4,400 ± 109%	1.0 ± 276%	3.0 ± 179%
Louisiana	8,800 ± 85%	1,000 ± 167%	2,000 ± 123%	300 ± 98%	3,600 ± 91%	800 ± 104%	4.5 ± 150%	3.6 ± 194%
Maryland	0	0	0	0	0	0	0	0
Mississippi	1,100 ± 136%	2,500 ± 135%	200 ± 136%	600 ± 110%	300 ± 144%	1,100 ± 97%	5.0 ± 192%	4.2 ± 174%
North Carolina	0	0	900 ± 115%	300 ± 138%	1,700 ± 117%	400 ± 145%	0	0
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	23,400 ± 80%	27,600 ± 113%	7,000	4,700	14,100 ± 53%	14,800 ± 61%		
Colorado	2,900 ± 140%	1,000 ± 69%	800 ± 59%	900 ± 52%	2,500 ± 108%	2,500 ± 65%	3.8 ± 152%	1.1 ± 87%
Kansas	400 ± 188%	1,900 ± 168%	200 ± 195%	1,200 ± 97%	200 ± 188%	3,700 ± 106%	2.2 ± 271%	1.5 ± 194%
New Mexico	44,900 ± 40%	45,000 ± 37%	6,200 ± 26%	4,700 ± 23%	18,300 ± 33%	13,800 ± 25%	7.2 ± 48%	9.7 ± 43%
Oklahoma	7,800 ± 157%	5,700 ± 57%	1,200 ± 128%	1,800 ± 53%	2,400 ± 99%	7,900 ± 82%	6.3 ± 203%	3.2 ± 78%
Texas	1,481,200 ± 33%	1,574,600 ± 29%	130,500 ± 26%	125,900 ± 17%	374,900 ± 24%	426,500 ± 23%	11.4 ± 42%	12.5 ± 34%
Central Unit Total	1,537,300 ± 32%	1,628,100 ± 28%	138,900	134,400	398,400 ± 23%	454,500 ± 22%		
Arizona	71,900 ± 16%	52,500 ± 16%	11,000 ± 9%	8,200 ± 10%	29,900 ± 12%	22,400 ± 15%	6.5 ± 19%	6.4 ± 19%
California	38,600 ± 53%	38,600 ± 32%	11,300 ± 31%	9,200 ± 24%	24,100 ± 40%	20,900 ± 27%	3.4 ± 62%	4.2 ± 40%
Nevada	<50 ± 191%	1,200 ± 116%	300 ± 119%	500 ± 80%	1,000 ± 165%	1,000 ± 85%	0.1 ± 225%	2.4 ± 141%
Utah	200 ± 137%	100 ± 135%	1,000 ± 82%	900 ± 72%	1,600 ± 84%	1,600 ± 74%	0.2 ± 160%	0.1 ± 153%
Western Unit Total	110,800 ± 21%	92,400 ± 16%	23,600	18,900	56,600 ± 18%	45,800 ± 15%		
United States Total	1,671,500 ± 30%	1,748,000 ± 26%	169,500	158,000	469,000 ± 19%	515,100 ± 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 15. Preliminary estimates of band-tailed pigeon harvest and hunter activity during the 2018 and 2019 hunting seasons.¹

	<u>Band-tailed Pigeon Harvest</u>		<u>Active Hunters ²</u>		<u>Band-tailed Pigeon Days Afield</u>		<u>Seasonal Harvest Per Hunter</u>	
	2018	2019	2018	2019	2018	2019	2018	2019
Arizona	100 ± 110%	500 ± 109%	100 ± 49%	500 ± 70%	600 ± 60%	1,800 ± 87%	0.9 ± 120%	1.0 ± 130%
Colorado	-- ³	<50 ± 69%	-- ³	<50 ± 36%	-- ³	100 ± 46%	-- ³	0.5 ± 78%
New Mexico	100 ± 94%	100 ± 108%	100 ± 36%	100 ± 29%	200 ± 43%	200 ± 42%	0.6 ± 101%	0.8 ± 112%
Utah	<50 ± 156%	<50 ± 87%	<50 ± 57%	<50 ± 36%	100 ± 82%	100 ± 67%	0.6 ± 166%	1.4 ± 94%
Interior Total	200 ± 77%	600 ± 90%	300	600	800 ± 42%	2,100 ± 73%		
California	9,000 ± 70%	8,400 ± 65%	2,400 ± 65%	2,600 ± 47%	6,400 ± 66%	9,300 ± 90%	3.8 ± 95%	3.2 ± 80%
Oregon	1,200 ± 44%	1,100 ± 33%	300 ± 21%	400 ± 17%	1,000 ± 34%	1,100 ± 23%	3.4 ± 49%	2.4 ± 37%
Washington	1,500 ± 154%	200 ± 44%	500 ± 80%	100 ± 30%	1,500 ± 95%	300 ± 38%	3.1 ± 173%	2.1 ± 53%
Pacific Coast Total	11,600 ± 57%	9,700 ± 57%	3,200	3,200	8,900 ± 50%	10,700 ± 78%		
United States Total	11,800 ± 57%	10,300 ± 54%	3,400	3,800	9,800 ± 46%	12,800 ± 67%		

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.

³We were unable to conduct a survey of band-tailed pigeon permit hunters in CO in 2018, and no band-tailed pigeons were reported in the dove survey.

