



## 2020 SMALL GAME HUNTER MAIL SURVEY

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### INTRODUCTION

The Minnesota Department of Natural Resources (MNDNR), Division of Fish and Wildlife, Wildlife Research unit annually conducts a mail survey of small game hunters. The small game mail survey was initiated in 1976 as a means to gather small game harvest information, which is used to inform our constituency and guide decisions about hunting regulations and season structure.

### METHODS

A postcard survey (Figure 1) was mailed in early March following the close of the small game hunting season. Hunters who returned it within three weeks were eliminated from a follow-up mailing to non-respondents. The sampling frame consisted of individuals who purchased a small game hunting license (any type) for the 2020-21 small game hunting season (N=244,100). A stratified random sample (n=7,000, 2.9%), allocated proportionally by license type, was drawn from the MNDNR electronic licensing system (ELS) database. Small game license types included: Resident Senior Citizen, Resident Youth, Resident Adult, Resident Individual Sport, Resident Combination Sport, Resident Lifetime, Resident Lifetime Sport, Non-resident Youth, and Non-resident Adult. For analysis, license types were pooled into "Resident" (N=235,725) and "Non-resident" (N=8,375) (Figure 2). A free youth license was added to the sampling frame for 2010-13 but that license has since been discontinued. Estimates for those years have been recalculated without the youth license so harvest estimates and license sales are comparable among years. Also, beginning in 2017, license holders <18-years old at the time of the survey were excluded from the sampling frame but included in the overall expansion for sampling. This group comprised <3% of license holders and thus estimates should be comparable among years.

Recipients were asked if they hunted small game in 2020-21 and if not, they were instructed to return the survey. Respondents who hunted were asked: (1) total number of days they hunted small game, (2) number bagged by species, (3) number of days hunted by species and (4) the county in which they hunted most for each species listed. Returned surveys were checked for completeness, consistency, and biological practicability. Dual key-entry and quality control checks were used to minimize transcription errors. Data were tabulated using Viking Data Entry VDE+ software and analyzed using R programming language (R version 4.1.0 [2021-05-18]; R Core Team 2020).

### RESULTS

#### Survey Response and Overall License Sales Trends

Statewide (resident and non-resident) small game license sales and survey response rate are shown in Figure 2. Of the 7,000 mailed surveys, 255 surveys were returned as undeliverable; 2,413 surveys were completed and returned for an adjusted response rate of 36%. The percent of respondents who said they hunted or did not hunt is reported in Table 1. Overall, statewide

license sales (244,100 small game licenses) increased nearly 9% from the previous year but was 4% below the 10-year average (253,879 licenses; Figure 2, Table 2). Non-resident small game license sales (8,375 licenses) increased 22% in 2020 and was 28% above the 10-year average (6,547 licenses; Table 3).

### **Estimates by Species**

Harvest trends for the four most sought-after small game species (ducks – all species, Canada geese, ruffed grouse, and ring-necked pheasants) in Minnesota since 2002 are shown in Figure 3 and discussed separately below. For most other species, estimated harvest (Table 2) and number of statewide hunters (Table 4) showed a mix of increases and decreases compared to 2019 and the 10-year averages. Non-resident estimates are shown in Table 3. Table 5 shows the estimated harvest per active hunter by species and Table 6 shows the mean harvest for successful hunters and hunter success rates (%).

#### *Ducks – all species*

The number of state duck stamps sold in 2020 (95,116 stamps) was 10% above the 10-year average (89,234 stamps; Table 2) but the 2020 harvest (555,985 ducks) was 22% lower than the 10-year average (709,114 ducks; Table 2). An estimated 56,347 hunters pursued ducks in 2020 compared to an average of 73,514 duck hunters in the previous 10 years (Table 4). The estimated harvest was 9.9 ducks/active hunter which was comparable to the 10-year average of 9.7 ducks/active hunter (Table 5). Duck hunter success rate (82%) was just below the 10-year average (85%), but successful hunters harvested slightly more ducks in 2020 than the 10-year average (12.1 vs. 11.4 ducks/successful hunter, respectively; Table 6).

#### *Canada geese*

The 2020 Canada goose harvest (182,194 geese) was well-below the 10-year average (259,325 geese; Table 2). An estimated 37,430 hunters pursued geese in 2020 compared to the 10-year average of 50,478 goose hunters (Table 4). The estimated harvest per active hunter was 4.9 geese/hunter which was comparable to the 10-year average (5.1 geese/hunter; Table 5). The hunter success rate (74%) and the mean harvest per successful hunter (6.5 geese) were also similar to their respective 10-year averages (76%; 6.6 geese/successful hunter; Table 6).

