

2010 SMALL GAME HUNTER MAIL SURVEY

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INTRODUCTION

The Minnesota Department of Natural Resources, Division of Fish and Wildlife, Wildlife Research unit annually conducts a survey of small game hunters. Annual harvest estimates from survey data provide guidance for future hunting regulations and season structure.

METHODS

The Wildlife Research unit requested a random sample be drawn from the Electronic License System database in late February, 2010 to ensure that each license holder had an equal chance of being in the survey sample. The sample consisted of 6,000 (approximately 2%) Small Game License holders, drawn proportionately from each of the nine Small Game license types available: Resident Senior Citizen, Resident Youth Small Game, Resident (Adult) Small Game, Resident Individual sports, Resident Combination Sports, Resident Lifetime Small Game, Resident Lifetime sports, Nonresident Youth, and Nonresident (Adult) Small Game.

Hunters that returned the survey questionnaire within three weeks were marked returned and eliminated from follow-up mailings. Follow-up mailings were sent to non-respondents at three week intervals. There were three follow-up mailings to non-respondents.

Completed and returned questionnaires were checked for completeness, consistency, and biological practicability. Cards were marked with numeric county codes corresponding to the hunter's written information. Data from each usable card was converted to an electronic database. Data were checked for errors, duplicate responses, and /or missing data. The following is a list of assumptions made in data coding:

- 1) If an individual checked the box indicating (s)he did not hunt, but harvest information was provided, it was assumed that the individual did hunt.
- 2) If a range was given for "number of days hunted" or "number of animals harvested", the median of the range, rounded to the nearest even integer was recorded.
- 3) If a hunter indicated spending time hunting for a species, but left "number bagged" blank, the # bagged was entered as missing data.
- 4) If a small game hunter indicated bagging a species, but left "number of days hunted" blank, then "number of days hunted" was recorded as missing data.
- 5) If more than one county was indicated for "county hunted in most", the first county listed was recorded. However, if the several counties listed were indicated to apply to all species hunted, then counties were recorded in sequential order in relation to species hunted.
- 6) If "county hunted in most" was left unanswered or not legible, the county was recorded as missing data.

Data from all usable cards were tabulated and statistically analyzed by the St. Paul staff, using SAS statistical analysis software programs.

RESULTS

Estimated number of hunters continued to decrease for ducks, geese, and pheasants (Table 3). However the estimated take per hunter was up slightly for ducks and geese and held steady for pheasants (Table 4). Total estimated harvests (Table 6) increased for ducks, Canada geese, coots, ruffed grouse, sharp-tailed grouse, gray squirrel, fox squirrel, jack rabbits and raccoons. Estimated harvests declined for rails and gallinules, woodcock, mourning dove, spruce grouse, cottontail and red fox. Estimated harvest for pheasant, gray partridge and coyote stayed the same as for the previous year. Note that all estimates were based on a survey of approximately 2% of all small game license holders. Data in this report may change as a result of future verification and more comprehensive analysis.

Attached are survey results. All estimates were statewide unless otherwise indicated. Tables 1-7 are historic tables of small game harvest for the previous 10.

Table 1. Small game hunter response to mail surveys, 1979 - 80 through 2010 - 11.

