



2013 SMALL GAME HUNTER MAIL SURVEY

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INTRODUCTION

The Minnesota Department of Natural Resources (DNR), Division of Fish and Wildlife, Wildlife Research unit annually conducts a self-administered mail back survey of small game hunters. Annual harvest estimates from survey data provide guidance for future hunting regulations and season structure. This mail survey was initiated in 1976 as a means to gather small game harvest information.

METHODS

A postcard survey (Figure 1) was mailed in early March and respondents who returned it within three weeks were eliminated from follow-up mailings. Recipients were asked if they hunted small game in 2013-14. Respondents who hunted were asked, (1) the total number of days they hunted small game, (2) the number bagged by species, (3) the number of days hunted by species and (4) the county in which they hunted most for each species listed (Figure 1).

The sampling frame consisted of individuals who purchased a small game hunting license (any type) for the 2013-14 small game hunting season (N= 258,581). A stratified random sample, allocated proportionally by license type (n= 7,000; 2.7%) was drawn from the Minnesota DNR electronic database. License type was used as strata and included the following small game license types: Resident Senior Citizen, Resident Youth, Resident Adult, Resident Individual Sport, Resident Combination Sport, Resident Lifetime, Resident Lifetime Sport, Nonresident Youth, and Nonresident Adult. For analysis, license types were pooled into "Resident" (N= 252,550) and "Nonresident" (N= 6,031) (Figure 2). A free youth license was added to the sampling frame for 2011-12 (20960) and 2012-13 (20987) but that license has since been discontinued. Estimates for those years have been recalculated without the youth license so that those estimates are comparable from year to year.

Returned surveys were checked for completeness, consistency, and biological practicability. Dual key-entry and quality control checks were used to minimize transcription errors. Data was tabulated using Viking Data Entry VDE+ software and analyzed using R programming language (ver. 2.9.2; R Development Core Team [RDCT] 2009).

RESULTS

Of the 7,000 mailed surveys, 125 were undeliverable; 3,589 were returned for an adjusted response rate of 52%. Estimated number of hunters declined for geese, crows, ring-necked pheasants, rabbits and hares (Table 2). Success rates for all species were fairly similar to last year as was estimated take per hunter (Tables 3 and 4). License sales decreased about 5% from the previous year (Figure 2). Pheasant stamp sales were down about 17% (Table 5), most

likely in response to predictions of low numbers from the August roadside survey. Total estimated harvest for the top-four small game species in Minnesota is presented in Figure 3. Total estimated harvest for all small game species is presented in Table 5. Survey results for selected species taken by Non-resident hunters are presented in Table 6.

Note that all estimates were based on a survey of approximately 2% of all small game license holders. This project was funded in part by the Wildlife Restoration Program (Pittman-Robertson).



2013 Small Game Hunter Report

1. Did you hunt small game, listed below, in Minnesota this year (March 2013 - Feb 2014)? 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		
Pheasants	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	96		
Raccoon	94		
Red fox	95		

Dear Small Game Hunter: We have not received a reply to our first request. Please, we need information on your 2013-2014 season. Please fill this out and mail.

You have been selected at random from among Minnesota's small game hunting license buyers to assist us in evaluating the 2013-2014 small game hunting season (**March 2013-February 2014**). We need information to estimate the season's harvest and to help set future small game seasons. Answer only for your Minnesota 2013 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. No envelope or stamp is necessary; just tear along the perforation and drop into a mailbox.

THANK YOU FOR YOUR COOPERATION

Ed Boggess, Director
Division of Fish and Wildlife
Department of Natural Resources

Figure 1. Sample of Small Game Hunter survey card.