#### *Ruffed grouse*

For ruffed grouse, the estimated 2020 harvest and number of hunters (221,746 birds, 63,428 hunters) were 28% and 22% below the 10-year averages (306,250 birds, 80,795 hunters), respectively (Tables 2 and 4). Harvest per active hunter (3.5 grouse/hunter) was slightly below the 10-year average (3.8 grouse/hunter; Table 5), and the mean harvest for successful hunters (5.2 grouse/successful hunter) was similar to the 10-year average (5.3 grouse/successful hunter; Table 6). The 2020 ruffed grouse hunter success rate was 67%, slightly below the 10-year average (71%; Table 6).

#### *Ring-necked pheasants*

Pheasant stamp sales (88,803 stamps) increased nearly 19% from the previous year and was 10% higher than the 10-year average (80,730 stamps; Table 2). The 2020 harvest (190,185 roosters) was 13% lower than the 10-year average (217,317 roosters; Table 2), and the number of pheasant hunters (52,503) was 17% below the 10-year average (63,592 hunters; Table 4). The estimated harvest per active hunter was 3.6 pheasants/hunter which was comparable to the 10-year average (3.4 pheasants/hunter; Table 5). Mean harvest per successful hunter (5.3 roosters) and hunter success (69%) in 2020 were also similar to the 10-year averages (5.1 roosters, 67% success; Table 6).

## **ACKNOWLEDGMENTS**

This project was funded in part by the Federal Aid in Wildlife Restoration Program. John Giudice analyzed the data and Tim Lyons provided comments on a previous draft of this report.

Dear Small Game Hunter:

You have been selected at random from among Minnesota's small game hunting license buyers to assist us in evaluating the 2020-2021 small game hunting season (March 2020 - February 2021). We need information to estimate the season's harvest and to help set future small game seasons. Answer only for your Minnesota 2020 hunting experience.

**YOUR RESPONSE IS NEEDED  
EVEN IF YOU DID NOT HUNT OR HARVEST SMALL GAME**

Please fill out the attached questionnaire and mail as soon as possible. A reminder will be sent to individuals not returning the questionnaire within three weeks. No envelope or stamp is necessary; just tear along the perforation and drop into a mailbox.

**THANK YOU FOR YOUR COOPERATION**

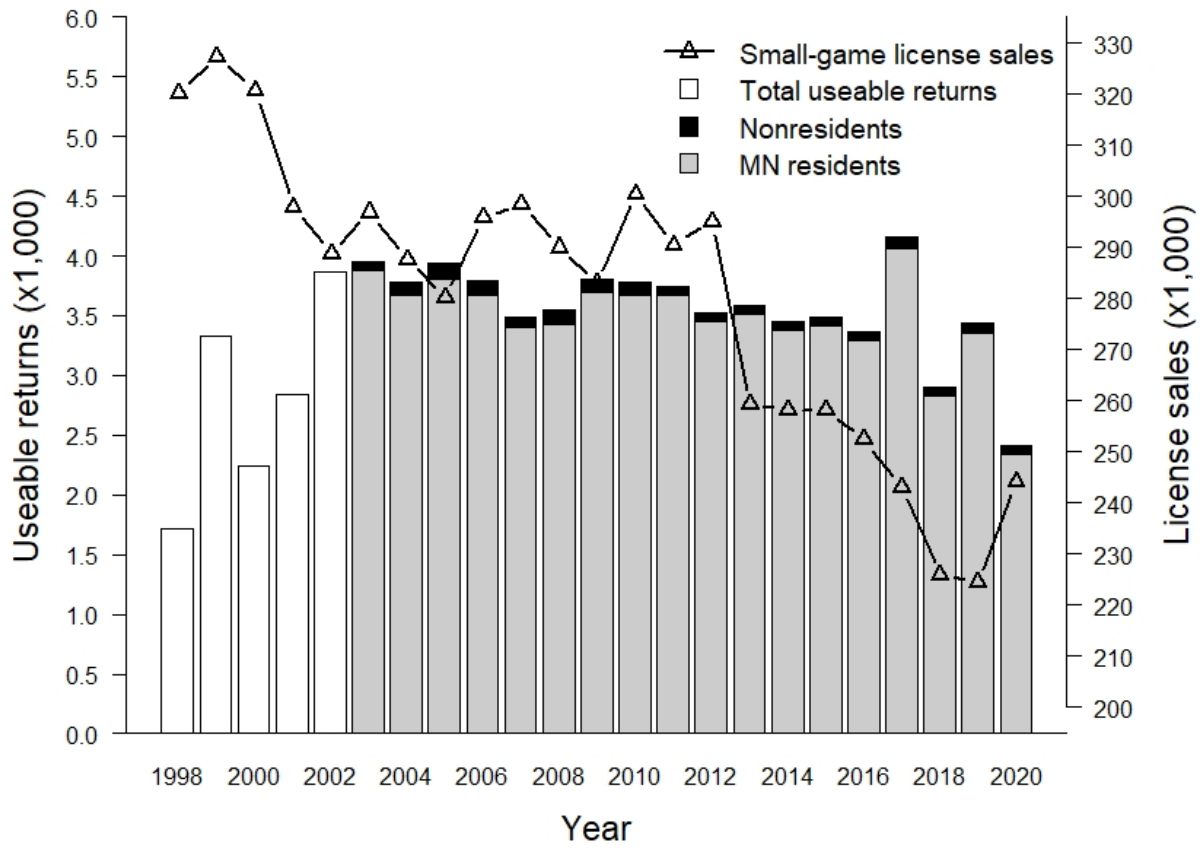
Michelle Carstensen, Acting Wildlife Research Program Manager  
Division of Fish and Wildlife  
Department of Natural Resources