Table 16. Preliminary estimates of American woodcock harvest and hunter activity during the 2018 and 2019 hunting seasons.¹

	Woodcock Harvest		Active Woodcock Hunters ²		Woodcock Hunter Days Afield		Seasonal Harvest Per Hunter	
	2018	2019	2018	2019	2018	2019	2018	2019
Connecticut	900 ± 59%	1,200 ± 50%	600 ± 46%	800 ± 41%	2,100 ± 45%	4,700 ± 66%	1.4 ± 75%	1.6 ± 65%
Delaware	100 ± 82%	100 ± 103%	100 ± 156%	<50 ± 78%	500 ± 140%	100 ± 96%	0.6 ± 176%	2.5 ± 129%
Florida	200 ± 195%	0	100 ± 195%	100 ± 195%	300 ± 195%	800 ± 195%	3.0 ± 275%	0
Georgia	4,100 ± 121%	1,800 ± 169%	4,400 ± 129%	4,800 ± 110%	8,000 ± 118%	6,500 ± 115%	0.9 ± 177%	0.4 ± 202%
Maine	9,700 ± 28%	6,200 ± 17%	3,800 ± 47%	3,300 ± 37%	17,200 ± 37%	15,300 ± 34%	2.5 ± 55%	1.9 ± 41%
Maryland	1,500 ± 171%	300 ± 81%	800 ± 170%	200 ± 45%	900 ± 145%	500 ± 53%	2.0 ± 241%	1.4 ± 93%
Massachusetts	3,500 ± 54%	2,200 ± 33%	1,400 ± 36%	1,500 ± 28%	8,100 ± 45%	7,900 ± 32%	2.5 ± 65%	1.5 ± 43%
New Hampshire	5,400 ± 41%	3,200 ± 34%	2,000 ± 34%	1,800 ± 41%	8,500 ± 28%	8,000 ± 31%	2.7 ± 53%	1.8 ± 54%
New Jersey	2,900 ± 75%	1,400 ± 66%	900 ± 69%	1,100 ± 78%	2,900 ± 61%	2,700 ± 63%	3.2 ± 102%	1.3 ± 102%
New York	5,100 ± 65%	6,500 ± 60%	3,400 ± 60%	2,800 ± 42%	17,200 ± 102%	16,900 ± 56%	1.5 ± 88%	2.3 ± 73%
North Carolina	6,000 ± 119%	3,400 ± 196%	3,400 ± 160%	2,300 ± 176%	13,700 ± 160%	14,500 ± 169%	1.8 ± 199%	1.5 ± 263%
Pennsylvania	4,000 ± 81%	2,700 ± 45%	1,500 ± 46%	4,100 ± 44%	6,300 ± 73%	12,000 ± 45%	2.7 ± 93%	0.7 ± 63%
Rhode Island	200 ± 81%	200 ± 76%	100 ± 104%	100 ± 88%	700 ± 86%	800 ± 54%	1.5 ± 132%	1.3 ± 116%
South Carolina	1,200 ± 73%	1,300 ± 52%	1,900 ± 168%	200 ± 28%	2,800 ± 117%	1,200 ± 39%	0.7 ± 183%	5.5 ± 59%
Vermont	2,200 ± 42%	2,900 ± 45%	900 ± 22%	1,200 ± 46%	4,300 ± 25%	5,200 ± 42%	2.5 ± 48%	2.3 ± 64%
Virginia	2,200 ± 59%	1,500 ± 64%	2,700 ± 83%	800 ± 125%	5,300 ± 75%	3,300 ± 99%	0.8 ± 102%	1.8 ± 141%
West Virginia	300 ± 47%	400 ± 54%	100 ± 28%	300 ± 72%	400 ± 41%	700 ± 46%	2.7 ± 55%	1.3 ± 90%
Eastern Region Total	49,600 ± 23%	35,300 ± 25%	28,300	25,400	99,200 ± 32%	101,200 ± 29%		
Alabama	200 ± 134%	1,000 ± 186%	200 ± 64%	100 ± 133%	500 ± 81%	300 ± 175%	1.3 ± 148%	15.5 ± 229%
Arkansas	10,100 ± 183%	6,800 ± 181%	2,500 ± 187%	7,000 ± 130%	7,700 ± 180%	14,400 ± 115%	4.1 ± 262%	1.0 ± 223%
Illinois	0	3,400 ± 195%	<50 ± 194%	2,300 ± 136%	100 ± 194%	11,300 ± 160%	0	1.5 ± 237%
Indiana	200 ± 136%	400 ± 56%	100 ± 78%	500 ± 112%	200 ± 92%	1,100 ± 85%	1.8 ± 157%	0.8 ± 126%
Iowa	0	1,600 ± 151%	0	600 ± 105%	0	4,500 ± 112%	0	2.7 ± 184%
Kansas	100 ± 192%	0	100 ± 0%	0	200 ± 0%	0	1.5 ± 192%	0
Kentucky	300 ± 107%	100 ± 162%	100 ± 77%	100 ± 49%	300 ± 99%	200 ± 59%	3.8 ± 132%	0.8 ± 169%
Louisiana	10,600 ± 112%	1,500 ± 151%	5,200 ± 84%	1,300 ± 168%	11,100 ± 94%	6,000 ± 181%	2.0 ± 140%	1.2 ± 226%
Michigan	59,600 ± 34%	64,500 ± 46%	29,300 ± 25%	19,100 ± 24%	135,800 ± 46%	86,100 ± 29%	2.0 ± 42%	3.4 ± 52%
Minnesota	22,500 ± 34%	20,800 ± 42%	10,400 ± 39%	8,700 ± 43%	41,500 ± 46%	29,300 ± 38%	2.2 ± 52%	2.4 ± 60%
Mississippi	400 ± 121%	100 ± 106%	100 ± 92%	100 ± 90%	400 ± 117%	300 ± 93%	4.3 ± 152%	0.8 ± 139%

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 2018 and 2019 hunting seasons.¹