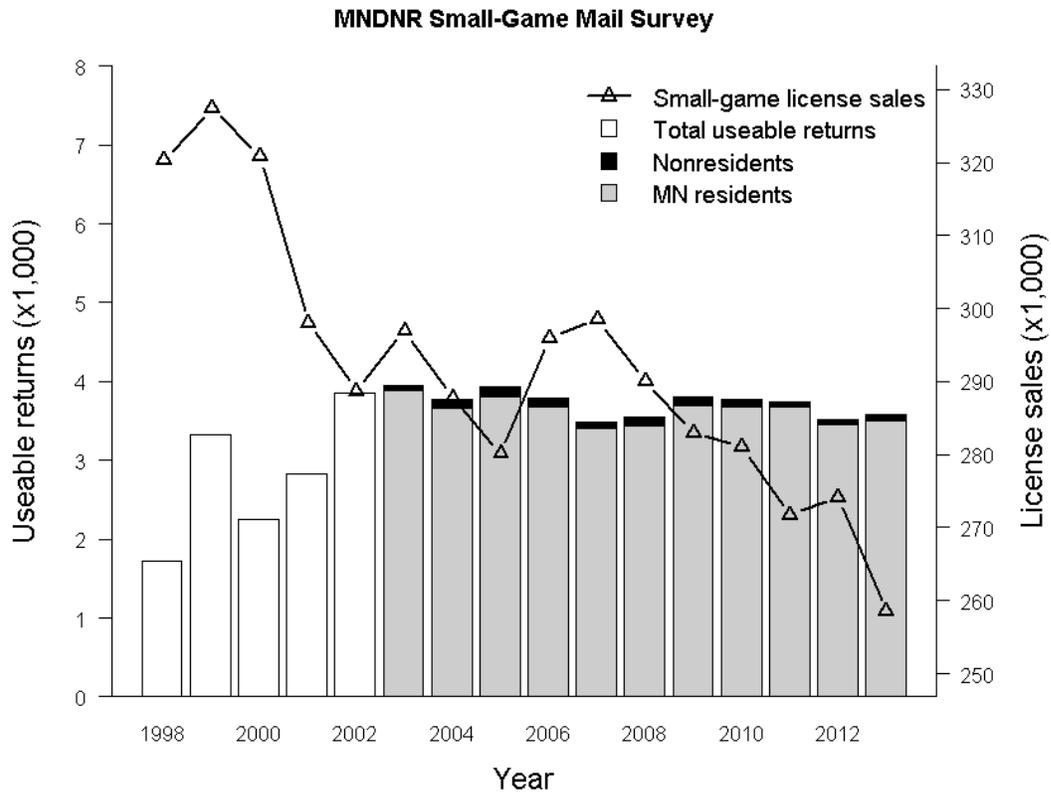


Figure 2. Number of Minnesota small game license sold and usable returned surveys, 1998-2013. Includes resident and non-resident licenses, and excludes duplicate and free licenses.