**2020 Small Game Hunter Report**

1. Did you hunt small game, listed below, in Minnesota this year (March 2020 - Feb 2021)?  No  Yes (Please check box)
2. Indicate the **total number of days** spent hunting small game of all species listed below, in Minnesota. \_\_\_\_\_
3. For the species you hunted indicate your harvest, number of days hunted, and county in which you hunted most for each species, even if **None** were bagged. Report only game **you personally** bagged and retrieved in Minnesota. Do not include birds taken on shooting preserves or game farms.

	Number You bagged	Days Hunted	County
Ducks (all species)	01	_____	_____
Coots (mud hens)	50	_____	_____
Canada geese	40	_____	_____
Other geese	41	_____	_____
Snipe (jacksnipe)	51	_____	_____
Rails and gallinules	52	_____	_____
Crows	53	_____	_____
Woodcock	60	_____	_____
Mourning Dove	65	_____	_____
Pheasant	70	_____	_____
Ruffed grouse (Forest partridge)	71	_____	_____
Spruce grouse	72	_____	_____
Sharp-tailed grouse	73	_____	_____
Hungarian (Gray) partridge	74	_____	_____
Fox squirrel	89	_____	_____
Gray squirrel	90	_____	_____
Cottontail rabbit	91	_____	_____
Jackrabbit	92	_____	_____
Snowshoe hare	93	_____	_____
Badger	35	_____	_____
Coyote (brush wolf)	97	_____	_____
Gray fox	98	_____	_____
Raccoon	94	_____	_____
Red fox	95	_____	_____