	Woodcock Harvest		Active Woodcock Hunters ²		Woodcock Hunter Days Afield		Seasonal Harvest Per Hunter	
	2018	2019	2018	2019	2018	2019	2018	2019
Missouri	200 ± 130%	300 ± 74%	100 ± 130%	100 ± 44%	200 ± 161%	800 ± 59%	2.0 ± 184%	2.3 ± 86%
Nebraska	0	0	0	0	0	0	0	0
Ohio	600 ± 123%	700 ± 95%	500 ± 49%	1,100 ± 154%	800 ± 71%	2,400 ± 84%	1.3 ± 133%	0.7 ± 181%
Oklahoma	100 ± 193%	300 ± 168%	<50 ± 193%	100 ± 80%	600 ± 193%	400 ± 101%	3.0 ± 272%	3.4 ± 186%
Tennessee	300 ± 158%	5,000 ± 187%	200 ± 104%	1,600 ± 192%	600 ± 105%	11,300 ± 194%	1.7 ± 189%	3.1 ± 268%
Texas	0	2,800 ± 115%	0	300 ± 92%	0	1,300 ± 115%	0	10.7 ± 148%
Wisconsin	25,500 ± 33%	26,800 ± 39%	10,800 ± 37%	9,500 ± 35%	45,900 ± 40%	47,000 ± 39%	2.4 ± 50%	2.8 ± 52%
Central Region Total	130,600 ± 25%	136,000 ± 27%	59,500	52,600	246,000 ± 29%	216,600 ± 22%		
United States Total	180,200 ± 19%	171,300 ± 22%	87,800	78,000	345,100 ± 22%	317,800 ± 18%		

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 2018 and 2019 hunting seasons.¹

	Snipe Harvest		Active Snipe Hunters ²		Snipe Hunter Days Afield		Seasonal Harvest Per Hunter	
	2018	2019	2018	2019	2018	2019	2018	2019
Connecticut	100 ± 187%	100 ± 167%	<50 ± 187%	100 ± 133%	<50 ± 187%	300 ± 135%	5.0 ± 264%	0.6 ± 213%
Delaware	0	0	0	0	0	0	0	0
Florida	18,900 ± 108%	48,000 ± 102%	1,600 ± 65%	3,700 ± 77%	6,700 ± 84%	12,500 ± 95%	11.7 ± 126%	13.1 ± 128%
Georgia	0	500 ± 194%	0	100 ± 135%	0	500 ± 178%	0	6.0 ± 236%
Maine	0	0	1,700 ± 182%	500 ± 186%	5,000 ± 184%	1,500 ± 186%	0	0
Maryland	0	<50 ± 191%	0	<50 ± 191%	0	<50 ± 191%	0	1.0 ± 270%
Massachusetts	0	<50 ± 163%	0	100 ± 172%	0	100 ± 172%	0	0.1 ± 237%
New Hampshire	0	100 ± 153%	0	200 ± 130%	0	400 ± 137%	0	0.6 ± 201%
New Jersey	800 ± 139%	0	200 ± 176%	0	1,400 ± 169%	0	4.4 ± 224%	0
New York	0	100 ± 193%	100 ± 195%	100 ± 135%	100 ± 195%	100 ± 138%	0	1.5 ± 235%
North Carolina	50,100 ± 196%	0	1,100 ± 196%	0	7,600 ± 196%	0	46.0 ± 277%	0
Pennsylvania	0	0	100 ± 131%	<50 ± 191%	100 ± 156%	100 ± 191%	0	0
Rhode Island	0	<50 ± 176%	0	<50 ± 176%	0	0	0	4.0 ± 249%
South Carolina	600 ± 145%	1,500 ± 168%	100 ± 129%	1,300 ± 134%	100 ± 129%	2,000 ± 141%	5.5 ± 195%	1.1 ± 215%
Vermont	200 ± 119%	<50 ± 186%	<50 ± 117%	<50 ± 186%	200 ± 133%	<50 ± 186%	7.0 ± 166%	1.0 ± 263%
Virginia	0	0	0	0	0	0	0	0
West Virginia	<50 ± 189%	0	<50 ± 189%	0	100 ± 189%	0	1.0 ± 268%	0
Atlantic Flyway Total	70,800 ± 142%	50,300 ± 98%	4,900	6,000	21,500 ± 87%	17,600 ± 72%		
Alabama	700 ± 195%	0	300 ± 113%	0	4,700 ± 168%	0	2.0 ± 226%	0
Arkansas	0	0	2,800 ± 196%	0	2,800 ± 196%	0	0	0
Illinois	0	0	0	0	0	0	0	0
Indiana	100 ± 98%	100 ± 73%	1,000 ± 182%	600 ± 178%	12,900 ± 193%	1,800 ± 166%	0.1 ± 206%	0.1 ± 192%
Iowa	<50 ± 132%	4,700 ± 110%	<50 ± 93%	900 ± 100%	100 ± 99%	2,000 ± 111%	0.5 ± 162%	5.3 ± 148%
Kentucky	0	0	0	0	0	0	0	0
Louisiana	0	13,300 ± 147%	0	1,200 ± 119%	0	3,900 ± 119%	0	10.7 ± 189%
Michigan	4,800 ± 196%	3,100 ± 157%	4,800 ± 196%	1,400 ± 168%	19,200 ± 196%	7,700 ± 183%	1.0 ± 277%	2.2 ± 230%
Minnesota	900 ± 140%	700 ± 196%	1,500 ± 154%	700 ± 196%	2,300 ± 119%	2,800 ± 196%	0.6 ± 208%	1.0 ± 277%
Mississippi	0	0	0	100 ± 195%	0	1,300 ± 195%	0	0
Missouri	0	2,000 ± 142%	0	700 ± 175%	0	1,300 ± 138%	0	2.9 ± 226%

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 2018 and 2019 hunting seasons.¹