Year	Number mailed	Number not delivered	Delivered questionnaires completed and returned	
			Number	Percent
1979 - 80	5,696	443	4,504	85.7
1980 - 81	6,434	385	4,963	82.0
1981 - 82	6,656	399	5,419	86.6
1982 - 83	5,963	266	4,792	84.1
1983 - 84	4,551	269	3,325	77.7
1984 - 85	4,096	127	3,280	82.6
1985 - 86	3,370	157	2,574	80.1
1986 - 87	4,668	208	3,623	81.2
1987 - 88	5,513	248	4,191	79.6
1988 - 89	15,388	857	11,431	78.7
1989 - 90 ^a	10,893	735	7,790	76.7
1990 - 91 ^a	5,000	394	3,467	75.3
1991 - 92 ^a	5,050	387	3,541	75.9
1992 - 93 ^a	5,000	288	3,625	76.9
1993 - 94 ^a	5,011	282	3,320	70.2
1994 - 95 ^a	5,000	387	3,353	72.7
1995 - 96 ^a	5,000	321	3,293	70.4
1996 - 97 ^a	5,000	170	3,334	69.0
1997 - 98 ^a	5,000	198	3,234	67.3
1998 - 99 ^a	5,000	200	3,153	65.7
1999 - 00 ^a	5,001	180	3,349	69.5
2000 - 01 ^a	5,000	184	3,001	62.3
2001 - 02 ^a	6,000	225	3,667	64.0
2002 - 03 ^a	6,000	363	3,862	68.5
2003 - 04 ^a	6,400	381	3,972	66.0
2004 - 05 ^a	6,000	356	3,823	68.0
2005 - 06 ^a	6,280	142	3,946	64.3
2006 - 07 ^a	6,000	151	3,810	65.1
2007 - 08 ^a	6,000	113	3,736	65.5
2008 - 09 ^a	5,996	183	3,551	61.1
2009 - 10 ^a	5,999	88	3,828	63.8
2010 - 11 ^a	6,000	100	3,777	63.0

^a Includes resident and non-resident licenses, and excludes duplicate licenses.

Table 2. Use of small game hunter licenses, 2001-02 through 2010-2011.

		Returns from mail survey	Projections from license sales
2001-02	Hunted	2,849 (77.7%)	231,589
	Did not hunt	<u>610 (21.3%)</u>	<u>66,466</u>
		3,665 (100.0%)	298,055
2002-03	Hunted	2,962 (76.7%)	221,455
	Did not hunt	<u>900 (23.3%)</u>	<u>67,274</u>
		3,862 (100.0%)	288,729
2003-04	Hunted	3,085 (78.2%)	232,206
	Did not hunt	<u>862 (21.8%)</u>	<u>64,733</u>
		3,947 (100.0%)	296,939
2004-05	Hunted	2,934 (77.6%)	223,275
	Did not hunt	<u>847 (22.4%)</u>	<u>64,450</u>
		3,781 (100.0%)	287,725
2005-06	Hunted	3,035 (77.1%)	216,000
	Did not hunt	<u>900 (22.9%)</u>	<u>64,156</u>
		3,935 (100.0%)	280,156
2006-07	Hunted	2,994 (79.0%)	233,759
	Did not hunt	<u>795 (21.0%)</u>	<u>62,139</u>
		3,789 (100.0%)	295,898
2007-08	Hunted	2,894 (77.9%)	232,505
	Did not hunt	<u>822 (22.1%)</u>	<u>65,961</u>
		3,716 (100.0%)	298,467
2008-09	Hunted	2,678 (75.4%)	218,753
	Did not hunt	<u>873 (24.6%)</u>	<u>71,311</u>
		3,551 (100.0%)	290,064
2009-10	Hunted	2,850 (75.0%)	212,126
	Did not hunt	<u>952 (25.0%)</u>	<u>70,857</u>
		3,802 (100.0%)	282,983
2010-11	Hunted	2,824 (74.8%)	210,129
	Did not hunt	<u>953 (25.2%)</u>	<u>70,911</u>
		3,777 (100.0%)	281,040

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

2010 Small Game Hunter Report

1. Did you hunt small game, listed below, in Minnesota this year (March 2010 - Feb 2011)? 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	_____	_____

Figure 1. Sample of Small Game Hunter survey card

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 2010-2011 small game hunting season (**March 2010-February 2011**). We need information to estimate the season's harvest and to help set future small game seasons. Answer only for your Minnesota 2010 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