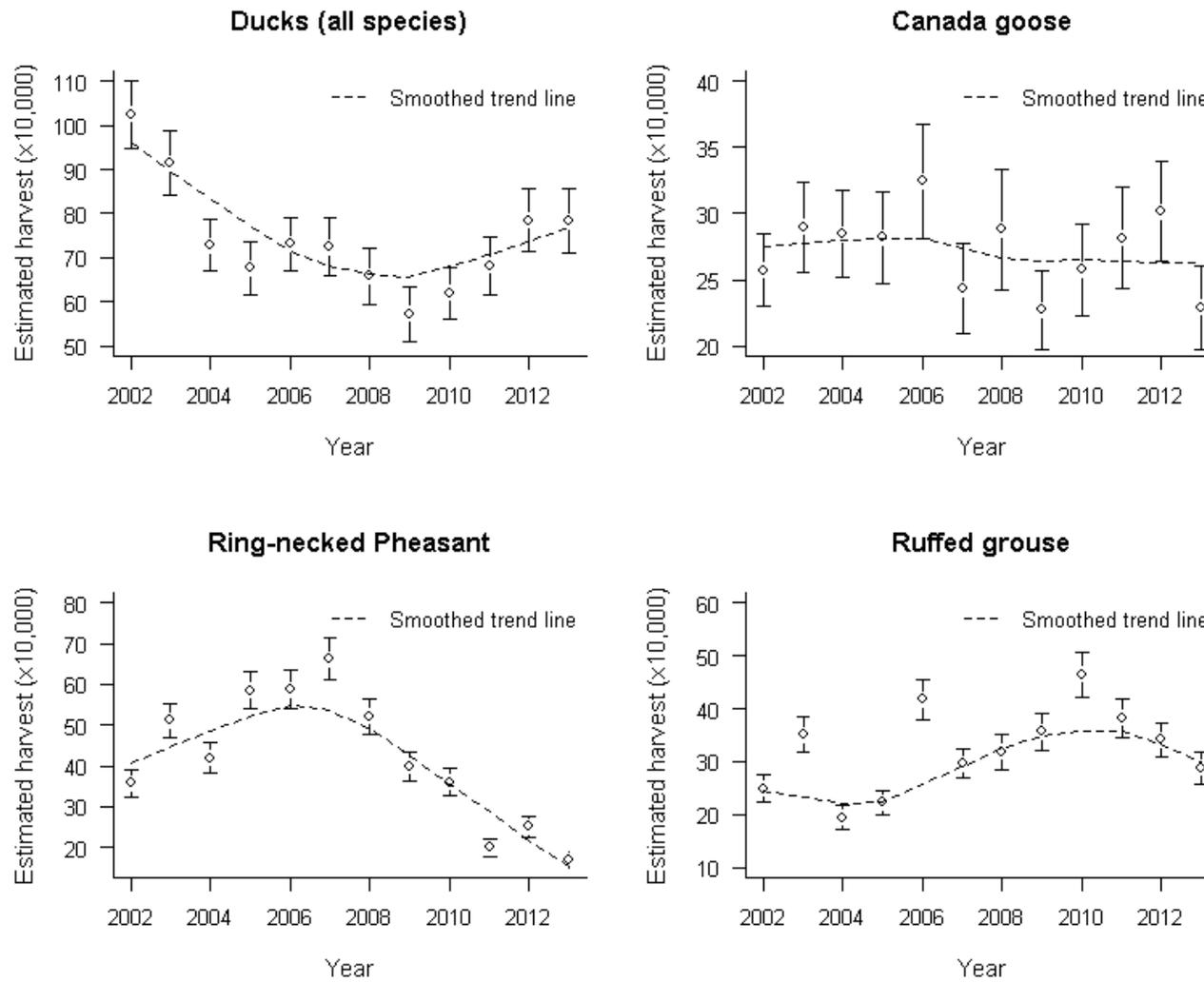


Figure 3. Summary of top four small game species harvested in Minnesota 2002-2013.

Table 1. Percent of respondents who hunted small game, 2004-05 through 2013-2014 ^a.

		Returns from mail survey	Projections from license sales
2004-05	Hunted	2,934 (78%)	223,275
	Did not hunt	<u>847 (22%)</u>	<u>64,450</u>
		3,781 (100.0%)	287,725
2005-06	Hunted	3,035 (77%)	216,000
	Did not hunt	<u>900 (23%)</u>	<u>64,156</u>
		3,935 (100.0%)	280,156
2006-07	Hunted	2,994 (79%)	233,759
	Did not hunt	<u>795 (21%)</u>	<u>62,139</u>
		3,789 (100.0%)	295,898
2007-08	Hunted	2,894 (78%)	232,505
	Did not hunt	<u>822 (22%)</u>	<u>65,961</u>
		3,716 (100.0%)	298,467
2008-09	Hunted	2,678 (75%)	218,753
	Did not hunt	<u>873 (25%)</u>	<u>71,311</u>
		3,551 (100.0%)	290,064
2009-10	Hunted	2,850 (75%)	212,126
	Did not hunt	<u>952 (25%)</u>	<u>70,857</u>
		3,802 (100.0%)	282,983
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

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

Table 2. Estimated number of statewide hunters by species, 2001-02 through 2013-14.