	Snipe Harvest		Active Snipe Hunters ²		Snipe Hunter Days Afield		Seasonal Harvest Per Hunter	
	2018	2019	2018	2019	2018	2019	2018	2019
Ohio	0	0	0	0	0	0	0	0
Tennessee	0	0	0	0	0	0	0	0
Wisconsin	2,500 ± 196%	7,300 ± 168%	2,500 ± 196%	4,300 ± 93%	2,500 ± 196%	8,500 ± 110%	1.0 ± 277%	1.7 ± 192%
Mississippi Flyway To	9,000 ± 119%	31,200 ± 78%	13,000	9,900	44,600 ± 104%	29,400 ± 65%		
Colorado	200 ± 195%	800 ± 195%	100 ± 195%	200 ± 134%	200 ± 195%	1,100 ± 177%	2.0 ± 276%	4.0 ± 237%
Kansas	0	0	1,900 ± 196%	400 ± 196%	1,900 ± 196%	400 ± 196%	0	0
Nebraska	0	1,000 ± 122%	0	500 ± 155%	0	700 ± 122%	0	1.9 ± 198%
New Mexico	0	<50 ± 125%	0	<50 ± 100%	0	<50 ± 115%	0	1.7 ± 160%
North Dakota	100 ± 89%	500 ± 169%	1,000 ± 182%	500 ± 181%	1,100 ± 175%	600 ± 161%	< 0.1 ± 203%	1.1 ± 248%
Oklahoma	100 ± 195%	<50 ± 191%	100 ± 195%	<50 ± 135%	200 ± 195%	100 ± 143%	1.0 ± 276%	0.5 ± 234%
South Dakota	0	<50 ± 170%	<50 ± 189%	<50 ± 97%	<50 ± 189%	100 ± 116%	0	1.7 ± 196%
Texas	0	3,700 ± 149%	400 ± 196%	2,900 ± 185%	2,200 ± 196%	14,000 ± 189%	0	1.3 ± 238%
Wyoming	300 ± 107%	200 ± 78%	200 ± 122%	100 ± 41%	400 ± 125%	200 ± 62%	1.2 ± 163%	3.9 ± 88%
Central Flyway Total	700 ± 84%	6,200 ± 94%	3,800	4,600	6,000 ± 100%	17,100 ± 155%		
Arizona	0	0	0	<50 ± 191%	0	<50 ± 191%	0	0
California	2,000 ± 86%	3,500 ± 66%	200 ± 77%	300 ± 35%	800 ± 87%	1,400 ± 63%	11.2 ± 115%	10.8 ± 74%
Idaho	0	0	0	0	0	0	0	0
Montana	300 ± 135%	100 ± 166%	100 ± 91%	<50 ± 130%	200 ± 110%	100 ± 153%	5.0 ± 163%	4.5 ± 211%
Nevada	0	300 ± 195%	0	200 ± 138%	0	1,500 ± 142%	0	1.5 ± 239%
Oregon	100 ± 195%	200 ± 193%	200 ± 104%	100 ± 134%	1,800 ± 176%	1,400 ± 175%	0.3 ± 221%	3.0 ± 235%
Utah	300 ± 196%	500 ± 194%	300 ± 196%	100 ± 135%	300 ± 196%	200 ± 143%	1.0 ± 277%	4.0 ± 237%
Washington	200 ± 90%	400 ± 84%	900 ± 162%	100 ± 39%	1,000 ± 144%	600 ± 60%	0.2 ± 185%	3.0 ± 93%
Pacific Flyway Total	2,900 ± 65%	5,000 ± 52%	1,700	900	4,100 ± 88%	5,200 ± 66%		
Alaska	200 ± 194%	0	100 ± 194%	0	200 ± 194%	0	4.0 ± 275%	0
United States Total	83,600 ± 121%	92,700 ± 60%	23,400	21,300	76,400 ± 66%	69,400 ± 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 18. Preliminary estimates of coot harvest and hunter activity during the 2018 and 2019 hunting seasons.¹

	Coot Harvest		Active Coot Hunters ²		Coot Hunter Days Afield		Seasonal Harvest Per Hunter	
	2018	2019	2018	2019	2018	2019	2018	2019
Connecticut	0	100 ± 188%	0	<50 ± 183%	0	700 ± 192%	0	1.9 ± 263%
Delaware	700 ± 195%	100 ± 182%	100 ± 195%	100 ± 182%	100 ± 195%	100 ± 182%	5.0 ± 276%	2.0 ± 258%
Florida	5,100 ± 150%	3,400 ± 155%	500 ± 134%	1,000 ± 159%	1,100 ± 134%	2,300 ± 116%	9.5 ± 201%	3.3 ± 222%
Georgia	0	1,400 ± 194%	0	<50 ± 194%	0	800 ± 194%	0	35.0 ± 274%
Maine	0	0	0	0	0	0	0	0
Maryland	0	<50 ± 191%	0	<50 ± 191%	0	<50 ± 191%	0	2.0 ± 270%
Massachusetts	<50 ± 181%	400 ± 178%	<50 ± 181%	100 ± 182%	<50 ± 181%	100 ± 149%	1.0 ± 257%	7.2 ± 254%
New Hampshire	0	0	0	0	0	0	0	0
New Jersey	900 ± 169%	2,400 ± 137%	<50 ± 128%	<50 ± 105%	400 ± 173%	200 ± 136%	22.5 ± 212%	73.7 ± 173%
New York	0	100 ± 193%	100 ± 195%	<50 ± 193%	2,800 ± 195%	100 ± 193%	0	5.0 ± 272%
North Carolina	0	1,400 ± 196%	0	1,400 ± 196%	0	1,400 ± 196%	0	1.0 ± 277%
Pennsylvania	100 ± 192%	<50 ± 191%	<50 ± 192%	<50 ± 191%	<50 ± 192%	<50 ± 191%	2.0 ± 272%	1.0 ± 270%
Rhode Island	200 ± 195%	100 ± 140%	100 ± 195%	<50 ± 115%	100 ± 195%	<50 ± 165%	2.0 ± 275%	5.0 ± 182%
South Carolina	4,600 ± 191%	2,100 ± 183%	1,200 ± 187%	1,300 ± 134%	1,200 ± 187%	2,000 ± 138%	3.9 ± 267%	1.6 ± 227%
Vermont	100 ± 190%	<50 ± 186%	<50 ± 190%	<50 ± 186%	<50 ± 190%	<50 ± 186%	6.0 ± 269%	2.0 ± 263%
Virginia	0	200 ± 187%	<50 ± 192%	200 ± 173%	<50 ± 192%	300 ± 149%	0	0.9 ± 255%
West Virginia	0	300 ± 192%	<50 ± 189%	<50 ± 192%	<50 ± 189%	<50 ± 192%	0	12.0 ± 272%
Atlantic Flyway Total	11,600 ± 102%	12,100 ± 68%	2,200	4,300	5,800 ± 105%	8,000 ± 65%		
Alabama	0	29,300 ± 168%	200 ± 195%	2,600 ± 134%	4,200 ± 195%	6,500 ± 155%	0	11.4 ± 215%
Arkansas	0	0	0	0	0	0	0	0
Illinois	0	0	0	0	0	0	0	0
Indiana	1,100 ± 109%	100 ± 68%	100 ± 62%	<50 ± 47%	300 ± 79%	200 ± 71%	14.7 ± 125%	2.6 ± 82%
Iowa	100 ± 99%	9,200 ± 129%	<50 ± 93%	1,400 ± 85%	200 ± 125%	6,700 ± 131%	1.3 ± 136%	6.5 ± 154%
Kentucky	0	0	0	0	0	0	0	0
Louisiana	14,600 ± 196%	110,800 ± 138%	500 ± 196%	3,600 ± 70%	1,000 ± 196%	14,000 ± 108%	30.0 ± 277%	30.9 ± 155%
Michigan	200 ± 196%	2,400 ± 196%	200 ± 196%	2,500 ± 133%	500 ± 196%	18,100 ± 182%	1.0 ± 277%	1.0 ± 237%
Minnesota	1,400 ± 195%	700 ± 196%	200 ± 195%	700 ± 196%	1,000 ± 195%	700 ± 196%	8.0 ± 276%	1.0 ± 277%
Mississippi	3,700 ± 196%	1,500 ± 138%	900 ± 196%	1,100 ± 154%	900 ± 196%	7,600 ± 133%	4.0 ± 277%	1.5 ± 207%
Missouri	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 18 (continued). Preliminary estimates of coot harvest and hunter activity during the 2018 and 2019 hunting seasons.¹