### MNDNR Small-Game Mail Survey



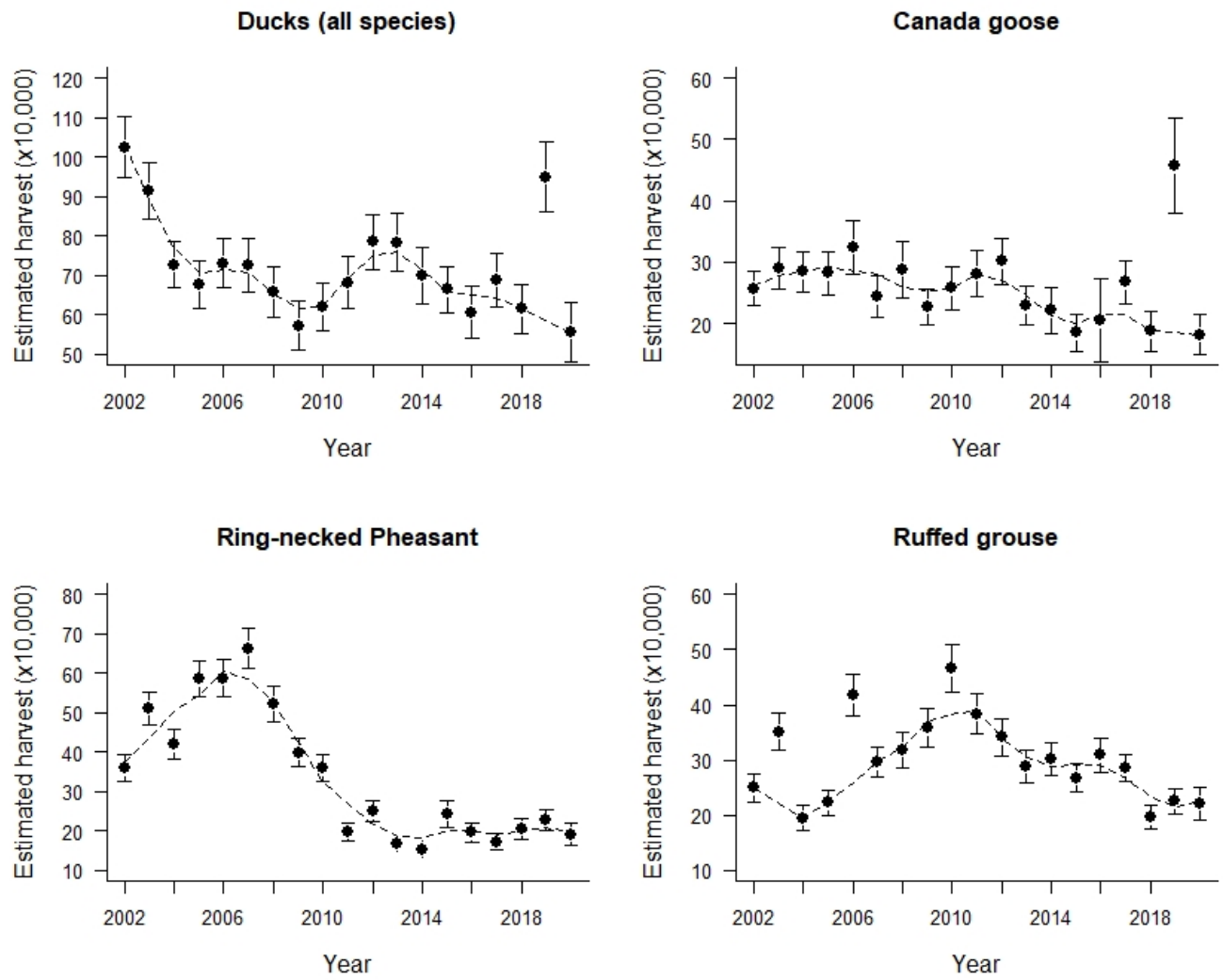


Figure 3. Harvest trends for top four small game species harvested in Minnesota, 2002-2020.

Table 1. Percent of respondents who hunted small game, 2010-11 through 2020-2021<sup>a</sup>.

		Returns from mail survey	Projections from license sales
2010-11	Hunted	2,824 (75%)	210,129
	Did not hunt	<u>953 (25%)</u>	<u>70,911</u>
		3,777 (100.0%)	281,040
2011-12	Hunted	2,761 (74%)	214,137
	Did not hunt	<u>987 (26%)</u>	<u>76,549</u>
		3,748 (100.0%)	290,686
2012-13	Hunted	2,669 (76%)	223,808
	Did not hunt	<u>851 (24%)</u>	<u>71,360</u>
		3,520 (100%)	295,168
2013-14	Hunted	2,586 (72%)	186,317
	Did not hunt	<u>1,003 (28%)</u>	<u>72,264</u>
		3,589 (100%)	258,581
2014-15	Hunted	2,476 (72%)	185,186
	Did not hunt	<u>975 (28%)</u>	<u>72,923</u>
		3,451 (100%)	258,109
2015-16	Hunted	2,505 (72%)	185,604
	Did not hunt	<u>980 (28%)</u>	<u>72,612</u>
		3,485 (100%)	258,216
2016-17	Hunted	2,426 (72%)	181,614
	Did not hunt	<u>945 (28%)</u>	<u>70,744</u>
		3,371 (100%)	252,358
2017-18	Hunted	2,768 (66%)	161,658
	Did not hunt	<u>1,395 (34%)</u>	<u>81,472</u>
		4,163 (100%)	243,130
2018-19	Hunted	2,000 (69%)	155,601
	Did not hunt	<u>904 (31%)</u>	<u>70,331</u>
		2,904 (100%)	225,932
2019-20	Hunted	2,524 (73%)	164,896
	Did not hunt	<u>911 (27%)</u>	<u>59,517</u>
		3,435 (100%)	224,413
2020-21	Hunted	1,487 (62%)	150,425
	Did not hunt	<u>926 (38%)</u>	<u>93,675</u>
		2,413 (100%)	244,100

<sup>a</sup> Includes resident and non-resident information. Excludes duplicates and free licenses (youth under 16, active-duty military and disabled veterans).

Table 2<sup>a</sup>. Statewide (resident and non-resident) small game hunting license sales and estimated hunter harvest, 2010-11 through 2020-21.