	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12 ^β	2012-13 ^β	2013-14
Ducks	109,241	111,619	101,487	104,634	92,634	87,075	87,468	81,358	77,480	72,770	76,090	80,770	76,950
Canada goose	76,322	78,574	74,855	74,728	69,416	66,224	62,649	59,222	55,520	53,430	57,220	58,900	51,160
Other geese	6,502	5,981	7,373	5,327	4,628	4,529	3,695	4,411	3,280	3,650	2,710	3,830	2,810
American coot	3,901	4,411	3,912	5,099	4,129	4,529	3,454	4,166	4,090	4,610	3,480	3,990	3,820
Common snipe	1,382	2,243	1,429	1,902	1,210	2,187	1,928	1,797	1,340	1,340	1,160	1,160	1,370
Rails / gallinules	406	673	150	228	0	547	482	408	370	220	230	500	140
Crow *	11,542	12,859	12,263	12,404	11,890	10,777	8,514	10,047	10,640	9,380	10,360	11,480	8,570
American woodcock	11,542	11,962	12,789	12,023	11,035	13,510	10,843	12,171	11,760	10,790	9,430	13,310	12,030
Mourning dove ^γ				15,524	11,107	12,886	13,172	11,599	10,500	10,640	8,970	9,230	10,380
Ring-necked pheasant	84,694	91,284	105,023	104,406	110,852	118,703	118,311	106,763	99,440	89,140	72,840	76,950	62,110
Ruffed grouse	101,194	90,686	93,513	79,141	76,037	91,682	90,600	86,505	87,230	92,490	88,620	91,260	81,130
Spruce grouse	8,778	7,327	8,727	7,305	7,048	9,840	10,602	8,332	9,750	8,860	10,210	7,400	10,810
Sharp-tailed grouse	8,372	6,355	6,921	6,164	4,913	6,560	6,827	6,616	5,510	7,140	6,190	6,570	6,700
Gray partridge	6,828	6,579	7,975	5,327	6,265	6,013	6,667	4,411	4,240	3,720	2,400	3,080	2,450
Gray squirrel	26,010	25,494	29,190	23,438	24,563	25,459	25,863	22,382	22,260	23,740	23,280	24,710	21,690
Fox squirrel	15,281	14,878	19,936	15,372	15,094	15,619	14,779	13,233	13,180	15,630	12,060	14,220	12,030
Eastern cottontail	17,150	15,700	21,441	18,644	20,148	20,070	19,598	17,644	16,300	15,030	12,300	16,390	14,550
White-tailed jackrabbit	3,251	2,467	3,009	3,044	2,065	2,577	2,891	2,451	1,790	2,230	2,320	1,750	1,220
Snowshoe hare	6,502	5,682	5,567	4,338	3,346	5,545	4,257	4,574	3,500	3,800	3,250	4,820	3,750
Raccoon (Sept - Feb)	6,340	5,981	5,868	6,316	4,841	8,747	9,558	7,433	7,300	8,260	8,040	8,570	7,640
Raccoon [‡] (March -Aug)	4,145	3,589	4,589	3,348	2,705								
Red fox (Sept -Feb)	5,608	7,476	7,222	5,783	5,980	6,248	5,783	5,800	7,820	7,220	6,030	5,820	5,910
Red fox [‡] (March -Aug)	2,682	2,243	2,182	1,370	1,282								
Gray fox	1,544	1,271	1,505	1,674	997	2,030	1,928	1,879	1,790	1,640	1,390	1,580	1,730
Coyote	10,648	12,261	15,122	16,133	18,653	17,024	16,064	19,278	19,280	19,420	17,940	21,050	17,650
Badger	406	748	451	533	783	859	482	490	370	600	310	330	500

* Crow season added in 1989. [‡] Raccoon and red fox season continuous May 1994 thru March 15, 2006. ^γ Mourning dove season added 2004. ^β Estimates from these years were recomputed without license type 99- free youth license to be consistent with other years of data.

Table 3. Estimated harvest per hunter, for respondents reporting that they hunted a particular species, 2001-02 through 2013-14.