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

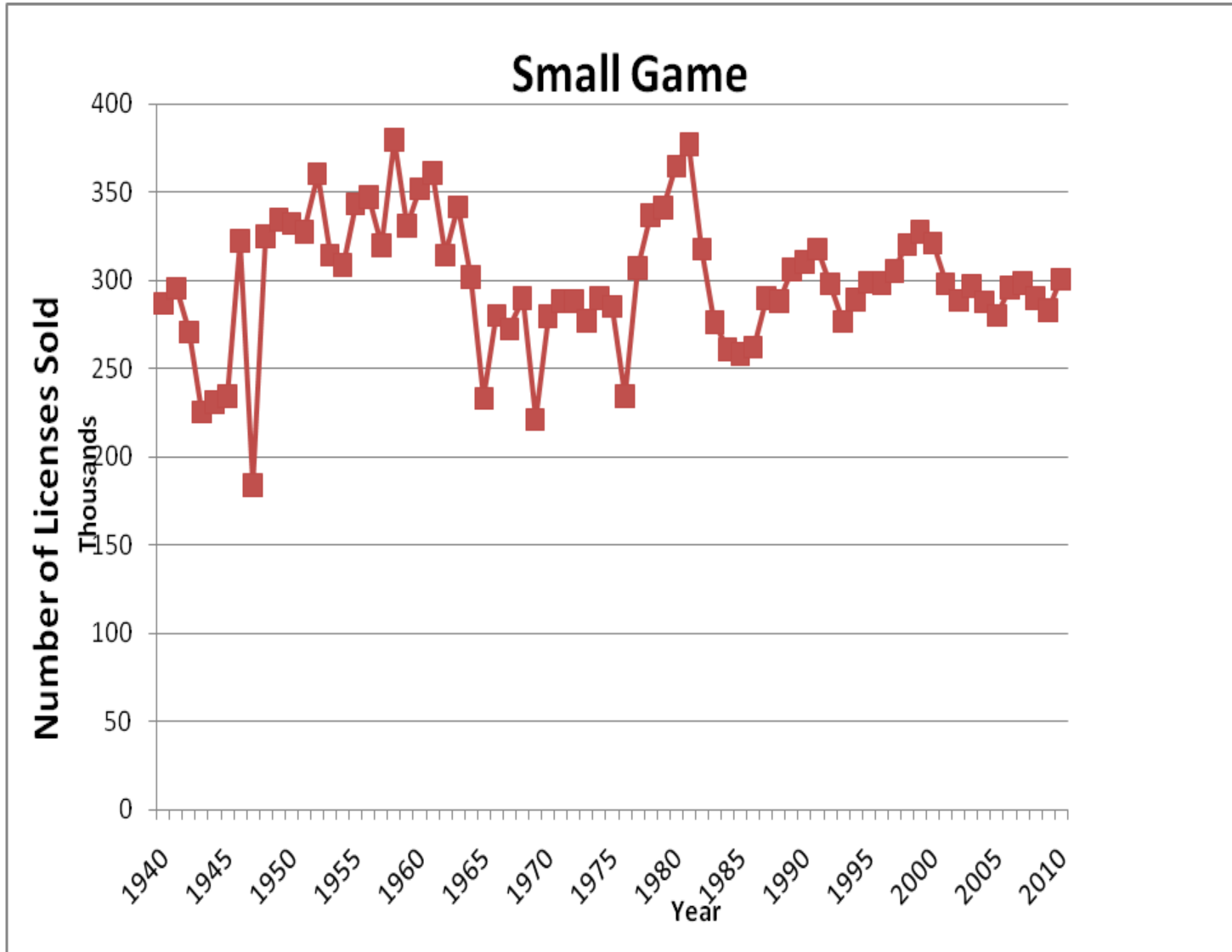


Figure 2. Number of Minnesota small game licenses sold, 1940–2010.

Table 3. Estimated number of hunters for various species, 1999-00 through 2010-11.