	2010-11	2011-12 <sup>b</sup>	2012-13 <sup>b</sup>	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Small game license sales <sup>c</sup>	282,227	271,768	264,063	258,581	258,109	258,208	252,358	243,130	225,932	224,413	244,100
State duck stamp sales	88,069	89,681	90,052	93,412	94,265	92,176	88,905	86,258	82,955	86,568	95,116
Pheasant stamp sales	104,286	86,868	90,541	77,597	74,295	77,750	76,920	71,925	72,192	74,921	88,803
<b>Estimated harvest<sup>d</sup></b>											
Ducks	619,600	681,550	784,360	782,810	699,620	663,811	606,458	688,225	614,780	949,928	555,985
Canada geese	257,530	281,630	301,550	229,120	221,620	185,012	204,825	267,192	187,578	457,192	182,194
Other geese	3,940	4,800	8,820	7,130	6,510	4,448	7,188	8,062	1,557	11,566	2,024
American coot	26,340	10,520	16,720	15,130	17,050	15,861	21,564	19,976	10,663	15,680	7,792
Common snipe	1,940	1,390	1,420	2,310	520	223	1,948	1,928	1,401	1,764	1,620
Rails / gallinules	80	390	80	70	80	1,039	n.a. <sup>e</sup>	1,697	n.a. <sup>f</sup>	n.a. <sup>g</sup>	507
Crow	57,300	81,500	90,260	67,440	56,020	57,576	48,590	110,034	34,940	27,377	21,248
American woodcock	29,770	24,980	30,360	31,920	25,810	37,270	46,867	38,546	30,500	27,116	33,182
Mourning dove	100,230	74,000	92,760	80,480	103,370	96,552	58,618	88,021	54,623	89,834	41,883
Ring-necked pheasant	359,400	198,500	250,140	169,100	152,800	243,176	196,141	171,883	205,395	226,639	190,185
Ruffed grouse	465,580	383,150	341,320	288,410	301,190	267,997	308,955	285,180	195,515	225,200	221,746
Spruce grouse	14,960	18,640	11,980	13,110	14,590	9,856	15,348	12,032	7,081	7,319	14,467
Sharp-tailed grouse	16,820	11,600	10,650	7,130	8,530	7,929	8,610	11,097	5,681	6,273	15,883
Gray partridge	9,150	3,950	5,160	2,380	3,590	3,187	3,745	4,557	3,893	3,399	1,822
Gray squirrel	138,920	115,840	126,110	84,010	91,250	96,400	95,374	105,712	71,888	101,069	87,002
Fox squirrel	61,690	48,100	49,750	33,940	40,840	46,383	39,603	41,994	28,398	35,672	18,413
Eastern cottontail	53,870	34,640	64,140	40,710	38,820	41,716	49,187	47,135	32,057	33,647	27,923
White-tailed jack rabbit	7,220	5,180	1,910	1,870	1,050	742	1,124	585	623	393	4,657
Snowshoe hare	6,770	8,430	16,800	6,200	7,860	6,374	5,990	10,864	3,191	3,855	5,060
Raccoon	77,690	44,080	48,340	46,690	52,800	38,387	22,312	68,685	29,332	33,908	38,140
Red fox	8,780	7,120	7,990	5,190	3,220	3,780	2,247	9,229	1,868	5,358	3,947
Gray fox	2,380	1,160	250	430	600	816	225	3,798	78	1,438	304
Coyote	44,050	33,410	51,990	23,630	17,430	35,123	24,481	56,184	22,408	41,095	29,540
Badger	600	230	330	290	80	149	375	760	78	66	203

<sup>a</sup> Harvest estimates in this table, and the number of hunters and mean take per hunter in Table 4, are calculated from different questions on the survey form. The sample used in calculations differs from one estimator to the next. This is because some respondents give specific answers to one question but not to a related one. A formula is used to calculate the total estimated take for each species that appear in this table. In most years the formula produces results rather close to those obtained by multiplying the average take per hunter times the number of hunters. However, in other years results of the two methods are quite divergent, perhaps as a result of an unusual sample. This is being investigated further, and as a result, numbers may change somewhat in future reports. The most current report of survey findings will have the best data available at that time.

<sup>b</sup> Estimates from these years were recomputed without license type 99- free youth license to be consistent with other years of data.

<sup>c</sup> Includes all types of small game licenses. Duplicate and free licenses not included.

<sup>d</sup> Estimates based upon response of hunters to questionnaires.

<sup>e</sup> Only 1 respondent indicated they hunted rails and they reported 0 bagged.

<sup>f</sup> No respondents indicated they hunted rails.

<sup>g</sup> Only 3 respondents indicated they hunted rails and they reported 0 bagged.



Table 3. Mail survey results of non-resident small game hunters, 2010-11 through 2020-21.

<b>Non-resident licenses issued <sup>a</sup></b>	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
	6,695	6,312	6,456	6,031	6,056	6,755	6,701	6,854	6,718	6,887	8,375
<b>Questionnaires:</b>											
Number mailed	163	169	166	162	165	169	190	200	200	213	214
Number not delivered	6	11	11	10	12	5	15	19	16	18	5
Number (percent) returned	107 (66)	91 (54)	71 (43)	81 (50)	70 (42)	73 (43)	78 (41)	99 (50)	80 (40)	86 (40)	75 (35)
<b>Estimated non-residents and (percent) of all licensed non-residents hunting:</b>											
Ducks	2,003 (29.9)	2,430 (38.5)	2,360 (36.6)	2,010 (33.3)	2,340 (38.6)	1,850 (27.4)	2,320 (34.6)	2,350 (34.3)	1,680 (25)	3,040 (44.2)	1,230 (14.7)
Canada goose	1,314 (19.6)	1,620 (25.6)	1,360 (21.1)	1,270 (21.0)	1,300 (21.4)	650 (9.6)	770 (11.5)	1,730 (25.3)	1,260 (18.8)	3,120 (45.3)	1,560 (18.7)
Ruffed grouse	2,503 (37.4)	1,460 (23.1)	2,820 (43.7)	2,010 (33.3)	2,600 (42.9)	2,870 (42.5)	3,520 (52.6)	2,280 (33.3)	2,270 (33.8)	1,760 (25.6)	3,800 (45.3)
Ring-necked pheasant	2,003 (29.9)	1,780 (28.2)	1,910 (29.6)	1,420 (23.5)	1,380 (22.9)	1,480 (21.9)	1,550 (23.1)	1,520 (22.2)	2,350 (35)	1,120 (16.3)	890 (10.7)
Raccoon <sup>b,c</sup>	63 (0.9)	0 (0)	0 (0)	80 (1.2)	0 (0)	0 (0)	170 (2.6)	70 (1.0)	0	0	0
<b>Estimated non-resident take:</b>											
Ducks	17,055	13,840	20,380	20,410	13,060	16,863	17,701	15,717	15,792	21,228	5,810
Canada goose	6,334	4,050	2,270	3,650	2,680	1,484	1,462	6,994	2,940	15,060	4,134
Ruffed grouse	12,600	8,980	10,090	4,990	9,090	13,805	11,772	6,994	2,856	4,325	24,793
Ring-necked pheasant	8,076	4,860	6,820	3,430	3,720	6,581	4,040	7,274	6,048	2,645	5,141
Raccoon <sup>b,c</sup>	593	0	0	1,280	0	0	172	770	0	0	0