	Estimated take per hunter												2013-14
	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12 ^β	2012-13 ^β	
Ducks	9.1	9.2	9.0	6.9	7.3	8.4	8.1	8.1	7.4	8.5	9.0	9.7	10.2
Canada geese	4.0	3.3	3.9	3.8	4.1	4.9	3.9	4.9	4.1	4.8	4.9	5.1	4.5
Other geese	1.2	1.9	1.7	1.5	1.9	1.5	2.1	3.2	1.9	1.1	1.8	2.3	2.5
American coot	4.5	4.6	2.8	4.0	3.9	5.6	4.6	5.7	3.6	5.7	3.0	4.2	4.0
Common snipe	1.3	1.5	1.8	1.1	4.4	1.9	2.0	1.2	1.1	1.4	1.2	1.2	1.7
Rails/gallinules	0.6	2.6	0.5	0.3	0	2.4	5.3	0.4	0.8	0.3	1.7	0.2	0.5
Crow *	7.7	5.6	6.7	5.8	7.8	6.4	6.4	5.2	5.3	6.1	7.9	7.9	7.9
American woodcock	2.3	2.4	2.4	3.5	2.5	3.2	2.6	2.4	3.0	2.8	2.6	2.3	2.7
Mourning dove ^γ				6.2	7	6.7	7.7	11.4	10.5	9.4	8.2	10.0	7.8
Ring-necked pheasant	3.2	3.9	4.9	4.0	5.3	4.9	5.5	4.9	4.0	4.0	2.7	3.3	2.7
Ruffed grouse	3.3	2.8	3.8	2.5	2.9	4.5	3.2	3.7	4.1	5.0	4.3	3.7	3.6
Spruce grouse	1.1	1.6	2.1	1.3	1.4	2.7	1.7	2.0	2.0	1.7	1.8	1.6	1.2
Sharp-tailed grouse	1.2	1.3	1.7	1.7	1.3	1.8	2.0	2.1	1.7	2.4	1.9	1.6	1.1
Gray partridge	1.5	1.7	2.8	2.4	2.6	1.9	1.6	2.2	1.9	2.5	1.6	1.7	1.0
Gray squirrel	5.6	5.2	6.0	5.7	5.0	5.5	5.2	5.4	4.9	5.9	5.0	5.1	3.9
Fox squirrel	4.1	4.5	4.2	4.1	4.1	4.2	3.2	3.9	4.1	3.9	4.0	3.5	2.8
Eastern cottontail	3.6	3.3	4.3	4.6	4.5	3.9	4.0	4.5	3.5	3.6	2.8	3.9	2.8
White-tailed jackrabbit	2.6	1.6	2.4	2.3	2.7	1.6	3.3	2.6	1.5	3.2	2.2	1.1	1.5
Snowshoe hare	3.3	1.9	2.2	1.8	3.1	3.0	1.4	2.5	1.5	1.8	2.6	3.5	1.7
Raccoon (Sept - Feb)	9.4	10.0	8.5	9.0	6.0	7.2	4.9	9.7	9.1	9.4	5.5	5.6	6.1
Raccoon [‡] (March -Aug)	4.4	5.4	4.7	6.1	2.7								
Red fox (Sept -Feb)	1.2	1.5	1.8	1.1	1.7	1.3	1.1	0.8	1.3	1.2	1.2	1.4	0.9
Red fox [‡] (March -Aug)	1.5	1.7	0.6	0.6	0.9								
Gray fox	0.4	0.4	0.4	1.1	0.9	1.8	0.3	1.3	1.0	1.5	0.8	0.2	0.2
Coyote	1.1	1.2	1.3	1.1	2.1	1.2	2.1	2.4	2.4	2.3	1.9	2.5	1.3
Badger	0.6	1.7	0.7	1.0	1.2	1.3	0.3	1.0	2.0	1.0	0.8	1.0	0.6

* Crow season added in 1989. ‡ Raccoon and red fox season continuous May 1994 thru March 15, 2006. ^γ Mourning dove season added 2004. ^β Estimates from these years were recomputed without license type 99- free youth license to be consistent with other years of data.

Table 4. Mean harvest for successful hunters and hunter success rates (%), 2003-04 through 2013-14.