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Ducks	121,718	109,008	109,241	111,619	101,487	104,634	92,634	87,075	87,468	81,358	77,705	72,772
Canada goose	80,458	76,518	76,322	78,574	74,855	74,728	69,416	66,224	62,649	59,222	55,599	53,426
Other geese	5,403	6,834	6,502	5,981	7,373	5,327	4,628	4,529	3,695	4,411	3,275	3,647
American coot	6,189	3,809	3,901	4,411	3,912	5,099	4,129	4,529	3,454	4,166	4,094	4,614
Common snipe	1,768	2,241	1,382	2,243	1,429	1,902	1,210	2,187	1,928	1,797	1,340	1,340
Rails / gallinules	491	336	406	673	150	228	0	547	482	408	372	224
Crow *	13,557	14,004	11,542	12,859	12,263	12,404	11,890	10,777	8,514	10,047	10,643	9,376
American woodcock	19,353	15,909	11,542	11,962	12,789	12,023	11,035	13,510	10,843	12,171	11,834	10,790
Mourning dove [‡]						15,524	11,107	12,886	13,172	11,599	10,495	10,641
Ring-necked pheasant	92,836	100,045	84,694	91,284	105,023	104,406	110,852	118,703	118,311	106,763	99,811	89,142
Ruffed grouse	138,812	120,547	101,194	90,686	93,513	79,141	76,037	91,682	90,600	86,505	87,530	92,490
Spruce grouse	10,806	9,411	8,778	7,327	8,727	7,305	7,048	9,840	10,602	8,332	9,825	8,855
Sharp-tailed grouse	8,350	9,747	8,372	6,355	6,921	6,164	4,913	6,560	6,827	6,616	5,582	7,144
Gray partridge	9,922	7,842	6,828	6,579	7,975	5,327	6,265	6,013	6,667	4,411	4,243	3,721
Gray squirrel	30,749	26,664	26,010	25,494	29,190	23,438	24,563	25,459	25,863	22,382	22,255	23,737
Fox squirrel	20,139	16,693	15,281	14,878	19,936	15,372	15,094	15,619	14,779	13,233	13,174	15,626
Eastern cottontail	18,174	19,830	17,150	15,700	21,441	18,644	20,148	20,070	19,598	17,644	16,300	15,031
White-tailed jackrabbit	3,242	2,465	3,251	2,467	3,009	3,044	2,065	2,577	2,891	2,451	1,786	2,233
Snowshoe hare	6,680	5,154	6,502	5,682	5,567	4,338	3,346	5,545	4,257	4,574	3,498	3,795
Raccoon (Sept - Feb)	5,993	6,498	6,340	5,981	5,868	6,316	4,841	8,747	9,558	7,433	7,294	8,260
Raccoon [‡] (March -Aug)	2,554	4,593	4,145	3,589	4,589	3,348	2,705					
Red fox (Sept -Feb)	7,761	10,083	5,608	7,476	7,222	5,783	5,980	6,248	5,783	5,800	7,815	7,218
Red fox [‡] (March -Aug)	1,867	1,905	2,682	2,243	2,182	1,370	1,282					
Gray fox	1,965	1,344	1,544	1,271	1,505	1,674	997	2,030	1,928	1,879	1,786	1,637
Coyote	10,806	15,797	10,648	12,261	15,122	16,133	18,653	17,024	16,064	19,278	19,426	19,421
Badger	786	672	406	748	451	533	783	859	482	490	372	596

* Crow season added in 1989.

[‡] Raccoon and red fox season continuous May 1994 thru March 15, 2006.

[‡] Mourning dove season added 2004.

Table 4. Estimated take per hunter, for respondents reporting that they hunted a particular species, 1999-00 through 2010-11.