<sup>a</sup> Excludes duplicate licenses and non-resident shooting preserve licenses.

<sup>b</sup> In 2009, 2011, 2012, 2014, 2015, 2018, 2019 and 2020 no non-residents reported hunting/harvesting raccoons.

<sup>c</sup> In 2013 and 2017 only one non-resident reported hunting/harvesting raccoons. The extrapolated estimate is not reliable.

Table 4. Estimated number of statewide hunters by species, 2010-11 through 2020-21.

	2010-11	2011-12 <sup>a</sup>	2012-13 <sup>a</sup>	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Ducks	72,770	76,090	80,770	76,950	75,170	76,243	67,301	63,426	61,618	84,801	56,347
Canada goose	53,430	57,220	58,900	51,160	48,240	45,938	40,950	44,678	38,278	65,985	37,430
Other geese	3,650	2,710	3,830	2,810	2,770	2,520	2,321	2,512	1,323	3,071	2,125
American coot	4,610	3,480	3,990	3,820	4,410	3,261	3,519	3,446	3,113	3,332	3,238
Common snipe	1,340	1,160	1,160	1,370	820	667	899	1,285	934	1,176	1,316
Rails / gallinules	220	230	500	140	300	445	75	234	n.a. <sup>b</sup>	196	304
Crow	9,380	10,360	11,480	8,570	7,400	7,410	7,412	11,564	4,669	5,227	3,946
American woodcock	10,790	9,430	13,310	12,030	9,650	12,596	12,877	12,615	10,737	9,866	10,622
Mourning dove	10,640	8,970	9,230	10,380	9,950	8,966	7,636	8,878	6,536	10,780	6,070
Ring-necked pheasant	89,140	72,840	76,950	62,110	57,590	63,350	59,965	45,263	55,861	52,854	52,503
Ruffed grouse	92,490	88,620	91,260	81,130	83,020	79,058	82,348	80,654	67,765	61,608	63,428
Spruce grouse	8,860	10,210	7,400	10,810	10,320	8,225	9,658	8,819	7,314	6,142	8,093
Sharp-tailed grouse	7,140	6,190	6,570	6,700	5,460	5,113	6,214	5,198	4,202	4,443	4,350
Gray partridge	3,720	2,400	3,080	2,450	2,540	2,075	2,097	2,103	1,479	2,614	1,923
Gray squirrel	23,740	23,280	24,710	21,690	21,240	22,303	23,806	20,967	17,972	18,097	16,591
Fox squirrel	15,630	12,060	14,220	12,030	12,790	13,411	13,625	11,798	9,803	10,192	7,284
Eastern cottontail	15,030	12,300	16,390	14,550	13,160	11,633	16,096	14,368	12,449	11,368	10,724
White-tailed jackrabbit	2,230	2,320	1,750	1,220	1,350	890	1,423	643	623	523	1,316
Snowshoe hare	3,800	3,250	4,820	3,750	4,560	4,076	3,369	4,439	2,101	1,960	2,125
Raccoon	8,260	8,040	8,570	7,640	6,880	5,632	5,840	8,936	4,746	5,880	6,677
Red fox	7,220	6,030	5,820	5,910	4,560	4,150	3,594	5,549	3,035	4,247	2732
Gray fox	1,640	1,390	1,580	1,730	1,050	1,186	899	2,103	623	1,176	607
Coyote	19,420	17,940	21,050	17,650	17,580	18,302	15,871	22,193	14,394	16,464	12,443
Badger	600	310	330	500	80	297	375	701	234	66	203

<sup>a</sup> Estimates from these years were recomputed without license type 99- free youth license to be consistent with other years of data.

<sup>b</sup> No respondents indicated they hunted rails.

Table 5. Estimated harvest per active hunter by species, 2010-11 through 2020-21.