	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12 ^β	2012-13 ^β	2013-14
Ducks	10.4 (87)	8.6 (81)	8.9 (83)	9.9 (84)	9.5 (85)	9.8 (83)	9.2(80)	10.3 (83)	10.5 (85)	11.1 (87)	11.7 (87)
Canada geese	5.1 (76)	5.2 (73)	5.5 (74)	6.3 (78)	5.5 (71)	6.4 (77)	5.6 (73)	6.1 (80)	6.3 (78)	6.5 (78)	5.8 (77)
Other geese	2.7 (653)	3.3 (46)	4.5 (43)	2.7 (55)	4.2 (50)	6.3 (50)	3.5 (55)	2.6 (41)	3.4 (51)	4.4 (52)	5.5 (46)
American coot	3.7 (77)	5.5 (73)	5.1 (76)	7.2 (78)	6.3 (74)	6.9 (82)	5.5 (65)	7.2 (79)	4.4 (69)	5.2 (81)	5.2 (75)
Common snipe	2.3 (79)	1.6 (68)	4.7 (94)	2.6 (75)	2.9 (71)	1.7 (73)	1.8 (61)	2.2 (67)	1.6 (73)	2.1 (57)	2.1 (79)
Rails / gallinules	1.0 (50)	1.0 (33)	0.0 (0.0) *	4.3 (57)	6.4 (83)	1.0 (40)	1.3 (60)	1.0 (33)	5.0 (33)	1.0 (17)	1.0 (50)
Crow	7.9 (85)	6.4 (91)	9.1 (86)	7.2 (89)	7.3 (88)	5.9 (88)	5.9 (90)	6.7 (91)	8.9 (88)	8.8 (90)	9.4 (84)
American woodcock	3.3 (72)	5.3 (65)	3.6 (70)	3.9 (83)	3.7 (69)	3.3 (74)	4.1 (73)	3.6 (76)	3.8 (70)	3.4 (68)	3.8 (70)
Mourning dove ^γ		7.9 (79)	8.7 (80)	8.2 (81)	9.8 (79)	13.2 (87)	11.4 (92)	11.1 (85)	10.5 (78)	12.5 (80)	9.2 (85)
Ring-necked pheasant	6.3 (77)	5.7 (70)	7.0 (76)	6.6 (75)	7.1 (78)	6.4 (77)	5.8 (69)	5.6 (72)	4.4 (63)	4.9 (67)	4.2 (64)
Ruffed grouse	5.1 (74)	3.9 (63)	4.4 (68)	5.9 (77)	4.7 (69)	5.0 (74)	5.5 (74)	6.6 (76)	5.9 (74)	5.2 (71)	5.2 (68)
Spruce grouse	3.3 (63)	2.3 (54)	2.4 (61)	3.8 (71)	3.1 (54)	3.0 (68)	3.1 (64)	2.4 (71)	3.0 (61)	2.8 (57)	2.4 (51)
Sharp-tailed grouse	3.3 (52)	3.1 (54)	2.4 (55)	3.3 (56)	4.4 (46)	3.2 (64)	3.0 (58)	3.5 (68)	3.1 (61)	3.4 (48)	3.2 (33)
Gray partridge	4.1 (69)	3.6 (66)	5.0 (52)	2.8 (69)	3.0 (55)	3.4 (65)	3.3 (58)	4.2 (58)	3.2 (52)	3.1 (54)	2.5 (38)
Gray squirrel	7.0 (85)	6.9 (83)	5.8 (86)	6.4 (87)	5.9 (88)	6.2 (88)	5.8 (86)	7.0 (84)	6.3 (78)	6.3 (80)	5.0 (77)
Fox squirrel	5.1 (83)	4.8 (85)	5.0 (83)	5.0 (85)	3.9 (83)	4.6 (83)	4.8 (85)	4.6 (86)	5.4 (74)	4.4 (80)	3.7 (75)
Eastern cottontail	5.2 (84)	5.8 (80)	5.4 (83)	4.6 (85)	4.8 (84)	5.3 (85)	4.3 (83)	4.4 (81)	4.1 (69)	5.5 (71)	3.5 (79)
White-tailed jackrabbit	3.3 (73)	3.0 (75)	3.2 (83)	2.5 (64)	4.5 (72)	3.8 (70)	2.1 (71)	4.6 (70)	3.5 (63)	2.3 (48)	5.2 (29)
Snowshoe hare	3.5 (61)	3.0 (61)	4.6 (68)	3.8 (80)	2.2 (62)	3.5 (71)	2.6 (60)	2.6 (69)	3.8 (69)	5.0 (69)	2.9 (58)
Raccoon (Sept -Feb)	9.6 (86)	9.9 (92)	6.5 (93)	7.7 (94)	5.4 (90)	10.6 (91)	9.6 (95)	10.0 (94)	6.1 (89)	6.1 (93)	6.9 (89)
Raccoon [‡] (March -Aug)	5.6 (85)	6.7 (91)	3.1 (87)								
Red fox (Sept -Feb)	3.5 (51)	2.8 (38)	3.7 (46)	2.1 (60)	2.3 (46)	1.5 (49)	2.4 (54)	2.3 (54)	2.4 (49)	2.7 (50)	2.0 (44)
Red fox [‡] (March -Aug)	1.1 (52)	1.4 (44)	1.6 (56)								
Gray fox	1.3 (30)	2.6 (41)	1.9 (50)	2.7 (65)	1.0 (29)	3.3 (39)	2.5 (42)	4.0 (36)	2.5 (33)	1.0 (16)	1.5 (17)
Coyote	2.7 (49)	2.5 (45)	4.11 (50)	2.4 (51)	4.4 (49)	4.4 (54)	4.6 (52)	4.0 (57)	4.0 (47)	5.1 (49)	2.7 (50)
Badger	1.0 (67)	1.2 (86)	1.2 (100)	1.6 (82)	1.0 (33)	1.2 (83)	2.5 (80)	1.0 (100)	1.5 (50)	1.0 (100)	1.0 (57)