	Coot Harvest		Active Coot Hunters ²		Coot Hunter Days Afield		Seasonal Harvest Per Hunter	
	2018	2019	2018	2019	2018	2019	2018	2019
Ohio	800 ± 195%	0	200 ± 195%	0	200 ± 195%	0	5.0 ± 276%	0
Tennessee	0	0	0	2,500 ± 196%	0	22,100 ± 196%	0	0
Wisconsin	0	7,200 ± 195%	0	1,100 ± 177%	0	2,300 ± 177%	0	6.3 ± 263%
Mississippi Flyway Tot	21,900 ± 136%	161,300 ± 100%	2,300	15,500	8,300 ± 107%	78,200 ± 76%		
Colorado	0	300 ± 196%	0	400 ± 153%	0	1,200 ± 158%	0	0.7 ± 249%
Kansas	0	2,000 ± 196%	0	500 ± 196%	0	500 ± 196%	0	4.0 ± 277%
Nebraska	0	0	0	0	0	0	0	0
New Mexico	600 ± 98%	<50 ± 174%	100 ± 75%	<50 ± 100%	100 ± 78%	100 ± 145%	10.0 ± 123%	1.0 ± 201%
North Dakota	1,200 ± 154%	4,500 ± 183%	1,000 ± 181%	500 ± 168%	1,500 ± 130%	1,300 ± 143%	1.2 ± 237%	8.2 ± 248%
Oklahoma	200 ± 195%	2,000 ± 141%	100 ± 195%	600 ± 124%	300 ± 195%	4,700 ± 179%	2.0 ± 276%	3.5 ± 188%
South Dakota	100 ± 189%	100 ± 108%	<50 ± 189%	<50 ± 74%	<50 ± 189%	100 ± 103%	4.0 ± 267%	5.4 ± 131%
Texas	400 ± 196%	37,800 ± 196%	400 ± 196%	2,700 ± 196%	400 ± 196%	2,700 ± 196%	1.0 ± 277%	14.0 ± 277%
Wyoming	300 ± 110%	100 ± 81%	300 ± 119%	100 ± 143%	500 ± 128%	100 ± 120%	1.1 ± 162%	0.8 ± 165%
Central Flyway Total	2,800 ± 78%	46,800 ± 160%	1,900	4,800	2,800 ± 79%	10,800 ± 96%		
Arizona	0	0	0	<50 ± 191%	0	<50 ± 191%	0	0
California	34,900 ± 127%	6,200 ± 84%	3,100 ± 90%	900 ± 101%	12,700 ± 135%	2,500 ± 75%	11.4 ± 155%	7.1 ± 131%
Idaho	0	0	0	0	0	0	0	0
Montana	<50 ± 132%	100 ± 146%	<50 ± 106%	<50 ± 106%	<50 ± 106%	100 ± 114%	0.7 ± 170%	2.7 ± 180%
Nevada	0	3,000 ± 121%	0	200 ± 110%	0	400 ± 91%	0	12.1 ± 164%
Oregon	0	800 ± 196%	200 ± 133%	400 ± 196%	1,700 ± 185%	400 ± 196%	0	2.0 ± 277%
Utah	12,000 ± 143%	11,000 ± 129%	900 ± 88%	1,400 ± 64%	4,700 ± 127%	8,400 ± 97%	12.7 ± 168%	7.9 ± 144%
Washington	300 ± 89%	1,300 ± 87%	100 ± 54%	200 ± 36%	200 ± 58%	700 ± 58%	2.6 ± 104%	7.4 ± 95%
Pacific Flyway Total	47,300 ± 100%	22,300 ± 70%	4,400	3,100	19,400 ± 95%	12,500 ± 68%		
United States Total	83,600 ± 69%	242,600 ± 74%	10,800	27,800	36,300 ± 59%	109,500 ± 56%		

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 2018 and 2019 hunting seasons.¹