	2010-11	2011-12 <sup>a</sup>	2012-13 <sup>a</sup>	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Ducks	8.5	9.0	9.7	10.2	9.3	8.7	9.0	10.9	10.0	11.2	9.9
Canada geese	4.8	4.9	5.1	4.5	4.6	4.0	5.0	6.0	4.9	6.9	4.9
Other geese	1.1	1.8	2.3	2.5	2.4	1.8	3.1	3.2	1.2	3.8	1.0
American coot	5.7	3.0	4.2	4.0	3.9	4.9	6.1	5.8	3.4	4.7	2.4
Common snipe	1.4	1.2	1.2	1.7	0.6	0.3	2.2	1.5	1.5	1.5	1.2
Rails/gallinules	0.3	1.7	0.2	0.5	0.2	2.3	n.a. <sup>b</sup>	7.2	n.a. <sup>c</sup>	n.a. <sup>d</sup>	1.7
Crow	6.1	7.9	7.9	7.9	7.6	7.8	6.6	9.5	7.5	5.2	5.4
American woodcock	2.8	2.6	2.3	2.7	2.7	3.0	3.6	3.1	2.8	2.7	3.1
Mourning dove	9.4	8.2	10.0	7.8	10.4	10.8	7.7	9.9	8.4	8.3	6.9
Ring-necked pheasant	4.0	2.7	3.3	2.7	2.7	3.8	3.3	3.8	3.7	4.3	3.6
Ruffed grouse	5.0	4.3	3.7	3.6	3.6	3.4	3.8	3.5	2.9	3.7	3.5
Spruce grouse	1.7	1.8	1.6	1.2	1.4	1.2	1.6	1.4	1.0	1.2	1.8
Sharp-tailed grouse	2.4	1.9	1.6	1.1	1.6	1.6	1.4	2.1	1.4	1.4	3.7
Gray partridge	2.5	1.6	1.7	1.0	1.4	1.5	1.8	2.2	2.6	1.3	0.9
Gray squirrel	5.9	5.0	5.1	3.9	4.3	4.3	4.0	5.0	4.0	5.6	5.2
Fox squirrel	3.9	4.0	3.5	2.8	3.2	3.5	2.9	3.6	2.9	3.5	2.5
Eastern cottontail	3.6	2.8	3.9	2.8	2.9	3.6	3.1	3.3	2.6	3.0	2.6
White-tailed jackrabbit	3.2	2.2	1.1	1.5	0.8	0.8	0.8	0.9	1.0	0.8	3.5
Snowshoe hare	1.8	2.6	3.5	1.7	1.7	1.6	1.8	2.4	1.5	2.0	2.4
Raccoon	9.4	5.5	5.6	6.1	7.7	6.8	3.8	7.7	6.2	5.8	5.7
Red fox	1.2	1.2	1.4	0.9	0.7	0.9	0.6	1.7	0.6	1.3	1.4
Gray fox	1.5	0.8	0.2	0.2	0.6	0.7	0.2	1.8	0.1	1.2	0.5
Coyote	2.3	1.9	2.5	1.3	1.0	1.9	1.5	2.5	1.6	2.5	2.4
Badger	1.0	0.8	1.0	0.6	1.0	0.5	1.0	1.1	0.3	1.0	1.0

<sup>a</sup> Estimates from these years were recomputed without license type 99- free youth license to be consistent with other years of data.

<sup>b</sup> Only 1 respondent indicated they hunted rails and they reported 0 bagged.

<sup>c</sup> No respondents indicated they hunted rails.

<sup>d</sup> Only 3 respondents indicated they hunted rails and they reported 0 bagged.

Table 6. Mean harvest for successful hunters and hunter success rates (%), 2010-11 through 2020-21.