	Estimated take per hunter											
	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Ducks	8.4	8.9	9.1	9.2	9.0	6.9	7.3	8.4	8.1	8.1	7.4	8.5
Canada geese	3.5	3.9	4.0	3.3	3.9	3.8	4.1	4.9	3.9	4.9	4.1	4.8
Other geese	1.2	2.2	1.2	1.9	1.7	1.5	1.9	1.5	2.1	3.2	1.9	1.1
American coot	4.0	2.7	4.5	4.6	2.8	4.0	3.9	5.6	4.6	5.7	3.6	5.7
Common snipe	1.6	1.3	1.3	1.5	1.8	1.1	4.4	1.9	2.0	1.2	1.1	1.4
Rails/gallinules	0.2	3.7	0.6	2.6	0.5	0.3	0	2.4	5.3	0.4	0.8	0.3
Crow *	4.4	6.9	7.7	5.6	6.7	5.8	7.8	6.4	6.4	5.2	5.3	6.1
American woodcock	2.8	2.8	2.3	2.4	2.4	3.5	2.5	3.2	2.6	2.4	3.0	2.8
Mourning dove ^γ						6.2	7	6.7	7.7	11.4	10.5	9.4
Ring-necked pheasant	3.7	3.7	3.2	3.9	4.9	4.0	5.3	4.9	5.5	4.9	4.0	4.0
Ruffed grouse	4.9	5.1	3.3	2.8	3.8	2.5	2.9	4.5	3.2	3.7	4.1	5.0
Spruce grouse	1.8	2.5	1.1	1.6	2.1	1.3	1.4	2.7	1.7	2.0	1.9	1.7
Sharp-tailed grouse	1.6	1.6	1.2	1.3	1.7	1.7	1.3	1.8	2.0	2.1	1.7	2.4
Gray partridge	1.9	2.1	1.5	1.7	2.8	2.4	2.6	1.9	1.6	2.2	1.9	2.5
Gray squirrel	4.3	5.3	5.6	5.2	6.0	5.7	5.0	5.5	5.2	5.4	4.9	5.9
Fox squirrel	3.5	3.9	4.1	4.5	4.2	4.1	4.1	4.2	3.2	3.9	4.1	3.9
Eastern cottontail	3.2	3.9	3.6	3.3	4.3	4.6	4.5	3.9	4.0	4.5	3.5	3.6
White-tailed jackrabbit	1.9	2.8	2.6	1.6	2.4	2.3	2.7	1.6	3.3	2.6	1.5	3.2
Snowshoe hare	3.1	5.2	3.3	1.9	2.2	1.8	3.1	3.0	1.4	2.5	1.5	1.8
Raccoon (Sept - Feb)	10.9	7.6	9.4	10.0	8.5	9.0	6.0	7.2	4.9	9.7	9.1	9.4
Raccoon [‡] (March -Aug)	6.4	7.8	4.4	5.4	4.7	6.1	2.7					
Red fox (Sept -Feb)	1.2	1.9	1.2	1.5	1.8	1.1	1.7	1.3	1.1	0.8	1.3	1.2
Red fox [‡] (March -Aug)	0.6	0.9	1.5	1.7	0.6	0.6	0.9					
Gray fox	0.9	0.7	0.4	0.4	0.4	1.1	0.9	1.8	0.3	1.3	1.0	1.5
Coyote	1.3	1.8	1.1	1.2	1.3	1.1	2.1	1.2	2.1	2.4	2.4	2.3
Badger	1.1	0.8	0.6	1.7	0.7	1.0	1.2	1.3	0.3	1.0	2.0	1.0

* Crow season added in 1989. [‡] Raccoon and red fox season continuous May 1994 thru March 15, 2006. ^γ Mourning dove season added 2004.

Table 5. Mean harvest for successful hunters and hunter success rates (%), 2001-02 through 2010-11.