	Gallinule Harvest		Active Gallinule Hunters ²		Gallinule Hunter Days Afield		Seasonal Harvest Per Hunter	
	2018	2019	2018	2019	2018	2019	2018	2019
Delaware	0	0	0	0	0	0	0	0
Florida	1,600 ± 195%	7,900 ± 185%	200 ± 195%	900 ± 172%	200 ± 195%	9,300 ± 189%	10.0 ± 276%	9.2 ± 253%
Georgia	0	0	0	0	0	0	0	0
New Jersey	300 ± 190%	700 ± 183%	<50 ± 190%	<50 ± 183%	100 ± 190%	100 ± 183%	15.0 ± 269%	95.0 ± 259%
New York	0	0	0	0	0	0	0	0
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	0	0	0	0	0	0	0	0
West Virginia	0	0	<50 ± 183%	0	<50 ± 183%	0	0	0
Atlantic Flyway Total	1,800 ± 170%	8,700 ± 170%	200	900	300 ± 130%	9,900 ± 179%		
Alabama	0	0	100 ± 195%	0	2,200 ± 195%	0	0	0
Arkansas	0	0	0	0	0	0	0	0
Kentucky	0	0	0	0	0	0	0	0
Louisiana	0	10,900 ± 126%	0	1,200 ± 116%	0	3,300 ± 91%	0	8.9 ± 172%
Michigan	0	0	0	0	0	0	0	0
Minnesota	0	0	1,200 ± 196%	0	1,200 ± 196%	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	100 ± 193%	0	<50 ± 193%	0	100 ± 193%	0	2.0 ± 273%
Mississippi Flyway Total	0	11,000 ± 126%	1,300	1,300	3,300 ± 143%	3,300 ± 89%		
New Mexico	0	0	0	0	0	0	0	0
Oklahoma	0	0	100 ± 195%	0	100 ± 195%	0	0	0
Texas	0	0	0	0	0	0	0	0
Central Flyway Total	0	0	100	0	100 ± 195%	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 19 (continued). Preliminary estimates of gallinule harvest and hunter activity during the 2018 and 2019 hunting seasons.¹

	Gallinule Harvest		Active Gallinule Hunters ²		Gallinule Hunter Days Afield		Seasonal Harvest Per Hunter	
	2018	2019	2018	2019	2018	2019	2018	2019
Arizona	0	0	0	0	0	0	0	0
California	600 ± 196%	0	600 ± 196%	0	1,700 ± 196%	0	1.0 ± 277%	0
Nevada	0	0	0	0	0	0	0	0
Pacific Flyway Total	600 ± 196%	0	600	0	1,700 ± 196%	0		
United States Total	2,400 ± 138%	19,700 ± 103%	2,100	2,200	5,400 ± 108%	13,200 ± 135%		

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 2018 and 2019 hunting seasons.¹

	Rail Harvest		Active Rail Hunters ²		Rail Hunter Days Afield		Seasonal Harvest Per Hunter	
	2018	2019	2018	2019	2018	2019	2018	2019
Connecticut	100 ± 181%	<50 ± 150%	<50 ± 181%	<50 ± 150%	<50 ± 181%	<50 ± 150%	21.0 ± 256%	2.0 ± 211%
Delaware	0	0	0	0	0	0	0	0
Florida	2,200 ± 195%	2,200 ± 149%	200 ± 195%	200 ± 108%	500 ± 195%	800 ± 135%	14.0 ± 276%	13.7 ± 184%
Georgia	0	2,100 ± 111%	0	100 ± 90%	0	200 ± 121%	0	27.0 ± 143%
Maine	0	400 ± 171%	0	100 ± 136%	0	200 ± 140%	0	8.5 ± 218%
Maryland	0	<50 ± 190%	0	<50 ± 190%	0	<50 ± 190%	0	2.0 ± 269%
Massachusetts	100 ± 195%	<50 ± 156%	100 ± 195%	<50 ± 109%	100 ± 195%	<50 ± 135%	1.0 ± 276%	2.5 ± 190%
New Jersey	900 ± 127%	4,900 ± 81%	100 ± 63%	200 ± 97%	300 ± 102%	400 ± 66%	8.3 ± 142%	25.2 ± 126%
New York	0	0	0	0	0	0	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	1,600 ± 194%	5,900 ± 150%	1,200 ± 185%	800 ± 153%	1,200 ± 176%	1,600 ± 157%	1.4 ± 269%	7.4 ± 215%
Virginia	1,900 ± 75%	2,900 ± 61%	100 ± 53%	100 ± 45%	300 ± 65%	200 ± 55%	15.5 ± 92%	30.8 ± 76%
West Virginia	<50 ± 183%	0	<50 ± 183%	0	100 ± 183%	0	3.0 ± 259%	0
Atlantic Flyway Total	6,900 ± 82%	18,500 ± 58%	1,600	1,400	2,400 ± 99%	3,500 ± 77%		
Alabama	0	0	200 ± 97%	0	2,400 ± 163%	0	0	0
Arkansas	0	0	0	0	0	0	0	0
Illinois	0	0	0	0	0	0	0	0
Indiana	100 ± 124%	<50 ± 100%	600 ± 186%	<50 ± 64%	2,300 ± 185%	100 ± 92%	0.1 ± 223%	1.0 ± 118%
Iowa	5,300 ± 187%	4,500 ± 132%	1,000 ± 190%	800 ± 109%	2,200 ± 185%	2,100 ± 118%	5.1 ± 266%	5.6 ± 171%
Kentucky	0	0	0	0	0	0	0	0
Louisiana	0	600 ± 166%	0	600 ± 179%	0	1,200 ± 139%	0	1.1 ± 244%
Michigan	0	0	0	0	0	0	0	0
Minnesota	2,200 ± 183%	0	1,400 ± 160%	0	2,700 ± 120%	0	1.5 ± 244%	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 2018 and 2019 hunting seasons.¹