[‡] Raccoon and red fox season continuous May 1994 thru March 15, 2006. ^γ Mourning dove season added 2004. * No hunters surveyed reported Rails/Gallinules in bag.

^β Estimates from these years were recomputed without license type 99- free youth license to be consistent with other years of data.

Table 5. Statewide (resident and non-resident) small game hunting license sales and estimated hunter harvest, 2002-03 through 2013-14.

	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12 ^b	2012-13 ^b	2013-14
Small game license sales ^a	288,729	296,939	287,725	280,156	295,898	298,467	290,064	282,983	282,227	271,768	264,063	258,581
State duck stamp sales	119,677	118,757	114,003	102,143	101,792	100,134	95,675	89,942	88,069	89,681	90,052	90,483
Pheasant stamp sales	102,097	121,456	114,653	117,301	129,546	129,315	123,270	110,456	104,286	86,868	90,541	74,668
Estimated harvest ^b												
Ducks	1,024,662	914,398	727,206	676,741	730,559	708,491	658,186	572,220	619,600	681,550	784,360	782,810
Canada geese	256,937	289,689	284,714	281,829	324,498	243,705	288,411	227,160	257,530	281,630	301,550	229,120
Other geese	11,125	12,755	8,150	9,025	6,658	7,723	13,895	6,250	3,940	4,800	8,820	7,130
American coot	20,114	10,993	20,345	15,938	24,909	16,061	23,871	14,810	26,340	10,520	16,720	15,130
Common snipe	3,432	2,558	2,130	5,336	4,221	3,933	2,210	1,490	1,940	1,390	1,420	2,310
Rails / gallinules	1,723	75	75	0	1,329	2,569	163	300	80	390	80	70
Crow	71,753	82,285	71,943	92,742	69,188	54,319	51,742	56,350	57,300	81,500	90,260	67,440
American woodcock	28,230	30,438	41,479	27,919	39,907	27,866	29,210	35,430	29,770	24,980	30,360	31,920
Mourning dove ^d			96,559	77,749	85,950	101,161	132,577	109,940	100,230	74,000	92,760	80,480
Ring-necked pheasant	357,833	511,462	419,712	585,299	587,580	655,443	522,071	398,130	359,400	198,500	250,140	169,100
Ruffed grouse	249,386	350,674	194,687	224,309	417,153	293,544	318,338	357,420	465,580	383,150	341,320	288,410
Spruce grouse	11,943	18,327	9,204	10,079	26,568	17,705	16,997	19,130	14,960	18,640	11,980	13,110
Sharp-tailed grouse	8,516	11,835	10,417	6,387	11,939	13,790	13,695	9,530	16,820	11,600	10,650	7,130
Gray partridge	10,921	22,250	12,572	16,289	11,545	11,000	9,660	8,040	9,150	3,950	5,160	2,380
Gray squirrel	133,589	174,848	132,659	122,078	140,788	133,194	121,534	109,790	138,920	115,840	126,110	84,010
Fox squirrel	67,100	84,529	62,410	62,187	66,068	47,736	51,079	53,970	61,690	48,100	49,750	33,940
Eastern cottontail	51,967	93,054	86,508	90,062	77,872	78,588	79,927	57,760	53,870	34,640	64,140	40,710
White-tailed jack rabbit	4,046	7,161	6,940	5,493	4,149	9,482	6,446	2,610	7,220	5,180	1,910	1,870
Snowshoe hare	10,909	11,969	7,895	10,406	16,801	5,789	11,343	5,360	6,770	8,430	16,800	6,200
Raccoon (Sept -Feb)	60,049	49,878	56,970	29,191	62,891	46,739	72,026	66,700	77,690	44,080	48,340	46,690
Raccoon ^c (Mar -Aug)	19,524	21,752	20,456	7,331								
Red fox (Sept -Feb)	11,438	13,000	6,072	10,166	7,872	6,188	4,408	10,270	8,780	7,120	7,990	5,190
Red fox ^c (Mar -Aug)	3,746	1,287	836	1,141								
Gray fox	521	602	1,758	927	3,593	559	2,443	1,860	2,380	1,160	250	430
Coyote	14,223	19,961	18,230	38,612	20,769	34,377	45,689	46,070	44,050	33,410	51,990	23,630
Badger	1,272	302	533	924	1,091	159	490	750	600	230	330	290