	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Ducks	10.6 (85.6)	10.6 (86.7)	10.4 (86.7)	8.6 (81.1)	8.9 (82.5)	9.9 (84.4)	9.5 (85.4)	9.8 (82.8)	9.2(80.5)	10.3 (82.7)
Canada geese	5.3 (76.3)	4.6 (72.0)	5.1 (76.0)	5.2 (72.8)	5.5 (73.7)	6.3 (78.4)	5.5 (71.4)	6.4 (76.6)	5.6 (72.8)	6.1 (79.5)
Other geese	2.8 (43.8)	4.4 (42.5)	2.7 (65.3)	3.3 (45.7)	4.5 (43.1)	2.7 (55.2)	4.2 (50.0)	6.3 (50.0)	3.5 (54.5)	2.7 (40.8)
American coot	7.5 (60.4)	6.4 (71.2)	3.7 (76.9)	5.5 (73.1)	5.1 (75.9)	7.2 (77.6)	6.3 (74.4)	6.9 (82.4)	5.5 (65.5)	7.2 (79.0)
Common snipe	2.4 (52.9)	2.6 (60.0)	2.3 (78.9)	1.6 (68.0)	4.7 (94.1)	2.6 (75.0)	2.9 (70.8)	1.7 (72.7)	1.8 (61.1)	2.2 (66.7)
Rails / gallinules	1.5 (40.0)	3.8 (66.7)	1.0 (50.0)	1.0 (33.3)	0.0 (0.0) *	4.3 (57.1)	6.4 (83.3)	1.0 (40.0)	1.3 (60.0)	1.0 (33.3)
Crow	8.6 (89.4)	6.3 (89.0)	7.9 (85.3)	6.4 (90.8)	9.1 (85.6)	7.2 (89.1)	7.3 (87.7)	5.9 (87.8)	5.9 (89.5)	6.7 (91.3)
American woodcock	3.4 (68.3)	3.6 (65.6)	3.3 (71.8)	5.3 (64.6)	3.6 (70.3)	3.9 (82.7)	3.7 (68.9)	3.3 (73.8)	4.1 (72.3)	3.6 (75.9)
Mourning dove ^γ				7.9 (78.9)	8.7 (80.1)	8.2 (81.2)	9.8 (78.7)	13.2 (86.6)	11.4 (92.2)	11.1 (84.6)
Ring-necked pheasant	4.7 (66.4)	5.5 (71.7)	6.3 (77.2)	5.7 (70.0)	7.0 (75.9)	6.6 (75.3)	7.1 (78.1)	6.4 (76.7)	5.8 (68.7)	5.6 (71.5)
Ruffed grouse	4.8 (68.5)	4.3 (63.8)	5.1 (73.5)	3.9 (63.3)	4.4 (67.5)	5.9 (77.4)	4.7 (69.4)	5.0 (73.7)	5.5 (74.5)	6.6 (76.3)
Spruce grouse	2.3 (47.2)	3.4 (48.0)	3.3 (62.9)	2.3 (54.2)	2.4 (60.6)	3.8 (70.6)	3.1 (53.8)	3.0 (67.6)	3.1 (63.6)	2.4 (70.6)
Sharp-tailed grouse	2.4 (49.5)	3.5 (38.8)	3.3 (52.2)	3.1 (54.3)	2.4 (55.1)	3.3 (56.0)	4.4 (45.9)	3.2 (64.2)	3.0 (57.3)	3.5 (67.7)
Gray partridge	2.5 (58.3)	2.8 (59.1)	4.1 (68.9)	3.6 (65.7)	5.0 (52.3)	2.8 (68.8)	3.0 (55.4)	3.4 (64.8)	3.3 (57.9)	4.2 (58.0)
Gray squirrel	6.6 (84.4)	6.1 (86.2)	7.0 (85.3)	6.9 (82.5)	5.8 (86.1)	6.4 (87.1)	5.9 (87.6)	6.2 (87.6)	5.8 (85.6)	7.0 (84.0)
Fox squirrel	5.3 (77.7)	5.9 (76.4)	5.1 (82.6)	4.8 (85.1)	5.0 (82.5)	5.0 (84.5)	3.9 (82.6)	4.6 (83.3)	4.8 (84.7)	4.6 (85.7)
Eastern cottontail	4.7 (77.7)	4.7 (70.5)	5.2 (84.2)	5.8 (79.6)	5.4 (83.4)	4.6 (84.8)	4.8 (84.0)	5.3 (85.2)	4.3 (82.6)	4.4 (81.2)
White-tailed jackrabbit	5.2 (50.0)	2.7 (60.6)	3.3 (72.5)	3.0 (75.0)	3.2 (82.8)	2.5 (63.6)	4.5 (72.2)	3.8 (70.0)	2.1 (70.8)	4.6 (70.0)
Snowshoe hare	4.4 (75.0)	2.9 (67.1)	3.5 (60.8)	3.0 (61.4)	4.6 (68.1)	3.8 (80.3)	2.2 (62.3)	3.5 (71.4)	2.6 (59.6)	2.6 (68.6)
Raccoon (Sept -Feb)	10.0 (93.6)	11.6 (86.3)	9.6 (88.5)	9.9 (91.6)	6.5 (92.6)	7.7 (93.8)	5.4 (89.9)	10.6 (91.2)	9.6 (94.9)	10.0 (93.7)
Raccoon [‡] (March -Aug)	4.9 (90.2)	5.9 (91.7)	5.6 (85.2)	6.7 (90.9)	3.1 (86.8)					
Red fox (Sept -Feb)	2.7 (44.9)	3.1 (49.0)	3.5 (51.0)	2.8 (38.2)	3.7 (46.4)	2.1 (60.0)	2.3 (45.8)	1.5 (49.3)	2.4 (54.3)	2.3 (53.6)
Red fox [‡] (March -Aug)	2.8 (54.5)	3.6 (46.7)	1.1 (51.7)	1.4 (44.4)	1.6 (55.6)					
Gray fox	1.4 (26.3)	1.8 (23.5)	1.3 (30.0)	2.6 (40.9)	1.9 (50.0)	2.7 (65.4)	1.0 (29.2)	3.3 (39.1)	2.5 (41.7)	4.0 (36.4)
Coyote	2.4 (47.3)	3.2 (36.6)	2.7 (48.8)	2.5 (45.3)	4.11 (50.4)	2.4 (50.5)	4.4 (49.0)	4.4 (53.8)	4.6 (51.7)	4.0 (57.1)
Badger	1.0 (60.0)	2.8 (60.0)	1.0 (66.7)	1.2 (85.7)	1.2 (100.0)	1.6 (81.8)	1.0 (33.3)	1.2 (83.3)	2.5 (80.0)	1.0 (100.0)