	Rail Harvest		Active Rail Hunters ²		Rail Hunter Days Afield		Seasonal Harvest Per Hunter	
	2018	2019	2018	2019	2018	2019	2018	2019
Missouri	0	700 ± 194%	0	100 ± 194%	0	400 ± 194%	0	12.0 ± 275%
Ohio	0	0	0	0	0	0	0	0
Tennessee	0	0	0	0	0	0	0	0
Wisconsin	0	200 ± 193%	0	1,000 ± 189%	0	1,100 ± 173%	0	0.2 ± 270%
Mississippi Flyway Total	7,600 ± 141%	6,100 ± 102%	3,200	2,400	9,600 ± 81%	4,900 ± 74%		
Colorado	0	100 ± 194%	0	100 ± 194%	0	500 ± 194%	0	1.0 ± 275%
Kansas	0	0	0	400 ± 196%	0	400 ± 196%	0	0
Nebraska	0	100 ± 194%	0	100 ± 194%	0	200 ± 194%	0	1.0 ± 275%
New Mexico	0	0	0	0	0	0	0	0
Oklahoma	100 ± 195%	0	100 ± 195%	0	100 ± 195%	0	2.0 ± 275%	0
Texas	0	5,100 ± 196%	100 ± %	2,600 ± 196%	700 ± 0%	12,900 ± 196%	0	2.0 ± 277%
Wyoming	0	0	<50 ± 189%	0	<50 ± 189%	0	0	0
Central Flyway Total	100 ± 195%	5,200 ± 192%	200	3,100	900 ± 29%	13,900 ± 181%		
United States Total	14,600 ± 83%	29,800 ± 53%	5,100	6,900	12,900 ± 63%	22,400 ± 115%		

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 2018 and 2019 hunting seasons. Species-specific estimates were derived from 5-year running averages of species composition estimates from the Migratory Bird Wing Collection Survey.

Flyway	Sora		Virginia		Clapper		King	
	2018	2019	2018	2019	2018	2019	2018	2019
Atlantic	600	1,200	100	200	6,200	17,200	0	0
Mississippi	7,400	6,000	<50	<50	100	100	0	0
Central	0	4,300	100	1,000	0	0	0	0
U.S. Total	8,000	11,400	200	1,200	6,300	17,200	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.

Seth Maddox, Alabama Department of Conservation and Natural Resources
Destinee Green, 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 and Tara Reichert, Florida Fish and Wildlife Conservation Commission
David Neyhart, Georgia Department of Natural Resources
Craig Weidmeier, Idaho Department of Fish and Game
Randy Smith, Illinois Department of Natural Resources
Karl Eliason, Indiana Department of Natural Resources
Orrin Jones, 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
Bill Harvey, Maryland Wildlife and Heritage Service
Rick Kennedy, Massachusetts Division of Fisheries and Wildlife
Kristen Kosloski, 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
Phil Schroeder, Montana Fish, Wildlife and Parks
Leslie Hershberger and Will Inselman, Nebraska Game and Parks Commission
Kimberly Munoz and Russell Woolstenhulme, 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
Josh Stiller, New York Department of Environmental Conservation
Doug Howell, North Carolina Wildlife Resources Commission
Chad Parent, North Dakota Game and Fish Department
Andrew Burt, Ohio Department of Natural Resources
Mike Chrisman, Oklahoma Department of Wildlife Conservation
Brandon Reishus, Oregon Department of Fish and Wildlife
Ian Gregg and Tammy Klinger, Pennsylvania Game Commission
Jenny Kilburn, Rhode Island Division of Fish and Wildlife
Billy Dukes, South Carolina Department of Natural Resources
Corey Huxoll, South Dakota Game, Fish, and Parks
Jamie Feddersen, Tennessee Wildlife Resources Agency
Kevin Kraii, Texas Parks and Wildlife Department
Heather Bernales, Utah Division of Wildlife Resources

David Sausville, Vermont Fish and Wildlife Department
Doreen Richmond and 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
Jessica Rees Lohr, Wisconsin Department of Natural Resources
Noelle Smith, Wyoming Game and Fish Department

Appendix B. Names and affiliations of waterfowl wingbee participants.

Atlantic Flyway Wingbee, Laurel, MD January 27 to January 31, 2020

A. Auger, Florida Fish and Wildlife Conservation Commission; J. Ball, Maryland Natural Resources Police; J. Bennett, Maryland Department of Natural Resources - Wildlife and Heritage Service; N. Bosco, Volunteer; P. Bosco, USFWS (Retired); S. Catino, USFWS - DMBM/BMDM; S. Chandler, USFWS - DMBM/BMDM; C. Collison, Maryland Department of Natural Resources - Wildlife and Heritage Service; C. Deets, USFWS – BMDM; K. Harvey, Delaware Division of Fish and Wildlife; T. Hodges, SUNY – ESF; J. Homyack, Maryland Department of Natural Resources - Wildlife and Heritage Service; S. Hopkins, Maryland Department of Natural Resources - Wildlife and Heritage Service; N. Huck, Pennsylvania Game Commission; J. Keeney, Maryland Natural Resources Police; W. Knepp, Pennsylvania Game Commission; S. Kucia, SUNY – ESF; D. Lynch, Pennsylvania Game Commission; M. McAlister, South Carolina Department of Natural Resources; K. McCargo, North Carolina Wildlife Resources Commission; C. McDougal, West Virginia Department of Natural Resources; C. Miller, CC Outdoor School; C. Miller, Pennsylvania Game Commission; M. Murphy, Clemson University; J. O'Connor, New York State Department of Environmental Conservation; P. Padding, USFWS (Retired); B. Raftovich, USFWS - DMBM/BMDM; R. Rau, USFWS-DMBM/BMDM; W. Rhodes, USFWS - DMBM/MBSB; A. Riddle, CC Outdoor School; B. Rosamond, USFWS; M. Schummer, SUNY – ESF; J. Stemplen, Pennsylvania Game Commission; J. Tyler, USFWS – JOA; J. Veale, USFWS; J. Woods, South Carolina Department of Natural Resources.