	2010-11	2011-12 <sup>a</sup>	2012-13 <sup>a</sup>	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Ducks	10.3 (83)	10.5 (85)	11.1 (87)	11.7 (87)	11.0 (85)	10.6 (82)	10.9 (83)	12.5 (87)	11.3 (89)	13.1 (85)	12.1 (82)
Canada geese	6.1 (80)	6.3 (78)	6.5 (78)	5.8 (77)	6.6 (69)	5.7 (71)	7.1 (70)	7.4 (81)	6.3 (77)	8.5 (81)	6.5 (74)
Other geese	2.6 (41)	3.4 (51)	4.4 (52)	5.5 (46)	4.3 (54)	4.0 (44)	8.0 (39)	8.6 (37)	3.3 (35)	8.0 (47)	2.9 (33)
American coot	7.2 (79)	4.4 (69)	5.2 (81)	5.2 (75)	5.0 (78)	6.7 (73)	7.6 (81)	8.1 (71)	5.3 (65)	7.5 (63)	3.5 (69)
Common snipe	2.2 (67)	1.6 (73)	2.1 (57)	2.1 (79)	1.4 (45)	1.0 (33)	3.2 (67)	2.5 (59)	2.6 (58)	1.9 (78)	2.3 (54)
Rails / gallinules	1.0 (33)	5.0 (33)	1.0 (17)	1.0 (50)	1.0 (25)	3.5 (67)	n.a. <sup>b</sup>	14.5 (50)	n.a. <sup>c</sup>	n.a. <sup>d</sup>	2.5 (67)
Crow	6.7 (91)	8.9 (88)	8.8 (90)	9.4 (84)	8.7 (87)	8.3 (94)	7.6 (86)	11.0 (86)	9.4 (80)	6.1 (86)	6.6 (82)
American woodcock	3.6 (76)	3.8 (70)	3.4 (68)	3.8 (70)	4.2 (64)	4.4 (67)	5.4 (67)	4.5 (69)	4.4 (65)	3.8 (72)	4.4 (70)
Mourning dove	11.1 (85)	10.5 (78)	12.5 (80)	9.2 (85)	12.5 (83)	13.3 (81)	10.3 (75)	11.6 (86)	10.2 (82)	10.3 (81)	8.4 (82)
Ring-necked pheasant	5.6 (72)	4.4 (63)	4.9 (67)	4.2 (64)	4.3 (61)	5.4 (71)	5.0 (65)	5.5 (69)	5.4 (68)	6.0 (71)	5.3 (69)
Ruffed grouse	6.6 (76)	5.9 (74)	5.2 (71)	5.2 (68)	5.1 (71)	4.9 (69)	5.3 (70)	4.8 (73)	4.3 (67)	5.2 (71)	5.2 (67)
Spruce grouse	2.4 (71)	3.0 (61)	2.8 (57)	2.4 (51)	2.5 (56)	2.4 (50)	2.7 (58)	2.4 (57)	1.9 (50)	2.3 (51)	3.2 (56)
Sharp-tailed grouse	3.5 (68)	3.1 (61)	3.4 (48)	3.2 (33)	3.8 (41)	3.1 (51)	2.9 (47)	4.0 (53)	3.0 (44)	2.5 (56)	7.8 (47)
Gray partridge	4.2 (58)	3.2 (52)	3.1 (54)	2.5 (38)	4.4 (32)	2.7 (57)	3.3 (54)	4.3 (50)	4.5 (58)	3.7 (35)	3.0 (32)
Gray squirrel	7.0 (84)	6.3 (78)	6.3 (80)	5.0 (77)	5.5 (78)	5.3 (81)	5.1 (79)	5.7 (89)	4.8 (83)	6.2 (90)	6.3 (83)
Fox squirrel	4.6 (86)	5.4 (74)	4.4 (80)	3.7 (75)	4.3 (75)	4.9 (71)	3.8 (76)	4.3 (83)	3.6 (81)	4.4 (80)	3.3 (76)
Eastern cottontail	4.4 (81)	4.1 (69)	5.5 (71)	3.5 (79)	4.1 (73)	5.0 (72)	4.0 (77)	4.0 (83)	3.6 (71)	3.6 (83)	3.4 (76)
White-tailed jackrabbit	4.6 (70)	3.5 (63)	2.3 (48)	5.2 (29)	1.8 (44)	2.0 (42)	1.9 (42)	1.7 (55)	1.6 (62)	1.5 (50)	6.6 (54)
Snowshoe hare	2.6 (69)	3.8 (69)	5.0 (69)	2.9 (58)	3.0 (57)	3.0 (53)	3.2 (56)	3.9 (63)	2.7 (56)	2.8 (70)	3.3 (71)
Raccoon	10.0 (94)	6.1 (89)	6.1 (93)	6.9 (89)	8.5 (90)	7.7 (88)	4.1 (92)	8.2 (93)	7.4 (84)	6.2 (93)	6.0 (95)
Red fox	2.3 (54)	2.4 (49)	2.7 (50)	2.0 (44)	1.7 (41)	1.6 (57)	1.4 (44)	2.6 (63)	1.2 (51)	2.2 (58)	2.2 (67)
Gray fox	4.0 (36)	2.5 (33)	1.0 (16)	1.5 (17)	2.0 (29)	1.4 (50)	1.0 (25)	2.8 (64)	1.0 (12)	3.1 (39)	1.0 (50)
Coyote	4.0 (57)	4.0 (47)	5.1 (49)	2.7 (50)	2.4 (41)	3.4 (57)	3.1 (49)	4.3 (59)	2.9 (53)	4.3 (58)	4.4 (54)
Badger	1.0 (100)	1.5 (50)	1.0 (100)	1.0 (57)	1.0 (100)	1.0 (50)	1.2 (80)	1.6 (67)	1.0 (33)	1.0 (100)	1.0 (100)

<sup>a</sup> Estimates from these years were recomputed without license type 99- free youth license to be consistent with other years of data.

<sup>b</sup> Only 1 respondent indicated they hunted rails and they reported 0 bagged.

<sup>c</sup> No respondents indicated they hunted rails.

<sup>d</sup> Only 3 respondents indicated they hunted rails and they reported 0 bagged.