[‡] 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.

Table 6. Statewide (resident and non-resident) small game hunting license sales and estimated hunter harvest, 1999-00 through 2010-11.

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Small game license sales ^a	327,431	320,862	298,055	288,729	296,939	287,725	280,156	295,898	298,467	290,064	282,983	300,624
State duck stamp sales	128,245	121,709	118,590	119,677	118,757	114,003	102,143	101,792	100,134	95,675	89,942	88,069
Pheasant stamp sales	106,945	114,440	97,665	102,097	121,456	114,653	117,301	129,546	129,315	123,270	110,456	104,286
Estimated harvest ^b												
Ducks	1,021,214	969,081	989,723	1,024,662	914,398	727,206	676,741	730,559	708,491	658,186	576,571	619,604
Canada geese	284,821	301,481	308,341	256,937	289,689	284,714	281,829	324,498	243,705	288,411	229,068	257,532
Other geese	5,781	14,761	7,867	11,125	12,755	8,150	9,025	6,658	7,723	13,895	6,255	3,945
American coot	24,880	10,437	17,554	20,114	10,993	20,345	15,938	24,909	16,061	23,871	14,820	26,345
Common snipe	2,758	2,801	1,783	3,432	2,558	2,130	5,336	4,221	3,933	2,210	1,487	1,936
Rails / gallinules	98	1,233	244	1,723	75	75	0	1,329	2,569	163	298	75
Crow	60,057	96,347	84,412	71,753	82,285	71,943	92,742	69,188	54,319	51,742	56,301	57,298
American woodcock	54,382	45,341	26,662	28,230	30,438	41,479	27,919	39,907	27,866	29,210	35,384	29,766
Mourning dove ^d						96,559	77,749	85,950	101,161	132,577	109,988	100,234
Ring-necked pheasant	339,780	375,169	266,786	357,833	511,462	419,712	585,299	587,580	655,443	522,071	400,242	359,396
Ruffed grouse	685,731	619,612	331,916	249,386	350,674	194,687	224,309	417,153	293,544	318,338	357,998	465,576
Spruce grouse	19,343	23,151	9,480	11,943	18,327	9,204	10,079	26,568	17,705	16,997	19,159	14,957
Sharp-tailed grouse	13,694	15,888	9,795	8,516	11,835	10,417	6,387	11,939	13,790	13,695	9,545	16,819
Gray partridge	19,050	16,782	10,174	10,921	22,250	12,572	16,289	11,545	11,000	9,660	8,019	9,154
Gray squirrel	132,221	140,253	145,916	133,589	174,848	132,659	122,078	140,788	133,194	121,534	109,717	138,925
Fox squirrel	71,091	65,103	62,958	67,100	84,529	62,410	62,187	66,068	47,736	51,079	54,013	61,686
Eastern cottontail	58,702	78,328	62,426	51,967	93,054	86,508	90,062	77,872	78,588	79,927	57,702	53,874
White-tailed jack rabbit	6,192	6,803	8,453	4,046	7,161	6,940	5,493	4,149	9,482	6,446	2,608	7,221
Snowshoe hare	20,842	26,904	21,717	10,909	11,969	7,895	10,406	16,801	5,789	11,343	5,352	6,772
Raccoon (Sept -Feb)	65,024	3,785	59,279	60,049	49,878	56,970	29,191	62,891	46,739	72,026	66,667	77,689
Raccoon ^c (Mar -Aug)	16,294	35,733	18,362	19,524	21,752	20,456	7,331					
Red fox (Sept -Feb)	9,546	19,460	6,842	11,438	13,000	6,072	10,166	7,872	6,188	4,408	10,238	8,781
Red fox ^c (Mar -Aug)	1,176	1,676	4,077	3,746	1,287	836	1,141					
Gray fox	1,768	900	571	521	602	1,758	927	3,593	559	2,443	1,857	2,382
Coyote	13,507	28,908	12,032	14,223	19,961	18,230	38,612	20,769	34,377	45,689	46,234	44,051
Badger	888	558	244	1,272	302	533	924	1,091	159	490	744	596