Mississippi Flyway Wingbee, Carbondale, IL February 3 to February 7, 2020

C. Alger, Iowa Department of Natural Resources; M. Barnes, USFWS; P. Bosco, USFWS (Retired); J. Brown, University of Texas El Paso; A. Butler, Ohio Department of Natural Resources; J. Carbaugh, Arkansas Game and Fish Commission; C. Carlstrom, USFWS; S. Catino, USFWS - DMBM/BMDM; S. Chandler, USFWS - DMBM/BMDM; R. Colvis, Kentucky Department of Fish and Wildlife Resources; S. Dainko, Indiana Department of Natural Resources; B. Davis, Minnesota Department of Natural Resources; J. Dooley, USFWS - DMBM/PHAB; S. Easterly, Wisconsin Department of Natural Resources; L. Fendrick, Ohio Department of Natural Resources; M. Garrick, Iowa Department of Natural Resources; J. Hager, Kentucky Department of Fish and Wildlife Resources; P. Hahs, Kentucky Department of Fish and Wildlife Resources; J. Hanks, Louisiana Department of Wildlife and Fisheries; J. Hartleb, USFWS; B. Hartleben, Michigan Department of Natural Resources; T. Hauptert, Iowa Department of Natural Resources; J. Jaworski, Wisconsin Department of Natural Resources; B. Kelly, Wisconsin Department of Natural Resources; G. Knutsen, USFWS; M. Madgar, Ohio Department of Natural Resources; C. Moratz, USFWS; P. Padding, USFWS (Retired); A. Phillips, Illinois Department of Natural Resources; J. Poore, Tennessee Wildlife Resources Agency; T. Porter, USFWS; J. Rabbers, Michigan Department of Natural Resources; D. Rave, Minnesota Department of Natural Resources; C. Skaggs, USFWS; J. Tapp, Missouri Department of Conservation; J. Veon, University of Arkansas; Rob Vinson, USFWS; G. Wilkerson, USFWS – BMBM; B. Williams, Illinois Department of Natural Resources.

Central Flyway Wingbee, Emporia, KS February 18 to February 21, 2020

C. Anchor, South Dakota State University; R. Assenheimer, Texas Parks and Wildlife Department; T. Bidrowski, Kansas Department of Wildlife, Parks, and Tourism; K. Biemser, Kansas State University; J. Black, Kansas Department of Wildlife, Parks, and Tourism; D. Butler, Texas Parks and Wildlife Department; S. Catino, USFWS - DMBM/BMDM; S. Chandler, USFWS - DMBM/BMDM; M. Cline, New Mexico Department of Game and Fish; A. Dinges, North Dakota Game and Fish Department; P. Doherty, Colorado State University; J. Dooley,

USFWS - DMBM/PHAB; J. Dubovsky, USFWS - DMBM/Central Flyway; K. Fleming, USFWS - DMBM/BMDM; A. Friesen, Kansas Department of Wildlife, Parks, and Tourism; J. Gammonley, Colorado Parks and Wildlife; M. Grovijahn, South Dakota Game, Fish, and Parks; K. Hand, Texas Parks and Wildlife Department; J. Harbit, Kansas Department of Wildlife, Parks, and Tourism; K. Karrow, Kansas Department of Wildlife, Parks, and Tourism; K. Kraai, Texas Parks and Wildlife Department; K. Kriegel, Texas Parks and Wildlife Department; T. Liddick, USFWS - DMBM/MBSB; E. Love, Texas Parks and Wildlife Department; B. Malanchuk, Kansas State University; M. Manbeck, Kansas Department of Wildlife, Parks, and Tourism; L. May, Wyoming Game and Fish Department; S. McDowell, Texas Parks and Wildlife Department; T. Menard, USFWS; C. Morris, Oklahoma Department of Wildlife; R. Murano, South Dakota Game, Fish, and Parks; J. Neal, Oklahoma Department of Wildlife Conservation; J. Richardson, Oklahoma Department of Wildlife Conservation; K. Schoonover, Oklahoma Department of Wildlife Conservation; R. Schultheis, Kansas Department of Wildlife, Parks, and Tourism; N. Smith, Wyoming Game and Fish Department; T. Stechman, North Dakota Game and Fish Department; P. Stephenson, USFWS; R. Stutheit, Nebraska Game and Parks Commission; M. Sullivan, Nebraska Game and Parks Commission; M. Szymanski, North Dakota Game and Fish Department; C. Thornton, USFWS; P. Thorpe, USFWS - DMBM/MBSB; M. Vrtiska, Nebraska Game and Parks Commission; R. Warhurst, North Dakota Natural Resources Trust; J. White, Texas Parks and Wildlife Department; J. Widhelm, Nebraska Game and Parks Commission.

Pacific Flyway Wingbee, Anderson, CA February 24 to February 28, 2020

C. Brady, California Waterfowl Association; S. Brinkman, USFWS; T. Byers, Washington Department of Fish and Wildlife; C. Cain, USFWS - DMBM/BMDM; R. Cain, University of California Davis; B. Canning, USFWS; M. Carpenter, USFWS; S. Catino, USFWS - DMBM/BMDM; S. Chandler, USFWS - DMBM/BMDM; T. Clark, California Department of Fish and Wildlife; S. Cordes, California Department of Fish and Wildlife; J. Dooley, USFWS - DMBM/PHAB; L. Eskridge, California Waterfowl Association; B. Flack, Idaho Department of Fish and Game; G. Gerstenberg, California Department of Fish and Wildlife; J. Green, California Department of Fish and Wildlife; M. Guttery, Alaska Department of Fish and Game; M. Guzman, U.S. Geological Survey; D. Johnson, USFWS; J. Laughlin, U.S. Department of Agriculture - APHIS/Wildlife Services; A. Martinez, USFWS; A. Martinez, Oregon Department of Fish and Wildlife; I. Metcalf, Nevada Department of Wildlife; S. Olson, USFWS - DMBM/Pacific Flyway; J. Oskowski, California Waterfowl Association; B. Reishus, Oregon Department of Fish and Wildlife; W. Rhodes, USFWS - DMBM/MBSB; O. Rocha, California Department of Fish and Wildlife; A. Rodgers, Washington Department of Fish and Wildlife; N. Saake, Nevada Department of Wildlife (Retired); T. Sanders, USFWS - DMBM/Pacific Flyway; R. Shinn, California Department of Fish and Wildlife and U.S. Geological Survey; J. Simons, USFWS; D. Speten, Oregon Department of Fish and Wildlife; K. Walton, Oregon Department of Fish and Wildlife; S. Wascisin, Washington Department of Fish and Wildlife; K. Wilson, University of California Davis; M. Wilson, Washington Department of Fish and Wildlife; M. Wood, USFWS.

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