Harvest estimates in this table, and the number of hunters and mean take per hunter in Table 5, 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 (e.g., 1985) 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. A youth-free license was part of the sampling frame for the 2011-12 and 2012-13 seasons but was discontinued for 2013-14. The harvest statics for those years have been recomputed by removing the youth free license from both the sampling frame and the respondents' database. The estimates are now more comparable over time.

^a Includes all types of Small game licenses. Duplicate and free licenses not included.

^b Estimates based upon response of hunters to questionnaires.

^c Raccoon and red fox seasons were year round from May, 1994 through March 16, 2006.

^d Mourning dove season added 2004.

Table 6. Mail survey results of nonresident small game hunters, 2001-02 through 2012-13.

	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Nonresident licenses issued ^a	5,852	6,291	6,385	5,897	7,356	7,858	7,114	6,934	6,695	6,312	6,456	6,031
Questionnaires:												
Number mailed	130	123	182	210	185	185	226	196	163	169	166	162
Number not delivered	9	17	13	10	11	11	15	10	6	11	11	10
Number (percent) returned	75 (66)	68 (64)	114 (67)	134 (67)	115 (62)	101 (58)	89 (42)	105 (54)	107 (66)	91 (54)	71 (43)	81 (50)
Estimated nonresidents and (percent) of all licensed nonresidents hunting:												
Ducks	2,263 (39)	2,498 (40)	2,394 (37)	2,040 (35)	2,344 (32)	2,256 (29)	2,293 (32)	1,849 (27)	2,003 (29.9)	2,430 (38.5)	2,360 (36.6)	2,010 (33.3)
Canada goose	1,092 (19)	1,388 (24)	1,368 (21)	1,818 (31)	2,083 (28)	934 (12)	1,587(22)	726 (10)	1,314 (19.6)	1,620 (25.6)	1,360 (21.1)	1,270 (21.0)
Ruffed grouse	2,029 (35)	2,313 (40)	1,824 (29)	1,774 (30)	1,953 (26)	1,867 (24)	1,940 (27)	1,915 (28)	2,503 (37.4)	1,460 (23.1)	2,820 (43.7)	2,010 (33.3)
Ring-necked pheasant	1,404 (24)	2,128 (36)	2,679 (42)	2,572 (44)	3,776 (51)	2,645 (34)	3,116 (44)	1,519 (22)	2,003 (29.9)	1,780 (28.2)	1,910 (29.6)	1,420 (23.5)
Raccoon ^{b, c}	0 (0)	0 (0)	0 (0)	44 (0.7)	0 (0)	78 (1.0)	0 (0)	0 (0)	63 (0.9)	0 (0)	0 (0)	80 (1.2)
Estimated nonresident take:												
Ducks	17,556	17,855	19,269	12,149	12,173	22,718	15,463	11,755	17,055	13,840	20,380	20,410
Canada goose	5,852	5,736	6,214	3,946	3,580	3,501	5,762	3,698	6,334	4,050	2,270	3,650
Ruffed grouse	9,207	9,437	7,924	6,429	11,522	7,236	6,938	8,651	12,600	8,980	10,090	4,990
Ring-necked pheasant	7,647	9,344	11,174	13,656	16,079	17,661	10,642	6,274	8,076	4,860	6,820	3,430
Raccoon ^{b, c}	0	0	0	887	0	3,268	0	0	593	0	0	1,280

^a Excludes duplicate licenses and nonresident shooting preserve licenses.

^b In 2002, 2003, 2004, 2006, 2008, 2009, 2011 and 2012 no non-residents reported hunting/harvesting raccoons.

^c In 2013 only one non-resident reported hunting/harvesting raccoons. The extrapolated estimate is not reliable.