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 Includes all types of Small game licenses. Duplicate 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 7. Mail survey results of nonresident small game hunters, 1999-00 through 2010-11.

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Nonresident licenses issued^a	7,572	7001	5,843	5,852	6,291	6,385	5,897	7,356	7,858	7,114	6,934	6,695
Questionnaires:												
Number mailed	199	98	124	130	123	182	210	185	185	226	196	163
Number not delivered	16	6	9	9	17	13	10	11	11	15	10	6
Number (percent) returned	136 (74)	56 (61)	77 (67)	75 (66)	68 (64)	114 (67)	134 (67)	115 (62)	101 (58)	89 (42)	105 (54)	107 (66)
Estimated nonresidents and (percent) of all nonresidents hunting:												
Ducks	2,505 (33)	2,375 (34)	2,727 (47)	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)
Canada goose	1,225 (16)	1,500 (21)	1,169 (20)	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)
Ruffed grouse	3,508 (46)	3,000 (43)	1,169 (20)	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)
Ring-necked pheasant	947 (13)	625 (9)	935 (16)	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)
Raccoon	56 (1)	250 (4)	0 (0)	0 (0)	0 (0)	0 (0)	44 (0.7)	0 (0)	78 (1.0)	0 (0)	0 (0)	63 (0.9)
Estimated nonresident take:												
Ducks	26,391	18,253	42,225	17,556	17,855	19,269	12,149	12,173	22,718	15,463	11,755	17,055
Canada goose	6,960	5,001	13,400	5,852	5,736	6,214	3,946	3,580	3,501	5,762	3,698	6,334
Ruffed grouse	23,384	24,003	6,622	9,207	9,437	7,924	6,429	11,522	7,236	6,938	8,651	12,600
Ring-necked pheasant	4,844	4,001	3,740	7,647	9,344	11,174	13,656	16,079	17,661	10,642	6,274	8,076
Raccoon ^b	724	3,375	0	0	0	0	887	0	3,268	0	0	593

^a Excludes duplicate licenses and nonresident shooting preserve licenses.

^b In 2001, 2002, 2003, 2004, 2006, 2008, and 2009 no non-residents reported hunting/harvesting raccoons.

Raccoon take per hunter			
Year	Resident	Non-resident	Number of Non-resident raccoon licenses
2001 ^b	10	0	48
2002 ^b	11	0	46
2003 ^b	10	0	44
2004 ^b	8	0	46
2005	6	20	44
2006 ^b	8	0	53
2007	5	42	45
2008 ^b	10	0	40
2009 ^b	10	0	33
2010	9.4	9.4	42

